

Healthcare for All

Community Action and Public Systems
for an Inclusive India

**Edited by K. Srinath Reddy, Girija Vaidyanathan
and Amarjeet Sinha**

Innovations, Practice and the Future of Public Policy in India



HEALTHCARE FOR ALL

This book offers a comprehensive analysis of India's healthcare challenges and the pathways to achieving universal health coverage. It critically examines the current healthcare landscape, highlighting persistent issues such as undernutrition, demographic transitions, and pandemic vulnerabilities.

The book emphasises the importance of strengthening public healthcare systems, investing in human resources, and adopting a community-centred approach to health policy. It discusses the need for decentralised community action, substantial public investment in healthcare infrastructure, addressing urban health challenges, and developing a more inclusive and accessible healthcare model. Drawing on microstudies from across different states, the volume offers evidence-based recommendations for policymakers to transform India's healthcare ecosystem and make quality healthcare a reality for all. Its multidisciplinary approach – spanning healthcare policy, economics, and social development – ensures relevance across diverse professional domains while maintaining a clear focus on healthcare improvement in India. This broad yet focused perspective makes it a valuable resource for both specialists in the field and those seeking to understand the complexities of India's healthcare challenges and solutions.

Part of the Innovations, Practice and the Future of Public Policy in India series, this open access volume will interest policy professionals, administrators, academics, and researchers in public health, healthcare economics, and development studies.

K. Srinath Reddy is a renowned cardiologist and epidemiologist and the founder and past president of the Public Health Foundation of India (PHFI).

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Rajeev Sadanandan is the former CEO of the Health System Transformation Platform, a think tank on health policy and systems in New Delhi. He had worked as the health secretary of Kerala and CEO of Rashtriya Swasthya Bima Yojana (RSBY) and in India's national social health insurance programme, in addition to holding many other positions in state and central governments. Rajeev worked for a brief stint in UNAIDS and has been a member of technical committees set up by UNAIDS and WHO. During the COVID-19 pandemic, he served as advisor to the chief minister of Kerala on the management of COVID. Rajeev, as health secretary, had overseen the transformation of the government health system, the launch of the NCD control programme, the Kerala Antimicrobial Resistance Strategic Action Plan, and the preparation of the Kerala Cancer Control Strategy. Rajeev was one of the commissioners on the Lancet Global Health Commission on Financing Primary Health Care. He is a member of the Technical Advisory Panel of the Pandemic Fund set up to help countries build resilience to future pandemics, a member of the WHO Roster of Experts for Joint External Evaluation of countries for pandemic preparedness and response, a member of the Policy-makers Forum set up by Alliance-WHO, and a founder member of the Centre for Research in Systems and Policies.

Ankur Sharan is a senior programme manager at HRIDAY (Health Related Information Dissemination Amongst Youth), with a background in medicine and a master's in public health. His work focuses on non-communicable diseases (NCDs), with a growing interest in understanding the role of commercial determinants of health (CDoH) – particularly how industries such as tobacco, alcohol, and processed foods influence health outcomes and contribute to inequities. Dr Sharan is also a dedicated advocate for mental health, LGBTQA+ rights, and inclusive social reform. Passionate about capacity building, he enjoys working with diverse, interdisciplinary teams to advance impactful public health solutions.

Abhay Shukla is a public health physician who has been working in areas of community and public health for the last three decades. He is a senior scientist at SATHI, Pune, and has membership in the Core Group on Health and Mental Health of the National Human Rights Commission (NHRC). He is a national co-convenor of Jan Swasthya Abhiyan and has led the development of rights-based community-based monitoring and planning (CBMP) of health services for public health system accountability across Maharashtra since 2007. He was centrally involved in drafting of the national 'Patients' Rights Charter', adopted by the NHRC and the Union Health Ministry. He has authored/co-authored various publications on the health system in India, including 'Dissenting Diagnosis', which exposes malpractices in the private medical sector in India. Dr Shukla is a global steering council member of the People's Health Movement. His research areas include corporatisation of healthcare, regulation of the private healthcare sector, social accountability, and co-production of public health services.

Amarjeet Sinha is a distinguished Indian Administrative Service (IAS) officer from the 1983 Bihar Cadre, with a profound commitment to transforming the lives and livelihoods of marginalised communities. Throughout his 41-year career in government service, he has played pivotal roles in designing and implementing significant national programmes, including Sarva Siksha Abhiyan (universal education), the National Rural Health Mission, and various rural development initiatives. A key highlight of his career was coordinating the Gram Swaraj Abhiyan in 2018, which delivered seven critical welfare interventions to nearly 64,000 villages with vulnerable populations. His work spans multiple sectors, including education, health, rural development, and public policy, with a particular focus on multidimensional poverty reduction. Sinha has extensive experience across different challenging terrains, having served in remote tribal districts like Singhbhum and Naxalite-affected areas like Jehanabad. He has travelled to over 95% of India's districts, promoting human development initiatives and training IAS officer trainees for three decades. An accomplished author, he has published eight books on public policy, including *An India for Everyone* and *The Last Mile – Turning Public Policy Upside Down*. He has written over 100 op-eds and contributed to numerous academic publications. Currently, a senior fellow at Centre for Social and Economic Progress, he remains actively involved in research and advisory roles with various organisations.

A St. Stephen's College alumnus who topped Delhi University, Sinha is a recipient of prestigious scholarships, including the Rhodes Scholarship. His work continues to focus on creating inclusive development strategies and improving public welfare systems.

Satish Suhas, MD, works as an assistant professor of psychiatry at NIMHANS, Bangalore. He has received more than 15 prestigious awards, including the World Psychiatric Association's Early Career Fellowship Award in 2019; Dr DLN Murthy Rao Memorial Prize for University Gold Medal, NIMHANS; and the Dr Frank Noronha Award for the best outgoing student from the Department of Psychiatry, NIMHANS. Dr Satish is a clinician scientist with a passion for academia and leadership, in addition to adult psychiatric disorders, community psychiatry, digital psychiatry, and neuromodulation.

T. Sundararaman was a professor of medicine in JIPMER, Puducherry, before he shifted to working full time with health systems strengthening and health policy – initially, for 5 years as the director of the State Health Resource Centre, Chhattisgarh, and then as the executive director of the National Health Systems Resource Centre for 7 years. He then taught public health and health systems in CSMCH in JNU for a year and served as professor and dean of the School of Health Systems Studies at TISS Mumbai for 4 years. All along he has also contributed to Peoples Health Movements, as a founder and one of its convenors.

Girija Vaidyanathan is a retired IAS officer (1981 batch) with extensive experience in public health, nutrition, and environmental governance. She served over 15 years in the health sector, including as the health secretary and mission director of the National Health Mission, where she led initiatives to improve maternal and child health, reduce mortality rates, and strengthen health systems in Tamil Nadu. As chief secretary of the state, she oversaw the Universal Health Care initiatives, including antenatal registration reforms and the establishment of health and wellness centres. Post-retirement in 2019, she remains active in health research and policy, collaborating with national and international groups. She is a professor of practice at the Indian Institute of Technology (IIT) Madras and serves on the governing bodies of organisations such as the PHFI, SCARF, Voluntary Health Services (honorary treasurer), Bala Mandir Kamaraj Trust, and the Madras Institute of Development Studies.

Divya Varma is the cofounder and director of policy and practice at Work Fair and Free, an organisation that supports domestic migrant workers in India. Divya has long years of experience in policy analysis, advocacy and research, non-profit strategy, management, and fundraising. Building on her experience in direct grassroots action in establishing and managing worker centres in high migration geographies, she has published widely on issues related to migration and informality in various academic and popular platforms. She has also made representations on the issue in several national and international fora, including at the Niti Ayog, where she was a member of

the subcommittee on labour migration. Divya is a recipient of many prestigious fellowships, including the Fulbright – Nehru Fellowship for Leadership Development and the Joint Japan World Bank Scholarship. She holds a master's degree in public administration from the Harvard Kennedy School of Government and a master's from the Institute of Rural Management, Anand.

Spanning a career over three decades, **Sandhya Venkateswaran** has engaged with a wide range of issues in the social sector, spanning health, nutrition, gender, natural resources, urban development, and others. Over the last 15 years or so, she has focused on policy issues, developing and leading the policy and advocacy portfolio in organisations such as the Bill & Melinda Gates Foundation, Global Alliance for Improved Nutrition, and CARE. She has worked with multiple grassroots campaigns and civil society organisations, as well as with government and international organisations. She has authored books, multiple articles, and other publications on varied social sector issues. She is currently a senior fellow at the Centre for Social and Economic Progress and a commissioner at the Lancet Citizens' Commission on Reimagining India's Health System.

Sanjay Zodpey is the president of the PHFI. He has served as the vice president – academics at the PHFI and led the Indian Institute of Public Health, Delhi, as its founding director. He has held joint appointments as honorary/adjunct professor in five international universities. He was recognised as an 'outstanding professor' by the Academy of Scientific and Innovative Research (AcSIR). Earlier, he had a distinguished career as a professor in the Department of Preventive and Social Medicine, Faculty in the Clinical Epidemiology Unit, and vice dean at Government Medical College, Nagpur. Prof. Zodpey is an internationally renowned epidemiologist, public health scientist, award-winning educator, and widely recognised academic leader. He was conferred 'Doctor of Science (DSc) (honoris causa)' by Datta Meghe Institute of Management Studies (DMIMS) deemed-to-be university, Wardha, and 'Doctor of Medicine (honoris causa)' by the University of Sydney. He was the national president of the Indian Association of Preventive and Social Medicine for two consecutive terms.

PREFACE TO VOLUME

Microstudies in Human Development

It is indeed a fulfilment of a dream to publish six volumes of micro-studies on human development. These cover diverse sectors such as education, health, nutrition, climate action, institutional challenges, and livelihood and skills. A part of the ongoing Innovations, Practice, and the Future of Public Policy in India series, these six volumes capture experiential learning in these sectors and subject them to rigorous academic scrutiny. A total of 192 authors who have contributed 102 chapters to these volumes are academics, civil society professionals, activists, policy makers, and practitioners. The thrust has been on capturing the processes of transformation. It has been a unique journey of partnership across sectors among the finest in their respective spheres, coming together to provide a micro insight on their work.

All the volume editors have worked tirelessly to capture the diversity of experiential learning and subject these to academic scrutiny. The six volumes represent an effort to capture human development as it is lived and practiced, and it was achieved through a series of workshops and dialogues, multiple online sessions, cross-sectoral inputs for multi-disciplinarity, and a commitment to combine experiential knowledge and academic rigour. The reflection and analysis presented across the chapters provide important lessons for the future. These volumes have been visualized as necessary reading for students of public policy. There has been a dearth of micro studies in public policy in India, and these six volumes have started to fill that major vacuum. These have also been designed in a manner to provide comprehensibility to policy makers, programme implementors, civil society initiatives, and a range of interested citizens wishing to contribute to the transformation of lives and livelihoods of the deprived.

The thrust on human development is a timely one, as India's journey to a high-income status hinges on better performance in sectors such as education, health, skills, livelihoods, and nutrition, as well as on ensuring inclusive development. It is important to understand the institutional constraints to human development to be able to address them meaningfully. These volumes are a record of the journey of committed professionals from diverse backgrounds creating knowledge from practical experience. We hope this knowledge contributed to the creation of a framework for innovations and reform across these sectors, based on the rich evidence included in these volumes.

As you read the chapters in this volume in your hand, remember that the chapters included here are part of a larger tapestry woven across five other volumes. By virtue of reading this preface, we believe you will agree with us that human development is multi-dimensional and our success in achieving it is critically dependent on our ability to connect the dots across these dimensions. The threads that link health to nutrition and education to livelihoods are not hidden. The value of the six volumes lies in making them visible at once, to enable better-informed debates and hopefully more nuanced public policy.

We sincerely hope that you find the volume useful and the chapters that follow inspire you to pick up one or more of the other five volumes produced in parallel.

Amarjeet Sinha
Ashwini Chhatre
2025

Available titles:

Changing Tides: Climate Action and Justice in India (Edited by Anjal Prakash, Marcella D'Souza)

Healthcare for All: Community Action and Public Systems for an Inclusive India (Edited by K. Srinath Reddy, Girija Vaidyanathan, Amarjeet Sinha)

Improving Learning Outcomes in Schools: Understanding the Challenge of Quality in the Indian Context (Edited by N.V. Varghese, Vrinda Sarup, Anuradha De, Amarjeet Sinha)

Improving Nutritional Outcomes: Connecting the Dots through Grounded Action (Edited by Vandana Prasad, Arti Ahuja)

Pathways to Rural Prosperity: Livelihood Interventions and Transformation in India (Edited by Ved Arya, Ayushii Balutia, Ashwini Chhatre and Nivedita Narain)

Reimagining Institutions: Collaborative Pathways to Social Development in India (Edited by Pushpinder Puniha, Aarushi Jain)

PREFACE

In the pursuit of becoming a developed nation, India's most critical challenge lies in transforming its demographic potential into a dividend through strategic investments in human capital. This volume on *Healthcare for All* emerges at a pivotal moment when the lessons from the COVID-19 pandemic have underscored the indispensable value of robust public health systems and universal healthcare access.

The journey of Indian healthcare presents a complex narrative of remarkable achievements alongside persistent challenges. While we celebrate significant improvements in maternal and infant mortality rates and successful interventions against communicable diseases, we cannot overlook the stubborn persistence of chronic ailments (non-communicable diseases) that continue to undermine our human capital potential.

This collection of microstudies offers a multidimensional examination of India's healthcare landscape through four thematic sections: perspectives on universal healthcare challenges, state-level implementation experiences, human resource development for healthcare, and interventions across diverse sectors affecting health outcomes. Our approach deliberately prioritises process-oriented, community-centred solutions that recognise the interconnectedness of human development sectors.

Each chapter represents rigorous academic scrutiny of experiential learning, constructing what we term a 'theory of practice' to inform evidence-based policymaking. The volume makes a compelling case for strengthening public healthcare systems while acknowledging the supplementary role of private capacity, particularly in the context of information asymmetry and market failures in healthcare delivery.

As editors, we have curated these contributions with the explicit intent to influence practice and provide actionable insights for policymakers at all governance levels. Our focus on decentralised community action and citizen-centric interventions to address last-mile challenges reflects our conviction that healthcare for all remains unattainable without policies that place people at their core.

We offer this volume as both a scholarly resource and a practical guide for those committed to making universal healthcare a reality in India – a critical imperative for our nation’s sustainable development and the dignity of all our citizens.

ACKNOWLEDGEMENTS

This volume is the result of sustained collaboration, insightful contributions, and dedicated support from a diverse group of individuals and institutions. We are deeply grateful to all the authors for their commitment to the volume and for sharing their invaluable expertise on the institutional dimensions of social development.

We acknowledge the support of the Bharti Institute of Public Policy at the Indian School of Business (ISB) for facilitating this volume. This volume benefited from research and coordination support provided by Dr Motika Sinha Rymbai through her research assistance and coordination with multiple authors and from her overall support. Copyediting support was provided by Mr Vineet R. Bhatt, while publication management support was provided by Ms Nimisha Jain. Graphic design support was ably handled by Ms Kanika Rana. We would also like to thank Mr Srikanta Kumar Naik for providing grant-related support and Ms Himani Gupta and Ms Jagriti Chhabra, who provided vital logistical support throughout the development of this volume. We also extend our appreciation to other team members of the department who worked behind the scenes, providing documentation and administrative support. Additionally, we appreciate the contributions of the entire team to the peer-review authors' workshop, which played a crucial role in refining the content of the chapters. Their collective efforts were essential to the successful completion of this volume.

We are especially grateful for the guidance and mentorship of Prof. Ashwini Chhatre, Mr Amarjeet Sinha, Prof. Anjal Prakash, and Dr Aarushi Jain – whose insights and support were instrumental in shaping the direction and quality of this volume. We also express our sincere thanks to the Bill & Melinda Gates Foundation, whose generous support made this volume a reality.

Finally, we express our sincere gratitude to all those who contributed, directly or indirectly, to shaping this work. The insights, discussions, and cooperation from various quarters have enriched this book and enabled us to bring forth a nuanced perspective on reimagining institutions through collaborative pathways to social development in India.

1

MAKING HEALTHCARE FOR ALL A REALITY

Addressing Key Challenges

K. Srinath Reddy, Girija Vaidyanathan, and Amarjeet Sinha

Introduction

Human capital holds the key to sustainable economic progress. The greatest risk to India's quest in becoming a developed nation lies in converting demography into a dividend through priority to human capital that raises productivity and incomes and enables lives of dignity to all. The World Bank defines human capital as 'the knowledge, skills and health that people invest in and accumulate throughout their lives, enabling them to realise their potential as productive members of society'. Health, nutrition, and survival are all intricately linked to human capital.

In the decades since independence, the country has made major strides in improving the health status of its citizens. Vital indicators such as maternal mortality rate (MMR) and infant mortality rate (IMR) have decreased substantially because of various programmes in the area of maternal and child health. Communicable diseases have also been tackled by systematic public health interventions such as immunisation and investments in related areas like clean water and sanitation. The country has also been appreciated for its progress in handling the HIV epidemic and the vaccine programme to control COVID-19.

Studies have rightly pointed out the role undernutrition and stunting play in irreversibly damaging the learning abilities of a child. A fifteen-point loss in intelligence quotient and a one-fourth reduction in productivity in wage-earning years have been found to be the consequences of persistent stunting. Despite significant progress in improving health indicators in India, especially since the National Rural Health Mission in 2005, India has not managed to bring down stunting and underweight infants to less than a third of the infant population.

Multiple challenges still remain. The changing demographic profile of our population, with the proportion of elderly going up in many states, has further complicated the non-communicable disease (NCD) epidemic, with specific reference to diabetes and hypertension. The persistence of anaemia in women and children is another major health challenge that has eluded large-scale improvement. In fact, the National Family Health Survey in its fifth round (2019–2021) actually found evidence of increase in the incidence of anaemia in many states. A complete volume in this series is focused on microstudies on nutrition in Indian states, given its key importance to making healthcare for all a reality.

The impact of COVID on human development was also evident in the absence of appropriate public health preparedness to handle pandemics. Schools shut, economic activity closed, per capita gross national income reduced, and life expectancy plummeted, affecting human capital in myriad ways. The consequences of COVID, including the learning poverty, are reason enough to focus on building a strong public health system to tackle pandemics. This will not only help insulate India from the debilitating impact of future pandemics but will also play a major role in taking comprehensive primary healthcare to the entire population. Public health requires major investment in human resource capacity, infrastructure, and processes. It also requires a deeper understanding of the processes at play. Public expenditure on health is a crucial intervention that needs attention, alongside innovations in governance and community accountability.

While planning for healthcare for all, it is important to turn the politics of knowledge upside down to enable a better appreciation of community-centred public policy for sustainable universal healthcare systems. Advancing publicness in the healthcare system is also an important theme, especially when private sector initiatives in health and markets have exposed the pitfalls of information asymmetry. The need to craft credible public systems of healthcare requires reiteration, especially after COVID when it was realised why public systems matter in tackling challenges of public health and in providing quality primary healthcare for all. It is time to go back to some arguments of Nobel laureate Kenneth Arrow on how medical services with information asymmetry lead to market failures. The rationale for a functional and effective public system of care comes from this basic economic principle. Private capacity for secondary and tertiary care can supplement the efforts of the public system. It can also facilitate better preparedness for testing and diagnostics.

The Four Sections in the Volume

This volume on ‘Healthcare for All’ is an effort to understand the challenges of public health through lessons from sector reviews and microstudies. All

chapters attempt to understand the size of the problem of taking healthcare to all in India today and the possible pathways to tackle the challenges. Starting with a thematic section articulating the perspectives regarding the key challenges to healthcare for all in India, the volume delves deep into microstudies across the country to understand what lessons the experience of states offer.

The perspective section shares the challenges of financing healthcare as also the need for crafting credible public systems. It factors the post-COVID world in making suggestions for universal health coverage (UHC). A chapter in the section raises the challenges of publicness in health systems and lay person's perspectives on integrated healthcare. It addresses the fundamental issues of the design of public systems of healthcare from people's perspective. It also constructs knowledge from people's perspective and diversity. This section also considers the relevant global lessons for India in crafting its public system.

We have made an attempt, through the microstudies, to construct a theory of practice that can add value to policymaking and programme implementation. Many policy design issues are also handled in this section that try to build knowledge through rigorous academic scrutiny of experiential learning. The experience of states in implementing comprehensive primary healthcare and innovating within the central government programmes, such as health and wellness centres (HWC), Pradhan Mantri *Jan Arogya Yojana* (PMJAY), and community action for health, is discussed. This section discusses initiatives at the state level in managing pandemics.

The third section addresses a critical gap in taking healthcare for all – human resources for health. Besides an overview of needs, this section examines efforts at capacity building and lessons from investing in the Accredited Social Health Activist (ASHA) programme to develop community health workers. It also provides two interesting case studies of building capacity in public health at the field level and in institution building at the national level.

The fourth section analyses a range of interventions in diverse sectors to understand how best we can address the challenges of quality healthcare for all. From discussing the interrelationship of air pollution and health, to a community-based approach to mental health challenges, to the challenges of urban health, to addressing commercial determinants of health, to the landscape of India's pharmaceutical sector, we have made an effort to understand the best course of action in these varied fields in a diverse nation like ours.

Every chapter in this book builds on the central theme of making healthcare for all a reality by addressing the challenges effectively through community connect, innovations, technology, and human resources. The other volumes in this series of microstudies in human development also study the wider determinants of health, the interconnectedness of human development

sectors, experiential learning, and global good practices. Without compromising on the academic rigour, every chapter in this volume has endeavoured to enrich the discourse around India's public health challenges. Together they make a very loud and clear plea to policymakers to pursue an evidence-based approach in the quest for healthcare for all. The volume aims to sensitise policymakers, including those in the finance department, to the dangers of underinvestment in health and the debilitating consequences. The need for decentralised community action flows from the microstudies and experiential learning shared in the chapters.

While studying the sectors in healthcare, the chapters are deeply cognisant of the interconnectedness of human development sectors like education, health, nutrition, skills, and livelihoods. Every chapter alludes to decentralised community action and its role in improving governance of institutions. The chapters offer microlessons for action. Besides building a body of knowledge, these chapters are also an effort at influencing policy through evidence-based studies and recommendations. The intent is to be impactful in determining which way India's health system is headed.

The volume chose to focus on processes of community action. It tries to learn from experiential learning across sectors and subjects it to rigorous academic scrutiny. The health sector is vast, and it is difficult for one volume to fully address all the issues. We therefore chose to focus on the post-COVID world posing specific challenges for universal health coverage. We also chose to learn from microstudies that captured the learning from local initiatives and national programmes. The volume also builds a very strong case for public systems in health, given the challenges of information asymmetry and market failures.

The thrust on processes is clear in debates on publicness in the health system and on understanding the experiences of community action by civil society for improving the quality of health services in public systems. Likewise, the chapter on migrants and their health challenges tries to delve deep into a sector on which not enough academic research has been done so far. The chapter on mental health takes into account some of the experiences during and after the COVID pandemic and how the health system needs to expand its services with home care and community action for mental health challenges.

The chapters on health insurance as a delivery mechanism brings out challenges that are faced at the last mile, from the perspective of a deprived household who has been given the right to seek cashless secondary and tertiary care from a listed health facility, public or private. It brings out nuances that need attention and mid-course changes.

India's unsatisfactory progress is highlighted by failures in public goods like a clean environment. The chapter on air pollution and health dives deep to understand the relationship and suggest the way forward. The editors have

tried to focus on key issues in the context of India's public health challenges, especially in a post-COVID world.

The editors were absolutely clear that this volume cannot be exhaustive, covering all sections of healthcare for all. It purposively chose to focus on processes, communities, and the last mile challenges across sectors. Every chapter focuses on people-centric interventions for public health. Healthcare for all is not achievable unless citizen-centric policies and interventions that are evidence based become the central focus. We wanted this volume to provide answers to many policy-level changes that the central and state governments face in securing healthcare for all.

The Process

In October 2023, the first book in this series *Innovations, Practice and the Future of Public Policy in India* was published. The Bharti Institute of Public Policy, Indian School of Business, recognised that the field of public policy is broad, interdisciplinary, and multifaceted and required constant communication among stakeholders, including academics, practitioners, policymakers, and the general public. The books in this series focus primarily on the voices of academics and practitioners and offer crucial insights for corrective action and the creation of more comprehensive policy designs. By critically analysing cases and policy designs, these volumes offer insights into the feasibility of innovative models where they meet practice in the pursuit of public good. Amarjeet Sinha's *The Last Mile – Turning Public Policy Upside Down* was the first in this series of books. The book explores the gaps and dichotomy between drafted policies and their implementation, and the last mile challenges that often make public services inaccessible to the poorest and most vulnerable sections of the society. It provides an in-depth overview of the dynamics between communities, research and consultation, and the implementation of policies for development. It views the health sector from the lens of the last mile challenges.

The deliberations around this volume on 'Healthcare for All' began at the Public Policy Dialogue, organised in October 2023 by the Bharti Institute of Public Policy. The intent was to allow policymakers, academics, and practitioners to capture experiential learning and subject it to rigorous academic scrutiny, to understand the challenges of quality better. Through a series of workshops thereafter, and with an extremely participatory process of knowledge cafes, a sincere effort was made to understand the challenges to quality healthcare for all, and to make it a truly team and collective effort. Every participating author got an opportunity to comment on every other author's chapter. Our intent was to develop a volume of microstudies that scrutinise each factor that could explain our current health scenario. Besides providing policy advice to central, state, and local governments, the intent was

to prepare a relevant volume of microstudies that students of public policy could learn from. While we did not wish to compromise on the academic rigour, we were very clear that the objective was to influence practice.

We invited distinguished academics, practitioners, and policymakers to our deliberations to develop a shared understanding on where the challenges lie and what could be done to address them. While we ambitiously tried to get nearly 22 contributors together, we succeeded in 19 of them contributing through their participation and chapters.

Description of the Chapters

Dr K. Srinath Reddy's chapter 'Envisioning a Healthy India: Learning from the Past and Looking to the Future' lays out a public health roadmap that can tackle the challenges likely to compromise our human capital. The chapter advocates a multi-institutional, multidisciplinary collaboration to advance science and technology for the benefit of human health. Three reasons justify the need for higher levels of investment: (1) focus on health problems which are context relevant; (2) greater self-reliance in view of the fragility of global supply chains (as seen during the COVID-19 pandemic) and barriers to knowledge and technology transfer from high-income countries, erecting barriers of 'intellectual property rights'; and (3) the rich geographic, socio-demographic, cultural, linguistic, and dietary diversity of India provides a fertile ground for a wide range of gene-environmental interactions whose study can enrich global science and fill many gaps in our understanding of health and well-being. Such advancement of knowledge and further translation into impactful and affordable applications can benefit all of humankind.

Amarjeet Sinha's chapter 'Key Gaps in Healthcare for All – Why Public Systems Matter' makes a very strong case for investing in crafting credible public systems of healthcare. Starting with the economic argument developed by Kenneth Arrow on why public systems matter in the health sector, this chapter explores the genesis of interstate disparities in healthcare, investment in medical and nursing education, and evolution of the healthcare industry in India. Highlighting the importance of decentralised community action, the chapter presents experiences under the National Rural Health Mission in working through community institutions. The chapter examines the role of the private sector in pursuing public health goals and emphasises the need for a public health cadre and a public health thrust that ensure quality healthcare for all. Considering the inadequate attention given to urban health at a time when India's urbanisation is likely to gather pace, the challenges of urban health are examined in some detail. The chapter raises the issue of public expenditure on health and presents a detailed examination of the lessons from the National Rural Health Mission for

public policymaking in health. Finally, the key gaps in healthcare for all are identified, and in conclusion, the chapter identifies key gaps in healthcare for all and concludes by emphasising the need for crafting a credible public system for healthcare. There is no going away from a convergent human development approach and a decentralised community action with professionals to make a real difference.

Dr Sandhya Venkateswaran's chapter 'Global Insights on Comprehensive Primary Healthcare' begins by taking stock of India's position on physical and human infrastructure for healthcare for all. A patient-initiated reactive health system, limited system responsibility for the health of the population, the absence of coordination between the public and the private sector, weak institutions for managing financing, and an underfunded input-based system are some key gaps this chapter identifies. Thereafter, it examines how countries like Turkey, Brazil, Thailand, India, and Costa Rica handled challenges of primary healthcare. The chapter goes on to identify the innovations in the workforce for primary healthcare delivery. It articulates factors that enhanced quality and accountability and aims to unfathom performance incentives, provider regulation, community monitoring, and governance and institutional mechanisms to manage quality as the key interventions for effectiveness. The chapter examines health financing and the possible pathways for India, learning from the good practices of countries that seem to have handled the challenges of quality healthcare for all better.

Dr Ritu Priya's chapter 'Turning the Politics of Knowledge Upside Down: Community-Centred Public Policy for Sustainable Universal Healthcare System' raises fundamental issues on how the healthcare system needs to be constructed considering people's perceptions, knowledge, and practices. It examines the crisis of contemporary healthcare from a politics of knowledge perspective. The chapter emphasises on the need to understand the perceptions of the community in designing interventions. It, thereafter, proceeds to analyse the experiences of communitisation/community participation initiatives in India and makes a detailed assessment of some efforts under the National Rural Health Mission and the National AIDS Control Programme. The chapter examines the recommendations of the 2018 Expert Committee of Tribal Health. It scrutinises community participation in the Ayushman Bharat Health and Wellness Centres. The chapter brings out the shared perceptions of healthcare across all population: healthcare that is trustworthy and ethical, effective and safe, and affordable and convenient to access; importance of healthcare providers who listen to the patient's experience of their body and illness; healthcare providers guided by patient's interest; and healthcare providers who treat their patients with respect and maintain their dignity. The chapter finally advocates the need for people's perception about health to feature in a dialogue with biomedical and technocratic perspectives.

Dr A.K. Shiva Kumar's 'Towards Realising the Goal of Universal Health Coverage' highlights three key aspects of India's approach to UHC that have remained limiting factors. Firstly, the insufficient attention to primary healthcare has resulted in many parts of the country still falling short of universal access. Secondly, the reliance on medical insurance schemes by the government to provide financial protection to poor and vulnerable populations is fundamentally flawed. This approach excludes a large segment of the population that also needs affordable and reliable healthcare. Thirdly, the chronic underinvestment on health in the public sector poses a major obstacle. Unfortunately, the underfunding of health by the state has meant that the much-needed government healthcare, especially in rural and remote areas, is not available to a vast majority of the population. The low levels of public spending on health has also led to the unbridled expansion of an unregulated 'private sector' largely providing health services of dubious quality. Moving forward, central and state governments should prioritise health, especially primary healthcare, by significantly increasing public investment. There is no alternative for the government but to spend more and spend better to enhance the public sector's capacity to meet UHC goals. Efforts should include empowering individuals by expanding access to primary healthcare and strengthening local health delivery systems, supported by the decentralisation of funds to the states. Expansion of government health services should be paired with efforts to regulate and curb the unchecked growth of the private healthcare sector. A new regulatory framework is needed to ensure that the private sector contributes responsibly to UHC. Moreover, India should transition away from an insurance model that only provides financial protection for the poor and vulnerable and move towards a tax-funded, public sector-led system that offers affordable, quality healthcare to all citizens. These fiscal and governance reforms are within the reach of a country with India's resources. A stronger political will and resolve to advance health well beyond current efforts are required.

Dr V.R. Muraleedharan, Dr Girija Vaidyanathan, and Dr Rajesh M's chapter on 'Building Ayushman Bharat – Health and Wellness Centres – Early Lessons with Community Primary Health Centre in Tamil Nadu – 2015–2022' attempts to throw light on the significance of strengthening the primary healthcare system in reducing barriers to accessing primary care and thereby reducing the financial burden on those (especially the poor) who seek care from public primary healthcare facilities, namely, through health sub-centres. This chapter discusses a pilot initiative by the Tamil Nadu government to strengthen the health sub-centres at the lowest level of health service delivery as a step towards providing comprehensive primary healthcare (CPHC) for achieving universal healthcare. Started in 2016–2017 in three blocks in the state, this initiative preceded the launch of HWCs by the government of India in 2018. This chapter is based on three primary

surveys carried out in the three pilot blocks. This chapter will also incorporate results of another primary survey of health sub-centres and households in the districts of Cuddalore and Virudhunagar, carried out to evaluate the impact of UHC and comparing the results with non-UHC blocks during 2022. The outcome of the HWC pilot, studied and documented by rigorous field visits, showed that there was a significant change in improving access to primary care at the sub-centre level, reducing the overall dependence on private providers and a substantial fall in out-of-pocket expenditure (OOPE) for the users. This HWC model developed by the state underwent many design changes due to changing political priorities and the directives of the central government. Moreover, the provision of primary healthcare was significantly affected by the COVID-19 pandemic of 2020–2022. The study concluded that by increasing the awareness of people about the HWCs, providing the necessary infrastructure and drugs, building a population-based registry, and linking the state government scheme for door delivery of drugs to the HWCs fully, there was potential to further improve the performance of the HWCs.

Rajeev Sadanandan's chapter 'Learning from the Past: Kerala's Preparedness for Future Pandemics' provides experiential insights into better management of health emergencies, based on the hands-on experience of Kerala. The factors that precipitated the COVID-19 crisis could create new health emergencies of a similar or even larger magnitude in the future. It is, therefore, necessary to identify the factors that need strengthening. The chapter argues that preparedness is expensive, but not doing it can lead to a far greater disruption of lives and livelihoods of people and mortality. The state needs to develop a roadmap for building capacity and systems to respond to crises. The chapter begins by listing the advantages of Kerala's public health system that is already in place and functional. It identifies areas where Kerala's response had faltered – lack of a dedicated surveillance system for emerging and re-emerging pathogens; insufficient steps to prevent hospital-acquired infections; lack of facilities and dedicated teams for supportive care of acute and infectious diseases; poor data management and analysis to feed into action; and an action plan for assessing and addressing potential threats. The chapter identifies key preparatory issues in surveillance, laboratory system, infection prevention and control, zoonotic infectious diseases and food safety, human resources, and health emergency management. It re-emphasises health services provision and risk communication and community engagement. This chapter is a very useful guide to public health policy-makers and human resources to improve their preparedness for public health emergencies.

Dr Poonam Muttreja's chapter 'Bringing "the Public into Public Health": Learnings from India's Community Action for Health Programme, National Health Mission' recounts the journey of community monitoring by civil

society organisations, in improving the quality of health services for people. This chapter presents the experience of Community Action for Health (CAH) and revisits the evolution of communitisation as a strategy. It unpacks the implementation of the CAH programme by highlighting its key outcomes, challenges, learnings, and the way forward. It reflects on the 18-year journey of CAH (2005–2023) within the larger National Health Mission (NHM) framework, including the evolution, institutionalisation, and scaling up. The challenges and opportunities for the way forward have been identified and analysed for communitisation. The chapter identifies the enabling factors, challenges and adaptations, scaling up processes, and lessons from scaling up, in pursuing CAH. It provides microlevel insights into state- and NGO-specific contexts, to suggest what works and what does not. A review of CAH in Maharashtra, Karnataka, and Madhya Pradesh is provided for a better appreciation of the challenges. Useful insights on working with institutions of local governments at the gram panchayat level are provided. This chapter finds evidence that CAH can bring distinctive value addition to health system strengthening by serving as a voice for citizens and communities, improving communication and transparency with a wider network of stakeholders, and offering an independent perspective on progress. All of this improves health outcomes, enhances accountability and good governance of health services, and eventually contributes to saving and improving lives.

Sanjay Kaul and Nikita Pandey's chapter, 'Making Government-Funded Health Insurance an Effective Strategy for Universal Health Coverage' examines the experience of health insurance in India. An analysis of the performance of the Pradhan Mantri Jan Arogya Yojana (PMJAY) and state government-funded health insurance schemes (GFHISs) under implementation suggests the needed policy changes in their operations to meet UHC goal. The PM-JAY has emerged as a major health sector programme, aiming to provide cashless access to healthcare services to 12 crore (120 million) poor and vulnerable families in both private and public health facilities. The review shows several systemic weaknesses and policy issues in GFHIS implementation. The chapter concludes by expressing the need for key policy changes and reforms even as GFHISs hold promise in the journey towards UHC. This would require changes in the operational structure of PMJAY and in the erstwhile state insurance schemes that it has subsumed, to provide primacy to public hospitals to make the scheme effective and fiscally sustainable. The chapter recommends enhancement in health budgets; priority to public hospitals; priority to vulnerable groups; focus on backward regions and reduction in OOPe on health; promotion of a competitive health insurance market and measures such as reservation of treatments; and 'ringfencing' to truly reflect the correct understanding of 'strategic purchasing' in health policy.

Dr Pavitra Mohan, Ashmita Gulechha, and Divya Varma's chapter 'Improving Health and Well-Being of Migrants in India' raises the critical

challenge of meeting the comprehensive health needs of migrants. Migration, often circular and seasonal, is a lived reality for millions of people, often the most marginalised. While migration offers an opportunity to come out of vulnerability, it also creates circumstances highly adverse for them and their family's health and well-being. The intersection of four factors – inadequate nutrition, poor housing, hazardous occupations, and lack of migrant-responsive healthcare – is responsible for the poor health of the migrants. Health, housing, and nutrition policies and schemes are either blind to the needs of the migrants or are insufficiently implemented so as to reach the most vulnerable. There are examples of policies, programmes, and models that are migrant-responsive in each of these domains of healthcare, housing, occupational safety, and nutrition, some of which are presented here. It is now imperative on policymakers, programme managers, civil society, and industry to take these examples to scale and make inclusive spaces for living, healthcare, and work for all migrants. There is also an urgent need for a policy on migrants' health.

Dr Garima's chapter deals with 'Reflections from Two Decades of ASHA Programme Implementation'. The ASHAs, perhaps the only activists to be part of large-scale public programmes, have been recognised nationally and internationally for the positive contribution they have made under the NHM, in interventions for primary healthcare, particularly for maternal, newborn, and child health. However, little is known about the evolution of the ASHA programme to meet the emerging public health challenges. This chapter focuses on the evolution of the programme and the challenges it faces in the future. It commends the programme for practitioner-led learning from the field and field reviews leading to policy changes. Many innovations were incorporated into the policy guidelines. Section 2 of this chapter provides insights into the section of ASHAs, their training and competencies, support and supervision, programme financing, remuneration, and, finally, institutional arrangements of the programme. Training skills and competencies in the various ASHA training modules and the rationale for it are explained in some detail. The chapter provides insights into the evaluation of the programme that establish success of the innovation. The chapter concludes with an assessment of where the programme is and where it may be headed. It provides actionable points of priority for policymakers and practitioners. Researchers will find it useful, especially those who wish to understand how such a large programme was made impactful, nationwide. There are important lessons for public health.

Dr T. Sundararaman's chapter 'Building Capacity in Public Health Systems – Experience of the National Health System Resource Centre and the Mitatin Programme' provides an account of large-scale experiments in building capacity in public systems. The chapter begins by defining public health systems as a complex adaptive system that has several components and parts

in relationship with each other and are in constant interaction. The chapter brings out the theoretical foundation of institutional and organisational capacity. The Mitandin programme of Chhattisgarh and the National Health System Resource Centre under the National Rural Health Mission provided specific opportunities for institutional crafting and capacity development. This chapter captures the essential features of how this was attempted to be impactful with states and districts. Although descriptive, a nuanced understanding of institutional development and capacity is well captured, and challenges in its crafting and development of its work plan are brought out. The chapter argues that a better way to approach health system strengthening is to conceptualise it as a process of building the institutional capacity of the health systems to deliver the required services while keeping their nature as public good intact.

Dr Sanjay Zodpey and Dr Anup Karan's chapter 'Strengthening the Health Workforce in India: Challenges and Priorities for Achieving Universal Healthcare' undertakes a comprehensive review of the human resource needs and availability across the states of India. This chapter, using Registration Councils' and Periodic Labour Force Survey data, presents the latest evidence on availability, accessibility, and quality of health workforce in India and identifies persisting and emerging challenges and priority areas for policy implications. The chapter highlights that while the number of health workforce in India falls short of the recommended levels for achieving UHC, quality of health workforce remains an important concern, particularly in rural areas, in the private sector, and in several less developed states. Public health system needs to enhance its capacity to absorb an increased number of health workforce. Although India has one of the largest medical and nursing education system in the world, the number of annual medical and nursing graduates per 100,000 persons in India is much lower than that in OECD and in many South Asian countries. An increased investment in the medical and nursing education system, along with a policy framework to improve the quality of health workforce, is required to strengthen the availability, accessibility, and quality of health workforce.

Dr Mahaveer Golecha and Dr Dileep Mavalankar's chapter 'Healthcare for All – Challenges in Urban Areas' highlights the sense of urgency in providing better quality healthcare in urban areas, given the fast pace of urbanisation and the rising challenges in meeting the health needs of the urban poor. A major cause for alarm is the growing disparity in healthcare access experienced by the urban poor, who currently make up nearly 30% of the country's impoverished population. The fragmented, weak, and poorly governed urban health system and the numerous vulnerabilities faced by urban populations contribute significantly to the inadequate accessibility of health services. The National Urban Health Mission programme was a significant step in organising urban healthcare services and acknowledging the unique

needs of the urban population. However, its implementation in urban areas has been patchy and has not effectively enhanced the availability, accessibility, and affordability of health services. The chapter discusses the challenges of accessing healthcare in urban areas and the possible solutions towards achieving healthcare for all through effective and efficient urban healthcare in India. Practical recommendations and approaches to tackle the complex urban health scenario to achieve universal health coverage in India are detailed in the chapter.

Dr Monika Arora, Dr Shalini Bassi and Dr Ankur Sharan's chapter 'Addressing Commercial Determinants of Health to Promote Health for All' comprehensively examines the impact of commercial determinants of health (CDoH) on public health globally and in the South East Asia region, with a focus on India. The detrimental impact of the current economic system concerning CDoH is increasingly evident. The review explains the pathways and adverse impacts of tobacco, alcohol, and ultra-processed foods on accelerating the NCD burden globally and in low-and middle-income countries (LMICs). The findings underscore the importance of a multifaceted approach to addressing CDoH.

Dr Preeti Kumar's chapter 'Evolving Landscape of India's Pharmaceutical Sector' scrutinises the challenges in access to medicines. Despite recent attempts by the government to promote generics, the Indian medicine market continues to be dominated by branded generics. Affordability is a major issue warranting government intervention in price regulation. Other barriers include inappropriate use, especially in the context of antibiotics amidst increasing antimicrobial resistance. Quality issues indicate the need for more stringent regulation and enforcement of medicines and their use.

Addressing the barriers to medicine access would require concerted policy efforts. Increasing public spending on healthcare in general and medicines in particular is required to further reduce the dependence on out-of-pocket spending. While the government has plans to expand the number of *Jan Aushadhi* stores from the existing 10,000–25,000, in comparison to the number of private pharmacies in the country, this number is still very low. Further expansion is, therefore, the need of the hour to promote the use of generics and reducing expenditure. Encouraging generic prescribing by the clinicians is equally important for bringing down medicine expenditure further and improving access.

Dr Abhay Shukla's chapter 'Moving Beyond Corporatisation: Advancing Publicness in Healthcare Systems' raises concerns about a market- and for-profit-motivated thrust in a sector of public good like primary healthcare. It makes a strong case for restoring the publicness of the healthcare system and begins by taking a comprehensive view of actors, sectors, and influencers involved in India's healthcare ecosystem. The chapter prioritises the social lens in terms of social embeddedness versus social alienation of healthcare.

Using data, it points out the growing financialisation and expanding corporatisation reshaping private healthcare. It questions the hyper-centralisation of public health systems and brings in the notion of contained versus universal and comprehensive healthcare. It raises the issue of conflict between the social and the profit logic in partnerships. The chapter makes a case of shift from a market-centred engagement to a public-centred engagement and identifies normative criteria for evaluating public service provisioning. For making people-centred choices, the chapter makes a case for assessing publicness through improving public healthcare services, evaluating market-oriented reforms, scrutinising public–private partnerships, and analysing and navigating universal health coverage/universal healthcare models. The framework for advancing publicness can help show the directions that need to be consistently followed during further health system transformation.

Dr Bhargav Krishna and Dr Nazneen's chapter 'Air Pollution: Public Health Impacts and Policy Measures' examines the pervasive issues of air pollution as a formidable public health concern globally, with a profound impact in a country like India. Over the past several years, the burden of diseases attributed to air pollution has increased significantly, underscoring the need for effective action at all levels. The burden absorbed by the health sector in managing conditions associated with air pollution is only likely to increase with rapid urbanisation and industrialisation. This necessitates a review of our current policy instruments' capability in effectively managing the health harms generated by air pollution, and centring health much more fundamentally in air pollution policymaking. In this, the health sector can play a crucial role not only as a moral arbiter but also as an actor that raises awareness to generate public demand for action, creates data architectures to support research and development, and builds the capacity of healthcare providers and frontline health workers to better tackle ailments linked to air pollution. Simultaneously, however, air pollution is an inter-sectoral challenge, and addressing it requires developing appropriate frameworks to support inter-sectoral action. In this, health can play a key role as the basis for formulating, deploying, and evaluating actions in a way that it currently does not. Making health the basis for action has the potential to unlock compounding effects, viz., economic social and environmental goals, and India must embrace this policy frame at the current inflection point to ensure future generations achieve their full potential, absent the health impacts of air pollution.

Dr Pratima Murthy and Dr Satish Suhas's chapter 'The Future of Mental Healthcare in India: Policy Innovations with a Community Focus' is a comprehensive effort to understand the attempts made so far, the gaps and the solutions. It concludes that a comprehensive approach to understanding mental disorders necessitates a convergence of psychiatric, biological, social, and ecological perspectives. An integrated approach that synthesises insights

from biological sciences with social and ecological understanding is essential. Such a holistic perspective not only acknowledges the multifaceted nature of mental disorders but also promotes more effective and comprehensive strategies for prevention, intervention, and treatment.

If this volume raises relevant policy issues and implementation challenges in the post-COVID world and the Indian context, it would have served its purpose. The volume should also help in a better understanding of the need to craft credible public systems of healthcare.



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PART I

Overview – Perspectives on Public Health



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2

ENVISIONING A HEALTHY INDIA

Learning from the Past and Looking to the Future

K. Srinath Reddy

I. Introduction

As the world's most populous country pursues the goal of becoming a fully developed country by 2047, at 100 years of its postcolonial journey as an independent nation, health of her population has to be the propellant of progress rather than a drag on its engines of economic growth and social development. Apart from being an economic imperative, health is also an inalienable human right that is recognised, respected, protected, and promoted by enlightened societies as a hallmark of civilisational advance. Therefore, India has to place health as the centrepiece of her design for development.

The metrics to measure development have most often been constructed around indices of economic strength of countries – overall gross domestic product (GDP) and per capita GDP. These measures can mask huge gaps in income and ignore their impact on health. Attempts have been made to factor this in, by extending the economic metrics to measures of absolute 'income poverty'. Combining several indices of human development gave rise to the multidimensional poverty index, which has intrinsic appeal but is prone to measurement errors due to methodological challenges, especially when sourced datasets are incomplete or inaccurate.

Health has many social, economic, and environmental determinants. Several of them feature across the band of sustainable development goals (SDGs). Health and well-being (SDG 3) are related to most of the other goals, often bidirectionally. Indeed, health is the best summative indicator of success across all SDGs, since progress on poverty alleviation, nutrition security, education, environmental protection, gender equity, sustainable urban

development, energy transition, and conflict resolution will protect and promote the health of populations.

Health itself has many indicators, distributed across different stages of the life course and measuring different disease conditions and their associated disabilities. Overall, life expectancy at birth (LE) is a measure of a population's health status. However, a person's health may not sustain itself throughout those years, due to diseases that impose disability. Healthy life expectancy (HLE) is a measure that captures the years of life spent in a state of good health and well-being. This measure distils the cumulative impact of multiple biological and social determinants on the health of all members of a society. This cluster of determinants that shape, sharpen, or shatter health includes, but is not restricted to, economic development.

While several websites give different figures for HLE or health-adjusted life expectancy (HALE), an official website of the government of India reports an LE of 70.2 years and a HALE of 60.3 years for India in 2020. Even while the figures provided in other websites (WHO Worldometer) differ slightly, there is a considerable gap of nearly a decade between LE and HLE/HALE, which needs bridging.

It would be appropriate, therefore, to use HLE as an aggregate measure of national development. To add an essential equity dimension, we should also measure and report disaggregated estimates across different socio-demographic groups in the country. Should we aim for an HLE of 75 years by 2047 or earlier, at the population level, with gaps between different socio-demographic groups of less than 10 years? This could be a true test of the country to attaining the status of a developed country, which celebrates health of the whole population and salutes health equity within the social spectrum of India that is Bharat.

II. Insights from the Past

Several key learnings have emerged from the study of India's health systems and outcomes over the past 76 years.

- Commitment to public sector-led healthcare, although limited in scale and modest in quality, provided for health equity across social classes. However, low levels of public financing led to a dwindling presence and decay in the quality of public sector health services in many states. This was compounded by poor governance.
- States that invested in building efficient public healthcare systems fared better than others in key health indicators. These were mostly the states of southern India, followed by western India. Later, Himachal Pradesh demonstrated considerable progress among the northern states.

- States that laid greater emphasis on strengthening public sector-provided primary and secondary healthcare services had the best health indicators. They could also more efficiently utilise opportunities provided by the larger emergence of private sector-led services in tertiary care.
- Private sector healthcare providers have been heterogeneous in composition and skewed in distribution. Organised private sector has gained prominence in the form of large multi-speciality corporate hospitals located in metros, and is mostly absent in rural areas and small towns.
- States that performed better on social determinants, such as education, gender equity, social harmony, lower levels of income disparity, nutrition security, potable water supply, electricity, road connectivity, and livelihoods, fared better on health indicators. Kerala is a standout example here. Scheduled tribes and scheduled castes faced many barriers to achieve good health and access healthcare.
- Public health services must be strong if many infectious diseases have to be controlled and national health programmes effectively delivered. Tamil Nadu, which maintained a distinct public health cadre even after independence, performed well in designing and delivering health services efficiently across the state.
- Health workforce shortages have weakened health system performance ever since independence. In recent decades, this problem has worsened because of population growth; suboptimal production of doctors, nurses, and allied health professionals; maldistribution across states and urban rural boundaries; migration to other countries; barriers to integration of healthcare providers from traditional systems of medicine into formal health services; and competition for scarce specialist doctors between public and private sectors.
- Emergence of accredited social health activists (ASHAs) under the National Rural Health Mission (NRHM) was transformational in improving maternal health and child immunisation services.
- Pooled public procurement of quality-assured generic medicines by the Tamil Nadu Medical Systems Corporation (TNMSC) reduced the cost of medicines and ensured the availability of medicines without stock-outs in public sector healthcare facilities.

III. Learnings from the COVID-19 Pandemic

- An unanticipated pandemic can take all health systems of the world by surprise and overwhelm most of them.
- If an effective, equitable, and empathetic health system is not already functioning in a steady state, countries will find it difficult to generate a swift, strong, and sustained surge response.

- Depending on testing technologies does not improve case detection rates, due to false positives and false negatives. Symptom-based syndromic surveillance in primary care must complement and support testing methods, to improve case detection, isolation, and quarantine.
- Public health teams are required for case detection, contact tracing, and immunisation. Functions such as contact tracing cannot be left to the police, just as pandemic management cannot be left to the National Disaster Management Authority. Public health expertise is indispensable, from frostlines to policymaking bodies, if pandemic prevention, preparation, and responses have to be efficient.
- Multi-stakeholder, multisectoral, multi-institutional, interministerial, and inter-agency partnerships have to be catalysed, created, and coordinated to provide a society-wide response to a public health emergency.
- In a federal polity, smooth coordination is needed between central and state governments and among states.
- Effective infectious disease surveillance must extend across human and animal populations (One Health), in case of potential zoonotic outbreaks.
- The health system must be capable of accurate and easily understandable messaging for risk communication and public health advisories. It should also be capable of promptly and convincingly countering fake news.
- Community engagement and civil society partnerships add great strength to a pandemic response.

IV. Creating a Healthy Future

Our endeavour to create a healthy India, which meets our SDG commitments by 2030 or shortly thereafter and qualifies to be designated as a developed country on the HLE criterion described above, will involve action in four areas. These may be regarded as the four wheels of our health and well-being vehicle (Swasthya Yaan) as we move ahead on the path of progress (Pragati Path).

The four wheels are as follows:

- Primary care-led universal health coverage (UHC);
- Alignment of actions in other sectors to public health goals (multisectoral actions on the social, economic, environmental, and commercial determinants of health);
- Community engagement, with participation at all levels – from policy and programme design to implementation and evaluation;
- Advancing science and technology towards evidence-informed, context-relevant, resource-optimising, culturally adaptive, and equity promoting recommendations for policy and practice as well as for health system transformation.

UHC has two key indicators for measuring progress – financial protection and service coverage. India must cover gaps in each of these areas. Financial protection is measured by estimating levels of out-of-pocket expenditure, catastrophic health expenditure, and healthcare-related impoverishment. Service coverage is estimated by an index that combines 14 tracer conditions across several health conditions and health system capabilities. We need to monitor and progressively improve our performance in each of these.

While quality of health services is mentioned in WHO's definition of UHC, it must be defined and measured. The Lancet Commission on High-Quality Health Systems provides a framework for this. An effective and accessible framework for assessing the quality of health services – clinical care provided to individual patients or broader public health initiatives – can be built around four essential questions:

- **Is the service beneficial?** Does it contribute meaningfully to improved health outcomes and overall well-being?
- **Is it safe?** Does it minimise harm and ensure the protection of patients, communities, and healthcare providers?
- **Is it resource-efficient?** Are financial, human, and material resources being used effectively and equitably to deliver value?
- **Is it satisfactory?** Does the service meet the expectations and needs of patients, their families, communities, and the healthcare workforce?

Addressing these questions requires an integrated approach that draws on both **quantitative methods** (e.g., statistical analysis and health outcome metrics) and **qualitative methods** (e.g., interviews, observations, and focus groups). Together, they provide a comprehensive understanding of quality from multiple stakeholder perspectives (mixed methods research).

Financing for UHC must come predominantly from government funding, from its tax revenues. Global experience has shown that achievement of UHC is not possible without adequate public financing. Contributory health insurance through salary deductions ('labour taxes') is not feasible in India because of over 90% of the workforce operating in the informal sector. Government funding may be supplemented by employer-provided and privately purchased health insurance. All or most of the purchaser channels must be unified into a 'single payer' pathway, with prepaid access to cashless service delivery by accredited service providers.

UHC has to be primary-care led, since primary care services provide the foundation for a competent health system. Primary care provides maximum population coverage and broad service coverage (for many common conditions) and is most resource optimising (in utilisation of financial and human resources). It needs to provide services at home or close to home, with a comprehensive care package, assured continuity of care, and reliable

bidirectional connectivity to secondary and tertiary care. District and medical college hospitals too need strengthening, alongside disease surveillance systems that stretch from block to national levels.

To provide such services, we must expand our health workforce and enhance their skills. Shortages existing across all levels of care and all categories of healthcare providers must be addressed. Priority must be accorded to primary care personnel, both because of the pivotal importance of those services and because of the relatively short time needed for their training and deployment (compared to doctors). Infrastructure too needs strengthening at all levels of care. Digital health architecture has to be robust, and all categories of healthcare providers must be skilled in its use. Diagnostic and management algorithms must be developed for a variety of health conditions, as appropriate to each level of healthcare. A pluralistic healthcare model will appropriately position and optimally utilise the skills and services of both allopathic and traditional Indian systems of healthcare and healing.

Essential drugs and diagnostics must be provided free of cost at all public healthcare facilities. Pooled public procurement of quality-assured drugs (preferably generics) will ensure lower costs and avoid stockouts if backed up by a digitally monitored supply chain. Even private sector hospitals can benefit from pooled procurement, as demonstrated by the National Cancer Grid.

All available healthcare resources (public, private, and voluntary) must be optimally utilised to deliver the vast array of needed health services. Public sector must design, lead in delivery, and monitor the utilisation and impact of health services under UHC. Private and voluntary sectors may be engaged as partners as per need, availability, and capabilities. However, all such partnerships must be framed to serve public good (PPP = Partnership for public purpose), with clearly defined deliverables and accountability mechanisms.

Since health has many determinants whose loci of policy and programmes lie outside the conventional health sector, there has to be convergence across many sectors to achieve higher levels of population health. Such a convergence is also envisaged in the SDG framework. While some determinants like water, sanitation, and nutrition have received attention in the past, there is a great need to address mounting threats to health from environmental degradation, commercial determinants of health, conflict, and increasing concentration of wealth with widening income disparities. Both equality of circumstances and equality of opportunities must be addressed if health is to be fostered as a 'capability' within a synergistic cluster of many capabilities (meta-capability).

Community engagement must be actively promoted, from programme design and delivery to monitoring and evaluation. Apart from being a respectful nod to the democratic principle of 'nothing about us without us', community engagement brings in the strengths of experiential wisdom and equity focus and aids effective delivery of services. A variety of community-based

organisations and voluntary groups may be engaged, based on local availability. ‘Panchayat Raj’ institutions too must have a strong role to play in the prioritisation of context-specific health needs, steering efficient and equitable service delivery and monitoring both operational and impact indicators.

Science and technology have made rapid advances in recent decades, for transforming healthcare through a vibrant fusion of innovation and enterprise. From m-health (mobile health) to artificial intelligence, from wearable sensors to remote monitoring, and from electronic health records (EHR) to robotics and drone delivery, technology is transforming models of healthcare. Science too is speedily advancing our understanding of health and disease, moving from genomics and gene editing to social and environmental epigenomics. Understanding the nature and role of the microbiome is opening new avenues for health promotion, disease prevention, and therapeutics. Pandemics and climate change are promoting strong commitment to One Health-related surveillance and research.

India must promote multi-institutional, multidisciplinary collaborations to advance science and technology for the benefit of human health. Higher levels of investment are needed for three reasons: (1) focus on context-relevant health problems; (2) greater self-reliance in view of the fragility of global supply chains (as seen during the COVID-19 pandemic) and barriers to knowledge and technology transfer from high-income countries erecting barriers of ‘intellectual property rights’; and (3) the rich geographic, socio-demographic, cultural, linguistic, and dietary diversity of India, which provides a fertile ground for a wide range of gene–environmental interactions and whose study can enrich global science and can fill many gaps in our understanding of health and well-being. Such advancement of knowledge and further translation into impactful and affordable applications can benefit all of humankind.

3

KEY GAPS IN HEALTHCARE FOR ALL – WHY PUBLIC SYSTEMS MATTER

Amarjeet Sinha

I. Introduction

This chapter seeks to identify the key gaps in healthcare for all in India. Before doing so, it builds the rationale for crafting a credible public system in healthcare. The influential 1963 article of Kenneth Arrow, the Nobel-winning economist in the *American Economic Review*, launched the discipline of modern health economics. With dazzling accuracy, he observed: ‘The special economic problems of medical care can be explained by adaptations to uncertainty in the incidence of disease and in the efficacy of treatment’.¹

The post-COVID world understands the importance of a public health approach much better now; however, our investments are yet to show the insulations against the dislocation caused by public health emergencies. When life and livelihoods dislocate, market and workplaces shut down, schools close, and health challenges multiply. No nation can afford to neglect public health.² COVID has also taught the world the necessity to build public system capacity to handle emergencies. The private sector can only play a supplemental role.

There are a range of other public policy issues and challenges in the health sector that make it necessary to craft a credible public system of delivery. After making a case for why public systems matter in the Indian context, this chapter presents the comparative position of the Indian health system and its evolution over the years. Thereafter, it assesses the major primary health initiative of the National Rural Health Mission (NRHM), 2005³ onwards. Although the mission was to end in 2012, it is continuing as the National Health Mission (NHM). The chapter then examines subsequent developments and finally undertakes the identification of the key gaps to

be addressed in India's health system. In doing so, it tries to learn from the COVID period to identify the gaps clearly.

The World Health Organization (1978) defines good health as not only the absence of disease but also the presence of well-being.⁴ Given the large number of wider determinants of health, every minister in a cabinet is a mini health minister – water, sanitation, housing, environment, petroleum, nutrition, women's empowerment, agriculture, horticulture, urban, power, transport, education, skills, livelihoods, roads, railways, education, industry, and science and technology, all have consequences on a person's health.⁵ India has done well to focus on pro-poor welfare and ease of living in the last 8 years, addressing many health challenges. This chapter examines sectors contributing to health and well-being to understand the key gaps. This chapter is structured in five parts.

II. Why Public System Matters in the Health Sector? The Indian Context

Health is one sector where most developed nations (the United Kingdom, Canada, Japan, Germany, Thailand, and China), except the United States, have gone for a publicly funded or state-regulated health system. Even Japan and Germany regulate health insurance companies, and the state plays a role in determining cost of procedures. The theoretical basis for such an approach comes from the famous Nobel Prize-winning economist Kenneth Arrow's study of 1963 that studied uncertainty and welfare economics of medical care. As Kenneth Arrow noted,

The subject is the medical care industry, not health. The causal factors in health are many, and the provision of medical care is only one. Particularly at low levels of income, other commodities such as nutrition, shelter clothing, and sanitation may be much more significant. It is the complex of services that centre about the physician, private and group practice, hospitals, and public health, which I propose to discuss.

Arrow went on to analyse the consequences of information asymmetry and market failure in health and, therefore, the need for a publicly funded system. Arrow (1963) says, 'I wish to repeat here what has been suggested in several places: that the failure of the market to insure against uncertainties has created many social institutions in which the usual assumption of the market is to some extent contradicted. The medical profession is only one example, though in many respects an extreme one'.⁶ Kenneth Arrow's study has been very influential, leading to the creation of a new discipline of health economics. It is interesting to see the evolution of independent India's journey in public health.

India's Journey – the Modernity–Tradition Divide

Independent India's journey of the last 75 years is best appreciated by understanding where we began. The neglect of healthcare reflected in the dismal life expectancy of 32 years in 1947 and an infant mortality rate of 146. Traditional systems of medicine in India had been condemned by the modern medicine and knowledge paradigm. Like most postcolonial societies, India had also grown on a rejection of all traditional systems without an adequate expansion of the modern systems of care. Inequalities and hierarchies of existence had sharpened further under colonial rule, with the civil lines in district towns representing the islands of cleanliness, hygiene, and sanitation, while the sea of squalor, filth, and dirt informed the lives of the rest of the city⁷ (Jeffery 1992).

Understanding the Bhore Committee Report⁸ is necessary in this context. While it laid down a blueprint for the expansion of modern medicine and care at all levels, it also negated the licentiate system of medical practitioners that had provided care in rural areas.⁹ This issue needs understanding as it represents a major modernity–tradition divide that has had serious consequences on the availability of health human resources where they are needed. India's expansion of modern medical education, while faster than many developing countries, has not been fast enough to have modern medicine-trained MBBS doctors at all levels of the health system. In a country of over a billion people living in over a million hamlets, villages, cities, and towns, this clearly has had implications on the availability of trained human resources in remote regions.

Uneven Regional Expansion of Medical and Nursing Education

The focus on modern medicine yielded positive results in creating an infrastructure for MBBS students graduating in large numbers. Over the decades, this expansion of medical and nursing education became more and more focused in the southern and western regions of the country, especially as private institutions came up in large numbers. This led to a situation where large states with unsatisfactory health indicators like Uttar Pradesh, Bihar, Orissa, Madhya Pradesh, and Rajasthan have far fewer medical and nursing institutions compared to their need.¹⁰ Thrust has given rise in recent years to the expansion of medical education in hitherto neglected areas by converting district hospitals into medical colleges. The expansion, however, is posing serious challenges to the availability of human resources as per norms.

Considering the roadmap of healthcare system expansion was based on the availability of modern medicine-trained human resources, poor households over large parts of the country had to depend on 'quacks' and local practitioners as the first point of contact. The system was based on the premise of

modern medicine-trained nurses and doctors as the sole healthcare providers. To back this larger need, systems for a faster expansion of medical and nursing education were absent. The cause of the health system crisis in India can be traced back to the mismatch between the demand for healthcare providers and their supply by the schools of modern medical institutions.

While India continued to support Indian Systems of Medicine (ISM) institutions in Ayurveda, *Unani*, Homeopathy, *Siddha*, yoga, etc., their integration into systems of healthcare was inadequate in most states, Kerala being an exception. Modern allopathic medicine and its boards for regulation always looked at the ISM sector with suspicion. Inadequate investments in testing the efficacy of ISM on modern scientific principles and laboratory tests also slowed the potential for the expansion or integration of these systems into the primary healthcare system. Neglect of preventive care, role of yoga and meditation, etc., also contributed to India's approach to health getting completely 'medicalised'. Even the role of sectors like water, sanitation, and nutrition did not find adequate articulation in the health policies of India¹¹ (National Health Policy 2002).

India – the Regional Perspective

During the last 75 years, independent India recorded a significant increase in life expectancy, decline in infant mortality, and sharp reduction in deaths due to malaria. Health indicators of some states, like Tamil Nadu and Kerala, equal those of many developed countries. There has been a significant expansion of the primary healthcare system with the norm-based establishment of primary health centres, sub-centres, and community health centres/first referral units, even in high population states, like Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Chhatisgarh, and Orissa, that have unsatisfactory health indicators. However, the disproportion between human resources for health and abysmally low public expenditure on health continues to dampen public health preparedness.

Given the diversity of health indicators, poverty levels; levels of social practices like early marriage, women's position in society, female literacy, and girls' participation in schools; availability of basic amenities like electricity, schools, and roads; levels of accountability; and focus on outcomes, a clear need exists for a diversity of interventions that reflect an understanding of the local contexts. Extensive evidence indicates that improvement in health indicators for infant and maternal mortality, morbidity, and death due to preventable diseases are influenced as much by factors outside the hospital and the health system as by healthcare provision alone¹² (Sinha 2024).

Food security, female literacy, gender relations, security of livelihoods, income levels, hierarchies of social relations, and their implications on access to health services play an equally important role in improving health

indicators. These must be emphasised in efforts to understand people's health needs. Periyar's exhortation to women in Tamil Nadu to marry late¹³ and have fewer pregnancies, hot cooked meals in schools, and a range of interventions for women and children have contributed as much to the health indicators of Tamil Nadu as has the well-functioning health system. Similarly, food security, women's literacy and empowerment, land reforms, non-negotiability of minimum wages, and progressive backward class movements created a pressure for better health services in Kerala.

Over a large part of the central Indian tribal region comprising districts of Madhya Pradesh, Andhra Pradesh, Jharkhand, Orissa, West Bengal, and Chhattisgarh, endemic poverty, daily struggles for wage guarantees, food security and secure livelihoods, encounters with animals and insects, vagaries of nature, and decline of traditional medicine with deforestation determine people's health. Clearly, a case exists for a diversity of approaches to meet context-specific needs, although not necessarily in the health system. There is also a need to understand the layperson's perspective on well-being, as there is a likelihood of it being at variance with purely biomedical-centric, epidemiological evidence. Well-being is a relative term where priorities must be determined in the context of people's needs.

Persistence of malnutrition among children, unprecedented levels of anaemia among adolescent girls and women, insanitary living conditions amidst squalor in public places, and unhygienic cultural practices compound the crisis of the Indian public health system. The non-existent habitation-level health worker over most part of our country, especially in the endemic poverty regions of Bihar, UP, MP, Jharkhand, Orissa, Rajasthan, Maharashtra, Chhattisgarh, AP, and West Bengal, makes poor people resign to fate or surrender to indebtedness when in need. Absence of an effective and reliable system of rural health delivery, unethical 'syringe-saline' syndrome popularised by unregulated public and private providers, and prohibitively high out-of-pocket expenditures have also contributed to high mortality and morbidity over most parts of India. For this reason, the accredited social health activist (ASHA) in every village under the NRHM is an important departure from past approaches. The NRHM approach attempts a simultaneous provision of a community worker who links households to health facilities and a complete overhaul of the health system by creating a functional system at all levels.

Given the dispersed habitation pattern in India, with the population spread over 10 lakh (one million) habitations, it would never be possible to provide the first point of healthcare through the primary healthcare (PHC) system, despite its expansion. One must keep in mind that Kerala's rural-urban continuum and large village size make access to PHC easier. Similarly, Tamil Nadu's and Himachal Pradesh's thrust on basic amenities, like electricity and all-weather roads in remote areas, makes physical access easier. Clearly, there is a case for locally trained women to meet the primary need for health

in the more backward regions of the country with the worst health indicators. Health sub-centres as health and wellness centres is a step in improving access to primary care.

The work of the Aroles in Jamkhed and the Bangs in Gadhchiroli have demonstrated the ability of well-trained and well-integrated local health workers to provide that very immediate community need, a need that cannot wait, a need that makes the difference between success and failure, a need that we have not met by merely providing an auxiliary nursing and mid-wife (ANM) for a population of 5,000. It is equally important to conceive this health worker as part of a network of primary, secondary, and tertiary care and not as an isolated autonomous unit of healthcare as the linkages determine the confidence level in the system, the quality of supervision of village health workers, their constant skill upgradation, and, most of all, a confidence that there is a place to go to in emergency if the first point of contact didn't meet the need. Referral chains and service guarantees in the network hold the key to people's confidence.¹⁴

Equally evident from Kerala and Tamil Nadu (as also Himachal Pradesh) experience is the importance of wider determinants of healthcare, like food and livelihood security, nutrition, drinking water, girls' education and thrust on women's literacy (for changing cultural practices for better nutrition and sanitation), care of adolescents, political commitment to social development, and, most of all, a confidence in convergent community action. The umbrella of *Panchayati Raj* institutions at *Gram Panchayat*, *Panchayat Samiti*, and *Zila Parishad* needs to be involved in leading community user groups for effective planning and implementation. Mapping people's health needs through habitation-based preparation of district health plans and provision of additional resources as per felt-needs will be effective in pushing accountability and effective decentralisation. The NRHM is attempting such a paradigm shift in the health sector.

Convergence can only take place when habitations, blocks, and districts emerge as units of health action. Top-down approaches can control diseases but can never guarantee good health. The process of 'communitisation' of the health delivery system requires investments in human and financial resources at all levels and a civil society movement for health transformation. It also requires a restructuring of our current systems of narrow disease-specific or family welfare-oriented budget lines as the source to fund healthcare. It requires total transparency in procurements to win people's trust.

The Public Health Thrust – Clean Water and Sanitation versus Antibiotics

It is important to understand how the developed countries faced the challenges of public health. As literature on the subject indicates, western nations

fought public health challenges by improving sanitation and making clean drinking water available to its people. In India, regulation and investment in public health were never a priority. India has unsuccessfully tried fighting public health challenges with antibiotics, unlike the west that won the battle with clean water and sanitation. Crucially, regulation of public health is as important as provision of care. Sanitation, clean water, housing, nutrition, public health education, gender, and social equality are all directly relevant to our quest for better health and well-being of our people. In both rural and urban areas, our thrust on public health has been inadequate to ensure food security and infection-free existence. These linkages must be understood while examining the health sector and nutrition. The notion of entitlement of an individual to health, clarified in the Supreme Court decisions, hasn't been a priority in public policy. If it were a priority, public expenditure on health in India would not have been just 1% of gross domestic product (GDP), one of the lowest in the world. National Health Policy 2017 calls for 2.5% GDP public expenditure on health, but that too has remained elusive.

Comparative Advantages in Drug Availability and Their Prices

While taking stock of India's journey, it must be understood how the focus on public sector capacity in the first few 5-year plans gave India a comparative advantage in the manufacture of generic drugs. Across the world, India has acquired pre-eminence as a manufacturer of cheap drugs. That's been possible because of India's private sector's enterprise over the last few decades and also because of the capacity creation in the public sector for bulk drugs. Given the large out-of-pocket expenses incurred by households in purchasing medicines, some requirements to make fast gains in the health system are available in India today, unlike in many other developing countries. The Tamil Nadu Medical Services Corporation has also demonstrated the possibility of a quality generic drug-based essential drug list with well-established procurement and logistics to take affordable and quality drugs to people in remote rural areas.¹⁵

Converting Demographics into Dividend – Investing in Human Development

India's large young population affords an opportunity to develop a cadre of caregivers where they are needed. India's nurses and doctors will always be in demand globally. We must factor in this in our medical and nursing education agenda. We must also factor in the large number of Indian systems of medicine graduates available in this country who have a low participation in the public health system. Health is a labour-intensive and care-intensive sector, and we have a large human workforce that when trained and skilled

can become health workers. Health is also a sector where women participation in workforce can be substantially larger. Tribal women from Jharkhand, Chhatisgarh, Orissa, and Madhya Pradesh have demonstrated their ability to be caregivers. Access to good nursing education would have prevented them from working as cheap domestic labour. Health being a state subject, the responsibility of salaries and support to health workers is with provincial governments. Sectors like health suffered because of inadequate recruitment efforts in the public system, especially in the post-1991 phase, because of the thrust on number crunching. The importance of sustainable financing through a partnership between central and state governments is crucial. It gives states the confidence that they can take the responsibility for a larger workforce in the health sector.

Hamlet as Thrust – Limitations of Decentralisation

Given the hierarchies of power, and social and gender relations in India, decentralisation has always been a formidable challenge. While the 73rd and 74th constitutional amendments have provided scope for local governments having a clearly demarcated role in the health and nutrition sector, the inability to involve habitation-level natural leaders in our elected Panchayati Raj system often reduces community ownership in the elected Panchayat system. The sense of community in India's villages often exists at the level of the hamlet, and not the revenue village. Also, over most parts of the central Indian tribal region where the health indicators are unsatisfactory, often 8–12 hamlets constitute a *gram panchayat*. This reduces the ability of local households to relate to the elected leader as the sole arbiter of their development. While the *gram sabha* is a forum for direct democracy, the power relations in a village being what they are, there is a conscious need to co-opt the natural leaders at the hamlet level in the development planning and implementation process. The constitution of the Village Health, Sanitation, and Nutrition Committees (VHNSCs) under the NRHM is an effort in that direction. It tries to build a village-level platform for motivated individuals lacking authority. It is this ability to build solidarity at the hamlet level that explains the success of self-help groups in many parts of the country. Without moving towards exclusive caste solidarities, there is a need to tap the homogeneity of the community in holding public systems accountable for quality healthcare that is accessible, affordable, and accountable.

Gender and Social Hierarchies

The neglect of women informs many aspects of India's social development. It leads to major ill-health and malnutrition. It is for this reason that gender and social issues must be addressed directly in health and nutrition

initiatives. Given India's hierarchies, it is a fact that many health and nutrition indicators, among socially vulnerable groups, low-income quintile households, and women, are worse than in the general population. Without specially developed strategies in public policy to address these social and gender determinants of health consciously and directly, the impact will be limited. One must also remember that targeting on the basis of income is nearly impossible, given India's informal economy and unsatisfactory governance systems. The informal economy and incomes also hamper a meaningful social insurance system where a certain percentage of income could be collected for healthcare. Analysing the current buzzword, 'conditional cash transfers' in health and nutrition indicates that availability of quality services is crucial. In the absence of quality services in remote regions, no amount of cash transfers will translate into better health nutrition outcomes. Also, cash transfers with high gender inequalities do not address women's well-being.

Role of the Private Sector in Meeting Public Health Goals

Role of the private sector is the other key issue that requires examination. India has a large private sector in health, and many commentators have often remarked that a greater involvement of the private sector through health insurance instruments holds the key to meeting India's healthcare challenges. A large part of what is generally classified as private includes not only the state-of-the-art private hospitals but also a range of 'quacks' and *jhola chhap* doctors who may not even be having the basic qualifications. It is also a sector that witnesses extremely irrational and unethical drug use, often to satisfy the consumerist system of saline-syringe that have dominated people's minds even in remote areas. Many households have actually started believing that good care must mean the use of injectables and saline drip. In the absence of licentiate courses, locals have somehow mastered the art of treating without formal education. We also have Indian systems of medicine doctors engaging in allopathic practice.

We must also keep in mind the information asymmetry in the health sector that often makes for market failures. Both cost and quality suffer unless there is the counter-veiling presence of a public system delivering quality services. While there is a case for engaging with the private sector, here's an equally strong case to give people a public alternative alongside. A purely private healthcare system without proper regulation, standard cost and treatment protocols, rational drug use policy, and well-established patient's rights often leads to unethical practice, given the high information asymmetry. The high cost of private medical education is also contributing to a 'mercenary' approach among many medical professionals who think it is their duty to recover the cost of their education by overcharging or indulging in needless

diagnostics. This doesn't mean partnerships are not needed. They are much needed in a country where a large part of the health professional is outside the government system. But these partnerships for public health goals have to be very carefully defined.

The Public Health Cadre and the Public Health Thrust

A public health approach to primary healthcare is to ensure people's health priority becomes the system's priority. Public health, in the words of the Alma-Ata Declaration (1978), recognises that '... health, which is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realisation requires the action of many other social and economic sectors in addition to the health sector'.

Public health makes the medical and the social determinants of ill health and the processes – clinical, managerial, and societal need – as the object of study and action for the attainment of the highest possible level of health. The success of Tamil Nadu in the health sector, among other factors, is also on account of an exclusive public health cadre.

Such an approach requires a constant leadership of the health system at various levels by professionals who are well-versed in the public health approach. It also requires the availability of key public health skills to plan and manage public health programmes. It is, therefore, important to plan building such a public health capacity within the public health system. Part of the challenge is ensuring those employed in the public health system acquire the appropriate skill-sets for their level of engagement and work. Another challenge is to build a cadre of public health administrators within the system who can provide leadership at the block, district, and state levels with a public health-focused approach. A third part of such capacity building is to induct and utilise public health specialists with advanced public health knowledge – both theoretical insights and the tools of the trade – who can ensure the level of public health practice within the system is benchmarked with the global best.

Creating a public health focus or thrust within the public health system requires public health tasks other than the provision of hospital services receive greater emphasis. This requires public health system to design interventions, programmes, and schemes that act on social determinants of health and prioritise preventive and promotive care and primary healthcare. In operational terms, besides financial investment it needs appropriate human resources. It follows that the space given in public health management and the skill-sets available within public health management be adequate to design, guide, and implement such programmes. Since numerous preventive

programmes rest on the provision of prompt and appropriate medical services, we must necessarily plan for both in an integrated manner.

Providing Care and Purchasing Care – Getting the Balance Right

There has been debates in India whether purchasing care is an option as opposed to providing care. As argued in many other sections, information asymmetry in the health sector does not lend itself to purely market principles. Public systems exist the world over, and we must work towards making credible public systems rather than doing away with them. The strengthening of the public system does not preclude the possibility of purchasing care for meeting public health goals and for reducing the out-of-pocket expenditures of the poor, which leads to their pauperisation. Purchasing care requires preparation of basic protocols and standard treatment procedures. It also requires community education on entitlements from an insurance cover. The participation of government hospitals helps in keeping the cost of care low. The *Rashtriya Swasthya Bima Yojana* (RSBY) attempted to extend cashless hospitalised services to below poverty line (BPL) people at accredited hospitals. Government and private hospitals have got accredited for RSBY in many states. The ‘Pradhan Mantri *Jan Arogya Yojana* (PMJAY) is presently trying to provide the much needed cashless care, even though these partnerships have their challenges.

Adequacy of Health Financing

Health expenditures in India are estimated to range between 4 and 5.5% of the GDP. Of this, the current public expenditure is less than 1.4% of GDP. The NRHM had made a commitment to increase public expenditure to 2–3% of GDP. National Health Policy 2017 called for reaching 2.5% GDP public expenditure by 2025. As per National Sample Survey Office (NSSO) 60th Round 2004–2005, out-of-pocket expenditure in government hospitals is over INR 3,000 in rural areas during every hospitalisation. The out-of-pocket expenditure in the urban areas and in private hospitals is two to three times more than this. Clearly, mechanisms must be found to ensure cashless hospital treatment for poor households in government hospitals.

Need for New Health Financing Mechanism

There’s a need to explore new health financing mechanisms to reduce the health distress of poor households. Households spend over INR 10,00,000 million a year, mostly out-of-pocket. Therefore, times of health distress is reason enough to explore new ways of health financing. The National Commission on Macroeconomics and Health¹⁶ has pointed out that 3.3% of India’s population

is impoverished every year because of health distress. There is also evidence that the poorest 10% of the population rely on sale of assets to meet their healthcare needs. A study in some of the poorest districts by Jha and Jhingran in 2002 revealed that illness of a family member is the commonest reason of financial crisis and a sense of insecurity among poor households. Nearly 40% BPL families reported having faced a financial crisis during the last 2 years – about 69% for illness and 11% for death of a family member. Clearly, poor people in rural areas are spending significant amounts on healthcare, leading to their pauperisation. PMJAY is trying to answer this challenge.

Urban Health

Urban health was added to the NRHM to make it the NHM. However, very little effort was made to create a system of primary care in urban areas. Financial resources for urban health was limited, and the diagnostic approach to

TABLE 3.1 List of Key Public Health Challenges and Responses Thereto in Urban Areas

	<i>Key Public Health Challenges in Urban Areas</i>	<i>Possible Responses under the National Urban Health Mission (NUHM)</i>
1.	Poor households not knowing where to go to meet health need	Connecting every household to health facilities is the biggest challenge. Role of the slum-level community worker (like the honorary health worker in Kolkata slums) is a possible intervention. Community worker becomes the first point of contact for any health need. They have the authority to connect households to health facilities. A health facility or health personnel is responsible for a certain number of households
2.	Weak and dysfunctional public system of outreach	A detailed review of the existing arrangements to identify causes of dysfunctional/functional systems. Investments under NUHM could be to provide a responsive public system – service guarantees well-defined and well-recognised by all
3.	Contaminated water and poor sanitation	Work towards a possible public health bill that sets standards for provision of basic entitlements, like water and sanitation facilities. Provide resources to communities to ensure action at their end to prevent contamination/maintain cleanliness. Work with urban local bodies to increase access to functional toilets
4.	Poor environmental health and poor housing	Work with urban local bodies to set standards for environmental sanitation. Set up systems of waste disposal, basic housing systems, etc. Work towards a rights- and entitlement-based approach through a public health bill

(Continued)

TABLE 3.1 (Continued)

<i>Key Public Health Challenges in Urban Areas</i>	<i>Possible Responses under the National Urban Health Mission (NUHM)</i>
5. Unregistered practitioners first point of contact – use of irrational and unethical medical practice	Develop systems of accrediting privately for fully qualified practitioners. Make them work under government doctors' supervision. Special thrust on rational drug use and ethical practice. Make local practitioners do more of preventive and promotive health
6. Community organisations' helpless in health matters	Establish vibrant community organisations at the slum level under the umbrella of the urban local body, local-level elected systems. Co-opt community leader like members of self-help groups, women's groups, etc. Provide united grants to local community organisations to carry out community-led action for public health. Jawaharlal Nehru Urban Renewal Mission (JNURM) is providing the hardware, but in the absence of effective community action, the hardware will be of little sustainable use. Community-led action for public health encompassing all the wider determinants of health is needed. (Nutrition, water, sanitation, education, housing, women's empowerment, skill development, etc.)
7. Weak public health planning capacity in urban local bodies	Provide additional human resources to urban local bodies for meeting public health challenges. Re-orient existing staff to understand public health challenges better
8. Large private sector, but the poor cannot access them	Develop systems of accrediting private practitioners for public health goals. These could be for a range of services. Need for transparency in developing protocols and costs. Community organisations to exercise key role in the roll-out of such partnerships. Non-governmental organisations to build capacity in community organisations to handle such partnerships
9. Problems of targeting the poor based on the BPL card	Many urban poor households do not have a BPL card. How to reach every poor household and provide them special entitlements at public costs for secondary and tertiary care? It will not be possible to provide free cancer treatment for all. Naturally, there's a need for identifying the poor. What possible criteria can be used? NUHM to develop criteria for such identification based on a wider understanding of poverty, not only on income or nutritional poverty
10. No risk pooling or community insurance system	Need to see healthcare costs not as episodes of illness. System of savings by households to create funds for healthcare needs. Developing a thrust for preventive and promotive care and for life cycle approach to saving for healthcare needs

(Continued)

TABLE 3.1 (Continued)

<i>Key Public Health Challenges in Urban Areas</i>	<i>Possible Responses under the National Urban Health Mission (NUHM)</i>
11. No convergence among wider determinants of health	Creating common institutional arrangements to ensure the same community organisation, under the umbrella of a urban local body, is responsible for all the wider determinants – water, sanitation, nutrition, healthcare, education, skill development, housing, etc. Creating <i>Basti Vikas Samitis</i> that have wider than medicalised care focus.
12. No system of counselling and care for adolescents	Adolescents face multiple problems in urban areas. Need to mobilise local youth for community-led public health action. Need to attend to special needs of adolescent girls to help them cope with physiological changes
13. Over-congested secondary and tertiary facilities and under-utilised primary care facilities	Need to create community workers in every slum who know clearly where the household must be sent. Need-based referrals are the only way to decongest
14. Problem of drug abuse and alcoholism	Urban life is demanding and leads to living with stress of all kinds. Problems of drugs and alcoholism, tobacco use, etc., need strong public health interventions
15. Many slums not having primary healthcare facility	Creating new public health infrastructure using community buildings, and mobile medical units based on fixed schedules where infrastructure cannot be created
16. High incidence of domestic violence	Need for counsellors in bastis to help in behaviour change and gender relation issues
17. Multiplicity of urban local bodies, state government, etc. Management of health needs of urban people	Need for clarity in responsibilities for urban health. Setting up of an overarching urban local body-level health mission for convergent action
18. No norms for urban health facilities	Need to develop clear norms for primary healthcare service guarantees for urban areas
19. No concerted campaigns for behaviour change	Need for concerted campaigns for behaviour change to enforce public health thrust. Problem of malaria, dengue, and chikunguniya in urban areas. Counselling services for the well-being of households
20. Problems of unauthorised settlements	Develop healthcare facilities in the framework of law for such areas

Source: Author

understanding the challenges of urban health was abandoned, hoping that private providers will take care of it. As the challenges of COVID clearly demonstrated, our preparedness was the worst in urban areas in the absence of human resources for health. In public health emergencies and in designated isolation wards, the public system has to provide capacity for care as the private sector does not provide it. Given the uncovered public health agenda in urban areas and an immediate need to respond to in view of the growing population 'clusterisation' in such areas, it is imperative we act fast to bring a transformation there. It is for this reason the challenges of public health in urban areas are a part of this chapter. It is the most critical gap in primary care that must be addressed.

III. Assessing the NRHM

Lessons in Public Policy for Health

The NRHM was launched on 12 April 2005. It sought to provide accessible, affordable, and quality healthcare to the rural population, especially the vulnerable sections. It had quantifiable targets for infant mortality (30), maternal mortality (100), and total fertility (2.1) rates (IMR, MMR, and TFR, respectively) with a 7-year time frame. The NRHM recognised the leadership role of the states. The framework for implementation states:

The NRHM is an effort to strengthen the hands of states to carry out the required reforms. The mission would also provide additional resources to the states to enable them to meet the diverse health needs of the citizens. While recognising the leadership role of the states in this regard, it is proposed to provide necessary flexibility to the states to take care of the local needs and sociocultural variations. In turn, states will decentralise planning and implementation arrangements to ensure that need-based and community-owned District Health Action Plans become the basis for interventions in the health sector.

With an annual increase of 30–40% in the central allocation and an equal thrust in states, the NRHM aspired to reach 2% of GDP as public spending by 2012. *Communitisation*, flexible financing, monitoring progress against Indian health standards, improved management through capacity, and innovations in human resource management were the five key approaches adopted by the NRHM in its framework for implementation. The National Health Systems Resource Centre (NHSRC) was set up to drive reforms by building capacity at all levels. Strengthening the public system of primary healthcare delivery with some partnerships as per need was its avowed thrust. The NRHM recognised the need for crafting a credible public system, given the

information asymmetry and likely market failure in the health sector (Nobel laureate Kenneth Arrow's work).

Many years after the 2012 target, the NRHM (renamed the NHM in 2013) when urban areas were added without adequate resources) has reached all the three quantifiable targets of IMR, MMR, and TFR, with public spending barely a little above 1% of GDP. PHC has many wider determinants that make attribution very difficult. The ability to vaccinate during COVID (2021) in the remotest locations with the active community-connect role played by the ASHAs, with adequate cold chain and vaccinators at the cutting-edge, is a tribute to the investments 2005 onwards in strengthening the public system with human and financial resources. The lessons in public policy that NRHM provided was that identifying worked and what did not require an evidence-based assessment.

The important NRHM lesson is that crafting a credible public system of PHC delivery must remain the central thrust. Health as a sector needs the countervailing presence of a functional public system, even if the private sector is to provide additional capacity for secondary and tertiary care. Tamil Nadu and Kerala have a vibrant and functional public system of healthcare, alongside an equally strong private sector. This has consequences for cost and quality of care in the private sector. Even with health insurance, claims in government hospitals remain very high.

Secondly, health is a sector where human resources are critical for quality service delivery. From hospital managers to nurses, paramedics, doctors, and specialists, there is a need for a range of human skill-sets, not all of which are necessarily available through public-private partnerships (PPPs). Effective management of PPPs also requires a strong public system of healthcare. Innovative human resource interventions like the 24-week Life Saving Anaesthetic Skills Course for MBBS doctors, 24-week Emergency Obstetric Care Course, Family Medicine Distance Education Programme for PHC doctors, One-Year Public Health Master's Programme, building capacity among community volunteers like ASHAs and providing for their HR continuum, recruiting resident ANMs, skilling PHC nurses in medical colleges, and setting up nursing skill labs are all geared to improving the quality of care.

Thirdly, while the NRHM's approach was to provide a horizontal platform at primary health centres for all forms of health needs (communicable, non-communicable, reproductive and child health, preventive, and promotive care), many vertically stand-alone programmes, like those for TB, malaria, filaria, kala-azar, etc., never got fully integrated into the platform for community connect and care. The NRHM also focused on convergence to make a difference in wider determinants, like clean water, sanitation, housing, school health, nutrition, etc. The ASHA, *Aanganwadi* (childcare centre) worker, and ANM partnership evolved as a consequence. The health and wellness centres are attempting to address this challenge.

Fourthly, community connect demanded the setting up of VHNSCs also as *Rogi Kalyan Samities* in health institutions. Their effectiveness would have been manifold higher if we had institutionalised a role for local governments in such community formations. Institutionalising decentralisation and devolution of funds, functions, and functionaries would have given even better and faster results in PHC. The 29 sectors for panchayats in rural areas and 18 in urban areas provide a perfect framework for convergence of outcomes. With civil society engagement through the Advisory Group for Community Action, the NRHM demonstrated the need for constant people-centric NGO oversight at the facility level for quality services.

Fifthly, quality PHC needs more financial and human resources, and we must step up investments in healthcare, in line with the 2.5% GDP public expenditure commitment made in the National Health Policy 2017. The public health system needs more health and hospital managers and institutions like the Tamil Nadu Medical Services Corporation, with complete digitisation and decentralised warehousing with batch-wise testing of rigorous pre-qualification-based procurement of generic drugs and medical equipment. While over 25 states have set up corporations, the last mile digitisation and random batch-wise testing with drug passbooks in health institutions have not become a reality in many. Doctors, drugs, and diagnostics still account for over two-thirds of the out-of-pocket expenditure. We must ensure uninterrupted supplies and services.

Sixthly, better decentralised management capacity requires a range of new skills in hospital and health management, finance, planning, programme management, accounts, procurement, information technology, etc. The NHRM brought in many of these skill-sets, which did not get institutionalised in most states. Before the NRHM scam in Uttar Pradesh, all the new skill-sets brought in for better management were set aside from responsibilities assigned to them.

Decentralisation without professionals and capacity is always fraught with dangers. We must heed to this need for social audit, local government role, and social capital of women's collectives of the Rural Livelihood Mission to drive decentralisation. Connecting households to health facilities will only be possible through such an approach.

Seventhly, AB-PMJAY is trying to use the excess private sector capacity for secondary and tertiary care for public health purposes at reasonable rates. Given the unequal social and power relations, many times, misadventures happen in such partnerships. The community connect and real-time accountability framework for social audit is our only guarantee for effectiveness of partnerships.

The biggest lesson is the need to engage with states meaningfully in a dialogue of equals (*Samakhyā*) as they alone can drive reforms with resources. The district health plans, the appraisal and approval process, the common

review missions, the good practices presentations across states, the partnership for community-owned institutional transformation through decentralisation with professionals, and untied grants to institutions are the real way forward for quality healthcare for all. The NRHM was surely a path-breaking public PHC mission that had many strengths. Weaknesses, however, can always be tackled for even better outcomes.

A total of 100 million toilets under *Swachh Bharat* Mission, 60 million household tap water connections so far under the *Jal Jeevan* Mission, electrification for over 99% households under *Saubhagya* green initiatives and the move towards zero carbon emission, over 9 crore LPG connections under *Ujjwala*, over 3 crore pucca homes under the Pradhan Mantri *Awas Yojana*, nearly 540 million beneficiaries benefitting from financial inclusion that ensures access to financial services under *Jan Dhan Yojana*, over 8 crore empowered women through diversified livelihoods under the *Deen Dayal Upadhyaya Antyodaya Parivar Suraksha Yojana* (National Rural Livelihood Mission), and the efforts of *Poshan Abhiyaan* so far have all helped in addressing the wider determinants of health and will have consequences on life expectancy. The chapter brings out how the gains of pro-poor public welfare need constant community engagement and support to local institutions and community organisation to nurture a comprehensive leaving-no-one-behind policy.

IV. Key Gaps in Healthcare for All

The National Health Policy 2017 laid out a roadmap for the health sector. Several praiseworthy initiatives took healthcare to the poor households. The list comprises the following:

- The proposed 1.5 lakh (150,000) holistic health and wellness centres (HWCs) of which over half are already functional.
- Health insurance for 100 million households and nearly 500 million persons for secondary and tertiary care (in both public and empanelled private hospitals) and hospitalisation needs under the AB-PMJAY.
- The launch of the National Digital Health Mission (NDHM) to improve ease of accessing healthcare for the citizen.
- The expansion of telemedicine and cheaper generic drugs through the Pradhan Mantri *Bhartiya Janaushadhi Pariyojana*.
- The Pradhan Mantri *Ayushman Bharat* Health Infrastructure Mission (PMABHIM) for creating capacity at all levels, including urban to strengthen primary care.
- Creating hospitalised facilities for communicable disease at block and district levels, setting up quality laboratories, promoting research, etc., the programme for converting good district hospitals into medical colleges,

opening of new exemplar AIIMS in uncovered states, reforms in the medical education sector through the National Medical Commission (NMC).

- Holistic development of Ayurveda, Yoga, *Unani*, *Siddha*, and Homeopathy (AYUSH).
- Promotion of yoga and *Khelo* India.

This chapter looks at the challenges that remain, despite many ongoing efforts and the challenges in effective decentralised community action for health transformation. Data from the National Sample Survey Rounds, the National Family Health Survey Rounds, the Sample Registration System of the Census of India, and other independent field-based studies are examined to understand the gaps better¹⁷ (Ambabade *et al.* 2022).

While a lot has been done, there are a few key gaps that must be addressed. These gaps are based on an analysis of the independent studies and reports studied.

Firstly, it is imperative to connect households to point of first care with doctor, drugs, and diagnostics (like the GPs under the UK's National Health Service (NHS)). The NDHM is an opportunity but needs community connect, role for panchayats/urban local bodies, a spatial attachment to first point of care, handholding, etc. The household, the elected local government functionary, the women's self-help groups, the ASHA, ANM, and Anganwadi workers must have the phone number of the first provider with health records in the NDHM. If house-to-house community connect was attempted effectively, hospitalisation in AB-PMJAY would have been much higher than the present 35 million in 4 years. Deprived households do not know their entitlement in many places yet. Public information, community connect, handholding, and use of technology as a means will help in making the first point of primary care (HWCs/PHCs/CHCs with a medical officer) play the gatekeeping role for even secondary and tertiary referrals.

Secondly, assessments of out-of-pocket expenditures clearly bring out how, despite support for secondary and tertiary care, two-thirds of the expenditure is on account of doctors, drugs, and diagnostics for primary non-hospitalised care¹⁸ (Muraleedharan, Vaidyanathan, Sundararaman, Dash, Ranjan and Rajesh 2020). It is lowest in Tamil Nadu which has a robust system of generic drug supply through the Tamil Nadu Medical Services Corporation (TNMSC) with its digitised data bases linked to every district warehouse from where primary units and hospitals can indent and collect medicines through their passbook. No stockouts and quality generic drugs (and medical equipment) are available to the facility. Sincere efforts to set up TNMSC like corporations were made in every state under the health mission under the leadership of Shri R. Poornalingam, a retired civil servant, who set up the TNMSC. While 22 states/UTs have set up an independent corporation

or society for procurement of drugs, the automation efforts have been inadequate in many. The full digitised operations are still work-in-progress in many, defeating the purpose of TNMSC-like reforms. While funds for drugs have been provided under the NHM and list of medicines and diagnostics at different levels of the healthcare system has been notified, stockouts are a common occurrence because of non-digitisation of district warehouses and absence of the passbook system at facilities. *The TNMSC public management practice must be made non-negotiable for states seeking central funds as drugs and diagnostics are key out-of-pocket expenditures.*

Thirdly, human resource practices and numbers need immediate attention as shortfalls, especially in rural areas, can affect outcomes at all levels. The frontline teams and the paramedics have already demonstrated their worth during COVID. We must accept that public health needs crafting of credible systems for health. The countervailing presence of public institutions is needed to address market failures because of information asymmetry, even for secondary and tertiary care, while using the private sector capacity fully for publicly funded partnerships. Tamil Nadu also shows the way in its exclusive public health cadre that other states have now been asked to emulate. Tamil Nadu's posting of trained nurses in medical college for 3 years to enable mastery over their responsibilities and then sending them to PHCs is also an outstanding practice worth emulation. Nursing skill labs set up in Bihar with the Bill & Melinda Gates Foundation support as an innovation is now happening from NHM funds. It is also a good model where trained nurses from advanced states or facilities helped the weaker state nurses at facilities (with mannequins) and actual deliveries, to develop skills among local nurses. A skill continuum of ASHAs to ANMs to general nurse midwives (GNMs), to staff nurses ought to be promoted as also the multi-skilling and standardisation of allied paramedical skills critical to management of facilities. We must also mainstream the position of hospital and health managers in our system to make quality truly achievable. With an ageing population, palliative and geriatric care will also require community workers like the ASHA.

Fourthly, promotion of holistic care through promotion of AYUSH does make a difference. AYUSH is already subjecting itself to research scrutiny, so mainstreaming efforts must be encouraged. Chronic diseases respond well to AYUSH and yoga and have a large global market too. It is an opportunity for India.

Fifthly, in medical education, NMC must come up with a 6- to 9-month programme for postgraduate government doctors to certify them as teachers. This is the biggest pool of specialists doing specialist duties as general duty medical officers (GDMOs). It will address shortages of teachers in large measure. The other big reform in NMC should be to put thrust on family medicine as a discipline for HWC/PHC/CHC doctors. Family medicine

distance education course run by CMC Vellore addresses the needs of a PHC doctor attending to varied health needs of people. It was started during the health mission, and PHC doctors treating snake bites to maternal deliveries had gained from it. Promotion of 16- to 24-week courses for emergency obstetric care (EmOC) and for life-saving anaesthesia skills (LSAS) for GDMOs should be encouraged without compromising quality, a learning from earlier initiatives.

Sixthly, it is time we factor in the needs of the middle classes as well as seeking healthcare, which is equally difficult for them. Their participation on payment as per incomes in AB-PMJAY will serve the cause of health insurance, as it will enlarge the risk pool and generate resources through subscriptions. It can also provide primary care to the middle class as an additional package.

Seventhly, India has a chance to provide healthcare for all at much lower than the 8% public expenditure on health in the UK, Brazil, Canada, etc., on account of the holistic care through AYUSH. It can also make available quality private sector secondary and tertiary care at rates much below the global charges. The cost of good quality secondary and tertiary care in India is globally competitive through innovations in procedures and costs. *Even a 2.5% GDP public expenditure on health suggested by the National Health Policy 2017 will go a long way in improving well-being.* We will need the public funds despite the private participation.

Eighthly, we must look at the context of healthcare for all from the perspective of local communities and their holistic needs. The information asymmetry in the health sector and the need for crafting credible public systems must also acknowledge the importance of decentralised community action for health transformation. The Indian Constitution in its eleventh and the twelfth schedules, and the Fifteenth Finance Commission in its reports have emphasised the importance of effective decentralised community action. The NRHM framework for implementation had laid a thrust on credible public systems with strong community linkage and support at all levels. It had promoted untied funds at the institution level, innovations in human resource engagement, monitoring against Indian Public Health Standards, 'Communitisation', and building management capacity at every level. This chapter analyses the consequences of some of these initiatives across states. Lessons from the ASHA programme and other human resource engagement innovations will also be examined to assess their efficacy in effective decentralised community action.

The NHM, started in 2005, demonstrated how even from a little below to a little above a percent of GDP public expenditure brought down IMR from 60 to 28 and MMR from 406 to 103 now. For us to reach the levels of the developed world, the centre and states must provide that additional financial support to make a real difference to morbidity and loss of disease-adjusted

life years (DALYs). With a large young population and simultaneous efforts in many wider determinants, we must find the money to make India the true leader in the *Amrit Kaal* period. Explore financing sources (tax on tobacco, junk food, and luxury goods) but do not neglect well-being as it is the pathway to the demographic dividend and sustainable economic progress in a post-COVID world. Higher public financing of health is necessary to enable every Indian citizen to develop their fullest human potential.

V. Concluding Observations

The tables below track the changes in health indicators between National Family Health Survey 4 (NFHS-4) and NFHS-5. They also examine the improvement as per the Sample Registration System of the Registrar General Census of India in infant and neonatal mortality over the years. The tables clearly highlight the progress achieved in maternal and child health indicators. The gains in nutrition indicators, however, leave much to be desired. We have a long way to go before we can improve our ranking in global hunger. The global comparisons on human development index scores show the long distance we must traverse to equal the developed world in education, health, and income indicators. Decentralised management with community action holds the key to better results, and we must institutionally move towards decentralisation with professional support. We will need many more managers than magistrates to set our health system right.

The continued under-financing of public expenditure on health is compromising the sustainable economic progress. We cannot afford to be unprepared or under-prepared for pandemics like COVID. The public health thrust in urban areas will improve the quality of lives of the working class in cities as also of the middle classes. The lower quantiles in urban areas need greater connect of households with health facilities. They also need convergence across the 18 sectors in the Twelfth Schedule, which are the responsibility of urban local bodies. Decentralised community-owned and managed, public-financed PHC system is the best way forward to meet the challenges of convergent community action and improved outcomes in health. While leadership at the ‘basti’ level must be incorporated into the decision-making process, institutionalisation of elected urban local body leaders at the basti level under the urban ward will greatly help in improving the governance of urban healthcare initiatives. With half of India in urban areas in the next 15 years, we cannot afford to neglect the challenges of primary care in urban locations.

As the chapter indicates, India has a long way to go in setting up a reliable quality public health system. Despite improvements, a long journey remains. Jean Dreze *et al.* in their article in the latest issue of *Economic and Political Weekly* (24 February 2024) provide a useful update of where we have

TABLE 3.2 India's Position and Trends in the Global Human Development Index (HDI) 2021

	<i>HDI 2021</i>		<i>HDI</i>	<i>Life</i>	<i>Expected</i>	<i>Mean</i>	<i>Gross</i>
	<i>Rank</i>	<i>Value</i>	<i>Rank</i>	<i>Expectancy</i>	<i>Years of</i>	<i>Years of</i>	<i>National</i>
			<i>2020</i>	<i>at Birth</i>	<i>School-</i>	<i>School-</i>	<i>Income</i>
				<i>(Years)</i>	<i>ing</i>	<i>ing</i>	<i>per Capita</i>
					<i>(Years)</i>	<i>(Years)</i>	<i>(2017</i>
							<i>PPP USD)</i>
Switzerland	1	0.962	3	84.0	16.5	13.9	66,933
Norway	2	0.961	1	83.2	18.2	13.0	64,660
United Kingdom	18	0.929	17	80.7	17.3	13.4	45,225
Japan	19	0.925	19	84.8	15.2	13.4	42,274
United States	21	0.921	21	77.2	16.3	13.7	64,765
China	79	0.768	82	78.2	14.2	7.6	17,504
Brazil	87	0.754	86	72.8	15.6	8.1	14,370
South Africa	109	0.713	102	62.3	13.6	11.4	12,948
Indonesia	114	0.705	116	67.6	13.7	8.6	11,466
India	132	0.633	130	67.2	11.9	6.7	6,590
South Asian region		0.632		67.9	11.6	6.7	6,481
World average		0.732		71.4	12.8	8.6	16,752

Source: 2021/2022 Human Development Report, UNDP

TABLE 3.3 Trends in Mortality Indicators

	<i>2014</i>	<i>2016</i>	<i>2018</i>	<i>2020</i>
Maternal mortality ratio (per 100,000 live births)	167 (201–2013)	130 (2014–2016)	113 (2016–2018)	97 (2018–2020)
Infant mortality rate (per 1,000 live births)	39	34	32	28
Neonatal mortality rate (per 1,000 live births)	26	24	23	20
Under-five mortality rate (per 1,000 live births)	45	39	36	32
Early neonatal mortality rate – 0–7 days (per 1,000 live births)	20	18	18	15

Source: Sample Registration System

TABLE 3.4 Improvement in Health-Related Indicators

	NFHS-4 (2015–2016)	NFHS-5 (2019–2021)
Households with any usual member covered under a health insurance/financing scheme (%)	28.7	↑ 41.0
Total fertility rate (children per woman)	2.2	↓ 2.0
Current use of family planning method – any method (%)	53.5	↑ 66.7
Mothers who had at least four antenatal care visits (%)	51.2	↑ 58.1
Institutional births (%)	78.9	↑ 88.6
Neonatal mortality rate (per 1,000 live births)	29.5	↓ 24.9
IMR (per 1,000 live births)	40.7	↓ 35.2
Under-five mortality rate (per 1000 live births)	49.7	↓ 41.9
Children age 12–23 months fully vaccinated based on information from either vaccination card or mother’s recall (%)	62.0	↑ 76.4
Children under age 6 months exclusively breastfed (%)	54.9	↑ 63.7
Children under 5 years who are stunted (height-for-age) (%)	38.4	↓ 35.5
Children under 5 years who are wasted (weight-for-height) (%)	21.0	↓ 19.3
Children under 5 years who are underweight (weight-for-age) (%)	35.8	↓ 32.1
Children under 5 years who are overweight (weight-for-height) (%)	2.1	↑ 3.4
Women who are overweight or obese (BMI > 25.0 kg/m ²) (%)	20.6	↑ 24.0
Men who are overweight or obese (BMI > 25.0 kg/m ²) (%)	18.9	↑ 22.9
Women aged 15–24 years who use hygienic methods of protection during their menstrual period (%)	57.6	↑ 77.3

Source: National Family Health Surveys (NFHS) 2015–2016 and 2019–2021, MoHFW

reached on access to quality healthcare. This study undertook a recent survey of public health centres in five North Indian states (Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, and Rajasthan), in the light of earlier surveys in the same areas from 2002 onwards. The study concluded that

contrary to a common narrative whereby public health services in India have ‘collapsed’, there is a general pattern of improving quality and utilisation over time. The pace of improvement, however, is far from adequate. The recent conversion of many health centres into HWCs has been largely cosmetic so far. In states like Bihar and Jharkhand, the standards of healthcare in public health facilities remain abysmal. Hope lies in the experiences of states that have shown the possibility of achieving decent standards of healthcare in the public sector, notably Himachal Pradesh. Even in Chhattisgarh and Rajasthan, there have been valuable initiatives in recent years¹⁹ (Dreze, Khera and Malhotra 2024)

Clearly, even this critical study has found gains in the system. Along with efforts to improve sanitation, housing, road connectivity, drinking water, electricity, and so on, there is an opportunity to move much faster on the public health challenge. A major constraint is financing resources with decentralised management of the health system.

Public systems and public financing of healthcare matter for sustainable economic progress. This is the key lesson worldwide. Given our limited public expenditure on health and unsatisfactory governance in the management of health in many states, we must use technology to make a difference to the quality of governance. This is best done through decentralised community action where funds, functions, and functionaries are accountable to local governments, with an adequate number of professionals selected on merit, providing the capacity for effective governance at the local government level. Social accountability needs a significant increase with transparent processes that provide for redressal of citizen grievances. Crafting an effective, decentralised, community-owned, credible public system of care is an imperative for India.

Notes

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- 7 Jeffery, R. 1992. *The politics of health in India*. University of California Press.
- 8 1946 – The Bhole Committee Report.
- 9 see useful article by Dr. K. Shyam Prasad in *The Hindu*, 2009.
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- 16 2005 – National Commission on Macroeconomics and Health.
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4

GLOBAL INSIGHTS ON COMPREHENSIVE PRIMARY HEALTHCARE

Sandhya Venkateswaran

I. Introduction

India's health policy focus currently rests primarily on the two pillars of comprehensive primary healthcare (PHC) and publicly funded health insurance. It is envisaged that together these will move India towards universal health coverage (UHC). Both focus areas have witnessed programmatic interventions under the overarching umbrella of the Ayushman Bharat Programme – the former as Health and Wellness Centres (AB-HWCs) and the latter through the Pradhan Mantri Jan Aarogya Yojana (AB-PMJAY). This chapter outlines progress made in India's PHC system, identifies current challenges, and discusses opportunities, informed by global experience.

India's focus on PHC is not new. The Bhore Committee Report, as far back as 1946, laid focus on primary health centres as a unit for the provision of both preventive and curative care. Despite the focus, primary health centres continued to face shortages of infrastructure, resources, and workforce. The NRHM was launched in 2005 to address these challenges and strengthen PHC in India, with a rural focus. Key strategies included integration of vertical programmes, strengthening community participation, greater outreach to citizens, and focus on comprehensive care through attention to public health. The subsequent NHM sought to address structural problems in both rural and urban areas aimed at improving access to and quality of PHC services.

More recently, the government expanded focus to comprehensive PHC service, through the Health and Wellness Centres programme, aimed at transitioning from the previous selective PHC focus to comprehensive PHC. The programme includes the introduction of a new cadre, upgraded primary-level facilities, expanded screening, enhanced availability of medicines and

diagnostics, and increased community participation. Alongside these transitions, proposed interventions in digital infrastructure aim to address workforce and other challenges and integration across levels of care.

The policy focus on PHC has clearly been growing for long. Yet, deficits in the system remain. Given the importance of a strong PHC system from the perspective of health outcomes, financial protection for citizens, and overall system efficiency, the need for a deeper focus on this pillar stands underlined.

II. Status of Primary Healthcare – Progress and Remaining Gaps

Progress on many fronts has accompanied government of India's focus on PHC over the years: increase in public infrastructure and health workforce, increase in the use of public facilities for primary care, enhanced focus on disease prevention through stronger outreach, and improvement on specific health indicators. Between 2004 and 2018, increased emphasis on PHC coincided with enhanced utilisation of public outpatient facilities, the latter increasing at a higher rate (47%) than public inpatient care (28%) during this period (Venkateswaran and Singh 2023). Disease prevention aspects such as child immunisation, birthweight screening, and antenatal care (ANC) visits led to increased focus on preventive care after the introduction of the NRHM/NHM (Bango and Ghosh 2022; Muraleedharan *et al.* 2020; Panda *et al.* 2020). The Accredited Social Health Activist (ASHA – community health workers (CHWs)) worker was introduced with the aim of developing a stronger outreach mechanism to the local population. Progress has been evident on the outcome front, with declines in total fertility rate, infant mortality rate, and maternal mortality rate. Successive National Family Health Surveys (NFHSs) (Government of India, 2006, 2021) highlighted reductions in child and adult morbidities, including malaria, diarrhoea, and TB, since 2004.

While the NRHM/NHM's focus on PHC contributed to reducing overall physical and human infrastructure gaps, interstate differences remain considerable. Variation in infrastructure shortfall ranges from 2% in Andhra Pradesh for PHC to 74% in Jharkhand (Table 4.1). Even where facilities exist, they often lack basic amenities, with 84% of the facilities lacking regular water supply in Mizoram and 52% functioning without electricity supply in Meghalaya.

Data for urban areas in smaller states have been omitted.

Human resource challenges persist, with shortfalls, high workloads, and overlapping roles. Shortage of doctors, frontline workers, and other workforce continues (Table 4.1). A high shortfall of male health workers exists at 64%, and an estimated 26–29% shortfall of lab technicians at PHCs (RHS 2021–2022). Interstate differences are also considerable, ranging from 1% in UP for doctors in rural PHCs to 36% in Chhattisgarh (Table 4.1). Shortfalls in workforce are not the only constraint. Heavy workloads add to the challenge. Despite the introduction of community health officers (CHOs)

TABLE 4.1 Availability of Physical and Human Infrastructure in PHC Centres and Sub-Centres (SCs)

<i>Indicator</i>	<i>All-India Level</i>	<i>Interstate Range</i>
<i>Deficits in physical infrastructure</i>		
Shortfall of SCs (rural)	25%	6% (Chhattisgarh) – 58% (Bihar)
Shortfall of PHCs (rural)	31%	2% (Andhra Pradesh) – 74% (Jharkhand)
Shortfall of PHCs (urban)	40%	13% (Bihar) – 69% (Kerala)
Availability of regular electricity at sub-health centres (SHCs) (rural)	11%	1% (Tamil Nadu) – 52% (Meghalaya)
Availability of regular water supply at SHCs (rural)	10%	3% (Himachal Pradesh) – 84% (Mizoram)
<i>Deficits in human infrastructure</i>		
Shortfall of lab technicians in PHCs and community health centres (CHCs) (rural)	26%	1% (Chhattisgarh) – 86 (Uttarakhand)
Shortfall of lab technicians in PHCs (urban)	29%	4% (Assam) – 87% (Madhya Pradesh)
Shortfall of pharmacists in PHCs (rural)	24%	7% (Andhra Pradesh) – 83% (Bihar)
Shortfall of pharmacists in PHCs (urban)	25%	12% (Andhra Pradesh) – 83% (Madhya Pradesh)
Shortfall of health workers (female)/ auxiliary nursing and midwifery (ANM) at SHCs (rural)	5 %	2% (Tamil Nadu) – 42% (Himachal Pradesh)
Shortfall of health workers (female)/ ANM at PHCs (rural)	25%	30% (Gujarat) – 91% (Punjab)
Shortfall of health workers (female)/ ANM at PHCs (urban)	36%	10% (Odisha) – 73% (West Bengal)
Shortfall of health workers (male) at SHCs (rural)	67%	10% (Gujarat) – 98% (Bihar)
Shortfall of doctors at PHCs in rural areas	3%	1% (Uttar Pradesh) – 36% (Chhattisgarh)
Shortfall of doctors at PHCs in urban areas	5%	1% (Haryana) – 54% (Jharkhand)

Source: Rural Health Statistics 2021–2022

(Agte and Soni 2023), 50% of ANM continue to feel overburdened with their tasks. One doctor managing six CHOs has translated to one doctor per 20,000–30,000 people.

On the one hand, there are overlapping roles (Table A1 in Appendix), contributed by the lack of role clarity between a CHO and ASHA facilitator, and a CHO and ANM, and on the other, some tasks remain unaddressed. The

introduction of a new cadre as CHO did not address the workforce problem to a meaningful extent due to the absence of a clear delineation of roles and responsibilities between cadres, the ANM continuing to be overburdened, increased workload for ASHAs, and a mismatch of managerial and technical capacities, with clinicians (PHC doctors) serving as managers, monitoring the performance of CHOs and HWCs (Abdel-All *et al.* 2019; Agte and Soni 2023; Manjunath *et al.* 2022; Solanki *et al.* 2020).

In addition to input gaps with regard to infrastructure and workforce, the challenges of quality and accountability in service provision undermine outcomes from the inputs that are available. There are at least four types of quality challenges.

- Input gaps in the form of supplies (medicines and diagnostics);
- Motivation gaps – Know–do gap in provision, lapse in examination, minimal time spent per patient examination (Das *et al.* 2016; Mohanan *et al.* 2015), and absenteeism (Pangariya 2008);
- Regulatory lapses – limited adherence to protocols of referral (Agte and Soni 2023; Bashir *et al.* 2019), overprescription of medicines by both public and private providers (Das *et al.* 2016; Mohanan *et al.* 2015), and no periodic accreditation of facilities (Bahri 2023; Kalita *et al.* 2022);
- Ineffective grievance redressal and accountability system – both community-led initiatives and otherwise (Srivastava *et al.* 2015).

Structural challenges accompany infrastructure shortfalls and quality gaps. They include the following:

- *A patient-initiated reactive health system* based on episodic treatment. The primary care system is driven by patients seeking curative care when needed, choosing varied providers across time and conditions.
- *Limited system responsibility for population health* has limited preventive and promotive elements, and addressing the set of comprehensive needs. The scope of services offered in India's public PHC system, until recently, was limited to reproductive and child health and a select set of communicable diseases. The system had not, until recently, evolved to respond to the changing demographic and epidemiological profile of the country, as evident from the proportion of non-communicable disease (NCD)-related deaths increasing from 37.9% in 1990 to 61.8% in 2016 (MoHFW 2022). The country faces a dual burden of disease with an unfinished communicable disease agenda. Gaps in screening have contributed to increasing incidence of NCDs, with an estimated 30–50% of the population, for example, being unaware that they are diabetic (Indian Express 2023; Pradeepa and Mohan 2021) and undiagnosed hypertension estimated at 42.3% (Boro and Banerjee 2022). A similar situation prevails for cervical cancer, endocrine disorders, and drug-resistant tuberculosis (Chakraborty and Deshpande 2022, WHO 2019; Wu *et al.* 2023).

- *Absence of co-ordination between public and private sectors* with government stewardship largely limited to the public delivery system, rather than the combined public and private systems.
- *Weak institutions to manage financing, provisioning, and regulation/quality* as depicted in Table 4.2, with governance and institutional landscape for financing, provisioning, and regulating healthcare being skewed towards centralisation, despite health being a state subject. There is fragmentation in legislation, institutions, and governance for quality (Clinical Establishment Act (CEA), National Quality Assurance Standards (NQAS), Consumer Protection Act (CPA), and National Accreditation Board for Laboratories (NABL)), and weak mechanism for implementation/adherence of legal and other existing mechanisms. The CEA is not implemented by most states because of its legal ramifications. Consumer Protection Act, 2019, lays the burden of proof on the consumer. NQAS 2013 has been introduced for public facilities, but so far only 2.5% of the public health facilities were NQAS certified (Bahri 2023).
- *An input-based, underfunded system.* There are at least three issues regarding financing: the quantum of funds allocated to primary healthcare, the targeting of allocations, and the architecture of financing PHC. Allocations to primary care, across levels of care, have been difficult to tease out from budget, but estimated requirements suggest that current allocations for HWCs are low for delivering Comprehensive Primary Health Care (CPHC). Singh *et al.* (2021) estimated funding requirement for transitioning to comprehensive primary care through HWCs to be INR 7,21,510 million for 2019–2023. However, allocations for upgrading infrastructure into HWCs stood at INR 60,750 million for 2018–2022. Budgets for primary healthcare are fragmented, with HWC allocation ranging between 4 and 5% of NHM budget, and separate allocations for individual vertical programmes (Shah *et al.* 2019). Expenditure on primary care as Out Patient Department (OPD) has been higher for secondary and tertiary care hospitals than at primary care facilities (National Health Authority (NHA) 2022). Priority towards building a strong PHC system is not evident from the financing patterns: public expenditure on preventive care as a proportion of the current health expenditure increased 27% (between 2013–2014 and 2019–2020) and 30% on government primary-level clinics (PHCs, dispensaries, and family planning centres), while it showed an increase of 60% on government hospitals (providing secondary and tertiary care). Importantly, a system designed to fund inputs, rather than outcomes, undermines system ability to incentivise service quality. Additionally, effective monitoring of performance is a function of robust data systems; the absence of the latter compromises the ability of the system to measure performance.

TABLE 4.2 Financing, Provisioning, and Quality Measurement of PHCs

	<i>Institutions</i>	<i>Central</i> <i>NHM</i>	<i>State</i> <i>State health society</i> <i>(part of NHM)</i>	<i>District</i> <i>District health</i> <i>society (part of</i> <i>NHM)</i>	<i>Remarks</i>
Financing	Funding mechanism Degree of autonomy	60:40 (with state contributing 40%), 90:10 (for poorer states) High (due to nature of centrally sponsored schemes (CSS))	Greater dependence on centre	Lesser autonomy	Participation of municipalities/ panchayats in financing and provisioning of primary care is insignificant
	<i>Institutions</i>	<i>Ministry of Health and Family Welfare (MoHFW)</i>	<i>Directorate of Health Services</i>	<i>Chief District Medical Officer (CDMO)</i>	
Provisioning	Administrative autonomy	High (due to centralised policymaking and regulation)	Relatively lower (Director General of Health Services (DGHS) mediates centre–state relations)	Low (merely acts as implementing agency)	

(Continued)

TABLE 4.2 (Continued)

	<i>Institutions</i>	<i>Ministry of Health and Family Welfare (MoHFW)</i>	<i>Directorate of Health Services</i>	<i>Chief District Medical Officer (CDMO)</i>	
	1. Clinical Establishment Act	National council (members from DGHS and various councils)	State council (members from various councils and Director of Health Services)	District Registering Authority (collector and district health officer)	As law seeks medical negligence as criminal offence, Indian Medical Association (IMA) has opposed the act's implementation. Not implemented by most states
	Degree of autonomy	Lower	Higher	Low	State can revise the act as per the context
	2. NQAS Programme	QA Committee (centre)	State QA Committee	District QA Committee and QA team at the facility	For facility level
Quality check	Degree of autonomy	Higher (separate national certification)	Higher (separate state certification)	Low	Facility can be both state and nationally certified separately, but not mandated. State certification required for national certificate. Less participation (2.5%) from facilities
	3. Consumer Protection Act	National Council	State Council	District Council	Insufficient to address cases of medical malpractice and poor medical practice
	Degree of autonomy	All the councils are advisory in nature			
	4. NABL	NABL is the constituent body of Quality Council of India under Ministry of Commerce and Industry. Centralised accreditation process			It is a lab accreditation body; therefore, quality of service delivery through facility cannot be entirely ensured

Source: Selvaraj *et al.* (2022)

These gaps have contributed to utilisation choices, delayed treatment, high out-of-pocket expenses, and system inefficiencies. Despite progress on the input front, existing deficits have led to low demand for public facilities for primary care. This has implied accessing private providers, including informal unqualified providers, and often overcrowding of secondary and tertiary institutions. While there has been progress on the overall utilisation of public facilities, progress has been slow on outpatient care, where despite increase only 30% of the population accessed outpatient care in public facilities in 2018 (GoI 2019). An income quintile-wise analysis reveals small differences across quintiles, suggesting that demand for public facilities for outpatient care remains low across income groups (Figure 4.1a and b).

Criss-crossing across levels of care, systems of medicine, nature of provider (qualified versus unqualified), and ownership (public versus private) have

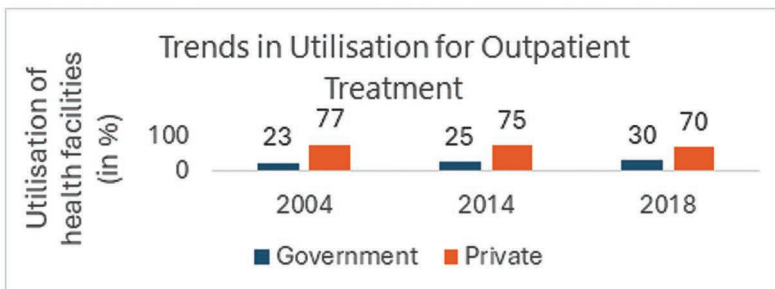


FIGURE 4.1A Trends in utilisation of outpatient facilities (percentage of population using public versus private outpatient facilities).

Source: Calculations based on unit-level National Sample Survey Office (NSSO) data

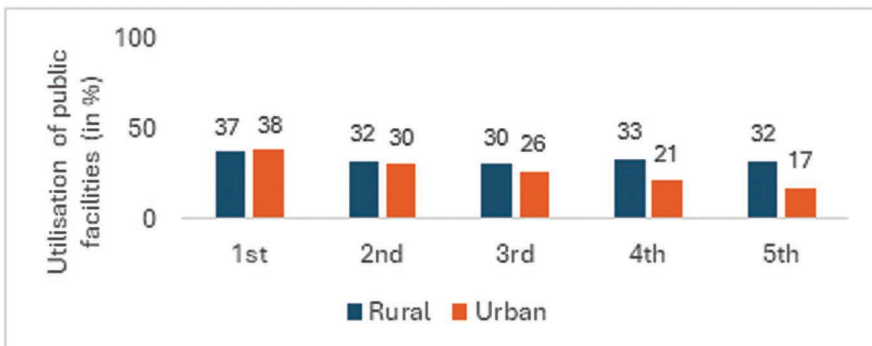


FIGURE 4.1B Quintile-wise trends in utilisation of public facilities for outpatient treatment, 2018.

Source: Created by authors (Venkateswaran and Singh 2023; Muraleedharan *et al.* 2020)

become common elements of India's health system. These have combined to lead to delayed treatment and financial vulnerability (Ghosh *et al.* 2023; Makkar *et al.* 2003; Unnikrishnan and Sharma 2018; Niti Aayog 2019). Government PHC services are free of cost yet lead to considerable out-of-pocket expenditure (OOPE) due to gaps in availability of medicines and diagnostic services (Kohli *et al.* 2018; Prinja *et al.* 2015). The lack of integration across levels, where citizens are able to choose providers irrespective of the need, has contributed to the overcrowding of higher-level facilities, an outcome of the preference for specialist care even for basic health needs.

III. Global Insights

The gaps outlined above are not specific to India. Several countries have experienced these and other gaps (with some continuing to do so) and have initiated system reforms to address them. Insights from their experience can be instructive in thinking through system-level shifts for India. Discussed below are some key administrative, financial, and governance reforms, which enabled progress towards comprehensive PHC provision across countries.

Transitioning from a Patient-Initiated to a System-Initiated Model

As mentioned in the previous section, introduction of the ASHA worker initiated India's move towards a proactive system under the NRHM in 2005, and it is through the AB-HWCs that a shift towards PHC teams is being envisaged. Yet, the system primarily remains a reactive one, with system engagement largely driven by health episodes. Several countries have transitioned to a system-initiated model, where

- each PHC team caters to a defined catchment;
- population in the catchment is empanelled with the PHC;
- state decides citizen registration to a facility, but citizens are free to use other facilities (in some countries);
- community outreach is done through multidisciplinary teams, which combine physicians and non-physicians; and
- population-based screening and treatment adherence are prioritised.

Such models have led to increased footfall at the primary level and referral in many cases, although not all, reducing hospital rates in some cases.

The size of the catchment area varies, ranging from 50,000 people covered by an urban PHC in India to 3,000–4,000 per PHC in both Turkey and Brazil (Table 4.3). Thailand's model varies in registering the population with a District Health Service (DHS) that covers several PHCs.

TABLE 4.3 Transitioning to System-Initiated Model: Population Empanelment

<i>Country</i>	<i>Team Composition</i>	<i>Identifying Catchment Area per PHC Team</i>	<i>Ensuring Registration of the Entire Population with the PHC Team</i>	<i>Outcomes/Shifts</i>
Turkey	One physician, one nurse, one ANM, and one emergency medicine technician	3K–4K	Mandatory registration of population within the catchment area	Increased footfall at the primary level; referral and facilitated change of funding mechanism, increased funding
Brazil	One physician, one nurse, two assistants, and six CHWs	3K–4K	Registered with a PHC but free to access PHC services elsewhere	Increased footfall at the primary level; facilitated change of funding mechanism, increased funding
Thailand*	One physician (rolling basis), two nurses, two public health officers, village health volunteers	50,000 individuals within a DHS	Registration at the contracting unit (CUP), which is usually a district hospital	Increased footfall at the primary level; enabled referral and gatekeeping
Indonesia	One physician, 5–8 nurses, midwives, dentists, and Kaders (CHWs)	25,000–40,000 individuals	Mandates to register but had the choice to change their registration after 3 months	Increased footfall at PHC, adherence to gatekeeping and referral not successful
Costa Rica	One physician, one nurse, one CHW, one pharmacist, and one medical data clerk	~4K–7K	Geographically empanel population to specific Equipos Básicos de Atención Integral de Salud (EBAIS) teams	EABIS team delivers approximately 50% of all OPD visits and care for 80% of nation's health needs
India	One doctor, one AYUSH doctor, two staff nurses, one pharmacist, one lab assistant, and one multipurpose worker (PHC level) One CHO, one ANM, one multipurpose worker (SHC level) ASHA (CHWs)	20k–50K (PHC) 5K–10K – Ayushman Arogya Mandir (AAM)	Slow progress	Expected to help in reaching the underserved population

Source: (Krassanairawiwong *et al.* 2021; Pesec *et al.* 2017)

* In Thailand, sub-district health centres are PHCs. The DHS consists of a district hospital and 10–15 sub-district health centres serving a typical catchment population of 50,000 people (Balani *et al.* 2024).

Registering citizens with a specific health facility raises the question of choice, especially in contexts of a low system capacity and low trust. Countries have accordingly adopted varied approaches. Brazil, Thailand, and Indonesia provide citizens the choice of accessing a PHC other than the one they are registered at, whereas Turkey and Costa Rica do not. Turkey adopted a hybrid approach, where citizens are registered to a facility based on geography but can substitute a provider if they so desire.

Such processes of empanelment have been associated with stronger relationships between caregivers and patients, increased access to PHCs, and improved coordination in the system. The 1990 reforms in Costa Rica, which introduced PHC teams, saw 80% of the country's health needs addressed by PHC teams by 2014 (Pesec *et al.* 2017). Accountability for a group of citizens is a natural outcome of such an approach, leading to improved care.

Moving from a patient-initiated to system-initiated model requires much higher outreach for tracking at-risk population groups and risk factors for early disease detection. Countries have accordingly developed multidisciplinary teams for screening and outreach activities. Turkey and Brazil introduced extensive door-to-door outreach. Brazil has focused on skill building of teams and the maintenance of real-time population and disease registers to track patients. These initiatives have been associated with declining heart failure, diabetes, and hypertension rates, and reduction in hospitalisation rates associated with several primary care conditions in Brazil and reduced cervical cancer rates in Thailand (OECD 2021). Such initiatives have implications for budget and for developing skilled teams. Brazil and Turkey witnessed a budgetary increase of 1% of GDP during their reform period (World Bank 2023).

Transitioning to Integrated Care

Countries have achieved shifts in care integration through systems of gatekeeping and referral. Gatekeeping required a larger scope of services being delivered at the primary level, leading countries to expand primary care functions through a broader workforce and scope of services. Gatekeeping has been undertaken in different forms. Thailand enforces a 100% OOPE for care sought at higher-level facilities without first accessing care at a designated primary care facility (Paek *et al.* 2016). Turkey, while abolishing the formal referral system to higher levels of care, introduced co-payments in 2009 for secondary care without referral (Balani *et al.* 2024)

These initiatives contributed to

- increased footfall in primary facilities in Thailand and Turkey;
- reduced crowding at higher-level facilities and reduced hospitalisation rates;

- improved overall efficiency of health system and reduced OOPe as a proportion of total health expenditure (THE) between 2000 and 2020: from 34.2 to 8.7 in Thailand and from 28.6 to 16.9 in Turkey.

Expansion to comprehensive care at the primary level has been a key element of integration. In Brazil, the Family Health Support Centres, comprising psychologists, social workers, pharmacists, physiotherapists, nutritionists, etc., collaborate with PHC teams to enhance the scope and quality of care provided and promotion and prevention efforts. In Turkey, healthy living centres address the growing burden of NCDs, serving a population of ~75K, and include nutritional counselling, healthy ageing support, smoking cessation, screening, and follow-up on patients referred by PHCs. The comprehensive care through family health strategy was associated with a reduction in hospitalisation rates, mostly for primary care conditions such as asthma, gastroenteritis, cardiovascular, and cerebrovascular diseases.

Achieving continuity of care has been a key reform agenda across countries. A key strategy witnessed across countries has been the establishment of regional health networks (Balani *et al.* 2024). China introduced autonomous primary care groups, constituting of CHCs, run by tertiary hospitals and facilitating two-way referrals and continuity of care from CHCs and tertiary hospitals. Brazil introduced healthcare networks that integrate planning and provisioning of healthcare services (primary and specialised care) at the regional level, supporting under-resourced municipalities. While the Brazil model has been recently implemented, with little evidence on outcomes, China witnessed improved accessibility and quality, with 20% lower costs and 30% higher insurance reimbursement rates than tertiary hospitals.

In countries such as India, with a strong presence of private providers in a mixed health system, any discussion on PHC would be incomplete without the mention of engagement with private providers. Effective engagement with private providers, where relevant, has been another area of reform contributing to integrated care. Research on the role of private providers in comprehensive primary healthcare is limited (Cercone *et al.* 2005; Islam *et al.* 2018; Liu *et al.* 2007; Umar-Sadiq 2020), and the countries discussed in this chapter have a much smaller private provider base compared with India, but the more important factor is the engagement with private providers through different mechanisms. A common mechanism is the inclusion of PHC within country insurance programmes. This facilitates the use of contracts, specifying quality and other criteria, as found in Thailand, Indonesia, and China (Nundy and Bhatt 2022b; Nundy and Venkateswaran 2022). Private health facilities in China register with the health insurance scheme. A second mechanism entails strategic purchasing of PHC services from private providers, as in Indonesia and Thailand, where services from private providers are purchased under

a strategic purchasing agreement, the latter giving the government greater control on quality and cost control. In Thailand, the contracting unit (usually a district hospital) can contract private clinics if they adhere to norms regarding human resources. Indonesia and Mexico engage primary providers through contracts. Payments are often based on unweighted capitation. Privately managed PHCs undergo an annual certification in Brazil to avoid gaps in service delivery and maintain user satisfaction. These initiatives have enhanced state ability to dictate terms regarding quality of care from private providers, leading to cost efficiency.

A third mechanism is based around incentivising private non-profit providers, demonstrated by the Costa Rica experience of financing and provisioning PHC. Although not private in the commercial sense, the non-government actors in Costa Rica have been incentivised to run primary care facilities through capitation-based payments based on the population attached to a specific facility. The payments motivate them to maintain or improve health status and control costs (Pesec *et al.* 2021).

Workforce for Primary Healthcare Delivery

Workforce availability has been a concern across countries, in absolute numbers (Table 4.4), in distribution, particularly for specialists, and challenges of workload. Countries have adopted a mix of strategies to address these, including re-architecting roles and responsibilities, training, and increased budgets. Turkey and Brazil both experienced acute shortage and distributional inequities of health workforce before their respective reforms. Physician shortage in Turkey had led to almost 17% of PHCs functioning without physicians in 2003 (Venkateswaran and Singh 2022a). A combination of increased budgets and dedicated focus on less developed areas through Brazil's Family Medicine Programme improved overall availability and reduced gaps between regions. Improved workforce led to increased utilisation of public facilities in both countries. As per the Turkey health statistics in 2019, the average per capita visit to a physician increased from 1.1 in 2002 to 1.9 in 2006, the ANC coverage increased from 81% in 2003 to 92% in 2008, and vaccination coverage of children below 2 years of age increased from 54% in 2003 to 77% in 2008 (Venkateswaran and Singh 2022a).

As is well-known, budgets are not always the only constraint to improving workforce shortages, which are often a result of other structural constraints. Thailand addressed shortages through varying strategies of rotating doctors across PHCs, running PHCs via nurse practitioners, and running PHCs with only public health officers (Kitreerawutiwong *et al.* 2017). While the rotational strategy helped address shortages to some extent, it did not do so entirely, as the rotation process did not ensure regular availability of doctors across PHCs.

TABLE 4.4 Addressing HR Shortage through Frontline Health Workers (FHWs)

<i>Country</i>	<i>FHW Outreach Density</i>	<i>Functions and Incentives of FHWs/Frontline Workers</i>	<i>Qualification</i>
Thailand*	~1:15	Functions: Responsible for health promotion, basic care, and control of communicable disease and referral to higher facilities Incentive/compensation: Monthly fixed plus social recognition awards	Basic school education
Brazil	~1:150	Functions: FHWs are tasked to perform ANM-level tasks, leading to increased and effective coverage of family health Compensation/Incentive: Monthly base salary + performance-based bonus	Secondary education + professional diploma
Turkey	~1:1400 ANM equivalent	Functions: ANM as frontline worker to provide preventive, promotive aspects of health services, including NCD screening. And basic clinical care related to maternal and child health Incentive/compensation: Monthly base salary + performance-based bonus	Bachelor's degree
Indonesia	~1:140/1:233 ASHA equivalent	Functions: FHWs include organising monthly community health sessions, weighing children under 5 years and pregnant women, filling in the record book, providing health promotion, and helping the village midwives in maternal health services Compensation/incentives: FHWs may receive informal types of compensation, as monthly honorarium payment for volunteering work, such as free medical treatment from higher levels in the health system	Basic high school education

(Continued)

TABLE 4.4 (Continued)

Country	FHW Outreach Density	Functions and Incentives of FHWs/Frontline Workers	Qualification
China	~1:300/1:2500 ANM level	Functions: FHWs are known as village doctors, who provide basic medical consultation, treat minor ailments, provide preventive and promotive healthcare, immunisation, and referral to higher facilities Compensation/incentives: Monthly salary + government subsidies to deliver essential medicines	Educational qualification vary across provinces: from basic high school education to additional vocational training or certification in specific areas of healthcare
India	1:1,000 (rural) 1:2,000 (urban) (ASHA)	Functions: Extensive list of functions ranging from ANC outreach, to birthweight and NCD screening, maintaining population registers, increasing overall awareness about nutrition and public health, facilitating referral visits to higher-level facilities, and assisting VHSNCs to create village-level health plan Compensation/incentives: Monthly fixed honorarium + incentive linked to completion of a bunch of tasks	Literate women, with preference given to women who are qualified up to the 10th standard

Source: Balani *et al.* (2024)

Note: Thailand has one village health volunteer (VHV) per 10–15 households, and Brazil has one CHW per 150 households. For all other countries, respective CHWs are population based (per number of individuals).

Thailand also adopted task shifting strategy to address doctor shortages and trained nurses to perform tasks such as regular check-ups, administering vaccinations, and diabetes care. Of note is the nurse–doctor ratio in Thailand, which enabled task shifting (Pagaiya and Noree 2009); at 3.4, it is much higher than that in India at 2 (OECD 2023). Whether it be task shifting or deeper community outreach, the need for skills and capacities cannot be overstated. Costa Rica’s ATAP (*asistentetécnicoenatenciónprimaria*), an advanced community health worker, undergoes 1 year of training before joining the PHC team.

Enhanced Quality and Accountability

Ensuring service quality and accountability has not only been one of the key challenges regarding the Indian health system but is also a challenge to several other countries. At least four levers have been utilised to work towards enhanced quality and accountability.

- Performance incentives
- Provider regulation
- Community monitoring
- Governance and institutional mechanisms to manage quality

Performance-linked incentives have been commonly utilised by countries. Brazil's focus on less-developed municipalities was translated through results-based financing, incentivising PHC coverage in less-developed areas. Federal financing to municipalities was based on the numbers enrolled in each catchment, the number of functioning family health teams, and CHWs (OECD 2021). In 2011, Brazil introduced a national programme focused on quality, which incentivised improved access to and utilisation of services at the municipality level and outcome indicators. Conditional transfer of funds was deployed to incentivise quality, based on care standards, measured for structure (availability of drugs and equipment), process (ANC, immunisation, and treatment completion rates), and outcomes (patient satisfaction and years of life lost because of disease) (Balani *et al.* 2024). Implementing an incentive programme required increased funds, committed through increased public health expenditure between 2012 and 2017 (Macinko *et al.* 2017). Despite its voluntary nature, most family health teams participated in this programme by 2019 (OECD 2021), possibly motivated by the prospect of additional resources. Between 2011 and 2019, progress as increased maternal and child health-related services and a 14% reduction in hospitalisation for chronic diseases was associated with these quality interventions (OECD 2021).

Performance incentives were deployed in Turkey, and performance-based contracts were issued to medical professionals. A deduction of up to 20% of base salary was associated with non-compliance to planned work hours and other indicators, and a payment of up to 40% of base salary was provided for being posted in less-developed areas (Özçelik 2020). These resulted in reducing the inequitable distribution of human resource and coverage disparities, increasing cover of preventive services, and an increase in annual per capita visits to a PHC physician, from 1.7 in 2005 to 3.5 in 2019 (Venkateswaran and Singh 2022a).

Regulation has been the second lever to enhance quality. The Accreditation Commission for Primary Care in Indonesia, an institution independent

of the ministry of health, mandates accreditation once every 3 years. Turkey contracts most pharmacies and diagnostic services, facilitating the regulation of private providers. Biannual audits enable the provincial directorate to track outpatient cases and quality of service provisioning, contributing to higher user satisfaction (67% in 2019) and low OOPe (16.7% in 2019) (Venkateswaran and Singh 2022a).

The third lever focuses on accountability driven through *community feedback*. Indonesia launched a web-based portal for service-related complaints, with well laid out timelines for redressal. Brazil included user satisfaction as a variable for payment to PHC teams (OECD 2021).

The focus on performance incentives requires a strong monitoring system, which requires a well laid out and effectively implemented data collection and reporting system. Countries have prioritised this aspect, leading to effective quality initiatives. Turkey's strong priority to this reflects in its tracking system performance through the integration of provider and administrative data, on the one hand, and patient data, on the other. Budgets and expenditures are tracked through the Core Resource Management System (CRMS). Falsification of data provided by staff is associated with a heavy penalty and/or contract termination (Kockaya *et al.* 2021; World Bank 2013).

While individual levers have contributed to quality enhancement, country experience points to the importance of the institutional and governance architecture and the role of consolidating individual mechanism under a unified framework for quality assessment. The Quality and Outcomes Framework in Thailand laid out performance indicators and financial incentives for the entire system. The Healthcare Delivery Performance Index introduced in Costa Rica uses 15 quality indicators to rank 106 health areas (Pesec *et al.* 2021). The development of such frameworks reduces fragmentation and ensures a cohesive and integrated strategy for quality improvement across areas of health.

Consolidating aspects of PHC and quality improvements are strengthened through organisational reforms, which bring together individual elements of PHC under one dedicated department focused on PHC that can ensure dedicated funding and quality. Innovations towards effective governance institutions have included a Directorate of Primary Care, Institutions of Accreditation, move from input financing to performance-based capitation/payments, strong information systems for patient data and budget spend, and effective grievance platform leveraged for facility payments. The General Directorate of Primary Health Care in Turkey is one such example that manages strategic and operational aspects of health centres, human resources, and communicable disease control (Venkateswaran and Singh 2022a). The Caja Costarricense De Seguro Social (CCSS), an autonomous service authority, in Costa Rica manages the country's PHC financing, management, and

delivery. Table A1 in the Appendix summarises the institutional arrangements across countries.

Financing Primary Healthcare

Several reforms undertaken by countries, as evident and discussed above, would have financial implications. While increase in healthcare budgets has been one strategy, better utilisation of existing budgets, through re-targeting funds, is another. India's low allocations to healthcare have been well noted. While comparison with countries on a different economic track may not be as instructive, what is particularly important to note is healthcare allocation by countries of similar economic status as India. Country economic status and expenditure on PHC show a non-linear association (Table 4.5), pointing to non-economic drivers of financial commitments. Political priority has played a role in this regard, as evidenced by Brazil, Turkey, and Thailand. Brazil and China are at similar development levels, yet Brazil's PHC expenditure is nearly double that of China. Brazil's expenditure is double that of other relatively higher-income economies like Turkey and Thailand (Balani *et al.* 2024).

Allocating increased funds often raises questions of competing priorities, and it is here that the role of dedicated revenue sources becomes important. The importance of ensuring funds earmarked for health is not diverted elsewhere, has been underscored by the varied experience of countries. Thailand was successful in this regard because it ensured that the surcharge on tobacco and alcohol was actually utilised for funding preventive and promotive care, which was done by transferring the generated surcharge to the Thai Health Fund daily. Focused on health risks related to alcohol, tobacco, and accidents, the Thai Health fund contributed to decline in smoking and alcohol consumption rates (tobacco usage dropped from 22.5% in 2001 to 18.2%

TABLE 4.5 Primary Healthcare Expenditure in 2017

<i>Country</i>	<i>GDP per Capita, PPP (Constant 2017, US\$)</i>	<i>Public Health Expenditure (% GDP)</i>	<i>PHC per Capita (2017 US\$)</i>
Turkey	28,193	3.25	\$132
Costa Rica	20,168	5.18	\$322
Thailand	17,008	2.78	\$145
Brazil	14,478	3.95	\$315
China	14,244	2.87	\$144
Indonesia	10,942	1.35	\$49
India	6,112	0.97	\$30

Source: Schneider *et al.* (2021)

Note: The components of PHC have been used from the definitions of WHO and OECD.

in 2014, and the annual per capita alcohol intake decreased from 8.1 litres of pure alcohol in 2005 to 6.9 litres in 2014) (Pongutta *et al.* 2019; Watabe *et al.* 2017).

Brazil's experience was less successful. The government in Brazil introduced a social security budget in 1988 aimed at improving funding for healthcare so that it was not dependent on the country's economic context. The government, however, was not focused on the purpose of the funds and used them for various other purposes, such as public debt payments, which were not part of the objectives of the social security budget (Almeida *et al.* 2000).

Analysis of OOPE and expenditure levels on PHC suggests that the mere increase of funds is not sufficient to bring about shifts in OOPE. Rather, the architecture of financing and targeting of funds is equally important. Financing reforms, in the form of capitation payments, have often complemented the empanelment approach. Capitation payments incentivise providers to offer improved quality, through which they may attract a larger number of patients. Capitation payment approaches have varied, with countries like Turkey adjusting capitation for the socio-economic and demographic status of an area, factoring in age, number of children, pregnancy, etc., and Thailand adjusting for age. The indexing approach is said to have improved service utilisation: annual visits to PHCs in Turkey increased from one in 2002 to three in 2020 per person (Tatar *et al.* 2011; World Bank 2013). Cost containment, implicit in the capitation approach, has been associated with increased use of generic medicines over branded medicines and reduced incidences of over-prescription, as found in Thailand (Tangcharoensathien *et al.* 2015).

Health technology assessments (HTAs) are used for improved targeting of funds. Undertaken annually in Thailand through the Thai Health Intervention and Technology Assessment Programme (HiTAP) for varied disease interventions, these helped assess the cost-effectiveness of interventions and required frequency of screening (Lahariya *et al.* 2023; Kingkaew *et al.* 2022). Such processes contributed to cost reduction and improved health outcomes (Kingkaew *et al.* 2022). Turkey's reforms led to increased expenditure on drugs and other supplies, growing annually at 7% in real terms (Gürsoy 2016), with public pharmaceutical spending estimated at about 1–1.5% of GDP between 2002 and 2014, contributing to OOPE reduction from 28% in 2000 to 16% in 2020. Owing to high OOPE, Brazil targeted resources on drugs as well, increasing from 6% of THE in 2001 to 13% in 2018, with OOPE declining from 37% of THE in 2000 to 28% in 2018.

The flow of funds and autonomy over them has been as much of a driver in their use. Brazil's experience is a strong pointer to the role of decentralisation and autonomy to municipalities. Post its reforms, Brazil transitioned away from federal government control of resources where 70% of resources were controlled by the federal government, to increased autonomy to state and

municipal governments in terms of allocation and expenditure of both federal and local funds and the ability to raise more resources (Venkateswaran and Singh 2022b). Local governments prioritised PHC as a result of the autonomy, leading to increased equity across municipalities. The focus of Brazil's reforms was on PHC, and the country witnessed a significant increase in primary care expenditure, in contrast to its previous focus on hospital care (Venkateswaran and Singh 2022b). Between 1990 and 2018, the federal government's share in the total government health expenditure (GHE) reduced from 73 to 43.2%, shares of states increased from 15 to 25.7%, and that of municipalities grew from 12 to 31% (OECD 2021). The per capita PHC spend by municipalities has doubled from R\$ 245 in 2005 to R\$ 490 in 2019 (Massuda *et al.* 2022; OECD 2021).

Decentralised autonomy and linking payments to performance require state capacity at local levels to both plan and implement. Recognising the importance of this, Indonesia introduced a line item for capacity building at the district and facility levels, contributing to improved access to PHC facilities and decline in hospitalisation rates (Nishijima *et al.* 2019; Nundy and Bhatt 2022a).

IV. Discussion

An analysis of reforms across countries highlights policy interventions strengthening PHC. India too has initiated certain reforms to strengthen its PHC.

Transitioning to a system-initiated model, such as introducing ASHA workers in the NRHM, increased system outreach, examples of which are found in specific states. Chhattisgarh introduced *haat* bazaar clinics to address the needs of remote and tribal areas, focusing on setting up mobile medical units (MMUs) at designated weekly marketplaces. Supported by a doctor and paramedic staff, these units provide preventive, promotive, and curative services (WHO 2023). Despite these, the systems in India remain largely reactive, leading to a high burden of undiagnosed diseases and delay in treatment (Ghosh *et al.* 2023). Population norms need attention from the perspective of both workforce needs and moving towards a stronger outreach, proactive system. ASHA workers and multipurpose workers (MPWs or multipurpose health workers?) are currently overburdened (Manjunath *et al.* 2022; Rao and Chowdhury 2021), and addressing this requires reviewing population norms for meaningful engagement with the population.

India could benefit from greater attention to the configuration of the team, density of population served, and workload. Introduction of the CHO moves India away from a doctor-focused system, but clinical medicine remains the overall focus of the system. A clear delineation of the duties within the

HWCs, aimed at addressing the overlap between CHO role and ANM/ASHA roles, offers the potential to better utilise the existing workforce.

Equally importantly, India's digital expertise offers the potential to address workforce challenges through greater leveraging of digital innovations, especially the distributional challenges in remote and underserved areas. E-Sanjeevani, MoHFW's telemedicine platform, is currently based on travel to the nearest HWC to connect with a doctor at a PHC or CHC. Strengthening operational challenges offers the potential to handle basic primary care services at the household level.¹ Leveraging medical staff from the private sector offers another opportunity. The creation of a Healthcare Professional Registry by the Ayushman Bharat Digital Mission offers further potential to leverage services of doctors.

Addressing quality issues, the Indian system includes performance incentives, but only for ASHA workers, MPWs and CHOs, with upper limits (monthly incentive capped at INR 15,000, INR 1,500, and INR 1,000 for CHOs, MPWs, and ASHA workers, respectively). Of note is the limited set of indicators on which performance is measured, largely focused on activities that can often skew action in directions that may not be the most appropriate. The regulation lever exists in India but has been utilised in a limited manner so far, with inconsistent implementation of the Clinical Establishments Act 2010 across all states. India has not ignored the potential gains from community-driven accountability. Numerous community-level initiatives such as Jan Arogya Samiti, Mahila Arogya Samiti, and the VHSNC have existed but have not delivered the level of accountability envisaged.

India envisions citizen empanelment as part of the HWC initiative, but the PHC: citizen ratio and presence of private providers make it more complex to do so without increasing the number of facilities and developing mechanisms for private sector participation. Path dependencies with regard to citizen autonomy in choice of providers and extensive use of private providers would require careful thought towards strategies and incentives for shifting health-seeking behaviours. Diversity across India in terms of socio-economic status, disease profile, and areas of low development suggests that such contexts be taken into consideration while bringing in reforms.

Data integration undertaken across countries, coupled with a strong incentive structure for reporting, offers valuable insights for India, which currently has multiple data sources that are either fraught with quality issues or exist in silos, resulting in sub-optimal tracking of systemic performance. A move to strengthen the data regime has been evident through the development of population-based health registers at the HWC level. There is now a need to integrate these with the PMJAY datasets, sharing data across levels of care. Standardisation of the Ayushman Bharat Health Account (ABHA) ID for PMJAY to be utilised for HWC treatment will enable better tracking of patients across systems and ensure a two-way referral between inpatient

utilisation at hospital and outpatient facilities at HWCs, ensuring continuity of care (Lahariya 2020).²

Finally, given that health system reforms in several countries were preceded by governance reforms aimed at greater decentralisation, India would gain from much more attention to strengthening state capacity at all levels, especially at lower levels for effective planning and fund utilisation. This will require commitment through annual budget allocations towards training and capacity building. Effective leverage of funds devolved through the Fifteenth Finance Commission for rural and urban primary care (INR 8,4540 million for rural and urban local bodies across 19 states for 2021–2022 to 2025–2026 (MoF 2021)) will require attention to such capacity building.

Insights emerging from across countries, combined with the context for India, point to the need for greater attention to the following in India, some of which are already envisioned but need greater emphasis in implementation.

On Delivery Models

- Population-centric models through empanelment of population groups to particular providers, requiring registration to a HWC, increased population awareness, and incentives and other interventions for shifts in health-seeking behaviours. The subnational context of varying capacities across states and the potential benefits of a competitive environment underline the benefits of pilots that provide choice of provider to citizens.
- Introduction of multidisciplinary team-based care, to address PHC needs comprehensively, with enhanced competence and ongoing capacity building of frontline workers. Addressing doctor shortages may be experimented through upgrading the general physician (GP) to family physician (as in Turkey and Indonesia) or through the rotating doctor model of Thailand.
- Care coordination, through hub and spoke models, along with well-defined processes of gatekeeping and referrals. Thailand's model of contracting through district hospital, and autonomy-based organisational arrangements for public providers in China could be instructive.

On Quality Improvement

- Quality improvement can be laid out as a clear policy objective with a strategy and clear actions through incentives and disincentives and plans for measurement. This could include the establishment of quality criteria for facilities, and define pay-for-quality mechanisms to influence quality measurement and improvement among contracted providers. Brazil's example regarding primary care access and quality (PMAQ) could be instructive.

- Institutionalisation of quality measurement and improvement through a multi-stakeholder structure in each state to develop, implement, and monitor quality improvement strategies. Brazil, Indonesia, and Ghana have institutions/committees under the ministry of health.
- Strengthening patient voice through strengthening information transparency and patient grievance procedures, and by building on learning from current initiatives in India.

On Financing

- Capitation-based payment could address funding fragmentation across vertical programmes, increase responsiveness of system, and bring about efficiency through managing costs.
- Introduce performance incentives. This will need to be clubbed with strong monitoring and data system.

On Governance Platforms

- Separate department responsible for primary care within MoHFW, to ensure dedicated focus on preventive, promotive, and lower-level curative care (as in Brazil and Turkey).
- Regulation through 1) setting up effective monitoring institutions at the state level, similar to Brazil and Turkey, and 2) strengthening state capacity for assessment, information collection/analysis, and regulatory enforcement.
- Purchasing primary care through a purchasing entity.

The above may entail considerably big shifts in the system as also of behaviours for providers, administrators, and citizens. Piloting these across smaller geographies could facilitate a process of least disruptions.

APPENDIX

TABLE 4.A1 Overlap in Roles of CHO/ANM and Medical Officer (MO)

<i>Component</i>	<i>MO PHC</i>		<i>CHO</i>		<i>ANM</i>		<i>Remarks</i>
	<i>Before AB-HWC</i>	<i>After AB-HWC</i>	<i>Before AB-HWC</i>	<i>After AB-HWC</i>	<i>Before AB-HWC</i>	<i>After AB-HWC</i>	
IPHS (Indian Public Health Standards) norms Roles	~ 1:30,000	~ 1:30,000	NA	~1:5,000	~1:5,000	~1:5,000	i) Instead of reporting to MO PHC, now ANMs report to CHOs. Rest of the roles are the same as before AB-HWC. ii) No geographical distinction marked in delivering the set roles for CHOs and ANM (no relevant guideline in IPHS 2022)
Clinical work (OPD and In Patient Department [IPD] services)	All OPD and IPD services at the PHC level (including referrals)		All OPD services at the SHC level		All OPD services at the SHC level		i) Overlapping the roles of CHOs and ANM to manage and deliver clinical care at SHCs ii) Case management of all clinical care and referrals per 30,000 population by one MO PHC

(Continued)

TABLE 4.A1 (Continued)

<i>Component</i>	<i>MO PHC</i>		<i>CHO</i>		<i>ANM</i>		<i>Remarks</i>
	<i>Before AB-HWC</i>	<i>After AB-HWC</i>	<i>Before AB-HWC</i>	<i>After AB-HWC</i>	<i>Before AB-HWC</i>	<i>After AB-HWC</i>	
IPHS (Indian Public Health Standards) norms	~ 1:30,000	~ 1:30,000	NA	~1:5,000	~1:5,000	~1:5,000	
Screening of patients (NCDs and specialised care)	Screening of NCDs and patients needing specialised care		Screening of NCDs and referral to PHC		i) Screening of NCDs and referral to PHC ii) Screening for any pregnancy-related complications and referral		i) Overlapping of tasks at the SHC level with greater burden on ANM to deliver comprehensive care
Coordination and management of maternal and child care	All cases at the PHC level (with support from PHC staff)		All cases at the SHC level (with support from SHC staff)		All cases at the SHC level		
Outreach activities (including Village Health and Nutrition Day (VHND)/Urban Health and Nutrition Day (UHND))	As and when required as per IPHS guideline		With support from SHC staff (as and when required as per IPHS guideline)		Performing outreach activities as per IPHS guideline with support and in coordination with ASHA		i) ANM and ASHA are mandated to conduct outreach sessions on a regular basis (as per IPHS guideline), whereas the degree of involvement of CHO is not clear
Training and capacity building of subordinates	All PHC staff		All SHC staff		MPW and ASHA		
Supervision of frontline workers	With support from CHO		Supervising ANM and ASHA		Supervising ASHA		
Mapping, enumeration, and enrolment of population	Ensuring maintenance of population register at the PHC level		Support and supervise data collection to create population register		Undertake household surveys with ASHA for mapping, enumeration, and enrolment of population at the SHC level		

Source: IPHS guidelines

TABLE 4.A2 Governance and Institutional Mechanism – Management of Performance and Quality

<i>Countries</i>	<i>Governance Institution</i>	<i>Mechanism to Regulate Performance and Quality</i>	<i>Public Awareness and Grievance System</i>	<i>Data System</i>	<i>Outcomes</i>
Turkey	The General Directorate of Primary Health Care and Provincial Health Directorates	The General Directorate of Primary Health Care manages staff, facilities, and training, while Provincial Health Directorates supervise and evaluate FMP professionals. Performance-based capitation: For doctors and other PHC staff. Criteria based on enrolment, work hours, service coverage, and serving in underdeveloped areas. Salary deductions or contract termination in case of non-compliance	Linking of patient rights communication unit in PHC to MoH, through the patient rights board at the provincial level	The Family Medicine Information System (FMIS) records patient data The Core Resource Management System (CRMS) monitors budgets and spending	Governance structure: Robust information system coupled with regular auditing makes governance effective, causing less doctor absenteeism, and improved PHC performance (greater coverage) Performance-based capitation: Ensured equity in finances across all provinces
Indonesia	Ministry of Public Health (MoPH) and Badan Penyelenggara Jaminan Sosial Kesehatan (BPJS)	Accreditation commission for primary care (KAFKTP): mandates accreditation and reaccreditation of PHCs against set criteria based on facility and staff. Capitation-based service competence (KBKP): Capitation payment to PHCs	Lapor.go.id is a web-based grievance collection mechanism	SIKDA-Generic: To collect information at the PHC level BPJS collects data through two distinct systems – p-Care and e-Klaim	KAFKTP: Recently implemented. KBKP: Limited impact due to small incentives that favoured private clinics over PHCs despite similar achievements.

(Continued)

TABLE 4.A2 (Continued)

<i>Countries</i>	<i>Governance Institution</i>	<i>Mechanism to Regulate Performance and Quality</i>	<i>Public Awareness and Grievance System</i>	<i>Data System</i>	<i>Outcomes</i>
		based on performance against three indicators: 1) contact rate, 2) referral rate, and 3) chronic disease management programme (Prolanis): prevention for NCDs following protocol Monitoring visits: Regular monitoring visits by DHO at PHC facilities			Implementation was ad hoc without study on readiness of PHCs
Thailand	MOPH, CUPs under DHS system. National Health Security Office (NHSO)	Contracting unit (CUP), which is usually a district hospital, supervises the health centres connected to it NHSO's quality outcome framework: Sets key performance indicators (KPIs) based on NCD targets to oversee specific NCD-based healthcare interventions across health centres and district hospitals	NHSO compliant system – not restricted to PHCs, overall health system	No separate data system for PHCs MOPH, NHSO, and SSS are collecting agencies	Governance structure limited autonomy at the health centre level Quality outcome framework NHSO quality outcome framework: Recently implemented. Limited research
China	County and district health government and commissions	County and district governments oversee monitoring and performance evaluation, with health commissions reporting to	NA	Primary Health Information System (PHIS) – PHIS serves as a digital platform for collecting,	Governance structure – Local governments can add additional service items deemed

(Continued)

TABLE 4.A2 (Continued)

<i>Countries</i>	<i>Governance Institution</i>	<i>Mechanism to Regulate Performance and Quality</i>	<i>Public Awareness and Grievance System</i>	<i>Data System</i>	<i>Outcomes</i>
		them for outcomes and maintaining quality at primary health centres Performance-based incentives are given to both facilities and individual health workers, where high-performing centres receive increased subsidies, albeit limited, and health workers may receive financial rewards, particularly for increasing service revenue		managing, and analysing health-related data from PHC units across the country	relevant to their local situation Performance-based incentive – Limited outcome of performance-based incentives as outcomes not linked to quality
Costa Rica	MoH, CCSS, and DRIPPS (Directorate of the Integrated Network for Health Services)	CCSS, an autonomous service authority, handles the country's PHC financing, management, and delivery are handled. The ministry of health oversees health regulations, research direction, and broader health sector planning. DRIPSS manages health regions, forming the governance structure for regional health networks	NA	The quality assurance department uses patient data, addressing bottom 20% scores with remediation plans for improvement Regional audits track general and specific targets annually, while internal health area monitoring operates at the local level	Ensured more proactive screening, detection, and contained costs, lower than government counterparts Sustained improvement in health outcomes

(Continued)

TABLE 4.A2 (Continued)

<i>Countries</i>	<i>Governance Institution</i>	<i>Mechanism to Regulate Performance and Quality</i>	<i>Public Awareness and Grievance System</i>	<i>Data System</i>	<i>Outcomes</i>
Brazil	Municipal secretaries	Performance-based capitation: Non-weighted capitation, payments provided on a flat basis, thereby motivating the system to be proactive Municipal secretaries: National audit department audits municipal secretariats regarding the functioning and performance of PHCs The pay-for-performance programme (PMAQ) evaluates FHTs on infrastructure, management, staff appreciation, access, and healthcare quality Incentives at the facility level	User satisfaction is a component for payment to PHC facility (FHT team); evaluation of the FHT team conducted through both internal and external auditing processes	The E-SUS system: Data are collected by CHWs at the local level and published in Brazil's national social and epidemiological databases, DATASUS	Governance structure: Municipalities have the freedom to decide which programme to implement to benefit their constituents PMAQ was associated with increased service provision to RCH services, greater equity in service delivery, and a reduction in avoidable inpatient care

Notes

- 1 The frontline workers can be utilised as an intermediary to handle the telemedicine technology between patients and doctors.
- 2 The referral system also has to be extended further by proactively helping patients with appointments at higher level of facilities.

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5

TURNING THE POLITICS OF KNOWLEDGE UPSIDE DOWN

Community-Centred Public Policy for Sustainable Universal Healthcare Systems

Ritu Priya

I. Introduction

For too long since the 19th century, we have viewed healthcare systems as deliverers of technological solutions and behaviour modification to the ill-informed masses, based on biomedical science. Healthcare is increasingly accepted in the 21st century as a ‘co-produced’ activity of societal conditions, formal institutional structures, and informal people’s practices. This chapter argues that the contemporary healthcare crisis is largely due to ignoring this fact in the design of healthcare systems of the 19th and 20th centuries.

Supported by the imperial governments of Europe in the 19th and 20th centuries, the rise of new knowledge and technologies that showed miraculous results led to the belief that this is *the* universal science, and all those not espousing it or practising anything else are ignorant and obscurantist. A divide appeared between what people practised and what was considered scientifically appropriate behaviour promoted by the state. Attempts at educating people to change their behaviour became a central public health activity.

However, independence of the colonies and democratic governments soon led to acknowledging that there was value in the pre-existing knowledge systems and practices, and they received official recognition. Yet, what continued to get institutionally strengthened was the dominance of ‘modern’ (now called conventional) biomedicine. The delegitimisation of not only ‘traditional’ medicine but also the patient’s experience and voice in the practice of conventional biomedicine was a simultaneous process. The notion of a ‘universal’ science and its solutions for people’s problems led to health system development ignoring environmental, social, economic, and cultural

specificities relevant to health problems and healthcare of populations and their subgroups. When the dominant doctor/hospital-based notion of health systems could not be adequately developed to cater to the health needs of the populations of the newly independent ‘developing’ countries, community development and community participation were adopted as correctives, partially accepting the logic of alternative streams of thought that were also asserting themselves (GoI 1982; WHO-UNICEF 1978).

Subsequent studies on the implementation of the primary healthcare approach (PHCA) have shown community participation to be one of the weakest dimensions (Lawn *et al.* 2008). This chapter argues that this has been an outcome of the politics of knowledge even within the PHCA, where plural epistemologies, people’s knowledge, and their agency have not been given their due. But first we need to answer the basic question.

Is There Value in People’s Knowledge and Practice?

While much literature on the subject exists, here are a few research findings to reflect upon.

The modern science of pharmacology and the pharmaceutical industry initially developed its knowledge and products based on the traditional herbal medicine knowledge, right up to the 1950s, and even now engages in bio-prospecting to obtain traditional knowledge and translate it into ‘new’ products (Ravina 2011).

The UK relies on regular surveys of individual self-reported health status using the SF-36 questionnaire to assess population health status. The individual self-assessment correlates well with 5-year survival rates.

Lessons from Thailand and Cuba, which we cite as best practices for universal health coverage (UHC) in low- and middle-income countries (LMICs), show how people’s decentralised knowledge can be successfully incorporated in health systems as cost-effective options (Applebaum *et al.* 2006; Thaiprayoon and Wibulpolprasert 2017).

A National Health Systems Resource Centre (NHSRC) study conducted in 2008–2009 across 18 states of India (Priya and Shweta 2010) found high utilisation of home remedies (20–80% households). The households’ knowledge of home remedies was verified as valid for 80% of the remedies by the classical science of the AYUSH system popular in the area. This shows that despite decline in the household knowledge and practice over time, home remedies remain a valid resource for healthcare.

AYUSH was used by 30% of all users of public service institutions in rural Tamil Nadu (Priya and Shweta 2010). Since public services in the state are among the best in the country, this indicates a preference by choice due to benefits experienced and not because of compulsion or lack of access to allopathic/conventional services.

Based on the prescribing data obtained by the NHSRC study, we estimated that utilisation of AYUSH and Local Health Traditions (LHT) reduced institutional costs by at least 20%, and this does not factor in patient's costs, which would likely make the cost saving even higher (Priya 2011).

Another study conducted in the capital city of Delhi in 2013–2014 found that the formal healthcare system was utilised only in 33% of ailments, with even the modern conventional services being received more often from informal providers. This shows that our policy and planning, which deal with only the formal systems of conventional biomedicine and AYUSH, exclude attention to people's management of 67% of ailment episodes (Priya *et al.* 2019).

During COVID, an online survey of urban middle-class households across ten cities conducted by a network of university researchers found that over 50% households used home remedies for prevention and treatment (Priya *et al.* 2022). It certainly would have allayed anxiety of illness during a time of heightened health concerns, while other benefits need to be studied further.

The 'vaccine hesitancy' we heard so much about during the COVID-19 pandemic disappeared with vaccine availability, and 90% coverage became possible in a short time. Not people's perceptions or behaviour but systemic delay was holding back the vaccination rate.

The effectiveness of the HIV/AIDS control programme came from its rapid learnings from research evidence of perceptions and practices related to the transmission and prevention of HIV (Rao 2017).

While these illustrative findings make a case for the multiple kinds of value people's practices and knowledge provide to the health system, we will discuss several more in greater detail later.

This chapter argues why correcting the 'architectural flaw' in the health systems (of ignoring the value of people's perceptions, knowledge, and practices) is crucial to address the present healthcare challenges and spells out measures for implementing the architectural correction. It draws upon the author's research on diverse dimensions of public health. The first section after this introduction briefly analyses the crisis of the contemporary healthcare systems globally. It then examines some specific correctives evolved in the Indian context with community participation as a strategy for strengthening health systems. The experience of communitisation under the National Rural Health Mission (NRHM), the community engagement in the National AIDS Control Programme, the recommended participatory governance structures of the Expert Committee on Tribal Health (2018), and the present health and wellness centre guidelines are four pertinent initiatives that are analysed. The third section summarises the findings of studies that help understand people's health perceptions and explains the gap between health system design and people's perceptions. The implications for institutional action for people-centred, sustainable, and just health system design and implementation are

discussed in the final section. The concluding remarks summarise the evidence and argument of the chapter.

II. The Contemporary Healthcare Crisis

Escalating costs of healthcare and rising inequalities in access to healthcare and medicines are currently being experienced globally. For those who do get access, iatrogenesis, i.e., negative health effects from healthcare, is being increasingly recognised (Gøtzsche 2016; Illich 1982). Besides this, the limitations of conventional modern medicine in dealing with individual health and its limited impact on population health indicators are also being acknowledged. Biomedical interventions alone cannot lead to significant health improvements unless the social determinants are addressed. Even in the 19th and 20th centuries, it was the combination of dealing with environmental, social, and biomedical issues that raised the health indicators substantially. People's assertions and democratisation of politics underlay the transformation.

Besides the socio-economic inequalities that underlie healthcare inequities, the contemporary healthcare crisis is also an outcome of the way health systems have evolved since the 19th century. As modern medicine advanced, it provided great benefits to humankind globally. However, its producers and providers were organised as a medical industrial complex (MIC) comprising the pharmaceutical industry, research funding and the medical and public health publication industry, large hospitals organised as hospital chains and corporations, the medical insurance industry, and so on. As dependence on the products and services of the MIC escalated, the profit orientation of this complex, as distinct from the service orientation, led to unholy nexus formation and unethical practices globally. These have shaped the political economy of healthcare, turning it away from the social determinants and towards increasing medical interventions, often unnecessary and sometimes iatrogenic.

The Politics of Knowledge in Health System Development

The present crisis, however, is an issue not only of the political economy of healthcare but also of the knowledge paradigm that supports it. This has not only undermined the understanding of social determinants of health but also delegitimised any other source or form of knowledge – of the social sciences that help examine the social, economic, political, and cultural dimensions of health, of laypeople and communities, and of traditional knowledge systems (Gaitonde *et al.* 2019). Technocratic health systems have tended to focus on 'deliverable' technological solutions with a lack of attention to social context, people's agency or people's experience of the services, and their health

perceptions and expectations. It is heartening that there is an increasing recognition of these limitations of the present dominant healthcare system and efforts are on to overcome them (George *et al.* 2019). Merely pouring more funds into healthcare will not lead us to UHC unless the systemic flaws are dealt with.

Even the genuine efforts made over the years at ‘strengthening health systems’ and making them ‘people-centred’ do not work optimally because of the political economy and politics of knowledge underlying this social institution. The forces shaping the political economy of health and healthcare are so wide they need a societal approach that strengthens institutional structures in synergy, strengthening people’s agency and their voice in shaping the institution.

Most of us who are writing or reading literature such as this volume – students, researchers, academics, systems analysts, and policymakers – are the producers and users of health system knowledge for planning and implementation. It is this knowledge space and its politics that we can attempt to change as our immediate self-reflective task. Our role lies in highlighting the political economy of healthcare but more centrally in turning the politics of knowledge upside down, generating evidence about people’s perceptions, knowledge, and behaviours to bridge the divide.

Returning the power of healthcare to multiple knowledge holders and to laypeople themselves is one way of addressing the political economy and politics of knowledge issues. How the discipline of public health, policymakers, and implementers of healthcare perceive the community and its role in healthcare is critical.

III. Public Health/Policymaker/Implementer Perceptions of ‘The Community’

The history of public health as a discipline and practice reveals its two faces. The coercive and the liberative face are evident in the diverse approaches, both in epidemiological analysis, when identifying causes of health problems, and in developing health systems. Causes of ill-health and disease are an outcome of multiple factors. When the causality is viewed as individual behaviour focused, public health tends to be ‘victim-blaming’ and disciplinary, letting off the conditions of life and the structural factors that influence the state of health of various sections. On the other hand is the understanding that people optimise their well-being within the constraints of their conditions. Thereby, their efforts at improving health need to be viewed empathetically with an ‘emic’ lens, when designing solutions/interventions. We may view these diverse approaches as a spectrum of perspectives, from the most coercive to the most liberative, as typologised below:

- 1) *The authoritarian perception:* People cause ill-health, so their behaviour must be regulated and wrongdoing punished. Institutionalisation of public

health in 19th-century Europe as the 'Health Police' (Rosen 1993) reflects this approach. It includes 'victim blaming', and the interventions are primarily designed to discipline people.

- 2) *The paternalistic/patronising perception*: The perception that people are ignorant about their health and therefore must be educated about it and encouraged to behave in ways the system (policy/planner/administrator/provider) considers beneficial for them. The targets and incentive-based family planning programme, mandatory vaccination, the concept of 'default' by patients, and the 'nudge approach' all illustrate this.
- 3) *The technology-driven perception*: We must take the benefit of technological solutions to the people for as much effect as possible, which is better than no intervention. When technologies are developed for the priorities of one set of people or as commercial ventures and brought in as solutions for other populations, 'solutions looking for problems' shape systems.
- 4) *The participatory and inclusive perception*: People experience the benefits and negative processes and/or outcomes of the healthcare they receive. Knowing these and responding to them will improve the design and effectiveness of the health services. It will also increase people's responsiveness to the healthcare being delivered.
- 5) *The empowering perception of people's agency*: People are rational and learning human beings with knowledge and experience, relating most closely to what is most relevant for their context. Therefore, they must have a voice in decision-making and be capacitated by conditions that allow them to implement their solutions and assist in better decisions and practices.

These perceptions and interventions of the policymakers/administrators are based on observations and assumptions about people's behaviour. While the first type does not need to know the perceptions behind the behaviours, the second and third too often do not bother about people's perceptions but do better when they relate their interventions to the people's experience. For the last two perspectives, a bottom-up view of health problems and their prevention and cure, and palliation or rehabilitation of sufferers requires an understanding of people's perceptions within their social and ecological context. The fourth is interested in the perceptions about the health services being delivered. The fifth is premised on the understanding of health perceptions and behaviour as resources for designing solutions that people work out for themselves, whether by using formal services being offered or in more informal ways.

Community participation and communitisation emerged out of the participatory and empowering perceptions, so these need to be examined for possible practical lessons.

IV. Experience of Communitisation/Community Participation Initiatives in India

This section analyses the experience of some of the most serious attempts at community participation or communitisation in India for the lessons they provide.

The Bhore Committee Report of the 1940s generated the blueprint for post-independence India's healthcare system, including setting up institutions for environmental and socio-economic development planning, along with a three-tier health service organised by the state for all citizens. Its approach could be said to be paternalistic/patronising. Provisioning of health services by the state, modelled on the Euro-American doctor-and-hospital-centred health services, was adapted to the Indian context by recommending a three-tier model of primary-level care in the community, along with the hospitals at secondary and tertiary levels. Education of the ignorant masses was a thrust of the health services, ignoring the social and cultural context and envisaging the traditional knowledge and practices of the people as irrelevant. Licentiate doctors were weeded out, leaving only the medical graduates as the international standard. The report's comprehensive but technocratic approach led to major gaps in healthcare provisioning. Over the decades, correctives have been made, but not adequately (Priya 2023c). While its evident effectiveness and dominance as the state-supported system made people adopt modern medicine, existing socio-cultural and access gaps rendered the health system unable to cater to the perceived needs of the people.

Over the 1950s and 1960s, the Community Development Programme (CDP) was to embed several welfare measures in the community, such as rural water supply, sanitation, education, and healthcare. Underfunded, and with little attention to its functioning, the programme performed poorly and was discontinued. The primary-level infrastructure and services were gradually built in the 1970s and 1980s because of the family planning programme and other national health programmes for disease control. Therefore, the self-assigned role of the rural and urban health system has not been one of ensuring the health of the populations as per their need but of providing specific services deemed necessary for them by the health system administrators and policymakers.

The gap between the services and the people who needed the specified service package, but also more, has thereby persisted. In the 1970s, another attempt at community connect was made by initiating a community health worker (CHW) programme, training local villagers to become CHWs. This too fizzled out because of various social and institutional reasons just as the CDP earlier (Qadeer 1985).

While 'community participation' has been an important component of the primary healthcare approach, it has been viewed differently by varied policymakers and health system researchers (Priya 2018). Most often its practice

demonstrates the attempt to use it as a channel for enhancing the practice of biomedical technological or behavioural interventions, specifically for child immunisation, institutional deliveries, and selected diseases.

In the 1990s, the health sector reforms under the economic structural adjustment programme led to a policy shift away from support to public services and towards support to the private sector in medical care and pharmaceuticals. This led to a decline in the public services network that was still a work in progress. Decrease in funding to the public sector; imposition of user fees; increasing lack of human resources and medicines; and rise of the corporate sector in hospitals and the medical industrial complex led doctors and patients to shift to the private sector. In 2004–2005, government spending on health was only 17% of the total health expenditure of the country, the rest largely being out-of-pocket expenditure by households, indicating also the increasing focus on curative services rather than the preventive. From about 60% illness episodes being treated by the public services by 2004 in the 1970s, only 24% outdoor and 42% indoor patients went to public services, and the percentage of ‘untreated ailments’ went up (National Sample Survey Office (NSSO) 60th Round). By the end of the 1990s, with recognition of the market failure in health, rising inequities in access, and the need of public systems for vaccine markets, the international thrust became health system strengthening, with acknowledgement of the essential role of public services.

The NRHM

This is how the NRHM came to be in 2005, as a fast-track approach to strengthening the doddering public healthcare services in rural areas. The Framework for Implementation of the NRHM (NRHM, 2005) states:

Thus, the country has to deal with multiple health crises, rising costs of health care and mounting expectations of the people. The challenge of quality health services in remote rural regions has to be met with a sense of urgency. Given the scope and magnitude of the problem, it is no longer enough to focus on narrowly defined projects. The urgent need is to transform the public health system into an accountable, accessible and affordable system of quality services.

The framework for implementation reveals its basic premises that led to a comprehensive approach – recognition of the diversity of health system contexts across the Indian states and the need for decentralisation and context-specific district- and state-level planning, with the addition of management capacities and flexible funding, innovations in human resources, mainstreaming of AYUSH and revitalisation of local health traditions, addressing the

social determinants of health, and ‘communitisation’. The governance structures attempted to integrate the vertical national disease control programmes and the family planning programme with the general health services, and the health services with inter-sectoral linkages to other social determinants of health. Encouraging local innovations in architectural correction and systems strengthening, sharing across states of best practices that had worked, and providing various kinds of platforms for dialogue at all levels, from the village to the national, were attempted.

To keep the mission on track, several internal and external monitoring and evaluatory mechanisms were established – the National Mission Steering Group, the International Advisory Group, the annual Common Review Missions, Joint Review Missions, concurrent evaluation, internal and external financial audits, and Community-based Monitoring and Planning (CBM). With this multipronged and comprehensive approach, by 2014, 30% of the country’s health expenditure was by government rather than only 17% in 2004–2005, 28% outdoor and 50% indoor patients were going to public services (NSSO 75th Round), exceptional achievement of turning around the trend of declining utilisation of public services since the late 1980s, to a rise in patients towards the public services in the neoliberal times of the 21st century.

Communitisation under the NRHM had several components. Another attempt was made at a CHW programme, better designed than the previous version. The Mitnin Programme initiated in Chhattisgarh in 2002 provided the template, with women residents of the village selected by the community and put through a well-mentored system of initial and ongoing training to act as healthcare communicators, educators, advocates, and mobilisers. The success of this led to its adoption across the country as the Accredited Social Health Activist (ASHA) programme, with some variations in its structure. Besides proving themselves useful in ‘normal’ times, in increasing institutional deliveries, bringing children for immunisation, etc., i.e. bridging the gap between the service institutions and the community, the ASHAs demonstrated their value in pandemic control activities during the COVID-19 pandemic, and the WHO declared them as Global Health Leaders in 2023. Communitisation also included setting up of Village Health, Sanitation, and Nutrition Committees (VHSNCs), Rogi Kalyan Samitis (RKS) (Patient Welfare Societies) at institutions of all three levels, and CBM, all to give voice to communities in decision-making for the health system.

However, all the NRHM evaluations point towards communitisation remaining one of its weakest components in implementation. One of the ASHA programme’s closest promoters, including a founder of the Mitnin Programme, stated in a joint study report (Singh *et al.* 2024):

ASHAs are chosen by/for their communities as health advocates, and as cultural mediators, thereby holding a unique trust. Their deep understanding

of community dynamics is required to bridge the gap between healthcare services and the community. Preserving their role as community representatives, rather than functioning solely as government employees, would be crucial to preserve the community's rights to health.

However, when studying the status of the ASHA programme in 2023, the study team found that there has been a weakening of links of the ASHA with the community due to: 1) weak back up by the health service institutions and the referral system, 2) weakening of VHSNCs that had fostered solidarity and collaboration between ASHAs and the community, 3) inadequate involvement of the local elected bodies (the panchayats), and 4) waning interest of ASHAs with lack of regular employment and incomes, and lack of career progression even while workload increased manifold with diversity of tasks added to their original mandate.

Others have identified other reasons for the weak community connect. Kesharvani (2012) found through his multi-site study in Chhattisgarh, Jharkhand, and Rajasthan's tribal dominant areas that the nature of social capital in the community and in the health services affected the way the ASHA connects with the community and influenced how the ASHAs performed. With rising social fragmentation and conflicts, such relationships for a collective health action are likely to be affected negatively. Ignoring this social environment in which the ASHA's work is embedded is a major limitation of the evaluations of the ASHA programme (NHSRC 2011). Furthermore, one observes that the ASHA tends to move away from their cultural roots as their training provides an overlay that they cannot question. In an NHSRC study of 2008–2009 across 18 states (Priya and Shweta 2010), we found that the ASHAs could list much fewer medicinal plants in their area compared to the general villager. While critical questioning of traditions and practices is needed (e.g., in case of patriarchal views of domestic violence against women), loss of the ASHA's knowledge is contrary to the perceived need for 'revitalisation' of LHT, which is an NRHM strategy. It also needs to be recognised that loading the ASHAs with medical tasks of the auxiliary nursing and midwifery (ANM) and multipurpose worker (MPW) (such as making blood slides of fever patients, assisting in antenatal care (ANC) and postnatal care (PNC) care or NCD screening) increases their proximity to the health services and gives them greater credibility as a health worker, but detracts them from their role as a voice of the community.

Several studies show that the VHSNCs and the RKS largely became ritualistic exercises with little community voice. In many states, meetings were infrequent, or minutes were signed by circulation rather than attendance, and the official members (ASHA/ANM in VHSNCs, and medical officers in RKS) held sway in decision-making. In the committee meetings, since community members get no space to voice their opinions nor are given due consideration,

attendance tended to become irregular (Scott *et al.* 2017; NHSRC *et al.* 2010). Since the VHSNC members did not feel empowered enough to utilise the funds, they remained un-utilised in many states, until they received ‘guidance’ from the health departments and got claimed for expenditure on medical equipment needed at sub-health centres (SHCs), violating the very objective of the VHSNCs. Despite these shortcomings, VHSNCs and ASHAs created a popular presence of health services in villages across the country with a sharp increase in institutional deliveries, and possible mobilisation during COVID-19 or for CBM.

Although nine states piloted CBM successfully, only two states continued it, and that too where a proactive civil society organisation (CSO) existed to keep up pressure for it and shoulder the burden of undertaking it regularly for any length of time. The health system in these two states found it useful and budgeted for it for several years, but community engagement lasted only as long as the CSOs spearheaded them. Withdrawal of the CSO or of funding by the state meant that the initiative died out. In 2024, there is a proposal for reviving the CBM at village and institutional levels led by NGOs and community-based organisations (CBOs) (MoHFW 2024).

While the institutional strengthening did happen to an extent, increasing patient footfall in public services, community connect was still far away. The gap in implementation was because little was done to orient health personnel to the view that the communities have knowledge and agency of their own, and for them to understand the value of relating to this rather than viewing it as a problem. The community and its representatives often question health personnel attitude towards service users. While free services of the public system will attract users, the paid private sector is preferred for better behaviour and attention. Thus, the potential of NRHM strategies for empowering communities and for attracting patients back to the public services has not been adequately achieved.

V. The NACP

The National AIDS Control Programme (NACP) has been more successful on the community involvement front after several initial years of learning. The first national and international public health response in the early 1980s was authoritarian, with coercive surveillance activity among commercial sex workers (CSWs), men who have sex with men (MSM), and intra-venous drug users (IVDUs). By the 1990s, social movements among these groups had asserted themselves and a human rights approach had gained acceptance in the Global AIDS Control Programme (Priya 1994). The stigma and discrimination faced by HIV-positive persons, who also came from high-income countries (HICs) and well-off sections, led to a rights-based approach. The public health system’s inability to reach and work with such socially marginalised

and often criminalised groups even while the HIV and AIDs pandemic raged led to its openness to enlist CSOs engaging with these groups and their own collectives, the CBOs, to assist with planning and implementing HIV control activities. Dialoguing with HIV-positive persons and mobilising them to create people living with HIV (PLHIV) networks became an official programme strategy.

Thus, the authoritarian approach had changed to a more participatory one. This has been a long journey that has included the most marginalised sections of society, the CSOs, and the international and national human rights movements as active members of the dialogue, research, and correctives that went into a sharp learning curve of the HIV/AIDS control programme globally and in India. The lack of preventive or curative medical technology for almost a decade after the first few cases were diagnosed in the US in 1981 and the panic created due to a rapidly spreading fatal condition led to attention to the social dimensions of the disease and measures to address them, centrally involving the community in the process.

Since the antiretroviral therapy (ART) became available, the programme has also become most techno-centric, abandoning what promised to be an opportunity the threat of the AIDS epidemic created for societies to reflect on and bring correctives to how gender and gender relations are viewed. However, the epidemic has certainly empowered the affected marginalised communities, with sexual and gender minorities (the LGBTQI+) becoming symbols of diversity in society as a legitimate way of life. Several countries including India have changed legal provisions to safeguard their human rights.

The public health personnel, administrators, and policymakers engaged with the programme and its nitty-gritty vouch for the way these communities came forward to contribute to the dialogue and implementation, making the programme for such a complex social and medical problem effective (Rao 2017).

Even as the NACP was integrated into the general health services in 2014, the CBO and CSO roles continued, although with reduced funding. Recognising the value of empowered CBOs of the key communities and PLHIV networks in HIV-control activities, institutionalising the community engagement has been attempted by creating a platform for community systems strengthening and community-led monitoring for improving the delivery of diagnostic and ART services since 2021 (NACO 2024). Community resource groups (CRGs) are to be formed at district, state, and national levels, with persons from the key communities and PLHIV as members and the CSOs and partner agencies as special invitees. However, the CRGs are to be aided by technical resource groups (TRGs) whose members will come from the partner agencies and CSOs. It is hoped that the voice of the communities will continue to be heard for planning and implementation, and not overridden by the politics of knowledge between the CRGs and the TRGs.

Now, while the programme is focused increasingly on providing diagnostic and treatment access to HIV-positive persons, the key communities are mobilising for improvements in other dimensions of their lives, such as livelihood avenues for HIV-positive persons, the right to marry for the LGBTQI+, and the right to access basic needs for CSWs and their children. Thus, while challenges continue, there has been remarkable movement in the NACP across the spectrum from authoritarian towards empowering approaches. This achievement must be allowed to flower to its fullest potential.

Proposals by the Expert Committee on Tribal Health

The tribal groups of central, western, and southern India are among the most marginalised sections in the country, with high poverty indices and the poorest health indicators across social categories by caste and ethnicity. In the official government discourse, there have been significant shifts in the approach to tribal health. The post-independence approach to development efforts among the Adivasi/tribal communities was of Panchsheel, i.e., leaving them free to develop as per their own genius and not by the mainstream perspectives, supported by the state according to their aspirations. Over time, their vibrant life pattern was deprived of its sustenance by loss of their control over the natural resources that formed their habitat, taken over by the state and commercial interests. With evidence of their worsening health over time, the value of their life pattern and knowledge lapsed into a patronising approach where they were allowed their health practices, along with education into modern health knowledge and utilising conventional modern medicine in the public system. This is evident in the chapter on tribal health in the report of the high-level committee on the socio-economic and health status of tribal communities in India of the Ministry of Tribal Affairs (MoTA 2014). While it highlights the data on their poor state of health, its prescription is ‘modernisation’ of the tribal communities. It does not acknowledge the negative impact of modern development activities on the tribal communities and their health, for instance, by loss of access to their highly diverse traditional foods obtained from the forest, making them among the most grossly undernourished communities in the world. Nor does it even mention the traditional health knowledge of herbal medicine and other practices that they still resort to (Priya 2023a).

The expert committee set up later by MoTA and the Ministry of Health and Family Welfare (MoHFW) (MoHFW and MoTA 2018) took note of their cultural richness and advocated for a study of their knowledge and practices to validate them with modern tools. It provided a governance structure for tribal healthcare that would be participatory and start at the bottom from the Village Health, Sanitation, and Nutrition Committees, an annual Tribal Health Assembly in the 809 tribal blocks, a district tribal

health officer with a District Tribal Health Advisory Council and a State Tribal Health Directorate, and finally a national Tribal Health Directorate and Council. This participatory approach is a big leap in the imagination of how tribal health could be possible with decision-making including the tribal community's active involvement, in keeping with the international trends towards decolonisation of health systems and the Lancet-Lowitja Global Collaboration for Indigenous and Tribal People's Health (Anderson *et al.* 2016). Such dialogic processes are necessary for evolving an integrative health system with diverse ontologies and epistemologies being brought together in a practical way.

However, as the NRHM experience has shown, merely creating the platforms for dialogue does not mean interactions will occur on an equal footing. That requires a conscious ironing out of hierarchies and creating safe spaces for the powerless to voice their concerns (Marshall *et al.* 2018). Also, it will require an active re-legitimisation of the traditional knowledge and practices that were de-legitimised by the dominant development paradigm of the last century (Priya 2023b). Thirdly, there must be ways of integrating diverse epistemological traditions, not necessarily by merging the sciences but by evolving ways of dialogue between them and their practical application (Shankar *et al.* 2023).

Thus, while this report reflects the recognition by public health experts for bottom-up approaches to governance, only when recognising the value of the tribal ontology and epistemology will such initiatives get implemented. That the recommendations of this committee have not seen the light of day demonstrates the challenges the development technocracy poses to such a shift from patronising to participatory approaches, with little questioning of its colonial and elite ways (Priya 2023a). The governance for tribal health should cover not only preventive and curative services but also the wider social determinants, as relevant to their context, such as the return of their control over natural resources in their habitat, providing legal status to their way of collective trusteeship of land and labour.

Institutionalising community-led dialogue and decision-making platforms is an extremely significant structural recommendation of the Expert Committee Report (MoHFW & MoTA, 2018) that demonstrates a possibility of moving towards the required architectural correction of the general health system. They are now being proposed for strengthening NHM and NACP activities. However, the strengthening is largely being envisaged through structures of monitoring against programme guidelines, not for increasing the agency of the communities. Despite the NACP learnings, there continues to be nothing in health system development public discourse about the value of people's perceptions and little about how to deal with the existing epistemological pluralism, thereby ignoring their agency.

Community Participation in the Ayushman Bharat Health and Wellness Centres (AB-Arogya Mandirs)

In 2018, the government of India initiated a new programme, Ayushman Bharat, to move towards the goal of UHC and decrease in health inequity. It has two components – a social insurance scheme for secondary and tertiary hospital care to benefit the poorest 40% Indian households, and another to strengthen primary-level services for all with universal access to comprehensive primary healthcare (CPHC) at the existing SHCs and primary health centres upgraded as ‘Health and Wellness Centres’. Building on the earlier infrastructure and human resource strengthening by NRHM/NHM, HWCs are taking the primary-level services to the next level. It also envisages actively seeking community engagement in its local planning and implementation.

Strengthening beyond the NHM includes expansion of services, adding to the maternal and child health focus to include NCDs, health promotion through preventive lifestyle education (diet and yoga), and ENT/ophthalmic/oral health. This is to be achieved by adding human resources with a community health officer, ANMs, and ASHAs, provision of telemedicine links from the HWCs to specialists, and two-way referral with higher institutions. Of the 1,50,000 HWCs planned, 12,500 were to be administered by the National AYUSH Mission, with the vision to establish a holistic wellness model to reduce the disease burden and out-of-pocket expenditure and to provide informed choice to the needy public (Ministry of AYUSH 2024). Besides the activities of other HWCs, community mobilisation for self-care and linkages with Ayush educational institutions and reputed NGOs are planned.

Formation of *Jan Arogya Samitis* (JAS) at the SHC and PHC HWC facility levels to oversee all the HWCs and Village Health, Sanitation, and Nutrition Committees in the area is another addition.

India has the benefit of a strong community and home-based healthcare system, established during the period of the National Health Mission (NHM). This system forms the bedrock for achievement of several of the Millennium Development Goals (MDGs) and must be leveraged to achieve universal primary healthcare and the SDGs. The Jan Arogya Samitis that are now being created at the AB-HWCs are a useful mechanism for social audits which are key for people centred, integrated primary healthcare. A high-quality reporting and review system complemented by community led social audits are a powerful tool for transparency and accountability, building on the NHM’s legacy of Community Action for Health. If India’s journey to UHC depends upon ensuring primary healthcare as a critical milestone, it needs the active engagement of communities.

(NHM 2021)

This is a much-needed perspective. However, one lesson that has not been learnt from the experience of the NRHM is that merely creating structures for community participation does not ensure their becoming functional or functioning in a way that allows the marginalised people's voice to be heard for processes of planning and implementation. In fact, the composition of JAS-SHC does not follow the spirit of the above statement (in contrast to the NACP's CRG). It consists of the chairperson of JAS as the 'Sarpanch' of the 'Gram Panchayat' with co-chair as the medical officer of the concerned PHC, and the CHO as member secretary. Members are the sarpanches of other GPs of the HWC area, VHSNC president, ASHAs as member-secretary of the VHSNCs of the area, all MPWs (male) and ANMs of the HWCs, president of one self-help group of the area and one school health ambassador from the school with highest enrolment, and a senior peer educator (NHM, 2022). Special invitees were to be users of the services – a tuberculosis survivor, youth representative, and any male who has undergone sterilisation after one to two children. Similar is the composition of the JAS-PHC, with some upgradation. The JAS is a component of the District Health Society and not a separate legal entity. Among its long list of stated tasks, all to oversee and monitor the functioning of the HWC as well as coordinate with other sectors for addressing the social determinants of health affecting the population. Its tasks include, various health promotion activities, catalysing grievance redressal and social accountability mechanisms. The JAS-SHC will get INR 50,000 annually as untied fund for 1) local expenses on utilisation under different heads of HWC premises, 2) patient amenities, 3) HWC infrastructure maintenance, 4) health promotion, 5) medicines, 6) diagnostics, and 7) referral transport. This does not seem to reflect the stated objectives of JAS, which are primarily about serving 'as an umbrella for VHSNCs, providing mentorship to VHSNCs', 'support and facilitate . . . activities in coordination with VHSNCs'.

Setting up of HWCs has surpassed the planned number of institutions during 2018–2022, and they are demonstrating upgradation of services and increase in footfall against the non-HWCs, SHCs, and PHCs. However, official reports and studies of HWC status and functioning even until 2022, the latest report available in the public domain, talk about *the need* for setting up and activating JAS platforms, indicating that JAS is not getting the attention it deserves even as envisaged in the HWC plans (Dreze *et al.* 2024; Magotra *et al.* 2024; MoHFW 2021).

Of greater concern is a systemic reversal from giving agency to village communities as under the NRHM (or key communities as under the NACP). The VHSNC, in contrast to JAS, was envisaged as an autonomous body giving agency to the village community, to decide its health priority activities and use INR 10,000 as seed funds. Providing it oversight and mentorship by JAS, considering the composition of JAS and its allowed expenditure heads, seems to only formalise what have been the reasons for the VHSNCs not

becoming an active voice of the villagers. Instead of enhancing the empowerment of VHSNCs to use their autonomy, JAS may result in taking away the autonomy where it existed.

Thus, while the AB-HWC is an important key to upgrading primary-level health services and linking NHM and AB activities, the participatory community engagement is likely to be only ritualistic in operation and not take forward the community-empowering element of the NHM. The much stronger structural empowering of community, as in the Tribal Health Committee recommendations (MoHFW & MoTA, 2018), is not reflected in the vision of the AB-HWC. The NRHM/NHM's empowering conceptualisation of VHSNCs is narrowed in practical operation in many states. The AB-HWCs, even in conceptualisation, engage with community participation or communitisation only with the top-down institutional approach. This does not reflect a sensitivity to the people's knowledge and agency in healthcare.

If a participatory or people-empowering approach is to be implemented, people's perceptions and aspirations will have to be respected and given due attention. Otherwise, people will use the services they directly need, but the health system, with the multiple dimensions of its crisis, will not gain their trust. As the vicious cycle of increasing mutual distrust from both sides escalates, its violent expression will emerge (as in the assaults on doctors and health workers by patients and relatives). Non-compliance will be high, leading to the suboptimal use of biomedical interventions, or just moving away may be the result.

Lessons learnt from the analysis of programmatic initiatives suggest measures such as the following:

- 1) Holistic bottom-up and top-down approaches to policy formulation and systems design are needed to strengthen the co-produced healthcare system.
- 2) For this, data gathering on people's perceptions and health-seeking behaviours should become a part of regular health information systems.
 - Capturing in-depth perceptions and behaviour is a methodologically complex task, and survey design and tools should be appropriately designed for it.
 - The data and understanding must then be drawn upon for health policy formulation and systems design.
- 3) Forums for dialogue need to be created at all levels – the NRHM and NACP did that in different ways, from which both positive and negative lessons need to be learnt for strengthening systems.
 - The NACP's success in involving the socially marginalised vulnerable communities demonstrated the necessity of recognising the specific

vulnerabilities of different sections, and the value of their contribution in decision-making on how to improve the condition of their community.

- The NRHM initiatives demonstrate that forums for dialogue across the different sections and health personnel cannot function effectively for communitisation unless the politics of knowledge is made more democratic by valuing community knowledge.
- The addition of the CRGs and TRGs in the NACP for community systems strengthening and that of JAS for AB-HWCs are recent initiatives whose outcomes are still to be observed.

VI. Complexities of People's Health-Related Perceptions and Behaviours: Evidence from Research

Relative to the disciplinary silos and fragmented understanding of reality of the scientific world and its evidence, people understand their health and ill health much more holistically as whole persons with body and mind influencing each other and the impact of their conditions of life and work on their health. Observation, individual and collective experience, and cultural meanings given to the body functions and illnesses help each one describe these phenomena for themselves. Comparison with others within and across communities or economic strata is often further adopted for explaining the observations. Thereby, it is vital to address the kind of healthcare that is aspired for in accordance with the worldview on health issues, what the philosophy of science terms the 'ontology', and the concepts about how to understand healthcare, i.e., the 'epistemological' approach. Since a majority of people draw their ontology and epistemology from multiple sources, they thereby practice medical pluralism.

Furthermore, the nature of illness, acute or chronic, mild or severe, in child/adult/elderly, creates varied needs, and therefore simplistic questions in surveys about 'where do you go for healthcare?' – or even 'where would you go for treatment of diarrhoea?' – cannot elicit answers that capture the full reality of the household's health-seeking behaviour. Impressionistic understandings developed through conversations with a few manual workers as they serve the middle-class health professionals, or even by observations about their patients' perceptions and behaviour by clinicians are often the sources of understanding about 'community perceptions' that underlie decisions about health system development, health education, community participation, and so on. However, research findings demonstrate the complexity of the subject.

Variations in health perceptions and behaviour occur due to macro-, meso-, and micro-level influences, and these must be factored in to really understand them for contributing to evidence-based health system priority setting, policy-making, designing systems, and implementation.

Patterns of health perceptions and behaviours are observed across segments of the population, as a host of studies show. Globally, in countries with exemplary universal welfare systems where collective responsibility for all basic needs is fulfilled by the state, socially responsible perceptions and healthy behaviours are the highest in practice, indicating how the larger socio-political environment influences people's perceptions and behaviour. When inequalities are high, perceptions of relative poverty abound and irresponsible behaviours are high, with the reverse being true when people feel secure in societies with low inequality.

Furthermore, the diversity of social conditions and experiences people have of healthcare within societies shape perceptions. All people, educated or uneducated, well-off or poor, rural or urban, of HICs or LMICs, imbibe an understanding of their body and its health and ill-health as well as of healthcare from their early years in the family and community, and then through their formal educational process and by experience. It is this knowledge that provides them with the lens with which to view their own ill-health and what to do about it, or what health promotion and disease prevention measures to undertake. Actual behaviour is then constrained by what they can actually do to access the care they think desirable. Therefore, behaviours do not always tell us about how people perceive health issues, and perceptions may not always translate into action. Both perception and behavioural differences are easily observed when compared across sub-population groups, such as by gender, caste, or economic class.

Thirdly, there is the added complexity of biological variation, in that within the same geographical and social setting, despite commonalities of community experience, individuals have varied constitutional make up, family traits, epigenetic and genetic predilections, and, thereby, varied experiences and preferences for healthcare.

Fourthly, these perceptions are not static but ever-changing. The NSSO surveys demonstrate very well the dynamic nature of decisions of where to access healthcare. People moved from public sector service utilisation to the private sector markedly in the 1980s to 1990s period in response to the state's declining health allocations and escalating privatisation of the sector. The shift back to some extent after operationalisation of the NRHM further reflects this. The middle class increasingly resorting to various forms of traditional medicine in recent years is another reflection of the changing perceptions of health services. Hence, there is the necessity of periodic assessment of health perceptions and health-seeking behaviours for healthcare policy and planning.

Community Perceptions of Healthcare

Distilling from the body of literature on health perceptions and health-seeking behaviours, one can see some commonalities across geographical location and social background in broad terms. We outline some of these below.

The Shared Perceptions across All Population Segments Anywhere

People's need for trustworthy services and providers is universal. Their definition of quality of care includes the following:

Healthcare that is trust-worthy and ethical; that is effective and safe; that is affordable and convenient to access.

Healthcare providers who listen to the patients' experience of their body and illness; who are primarily guided by the patient's interest rather than by commercial gain; who treat patients with respect and maintain their dignity.

However, in operational terms, these shared value attributes about healthcare translate differently across social segments.

Variations in Perceptions across Population Segments

Medical Care and Other Needs for Health

The better off who have basic needs fulfilled tend to view health technologies and services as the main healthcare. Lifestyle issues have become part of the biomedical messaging and clinical care but do not go beyond individual behaviour change. The poorer communities tend to recognise clearly the role of standard of living and conditions of work (such as food, water, housing, incomes, occupational hazards) as determinants of their health; therefore, improvement in these domains is also considered necessary for improving health.

However, current health policy documents and budgets primarily address the availability and access to health services and medical care. The Bhore Committee and the Alma-Ata Declaration of 1978 emphasised on the impact of overall planning and development of other sectors on health and thereby addressed how to do, e.g., rural and urban planning, relate food production systems and nutrition, etc.

- It was found that a Dalit caste community from Rajasthan migrating to Delhi as construction workers viewed health as a composite of well-being, undermined by various social, environmental, occupational, dietary, and emotional aspects. They viewed their moving out of the experience of untouchability by social change in the village and anonymity in the urban workplace as improving their well-being in general, including access to fixed wages and healthcare. But the loss of sharing among family and community members, and the commercialisation of all dimensions of life, including healthcare, detracted from their quality of life and led to ill-health (especially in the context of support during difficult times, such as

food shortage or illness). While they appreciated the improved livelihood opportunities leading to regularity of food access, the food produced with modern agricultural practices was considered to have detracted their stamina for physical work, corroborated by the study that measured a decline in heights of the younger generation among them. The separation from their children and other kin due to migration was viewed as a detractor from well-being and health. Thus, they had a very nuanced understanding of health and its determinants (Priya 2001).

- They identified 'dignity' as the central theme for health and well-being, allowing for but going beyond the basic material needs.
- They considered the 'commercialisation' of healthcare and all aspects of life as the unethical dimension of the contemporary times. 'Equality', identified as the ethical dimension of the times, had allowed them to move out of untouchability and improve their socio-economic status and dignity.
- Similarly, studies among Adivasi communities show their anxiety about loss of their traditional habitat, their cultural identity, and way of life, even as they resort to conventional healthcare for their serious ailments (Mutatkar 2021; Xaxa 2005).
- Women's health studies show the consideration women's groups give to autonomy in decisions about their body over the control that doctors and the state exercise in the present times (Sathyamala 2005).
- Thus, dignity and autonomy in healthcare, and status and dignity in one's social sphere are viewed as central to health and well-being by all sections, but with varying symbols of what these mean to them in their historical and social context.

Formal and Informal, Public and Private Sector Services

- Among the better-off sections, status and dignity are demonstrated when their family members take them to more expensive corporate hospitals or other providers available in the area. The poorer sections perceived dignity emanating from the social behaviour of the doctors and other healthcare providers towards them and the attention given to their health problem. They perceived payment ensuring quality attention because their social standing as rural, poor, manual workers generally led to discriminatory behaviour experienced in institutions where free treatment was provided.

For the better-off, trust in healthcare providers depends more on state-recognition, degrees and specialisation, branding by the market/private sector, accreditation, etc.

For the lower socio-economic segments, the public sector is still trusted more (and by the better off when they want a second medical opinion).

The poor recognise the formally trained doctor but resort to the non-MBBS informal providers because of convenience of access and affordability. So, only for more serious illness do they go to the formal institutions.

People's Techno-Cultural Knowledge

Prior to the advent and advancement of modern medicine in the 19–20 centuries, all societies had what we today see as traditional knowledge about health and healthcare. In lesser or greater form, most of these other knowledge forms have persisted in all parts of the world. Herbal medicine and dietary measures for promotion, prevention, cure, and palliation (along with the use of minerals, surgical procedures, and so on) were well in practice across all continents. However, the Asian continent has the richest resource of written textual knowledge about health, with systematised textual knowledge being well preserved and alive in practice in communities across its various regions and countries. These classical textual traditions (such as Ayurveda, Unani, Siddha, Traditional Chinese Medicine, and Swa-Rigpma) have been found to have had organic linkages and interaction with the folk traditions. They include understandings of the anatomy and physiology of the body to human health and its relationship with the physical, biological, and social environment. As health conditions changed over the centuries, these knowledge traditions are known to have added new elements into their repertoire and organisational systems and adapted to the times.

Anthropological and ethnobotanical studies have documented the knowledges and practices of communities, often terming it as medical pluralism, since many traditions co-exist in practice, from various older traditions to the conventional modern biomedicine. While ethnobotany focuses on the practices and knowledge related to herbal medicinal knowledge with special focus on the plants used, anthropologists and historians have traced the origins, meanings, and changing trajectories of the various healthcare traditions.

However, there is only a marginal stream of public health that has given salience to this aspect of the health system. This marginal stream espouses a bottom-up perspective that views healthcare from the lens of the marginalised and poor, the relatively powerless, and deprived segments of the populations, local, national, and global. While the issues it raises cannot be ignored, the policy-makers and planners are unable to operationalise the full logic of the evidence this stream presents since it requires a major shift in developmental thinking and readiness to redefining of power relations at all levels (Gholipour *et al.* 2023; Longh *et al.* 2018).

Limitations of Available Data

- The absence of national data on health perceptions and health-seeking behaviours demonstrates the dominant health system thinking, which privileges the institutional view. The NSSO's decadal data on morbidity and treatment-seeking behaviours do not analyse the utilisation of traditional knowledge healthcare as a part of 'treated ailments', including

it in the figures for ‘untreated ailments’. It was only in the 71st round of 2014 that this was done for the first time, after the study conducted at the NHSRC across 18 states pointed this out as a lacuna that needed correction in the NSSO definitions and methodological frame (Priya and Shweta 2010). The NFHS, providing another major macro dataset on health, too has minimal findings in this regard, with the outcome figures showing much lower utilisation rates than the NHSRC study.

- A review of the methodology of the three datasets showed that this was due to the limitations of the interview schedules used by the NSSO and NFHS on treatment seeking. The NHSRC study had evolved an innovative approach in tool development, and this captured much higher contributions of other knowledge sources than the formal system of health service delivery. This was corroborated by other smaller surveys and anthropological studies. Even more interestingly, studies in urban areas using similarly designed tools find similar utilisation of the informal healthcare despite their greater access to modern medical services (Das *et al.* 2020; Priya *et al.* 2019, 2022). As Figures 5.1 and 5.2 show, the proportion of ailments for which home remedies and dietary measures were used by all urban socio-economic strata aggregated to 51% ailments. The informal health services (traditional and modern) were used in 52% and formal (traditional and modern) in only 33%, this being 77% for the urban middle class.

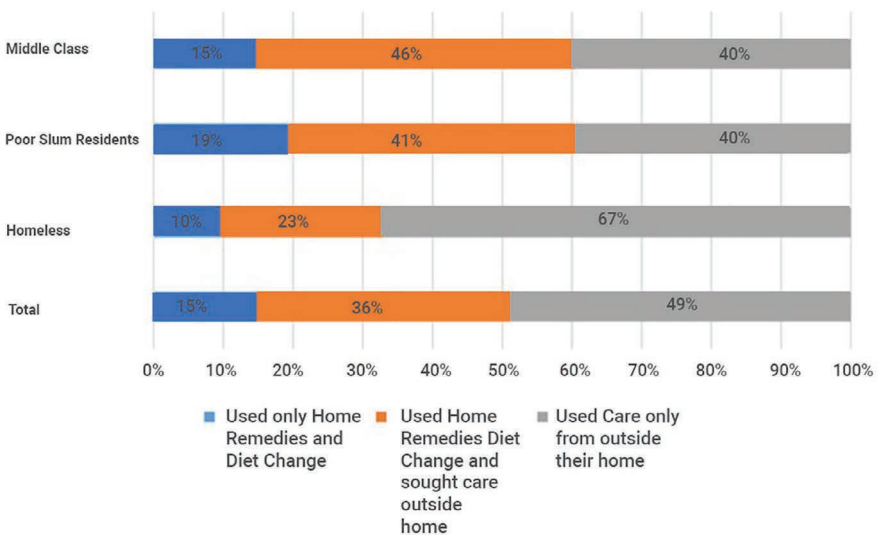


FIGURE 5.1 Healthcare-seeking behaviour of a sample of homeless, slum dweller, and middle-class residents of Delhi in 2013–2014.

Source: Priya R, Singh R and Das S 2019 ‘Health Implications of Diverse Visions of Urban Spaces: Bridging the Formal-Informal Divide. Front’. *Public Health* 7:239. <https://doi.org/10.3389/fpubh.2019.00239>



FIGURE 5.2 Forms of healthcare used within and outside the home by the sample of homeless, slum dweller, and middle-class residents of Delhi in 2013–2014.

Source: Priya R, Singh R and Das S 2019 'Health Implications of Diverse Visions of Urban Spaces: Bridging the Formal-Informal Divide. Front'. *Public Health* 7:239. <https://doi.org/10.3389/fpubh.2019.00239>

Note: Traditional informal includes, folk healer, faith healer, and vaid; traditional formal includes AYUSH clinics and dispensaries; modern informal includes *Jhola chhaap daktar* and chemist; modern formal includes MBBS doctor/nurse clinics and nursing homes, allopathic dispensaries, health centres, and hospitals.

Implications for Health Policy and Planning

No sector plans its growth and development without consumer research, but the health system, with its top-down institution-and-specialist-centred approach, goes ahead with public policy-making without such bottom-up data and perspective, clearly at its own peril and to the detriment of people's health.

The analysis presented in this chapter leads to some policy and planning leads, as indicated below.

1. A Mindset Shift to Reconsider Health Systems for Sustainable and Empowering UHC

People's perceptions need to be understood in all their complexity and considered seriously in policy and planning if the health system is to be made

people-centred, empowering, and equitable. Since they are dynamically changing over time, periodic study is essential.

For this to become operational, planners and policymakers must view the health system as a social institution, not merely as a ‘managed’ technological, professional service delivery and/or economic sector, and attempt to synergise the institutional with the community. This requires a shift in mindset from the dominant technocratic approaches that arise from any or all the first three technocratic perceptions. The participatory approaches will become more effective when people’s perceptions are understood and addressed. The shift from the participatory to the empowering will need framing the institutional systems differently to identify and rationalise the optimal role each individual, household, and community play in addressing their personal and collective health issues, making that central to health system design (Ghodajkar *et al.* 2019).

This requires reworking the politics of knowledge with a people-centred rather than an institution-centred approach even while creating the institutional support, basing it on the dignity of all communities, moving with a rights-based approach and a ‘dignity-based’ approach that recognises their relationship with the politics of knowledge.

We are all entitled to dignity because we possess certain ethically important features. One of those human features is that we are knowers. We know things. We learn. We make sense of what we know. We interpret our realities and the systems within which we have our being. If this feature is not respected, one’s dignity is violated. There is a kind of knowledge practice we may call dignity based practice.

– Seye Abimbola, 2023. *The Art of Medicine: When Dignity Meets Evidence* www.thelancet.com
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Orienting all levels of the health system to ‘dignity-based practice’ as articulated by Abimbola is the big challenge for bridging the community–institutional divide in health systems. Generating evidence and literature for this is one important measure.

2. *Generating Data and Understanding*

Viewing health systems as complex adaptive systems, we need to make use of complexity science and sustainability studies, which are increasingly constituting the frontiers of contemporary scientific advances in social and technological systems. This is a move away from the reductionist science of the 19th and 20th centuries, which fragmented the exploration of a whole reality into narrow silos.

Complexity science conceptually includes both the institutional top-down perspective and the people's bottom-up perspective; however, its contemporary practice tends to focus on the institutional priorities and people's perceptions and behaviour only as barriers (and sometimes as facilitators) to it.

It needs to be recognised that people's healthcare-related experience, perceptions, and behaviours are diverse and complex in themselves. Therefore, they need specific study and understanding.

Critical holism, proposed as a theoretical frame, allows for bridging across the institutional and the people's perspectives for a co-produced and a more effective system (Priya 2022).

For understanding people's perspectives and creating a people-centred system, data consideration is required on three dimensions:

- *The epidemiological profile*, i.e., examining the disease and death profile of the population or community, establishing causality, and deciding priority problems to be tackled on that basis. On the other hand is the international and technology-driven approach of bringing the 'best' services as inputs for planning and designing systems.
- Secondly, rapid assessments of health services gather patient satisfaction data for programmes, institutions, or health systems, along with data on terms people use for the particular health problem and its allied issues, and their utilisation of preventive and curative interventions being offered. Exit surveys with patients or community surveys specifically on the particular problem and programme provide useful quantitative data, especially when followed up with qualitative methods to understand the 'why' of people's experience.
- *The third consideration is of people's perceptions of health and disease, health-seeking behaviours, and their own aspirations and expectations of healthcare.* This includes not only their experience and utilisation of the formal programmes and services but also all other ways of understanding ill-health and practices adopted as preventive or curative measures. Social anthropology and cultural epidemiology provide approaches to study these, integrating both quantitative and qualitative data to *understand* people's health perceptions and behaviours.
- In the study of people's health perceptions and behaviours based on plural knowledge systems, sensitivity to the politics of knowledge operating in the study population is essential for developing appropriate tools. The interview schedules and group discussion guides must be designed in a way that elicits what the respondents do not commonly consider as 'treatment', and allays the respondents' anxiety about revealing or not revealing the 'informal' and non-dominant dimension of the health-seeking behaviours they adopt. The tools designed for the NHSRC study (Priya and Shweta 2010) were successful in doing so. Thereby, they were able to elicit much

higher rates of utilisation of local health traditions and AYUSH services and capture the reality better than, e.g., the NFHSs. A similar methodological approach to the urban study (Priya *et al.* 2018) corroborated that it works well.

Communitisation, defined in public policy as ownership of the health services by the people they are meant to serve, requires focus on data of all three dimensions, especially the neglected third dimension of people's perceptions and agency. The service system structure and functioning, its governance, must be designed to involve the community in ways that infuse them with a feeling that this is 'ours', a healthcare service they can trust, which gives dignity to what they think, and which is responsive to their needs and fulfils them in the most humane way.

3. *Institutional Arrangements*

To be evidence-based and bottom-up, the policy and planning process needs certain institutional structural changes, some of which are indicated below:

Decentralisation of healthcare services and decision-making.

Engaging key community members and affected persons in decision-making, monitoring, and implementation, as in the NACP.

Effective implementation of the participatory governance structures, as provided for in the NRHM and recommended by the Report of the Expert Group on Tribal Health 2018.

Addressing the politics of knowledge through data generation and using its evidence for orienting health policy, administrators, and implementers. Institutional capacities will be necessary for this interdisciplinary and bottom-up thinking and research.

Developing District Health Resource Centres for documenting local health traditions, documenting and supporting traditional community healers, ensuring availability of their herbal resources, and linking with the Biodiversity Registers under the Biodiversity Act (Priya and Shweta 2010).

Using the Quality Council of India mechanism of Certification for Traditional Community Healthcare Providers (Roy 2023).

Implementing the Indian Public Health Standards (IPHS) requirement of cultivating medicinal plants in sub-centres and PHCs, and promoting their use through schools, health and wellness centres, etc.

Many more such research questions and directions for institutional arrangements will emerge once the shift in orientation occurs and bottom-up data are generated.

VII. Concluding Remarks: Centring People's Perceptions about Health to Dialogue with the Biomedical and Technocratic Perspectives

Despite decades of attempts at 'community participation', only a marginal movement seems to have been made in practice. Lessons learnt from the analysis of programmatic initiatives suggest that the politics of knowledge that currently places the biomedical specialists and experts on the highest pedestal in the hierarchy and relegates the lay people's knowledge as of minor or no value needs to be turned upon its head to effectively implement 'community participation'. It becomes essential if 'community empowerment' is the goal.

If we grant that people's actions are based on their agency to accept or not accept the system's prescriptions and to add their own if considered beneficial, then community perceptions gain a significant role and become central to the conceptualisation of health systems (Priya 2023a, 2023b). Recent trends in clinical approaches, epidemiology, and health system research, such as the biopsychosocial approach in clinical medicine, eco-social epidemiology, cultural epidemiology, popular epidemiology, critical realism, and critical holism in health system research, policy and planning are all advances with this underlying conceptualisation (Priya 2021). Linking evidence from these subfields/approaches/paradigms will lead health systems thinking towards integrally relating the techno-managerial and socio-cultural (or institutional and people's) perspectives. Holistic and sustainable approaches implied in people's health perceptions rather than reductionist approaches will then become operationally possible.

The dialogue required between various sections of people/community, epidemiologists, health system researchers, social scientists, biomedical and traditional medicine practitioners, bioengineering technologists, industry, policymakers, administrators in health systems, and other relevant sectors can then be undertaken through organic systemic processes. A people-empowering healthcare system requires not only decolonising knowledge but also decentralising and democratising it for continuous renewal of evidence-based health policy, planning, and implementation.

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6

TOWARDS REALISING THE GOAL OF UNIVERSAL HEALTH COVERAGE

A.K. Shiva Kumar

I. The Backdrop

Enhancing health and nutrition is India's critical and immediate necessity to fully capitalise on its demographic dividend, ensure sustained long-term economic growth, and elevate the standard of living for a significant portion of its citizens. As one of the youngest populations globally, India stands at unique crossroads where its large, youthful workforce could drive unprecedented economic gains – nationally and globally. However, to realise this potential, the health and well-being of the population must be prioritised. A healthier workforce is not only more productive but also more resilient, capable of contributing meaningfully to the nation's development. Ensuring good health is not only a moral obligation of the state but also essential for empowering individuals, enhancing their capabilities, and expanding the choices and opportunities available to them. Without significant improvements in health and nutrition, India risks squandering this demographic advantage and facing the social and economic consequences of a population that is unable to fulfil its potential.

India's most notable achievement over the past 30 years has been the country's impressive economic growth record. India's GDP grew at an average of 5.4% a year between 1991 and the early 2000s, at a much higher rate during 2004–2008 when it averaged 8.8% a year, and at a growth rate averaging 7–7.5% between 2009 and 2017 (Ahmad *et al.* 2018). According to the World Bank (2022), India was the fifth largest economy in the world with a GDP of USD 3,385,090. Medium and long-term prospects of further economic expansion remain bright even after the COVID-19 pandemic. Projections suggest India is on track to overtake Japan and Germany and become the world's third largest economy by 2027 (Laker 2024).

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The country's economic expansion has contributed to many gains in health over the past 70 years. Life expectancy at birth has more than doubled since independence – from 32 years in 1950–1951 to 70 years in 2020. In 2020, the infant mortality rate (IMR) was 28 per 1,000 live births – down from 139 in 1976. From 556 in 1990, India's maternal mortality ratio (MMR) fell to 97 per 100,000 births by 2018–2020 (Office of the Registrar General, & Census Commissioner, India (ORGI) 2022b). The spread of HIV/AIDS has been successfully contained. The World Health Organisation (WHO) officially declared India polio-free in March 2014 and free of maternal and neonatal tetanus in August 2015.

Despite the country's capacity to make rapid strides in the health sector, India's performance has lagged. While the country has experienced substantial economic expansion, these gains have not sufficiently translated into better health for its population, unlike in other South Asian nations (Reddy *et al.* 2011). For example, in 1990, India's life expectancy at birth was 66 years, higher than most of its neighbouring South Asian countries except Sri Lanka and the Maldives. By 2020 (before the COVID-19 pandemic), India's life expectancy had increased to 70 years, but it still trailed Sri Lanka (77 years) and the Maldives (79 years). However, it had fallen behind Bangladesh (73 years), Nepal (71 years), and Bhutan (72 years) (World Bank n.d.a). This shortfall is particularly striking given that, in 2021, India's per capita gross national income (Purchasing Power Parity (PPP) current international dollars 7,334) was significantly higher than that of Bangladesh (PPP current international dollars 6,613) and Nepal (PPP current international dollars 4,261) (World Bank n.d.a).

India continues to face a significant health burden with infectious diseases, reproductive and child health issues, and nutritional deficiencies persisting alongside an increasing burden of chronic illnesses. Communicable, maternal, perinatal, and nutritional conditions in 2022 accounted for only 24% deaths in India while non-communicable diseases (NCDs)¹ have become a leading cause of death, the proportion rising from 37.9% in 1990 to 66% in 2022 (Ministry of Health and Family Welfare 2022). The Global Burden of Disease (GBD) study estimated that smoking and second-hand smoke (SHS) were responsible for over 1.2 million deaths in India in 2019. More recently, WHO has estimated tobacco use overall leads to 1.35 million deaths annually in India (Swasticharan *et al.* 2022). The large and growing number of multidrug-resistant tuberculosis cases is particularly troubling. In 2022, there were an estimated 410,000 global cases of people who had rifampicin-resistant TB (RR-TB) and multidrug-resistant TB (MDR-TB, resistant to both rifampicin and isoniazid), collectively referred to as MDR/RR-TB. The highest number of such cases were in India (27% of global cases) followed by the Philippines (7.5% of global cases) and the Russian Federation (also 7.5% of global cases) (World Health Organization n.d.a). Additionally, the alarmingly high

malaria-related deaths and its resurgence in specific regions and the rise of viral encephalitis, dengue, and chikungunya, especially in urban areas, are of significant concern. There are also substantial gaps in addressing the needs for occupational health, adolescent health, mental health, geriatric care, and palliative care.

Health inequalities remain pervasive, with significant disparities in morbidity, mortality, and nutritional status driven by caste, class, gender, and geography. In 2020, e.g., Kerala's IMR was 6 per 1,000 live births, while it was 38 in Chhattisgarh and 43 in Uttar Pradesh (Office of the Registrar General, & Census Commissioner, India (ORGI) 2022a). The MMR from 2017 to 2019 ranged from 19 in Kerala to 195 in Assam (Office of the Registrar General, & Census Commissioner, India (ORGI) 2022a). In 2019–2021, stunting among children under five also varied widely, with 22% in Sikkim and 23% in Kerala compared to 40% in Jharkhand and Uttar Pradesh and 43% in Bihar (International Institute for Population Sciences (IIPS), & ICF 2021). The neglect to women's health is particularly stark, with anaemia prevalence among women aged 15–49 years from 2019–2021 ranging from 36.3% in Kerala to 71.4% in West Bengal. India's gender imbalance remains troubling, the female-to-male ratio among children aged 0–6 years declining from 927 in 2001 to 919 in 2011 (Government of India 2014), reflecting the deep-rooted son preference and anti-female biases in society.

Climate change, rampant pollution, insufficient access to safe drinking water, inadequate sanitation, waste disposal, and high levels of undernutrition contribute to the growing health burden on India's population. The COVID-19 pandemic has exacerbated this burden, with the full scope of its medical impacts, including mental health concerns, still unfolding. Additionally, India is expected to become a hotspot for zoonotic diseases in the coming years.

India has consistently embraced the concept of universal health coverage (UHC) as a foundation for improving people's health. Progressively achieving UHC, for instance, is among the core objectives of India's National Health Policy (NHP) 2017. According to NHP 2017, this includes:

- (A) assuring the availability of free, comprehensive primary healthcare services, for all aspects of reproductive, maternal, child, and adolescent health and for the most prevalent communicable, non-communicable and occupational diseases in the population. The policy also envisages optimum use of existing workforce and infrastructure in the health sector. It advocates collaboration with non-government sector on pro-bono basis for delivery of healthcare services linked to a health card to enable every family to have access to a doctor of their choice from amongst those volunteering their services; (B) ensuring improved access and affordability of quality secondary and tertiary care services through a combination

of public hospitals and well measured strategic purchasing of services in healthcare deficit areas, from private care providers, especially the not-for-profit providers; and (C) achieving a significant reduction in out-of-pocket expenditure due to healthcare costs and achieving reduction in proportion of households experiencing catastrophic health expenditures and consequent impoverishment.

(Government of India 2017)

India, however, is still far from achieving UHC. This chapter identifies three critical shortcomings hindering progress: insufficient focus on primary healthcare, over-reliance on state-funded medical insurance for the poor and vulnerable, and inadequate government investment in strengthening the public health sector. The concluding section calls for a fundamental reassessment of India's approach to UHC. It emphasises the urgent need for both central and state governments to prioritise health by significantly increasing public investment, particularly in primary care. This ought to be accompanied by regulating the private sector in health to assure citizens of quality care and treatment. The chapter also advocates for empowering individuals by expanding access to primary healthcare and strengthening local health delivery systems. Finally, it recommends transitioning from an insurance-based model that only protects the poor and vulnerable to a tax-funded, public sector-led system that provides affordable, quality healthcare for all citizens.

II. The Neglect of Primary Healthcare

The historic Declaration of Alma-Ata in 1978 emphatically highlighted the crucial importance of providing primary healthcare for all. The declaration urged for 'urgent and effective national and international action to develop and implement primary healthcare worldwide, especially in developing countries', with the goal of achieving this by 2000 (Declaration of Alma-Ata 1978). Primary healthcare is 'a whole-of-society approach to health that aims to ensure the highest possible level of health and wellbeing and their equitable distribution by focusing on people's needs and preferences (as individuals, families, and communities) as early as possible along the continuum from health promotion and disease prevention to treatment, rehabilitation and palliative care, and as close as feasible to people's everyday environment' (World Health Organization, & UNICEF 2018).

Progress in promoting primary healthcare has been slow across many countries, including India. This is reflected in the statement made 40 years after the Alma-Ata Declaration in 2018 by heads of states and government, ministers and representatives of states and governments who participated in the global conference on primary healthcare. They reaffirmed the need for primary healthcare and health services 'that are high quality, safe,

comprehensive, integrated, accessible, available, and affordable for everyone and everywhere, provided with compassion, respect and dignity by health professionals who are well-trained, skilled, motivated, and committed'. They made a commitment to make bold political choices for health across all sectors, build sustainable primary healthcare, and empower individuals and communities. They urged '... all stakeholders – health professionals, academia, patients, civil society, local and international partners, agencies and funds, the private sector, faith-based organisations, and others – to align with national policies, strategies and plans across all sectors, including through people-centred, gender-sensitive approaches, and to take joint actions' for building stronger and sustainable primary healthcare towards achieving UHC (Global Conference on Primary Healthcare 2018). Evidence suggests that a primary healthcare approach is 'the most equitable, effective, and efficient way to improve health. Yet, in many settings, persistent gaps in contextualised knowledge, capacity for research and locally acceptable solutions exist, exacerbated by a lack of political will, insufficient leadership and inadequate funding' (Barkley *et al.* 2020).

Many countries, including India, have not realised that primary healthcare must be the cornerstone of a strong health system and is an essential prerequisite for accelerating progress towards UHC. India has not adequately tackled the three interconnected and synergistic components of primary healthcare. Firstly, there are significant gaps in the provisioning of primary healthcare. For instance, according to the National Health Profile 2021, rural areas, accounting for nearly 65% of India's population, had only 3.2 government allopathic doctors per 10,000 people, compared to 13.3 per 10,000 in urban areas (Government of India (GoI) 2021a). Similarly, the limited reach and quality of services affect the access of rural populations to adequate and appropriate primary healthcare. For instance, as on 31 March 2021, 21.1% of the sanctioned posts of health worker (female) and auxiliary nurse midwives (HW(F)/ANM) at sub-centres (SCs) and primary health centres (PHCs) were vacant compared to 41.9% vacancies of HW (male) at SCs. At PHCs, 64.2% of the sanctioned posts of health assistants (male and female) and 21% of the sanctioned posts of doctors were vacant (GoI 2021a). Access to maternal and child health services remains a concern, as evidenced by the National Family Health Survey 5 (NFHS-5) data (2019–2021). It shows that only 58.6% of pregnant women received all recommended antenatal checkups. Furthermore, the institutional delivery rate in certain states like Bihar was 76% compared to the national average of 88.6%, indicating gaps in access to essential maternal health services in certain regions (International Institute for Population Sciences (IIPS), & ICF 2021).

Secondly, India has failed to systematically address the broader determinants of health (including social, economic, and environmental factors, and individual characteristics and behaviour). The neglect of women's health is a

case in point. In 2019–2021, only 56.5% of currently married women aged 15–49 used modern contraception and 57% of women in this age group were anaemic. Additionally, 29% of ever married women aged 18–49 reported spousal violence. Stunting among children is more prevalent in rural areas (37%) compared to urban areas (30%). The incidence of stunting decreases with rising education levels among mothers and with rising wealth. For instance, 46% of children born to mothers with no education are stunted, whereas this figure drops to 26% for children whose mothers have completed 12 or more years of schooling. Stunting affects 46% of children in the lowest wealth quintile compared to 23% in the highest. Among all social groups, stunting is most prevalent among children from scheduled tribes, at 41% (International Institute for Population Sciences (IIPS), & ICF 2021).

Thirdly, India has not sufficiently empowered individuals, families, and communities to optimise their health by advocating for policies that promote and protect well-being, co-developing health and social services, and encouraging self-care and caregiving. The country's focus has been too narrow, emphasising curative care-oriented institutions. Institutions responsible for primary healthcare, such as SCs, PHCs, and community health centres (CHCs), have struggled to gain public trust as effective providers of healthcare at the primary level (Bhutta *et al.* 2018; George 2020). For instance, the report of the Expert Committee of Tribal Health notes that 'the poor acceptability and utilisation of healthcare services is, in part, attributable to the near absence of participation by tribal communities or their representatives in shaping policies, plans or ensuring implementation of services in tribal areas, right from the hamlet to the national level' (GoI 2018).

III. The Fundamentally Flawed Dependence on Medical Insurance

The second factor in the way of UHC is the high dependence on medical insurance, which has become a vital component of India's strategy to achieve UHC. Central government and several state governments have launched medical insurance schemes to benefit the poor. For instance, Government of India's (GoI's) *Pradhan Mantri Jan Arogya Yojana* (PMJAY), a health insurance or assurance scheme, provides a cover of INR 500,000 per family per year for secondary and tertiary care hospitalisation across public and private empanelled hospitals in India. Over 120 million poor and vulnerable entitled families (approximately 550 million beneficiaries) are eligible for these benefits.

PMJAY provides cashless access to healthcare services for the beneficiary at the point of service – the hospital. It covers up to 3 days of pre-hospitalisation and 15 days of post-hospitalisation expenses, such as diagnostics and medicines. There is no restriction on the family size, age, or gender,

and all pre-existing conditions are covered from day one. Services include approximately 1,929 procedures covering all the costs related to treatment, including but not limited to drugs, supplies, diagnostic services, physician's fee, room charges, and surgeon charges. State governments can implement PMJAY through an assurance or trust model, insurance model, or mixed model. Several states, including Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, and Uttar Pradesh, have adopted the insurance model under which a flat premium per family, irrespective of the number of members under PMJAY in that family, is paid by the central government to the state government, which in turn pays the amount to the insurer based on the number of eligible families (National Health Authority n.d.).

Health insurance tends to encourage people to seek medical care promptly, without hesitation or delay because of financial concerns. This also leads to increased use of healthcare services, including regular check-ups, preventive care, and timely treatment for illnesses and injuries. PMJAY has enabled the poor, in most part, to receive tertiary medical care without having to pay for it. As of January 2024, close to 300 million Ayushman cards had been issued, and there had been around 62 million free hospital admissions under PMJAY (Press Information Bureau 2024).

Evidence suggests the presence of several conceptual and other flaws that limit adopting such an insurance approach to UHC because of which UHC in India can hardly achieve 'universal' coverage. To begin with, the government seems to have assumed responsibility for providing financial protection to only the poor, not the entire population. Even so, the identification of eligible families is outdated, irrational, and flawed. There are three serious concerns. Firstly, PMJAY is intended to benefit the bottom 40% of the poor and vulnerable population. The inclusion of households is based predominantly on the deprivation and occupational criteria of the Socio-Economic Caste Census (SECC) 2011 for rural and urban areas. Besides, the survey being outdated by 13 years, the intent of the SECC was to rank households based on their socio-economic status. It was not to identify households that needed medical care. Secondly, the intent of the government to offer universal financial protection is missing. It is expected the number of poor and vulnerable households in the country would have come down since 2011 and will likely fall further over the next decades. This then will lead to a situation where the government's obligation to pay for the insurance premiums of the poor and vulnerable households gets dramatically reduced. In the 'ideal' case, there would be no one considered poor and vulnerable. This will mean that the government has no financial obligation to offer financial protection to anyone, which is certainly not the goal of UHC. Also, PMJAY and other such state government schemes cover medical expenses only for

hospitalisation or tertiary care. This is problematic for various reasons. The financial protection offered is inadequate because there is no financial protection against outpatient treatment costs that account for as much as 70–75% private out-of-pocket expenditures (OOPEs) on health. Thirdly, offering to cover only tertiary care leads to a fragmentation of healthcare provisioning. It fails to incentivise primary and secondary care. Additionally, there is the risk of government health budgets being diverted to tertiary care when the priority should be to address the challenges of primary healthcare.

There seems to be an inherent belief in extending financial protection only to poor and vulnerable families. It is only when incomes of families increase, they will be (or should be) able to pay the premiums for medical insurance on their own. This is a flawed argument. It is unlikely in the near future families will be well-off to pay their own insurance premiums. Even today, despite the country's sustained economic growth, poor-quality employment dominates the informal sector and informal employment. Employment in India is predominantly self-employment and casual employment. Nearly 82% of the workforce engages in the informal sector, and nearly 90% is informally employed (International Labour Office 2024). Precariousness, low wages, and high job insecurity characterise informal sector work. The informal sector is characterised by the predominance of own-account and self-employment work; absence of official protection; non-coverage by minimum wage legislation and social security system; and absence of trade union organisation. Additionally, levels of unemployment, especially youth unemployment, remain high. Paying annual medical insurance premiums continuously poses serious challenges. According to the ILO Employment Report 2024, 83% of India's unemployed people are between the ages of 15 and 29, the unemployment rate for graduates is 29.1%, and nearly two-thirds of the incremental employment after 2019 comprised self-employed workers, among whom unpaid (women) family workers predominate. Evidence from across the world points out that for large groups of workers in the informal sector, costs of premium tend to be prohibitive. Only a small proportion are willing and are able to pay the premiums. Many typically pay once for insurance but due to uncertain incomes and their changing financial condition and needs, they are unable to renew it (Muttaqien *et al.* 2021). It is, therefore, not surprising, that according to the more recent NFHS, in 2019–2021, nearly three out of five (59%) households didn't have even one member covered under health insurance or a health scheme. Health insurance or a health scheme covered only 30% of women aged 15–49 and 33% of men aged 15–49 (International Institute for Population Sciences (IIPS), & ICF 2021).

Evidence highlighting the potential benefits of health insurance in improving access to and affordability of healthcare services is limited. For instance, an analysis of data from 2022 to 2023 in Ethiopia, Kenya, South Africa, India, and Laos indicates that evidence of insurance effect on care use in

Africa and Asia is 'scarce'. The overall connections between enrolment in national health insurance programmes and indicators of service usage are weak. Current public insurance schemes may not be sufficient to guarantee adequate access to high-quality healthcare services (Odipo *et al.* 2024). Also, medical insurance has minimal impact on motivating private healthcare providers to address critical gaps in healthcare facilities. Private hospitals tend to be situated in regions where already a high concentration of public and private facilities exist (Hooda 2024).

Private hospitals are expected to be crucial in implementing government-sponsored health insurance programmes. But there appears little incentive for private hospitals to participate in such schemes. An analysis of the distribution and participation of private hospitals in government health insurance schemes shows few private hospitals enrolled and were limited in presence in certain areas in low-income states. This could suggest barriers to entry or a lack of interest in private hospitals to join these programmes. This could limit the attainment of UHC, especially in low-income populations (Choudhury, & Datta 2020).

Indian policymakers appear unaware that private healthcare, even with adequate subsidies, or state-subsidised private health insurance, cannot address the challenge of UHC. To start, commercial insurance faces significant incentive incompatibility issues, as the interests of providers, consumers, and insurance companies do not align to maximise consumer benefits (Shiva Kumar 2014). Insurance companies often deny coverage. Healthcare providers may induce demand or promote overuse, and patients might misuse services, a phenomenon known as the 'moral hazard' problem (Reddy, & Mary 2013). Some hospitals and insurance companies have even engaged in anti-competitive practices, such as colluding to bid for government insurance schemes (Livemint 2015) and conducting fraudulent activities, including unnecessary surgeries (Times of India 2016).

Medical insurance schemes often exhibit inherent inequities, evident from the limited coverage of several publicly financed health insurance programmes launched by both the union and state governments in India for poor and vulnerable populations (Jena, & Roul 2020; Reddy, & Mary 2013). These schemes provide access to inpatient hospitalisation procedures and offer financial protection to households through public and private hospitals. However, the availability of private facilities is limited and is closely linked to the per capita income of states and districts, limiting access to insured services in the poorer regions of the country (Choudhury, Tripathi, & Dubey 2021). The combination of low coverage and significant interdistrict disparities in private provider availability makes it challenging to achieve equitable empanelment under insurance schemes. The relatively low hospitalisation rate among the poor and their heavy reliance on public facilities for inpatient care further indicate that the financial support provided by the government

through health insurance schemes is insufficient for the poorer segments of the population (Choudhury, & Datta 2020; Choudhury, & Dubey 2020).

There are flaws in the design of insurance schemes that adversely affect enrolment, awareness, citizen's knowledge of entitlements, access to participating hospitals, imbalances in the supply of services, and proper implementation (Bauhoff & Sudharsanan 2021). For instance, a recent study examining the impact after 4 years of PMJAY reveals that although PMJAY has successfully extended coverage to a large segment of the population, the scheme has not significantly improved utilisation, quality of care, or financial protection. Private hospitals participating in the scheme continue to overcharge patients, and the purchasing mechanisms have been ineffective in regulating provider behaviour (Garg, Bebartha, & Tripathi 2024). Similarly, an analysis of equity in PMJAY's service supply and utilisation across various demographics – such as geography, sex, age, social groups, and healthcare sectors – reveals significant systemic imbalances. States like Kerala and Himachal Pradesh, having lower poverty rates and disease burdens, show higher service utilisation. Males are more likely to seek care under PMJAY than females, and the mid-age population (19–50 years) is the most frequent user of services. Additionally, individuals from scheduled castes and scheduled tribes exhibit lower service utilisation. These disparities risk exacerbating deprivation among the most vulnerable populations due to limited access to necessary healthcare (Dubey *et al.* 2023).

An inherent problem with medical insurance schemes is the escalating medical costs contributing to rising insurance premiums. Serious concerns of financial affordability arise for governments as medical costs and insurance premiums rise, making insurance schemes financially unsustainable. Medical inflation in India has been consistently outpacing general inflation, driven by advancements in medicines and procedures along with heightened awareness due to Internet access, leading to more expensive treatments. India's medical inflation rate stands at a striking 14%, more than double the rate of retail inflation. A recent report indicates India's medical inflation is the highest in Asia, surpassing countries with significant medical cost increases such as China (12%), Indonesia (10%), Vietnam (10%), and the Philippines (9%) (Firstpost 2023). Health insurance claims data for India show that the average claim for infectious diseases surged from INR 24,569 in 2018 to INR 64,135 in 2022 – an increase of over 160%, with a compound annual growth rate of 26% (Shetty 2023). Claims for infectious diseases and respiratory disorders are rising even faster than the overall rate of medical inflation.

Several factors have contributed to the rise in medical costs. One significant factor is that the cost of treatment for common ailments requiring hospitalisation has more than doubled between 2018 and 2022. Following COVID-19, the share of consumables in medical bills has sharply increased – just 3–4% of the total bill to sometimes as much as 15%. Growth and expansion of

private hospitals, often financed with borrowed funds, and increased use of expensive non-invasive medical procedures have also driven up costs. Rising wages for paramedical staff and higher fees for consulting doctors are further contributing to the escalating medical expenses (Policybazaar n.d.).

Of equal concern are two consequences of soaring medical inflation for individuals and families. Firstly, rising medical costs are causing many people to avoid seeking care, as the more than doubling of hospitalisation expenses since 2018 threatens family savings and emergency funds. This high cost of treatment leads individuals and families to forgo necessary medical care because of its prohibitive financial impact. Secondly, the surge in medical costs has caused a dramatic increase in the average sum insured, which increased from INR 420,000 in 2018 to INR 2,240,000 in 2022 (Shetty 2023). However, higher medical costs often lead to increased premiums for the same sum insured, making insurance coverage more expensive.

IV. Low and Insufficient Public Spending on Health

The third factor preventing India from achieving UHC is the low levels of public spending on health, which has remained around 1.2% of GDP (Centre for Budget and Governance Accountability 2020; Kumar & Sarwal 2021) for nearly two decades. This is far below the target set in the National Health Policy 2017, which aims to raise it to 2.5% by 2025 (GoI 2017). When expressed as a percentage of GDP, India's government health expenditure in 2020, at 1.2%, seems to be similar to that of Sri Lanka (1.97%), Bhutan (2%), or even Thailand (3.2%) and China (3.1%). However, the disparity becomes clear when comparing government spending on health per capita. In 2020, India's public health expenditure per person was USD 74, which is less than a third of Sri Lanka's USD 212, and significantly lower than Thailand's USD 215 and China's USD 528 (World Health Organization 2020).

Low public spending on health is a major cause of and an exacerbating factor in the challenges of health inequity, inadequate availability and reach, unequal access, and poor quality and costly healthcare services (Planning Commission of India 2011; Reddy *et al.* 2011). States' underinvestment in health has resulted in an uneven distribution of facilities, especially in rural areas. The private sector has little incentive to invest in rural, tribal, and other remote regions, where incomes are low and people have limited capacity to pay for healthcare services. Although nearly two-thirds of India's population resides in rural areas, only one-third of all HWs are based there. Only 27% of doctors and 36% of nurses work in rural settings (Karan *et al.* 2021).

There are other adverse consequences of low government spending on health in India. Firstly, a large portion of India's population faces high OOPes on healthcare, which was 52% in 2019 – one of the highest rates

globally and much higher than Thailand (8.7%), Bhutan (17.8%), and China (34.8%). Private OOPes in India are also significantly higher than in Africa (36.1%), South-East Asia (39.7%), and the global average of 30.9% (World Health Organization n.d.a). Secondly, the high OOPes make all segments of the Indian population vulnerable to catastrophic health expenditures and impoverishment. An estimated 60 million families every year are pushed below the poverty line on account of catastrophic expenditure on health. Also, the proportion of the population receiving free medical care remains low. For instance, according to the National Sample Survey (NSS) 75th Health Survey Round (July 2017–June 2018), only 12–18% of rural and urban patients received free medicines, X-rays, ECGs, and other diagnostic tests (Executive Summary on Report – Health in India n.d.a). Thirdly, underinvestment by the state has significantly restricted the capacity and quality of healthcare services available in the public sector. It has led to many public healthcare facilities being understaffed, overcrowded, and poorly managed. For instance, according to the NFHS-5 (2019–2021), 48% of households that avoid government health facilities cited poor quality of care as the main reason. Long waiting times were reported by 46% of these households, while 40% mentioned the lack of nearby government facilities (International Institute for Population Sciences (IIPS) & ICF 2021). The availability of health professionals in the public sector is further challenged by the high rate of vacancy of sanctioned positions (Karan *et al.* 2021).

The low levels of public spending have led to an unwarranted dependence on a large and growing private sector, which remains largely unregulated. In 2019, for instance, of the 69,265 hospitals and nearly 1.9 million hospital beds in India, 62% were in the private sector (Kapoor *et al.* 2020). Close to two-thirds (65%) of doctors, 89% of dentists, and 67% of other health workers are employed in the private sector (Karan *et al.* 2021).

India's private healthcare sector, which dominates the provision of services, is highly varied in quality. At one end of the spectrum are super-specialty hospitals offering world-class care to those who can afford it, while on the other are untrained and unqualified health practitioners, many lacking even a high school education.

Dependence on the private sector has also meant higher private OOPes on health. In 2017–2018, for instance, nearly two-thirds of all ailments treated by the private sector and only 42% of hospitalisation cases were attended to by government and public hospitals (NSS, 75th Round, 2017–2018). For instance, in 2017–2018, the average medical expenditure incurred for treatment during stay at hospital per case of hospitalisation at the national level was INR 4,452 in government and public hospitals as against INR 31,845 in private hospitals. The expenditure differential was significantly higher in urban areas (INR 4,837 in public hospitals versus INR 38,822 in private

hospitals) than in rural areas (INR 4,290 in public hospitals versus INR 27,347 in private hospitals) (NSS, 75th Round, 2017–2018).

Meanwhile, due to the lack of effective regulation and oversight by the government, the quality of healthcare in the private sector is often inconsistent and the costs can be prohibitively high. The private healthcare market is known to be inefficient because of significant information asymmetry, where profit-driven doctors may exploit patients by prescribing unnecessary medications or treatments. Also, many health practitioners lack necessary educational qualifications. Private medical facilities are often known for overdiagnosing, overtreating, and maltreating patients (Kumar *et al.* 2011). Reports indicate some facilities dispensing substandard and counterfeit medicines, prescribing unnecessary drugs and tests, receiving kickbacks for referrals, and manipulating hospital admissions and lengths of stay (Nundy, Desiraju, & Nagral 2018).

V. The Way Forward

Three associations between economic performance, public spending on health, and health outcomes across Indian states are important to note. One, there is a strong association between a state's economic performance and an expansion of social opportunities. For instance, in 2021–2022, the per capita Net State Domestic Product (NSDP) in the better-performing states of Kerala, Maharashtra, and Tamil Nadu ranged between around INR 215,000 and INR 242,250, considerably higher than the per capita NSDP in Bihar, Madhya Pradesh, and Uttar Pradesh, where the range was around INR 47,000–INR 121,000 (Reserve Bank of India (RBI) 2023). The under-five mortality rates (U5MRs) 2019–2021 in the set of higher-income states of Kerala, Maharashtra, and Tamil Nadu ranged between 5 and 20 deaths per 1,000 live births as against the U5MR range of 52–59 in the relatively low-income states of Bihar, Madhya Pradesh, and Uttar Pradesh (International Institute for Population Sciences (IIPS), & ICF 2021). Two, Indian states with higher per capita incomes tend to spend more on health per capita. According to NHA estimates for 2019–2020, the per capita government health expenditure among the 'major' states ranged from INR 701 in Bihar, INR 951 in Uttar Pradesh, INR 1,014 in Jharkhand, and INR 1,249 in Madhya Pradesh to INR 2,263 in Telangana, INR 2,273 in Uttarakhand, INR 2,590 in Kerala, and INR 3,829 in Himachal Pradesh (GoI 2023). For example, in 2019–2020, Bihar's per capita state domestic product (SDP) was INR 45,071 compared to Kerala's per capita SDP of INR 221,904 (Reserve Bank of India (RBI) 2021). Three, states with higher per capita health expenditure tend to have better health outcomes. For example, in 2020, the IMR was significantly higher in Jharkhand (25), Bihar (27), and Uttar Pradesh (38) compared to Kerala (6) and Himachal

Pradesh (17) (Office of the Registrar General, & Census Commissioner, India (ORGI) 2022a).

India has compelling reasons to prioritise enhancing the health and nutrition of its population. Good health is essential for a fulfilling life. Beyond this, improved health boosts labour productivity, which can drive substantial economic growth. Safeguarding against healthcare-related expenses can help protect individuals from financial hardship and poverty.

Not all states prioritise health, and this is reflected in the large disparities among states in their fund allocation to health. In the fiscal year 2019–2020, e.g., some states allocated as little as 4.9% (e.g., Punjab) and others as much as 8% (e.g., Kerala) or even 9.1% (e.g., Meghalaya) (Fifteenth Finance Commission 2020). India's public investment in primary healthcare is notably inadequate. In the fiscal year 2019–2020, government expenditure on primary care was 55.9–29.6% on secondary care and 6.4% to tertiary care (GoI 2023). This allocation falls short of the high-level expert group recommendation on UHC's 70% for primary care spending (High-Level Expert Group 2011).

To fully realise the benefits of good health, India must rethink its approach to UHC. Strengthening and allocating adequate funds to community-level primary healthcare must become a priority within UHC. The XV Finance Commission rightly notes that primary-level care has the potential to take care of 90% of healthcare demands. Investment in primary healthcare, including prevention and health promotion, provides better health and developmental outcomes at a much lower cost (Fifteenth Finance Commission 2020). The *Lancet Global Health* Commission on financing primary healthcare, for instance, notes that in many regions globally, primary healthcare falls short of meeting the needs of its intended users due to inadequate public funding, unequal access, and the necessity for out-of-pocket payments by patients. The commission makes the case that 'all countries need to both invest more and invest better' in primary healthcare 'by designing their health financing arrangements – mobilising additional pooled public funding, allocating and protecting sufficient funds' for primary healthcare, and 'incentivising providers to maintain the health of the populations they serve – in ways that place people at the centre and by addressing inequities first' (Hanson *et al.* 2022).

A commitment to placing people at the centre implies that access to healthcare should not be tied to an individual's socio-economic status. Everyone, regardless of their ability to pay, should have access to a package of essential healthcare services without out-of-pocket expenses at the point of care. Additionally, essential medicines and diagnostics should be provided free.

The GoI's primary strategy has been to 1) provide universal access to free primary healthcare wherever possible; 2) offer free secondary and tertiary care to the poor and a select group of government employees, often through insurance mechanisms; and (3) leave remainder of the population to purchase

healthcare in the private market. This approach has led to the emergence of a significant ‘missing middle’ – a large portion of whom are informal sector workers – without financial protection. The COVID-19 pandemic has further exacerbated this issue, increasing insecurity and instability among informal sector and migrant workers.

No country in the world has achieved anything like UHC without the presence of a strong public sector in health and adequate investments in the provision of primary healthcare. Achieving UHC demands decision-makers ‘to stop believing, against all empirical evidence, that India’s transition from poor health to good health could be easily achieved through private healthcare and insurance’ (Drèze, & Sen 2013). The shift from an insurance-based to a tax-funded system is essential. It will be equally essential to remove all forms of user fees from healthcare services. As done in many countries, reliance must be on general taxation to fund healthcare. Although mandatory contributions from salaried individuals and taxpayers can serve as a supplementary revenue source, this method is unlikely to substantially increase revenue because of the high proportion of India’s workforce employed in the informal sector.

India must also embrace and implement the recommendations of the XV Finance Commission, which include 1) progressively increasing public health expenditure by the union and states to 2.5% of GDP by 2025, 2) raising state health spending to over 8% of their budgets by 2022, and 3) allocating 66% of total health expenditure to primary healthcare (Fifteenth Finance Commission 2020).

Implementing the XV Finance Commission’s additional recommendations is equally essential for achieving UHC. Centrally sponsored schemes (CSS) funded by the central government should be designed with enough flexibility to enable states to adapt and innovate. The current top-down approach to programming should be abandoned. Instead, the central government should allow states greater autonomy to customise implementation based on local needs and conditions. Financing should be based on mutually agreed ‘compacts’ focused on specific goals, such as service delivery outputs or targeted outcomes, rather than detailed implementation plans.

The XV Finance Commission advocates strongly for decentralising health-related public expenditure. For instance, it recommends providing grants for urban health and wellness centres (HWCs), SCs without buildings, PHCs, CHCs, and block-level public health units; providing diagnostic infrastructure for primary healthcare; and converting rural SCs and PHCs into HWCs. These grants should be allocated directly to local governments without preconditions.

In conclusion, India must undertake a fundamental reassessment of its approach to UHC. Both central and state governments need to prioritise health, particularly primary healthcare, by significantly increasing public

spending on health. There is no option but to spend more and spend better on enhancing the capacity of the public sector to meet UHC goals. Efforts must also focus on empowering individuals through enhanced primary healthcare access and improving local health delivery capacities, supported by the decentralisation of funds to states. Curbing the unchecked growth of the private healthcare sector should accompany the expansion of government health services. A new regulatory framework should be established to ensure the private sector contributes responsibly to UHC. Steps should be taken to exit from the insurance model that offers financial protection only to poor and vulnerable populations. India should move towards a tax-funded public sector-led provision of affordable quality healthcare to all its citizens. These fiscal and governance reforms are definitely within the reach of a country with India's resources. A greater political will and determination is needed, along with coordinated public action, to advance health far beyond current efforts.

Note

- 1 NCDs include cardiovascular diseases, cancers, chronic respiratory diseases, diabetes, and other diseases.

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PART II

Learning from the States



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BUILDING AYUSHMAN BHARAT – HEALTH AND WELLNESS CENTRES – EARLY LESSONS WITH COMPREHENSIVE PRIMARY HEALTH CARE IN TAMIL NADU – 2015–2022

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I. Introduction

The impetus to provide comprehensive primary healthcare (CPHC) comes from the National Health Policy 2017 of the government of India (GoI). This policy denotes an important shift from very selective to CPHC package as part of the pathway to provide universal healthcare to the people of India. To take primary care closer to the people and take responsibility for the health of a defined population through a primary care team, the health sub-centres were identified as the facilities to be upgraded as health and wellness centres (HWCs). With a view to implement this policy, Ayushman Bharat (AB) envisioned provision of CPHC through a network of ‘health sub-centres (HSCs) and primary health centres (PHCs)’, collectively known as HWCs, having ‘linkages with referrals to hospitals’ (from secondary to tertiary hospitals).

The pathway towards CPHC consists of the pyramid of the public primary healthcare delivery system, the bottom of which is supported by 1) large number of HSCs located closest to the community (as the first point of contact to the formal public healthcare delivery system) and 2) PHCs, complementing each other in providing primary healthcare services, in so far as they function as the first referral point for HSCs. We should note here that the community health centres (CHCs), established at the block level, notionally constitute the third higher level in the public primary healthcare delivery system, and provide a larger range of services than PHCs. Therefore, all three levels of delivery (HSCs, PHCs, and CHCs) together constitute the primary healthcare system in the Indian context.¹

The GoI announced AB-HWCs in February 2018 and inaugurated the first AB-HWC in August 2018. It is now 6 years since the inauguration of the

AB-HWC programme. There are a few assessment studies and commentaries on its progress, highlighting the challenges in the design and its implementation. In this chapter, we do not examine per se the experience of this programme across the country. Rather, our primary purpose is to bring together lessons and insights based on primary empirical surveys of the pioneering pilot initiative of the government of Tamil Nadu (GoTN) in providing CPHC (through upgrading HSCs in three blocks) during 2016–2017 and evidence from another primary survey carried out in 2022 of the impact of AB-HWCs after scaling up the pilot initiative in other districts of Tamil Nadu (TN).

More specifically, we present details of the way HWCs differ from the earlier network of HSCs and PHCs: How have they impacted (improved) access to primary healthcare? Have they reduced dependence on private facilities for primary healthcare, and, as a result, have they reduced the financial stress on those seeking primary healthcare? Have they also reduced dependence on higher-level public healthcare facilities for primary healthcare services, thus releasing the scarce resources at their disposal to providing secondary and tertiary care? Empirical evidence in this chapter brings about the answers to these questions.

This chapter is structured as follows: Section II presents the context of the study and the overall methodology used for the primary household and facility surveys carried out during the ‘pilot’ initiative with CPHC during 2015–2016 and for the other two primary surveys carried out later in 2017 and 2022.² In Section III, we highlight the key findings of these surveys, primarily to throw light on improvements in access/utilisation of HSC-HWCs (and other public facilities), fall in dependence on private providers, and reduction in out-of-pocket-expenditure (OOPE). Section IV provides a brief sketch of the official guidelines for scaling up HWC-HSCs, followed by Section V, with some concluding remarks on the overall design and implementation of CPHC in TN and the way forward for both TN and other states in India.

II. Context and Methodology

1. Context of the Pilot Study

Strengthening the HSCs is the first step in the design and rolling out of CPHC through HWCs, as envisaged in the National Health Policy. As a result, HSCs, the closest delivery points to the community, have logically become the first building blocks towards achieving universal health coverage (UHC) in the state.

Almost 2 years prior to the launch of AB-HWCs in 2018 by the GoI, the Department of Health and Family Welfare of the GoTN launched a pilot programme to provide CPHC in early 2017 based on a scoping study in three identified pilot blocks of Shoolagiri Block (of Krishnagiri Health Unit District

(HUD)), Viralimalai Block (of Pudukkottai HUD), and Veppur Block (of Perambalur HUD).³ The scoping study by the Centre for Technology and Policy (CTaP) of IIT Madras in 2015–2016 was primarily to assess the sub-centre level adequacy of infrastructural facilities (including the building, water, and electricity) and vacancies and functional workload of village health nurses. A series of one-to-one consultations and focused group discussions with VHNs, medical officers, and stakeholders in all three blocks were conducted to elicit the challenges faced by the health staff and perception of the public regarding delivery of CPHC services expected from HSCs and to assess possible ways to improve the quality and accessibility to primary care. These findings were presented to the Director of Public Health and Preventive Medicine (Health and Family Welfare (HFW) Department) based on which the design for the pilot CPHC at the HSC level was conceived.

The pilot was expected to have the following outcomes: 1) Over a period, HSCs would be able to provide a larger range of primary care; (2) HSCs would be able to divert not only patients seeking care from higher-level public facilities (PHCs/CHCs/general hospitals) but also those seeking care from private providers; (3) as a result, per capita public spending for OP care would reduce (as patients get diverted from higher-level facilities); and (4) the average OOE for patients would also reduce.

The inputs for upgrading sub-centres for providing CPHC included the following: beefing up physical infrastructure of all HSCs in respective pilot blocks, filling up all vacancies of existing village health nurse (VHN; equivalent to the auxiliary nurse midwives (ANMs)) posts, and creation of an additional post for a second VHN in all HSCs.⁴ The pilot was unique for it used a population-based mobile application (borrowed and customised from a field-level NGO working in the state).⁵ This not only enabled validation and analysis of the data on utilisation but also allowed for the digital maintenance of clinical records of patients. Other significant inputs included the provision of adequate drugs, including certain drugs for non-communicable diseases (NCDs), and basic diagnostics.⁶ Sequentially speaking, to run the clinic and deliver outpatient care at the HSC level, daily (9 a.m.–5 p.m.), attention was first paid to the physical structure to ensure HSCs have electricity, water, and toilet in functional form. Ensuring the presence of an additional trained VHN (most of whom resided in respective facilities or in the neighbourhood so that they were available the whole day) provided with adequate drugs and diagnostics was also an essential feature of the pilot HWCs. To achieve this, we should add that a special grant of INR 10 million per pilot block was released under the state's annual project implementation plan (PIP) by the National Health Mission (NHM) for building new HWCs or refurbishing existing buildings, and providing other basic facilities. The box item below highlights these inputs.

BOX 7.1 ON INPUTS AT SUB-CENTRES FOR PROVIDING CPHCS – PILOT BLOCKS

Strengthening HSCs

- Building infrastructure
 - New building/refurbished building
 - Electricity
 - Water
 - Toilet
- HR in position
(additional VHN at HSCs for providing clinical services. No accredited social health activists (ASHAs) added except in some HSCs located in the Hilly terrains of Shoolagiri block. The state does not have ASHAs as in other states.)
- Digital maintenance of clinical record using population-based mobile application
(for capturing details of patients visiting sub-centres, including their age/sex/place of residence/nature of ailments/personal IDs/drugs dispensed/details of diagnostics tests/follow-up status., etc.)
- Drugs (including NCD drugs)
- Basic diagnosis (for hypertension (HT)/blood and urine tests)

The official declaration for scaling up CPHC through sub-centres thus stated: ‘Health sub-centre strengthening is the cornerstone of UHC implementation and differential services provided at differential levels of health systems’ (HFW, GoTN, UHC, Conceptualisation Document 2020–2021, page 3). The motivation and justification for this approach towards UHC are that these tail-end facilities have been the weakest link in the entire edifice of public healthcare delivery system, and therefore, from an equity perspective, it is logical to first strengthen these facilities by providing basic primary care services.

The team from CTaP had the unique advantage of being associated with the pilot project from the scoping survey itself and guiding the implementation of the pilot in the three blocks till the end of the follow-up survey in December 2017. By this time, the CPHC pilot had nearly 8 months of experience. The rolling out process faced numerous challenges typically encountered during the initial stages of implementation of such ambitious public health interventions.⁷

The initial months (from February till April 2017) were spent addressing ground-level challenges, in getting the buildings ready, recruitment, and capacity building of additional VHNs and also filling vacancies, etc. Acquiring and customising the UHC-app was another difficult exercise, as the block population had to be mapped to each of the HSCs using the digitised ration card database, which was almost universal. It took a few months to make many features of the UHC-app functional. All VHNs were trained in the UHC-app in maintaining patient records. In addition to the UHC-app, all the VHNs had to maintain a hard-copy of patient records as well, as uploading the data daily was highly dependent on unreliable net connectivity, web-service providers, electricity, etc.

It is also relevant to point out that because Tamil Nadu does not have ASHAs appointed except in tribal areas, building awareness about the pilot in the community was more difficult.

2. *Scaling up HWC-HSCs under the Ayushman Bharat Programme-Tamil Nadu Model*

An official policy guideline in 2020, titled ‘Universal Health Coverage – Conceptualisation Document 2020–2021’ was prepared by the HFW, Department of GoTN. It spelt out the basic design of the pathway to UHC, including details of various inputs to be provided at various levels of primary care to transform the HSCs and PHCs into HWCs under the AB programme. The progress made till 2019 and the targets to be achieved are shown in Figure 7.1 and Table 7.1.

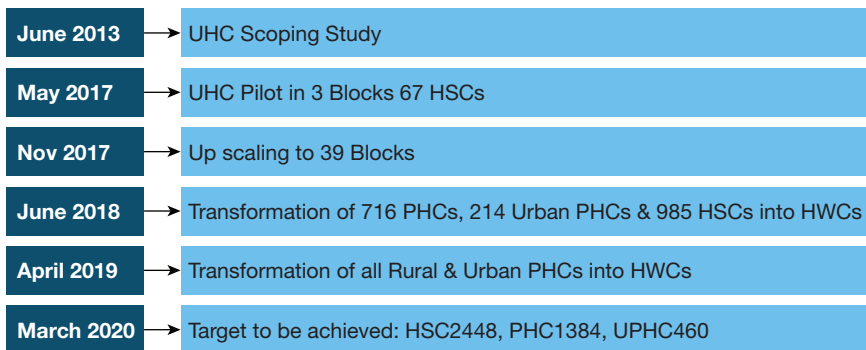


FIGURE 7.1 Progress till 2019: timeline of UHC and HWC implementation.

Source: Department of Health and Family Welfare, GoTN, ‘Universal Health Coverage – Conceptualisation Document 2020–2021’ (2020)

TABLE 7.1 Targets Set for HWCs-HSCs and PHCs till 2022–2023

<i>Year</i>	<i>HSCs</i>	<i>Additional PHCs</i>	<i>Urban PHCs</i>	<i>Total</i>
2017–2018	67	14	–	81
2018–2019	918	702	214	1,834
2019–2020	796	668	246	1,710
2020–2021 (proposed in PIP 2020–2021)	667	–	–	667
<i>Total (GoI Target Set by 2020–2021)</i>	<i>2,448</i>	<i>1,384</i>	<i>460</i>	<i>4,292 (47% of Target)</i>
Total target set by GoI (2022–2023)	7,291	1,421	420	9132
Total centres in TN	8,713	1,384	460	10,557

Source: UHC Conceptualisation Document 2020–2021

Two additional features of this document need highlighting: 1) It spelt out key services to be provided as part of CPHC under UHC, which included the 12 packages spelt out by the AB-HWC programme, and two additional services, namely, the mobile medical unit (MMU) services in tribal areas and ‘water and iodine testing kit’, and 2) criteria for ‘functional UHC-HSC, PHC, and block’ level facilities.

It is important to note that the guideline document restricted the primary healthcare ‘team’ at the HSC level to one mid-level health provider (MLHP) to be a qualified staff nurse (B.Sc) following the AB guidelines and one VHN, who had a diploma in nursing for outreach activities. In addition, the state was planning to have one women health volunteer (WHV)/ASHA (in tribal areas) per HSC and a health inspector (HI) for every two HSCs, which is different from the central government guidelines. This was different from the pilot phase, where a VHN trained in the CPHC itself, as the programme unfolded, was appointed to provide services at the HSC.

There are many other differences too: In pilot blocks, all HSCs in a block were upgraded with the block as the unit of supervision and monitoring. Under the AB programme, only select HSCs in each block were upgraded to reach the target numbers. Although the conceptualisation document talks about creating a strong population health registry and electronic health records, no population-based recording of data using mobile application seems to have been actually carried out as the programme expanded, which made the front-line workers maintain records only as hard copies and feed them into the AB portal. Thus, the focus shifted to the number of HSCs ‘branded’ and monitoring footfall/screening numbers alone. Without a population-based database, there was no possibility of creating digital clinical

records for the patients, which could be used to ensure continuum of care. Measuring the progress towards provision of CPHC in a selected area using parameters that better reflect population coverage as done during the pilot was no longer possible and lost its importance and priority.

Furthermore, by the time we carried out this survey in Cuddalore and Virudhunagar districts, the government had introduced, since the late 2021, an innovative scheme (referred to as Makkalai Thedi Maruthuvam (MTM), refer footnote 12 for NCD patients). The WHVs, selected through the women's self-help groups (SHGs) under this scheme, were expected to deliver NCD drugs directly at the doorsteps of the (line-listed) NCD patients (particularly for those unable to travel up to the respective HSCs), to ensure greater compliance to drug consumption.

III. Methodology

This study uses the results of primary household and facility surveys collected.

The first two surveys were from the pilot blocks and the third was carried out in two other districts (of Cuddalore and Virudhunagar). Field-level qualitative primary studies were also carried out, the details of which are provided here.

Surveys in the Pilot Blocks

- 1) Household Survey 1 (HS-1): We carried out a baseline primary household survey in all three blocks during 2015–2016, following the methodology of the 71st Round National Sample Survey (NSS) Report (2014).⁸ The survey covered a sample of 1,000 households from 25 villages from each block to collect information on household health-seeking behaviour for both OP and IP care, type of facilities utilised, nature of ailments reported for OP and IP services, and overall expenses made towards OP and IP, including amount spent on drugs, diagnostics, overall monthly household consumption, etc.⁹
- 2) Facility Survey-1 (FS-1): A baseline primary survey of all HSCs in all three pilot blocks on gaps in physical infrastructure, other facilities (such as availability of water, electricity, and toilets), vacancies in VHNs, drugs, etc., was carried out during October 2015 and June 2016. As part of this survey, the research team also carried out one group discussion with VHNs (in each block) to elicit their views on gaps in facilities and expectations of community members, and village-level group discussions to directly elicit expectations of community members for services to be made available at HSCs.
- 3) Interim progress of UHC: HS-2 – During November–December 2017, nearly 8 months after the launch of the pilot, we carried out another

primary household survey in each pilot block. We followed the same design/methodology as in baseline household surveys and chose the same 25 villages, as in baseline, but the sampled households were different. Also, it should be noted here that during HS-2, a much larger sample of households and, therefore, a larger number of household members were included. In each village, a minimum of 40 households were sampled. During HS-2, we also collected information on a sample of NCD patients identified during the baseline (HS-1) from the same sample villages. This community-level cohort-based information on select NCD patients is perhaps the first of its kind ever collected in Tamil Nadu.¹⁰

- 4) FS-2: Qualitative primary survey of progress of UHC pilot and the role of HSCs and VHNs: (FS-2). This survey involved a detailed discussion with VHNs from all three UHC blocks. The study team visited all 67 HSCs during November–December 2017 and also made a note on infrastructural progress and the gaps that continued to constrain the performance of VHNs. Discussions with VHNs were primarily focused on their clinical experience with patients over the months, their interactions with community, living conditions, what they expect from the government to be able to perform better, and their relationship with the senior VHNs.
- 5) During 2016–2017, we visited all three pilot blocks four times and observed all facilities as they were before the launch of the pilot, during the process of upgradation of facilities, and during the initial stage of deployment of VHN-2. We made the fourth (final) visit to the HSCs during November–December 2017. Several interactions with respective deputy director, health services (DDHS), block medical officers (BMOs), medical officers (MOs), HIs, UHC-Nodal MOs, pharmacists, and other field staff members provided valuable insights into the ground-level realities and the challenges addressed daily in making the pilot successful. (In addition to these surveys in pilot blocks, we also carried out another survey among the SC/ST population in Shoolagiri block to assess the extent to which they depend on primary care delivered through public facilities. This was done in January 2018 as a supplement to the above two household surveys (HSs).)

Surveys in the Cuddalore and Virudhunagar Districts

HS-3 and FS-3 in Cuddalore and Virudhunagar districts (June–August 2022).

In June 2022, after an ‘interruption’ of services for nearly 2 years due to COVID-19, the department of HFW of GoTN was keen to undertake a comparative assessment study of provision and utilisation of CPHC through HSCs declared as HWCs under the AB HWC programme vis-a-vis HSCs, which had not yet been upgraded as AB-HWCs.¹¹ The districts chosen for

this survey were Cuddalore and Virudhunagar. Both HS and facility surveys were carried out. The household surveys used the same methodology as was during the assessment of the pilot blocks. But the methodology used for assessing the impact of HSCs-HWCs was different. We compared the footfall in HSCs-HWCs with non-upgraded HSCs.

The survey methodology for choosing facilities and households was statistically elaborate and rigorous. Overall, in *Cuddalore*, 414 HSs (with 1,513 individuals) were surveyed, constituting ~6.5% population of the ten villages covered in Naduveeranpattu block. In *Virudhunagar*, 586 HSs (with 1,847 individuals) were surveyed, constituting ~15% of the total population of 14 villages covered in the three blocks of Virudhunagar HUD.

The household survey was conducted in Cuddalore HUD during 1322 July 2022 and in Virudhunagar HUD during 12–26 August 2022.

To assess the functionality of HWCs, we collected the following information from official records from a sample of health facilities (HWCs): OP attendance at HWCs from records maintained by MLHPs (coverage of antenatal care (ANC/PNCs/immunisation from records maintained by VHNs and number of individuals screened by WHVs¹² for NCDs (particularly for hypertension and diabetes mellitus (DM)) and number of persons referred to MOs and number confirmed positive from records maintained by WHVs. We also interviewed HIs from the sampled HWCs. Through open-ended discussion with these functionaries, we obtained some qualitative observations on the overall quality and accuracy of data. We cover these issues in the concluding section of this chapter.

The criteria used for the selection of HWCs and methodology of data collection were as follows:

- 1) All HWCs should have functioned with MLHPs/VHNs/WHVs and HIs at least for 4 months. In Cuddalore, we found only five such HWCs. Therefore, we collected information from these five HWCs. In Virudhunagar, we collected information from seven HWCs (instead of five HWCs, because of the request from district officials to include two more facilities declared as HWCs before COVID).
- 2) Collect relevant data from January to June 2022. In Cuddalore, we could collect information only for 3 months (March–May 2022), while in Virudhunagar, we could get information for 6 months (January–June 2022).
- 3) Wherever possible, compare data with the pre-COVID period. This was not possible, as in almost all centres pre-COVID records were not available.
- 4) Collect information from HSCs (non-HWCs) to compare footfalls, in particular. This was possible from several HSCs. We present these comparative figures between HWCs and HSCs with respect to OP attendance in this section.

W carried out facility survey in Cuddalore during 22–29 June 2022 and in Virudhunagar during 12–26 August 2022.¹³

Before we present the results of the pilot and later surveys, we wish to restrain the readers from asking a set of questions, which we shall address in the concluding section: What should CHPC eventually be delivering beyond the primary care facilities (namely, HSC–PHC–CHC levels)? What is the ideal combination of inputs (in particular the workforce composition) for effective delivery of services? We are presenting here the results on-the-ground of early design and implementation of CPHC at the HSC level. What we can ask, as we have in the concluding section, is whether, even with the ‘very limited’ inputs in the pilot phase, could we have had greater impact than was ‘achieved’? This is the efficiency question that will remain valid even in regions/states where AB-HWCs were implemented more faithfully as per the ‘architects’ of this programme. We shall return to these questions in the concluding section, where we present the results.

IV. Results

We first present the results of the pilot for strengthening HSCs. We present the results of the FS-3 and HS-3 as additional evidence for the key findings of the pilot surveys and also present a few fresh insights on the CPHC design and implementation.

Footfall and Out-of-Pocket Expenditures in Pilot Blocks

TABLE 7.2 Footfall – Access to Public and Private Facilities for Outpatient Services: Pre- and Post-Pilot Period

	<i>Baseline Survey Pre-UHC HS-1 (2015) (N = 3,000 HH)</i>			<i>Post-UHC HS-2 (2017) (N = 4,380 HH)</i>		
<i>Provider</i>	<i>Shoolagiri</i>	<i>Viralimalai</i>	<i>Veppur</i>	<i>Shoolagiri</i>	<i>Viralimalai</i>	<i>Veppur</i>
HSC	0.37	0.71	0.38	17.83	14.08	23.11
PHC/CHC	32.96	32.62	31.06	28.03	26.87	24.26
Government Hospital	5.03	12.06	23.11	6.91	26.52	23.77
Private clinic	8.75	6.74	4.17	16.95	5.72	3.13
Private hospital	51.21	47.87	40.91	22.89	24.22	23.19
Informal care	1.12	–	–	2.65	0.41	–
Pharmacy	0.56	–	0.38	4.74	2.18	2.55
Total	100	100	100	100	100	100

Source: Muraleedharan *et al.* (2018)

Three Important Observations Were Made from the above Surveys

- 1) The proportion of those seeking OP care from pilot sub-centres (providing CPHC) significantly increased from less than 1% to 14% in Viralimalai block to 23% in Veppur block.
- 2) The proportion of OP care delivered through private facilities (including private clinics and private hospitals) fell from ~60% to ~30% over 8 months of implementation of the pilot CPHC.
- 3) The OOPes incurred for OP care in both public and private facilities reduced considerably. It is important to offer a plausible explanation for the fall in the overall (average) expenses for OP in private facilities. Because of nearly 50% fall in the footfall in private facilities, expenses made towards diagnostics, drugs, and transportation would have come down, while the consultation fees may have remained the same, or shown a miniscule increase. We surmise that total expenses may have fallen to a greater extent than the extent to which the footfall in private facilities fell. It is not possible for us to get the estimates of break-up of expenses made on these items, as we had not collected them during the baseline survey. We should follow-up on this during future studies and compare them with the estimates made during HS-2 (Muraleedharan *et al.* 2018).

Footfall for OPD and NCDs/OGs: FS-2

Additional evidence from the data collected from respective HSCs using the VHN records and the mobile 'UHC-app' reveals and substantiates the above HS results regarding access.

OPD per HSC for Shoolargiri and Veppurwas was around ten during October–December 2017. For Viralimalai, it was 13.11. The average footfall for availing NCD and obstetric and gynaecological (OG) services at the HSC also increased considerably (Muraleedharan *et al.* 2018). We can thus conclude that utilisation of HSCs not only increased significantly in general but also for specified services.

Cost of Drugs and Cost per OP Visit

While the pilot improved access and decreased OOPes, as shown in the preceding sections, it is important to have an estimate of the cost of outpatient services provided through HSCs. The total cost of OP care per patient visit includes all capital costs and recurring costs incurred in HSCs as part of UHC pilot.¹⁴ We did an analysis to arrive at this value for each block. An important inference from this could be that patients diverted from private facilities would spend less out-of-pocket for both drugs and other expenses towards travel and other non-medical expenses, including loss of daily wages.

What proportion of the total cost of OP services per consultation is accounted for by cost of drugs? A major use of the mobile application was that it could help compute total units of drugs distributed daily patient-wise. We estimated the average and total cost of drugs distributed during the OP visits using these data. For regular OPs, the average cost of drugs distributed varies from INR 6.61 per consultation in Shoolagiri to INR 12.30 per consultation in Viralimalai. For NCD drugs, the cost of drugs per consultation is between INR 7.08 in Veppur and INR 8.11 in Shoolagiri.

Three points should be noted here:

- 1) The average total cost per OP visits at an HSC has been calculated to range from INR 64 to INR 97 (Muraleedharan *et al.* 2018). This is far below the average OP cost per visit at public facilities, as estimated by an earlier study, which is about INR 300 using 2013–2014 data (TN-SHA 2017).
- 2) Therefore, every outpatient diverted from higher-level public facilities to the HSC level would help save the public exchequer about INR 200 per visit. These are enormous savings of public resources, which when redeployed could further strengthen the public health system.
- 3) Drugs account from 7% to 19% depending upon the OP. The larger the number of OPs attending HSCs, the lesser the cost per patient per visit. Accordingly, the share of drugs will rise. Viralimalai has the lowest total cost per OP visit (INR 64.12), and drugs (for regular OPs) constitute 19.8% of the total cost per OP visit. Shoolagiri has a much higher total cost per OP visit (INR 94.07), and drugs constitute only 7.03% of the total cost per OP visit.

Drug Distribution; Societal Impact

Using the total volume of drugs distributed, it was possible to arrive at their comparative rupee value using the unit price at which Tamil Nadu Medical Services Corporation (TNMSC) purchased them and their market price.

The total value of all drugs distributed from all three blocks at TNMSC price is INR 10.50 lakhs, whereas this amounts to INR 56.95 lakhs at market price. This shows the amount of money patients attending the HSCs-HWCs in the pilot region would have spent out-of-pocket had they attended private facilities (clinics and hospitals) in the absence of these HSCs providing CPHC (Muraleedharan *et al.* 2018).

Role of Proximity/Distance from HWCs – Geographical Reach

Using the population-linked data from the mobile application, we were also able to study in detail the geographical reach of the pilot HSCs. This analysis

yielded two important points (Muraleedharan *et al.* 2018) – 1) the proportion of all unique individuals visiting an HSC at least once, to the total population of the blocks, crossed 10% and 2) the proportion of ‘repeat’ patients had progressively increased (very significantly) over the months. This shows that over a period, the message about provision of CPHC through the pilot HSCs reached out to a larger cross-section of the population. We shall highlight this issue later in the concluding section while discussing the challenges in scaling up CPHC across the state.

The role of ‘proximity’ (distance) from patients’ place of residence and the public facilities (HWCs) has a significant role in deciding how far CPHC services have reached across the geographical area within the jurisdiction of these facilities. *This came out once again very clearly in the FS-3 carried out in Cuddalore and Virudhunagar districts. We shall summarise the results of FS-3 and HS-3 below.*

Overall, utilisation of public facilities varies from 46.3% in Cuddalore to 58.6% in Virudhunagar district (Muraleedharan *et al.* 2022).

Evidence shows sub-centres (as they existed during the pre-UHC HWC period until 2018) at best cater to 1.5% of those seeking primary care (NSSO 71st Round 2014, Muraleedharan *et al.* 2018). Upgradation of HSCs to HWCs is expected to increase their utilisation. The extent of increase due to HWC establishment is the question.

The surveys in Cuddalore and Virudhunagar show clearly the upgradation of HSCs to HWCs has improved their utilisation substantially. The utilisation of HWCs in villages they are located is 13.3%, and in Cuddalore, where they are not present, it is 0%. In Virudhunagar, the utilisation of HWCs is 23.7% in villages they are located, while it is 1.1% in villages they are not. The reasons for higher utilisation of HWCs are possibly provision of care on all days of the week, the physical presence of MLHPs, drugs, basic amenities, etc.

It can be inferred that the establishment of HWCs clearly causes some diversion of patients visiting either PHCs or ‘taluk’ hospitals. In Cuddalore, in villages with HWCs, the proportion of those using PHCs is 14.6%, against 37.4% in non-HWC villages using PHCs. In Virudhunagar, the impact of HWCs is seen more in the diversion of patients from taluk hospitals – proportion from HWC villages using taluk hospitals is about 14.2%, compared to 32% from non-HWC villages. This reflected in the proportion of persons using HWCs, which is 23.7%. We can understand such variations fully only when we understand the proximity of alternative facilities (such as taluk hospitals). Numbers as such cannot reveal everything about the patterns, especially about the reasons for such patterns.

Over a period, as HWCs get stabilised and become more effective in delivering primary care, they would attract more patients, both from villages

where they are located and from neighbouring villages seeking care from higher levels of public facilities, as demonstrated through the UHC pilot phase (Muraleedharan *et al.* 2018).

The utilisation of private providers and pharmacists taken together varies from about 30% in Virudhunagar to 40% in Cuddalore. Dependence on pharmacists is quite high in both regions.

Our results from the facility survey clearly corroborate the increased use of HWCs compared to HSCs in the same neighbourhood.

Out-of-Pocket Expenses for Primary Care (OP Care)

OOPes for those accessing various types of facilities towards medical expenses (including drugs and physician fees) and transport expenses were also collected during the survey (Muraleedharan *et al.* 2022). It is seen that for those accessing public facilities, the OOPe for medicines and physician's fees is nearly zero at all levels of care, while transport expenses are around INR 30, in both regions. For those accessing private facilities, an average of INR 696 towards medicine and fees and INR 58 towards transportation were spent in Cuddalore, while in Virudhunagar, it was INR 808 towards medicines and fees and INR 81 towards transportation.

Those using pharmacists spend about INR 114 in Cuddalore and INR 105 in Virudhunagar.

We should highlight here wages lost because of sickness and inability to work because of seeking care. Those who sought care from public facilities lost close to INR 300 per day in both regions. For those who sought care in private facilities, the wage loss was INR 531 in Cuddalore and INR 367 in Virudhunagar. It is important to note that none of those who visited HWCs reported wage loss in both Cuddalore and Virudhunagar.

Clearly, those who are unable to access HWCs incur this additional loss of wage. Those engaged in Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) lose around INR 250 per day. Evidently, if direct expenses and loss of wages were added, it would be substantial.

Footfall in Sub-Centres (HWCs) versus Sub-Centres (Non-HWCs)

During the assessment of pilot CPHC, we compared the footfall in pilot centres before and after the introduction of the pilot programme. In the case of FS-3, we compared the footfall in upgraded HSCs (known as HWCs) with those not upgraded (which continued to function as they did during the pre-AB-HWC phase). The results are unambiguously evident (as shown in Table 3.2).

TABLE 7.3 HWC versus HSC OP Performance

	<i>Cuddalore</i>	<i>Virudhunagar</i>
Average OP per month Per HWC	699	326
Average OP per month per HSC (non-HWCs)	33	40
Ratio of average OP per month HWC versus HSC	21.2 Times	8.1 Times

Utilisation will be far higher in HWCs if they are open throughout the day.

Source: Muraleedharan *et al.* (2022)

An overarching result of the pilot CPHC and later scaled-up version of the CPHC in Tamil Nadu shows definite positive impacts.

- 1) CPHC pilot has brought about a ‘significant change’ in improving access to primary care at the sub-centre level.
- 2) CPHC pilot has brought about a dramatic fall in the overall dependence on private providers, particularly those seeking care from private hospitals.
- 3) CPHC pilot has brought about a substantial fall in the OOPe among those seeking OP care from both public and private providers.
- 4) CPHC pilot clearly shows the per capita public expenditure per OP visit falls significantly when provided at the HSC level, thus resulting in enormous savings for the government expenditure, when patients are diverted from PHCs/CHCs/GH to HSCs.
- 5) There was a significant positive societal impact measured through reduction in financial burden, which otherwise would have been borne by the patients.

Access and OOPes among the SC/ST Population

During the HS-2 survey, we could not pay adequate attention to assess the issue of access and utilisation of sub-centres among the society’s vulnerable sections, namely, the SC/ST population.

We undertook a special survey among the SC/ST population of the Shoolagiri block during January 2020, a few months before the COVID-19 outbreak.

The results are significant: 1) HSCs, which accounted for almost 0% for outpatient care (NSSO 71st Round, 2014), show a significant increase in access of ~10.2% (ST social group) and ~5.1% (SC social group) during the HH survey in January 2020. Also, the share of PHC/CHC for outpatient care has shown a significant increase in both ST and SC social groups. 2) The

TABLE 7.4 Average Expenditure on Outpatient Care (30 Days Recall) in Public and Private Facilities

	ST		SC	
	Public	Private	Public	Private
Medical**	2.4 (0)	652.8 (500)	.41 (0)	607.6 (450)
Non-medical***	88.3 (50)	138.2 (50)	102.7 (100)	111.7 (100)
Total expenditure	90.2 (50)	789.6 (500)	103.2 (100)	719.7 (500)

Source: Muraleedharan *et al.* (2020)

** Medical expenses – includes expenditure on consultation fee and cost of medicines and diagnostics tests.
*** Non-medical – includes expenditure on transportation and informal payments – food expenses.

average expenditure on outpatient care is around INR 90 (ST social group) and INR 103 (SC social group) in public sector facilities, which is significantly lower than INR 789 (ST social group)/INR 719 (SC social group) in the private sector facilities. Non-medical expenses (transportation and informal payments) account for about 98–99% of OOPE in public care (refer Table 3.3).

The average OOPE was lowest at INR 25 per visit (ST social group) and INR 11 (SC social group) among those who visited HSCs, while it increases to INR 84 (ST social group), INR 107 (SC social group), and INR 251 (ST social group), and INR 133 (SC social group) per visit for those accessing PHCs/CHCs and public hospitals, respectively.

V. Concluding Remarks and Way Forward

- 1) The current design of the AB-HWCs programme is concerned with enhancing the provision and quality of CPHC (covering 12 different services) at sub-centres and PHCs, with appropriate referrals. The policy guidance provides details of workforce and infrastructural complements at the sub-centre and PHC levels. The pilot HWCs in the three blocks suggest that the unit of coverage of AB-HWCs should be at the block level and also include CHCs. While this saturation at the block level is indicated as a future objective in the guidelines, it must be stated and implemented explicitly or the current model will remain truncated and incomplete by design. AB-HWCs should, therefore, be seen as a network of sub-centres–PHCs–CHCs, with strong referrals across these delivery

centres. Together, they should cover one administrative block with a population roughly about 1 lakh each. The workforce in place, the primary care team together would complement and determine the quality of CPHC geographically. Needless to emphasise that 'norms' should be arrived at each level of AB-HWCs and be followed for the effective implementation of CHPC.

- 2) Currently we witness, after many years of functioning of the PHC system, feeble 'engagement' (if at all) between the MOs at the CHCs/PHCs and those at the AB-HWCs. The absence of any organic link between them is palpable. This refers to also a sense of 'ownership' expected of the team providing primary healthcare. The improved performance we could capture in the pilot blocks was due to the complete involvement of the block PHC level MO in implementing, mentoring, and monitoring the functioning of the AB-HWCs.
- 3) Our studies, both in pilot blocks and in Virudhunagar/Cuddalore, have unambiguously shown that mere fulfilment of 'norms' is insufficient to deliver CPHC across all habitations in a block. The building capacity of those delivering CPHCs at the block is the cornerstone for effective progress towards UHC. Having an MLHP could enhance the utilisation of care at the HSC level, but their presence does not automatically ensure delivery of the package of 12 services, let alone the quality of care they can eventually provide, especially at the early stage of their career in a given geographical area. Naturally, even the trained MLHPs will require time and experience for the effective delivery of all 12 services. This has not been sufficiently recognised and appreciated while scaling up HWCs. The hurry to increase the number of HWCs-HSCs has led to inadequate attention on the quality of what gets delivered.
- 4) Digital platforms are essential as part of efforts to strengthening AB-HWCs, but we first need to create a family register (population-based), and they should be 'used' in multiple ways to strengthen further the primary care delivery system. Although the creation of this database forms part of the guidelines, its successful implementation is not yet done in Tamil Nadu, unlike during the pilot study, when the UHC-app was fully functional. As a result, we do not have credible line lists of the population actually covered by each AB-HWC to estimate the 'size of the targeted populations' as denominators to set achievable targets.
- 5) The proportion of block population (progressively) accessing the AB-HWCs and the proportion of repeat 'patients' over a period are key indicators of the extent of the effective reach of CPHCs in a given geographical unit. We should have information on the age and sex of those accessing these centres, ailments for which they are accessing them, and the distance travelled to access the centres. Such details were collected daily using the UHC-app during the pilot study, but its use was later

discontinued. They are vital inputs for achieving the overarching goals of AB-HWCs.

- 6) 'Robust IT and telemedicine consultations' alone cannot establish a continuum of care. The vital nature of 'follow-up and acting upon' the results of such referrals (back and forth) should reflect in the regular functioning and performance of the PHC team. While the efforts of MTM in Tamil Nadu and other interventions to control NCDs are significant, we lack the robust evidence on their 'effectiveness', on the control of their prevalence, and on how they inform further refinements in the intervention strategies. Measures of effectiveness should be planned, and relevant 'information' should be collected and collated for every single 'individual' being 'followed' up continually, for which the creation of electronic health records is vital. Unfortunately, this exercise, which was possible during the pilot phase, is not being given much priority in the ongoing implementation of the AB-HWC programme.
- 7) Presently, there is no well-functioning information, education, and communication (IEC) programme and no design as well. The budgetary allocation is abysmally low, while the importance given (in all documents) is prominent. We need a separate 'IEC brigade' at every block level and a clear 'IEC policy' to strengthen HWCs/the CPHC programme over the next few years.
- 8) This is particularly important in states like Tamil Nadu that have ASHAs functional only in tribal areas. The newly introduced MTM programme is a potential opportunity to strengthen the community linkages since the WHV is a village-level worker. However, specific efforts will have to be made to link the AB-HWCs with the WHVs working in the area and to align the objectives of both programmes to achieve CPHC. We need to consider the fact that only one WHV is available per HWC (as against the ASHAs who cover a much lesser population).
- 9) Provision of primary healthcare at HWCs-HSCs is cheaper than at higher-level facilities. But this does not mean provision of effective CHPC through HSCs (with all key components) does not require financial resources. They require a substantial increase in investment. Building effective HWCs requires a definite commitment to set aside a higher allocation of financial resources than we have witnessed so far.
- 10) The proof of the pudding is in the eating as the saying goes. No state has earmarked close to 8% of its annual budget towards the health sector. This also applies to the central allocation. Whether this 8% will be adequate to build a robust CPHC system is also a question that we should address. Perhaps not now, as we are far below this 'magic' threshold.
- 11) There should be a periodic (continuous) assessment of the roll-out of AB-HWCs. Currently, we are in a mood to inaugurate and brand every year X number of HWCs, with no assessment of the extent to which the

concept of CPHC has been imbibed and practised. Footfall is shown to have increased significantly, but the impact of it in bridging inequities in access to CPHC services, reduction in financial burden, and improvements in quality of care has not been rigorously documented. As a result, the original norms for HR and other infrastructural inputs at all levels of primary care will remain operationally ineffective by design. For example, the HR norms suggested at the sub-centre level is the least examined issue so far, even 5 years after the inauguration of the AB-HWCs. All pronouncements on evidence-based approach to strengthening, e.g., sub-centres will remain a mere rhetoric until we rigorously assess the bases for such norms. If the designs are not based on ground reality, implementation of such designs will eventually (and naturally) suffer.

- 12) The best way to test the proposition that it takes time for ‘practicing’ (delivering) CPHC holistically and to strengthen HSCs as HWCs is to revisit the HSCs in the same three pilot blocks and assess them more comprehensively (including the quality of primary care delivered) through well-designed household and facility surveys. This will make TN the first state in the entire country to have the necessary temporal evidence to relook at the entire rationale behind the AB-HWC programme of the GoI.
- 13) What should CPHC include or what should constitute CPHC, eventually? Presently some observers state that it should not be confined to ‘levels of primary healthcare’ but should go beyond. Perhaps, but this is not clear. What matters is the clarity among the policy designers and those at the helm of affairs and the efforts being made progressively to address the challenges at various levels. What matters most crucially is where the journey towards CPHC ought to commence to achieving UHC. The current evidence-based guidance is abundantly clear for the AB-HWC programme – strengthen the HSCs as they are closest to the community, yet neglected over the years, while we may continue to reflect on the contours and details of CPHC.

Notes

- 1 These facilities are established as per population norms. Till date, there has been no attempt to reconsider geographical factors (except which exists for hilly areas) in revising the coverage by public primary healthcare facilities, despite the recommendations by the NHP 2017.
- 2 The CTaP at IIT Madras undertook these surveys, on behalf of the Department of HFW, GoTN.
- 3 Letter from Mission Director, State Health Society, No. 8330/SHS/P5/2016, dated 29 September 2017; 19 November 2016, and 13 April 2017. Shoolagiri block had a population of 1,84,940 and is served by 25 HSCs, 4 PHCs, and 1 CHC. Virali-malai block had a population of 1,41,409 and is served by 21 HSCs, 6 PHCs, and 1 CHC. Veppur block had a population of 1,54,789 and is served by 21 HSCs, 6 PHCs, and 1 CHC.

- 4 G.O. 204, dated 12 Aug 2016.
- 5 This application was designed and deployed by a non-governmental organisation (ICICI Knowledge Park (IKP) Nalavazhvu Thittam, based in Tanjavur town in TN). A special arrangement was made to provide Internet connection in all upgraded 67 sub-centres across the three pilot blocks. The NGO conducted a training session for all VHNs' respective blocks. Almost daily, our survey team (from CTaP-IITM) would visit these centres to get feedback on the use of this application, especially on the functionalities (special features of) of the application. They would contact the IKP team and address specific issues, such as the inability to save patient-related data centre-wise. Overall, close to 25 'patches' were made in the software over 8 months of the pilot phase.
- 6 A special note should be made of the diagnostic kits and the delivery mechanisms arranged for conducting the blood/urine and blood tests here. A hub-spoke model for collecting samples every day regularly from HSCs and communicating the results back to the patients through respective VHNs for further follow-up was adopted. A contract was made with a private agency to deploy a motor-bike equipped with a carrier to transport safely blood and urine samples from sub-centres. A person in-charge would visit each of these sub-centres around 12 noon to collect these samples and deliver them at respective PHCs to carry out diagnostic tests and relay results of positive tests (certified by respective MOs) to respective patients and VHNs through WhatsApp message for follow-up.
- 7 As mentioned earlier, the research team from CTaP-IITM was retained throughout this phase to carry out concurrent assessment of operational challenges faced by VHNs and provided weekly and monthly feedback on the same to the block MOs, district health officials and state officials.
- 8 For details of the sampling/design methodology adopted by NSS 71st Round on 'Social Consumption: Health', refer Appendix B of the report: (http://mospi.nic.in/sites/default/files/publication_reports/nss_rep574.pdf)
- 9 A very large number of field investigators were trained and deployed for these surveys. It is important to note that all field investigators were then VHN trainees undergoing final term of their training programme at the training institutes in Hosur (Krishnagiri district) and Tiruvalankulam (Pudukottai district).
- 10 We do not present here the results of self-reported morbidity surveys, given the scope of this chapter. (Readers may wish to read the original report on these surveys for more details.)
- 11 CTaP, IIT-Madras, carried out this study on behalf of National Health Mission, TN.
- 12 During the pilot phase of CPHC, VHNs at sub-centres were provided with basic diagnostic kits to carry out blood tests for DM and urine tests and HT. Patients suspected to be suffering from DM/HT were referred to the MO in respective PHCs and on confirmation of their status and further follow-up with necessary drugs with observations every month at sub-centres for the next 3 months, after which patients were again supposed to be referred to the respective MOs, who may alter or continue with the existing prescription. Later since late 2021, under an innovative scheme (referred to as MTM) for NCD patients, WHVs were expected to deliver drugs directly at the doorsteps of the (line-listed) NCD patients (particularly for those unable to travel up to the respective HSCs), to ensure greater compliance of drug consumption.
- 13 For complete details of the methodology adopted for HHS-3 and FS-3, refer Muraleedharan *et al.* (2018).
- 14 Capital cost includes annualised values of all expenses made towards the purchase of various equipment, including clinical instruments; cost of additional amount

spent in upgrading the physical infrastructure; etc. Recurring cost includes salary of VHNs, cost of drugs, and other expenses such as electricity, water, etc. Capital expenses incurred for the pilot are assumed to have a life span of just 5 years.

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8

LEARNING FROM THE PAST

Kerala's Preparedness for Future Pandemics

Rajeev Sadanandan

I. Introduction

The world is likely to remain vulnerable to health emergencies of different types and scales because of many precipitating factors acting individually or jointly. Experience has shown that states that have confronted emergencies in the past and are better prepared, respond better. Having learnt this from their experience of handling the COVID-19 pandemic, many countries are currently engaged in preparing to manage the next pandemic. They have arranged for joint external evaluation to assess their readiness for health emergencies and are preparing or have prepared the National Action Plan for Health Security (NAPHS). In their first call for proposals, the pandemic fund set up to support pandemic preparedness and response received 135 applications, which went up to 185 in the second call, demonstrating the interest of nations to be prepared for future pandemics. The current revisions to the International Health Regulations, which govern the global response to health emergencies, and the work of the Intergovernmental Negotiating Body, set up by the World Health Assembly to formulate a global accord on pandemic preparedness and response, indicate how urgently the world is seeking to learn from the past and mount a better response to a future health emergency than it did to the COVID-19 pandemic.

Among the Indian states, Kerala has been dealing with a series of emergencies in recent years. These include the Nipah outbreaks of 2018 (Arunkumar et al. 2019), 2023, and, 2024; the floods of 2018; and the COVID-19 pandemic (Thomas Isaac & Sadanandan 2020). This chapter will examine how lessons from the way Kerala handled these crises can contribute to preparation for handling health emergencies in future. While the chapter deals

specifically with Kerala, we may generalise the recommendations to other low-resource settings.

II. Kerala's Advantages

While an emergency can threaten any health system, Kerala has some advantages in dealing with health emergencies.

1. The Health System

For detection, prevention, and treatment of health emergencies, a good health system is necessary. Kerala's health system, including the private sector, has considerable depth, from primary to tertiary levels. Qualified personnel fill up most of the positions, providing the state the workforce/human resource necessary for a proper response to health emergencies and facilitating early detection of an emerging health crisis.

Kerala is also supported by adequate availability of veterinarians and veterinary institutions to deal with zoonotic infectious diseases.

2. Decentralised Governance with Panchayat Raj Institutions Being Entrusted with Public Health and Social Support

The tendency of governments in a crisis is to centralise the response, managing it through a series of one-size-fits-all directions. This is counterproductive. Appropriate response is highly contextual, and centralisation will distort the response, leading to inefficiency and resentment. In a crisis, community engagement along with risk communication is important. A strategy for engaging the community is decentralising governance to levels as near as possible. Kerala has implemented decentralisation as envisaged in the 73rd and 74th amendments of the constitution, along with financial delegation, in many subjects including public health (Anju et al. 2023). They also have a role to play in implementing the National Disaster Management Act, which was the legal instrument the union government had relied on to manage COVID-19. Local governments that have financial powers and control

TABLE 8.1 Healthcare Human Resources and Infrastructure: Kerala versus India Comparison

	<i>Kerala</i>	<i>India</i>
Doctors/1,000 population	2.18	1.07
Nurses (including ANM) 1,000	10.64	2.90
Beds/1,000 population (government)	1.14	0.70

Source: National Health Profile 2022, CBHI, Government of India

the relevant institutions can play an important role in providing services that support the management of a health crisis.

3. *A Media Willing to Partner with the Government on Health Emergencies*

Since the time of the response to the AIDS pandemic, which started in Kerala in the nineties, the media, which is influential in setting public opinion and is trusted to provide corroborated information, has allied with health authorities to provide health-related messaging and scientific information. They become a trusted source to verify information and to clarify misinformation that follows every health crisis (referred to as infodemic). This remains effective as long as the government is transparent and admits facts even if they show them in bad light. Kerala gained considerable experience in this during the Nipah outbreak of 2018 (Vijayakumar 2020).

4. *High Importance Given to Performance in the Health Sector, Creating Visibility and Pressure on the Government to Perform*

Kerala society, and by extension the polity, has valued government performance in health and school education. It recognises good performance, and the media and the political fora mercilessly castigate any failure. This becomes acute during a health emergency. Each action is scrutinised, and the government is under pressure to do well. This urgency and prominence are passed on to the department and health workers, who also take pride in ensuring that no matter how difficult the task and limited the resources are, they must rise to the challenge.

5. *Willingness of People to Access Treatment from the Formal Health System*

The practice of quackery is practically non-existent in Kerala. All treatment is accessed from formal health systems in western medicine or AYUSH. This facilitates surveillance as formally qualified, and registered providers can be sensitised about disease conditions and are more likely to report any unusual medical event.

6. *High Level of Social Cohesion and Trust in the Government*

Social measures (such as quarantine) taken to prevent human-to-human transmission of pathogens can be socially and economically disruptive. This can lead to resentment and even violence. People will comply with such restrictions only if they trust the authorities enforcing them and can prioritise

social well-being above individual hardships. Such trust arises from their experience of the competence of the government and the value of official interventions. This was evident during the earlier crises. However, during COVID-19, it was demonstrated that compliance with such restrictions is effective for a short while but will fray if they are extended for a long time (Chathukulam & Tharamangalam 2021).

III. Areas Where Kerala's Response Faltered

1. *Lack of a Dedicated Surveillance System for Emerging and Re-Emerging Pathogens*

The post-incident review of the Nipah outbreak revealed two important kinks in Kerala's preparedness. The surveillance system did not pick up the index case, even though they satisfied all norms of a case requiring further investigation. Many infections took place in healthcare settings. A system has since been put in place for detecting emerging and re-emerging pathogens to pick up dangerous pathogens, including the Nipah index case of 2024. (The index case of the 2023 Nipah outbreak was missed.) This must be in addition to the routine disease surveillance.

2. *Insufficient Steps to Prevent Hospital-Acquired Infections*

Since most hospitals, especially secondary and tertiary, are overcrowded, the preventive measures against patients infecting others are not efficient. Some improvements have occurred after Nipah, which was obvious during COVID-19. However, the hospitals remain overcrowded and can be the site of a massive spread in the event of a highly infectious pathogen appearing in the state.

3. *Lack of Facilities and Dedicated Teams for Supportive Care of Acute Infectious Diseases*

No treatment protocols will be available to treat a novel, emerging pathogen. Initially, only supportive care may be possible. Kerala has not developed a cadre that can manage such cases, nor are there dedicated facilities for safely managing infectious cases. For each outbreak, the state had to scramble to modify existing facilities and draw from different departments to manage clinical cases, leading to fragmented and less efficient care. Kerala does not have a strategy to develop surge capacity.

4. *Poor Data Management and Analysis to Feed into Action*

Analysis of data can help detect cases, predict the mode of progression, and help modify management strategies. Kerala health authorities do not have

the required expertise to analyse data that the health department generates. They do not have analytical support to provide real-time results, which leads to wrong prioritisation and inability to use the analysis to respond better.

5. *An Action Plan for Assessing and Addressing Potential Threats*

Nations focus on preparing action plans for health security. This involves assessing possible threats they may face and developing strategies to deal with them. Highly susceptible to the impact of climate change on health, population density leading to destruction of wildlife habitats leading to crossover infections from wildlife living in close proximity to human settlements, and with close linkages to other countries through migration and tourism, Kerala is highly exposed to health emergencies. However, these have not been mapped nor countermeasures planned for. Kerala continues to rely on its ability to respond to a health emergency once it emerges. It would be more efficient to have a plan to assess the health emergencies the state could be subject to and be prepared with a contingency plan.

IV. Preparing for Future Health Emergencies

Over time, based on the experience of managing several situations, tools have been developed to help countries prepare, instead of developing a response after the emergency has occurred. Some necessary components of such a road map for preparedness are discussed below.

1. *Surveillance*

Kerala has to strengthen the early warning surveillance systems at different levels to detect events of significance for public health and health security, especially of pathogens with pandemic potential (World Health Organization 2022). If cases are detected as close to the index cases as possible, the number of infections can be kept low, through contact tracing, quarantine, testing, and isolation. Kerala's failure to detect the index case in the Nipah outbreak in 2018 led to a large number of infections, which could have been prevented had the clinicians picked up the red flags listed in the protocols and sent samples for analysis. Learning from this experience, Kerala launched active surveillance for emerging and re-emerging pathogens following the WHO protocol. Outbreak Management Units in every tertiary hospital are to receive reports from clinicians regarding cases of fevers that did not respond to treatment, acute respiratory diseases (ARDs), and encephalopathy with unknown aetiology in immune-competent persons. This system has picked up cases of like MERS Coronavirus West Nile Virus and should be extended to secondary hospitals. This system builds on a routine disease surveillance

programme but is moved to a more intense stage when red flag indicators are detected. The 2024 Nipah outbreak showed that surveillance and laboratory confirmation have improved at least for this known virus.

In today's globally connected world, all nations keep track of developments everywhere in the world. When COVID-19 emerged, based on epidemiological intelligence, Kerala actively screened cases that came from Wuhan, finding the first COVID-19 virus when many other regions that had a higher number of potential cases did not screen them and missed finding the initial infections. This led to massive spikes of infection in a few urban locations.

Kerala has developed Rapid Response Teams with standard operating procedures for investigating and risk-assessing detected events and has acquired skills in contact tracing and contact identification. But Kerala has not demonstrated the capacity to analyse data, including epidemiological, clinical, laboratory, environmental testing, and bioinformatics data, which can feed into real-time decision-making. Kerala also needs to build an electronic platform and a dedicated team to support data management, generate epidemiological bulletins, and improve the existing system for sharing information between different sectors (e.g., human and animal health). During the recent pandemic, the chief minister demonstrated the value of regular bulletins at the evening press conference. But Kerala must move to the digitally supported reporting and dissemination system, towards which most countries are migrating.

2. *Laboratory System*

The surveillance system will not be effective in detecting emerging epidemics without the support of a dedicated and specialised laboratory system, with levels of capacity to which cases can be escalated depending on the expertise required. This differs from the laboratory system for clinical management. Kerala has a reasonably good laboratory system to handle routine diagnostics for clinical management. But the system for surveillance is more specialised and dedicated. Supported by PM-Ayushman Bharat Health Infrastructure Mission, many states are investing in advanced, quality-controlled systems required for confirmation of pathogens. This will require laboratory systems at different levels capable of diagnostic testing, a system to identify samples to be tested based on clinical diagnosis, safe collection, and transportation of specimens and persons qualified to conduct and oversee the tests. The system should be capable of nucleic acid amplification testing, bacterial culture with antimicrobial sensitivity testing, viral culture, and a whole-genome sequencing for the identification of known and unknown pathogens, where needed. A lack of biosafety levels (BSL)-3-level laboratories handicapped Kerala during the Nipah and COVID-19 outbreaks. Since then, one BSL-3 and BSL-2+ lab each have been certified. Even with the additional laboratories proposed,

supply would be less than required. Kerala also needs to improve the laboratories under animal health and fisheries and have a system of sharing information between them. Ensuring internal and external quality controls managed by reference laboratories for all microbes is also required.

Laboratories cannot deliver if clinicians do not refer samples based on clinical suspicion. Kerala has arrangements for mortality and near-miss conferences, but many cases are missed out or poorly investigated, nor are pathological autopsies conducted for suspicious cases. Had this been done, the index case in the 2023 Nipah outbreak would not have been missed.

3. *Infection Prevention and Control*

A strong, effective infection prevention and control (IPC) programme that enables safe healthcare and essential services delivery and prevention and control of healthcare-associated infections (HCAIs) is a necessary condition for a successful response to any disease outbreak. During the 2018 Nipah outbreak, the largest episodes of transmissions of the virus occurred in healthcare settings. This violates trust, is highly demoralising for healthcare workers, and will lead to a reduction in the availability of responders. In the after-outbreak review, this was identified as an area that required strong intervention. Kerala could substantially improve the IPC practices. Kerala's efforts to reduce the spread of antimicrobial resistant bacteria in healthcare settings have also led to improved IPC practices.

There has been an increase in awareness and availability of institutional IPC plans, which received a boost during COVID-19. However, there is no system for monitoring and reporting HCAIs. Given the culture of fault finding and punitive approach in the health system, health workers are reluctant to report infections even when detected, thus preventing learning from experience. The financial crisis the state is going through has also limited the availability of infrastructure needed for IPC spaces for screening, isolation areas, and sterilisation services in healthcare facilities. The shortage of staff and space to prevent overcrowding increases the possibility of infections in healthcare settings.

4. *Zoonotic Infectious Diseases and Food Safety*

There is a high probability that the next pandemic will also be zoonotic and viral. To prepare for this, Kerala needs to build functional multisectoral, multidisciplinary mechanisms to detect and minimise the transmission of zoonotic diseases from animals to human populations. While Malaysia and Bangladesh have been able to identify the pathways through which bat-borne Nipah virus is transmitted to humans, Kerala could not do this so far. Partly, this is due to a lack of coordination between the animal health and public

health sectors on surveillance and to inadequate research into zoonotic diseases. While Kerala has taken some steps to create awareness regarding One Health, it is yet to develop coordination mechanisms, systems for sharing information, and joint research. Kerala has not prepared a list of common zoonotic diseases/pathogens of greatest public health concern nor agreed to a coordinated response by different sectors to zoonotic infectious disease outbreaks. The coordination that does happen during outbreaks, such as avian influenza, is episodic and not institutionalised. Kerala also needs an indicator and event-based surveillance of wildlife, animal farms, and processing centres.

A potential route for the entry of zoonotic (and antimicrobial-resistant) pathogens into the human body is through contaminated food. This can be countered only through a functional system for the surveillance and response to food-borne diseases and food contamination risks in collaboration with all sectors responsible for food safety. For this, Kerala needs to have a surveillance system that integrates information from the entire food chain, designated laboratories that can perform the necessary tests during food-borne outbreaks or contamination events, and a system for timely detection and effective response to potential food-related events, in collaboration with other sectors responsible for food safety. The team in the food safety department at different levels should rapidly assess food-borne events, collect samples and test them, and be able to put together a team competent to investigate outbreaks of food-borne diseases and respond to them. The oft-repeated events of food poisoning that crop up in the state show that the system is not yet capable of effectively regulating the sector.

In every crisis the state has faced in recent years, Kerala has responded vigorously and effectively to handle the threat. The morale of the team has been high, and even in institutions where the availability of human resources (HR) was not adequate, the team has worked together to manage the crisis. It has been a matter of pride for the state health department, and the Kerala society recognised their achievement. The private sector has been an effective partner in this effort.

But governments have faced criticism for their failure to anticipate and prevent the outbreak as they did during the COVID-19 outbreak. Knowing that a large number of medical students studied in Wuhan and that they were likely to enter the state as domestic travellers, Kerala coordinated with travel and immigration authorities to identify, isolate, and test travellers from the known epicentres: China, Italy, and later the Middle East. This prevented infected persons from spreading the infection in the state in the initial stages. The skills in contact tracing were built during the Nipah outbreak and effectively implemented, keeping the rate of infections very low in Kerala in the initial phases of COVID-19. But this stands in stark contrast to Kerala's failure to anticipate the Nipah outbreak. The lack of epidemiological research,

sufficient emphasis on epidemiology, and lack of a dedicated public health cadre are often identified as the causes. Kerala should have, in addition to clinical staff, adequate public health personnel, including epidemiologists, biostatisticians, information system specialists, social scientists, and laboratory specialists, along with a corresponding workforce in the animal health sector.

Kerala tends to react once the crisis has hit. Instead, it should anticipate and be prepared for emergencies. Rather than assigning duties after an emergency has occurred, officers should be designated and empowered to assume predefined roles. They should be trained during normal times on contingency planning, management of emergency situations, and risk communication exercises for multidisciplinary teams and provided with regular training in field epidemiology. Even for clinical care, the designated teams need to be trained and kept ready to move into position once the crisis is notified. Kerala also needs to assign persons in advance and train them in data analysis, modelling, and infodemic management.

Kerala's aim during the COVID-19 pandemic was to keep the infections below the capacity of the state's ability to handle patients with complications and intensive care needs. The state managed to do this, even though during the height of the delta wave, the health system of the state was very nearly overrun. But future pandemics may be even more challenging, and the regular HR may prove insufficient. Kerala needs to plan surge staffing management. The strategy could include deploying medical, nursing, and other students, or even training lay volunteers. This has to be planned during normal times and includes training, accreditation, enabling legislation for accrediting surge personnel, and priming the system for a surge response when the health emergency strikes.

5. *Health Emergency Management*

Like many other parts of India which have high levels of biodiversity and animal-human interaction and are subject to the impact of climate change on health, Kerala will have to deal with health emergencies in the future. Rather than responding after the emergency has struck, Kerala, like the rest of India, should put in place a health emergency management system to be ready when the crisis emerges. This can commence with preparing a list of potential health emergencies, based on risk assessment, the state is likely to face. For each of these or a cluster of similar emergencies, the state should develop an advance plan for emergency preparedness, readiness, and response, and robust emergency management structures, processes, and mobilisation of resources.

This would require the following:

- An assessment of health emergencies the state is likely to face and an inventory of the resources that are available to deal with it.
- Establishment of an emergency response coordination mechanism or incident management system, including emergency management centres.
- Emergency, administrative, financial management, logistic, and supply chain management system/mechanism that are approved in advance with a clearly defined tipping point at which these will legally replace normal systems.
- Kerala will need to have designated and trained staff with approved SOPs to manage the Emergency Operations Centre, with clearly understood trigger points for the deployment of emergency procedures.

6. *Health Services Provision*

Even when health emergencies strike, in addition to responding to the medical needs of that emergency, the health system will have to continue to provide routine health services, especially essential health services with minimum disruption. This will require the state to draw up case management procedures for specific conditions or supportive care if the aetiology is unknown, and set up a designated group of health professionals from within the health department who are periodically trained in management of emergency care.

Ensuring the continuity of essential health services in emergencies requires that the package of such services is defined and plans/guidelines ensuring their provision in emergencies are developed and their delivery is monitored. It also means having a contingency plan on how the services would continue to be provided if the facilities in a region are affected, such as during floods.

7. *Risk Communication and Community Engagement*

Trust in the government is a necessary condition to persuade people to follow the rigorous discipline needed to manage a disease that spreads through social contact. Livelihoods will be threatened, and even mental health of the population could be affected (Kruk et al. 2015). These could lead to social unrest, as seen during the Ebola outbreak and COVID-19. By demonstrating competence in dealing with crises, taking care of the social and economic needs of the people, and maintaining transparency in communication from authoritative sources, Kerala has built trust, which will be an asset in managing future emergencies (Sadanandan 2020).

V. Some of the Necessary Steps Are Listed as Follows

- 1) Real-time exchange of information, advice, and opinions during health emergencies to mitigate the effects of threats and take protective and preventive action: This includes media and social media communications, mass awareness campaigns, health promotion, social mobilisation, stakeholder engagement, community engagement, and infodemic management. Formal government risk communication and community engagement (RCCE) plans, arrangements, and systems have to be established and disseminated during normal times.
- 2) Risk communication units systematically engage populations at the community level during emergencies: This involves listening and responding to questions and demands from the affected population, which could be difficult during times of crisis. People managing this have to be identified in advance and their capacity for the task built during normal times. Formal infodemic management plans as well as arrangements and systems to gather information on perceptions, risky behaviours, and misinformation to analyse public concerns and fears are prepared and the persons designated and trained in advance (Tangcharoensathien et al. 2020).
- 3) Dedicated, trained human resources and adequate financial resources need to be allocated to handle communication. Trained spokespersons authorised to communicate have to be designated and known to all, and the levels of authorisation of information have to be clear and efficient.
- 4) Once the health emergency strikes: The system for public communication, including relevant aspects of infodemics management, has to start operating immediately, efficiently, and effectively.
- 5) Transparency, even if it is politically difficult, has to be maintained. If governments are to be trusted, they should provide the truth, even if it is bad news. Maintaining a false narrative, which can be easily exposed in a democratic society like India, is counterproductive and will lead to loss of trust when the truth comes out. Once the reputation of the government is destroyed, it leaves the field open for false information, which will be exploited by the purveyors of 'infodemic'.
- 6) During a crisis, the population is confused about which source of information to trust. It is important to have designated sources to provide authentic information, and preferred communication channels to notify risk communication interventions have to be designated, empowered, and their names formally published.
- 7) Infodemics will immediately follow a disease outbreak of serious proportions. An infodemic management strategy that uses various media data sources such as newspapers, radio, television, social media, Internet, and partnerships is used to address questions, concerns, information gaps, misinformation, and unhealthy behaviours.

- 8) Only systematic collection and analysis of data, including community feedback, and socio-behavioural data at different levels will alert officials about the areas that communication needs to focus on and what misinformation needs to be countered. The evidence gathered from data analysis should be used systematically for focused communication and community engagement.
- 9) Once the health emergency passes, the tendency is to leave it behind and move on. The opportunity to learn from the experience is lost if the post-incident review is not done transparently. This will help identify areas that need strengthening and areas that were ineffective. It will also help the state to be better prepared for future health emergencies.

VI. Conclusion

The factors that precipitated COVID-19 could create new health emergencies of a similar or even larger magnitude in the future. It is not possible to respond effectively to a health emergency after its occurrence if the preparations for it are not done in advance. Viral epidemics follow their course, slightly modified by the characteristics of their pathogen, the mode of infection, and their impact. This makes it possible for us to identify, using experience, the factors that need to be strengthened. Such preparation is expensive. However, the cost of prevention is insignificant when compared to the cost of economic and social disruption the outbreak of a health emergency can cause. Therefore, it is sensible for states to develop a roadmap for building capacity and systems to respond to such crises. Studying past crises can provide the best guidance for such preparation.

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9

BRINGING ‘THE PUBLIC INTO PUBLIC HEALTH’¹

Learnings from India’s Community Action for Health Programme, National Health Mission

Poonam Muttreja

I. Introduction

The international conference on primary healthcare that led to the historic Alma-Ata Declaration (1978) underscored the relevance of increasing community participation as a core aspect of global health (WHO 1978). Even before the Alma-Ata Declaration, community members in Africa had been supporting medical professionals during medical procedures as part of their missionary efforts (Olakanmi and Perry 2006). Globally, the role of communities in public health can be traced back to the early 20th century when China engaged local volunteers in providing healthcare services to rural areas through its ‘Barefoot’ programme (Jia 2023; Zhang and Unschuld 2008). This idea further expanded to other Asian, African, and Latin American countries (Taylor-Ide and Taylor 2002), and many countries, such as Sri Lanka, Botswana, and Colombia, implemented similar programmes. However, limitations in programme design and execution resulted in mixed outcomes, further stalling the community health workers’ ability to act as catalysts for larger community gains (Walt, Ross *et al.* 1989). A large-scale community-level volunteers’ study in Sri Lanka reported high attrition rates among them and suggested that these programmes sustain only under specific enabling conditions. These conditions include having a substantial number of relatively young and well-educated women and men, a strong cultural force to serve others, and political commitment that unites and stimulates voluntary efforts (Walt, Perera *et al.* 1989). The literature affirms that even in highly engaged communities the motivation to continue participating in developing and implementing initiatives may diminish over time without sufficient financial or other compensation for participation (Brunton *et al.* 2017). Circumstantial issues

such as the degree of steady funding, support during the project, certainty over future funding, mainstreaming opportunities, externally imposed policies and targets, and struggle for resources and discernibility are identified as significant contextual factors (Anastacio 2000; Holder and Moore 2000). Many of these conditions are pondered to create (or fail to create) an environment conducive to the development of virtuous (or vicious) circles (Brunton *et al.* 2017). In another study, poor performance of community health workers in Zambia was attributed to irregular and unreliable supplies of drugs and the selection of inappropriate individuals to be trained as community health workers (Stekelenburg *et al.* 2003). Although it is well-documented that community engagement can strengthen social networks and capital, empower families, and increase perceived health, specific contexts combined with community engagement project approaches may or may not trigger positive responses (Hogeling *et al.* 2024). Despite this, there are encouraging examples, such as the global fight against HIV, which illustrate enhanced community participation through building networks of people living with HIV (PLHIV). This success can largely be attributed to increased political will and financial resources allocated towards research, prevention, care, and treatment initiatives (Amon *et al.* 2018; Grimsrud *et al.* 2020). Globally, the active engagement and leadership of PLHIV and their peers have directly enhanced the accessibility of HIV treatment, prevention, support, and care services, leading to improved outcomes (Caswell *et al.* 2021). In the 1990s, empowering local communities became increasingly popular in public health discourse by forming committees composed of local community members to make decisions on public spending. This decentralised approach aimed to promote community participation in decision-making (Zakus and Lysack 1998). Later, the millennium development goals (MDGs) and presently the sustainable development goals (SDGs) emphasised advocating greater community participation in healthcare. The SDGs explicitly emphasised responsive, inclusive, participatory, and representative decision-making at all levels (United Nations General Assembly 2001; CSDH 2008; United Nations: Department of Economic and Social Affairs Sustainable Development 2015).

As a signatory of the Alma-Ata Declaration and a United Nations member state, India has taken several steps to engage communities in public health through various programmes. Polio-elimination and vaccination programmes saw specific community participation, which was, however, limited in geographies, programme scope, and role in implementation (Lahariya *et al.* 2020; Thacker *et al.* 2013). In 1999, at the national programme level, the evolution of the ‘*Sonagachi Model*’ into Durbār – a community-led structural intervention (CLSI) – over time during the National AIDS Control Programme² (NACP) Phase-2 witnessed nuanced community participation, ensuring project sustainability and replicability across various settings (Jana *et al.* 2004).

Literature affirms that CLSI with commercial sex workers have led to a range of structural and individual-level changes (Ali *et al.* 2021; Evans *et al.* 2010; Kerrigan and Barrington 2018), and these community movements have contributed immensely to the decline and control of HIV/AIDS in India and globally. In conjunction with family support, community-based organisations, faith-based organisations, and positive network groups have played a pivotal role in delivering care, support, and social and legal counselling, and providing vocational or occupational rehabilitation to PLHIV. Another example in HIV/AIDS discourse can be found in the implementation of the Global Fund Round 4 'Access to Care and Treatment' (ACT) and Round 6 'Promoting Access to Care and Treatment' (PACT) programmes since 2005, under which the Population Foundation of India (PFI) led a civil society consortium. Under this initiative, the PFI and its partners complemented the national programme by enabling PLHIV to access care, support, and treatment. Setting up of 99 *Community Care Centres* made it possible with facilities to manage HIV-related illnesses and promote drug adherence counselling and 220 *District-Level Networks* (DLNs) of PLHIV to offer psycho-social support, treatment education, and linkages to other support systems. PFI provided support to 158,000 PLHIV in nine states, which would not have been possible without the support of the community of PLHIV. These interventions stand as a testament to the positive outcomes stemming from community participation and engagement, albeit limited to disease-specific domains. Historical trajectory and evolution of community participation in healthcare in India, rooted back to the recommendations of specific committees – Sokhey Committee (1948) and the Bhore Committee (1946) – and later efforts such as the HealthWatch network and Jan Swasthya Abhiyan and the National Human Rights Commission (JSA-NHRC) public hearings, and National Health Assembly laid the groundwork for civil society's engagement with public health systems (Kakoti, Srivastava *et al.* 2022). However, it was the National Rural Health Mission³ (NRHM) – the flagship programme of the government of India in 2005 – that pioneered the integration of community participation in public health (Lahariya *et al.* 2020), identifying communitisation⁴ as one of its key pillars, promoting a rights-based approach to health and sharing political, administrative, and budgetary decision-making power with communities (Kakoti, Srivastava *et al.* 2024; Lahariya *et al.* 2020). An Advisory Group on Community Action (AGCA) was constituted by the order of Ministry of Health and Family Welfare (MoHFW), Government of India. Processes were formalised, institutional mechanisms were put in place, tools and resources were developed, capacities were enhanced, representation in various committees was ensured, and external evaluations and reviews were conducted to guide the communitisation process.

This chapter delves deeper into the process of Community Action for Health (CAH), which spans an 18-year journey (2005–2023) within the

National Health Mission (NHM) framework. This includes establishing the process, piloting it, scaling up, key learnings and challenges, their solutions, and outlining future directions.

II. Methodology

The chapter uses the desk review method to develop a compelling narrative on communitisation and derive inferences and insights. This includes an inquiry into the published literature on ‘community participation in health’, ‘community engagement in health’, and ‘social accountability in health’. Additionally, within the scope of the NHM, the published literature on communitisation was referenced, reviewed, and analysed. This included examining two fact-finding mission reports, four Common Review Mission (CRM) reports, two external evaluation reports on communitisation, and 36 quarterly report references submitted to the MoHFW from 2014 to 2023, as needed.

III. Empowering Communities: CAH in the NHM Framework

The NRHM was launched in 2005 to achieve universal access to equitable, affordable, and high-quality healthcare that is accountable and responsive to the needs of all individuals, particularly those residing in rural India, including marginalised communities (MoHFW 2005). The NRHM included community processes and creation of public platforms as underlying mechanisms of health system strengthening. The NHM, launched in 2013, subsuming the NRHM and National Urban Health Mission (NUHM) recognises CAH as pivotal to strengthening healthcare systems (Gaitonde *et al.* 2017).

The architectural design of CAH places people at the centre of the process to ensure communities’ health needs and rights are fulfilled. It started with mobilising and sensitising communities about their health entitlements and rights, successively building their capacity to monitor healthcare quality at community outreach and healthcare facilities, enabling their participation in monitoring NHM schemes and interventions in their areas and strengthening health services. The NRHM framework (2005–2012) proposed an accountability framework through a three-pronged process of community-based monitoring (CBM), external surveys, and robust internal monitoring through institutionalisation of the Health Management Information System (HMIS). CBM allowed for a continuous assessment of planning and monitoring within the NRHM (MoHFW 2005). This approach was further accentuated in the NHM framework (2012–2017), which specifically mentioned the continuation and scaling up of CBM in the 12th 5-year plan (MoHFW 2012).

The key programmes under the NRHM framework for communitisation were creating a new frontline workers cadre, the Accredited Social Health

Activist (ASHA), and establishing Village Health, Sanitation, and Nutrition Committees (VHSNCs) and *Rogi Kalyan Samitis* (RKSs; Patient Welfare Committees). To ensure institutionalisation and lead community action initiatives under the NRHM, the MoHFW constituted an advisory group (AGCA) in 2005. With distinguished public health experts⁵ from civil society among its members, the PFI served as the secretariat for the AGCA until September 2023, and the executive director of the PFI served as the convener of the AGCA secretariat. The AGCA was instrumental in conceptualising and piloting community monitoring projects and providing continuous and well-informed guidance to the AGCA secretariat. Subsequently, the role of the AGCA transitioned to the National Health Systems Resource Centre (NHSRC). The AGCA secretariat organised meetings regularly with participation from the MoHFW and NHSRC. Regular quarterly reports were shared with the MoHFW at the AGCA meetings. Between 2005 and 2023, the AGCA secretariat at the PFI convened 47 meetings and played a focal role in facilitating the rollout and scaling up of communitisation processes by providing technical support to state governments.

1. *Decoding the Role and Mandate of the AGCA and Its Secretariat*

The AGCA mandate included advising state governments and civil society organisations (CSOs) on developing community partnership and ownership for the NHM, providing feedback on ground realities to inform policy decisions, and developing and nurturing innovative models of community action and endorsing them for further adoption/extension to the national and state governments. To ensure the fulfilment of the AGCA mandate, the central government funded a pilot project for the CAH process between 2007 and 2009. The pilot project aimed to help states learn about and understand the communitisation process and activities, and adopt them (Kakoti, Srivastava *et al.* 2024). The AGCA secretariat guided the pilot implementation, covering 1,620 villages across 36 districts in nine states.⁶ The AGCA secretariat disbursed funds to implementing state NGOs and submitted the report to the MoHFW. The secretariat had the mandate to select state-level and district NGOs through a transparent and participatory selection process. A key factor crucial for effective collaboration was mutual respect between bureaucrats seeking change and civil society actors (Kakoti, Srivastava *et al.* 2022, 2024). The formation of the AGCA and its secretariat with a defined mandate and specific powers aligns with the literature suggesting that when higher-level political leadership devolves adequate powers for citizen participation in holding state agencies or frontline providers accountable, positive outcomes often result. This improves accountability and shortens the accountability process (Devarajan *et al.* 2011).

Earlier studies have noticed that specific initiatives meant to enable greater community participation, such as open budget initiatives (Gaventa and

Barrett 2010), public expenditure tracking surveys (Reinikka and Svensson 2004), mass media publication of fund flow leakages (Reinikka and Svensson 2005), town-hall meetings (Wantchekon 2003), constituency report cards (Banerjee *et al.* 2010), citizen report cards (Paul 2002), community management meetings, and participatory budgeting (Wampler 2013), have provided communities with significant platforms for participating in project designs and implementations. This has led to beneficial impacts on project outcomes, including better design, improved quality, and targeted benefits for the poorest. Most importantly, it ensured greater accountability.

Since its pilot phase (2007–2009), CAH has had a unique journey in empowering communities to participate and regularly monitoring the progress of the NHM schemes and interventions in their areas, thus contributing to the strengthening of health services and *Bringing Public into Public Health*. It has pioneered innovative approaches and facilitated the adoption and scaling up of CAH processes from 36 districts in nine states in the pilot phase to over 450 districts and 145 cities in 25 states by 2023, making it perhaps the biggest community action programme in the world. Learnings from the pilot and post-pilot phases have strengthened the programme in the country. India is not a homogeneous country. A one-size-fits-all approach does not work across the nation; hence, several innovative approaches and contextualisation were integrated to make CAH work. The successive sections delve into the key insights, challenges, and lessons learned from this pilot implementation.

IV. Insights from the Pilot Implementation of CAH

The AGCA, in consultation with the MoHFW, facilitated the entire process of community action for the 2-year pilot implementation that aimed to develop a scalable model (Lahariya *et al.* 2020). The phase involved developing resource materials, selecting and training state nodal NGOs, and providing regular mentoring for implementation processes. The AGCA secretariat initially suggested a phased learning process in each state to ensure state-specific learning and ownership of the community action process (PFI 2016). A pilot programme introduced the process of village committee strengthening and action. The overarching objective of these processes was to assess the feasibility of engaging village-level committees to strengthen the healthcare system. This approach aimed to enhance community ownership of the healthcare system and improve its accountability to the populace, with the idea that such participation would contribute to achieving health for all (PFI 2016). The pilot programme focused on establishing a standard mechanism for implementing community action at scale. A systematic plan of action was formulated at various levels, spanning from the village, sub-health centres (SHCs), primary health centres (PHCs), and community health centres

(CHCs) to the block and district levels. This plan included activities such as creating community awareness regarding health entitlements, rights, and the roles of healthcare providers; training and mentoring VHSNC and RKS members; constituting planning and monitoring committees and capacitating them at different levels; conducting data collection through monitoring tools like facility report cards, expenditure reviews, and village scorecards; compiling and analysing data using a scoring system; organising *Jan Samwads* to disseminate key findings while ensuring the participation of the community, Panchayati Raj Institution (PRIs), VHSNC members, ASHAs, and health officials; engaging with health officials for corrective measures; and developing locally informed solutions to identified issues. The pilot implementation resulted in significant gains in the formation of over 2,000 VHSNCs in nine states, developing national and state-level resource materials, preparing report cards in all VHSNCs, organising *Jan Samwads*, and completing one cycle of community monitoring.

An external evaluation of the pilot demonstrated the following outcomes: increased community awareness of health entitlements; improved coverage of immunisation and antenatal care services; greater availability of medicines and laboratory services in health facilities; and reductions in outside prescriptions and demands for informal payments by health providers. The evaluation recommended to the MoHFW and the state governments to support the scale up of community action across the country in a phased manner. While it is indisputably imperative to evaluate both processes and outcomes to assess the effectiveness of community participation interventions (Haldane *et al.* 2019), earlier studies suggest that community participation interventions have often been perceived primarily as tools to enhance health outcomes rather than as processes aimed at implementing and sustaining health programmes (Davison *et al.* 2013; Hoelscher *et al.* 2010). In this context, the external review of the pilot programme had a significant advantage, offering insights into both processes and outcomes. Findings from the states on immediate outcomes reflected a promising picture of engaged communities in public health and improved service delivery, mainly due to 'supply-side' inputs and 'demand-side' push by CAH. Progress showed across states in various aspects: Maharashtra showed significant improvement in immunisation services; Rajasthan saw improved village scores; Jharkhand recorded a notable improvement in community monitoring processes; Odisha and Madhya Pradesh demonstrated active participation and increased demand for health services; Assam proposed scaling up of CAH into additional districts; Chhattisgarh addressed human resources and infrastructure gaps; Tamil Nadu increased community awareness through VHSNCs; and Karnataka exhibited positive changes in community perceptions of health parameter. The findings also reflected on increased demand and utilisation of services; e.g., in some PHCs in Maharashtra, the number of patients availing services doubled since

community monitoring. In addition, patients shifted from private to public health system; the number of OPD patients, especially women, increased significantly after a decision was taken at a Jan Samwad to post a female medical officer (MO) at Dhamangaon Gadhi PHC in Amravati district. While Gunjalli PHC in Karnataka was designated as a 24 x 7 PHC, it had only one doctor and a staff nurse. With pressure from the people and discussions at a Jan Samwad, two more staff nurses were posted. This increased immunisation coverage from 40% to 80%, and 25 institutional deliveries were being done every month. In Madhya Pradesh, a malaria check-up was organised after a Jan Samwad at Bhuimad PHC, Sidhi district, which is a tribal and malaria endemic region. Over 1,000 patients were screened and treated (Singh *et al.* 2010). These examples may have small numbers but demonstrate the efficacy of making changes and the directions for potential health system responsiveness and are also testament to increased service availability and utilisation following community monitoring.

Key findings from the external review, documented in the report titled ‘Reviving Hopes and Realising Rights – A Report on the First Phase of Community Monitoring under NRHM’, led to several recommendations beneficial for scaling up, including continued support from the MoHFW, urgent need to foster state government ownership of the process, integrating community monitoring within the communitisation process of the NRHM, ensuring acceptance of the process by health officials, linking community monitoring to village-level planning, involving NGOs as resource centres, strengthening the role of PRIs, simplifying monitoring processes and introducing tools incrementally, gradually integrating the Jan Samwad initiative within the community, transitioning away from NGO-led initiatives, allowing sufficient time for processes to mature, and conducting a comprehensive assessment of resource requirements (human and financial) for institutionalisation, which differs significantly from the volunteerism approach seen during the pilot phase where NGOs primarily provided voluntary support. The review specifically suggested that while the processes showed much potential, long-term systemic support was needed to move them forward.

After the pilot implementation, many states integrated communitisation into their state Programme Implementation Plans (PIPs) and developed state-specific models for community participation over time. This indicated that the pilot programme was prepared for expansion and scaling up.

1. Enabling Factors during the Pilot Phase

Several enabling factors contributed to the effective implementation and scale-up of the pilot. The AGCA secretariat had autonomy to select state- and district-level NGOs through a transparent, participatory process, free from state government interference. This helped identify experienced and capable

NGOs. The secretariat also developed and mentored a cadre of motivated state and district resource persons, including state nodal officers, chief medical officers, district programme managers, and district community mobilisers, who played a key role in anchoring the scale-up. Financial management was handled directly by the AGCA secretariat, ensuring timely fund disbursement to state NGOs and smooth execution of activities. Jan Samwads played a critical role by raising community awareness about health entitlements and rights, which led to tangible improvements in service delivery, staff behaviour, and availability of medicines and diagnostics at healthcare facilities. They also created a space for communities to acknowledge and support the work of frontline health workers.

2. Challenges during Pilot Implementation and Adaptations for Scaling Up

The pilot phase faced many challenges, learnings from which shaped the design and scale-up of CAH processes. The community monitoring tools initially developed were too complex, even for some NGO facilitators. These tools had to be simplified and adapted to local contexts. Continued implementation in pilot states and expansion to new states required strong direction and support from the MoHFW. The pilot also relied heavily on NGO volunteerism, which raised concerns about sustainability. Maintaining fidelity to the original pilot model became difficult for some AGCA members, especially as the process demanded tool simplification and broader community engagement beyond NGO facilitation. These issues posed critical challenges during the transition from pilot to scale. Also, external evaluation of the pilot phase observed limited engagement and ownership of the *PRIs* in the CBM process. It recommended strengthening the role of *PRIs* through collaboration between the departments of health and rural development. Concerted efforts were made in the scaling-up phase around areas such as 1) the NHM national guidelines mandated leadership of community action by *PRIs*, with elected representatives chairing *VHSNCs*, *RKSs*, *Mahila Arogya Samitis* (*MASs*), and *Jan Arogya Samitis* (*JASs*). This was followed by systematic training and mentoring of *PRI* members, enabling them to take on more meaningful roles. 2) The AGCA secretariat supported the NHSRC in developing national guidelines and training manuals for these platforms. It also collaborated with the Ministry of Rural Development to develop a 'Handbook for *PRIs* on Health', contributing a chapter on community monitoring, which was later used by State Institutes of Rural Development for *PRI* training. 3) In Chhattisgarh, the Swasthya Panchayat Yojana aimed to strengthen *PRI* ownership in health by integrating CBM into Gram Panchayat activities. Over time, this expanded to include monitoring of school mid-day meals, ration distribution, pensions, and follow-up on maternal, infant, and untimely deaths.

V. Expanding the Reach: Scaling up Community Action for Health

After the pilot phase, implementation continued in the nine states with funding from the state NHM PIPs. There were several challenges in continuing the engagement of NGOs, including prolonged delays in selection and timely disbursement of funds, leading to ending of partnerships in Assam, Tamil Nadu, Rajasthan, Chhattisgarh, and Jharkhand by 2010. There were challenges in related capacities and geographical coverage, as very few NGOs had experience in health and fewer among them had worked on the rights-based issues.

Beyond the pilot states, partnerships with NGOs were done on a limited scale in Bihar (2011–2014), Punjab (2013–2015), Meghalaya (2011–2015), Mizoram (2014–2016), Gujarat (2010–2014), and Uttarakhand (2015–2016). The only state that continued support from the state government since the pilot is Maharashtra. However, the state government in Maharashtra had regular challenges in dealing with the state nodal NGO, whose role the state government perceived as hostile and disruptive. These issues were discussed on several occasions at the AGCA meetings. As a result, the AGCA secretariat had to intervene and seek support from the MoHFW and the state NHM to get approvals for the annual plans and facilitate disbursements of funds to state nodal NGO for implementation. The threat of leaving out the state nodal NGO was a continuous challenge through the programme period. At the international level, the work in Maharashtra was showcased as an independent initiative, whereas in reality it was a part of the national programme design and blueprint, which led to a distortion in the published literature.

Taking the lessons learnt from the pilot programme, the process of scaling up and institutionalisation began, and by the fiscal year 2012–2013, CAH was integrated into the PIPs of 21 state governments/union territories (PFI 2023). The AGCA secretariat continued to provide technical support to state governments to scale up as approved by the MoHFW, and the ministry continued to support the AGCA secretariat until September 2023. The AGCA secretariat played a pivotal role in both strengthening and institutionalising CAH.

1. *Scaling Up through the NHM Structures*

Global and Indian experiences show that very few innovative projects are effectively implemented with impact at large scale. The implicit assumption that scaling up happens spontaneously is a reason that causes actual implementation at large scale to be taken for granted. Often the adoption of a

systematic approach to scale up proven interventions, including at the planning stage of a project, is missing. The PFI in partnership with Management Systems International (MSI) developed and adopted the Scaling Up Management (SUM) framework in 2006 and has since been applying it to scale up NGO and government-led innovations/pilots in health and nutrition in India. The SUM framework details steps related to what, where, how, and when of scaling up (Scaling up Community of Practice 2022). We have trained over 500 senior management staff from donors, implementation organisations, and the government, including the Planning Commission. We also guided and mentored 15 NGO and government-led pilots that met the scalability assessment criteria and provided need-based support in systematically planning for scaling up. We applied the SUM framework for designing the scaling up of CAH by building a stronger partnership with the national and state governments.

To circumvent challenges as discussed above, the AGCA secretariat began to engage more effectively with the state governments by training and mentoring of state, district, and block NHM nodal officers (who were managing the community processes portfolio) to anchor the process. In 2013, the MoHFW suggested to rename CBM as CAH as 'action' was perceived to be more inclusive and acceptable by the government officials. The AGCA secretariat at the PFI trained and mentored a pool of over 50,000 state, district, and block NHM staff and NGOs across the country for continuity and sustainability. The secretariat also worked with the state NHM nodal officers to develop PIPs and allocate financial resources for community action in 25 states. Over 3,000 Jan Samwads were organised to find joint solutions between the community and health officials to improve the delivery of public health services.

2. *Alignment with Policy Mandates and Priorities*

The AGCA secretariat adapted its priorities to align with policy mandates as the policy landscape evolved during the scale-up process. For instance, in 2013, with the launch of the NUHM, it supported the activation of MASs (Women Health Committees) in selected cities of Odisha, later expanding to other states. The AGCA provided a detailed response and suggestions for the formal engagement of CSOs and CBOs in policy and implementation processes for the National Health Policy in 2015. The ministry reviewed all responses (~5,000) received through the process and considered them in the final policy revision in 2017 (MoHFW 2017; Lahariya *et al.* 2020). Aligning its priorities with the government of India's focus on Comprehensive Primary Healthcare (CPHC) through Ayushman Bharat – 'Ayushman Arogya Mandir' (formerly known as

Health and Wellness Centres – HWCs), the AGCA secretariat submitted a proposal to the ministry regarding social accountability at HWCs. The AGCA secretariat also became a prominent voice on Universal Health Coverage (UHC) by organising several consultations and policy dialogues. The AGCA secretariat also supported the ministry in its efforts during the COVID-19 pandemic by developing and disseminating guidance notes for PRIs, VHSNCs, RKSs, MASSs, and Resident Welfare Associations (RWAs), creating social behaviour change communication (SBCC) material related to COVID-19, conducting a dipstick study on vaccine hesitancy, facilitating over 100 online trainings on COVID-19 mitigation for over 5,500 block, district, and state nodal officers, organising 11 virtual Jan Samwad sessions to enable community interactions and feedback to health officials during COVID-19, and documenting and disseminating 30 good practices with state governments regarding community engagement initiatives (PFI 2023).

3. *Tracing the Outcomes and Impact of CAH Scaling Up*

The outcome of the initiatives above expanded the technical support reach of the AGAC to over 2,30,000 villages across 450 districts and 145 cities in 25 states.⁷ Additionally, the AGCA secretariat supported the NHSRC in developing national guidelines, training manuals, and resource materials for community action components and supported in a phased manner 31 state governments⁸ in developing the NHM PIPs for the community action components. During 2005–2023, the AGCA secretariat developed the capacities of state-, district-, and block-level NHM staff, creating a pool of over 50,000 *trained NHM staff* across 27 states.⁹ Since 2007, the state governments, with support from the AGCA secretariat, have organised over 3,000 *Jan Samwads*. The Jan Samwads provided a platform to publicly acknowledge the efforts of frontline health workers and staff while assisting administrators and policymakers in understanding community healthcare challenges and making informed policy decisions. Positive outcomes of Jan Samwads included resource allocation in state PIP and health budgets for SHCs and PHCs in Jharkhand and Tamil Nadu; government directives to ensure safe return after deliveries in Jharkhand and Uttarakhand; prompt incentive disbursals in Bihar, Jharkhand, and Rajasthan; timely procurement of medical supplies in Bihar and Maharashtra; regular medicine availability in HWCs in Assam, Bihar, and Maharashtra; evening OPD clinics at urban PHCs in Odisha; family planning and TB follow-up ANM team initiatives in Gujarat; ASHA restrooms in Punjab and Uttarakhand; public toilets in Odisha's urban slums; and construction of approach roads to HWCs in Bihar through the Gram Panchayat Development Fund (PFI 2023).

PEOPLE’S HEALTH ASSEMBLIES – TAMIL NADU MODEL

Background: The People’s Health Assemblies model in Tamil Nadu represents a collaborative approach to health system reform, engaging various stakeholders to address and improve healthcare services.

The process was steered by the State Working Group (SWG) chaired by project director, Tamil Nadu Health System Reform Programme, and District Working Group (DWG) chaired by the district collector. The SWG and DWG included representatives from the departments of health, women and child development, and public health engineering, and selected CSOs.

The SWG nominated the AGCA secretariat to plan and guide the process, which involved orientation sessions for district collectors, deans of medical colleges, and chief medical officers (CMOs) for rolling out the initiative in the districts. District- and block-level sensitisation workshops were organised to build awareness and mobilise support, while community feedback, perceptions, and aspirations were collected through PRI members, ANMs, *Anganwadi* workers (AWWs), and supervisors. Village, block, and district health assemblies facilitated dialogue between community representatives and health officials, culminating in a state assembly, chaired by the chief minister and the health minister, to present findings and make decisions on systemic issues.

Geographical Scale: Initially piloted in 14 districts during 2021–2022, the model was scaled up in 16 districts in 2022–2023 and further expanded to 24 districts, including Chennai Corporation, in 2023–2024.

Outcomes: Significant outcomes included the allocation of INR 235 million to Phase 1 districts (2021–2023) and INR 1,947 million to Phase 2 districts (2022–2023), which were utilised for recruiting human resources, establishing blood storage units, installing solar water heating systems, upgrading dental departments, and constructing mortuaries, postmortem units, compound walls at PHCs, staff quarters, and public toilets.

These efforts led to increased availability of medical equipment, addressed human resource gaps, and improved the availability of medicines, demonstrating the success of community-driven health system reform in Tamil Nadu.

The AGCA secretariat supported states in rolling out JASs, including facilitating training and orientation for over 3,700 MOs and CHOs. The AGCA secretariat’s commitment to nurturing innovative models and enabling their scale-up contributed to widening the reach of many innovative models, such as 1) the Interactive Voice Response System (IVRS) – an Information and Communication Technology (ICT) solution for community monitoring in Bihar; 2) People’s Health Assembly in Tamil Nadu; 3) grievance redressal

through the RKS in Uttar Pradesh; 4) social audit of health services; and 5) CBM of HWC services by the VHSNCs and CBM through MAS. Moreover, the AGCA secretariat launched the ‘*Samwad* (dialogue)’ webinar series to share best practices on community action processes in 2023.

3.1. Influence on Policy Landscape

In addition to these efforts, the AGCA secretariat provided regular feedback to the MoHFW, NHSRC, and state governments on ground-level issues requiring policy attention. This feedback was facilitated through field visits, participation in the CRM, and fact-finding missions. Two classic examples of fact-finding missions include investigations into maternal deaths in Barwani, Madhya Pradesh, and sterilisation deaths in Bilaspur, Chhattisgarh, led by the PFI as the AGCA secretariat.

Following the deaths of 16 women who underwent laparoscopic tubectomy between 8 and 10 November 2014 at four camps in Bilaspur district of Chhattisgarh, the PFI led a multi-organisational team fact-finding mission and documented the detailed evidence in a report titled ‘Robbed of Choice and Dignity’ (PFI 2014). The key issues and recommendations were shared with the MoHFW. The MoHFW directed State Principal Secretaries to improve the quality of care and strictly adhere to the family planning protocols. It immediately organised training across all the states to improve the quality of care. The PFI also engaged with decision-makers and influencers through media engagement, press conferences, and communication with the prime minister’s office (PMO), National Commission for Women (NCW), and National Human Rights Commission (NHRC). The report contributed to the honourable Supreme Court of India’s judgement by a bench led by Justice Madan B Lokur in the *Devika Biswas vs. Union of India* case in 2016, which mandated to stop holding sterilisation camps within 3 years and move to fixed-day family planning (FP) services; ensure FP targets are not fixed; improve quality of care through empanelment of doctors, informed consent and choice especially for spacing methods, regular review of quality, and mandate state and district authorities to publish biannual reports on sterilisation services, including deaths. The honourable Supreme Court of India’s judgement mandated the publication of an annual report covering statistical and non-statistical information, along with quarterly updates on the websites of the MoHFW, and corresponding state and union territory ministries or departments regarding details of each member of the Quality Assurance Committee (QAC) and District Quality Assurance Committee (DQAC), as well as the panel of doctors approved for sterilisation procedures.

The fact-finding mission followed by the honourable Supreme Court’s judgement upheld women’s rights and choices. No longer do we hear of women dying after sterilisations done in poorly managed camps across the

rural hinterland. The government also took necessary steps to move away from its predominant focus on achieving targets through sterilisation to improve quality and the expanding basket of contraceptives in the public health system.

Likewise, the district hospital in Barwani, the headquarters of a predominantly Adivasi district in southwestern Madhya Pradesh (MP), recorded 26 maternal deaths between April and November 2010. When the AGCA conducted a fact-finding mission into Barwani maternal deaths in March 2011, it recorded that tragically 21 of these 26 women (81%) belonged to scheduled tribes. The fact-finding mission report gave recommendations to improve maternal health services by ensuring appropriate and timely referral of high-risk cases; adherence to infection control protocols; assured services at 24 × 7 PHCs and CHCs by rationalising posting of doctors and nurses; increasing bed strength at the district hospital (DH), which had maximum case load; and setting up regular monitoring mechanisms at the state and district levels for grievance redressal. A public interest litigation (PIL) was filed by a local organisation urging the state government to take necessary corrective actions. Thereafter, the state high court entrusted the AGCA to have quarterly meetings under the leadership of the MP NRHM director to work on and monitor the implementation of recommendations of the fact-finding mission (Subha *et al.* 2011).

These examples illustrate the efficacy of strategically engaging the public in public health initiatives while improving accountability and responsiveness to the population's healthcare needs.

3.2. *Evaluations and Learning Outcomes*

The exponential learning from CAH processes and outcomes from its implementation over these years have been continuously documented and evaluated. Implementation evaluation, carried out regularly by the MoHFW as part of its CRM, includes annual concurrent assessment of NHM interventions that has witnessed impact in different states. For example, in Kerala, community action through *Arogya Keralam Puraskaram* awards has led to competition among panchayats to perform better (NHSRC 2016). Decisions in Jan Samwads led to moving immunisation sites towards hard-to-reach areas, thereby increasing coverage in Uttarakhand (NHSRC 2018). Jan Samwads became a platform for decision-making on issues related to maternal deaths, denial of health services, and basic amenities in Meghalaya (NHSRC 2019). VHSNCs' feedback led to ensuring availability of urine tests, pregnancy testing kit, and rapid diagnostic test kits for malaria at HWCs in Hailakandi district in Assam, along with community action on child marriage and addressing COVID-19 vaccine hesitancy, leading to over 95% coverage in Assam (NHSRC 2022).

A review examining five models of community participation across different states revealed a positive narrative consistent with literature emphasising several advantages of community participation, including improved dissemination of health information, better organisation of services based on community needs, delivery of relevant and acceptable services, higher levels of community satisfaction, efficient resource utilisation, and greater community accountability for their health outcomes (Preston *et al.* 2010; Zakus and Lysack 1998). Of the five projects reviewed, three – in Tamil Nadu, Chhattisgarh, and Bihar – were programmes supported by the state governments under the NRHM. The other two programmes – in Gujarat and Karnataka – were models that explored different strategies towards community participation in urban slums. The Tamil Nadu CAH programme focused on planning through representation, capacity building, monitoring, simplified tools for grading, and disseminating findings to improve service quality. Chhattisgarh's *Swasth Panchayat Yojana* began with Swasth Panchayat surveys and awards for better health indicators, later strengthening VHSNCs and community action using *Mitanins* (community health workers/ASHAs). Bihar's Community-Based Monitoring and Planning (CBMP) programme enhanced VHSNCs and used the Village Planning and Monitoring Committees (VPMCs) for monitoring and feedback. The SAHAJ in Vadodara develops Community Development Committees for advocacy and action in urban slums. The Public Affairs Centre (PAC) in Bengaluru monitored maternity services using innovative surveys, such as citizen report cards and advocacy methods. A more detailed explanation of these models can be found elsewhere (PFI 2016).

In consultation with the NHSRC, the AGCA secretariat at the PFI persistently requested the MoHFW for an evaluation of CAH. Terms of reference (ToR) for evaluation were developed and submitted to the MoHFW in 2018. However, we did not finally get a go ahead from the MoHFW. More recently, a comprehensive external evaluation of CBM implementation in Bihar conducted by Mathematica highlighted process and outcome evaluation and depicted a favourable outlook on community participation in health (Vohra *et al.* 2021). Bihar CBM implementation began in 2011 at the invitation of the Bihar state government. In addition to providing state-level guidance on implementation, the PFI managed direct implementation of CBM in Bihar over four phases, in collaboration with field NGO partners. The process evaluation found a proactive engagement of ASHA facilitators in ensuring VHSNC functionality. Community participation increased over time as community members became more willing to provide feedback, thanks to the simplified process using the IVRS.¹⁰ An IVRS-based system was put in place, where users can share their responses on a designated number, which is automatically transferred to a server and analysed. An online dashboard displaying indicator-wise details of the community enquiry process at the village,

block, and district levels was developed to compile and analyse inputs and feedback. Indeed, Block Planning and Monitoring Committee (BPMC) members found IVRS data and Jan Samwads to be two valuable sources of information for health planning. In this regard, the PFI trained PRI and VHSNC members to raise awareness in communities about registering and providing feedback via the IVRS. A total of 56,000 *unique callers* have registered for and used the IVRS. At the outcome level, the same study found a significant improvement in understanding by women of reproductive age (WRA) on various community health initiatives, such as VHSNCs and awareness of the IVRS. There was a significant improvement in participation in CBM-related meetings, although overall participation remained relatively low. Moreover, there was a substantial increase in knowledge and use of specific ANC services and FP methods among WRA (Vohra *et al.* 2021). Table 9.1 highlights the key findings of outcome evaluation.

TABLE 9.1 Impact of the CBMP Programme in Bihar

<i>Key Indicators</i>	<i>Baseline (2017)</i>	<i>Endline (2019–2020)</i>
Counselling by health providers on FP	11%	29%
Pregnancy registered	59%	87%
Blood pressure measurement among pregnant women	58%	81%
Abdominal examination	28%	51%
Haemoglobin test	47%	73%
Weight measurement	58%	83%
Receipt of 100 iron folic acid (IFA) tablets	22%	89%
Urine test	47%	65%
Knowledge in the community on the role and contributions of the VHSNC	0%	38%
Participation in CBM-related meetings at the village, Gram Panchayat, and block levels	0%	10%

Source: Evaluation of PFI's CBM implementation: endline findings (Vohra *et al.* 2021)

Regarding *improvements in footfalls* in primary healthcare facilities, the CAH processes undoubtedly ensured social accountability and enhanced the responsiveness of the public health system, as evidenced by Mathematica's evaluation of the Bihar CBMP. Health service utilisation increased considerably from baseline to end line, as stated in Table 9.1.

These findings and actions illustrate the importance of community participation in ensuring the system's accountability towards citizens and align with global evidence that emphasises the importance of civil society participation in healthcare. Examples can be seen in South Africa, where CSO engagement and advocacy ensured access to HIV/AIDS medicines (Olesen 2006); in Thailand, where National Health Assemblies played a key role in enhancing civil

society's capacity to engage in policymaking and bringing evidence into policy discussions (Rasanathan *et al.* 2012); and in Uganda, where community monitoring interventions, such as the unique report card approach, led to improved health outcomes, including reduced child mortality and increased child weight (Björkman and Svensson 2009). Studies have reflected that strategic approaches through enabling environments for collective action combined with increased state capacity to respond to citizens' voices are more promising, and 'sandwich strategies' can help 'voice' and 'teeth' to become mutually empowering through state–society synergy, thus giving more meaning to social accountability (Fox 2015).

4. *Learnings from the Scaling-Up Phase*

The scaling-up phase resulted into numerous learnings. It highlighted the value of strategic partnerships, with the AGCA secretariat collaborating with state institutions such as state health resource centres (SHRCs) in Chhattisgarh and Maharashtra; State Social Audit Units (SAUs) in Jharkhand, Meghalaya, and Uttarakhand; and Tamil Nadu Health Systems Strengthening Project (TNHSSP) in Tamil Nadu to leverage their human resources and reach for wider implementation at reduced costs. State-level policies and initiatives like Rajasthan's Right to Health Act, Meghalaya's Community Participation and Public Services Social Audit Act, Chhattisgarh's Swasthya Panchayat Yojana, Tamil Nadu's People's Health Assembly, and Kerala's ArdraKeralam Puraskaram reinforced the state's commitment and gave a new impetus towards community action. Coordination with the NHSRC helped align national priorities and efforts by co-developing guidelines and training modules for VHSNCs, RKS, MAS, and JAS, facilitating state-level master trainers' training and reviewing state implementation periodically. The AGCA secretariat's credibility with MoHFW and state officials, especially with the Joint Secretary Policy, who was the designated officer for CAH at the central level, State NHM Mission directors and state nodal officers, built over years, facilitated effective implementation.

Nevertheless, the journey of CAH has not followed a linear path. Numerous challenges were faced during both the pilot and scale-up phases. We are aware that India is not homogeneous at the national or state level, not only concerning the public health system but also regarding the presence and capacity of NGOs across the states. The subsequent section delves into these challenges in detail.

5. *Navigating Challenges: Adapting to Scale Up and Sustain Community Action*

The literature affirms the benefits of community participation in developing, implementing, and evaluating health services (Haldane *et al.* 2019).

However, many challenges to successful and sustainable community participation remain. These challenges persist at both structural and practical levels (Morgan 2001). Earlier studies have highlighted challenges of sustainability (Krishna *et al.* 1997); issues in placing community participation in the centre of the project but not merely as an input in the project; challenges in systematic encouragement and creating means to make it effective; and challenges in positioning community participation in health as a principle rather than merely a programme (Kahssay and Oakley 1999; Morgan 2001).

While examining and navigating the challenges during the rollout of communitisation, both structural and practical challenges were faced. Various challenges, such as prolonged delays in selection, timely disbursement of funds, and closing down partnerships in certain states – namely, Assam, Tamil Nadu, Rajasthan, Chhattisgarh, and Jharkhand – were witnessed by 2010. Wherever partnerships with NGOs extended beyond pilot states, they were conducted on a limited scale. The only state that continued support from the state government since the pilot implementation was Maharashtra, where the implementation of the CBPM programme was spearheaded by Support for Advocacy and Training to Health Initiatives (SATHI). This facilitated a broad network of state-wide CSOs to foster active citizen engagement in public health. Initially, the collaborative processes between the state and society were intensive, subsequently varying over time, and experiencing a revival during the COVID-19 response. The CAH in Maharashtra reached approximately 1,000 villages across 17 districts. Recently, field research was conducted to compare the activation of VHSNCs and RKSs in areas with and without a legacy of CAH. The research found that participatory spaces for community engagement were more active in the districts (Accountability Research Centre 2023) where CAH network had intensively promoted grassroots capacity for voice and health system responsiveness, especially frontline was higher in the districts where CBMP was active. Proactive emphasis on enabling voice and recognition of women, Dalits, and tribal communities contributed to addressing 'micropower' imbalances (Shukla *et al.* 2023).

Another example is from Tamil Nadu, wherein the implementation of the pilot phase was anchored by the Tamil Nadu Science Forum from 2007 to 2009. After the pilot phase, Society for Community Health Awareness Research and Action (SOCHARA) was nominated as the state nodal NGO, and the state government submitted and approved a 5-year perspective plan to scale up CBM from 225 villages to 5,000 villages. A governing body, with decision-makers from the state government and civil society members, was constituted for oversight and approval. While there was scepticism from state nodal officers on community engagement, the process continued to be implemented till 2012. Over the next 2 years (2012–2014), funding was drastically reduced and limited to state-level support by SOCHARA. There was also a shift in focus from communicable to non-communicable diseases,

and inadequate emphasis on selection and training for ASHA's planned in the tribal pockets of the state. While funding continued to be approved by the MoHFW for CBM under the state PIP till 2018–2019, the state nodal officers did not continue the process, even while there were commitments from the state NHM mission director's end. Subsequently, the process was re-initiated through 'People's Health Assemblies' and anchored under the Tamil Nadu Health Systems Reform Project. This was initiated in 14 districts (2021–2022) and scaled up in 16 additional districts in 2022–2023.

It was also observed that communities tend to lose interest if their grievances are not redressed, or feedback not considered. Resolving their demands and needs in a time-bound manner is necessary to sustain their interest and faith in the public health system. This requires establishing a robust grievance redressal mechanism for sustaining community interest in social accountability processes. In this context, in 2010 the convener of the AGCA made a compelling case to establish grievance redressal mechanisms, a request for which was sent to the then Prime Minister of India Dr Manmohan Singh. Although the committee was formed and three AGCA members were nominated, the committee's term expired without convening a single meeting.

Unlike projects that receive earmarked funding and approvals upfront, community action initiatives entail systematic stakeholder consultations and guidance. Overlooking the original goals may result in mistaking mid-term accomplishments as ultimate goals, potentially causing a decline in interest (Kakoti, Srivastava *et al.* 2022).

Similarly, since in many states, NGOs implemented the processes described in earlier sections, delays in either the memorandum of understanding (MoU) extension or the release of funds for on-ground implementation disrupted the implementation of the planned activities. Competitive priorities and budgetary restrictions in PIPs often resulted in states failing to make adequate provisions for capacity building and mentoring of community-based institutions such as VHSNCs, MASs, RKSs, and JASs, thus trimming community process components. Administrative delays in approvals and the fund transfer led to delays in implementing the approved CAH processes. In many states, different state nodal officers manage community action portfolio (VHSNCs, RKSs, MASs, and JASs). This has led to a lack of synergies and a cohesive approach towards community action. The role of the state nodal officer is pivotal in the success or failure of CAH. Some states did not implement the CAH process as per PIP approval. Likewise, although progress was observed in decentralising planning and increasing transparency, achieving a true power shift and greater community engagement remains a complex issue (Kakoti, Srivastava *et al.* 2022). Although efforts were made to evaluate the outcomes of CAH, more rigorous external evaluations are needed to understand better the enabling factors, challenges, and adaptations required. Large-scale government-led initiatives largely overlook this component. Evaluations can bring new

perspectives to programme design, implementation, and adaptation, creating space for critical examination. This can improve accountability and responsiveness, contingent upon the state allowing this space and being responsive to citizen engagement.

Despite these challenges and issues, the entire CAH pilot and the scale-up process have provided a coherent body of knowledge and a feasible model for community participation at the national programme level. This has increased evidence, strategies, readily deployable tools, resource materials, and a larger pool of trained staff.

VI. Exploring the Exponential Learning Curve as Recommendations

The implementation learnings built greater trust and mutual support between the government and CSOs through the AGCA secretariat that leveraged a vast network of CSOs across 25 Indian states and capacitated them on different communitisation processes through providing skills, readily available tools, techniques, and platforms. Since the central government, through the AGCA and its secretariat, had its concurrence throughout the process and also brought state governments under its purview, this led to making the health system responsive to the health needs and demands of the communities. Investments in financial and human resources were made for health system strengthening and community actions, and they ensured sustainability for CAH processes. Proactive efforts were made to establish grievance mechanism systems through various innovative models described earlier. They were institutionalised and scaled up to make health systems responsive and accountable to community needs. This has enhanced social accountability, leading to better healthcare services, increased demand for health services, and improved health outcomes. Efforts were made to equip and upskill health providers and officials through training, including valuing participation, responding to communities as equal partners, and incorporating and respecting the community's perspectives. These skills were essential to ensure a meaningful community participation free from biases, judgement, coercion, and hostility. The CAH processes upheld the community participation vision as a long-term process that required time to 1) build trust, 2) build ownership, and 3) provide voice, thereby leading to greater social accountability of the health system. In this context, CAH should be viewed as a continuous process requiring sustained budgetary and handholding support, as premature cessation of these may undermine community engagement.

The periodic reviews and external evaluations advocated by the CAH process, largely absent earlier, marked a substantial change in government programme design and implementation later. The long-term commitment reflected in political will and sustained funding was evident in the CAH

process over the last 18 years, resulting in positive outcomes and impact. Aligning with context specificity and constant evolution, the CAH processes used wisdom gained from pilot implementation for scale-up, and community-specific context and needs were incorporated into different models, as discussed earlier. The CAH processes specifically negated the ‘one-size-fits-all’ approach and adapted flexibility accordingly to the local context in a given state or district. As stated earlier, political will and buy-in are crucial for community participation models to succeed, and CAH processes ensure this sustainably. The CAH processes included an approach to capacitate and mentor state-level support structures. Different models that evolved, such as CSOs, SHRCs, and stated SAUs provided national-level support, resources, guidance, and, most importantly, training – a role that the AGCA secretariat provided over the last 18 years. This facilitated a seamless transition and ownership of the processes by the state governments.

The journey of the CAH process reflects the complexity of meaningful community participation, which cannot be achieved in a short span of time. It requires a longer time horizon to mature and develop an unclouded vision and a pathway to sustainable impact. CAH exemplifies a model of good governance, embodying the central government’s mantra of ‘maximum governance, minimum government’, and setting an example to live by.

VII. Conclusion and Future Directions

Globally, CAH under the NHM is the largest community-led action initiative, being implemented with the mandate and financial support of the government in partnership with CSOs at both the national and state levels. The learnings from CAH implementation in India make a case for institutionalising CAH in broader programmatic designs and strategies since the programme’s inception. A strong political commitment and meaningful partnerships with community systems through cost-effective interventions are the key to sustaining community participation in health. Power-sharing with civil society and community institutions stands out as a notable accomplishment. The inclusion of community processes in the state PIPs, supported by the AGCA secretariat, marked a significant change. The evolution and power devolution under the Panchayat Raj system played a crucial role in facilitating community processes. The engagement of PRI members in participatory spaces like VHSNCs and RKSs provides an opportunity to enhance community processes by leveraging funds allocated for local bodies under the 15th Finance Commission. To sustain the communitisation processes, it is essential to balance between the dual forces of social will from below and fluctuating political will from above. An important achievement is seen in the extensive adoption of CAH processes, such as Jan Samwads, where these processes seamlessly transitioned to online platforms – an indication of the

system's preparedness. These efforts foster a culture of participation that enhances accountability within the public health sector and creates avenues for promoting health equity. Additionally, we must recognise that community action programmes are process-intensive and come to realisation only in the long term, as witnessed through the journey of CAH. After a momentous 18-year journey, as of September 2023, the AGCA secretariat has successfully transitioned its technical support role to the NHRSC, where CAH is now housed. The AGCA secretariat has done a detailed briefing and handover with the NHRSC leadership. While the AGCA secretariat is not currently located at the PFI, the foundation continues its engagement and support of the NHRSC and MoHFW in national-level processes through its pivotal role in driving an affirmative change in population and public health discourse. The legacy left behind by the AGCA secretariat, including training modules, communication resource materials, and a flexible architectural framework, will continue to make contributions in the future.

There is evidence that the CAH can bring distinctive value addition to health system strengthening by serving as a voice for citizens and communities, improving communication and transparency with a wider network of stakeholders, offering an independent perspective on progress, all of which improve health outcomes, enhancing accountability and good governance of health services and eventually contributing to saving and improving lives.

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Notes

- 1 Bringing 'public into public health', a term coined by Poonam Muttreja.
- 2 India's AIDS Control Programme is globally acclaimed as a success story. The National AIDS Control Programme (NACP), launched in 1992, is being implemented as a comprehensive programme for the prevention and control of HIV/AIDS in India. Over time, the focus has shifted from raising awareness to behaviour change, from a national response to a more decentralised response and to increasing involvement of NGOs and networks of PLHIV.
- 3 The NRHM launched in 2005 and the subsequent NHM, which encompasses the NRHM and the NUHM, 2013, aims at the 'Attainment of Universal Access to Equitable, Affordable and Quality health care services, accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health'.
- 4 Communitisation has not been defined explicitly in the context of the NRHM; however, the term is understood as the institutionalisation and scale-up of community-led actions for health. Within the NHM, communitisation

encompasses several aspects, including Community Action, VHSNC, ASHA, Village Health Nutrition Day, and *Rogi Kalyan Samities* – Patient Welfare Committee.

- 5 Details of AGCA members – Mr. A.R. Nanda, former secretary, MoHFW; Dr Abhay Shukla, SATHI-CEHAT; Dr Abhijit Das, Centre for Health and Social Justice (CHSJ); Mr. Alok Mukhopadhyay, Voluntary Health Association of India (VHAI); Mr. Gopi Gopalakrishnan, World Health Partners; Dr H. Sudarshan, Karuna Trust; Ms. Indu Capoor, Chetna; Ms. Mirai Chatterjee, Self Employed Women's Association (SEWA); Dr Narendra Gupta, Prayas; Dr M. Prakasamma, Answers; Ms. Poonam Muttreja, PFI; Dr Sharad Iyengar, Action Research and Training for Health (ARTH); Dr Thelma Narayan, Schar; and Dr Vijay Aruldas, Christian Medical College (CMC), Vellore.
- 6 The pilot CAH implementation was conducted in nine states, namely, Assam, Jharkhand, Odisha, Chhattisgarh, Madhya Pradesh, Rajasthan, Maharashtra, Tamil Nadu, and Karnataka.
- 7 The states included Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Odisha, Puducherry, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, and Uttarakhand.
- 8 States/UTs where the AGCA secretariat worked closely with state NHM teams to co-facilitate the development of PIPs for community action processes include Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Arunachal Pradesh, Bihar, Kerala, Meghalaya, Sikkim, Uttarakhand, Assam, Uttar Pradesh, Delhi, Himachal Pradesh, Karnataka, Mizoram, Nagaland, Rajasthan, Punjab, Goa, Tripura, Manipur, Tamil Nadu, Chandigarh, Jammu & Kashmir, Puducherry, Telangana, Daman & Diu, and West Bengal.
- 9 States where NHM staff and trainers were capacitated – Andhra Pradesh, Assam, Bihar, Delhi, Goa, Gujarat, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Ladakh, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Puducherry, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, and Uttarakhand.
- 10 PFI partnered with Onion Dev (earlier known as Gram Vaani) to initiate community monitoring through a mobile-based IVRS, '*m-Shakti*' in Bihar in 2016. The IVRS provided an interface to the community to 1) *know about key health entitlements* and service, especially family planning, reproductive, and maternal and child health and nutrition services provided at the Village Health Sanitation and Nutrition Days (VHSNDs), functioning and user experiences at SHCs, HWCs, PHCs, and CHCs; 2) *rate health services*; and 3) *share specific qualitative feedback* on services.

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MAKING GOVERNMENT-FUNDED HEALTH INSURANCE AN EFFECTIVE STRATEGY FOR UNIVERSAL HEALTH COVERAGE

Sanjay Kaul and Nikita Pandey

I. The Context and Overview

The chapter addresses several emerging policy issues in Pradhan Mantri Jan Arogya Yojana (PMJAY) implementation. PMJAY, which operates with the state government-funded health insurance schemes (GFHISs) it has subsumed, has emerged as a major health sector programme in the country's quest towards universal health coverage (UHC). Launched in 2018, PMJAY aims at providing health cover up to INR 5 lakhs per family per year for secondary and tertiary care hospitalisation to 120 million poor and vulnerable families (approximately 550 million beneficiaries) that form the bottom 40% of the country's population. The aim is to provide cashless access to healthcare services at the point of service, i.e., the hospital, with the participation of both private and public facilities (NHA 2019). The scheme provides an incentive to public hospitals to improve their access and upgrade service quality by reimbursing them for healthcare services (NHA 2019).

The programme review that covers the coverage of PMJAY along with the state GFHISs addresses key questions in vital areas: 1) beneficiaries' access, coverage, and participation, and coverage in poorly served areas; 2) participation of good-quality private hospitals and their regulation, and efficacy in reducing the out-of-pocket expenditure on health; 3) role of public hospitals, and lessons learnt from Karnataka and Maharashtra; 4) the potential of GFHISs to divert resources away from other priority health-care areas; 5) the advantages and disadvantages of the insurance versus the trust (assurance) models; and 6) the implications on centre and state health budgets. Based on the discussion on these issues, we identify the

key findings and follow them with a set of policy reforms required to make PMJAY and the state GFHISs effective and sustainable programmes in the country's goal of UHC.

The chapter analyses the above issues in the backdrop of the very high burden of communicable and non-communicable diseases, and a fragile and underfunded public health system (Ila Patnaik 2018). India has one of the lowest spending on healthcare, with a mere 3.4% of total GDP expenditure. Out-of-pocket health expenditure (OOPHE) is the primary source of health financing, with an estimate suggesting it constitutes 62% of the total health expenditure. Such massive shares from households' pockets push less well-off households into a financial catastrophe and impoverishment (Pandey *et al.* 2018). An estimate suggests that high OOPHE pushes 8% (Kumar *et al.* 2015) of the population into poverty. Apart from the high OOPHE, the added rationale for health insurance is the negative correlation (Xu *et al.* 2007) between the financial catastrophe people undergo and the extent of financial protection provided. Poor households face a double-edged sword – catering to healthcare needs pushes them towards poverty, while foregoing them leads to consequences on health and earnings (Pandey *et al.* 2018).

The last several decades have seen rapid market-driven growth of the private healthcare industry due to the poor quality of public health services, resulting from inadequate health budgets and the commercial pull of an aggressive private sector (Kaul 2023). According to the WHO Collaborating Centre for Microbial Infections (CDDEP) Report of 2020 (Kapoor *et al.* 2020), of 69,265 hospitals in India, as many as 43,487 hospitals are private hospitals against 25,778 public hospitals. This rapid growth of private hospitals and private health providers also accounts for an increase in OOPHE (Patnaik 2018). The National Health Policy of 2017 has further contributed to this shift, as the policy recommends 'strategic purchasing' from the private sector (National Health Policy 2017).

The launch of PM-JAY needs to be seen in the light of the reality of high OOPHE, the emerging dominance of private hospitals, and the direction spelled out in the National Health Policy 2017. PMJAY is the culmination of several experiences with GFHISs. By the late 1990s, state governments recognised the failure of the three-tiered curative service systems, but rather than strengthening public health services, they began funding private players through health insurance schemes (Ila Patnaik 2018). Soon the country witnessed the mushrooming of GFHISs. In the past three decades, as many as 48 state schemes were introduced. In 2008, the central government launched the Rashtriya Swasthya Bima Yojana (RSBY) with an estimated projection to cover 60 million families (Nagpal 2012).

II. Research and Chapter Design

The chapter begins with a review of the secondary literature and data from various government sources, including drawing upon the data from the PMJAY dashboard. The chapter builds upon the secondary literature available and analyses data from various government sources (National Health Mission (NHM), National Health Profile, and Central Bureau of Health Intelligence) and the recently published CAG report.

The chapter identifies key findings from the above review and triangulates these with the findings and impressions gathered from Karnataka and Maharashtra. These states have been selected for comparative analysis as both have a sizeable presence of the private sector and, relative to many states, a well-developed public hospital infrastructure. To understand the workings of the programme in Karnataka, the authors gathered considerable information on the working of PMJAY in the state. The authors also held discussions with the principal secretary, Health & Family Welfare; director of the Suvarana Arogya Suraksha Trust (SAST), and the state mission director of the NHM. To assess the programme's effectiveness in Maharashtra, the authors took an in-depth look at the data in the public domain and drew impressions based on field visits and key informant discussions/interviews with stakeholders. Based on these findings and information gathered from other states, the chapter provides a road map of the policy changes required to make PMJAY an effective and sustainable programme. The analysis has been difficult as updated literature on the programme and data access from the National Health Authority (NHA), the PMJAY dashboard, and the State Health Authorities remain restricted.

III. Access, Coverage, and Beneficiary Participation

Since the launch of PMJAY, there has been a rapid expansion in the access and coverage of beneficiaries under the scheme. The coverage of empanelled hospitals in the public and private sectors has also witnessed a sharp and impressive rise. The treatment and surgical procedures covered are comprehensive. A study to analyse the 'unspecified package' or procedures not included showed that they constituted less than 1% of the total claims (Sethi *et al.* 2021).

As of 1 April 2024, 30,007 hospitals have been empanelled under PMJAY, comprising 17,242 public hospitals and 12,765 private hospitals (NHA 2024b). The scheme initially set a coverage target of about 107.4 million beneficiary households based on the deprivation and occupational criteria of the Socio-Economic Caste Census (SECC) 2011 and the families already covered under the erstwhile (RSBY). Subsequently, in January 2022, considering the decadal growth of the population, the coverage target stands expanded to cover 120 million families.

As per NHA records, 78.7 million beneficiary households have already been registered, constituting 73% of the initial coverage target, and 340 million Ayushman Bharat cards created (NHA 2024b). As the beneficiary set relies upon the SECC, the database was over 7 years old when the scheme was launched. Since then, many households may have moved out of poverty and become ineligible for inclusion, while others may have become eligible. In its 2023 audit report, the CAG also reported that several ineligible beneficiaries have been registered (CAG 2023). In a policy brief covering Haryana and Uttarakhand, WHO found that almost four to five out of ten eligible households were enrolled in PMJAY; however, because of systemic biases, the affluent got registered too. Although the beneficiaries had heard of the scheme in both states, they were unsure about their eligibility criteria (WHO 2022c).

In Karnataka, all 31 districts and 75% of the population are covered. This includes 119 lakh below poverty line (BPL) and 19 lakh above poverty line (APL) families. Of this, only 62 lakh families were enumerated under the SECC. The beneficiary is not required to have an Ayushman Bharat card; however, 1.69 crore beneficiaries have already been issued cards (Karnataka 2024). APL families in the state are entitled to only 30% of the treatment cost, and their cap is limited to INR 1.5 lakhs.

As in the case of Karnataka, Maharashtra is a ‘brownfield’ state that had the pre-existing state-sponsored Rajiv Gandhi Jeevandayee Yojana (later renamed Mahatma Jyotirao Phule Jan Aarogya Yojana (MJPJAY)). The beneficiaries of the erstwhile scheme stand included, and in 2020, Ayushman Bharat subsumed the scheme, which currently functions as an integrated scheme as MJPJAY–AB–PMJAY. Maharashtra has 2.69 crore families enrolled under PMJAY.

Although the central government has limited the coverage to 40% of households, the actual coverage is much in excess in most states. We have already noted the expanded coverage in Karnataka and Maharashtra, which have included the beneficiaries covered in their earlier schemes. In Kerala, PMJAY covers 22 lakh families, and the state budget fully covers an additional 20 lakh families. In Chhattisgarh, of the 63 lakh families covered, only 37.5 lakh families are covered under PMJAY. In addition, the state covers 9 lakh APL families, with a limited coverage of INR 50,000 per family. Similarly, in Tamil Nadu, in addition to the SECC census families, the scheme covers all families with an annual income of less than INR 1.2 lakhs. The overall coverage is 54%, with a target to cover 60% of the population (Sundaraman 2024).

In Maharashtra, beneficiaries under MJPJAY and AB-PMJAY differ in their eligibility and identification criteria, but both ensure flexibility and inclusivity. While MJPJAY primarily relies on ration cards and identity documents, AB-PMJAY utilises the SECC registration. The coverage limit for MJPJAY is

INR 1.5 lakhs or INR 2.5 lakhs for renal transplants per family per policy year. PMJAY provides the standard health cover of INR 5 lakhs per family per policy year. The analysis of the data obtained from the PMJAY website on district-wise coverage and utilisation shows wide divergence across districts. The highest number of Ayushman cards created were in Nashik district, with 16.42 lakh beneficiaries against the population of 61 lakhs, as per the 2011 census. On the other hand, the districts of Mumbai and suburban Mumbai have collectively created only 9.77 lakh Ayushman cards for a district population of 200 lakhs. Despite the highest number of cards issued in the district of Nashik, the highest number of authorised hospital admissions was sanctioned for the Mumbai suburban district, thereby showing that the mere issue of cards and the number of empanelled hospitals do not reflect the utilisation of the services. Furthermore, the gender distribution of the cards issued and the utilisation are also higher in men, with almost 4.9 lakh hospital admissions for men as opposed to 3.6 lakh for women.

Although in all states, many Ayushman cards have been created, the awareness of the benefits of PMJAY and the state GFHISs has not percolated. The beneficiaries' major source of awareness is limited to the PMJAY letter received through mail/Accredited Social Health Activist (ASHA) workers. For example, only 9.84% of the beneficiaries in Bihar and 12.41% of the beneficiaries in Haryana were aware of PMJAY. Furthermore, IEC activities to increase awareness and knowledge of PMJAY have not reached beneficiaries (Dash *et al.* 2022). CAG audit noted that IEC activities were poorly implemented. It observed that IEC cells had been formed only in 11 of the 23 states studied. Only a few states had prepared IEC plans, which were not implemented. In most states, expenditure on IEC activities ranged from 0 to 20% of the allotted budget (CAG 2023).

A significant concern is that in the first and second economic quintiles, awareness and enrolment levels may be the lowest among households that are the most deserving. Equally worrisome is that SC/ST households, with a combined 28% share of the population, have contributed to only 2% to 5% of private hospital admissions (Dubey *et al.* 2023).

IV. Hospital Accreditation and Participation

The rationale for onboarding private hospitals is that public hospitals are of poor quality. While the coverage of private hospitals has been impressive, less than 40% of hospitals with the National Accreditation Board for Hospitals and Healthcare Providers (NABH) accreditation have been empanelled with PMJAY (WHO 2022c). Our discussions with the state health authority in Karnataka and observations from Maharashtra also confirm that few NABH hospitals have been accredited. In Maharashtra, the trends in the overall distribution of the cards and in hospital empanelment corroborate the

findings from the field that private hospitals show resistance to the scheme after the initial empanelment because of obsolete package rates. Of the 1,000 hospitals empanelled in the state, 10% have remained inactive in the past 6 months. This suggests that the better-quality NABH-accredited hospitals are less interested in catering to PMJAY patients. A key reason for this is the difference in perception of price adequacy by NABH-accredited hospitals, and incentives for encouraging participation by such hospitals are inadequate (WHO 2022c).

Apart from the non-participation of NABH-accredited hospitals under PMJAY, the geographical location of the hospitals is vital. In an ideal setting, states with higher poverty headcounts and disease burdens should be accorded priority. However, a study notes that claim volume and value utilisation are significantly higher in states with lesser needs, such as Kerala and Himachal Pradesh (HP), and lesser in states with higher needs (Bihar, Uttar Pradesh (UP), Madhya Pradesh (MP), and Assam). This discrepancy in need versus utilisation is attributable to supply-side factors, including a low number of empanelled hospitals, an inefficient beneficiary identification system, and weak health governance in such states. A similar pattern showed at the district level, where socio-economically backward districts have lower beneficiary identification rates, and a low number of claims and claim amounts, than other districts (Smith *et al.* 2019b). The CAG also makes a similar finding of lower claims from states that need the most (CAG 2023). In Karnataka, there were relatively few private hospitals in the backward districts of Northern Karnataka getting accredited and actively participating under PMJAY. Furthermore, as in several states, the geographical location of empanelled private hospitals is skewed in favour of locations already better served by public hospitals and with better health indicators (Karnataka 2024).

The criteria for accrediting public hospitals under PMJAY have been liberal and automatic in most states. However, Maharashtra has placed a cap of 1,000 hospitals to be covered under the scheme. Although empanelled, public hospitals have been unable to derive much benefit under PMJAY and the GFHISs to strengthen their hospital infrastructure, as many of them do not have the specialists in place and/or possess the equipment required to carry out the required treatments. As a result, specialised procedures are mostly being undertaken in private hospitals. A study from Chhattisgarh indicated that most of the private claims were related to dental–eye low-barrier, high-profit specialties (Smith *et al.* 2019b). At the same time, a study has observed that the NABH accreditation system effectively identifies hospitals in their capacity to provide quality care.

Given this and the small percentage of NABH-accredited hospitals, there is a need to take more comprehensive policy measures to maintain quality in all empanelled hospitals (WHO 2022c). An early study undertaken in Karnataka had shown no change in the quality of service provision that was attributable

to PMJAY, although a few providers stated that they were able to provide better services under PMJAY versus the earlier state scheme as the coverage amount had increased. Most hospitals did not have accreditation or quality assurance certificates (Smith *et al.* 2019b).

V. Role of Public Hospitals under PMJAY

PMJAY requires a minimum of ten beds for empanelment under PMJAY. Despite empanelment of several Primary Health Centres (PHCs), they are ill-equipped to deal with serious treatments or surgeries. Only at the level of Community Health Centres (CHCs) and above it is realistic to expect curative services to derive benefits under PMJAY. While the country has as many as 5,700 CHCs, only 20% of the CHCs function as per the government's minimum public health standards. Most have massive shortages of specialists, staff, equipment, and infrastructure. Only 7% have all four specialists required at each centre (Gupta 2020). Public hospital infrastructure inadequacy goes beyond CHCs. India ranks among the lowest in the world in hospital beds, with 0.7 beds per 1,000 population, far below the global average of 3.4. The problem is more acute in some states, such as Bihar, which has only 0.11 beds per 1,000 population (Ministry of Finance 2020). Many of these hospitals are overcrowded, understaffed, and dangerously lacking in hygiene.

Given this situation, while policymakers had little option to include private hospitals in the design of PMJAY, there should have been a greater focus on government hospitals, as PMJAY and the GFHISs represent an extraordinary opportunity to strengthen their performance. Insurance reimbursement implies a new provider payment model for government hospitals and a shift towards greater autonomy in hospital management. A study found that district hospitals accounted for 40% of the total claims in the public sector but also found vast potential for this to go up with increased utilisation. Priority to public hospitals would bring India's hospitals closer in line with the norm in advanced health systems. No advanced health system relies on for-profit private hospitals. Rather, publicly owned or (in a few countries) non-profit hospitals predominate. Far more than just a cost recovery mechanism, insurance schemes can become a key building block for strengthening hospitals and management reform across the public health system.

In Karnataka, access to a private hospital under the scheme is only through a referral by a public hospital, except in emergencies. In addition, some treatments are reserved for public hospitals. Such measures, through what can be termed 'gatekeeping' and 'ringfencing', provide a way of promoting the participation of public hospitals (Karnataka 2024). In contrast, while Maharashtra has seen 6.5 crore authorised hospital admissions with expenditure at INR 81,979 crore as of 17 April 2024, the number of hospitals empanelled is heavily skewed towards private hospitals with 798 private hospitals

empanelled as opposed to 207 public hospitals. This shows that, unlike Karnataka, the state has not exploited the potential of the financial benefits to strengthen its public hospital system.

A study found that the public sector accounts for only 11% of the total number of claims and 35% of the total volume of claim payments under PMJAY. Special priority needs to be accorded to the lower levels of care; most claims have been from the higher-level hospitals; at the PHC and CHC levels, the claims were negligible (0.005%) (Prinja *et al.* 2023). Furthermore, the participation of public hospitals, especially in specialised treatments, has been low, and even when they render services covered under PMJAY, they have been unable to use the claim amounts to strengthen their infrastructure.

The CAG audit has noted that no clear infrastructure development guidelines have been framed for utilisation by public hospitals (CAG 2023). The interstate and inter-specialty variation in the number and value of claims is also high, which highlights the scope for the scale-up of the PMJAY scheme among the states and specialties that currently have low utilisation. An early study also suggests that private hospitals were more in numbers and active compared to public hospitals, although they were not contributing to geographical coverage (Dong *et al.* 2020).

Another study noted that the high-value claims were concentrated for tertiary care surgical services, predominantly for males from ‘brownfield states’ (Smith *et al.* 2019b). The study found that the states that needed a scheme like PMJAY for financial protection the most were utilising it the least (Smith *et al.* 2019b). The reasons for the same ranged from the exclusion of needy households through design-related errors to lesser awareness of the scheme to absent infrastructure. Another study also suggested that the lowest socioeconomic quintile, which is primarily the target of schemes like PMJAY, was least aware and enrolled, whereas the middle quintile households had the highest enrolment (Bhatnagar *et al.* 2022).

Karnataka appears to be an outlier in this regard, and as we will note in the succeeding paragraphs, public hospitals have actively participated under PMJAY. However, there has been little evidence of improvement in the public health infrastructure in the state or noteworthy improvement in the quality of services. Neither the state health departments nor the state health authority has been able to leverage the financing opportunities to strengthen the public hospitals under PMJAY. Although reimbursements have been received from the NHA to public hospitals, the expenditure has been mainly incurred on staff incentives and the purchase of medicines (Karnataka 2024).

VI. Out-of-Pocket Health Expenditure

A key question is whether GFHISs can substantially reduce OOPHE. Studies suggest that GFHISs only cover hospitalisation costs and only marginally

protect the poor as the largest expenditure in OOPHE is on medicines (Rao 2012). Notwithstanding this, there is evidence to suggest that continued uptake of PMJAY holds the potential to significantly decrease the household's expenses (Gruber *et al.* 2022; Parmar *et al.* 2023).

Regarding private hospitals, despite the PMJAY provision for cashless treatment, in most states 20–30% of the treatment costs are being borne by beneficiaries. In Karnataka, rate revision hasn't happened since 2018, and discussions showed that the rates are much lower than those ordinarily charged by private hospitals. Thus, beneficiaries have to bear close to 30% or more of the treatment costs. In Maharashtra too, the rate revision hasn't happened since 2012. Furthermore, issues including misrepresentation of free healthcare and mismatched patient expectations have led to considerable OOPHE.

In Tamil Nadu as well, there is evidence of denial of cashless treatment by private hospitals (Sundaraman 2024). Similarly, a recent study by the State Health Centre in Chhattisgarh shows that there was no significant difference in the OOPHE among those enrolled in PMJAY and those not enrolled. Both sets of patients spent around INR 20,000 per hospitalisation episode in private hospitals. The OOPHE incurred was about 25% of the patients' annual expenditure (Hindu 2024). In Tamil Nadu, in 63% treatments, the OOPHE was over INR 1,000 and, on average, 12 times more than that in private hospitals. In such cases, there are few complaints officially received, as patients believe that there is little likelihood of the complaint resulting in any refund and could also lead to difficulty in receiving future treatment (Sundaraman 2024).

VII. Trust versus Insurance Models

In the initial period, out of 36 states/UTs, 32 states/UTs had adopted PMJAY. Of these, 21 states/UTs adopted the trust model, seven states/UTs adopted the insurance model, and four states adopted the mixed model. Beneficiaries under the trust model constituted 62.11% of the total beneficiaries, while the mixed model and insurance model covered 27.66 and 10.23%, respectively, of total beneficiaries. In recent years, most states appear to be opting out of the insurance model.

One study assessed purchasing performance during the first seven months of scheme implementation in two states – UP, where the trust model was in vogue, and Jharkhand, which had adopted the insurance model (Furtado *et al.* 2022). Contrary to expectations, the trust model in UP was found to be more vigilant and stringent in hospital empanelment and claim approval than the insurance company in Jharkhand. However, Jharkhand generated a higher number of pre-authorisations and claims as a proportion of the expected utilisation, and more work was being done with fewer persons

working under the scheme. Given the contract terms, it may be inferred that the insurance model is not likely to curb the number of claims processed until a higher claim ratio is achieved in the state. However, to ensure that this does not result in wrongful approval of claims, a higher level of oversight may be required. The efficiency of pre-authorisation and claim processing was largely similar, with both states showing a certain proportion of delays and requiring improvements. UP had adopted a 100% claim audit policy during the study period that strengthened the robustness of the audits and enabled better monitoring of the insurance company's performance. This, however, resulted in delayed claim payments and higher numbers of queries.

The capacities built in the trust model must be retained and improved, while key performance indicators of an insurance company are monitored in a more regular, structured manner. The audit process remains cumbersome for the insurance company, as they are based on clinical opinion, rather than on standard treatment guidelines. In theory, the cost to the state per claim should decrease significantly in the insurance model because of the risk-sharing function of the insurance company. However, the insurance company may influence claim pay-outs, and for a change in premium rates and contract terms. Another evaluation of the scheme suggests that government insurers themselves suffer from financial fragility as insurance agencies pay more money as reimbursements than premiums collected (Shefali Malhotra 2018). In sum, at present, both the models appear to be cost-plus, with no risk-taking by the insurance company.

Provider payment systems have seen many improvements and professionalisation in both models. The NHA has institutionalised a standard methodology for provider payments under PMJAY, which is employed irrespective of the models in place. PMJAY is implemented in Karnataka by SAST, established under the aegis of the state Health and Family Welfare Department. In Karnataka, PMJAY functions under the trust model without the involvement of an insurance company. In Maharashtra, it is implemented in mixed insurance and trust models. United India Insurance Company Limited manages health insurance coverage, while the State Health Assurance Society handles coverage under the trust model. The government of Maharashtra fully funds MJPJAY, while the government of India and the government of Maharashtra jointly fund PMJAY in a 60:40 ratio. In both states, irrespective of the models in place, the dearth of good-quality data and non-revision of rates have remained significant challenges. Our interactions in Maharashtra with stakeholders, including health professionals, revealed that the scheme implementation is fraught with administrative challenges, ranging from difficulties in navigating scheme guidelines and the discord between scheme mandates for treating doctors to the stringent documentation requirements, particularly for end-of-life care. Other external challenges include the non-availability of necessary surgical implants and medicines.

There is a need for the NHA to continuously monitor and review the rates, including consideration of the empirical evidence on costs, to align prices with the cost of provision. The rates should be designed to incentivise the empanelment of providers where needed, facilitate cost control and enhance efficiency, encourage utilisation of priority services, and improve quality. Furthermore, there is a need to develop a system of price weights that help the health system achieve its strategic social policy goals, e.g., reaching remote/rural areas, improving efficiency, and improving equity in utilisation (NHA 2022).

We have noted that the development and implementation of a transparent and fair system of provider payments is challenging. The key policy question that arises is whether a government agency such as the NHA can in the long run remain a micro-manager for settling claims or determining the cost of each treatment. Insurance design is a very specialised, complex job requiring extensive studies and actuaries on an ongoing basis to assess health risks and determine the amounts to be reimbursed (Kaul 2023).

VIII. Health Budgets and Distortions

There is a need to understand the implications on the health budget because of the implementation of PMJAY, along with the simultaneous operation of state GFHISs. Health professionals have been concerned that a full-blown GFHIS would divert limited funds from other healthcare priority areas such as disease prevention and treatment, primary healthcare, and maternal and child health. For example, it was noted that health expenditure has not been expanding parallel to the funds allotted to PMJAY, and, as a result, PMJAY may negatively impact the ongoing process of strengthening and development of the public healthcare system at all levels – primary, secondary, and tertiary.

The centre's spending on health as a percentage of GDP, which increased moderately during the COVID-19 pandemic, has since decreased. States have done most of the recent increase in public spending on health and not the centre. As evidenced, the centre has cut the budget for the NHM while disproportionately increased PMJAY spending between FY 2015 and FY 2020, whose expenditure grew in real terms by 18% annually. The 2023–2024 central budget has earmarked INR 7,200 crore under PMJAY. In contrast, between FY 2014 and FY 2019, the expenditure on the NHM grew modestly at 7.4% on average, and in the post-2019 period, the expenditure declined in real terms at 5.5% on average (Indranil 2024).

States fund a significant proportion of the beneficiary coverage, so the distortions in health priorities are even more evident in the state health budgets. PMJAY only bears 60% of the expenditure for families enumerated under the SECC (except the Northeast and the three Himalayan states/UT, where

the ratio is 90:10). The states have to finance the expenditure on the sections not covered under the SECC. With the creation of the targeted Ayushman Bharat cards and greater awareness of the scheme's benefits, apprehension is that PMJAY, and more so state GFHIS budgets, will see an even sharper increase.

In the above context, the budget data from Karnataka shows that against the INR 8,043 crore pre-authorisation cost, INR 6,727 crores has been spent under PM-JAY since 2018, of which the state government has spent INR 4,798 crores, and the NHA reimbursement has been limited to INR 1,930 crores or less than 30%, against the PMJAY stated central contribution of 60%. The annual expenditure has increased at a fast pace from INR 474 crores in the first year (2018–2019) to INR 1,746 crores in the year 2023–2024. The NHA reimburses claims of only 69 lakh families that were covered under the SECC, requiring the state to finance the balance. As many as 3,515 hospitals (including PHCs) have been empanelled, comprising 2,959 public and 556 private health facilities. Since 2018, 82.5 lakh beneficiaries have been treated at a pre-authorisation cost of INR 8,043 crores. In 2023–2024, 90% of treated cases were in public hospitals. Although public hospitals under the programme are much higher in number, the total pre-authorisation cost was roughly equal in public and private hospitals (INR 3,982 versus INR 4,061 crores). This suggests public hospitals are mainly undertaking simple and low-cost treatments while sizeable budgets are being cornered by private hospitals. At the same time, the 'ringfence' approach has ensured that around 50% of the claim amount is being received by public hospitals.

A major concern in Karnataka has been that NHM budgets are not increasing. Discussions with the state mission director of the NHM showed that budgets under the NHM have seen little growth in the last 3–4 years. This appears to be the pattern in other states too.

Another budgetary dimension is to analyse on whom budgets are being spent. In Karnataka, of the total beneficiaries, 46.1 lakhs were female and 36.4 lakhs were male. However, the pre-authorisation treatment cost was more for males – INR 4,499 crores against INR 3,545 crores for females. The neediest 12.65 lakh SC/ST beneficiaries have been treated for a pre-authorisation cost of INR 871 crores, accounting for only 11% of the total.

Karnataka will face even greater fiscal pressure in the coming years because of the government's commitments to the five election 'guarantees'. In Maharashtra, unlike in Karnataka, although the beneficiary coverage is high, the budget has not risen sharply as there is at present a cap of 1,000 hospitals to be covered under the programme.

In the above context, a key and contentious policy question is whether covering all beneficiary households with cashless treatment in private hospitals is sustainable and necessary in the absence of a big hike in the health budget. As noted, studies have indicated that payment provisions are unattractive to

many NABH-accredited private hospitals. Raising the claim amounts would only serve to increase the PMJAY budget commitments further and may do so at the expense of other priority health needs. We have already noted a pressing need to strengthen the public hospital infrastructure, and a more sustainable model must progressively move towards providing more space for public hospitals under PMJAY. The overall national objective should be to reduce OOPHE, a large proportion of which is on medicines and drugs, which underlines the need to augment the supply of generic medicines and drugs at PHCs and government hospitals.

IX. Key Findings

To summarise, the key findings from the review of available literature and the information gathered from Karnataka, Maharashtra, and other states are as follows:

- 1) Despite high coverage, beneficiary awareness levels and their participation appear very low, caused by the absence of an effective communication strategy. PMJAY and state GFHISs must become more proactive in targeting the most vulnerable population. Mistargeting can risk inequitable demand and misutilisation, especially because the beneficiary set includes a significant percentage of non-poor households.
- 2) Although both Karnataka and Maharashtra have similar levels of public and private hospital infrastructure, major differences prevail in their implementation structures. Both states have implementation challenges, and there are wide disparities between the scheme's overarching goals and the ground-level reality. Other states also have several implementation challenges.
- 3) Although a large number of private hospitals have been empanelled, good-quality NABH hospitals largely remain out of the PMJAY fold. Furthermore, private hospitals prefer commercially profitable treatments such as dental and eye operations.
- 4) There is little oversight on the quality of care by empanelled private hospitals under the scheme and in the absence of a regulatory structure. Also, there's little evidence of improvement in service quality.
- 5) The participation of public hospitals is limited to simple treatments and surgeries. Measures such as 'gatekeeping' and 'ringfencing' can, however, increase the participation of public hospitals.
- 6) Reduction in OOPHE by households has been minimal as 1) most OOPHE expenditure is on drugs and medicines and 2) reimbursement rates to private hospitals are less, requiring beneficiaries to bear 20–40% of the hospital expenditure.
- 7) There is clear evidence of strains on state health budgets due to the PMJAY and GFHIS implementation. While the PMJAY budget has seen sharp

increases, an increase in the overall health budget of the centre has been miniscule. A similar situation exists at the state level. This supports the view that important health priorities, such as primary healthcare, may progressively and proportionately get neglected.

- 8) Both the insurance and trust models are in effect a 'cost-plus' model with no benchmarks for optimising expenditure.

X. The Way Forward and Direction for Reforms

Enhancing health budgets: PMJAY, along with other state GFHISs, must be viewed as an important component of the country's quest towards UHC. However, health budgets at both the centre and the states have not risen in line with the requirement, although the 15th Finance Commission announced as far back as in June 2020 that it was taking steps to raise central public health funding to over 2% of GDP (Haq 2020). With the setting up of the 16th Finance Commission, there is a need for health-policy advocates to impress upon the new body and the NITI Aayog to provide the needed thrust to health spending. The centre's share in the GFHISs has progressively declined since the PMJAY launch in 2018, straining the state health budgets, which must be reversed.

There is a need to ensure that the budgets of the NHM towards primary healthcare, including the critical component of reproductive and child health services, continue to be prioritised and progressively receive higher allocations. Similarly, higher budgets are required for dealing with the fast-rising non-communicable diseases. Preventive and promotive health has also remained a neglected area. Priority to improve quality through the implementation of a hospital quality management system with rigidly enforced standard operating protocols is necessary.

Strengthening public hospitals: The main effort of GFHISs should be to use insurance budgets to strengthen public hospitals. This would make the government's health insurance budget manageable. Failure to strengthen public hospitals and simultaneously seek to empanel 'high'-quality corporate hospitals may, over time, lead to healthcare cost increase and the cornering of the healthcare budget by the influential healthcare industry, as has happened in countries such as the US (Kaul 2023). States have not fully used PMJAY to avail the financial benefits to strengthen their public hospitals. We have to be mindful that if not managed well, PMJAY and state GFHISs could lead to a disproportionate share of the funds being cornered by private hospitals. The advantages of the Karnataka protocols that require referrals only from public hospitals, and through 'ringfencing' and acting as 'gatekeepers' protect the interest of public hospitals, are replicable and need consideration by other states. Other state-level initiatives, as in Tamil Nadu, such as reserving simple treatments and procedures for public hospitals and permitting specialists

need to be shared with other states (Sundaraman 2024). In the above context, state health authorities (SHAs) must closely monitor the participation of public hospitals to ensure they are better equipped to provide services and treatments under PMJAY and GFHISs. Equally, SHAs must ensure full utilisation of the claim amount by the public hospitals for their improved overall infrastructure and functioning.

Rationalising beneficiary coverage and reimbursement: Given the nominal increases in the health budgets at the centre and state levels, and the fast-rising coverage of beneficiaries and hospitals each year under state GFHISs, we have already noted that justifiable and understandable apprehension exists for the diversion of the health budget away from other priority health needs. Once all beneficiary households and their members obtain Ayushman cards or other eligibility cards, the budgetary requirement under state GFHISs would soar and cut into other priority healthcare services. Furthermore, treatment costs would have to be revised significantly upwards for the scheme to provide cashless treatment and also attract NABH-accredited private hospitals. Therefore, the present model appears unsustainable. In light of this, policy planners should consider two reforms that could make GFHIS sustainable and improve quality in the long run.

The first is to review the requirement of cashless treatment under PMJAY for NABH private hospitals. We have already noted that in most states, patients have to bear close to 20–30% of the treatment expenses in private hospitals. Secondly, at the present reimbursement rates, good quality NABH hospitals are shying away from the scheme.

The 2023 NITI Aayog has estimated that the population in multidimensional poverty has nearly halved, from 24.85 to 14.96% between 2015–2016 and 2019–2021 (NITI Aayog 2023). Given this, we may assume that a large section of beneficiary households under PMJAY and state GFHISs can bear a portion of the expenditure on treatment in private hospitals. A way to ensure participation of good quality private hospitals without putting an unnecessary strain on the PMJAY budget would be to reimburse, say, 80% of the charges, and let beneficiaries bear the balance. The percentage to be borne by beneficiaries, in respect of NABH and better-rated private hospitals, could be set even higher. In any case, the experience from the states suggests that already a significant portion of the costs is being borne by beneficiaries. It may be noted that the Central Government Health Scheme (CGHS), in vogue for central government employees, does not also in most cases ensure cashless treatment in private hospitals.

There is also merit in a cap on the reimbursement for APL families, to ensure state budgets under PMJAY do not explode. Although Karnataka permits reimbursement of only 30% of the rate for APL households, this has not resulted in considerable savings, as 85% of households have been issued BPL cards. To keep the programme fiscally sustainable and ensure it does

not corner a disproportionate share of the health budget, states may have to ensure that only the bottom, say, 40% of households, as provided under PMJAY (given the reduction in poverty levels), get the full reimbursement, while other households bear a portion of the expenditure.

The overall objective should be to reduce OOPHE. In the present scenario, cashless appears utopian, and insistence on it is only disincentivising NABH-accredited hospitals to become active participants. The NHA could, therefore, determine that in all NABH-accredited hospitals, the beneficiaries bear, say, 30% of the treatment expenses. Notifying it transparently can help beneficiaries make a conscious choice in availing treatment in such facilities, rather than in government hospitals. Over time, only the very poor should have the right to cashless treatment in private hospitals, while other households bear a portion of the expenditure towards their treatment in private hospitals. In public hospitals, however, the aim should be to ensure full cashless treatment.

Priority to vulnerable groups and backward regions: Despite the creation of beneficiary cards and increased awareness of PMJAY, most beneficiary households are unfamiliar with the procedure to avail scheme benefits. IEC plans and activities remain limited and are perceived to be peripheral to the programme. There is, therefore, a need to target vulnerable households that earmark sizeable IEC budgets and prepare and execute comprehensive annual IEC plans. IEC activities must actively engage and involve local communities/youth and PRI institutions to improve awareness and knowledge of the scheme, thereby enabling low-income beneficiary households to effectively utilise services.

In the selection and utilisation of hospitals, PMJAY and state GFHISs must accord priority to hospitals in the backward regions and in areas where hospital infrastructure is poor. Due to severe shortages of specialists, staff, and equipment, many public hospitals remain effectively outside the network. In each of the aspiration districts, all public hospitals, especially CHCs and up to the district level, need close monitoring to ensure their active participation under PMJAY. Much more needs to be done to strengthen the public hospital infrastructure in these areas. NHM budgets for strengthening tier-2 and tier-3 public hospitals, including CHCs, and focusing on improving service quality remain limited. Targeting aspiration districts especially need considerable enhancement.

Understanding ‘Strategic Purchasing’: The meaning of ‘strategic purchasing’ under the National Health Policy (2017) needs proper understanding. Karnataka, in some sense, has been a pioneer in strengthening public hospitals. Reservation of treatments at public hospitals through ‘ringfencing’ and getting public hospitals to act as ‘gatekeeper’ have ensured 50% claims to be from public hospitals. Over time, private hospitals should be reserved only for highly specialised treatments.

In light of the substantial use of private hospitals under PMJAY and state GFHISs, a key question arises – shouldn't the central government establish a well-designed regulatory framework and comprehensive legislation for the industry? Only 11 states have adopted the Clinical Establishments (Registration and Regulation) Act 2010, meant to oversee private hospitals but is mostly on paper. The recent initiative to oversee medical education and practice through setting up of the National Medical Commission Act (2019) has also been criticised as being ineffective. Apart from inadequate regulation of private hospitals, little regulation prevails in practices relating to prescribing medications and investigations. Only 10% of the medicine market is under price control (Bajpai 2015).

The Clinical Establishments Act is an essential regulatory reform and needs adoption and full implementation by all states. Ample evidence of many private hospitals earning exorbitant profits in the absence of such regulation prevails. Private practice regulation is also necessary to arrive at consistent pricing norms for consultations and treatments. Considerable scope exists to standardise pricing protocols across drugs and diagnostic services. If this is done, the task for the PMJAY and GFHIS authorities to determine the reimbursement of claims would automatically become easier (Kaul 2023).

Reforms in the insurance market: There is also a need for a fresh look at insurance and trust models. In the trust or assurance model, the NHA will need to put in place a large body of professionals to study costs and treatments, allow for inflation, deal with new treatments and services, and keep abreast of newer procedures and services. In the insurance model, public-sector insurance companies are seen as reliable. Given the complexity of the task, it would be worthwhile to examine a major policy reform to facilitate and promote a competitive insurance market that allows private insurance companies. In such a model, the risk of claim ratio breach after agreed upon premiums in a particular state would be borne by the insurance provider, and SHAs would have a choice of insurance agencies with the lowest premium offer.

XI. Concluding Remarks

In conclusion, PMJAY and state GFHISs hold promise in our journey towards UHC. However, the operational structures need major changes for an effective and fiscally sustainable scheme. This will require enhanced budgets, campaigns to focus on the vulnerable population through comprehensive IEC activities, allowing beneficiary contribution in respect of private hospitals and APL beneficiaries, 'ringfencing' and 'gatekeeping' to prioritise and protect the interest of public hospitals, priority in favour of aspiration districts, promotion of a competitive health insurance market, and putting in place an effective regulatory framework for private hospitals.

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IMPROVING HEALTH AND WELL-BEING OF MIGRANTS IN INDIA

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I. Internal Migration in India – Context and Scale

Internal labour migration is a complex reality in India. Triggered by degenerating rural livelihoods and climate variability, millions of Indians are choosing to migrate to cities in search of secure employment. The magnitude of this movement has been increasing steadily every decade. Although the census definition of migration captures a broader movement, a disaggregation of the census data shows that in 2011 about 51 million migrants migrated for work (Tumbe 2023).

Over time, this movement has become more long distance with an increase in interstate mobility. States such as Uttar Pradesh (UP), Uttarakhand, Bihar, Rajasthan, Odisha, West Bengal, and Jharkhand with low HDI outcomes and a surplus of labour are its primary suppliers. On the other hand, Maharashtra, Gujarat, Kerala, Haryana, Punjab, and Tamil Nadu, epicentres of economic progress, attract a large number of workers (Srivastava 2011).

Migrant workers, estimated about 350 million, form one of the biggest segments within India's large informal sector workforce. Most such workers migrate seasonally and keep moving between their villages of origin and cities of work, a pattern referred to as seasonal and circular. A disproportionate number of seasonal migrants hail from marginalised communities like SCs, STs, and religious minorities (National Commission for Enterprises in the Unorganised Sector 2007). Increasingly, millions of women are also undertaking migration and engage in severely exploitative work streams.

Many of these labour-migrants operate in the absence of written contracts and are often outside the ambit of social protection schemes. Devoid of critical skills, information, and bargaining power, they get caught in exploitative

labour arrangements that force them to work in low-end, low-value, hazardous work environments. Increasing informality of work, exclusionary urban policies, and weakening processes of social dialogue and collective bargaining have further compromised the conditions of migrant workers in the economy. Several such fragilities were sharply amplified during the COVID-related lockdowns in 2020 when the media was replete with images of lakhs of migrant workers walking back to their villages on foot.

Despite the large numbers that underlie this phenomenon, India's social policies continue to be plagued by a 'sedentary bias'. Because of their constant mobility, both between their villages and the cities, between several different workplaces and across different cities, they lose access to entitlements often tied to a single place of domicile. They struggle to access basic public provisioning such as subsidised food, fuel, health, and education, and even immunisation of children.

Political exclusion of migrants is another significant challenge. Many studies and anecdotal evidence point out that a large number of migrants cannot cast their votes or participate in elections because of mobility. Serious citizenship issues arise as the state machinery does not allow the portability of this basic entitlement (Srivastava 2020). This phenomenon is also inadequately captured by large-scale data collection exercises of the government, such as the census and national sample survey (NSS), which are constrained by methodological and definitional flaws. Cumulatively, these interconnected issues deepen the systemic vulnerability faced by migrant communities, making them more susceptible to health and well-being issues.

II. What Affects the Health and Well-Being of Labour-Migrants and Their Families?

Based on our own experience of working with high migrant communities, we have identified four critical factors that affect the health and well-being of migrants. These are nutrition, occupation, housing, and gender dynamics. In the following sections, we describe each factor in some detail.

Nutrition

While nutrition is vital for maintaining health and well-being, migrants often struggle with nutritional insecurity in both their source and destination regions. At the source, small land sizes, scarcity of water, and absence of alternative livelihoods cause economic distress. The meagre incomes from seasonal and unskilled jobs at the destinations are inadequate to pull these households out of poverty (Sharma *et al.* 2014) and subsequently impact their household food security. A study by Mohan *et al.* (2016) conducted in rural, high migration communities of southern Rajasthan revealed a significant lack

of availability of nutritious food. While most households had some cereals (87%), over half (56%) had no pulses and about a quarter (26%) had no cooking oil at home.

Most mothers reported consuming some form of staple (roti), but their access to essential components of a balanced diet like pulses and vegetables was considerably lower. It was not surprising that over half of the total children studied (695) were stunted and underweight, while about half of their mothers were undernourished.

Among migrants themselves, poor nutritional status has been observed at various instances. Surveys conducted by *Aajeevika* Bureau, a public service organisation that works to protect the rights and well-being of migrant workers, between 2015 and 2018 revealed high levels of malnutrition across various work sites. Among factory workers in Ahmedabad ($n = 407$), 46% were underweight and 13% overweight or obese. Among construction workers in Ahmedabad ($n = 200$), 42% underweight, 6% severely underweight, and 2% severely underweight. In Surat, 17% of power loom workers ($n = 65$) were underweight, while 29% were overweight or obese. Similarly, workers in recycling units in Mumbai ($n = 51$) were 33% underweight and 17% overweight or obese.

The nutritional status of women migrant workers is also precarious. A study by Ravindranath and Iannotti (2019) conducted across five construction sites in Ahmedabad found a significant proportion (47%) of women migrant workers in the sample ($N = 55$) underweight (including four pregnant women) or suffering from low BMI ($M = 18.36$, $SD = 1.7$) (Table 11.1).

Table created by author using data from Ravindranath and Iannotti (2019). ‘Maternal health and access to healthcare among migrant workers engaged in informal construction work, Ahmedabad, India’ (Version 1, Research Square).

Since many migrant workers move with their entire families, the children also experience vulnerability to nutrition insecurity. Findings of a study conducted in Ahmedabad revealed that undernutrition was highly prevalent among the children of migrant construction workers (Ravindranath *et al.* 2019). In a sample of 113

TABLE 11.1 Malnutrition among Women at Construction Sites in Ahmedabad City

<i>Classification</i>	<i>BMI (kg/m²)</i>	<i>Total Sample (N = 55)</i>
Normal range	18.50–24.99	29 (53%)
Underweight (<18.5)		
Mild thinness	17.00–18.49	13 (24%)
Moderate thinness	16.00–16.99	8 (14%)
Severe thinness	<16.00	5 (9%)

Note: BMI categories as per WHO norms.

TABLE 11.2 Malnutrition among Children Under Five in Ahmedabad City

<i>Prevalence of Undernutrition (%)</i>			
<i>Age in Months</i>	<i>Stunting</i>	<i>Underweight</i>	<i>Wasting</i>
0–5 (N = 7)	42.9	42.9	14.3
6–11 (N = 15)	46.7	53.3	33.3
12–23 (N = 30)	46.7	46.7	20.0
24–35 (N = 25)	40.0	52.0	8.0
36–47 (N = 18)	27.8	33.3	5.6
48–60 (N = 36)	38.9	61.1	38.9
All age groups (N = 131)	40.5	50.4	22.1

Note: Table created by author using data from Ravindranath et al. (2019). ‘Nutrition among Children of Migrant Construction Workers in Ahmedabad, India’. *International Journal for Equity in Health*. 18(143).

children, half were underweight, slightly less than half were stunted, and one in five experienced wasting (Table 11.2).

COVID-19 Effect

The COVID pandemic, subsequent lockdown, and halting of employment and incomes affected almost the entire country, with those working in the informal sector affected the most. Lack of food created panic and unrest after lockdown announcement. Fragility of the communities was visible clearly, with numerous families having no food to eat. Grains from the previous harvest were used up, the crop was not ready, food supplies from the public distribution system (PDS) did not reach, and other sources of income were abruptly halted.

Basic Healthcare Services (BHS), a not-for-profit organisation that provides health and nutrition services in rural, high migration communities in south Rajasthan, conducted a survey to ascertain food availability in rural, tribal communities in southern Rajasthan who rely predominantly on outward migration for sustenance. Telephonic interviews of 211 men and women were conducted (Saxena *et al.* 2020).

While cereals such as wheat and maize were available in most households, pulses were available in only 65% of households, with 43% having only one type. Additionally, 78% reported having one or more vegetables, but this dropped to 34% when lower nutritional value vegetables like onions, potatoes, green chilies, and garlic were excluded. Less than half (49%) reported having milk.

Challenges like remote market locations, pandemic restrictions, and supply chain disruptions contributed to price hikes and limited cash flow. This

often forced families to barter their harvest and subsist on a primarily cereal-based diet with minimal variety.

Children too were severely affected as childhood malnutrition levels increased substantially compared to pre-pandemic times. Mothers of children enrolled in the *phulwaris*, day-care centres, run by BHS, as the children became much weaker than before. The mothers had to go for work in the fields and needed a place to keep their children. Similarly, at the *phulwaris* we run at construction sites in Ahmedabad for children from migrant families, we saw the number of children attending the centres almost doubling following the pandemic, with older school-going children also attending the crèches in hope of two meals a day.

In summary, the COVID-19 pandemic worsened the nutrition security among migrant workers and their families, both in their villages where they came from and in the cities where they found work.

III. Work and Health – Occupational Safety and Health of Migrant Workers

Migrant workers are pervasively engaged in hazardous work sectors, largely vacated by local workers. Migrants, often belonging to marginalised social groups bereft of social capital and networks in cities, take up precarious work that subject them to grave risks of injury, accidents, and long-term health disorders.

Workers are subject to several types of occupational safety concerns, depending on the work sectors and contexts. For instance, fire hazards are one of the most fatal accidents with a very high incidence, especially in sectors such as chemicals (Kaushal 2021), recycling, garments, and heavy engineering. In settings such as the power looms, where the machinery is outdated with limited safety features, serious injury and even death by electrocution are common. The automobile sector sees a high incidence of limb loss and amputations on account of power press injuries (Safe in India 2021). Over and above these accidents, exposure to hazardous work conditions also results in deadly diseases, such as silicosis, tuberculosis, and other forms of respiratory illnesses, among workers (Jain & Sahoo 2019).

Despite the alarming regularity with which we hear of such accidents, there is no systematic data capturing the scale at which they happen. For instance, data from the Directorate General Factory Advice Service and Labour Institutes (DG-FASLI) show that 3,331 deaths were recorded between 2018 and 2020 in Indian factories (Paliath 2023). Experience and anecdotal evidence from the ground suggests that these are severe under-estimates, since most of these data are of registered factories that employ a small portion of workforce in India. Such data remain unavailable for the informal sector, which employs a large majority of workers.

Sectors where accidents/injuries have been recorded on the e-log

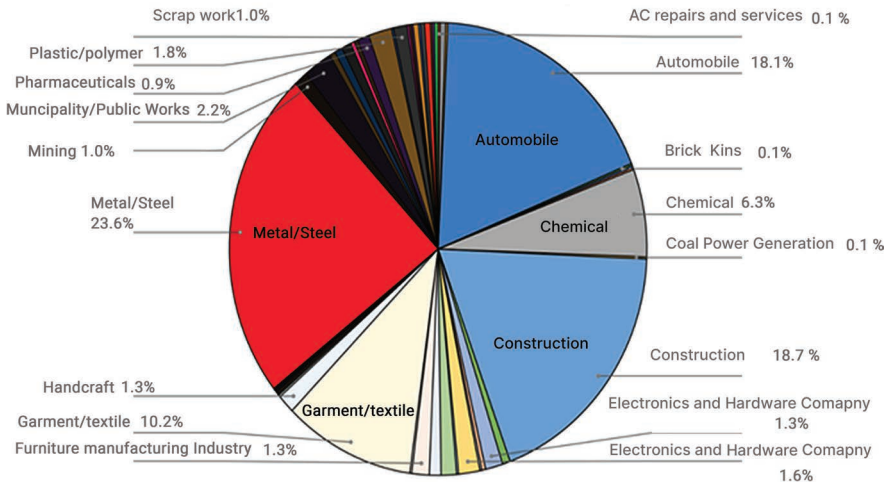


FIGURE 11.1 Sectors where accidents/injuries have been recorded on the e-log.

Note: Figure created by the author from Rajan *et al.* (2020). Precarious employment in power looms. In *Handbook of Internal Migration in India* (1st ed., p. 642). SAGE Publications Pvt Ltd.

An alternative data tool e-log, recently set up by Work Fair and Free Foundation to capture and establish the incidence of occupational accidents and injuries recorded about 670 cases in the industrial hubs of Gujarat (38%), Maharashtra (38%), and Rajasthan (20%), in which 1,273 workers were victims of various injuries and accidents. Most victims were between 20 and 40 years of age, largely migrant workers (Srinivasan & Niveditha 2024). Of the 670 cases recorded across 47 sectors, most were from the automobile, metal/steel, construction, and chemical industries (Figure 11.1).

HIGH INCIDENCE OF SILICOSIS IN THE STONE CARVING SECTOR – EVIDENCE FROM PINDWARA

In several districts of Rajasthan, large numbers of people are engaged in stone-carving as an occupation. For instance, in Pindwara block of Sirohi district, it is estimated that about 8000 people, largely young men, are employed in 248 factories in this occupation. Similar numbers are engaged in stone-carving in several other districts of Rajasthan, such as Dungarpur, Pali, Jodhpur, Karauli, and Bharatpur. According to a study conducted by Aajeevika Bureau and Kotra Adivasi Sansthan in 2017, the prevalence of those exposed was found to

be 9%, while in unexposed workers engaged in other occupations, the prevalence was 0.18%, thus indicating a prevalence 50 times more in stone-carvers than in those in other occupations. An assessment of stone-carving units of Pindwara by the National Pollution Control Board also reported that workers in these units are exposed to high respirable silica and are suffering from silicosis (Akolkar 31 July 2017).

Survey statistics also point to an alarmingly high death toll among stone-carving workers who are victims of silicosis. In just 11 panchayats surveyed, 275 workers have died in the last 3 years, preceding the survey, reporting sustained cough, breathlessness, and other symptoms of advanced silicosis. Crude death rate in Pindwara among working age men was also found to be 4.5 times higher than state average, which indicates high mortality.

An audiometry test done with power loom workers in Surat, mostly migrants from Odisha, revealed 94% of the workers had some form of hearing loss (Varma 2023). Noise-induced hearing loss (NIHL) found in 35% of workers was a direct consequence of their long unprotected exposure to extremely high levels of noise that emanated in the power looms. While normal conversation is at around 35 dB, these power looms generated noise between 110 and 114 dB, where workers work for 12 hours without ear protection.

Several structural drivers contribute to this disproportionate exposure to occupational risks migrant workers endure. Intense fragmentation of work because of high production pressures in global supply chains has resulted in the accelerating incidence of occupational safety and health (OSH) risks and long-term illnesses. Poor work conditions lead to failing health of workers, resulting in a high circulation of casualised workforce. Also, a poor investment in safety training or skilling increases their propensity to accidents.

Smaller units employing migrant workers in large numbers operate at a survivalist level and often lack the experience or the expertise to install adequate safety architecture. After COVID, an increasing casualisation of wage relations has seen workers moving from daily-waged arrangements to piece rates for job works. This has resulted in a scenario of long work hours needed to earn the same amount of wages, thus resulting in exhaustion and further risks. Piece-based wage relations also obliterate the employer–employee relationship, making it difficult for workers to mobilise and demand for safer conditions at work. This is further complicated because of marginalised communities, such as *Dalit* and *Adivasi* workers and women engaged in disproportionately hazardous work, whose ability to demand safety is constrained.

The current legal and policy architecture surrounding labour regulations also lends itself to exclusion. Thresholds for registration under safety

provisions are kept small. Only units employing over 10 workers are required to register themselves under various safety provisions. Several units avoid these obligations by registering themselves under less stringent acts, such as the Shops and Establishments Act, rather than Factories Act, where the safety mandates are much higher.

Housing and Health

In the absence of decent incomes, a vast majority of the informally employed migrant workers take up suboptimal housing arrangements in urban areas. These arrangements are often in temporary shelters, open spaces, work sites, or densely packed rooms/halls in urban slums. With varying degrees of access to safe drinking water and sanitation facilities, migrant workers persist in subhuman living conditions, exposing themselves to different kinds of health risks, especially infectious diseases such as dengue, malaria, diarrhoea, and tuberculosis.

Several studies have pointed out that urban settlements or peripheries with a marked presence of migrant workers are outside the ambit of urban governance policies and city planning processes. A large majority of migrant settlements are unrecognised in city-based enumeration exercises, which deprives them of access to basic public provisioning by a huge margin (Desai 2017). Thus, migrant settlements suffer from a glaring absence of basic infrastructure and urban amenities of water and sewerage lines and regular arrangements for garbage disposal.

Consider the following migrant testimonies from Surat that attest to suboptimal public provisioning in migrant settlements: *We have been living here for the last few years. All these years, we have had issues with the water supply and gutter line. Few days back the water was contaminated. It was water from the gutter. We couldn't even use it in the toilets* (by women migrant workers from Raigad district of Maharashtra engaged in 'dhaga' cutting work in Surat). *The gutter line overflows all the time. The toilet pipelines are leaking and deteriorating. We are forced to do all the maintenance work at our own expense. We complained at the commissioner's office multiple times, but nobody ever responded* (Pappubhai, resident of Kosad Awas in Amroli, Surat). Living in dense numbers in congested mess halls and rented rooms is also a common feature of migrant workers in cities. Crammed, ill-ventilated, dimly lit spaces that also house a small bathing area are usual characteristics of migrant living.

In industrial areas that also double up as worksite housing for migrant workers, garbage collection arrangements are abysmally poor. Such areas fall through the cracks of urban, labour, and industrial governance ecosystems, with migrant communities having to pay the heavy price of ad hoc and poor-quality access to basic amenities, while being at the beck and call of the employer round the clock.

Compounded impact of long working hours, strenuous working conditions, crowded living spaces, and poor nutrition usually leave migrant workers highly vulnerable to diseases such as tuberculosis. Severe lack of hygiene in their living areas also expose them to seasonal, communicable diseases such as dengue, malaria, and cholera. Challenges in navigating complex health systems in urban spaces render them incapable of accessing good quality, reasonably priced healthcare, which adversely affects their return to well-being and good health.

Gender, Work, and Health

Increasing rural distress has triggered migration of women in greater numbers, along with their families, alongside a smaller percentage who migrate on their own. Anecdotal evidence from the ground suggests that the number of women migrating is likely to have increased post-COVID.

Migrant women face numerous gender-based challenges at the destination regions. These challenges include, among others, discrimination in labour markets, vulnerabilities in living spaces, and a lack of access to public spaces (ILO *et al.* 2020). After putting in long work hours at the work sites, where they are not remunerated independently or are severely under-remunerated, they have to come back to their heavily congested living spaces in the evenings and perform functions of social reproduction that involves undertaking several gender-based tasks such as cooking, cleaning, and tending to children. Every time they move in search of work, they are forced to reproduce the household in very frugal conditions. Thus, women migrant workers absorb the compounded effects of a hostile city and poor work conditions with their bodies and minds.

Several migrant women, especially those residing on open settlements and pavements, have highly limited access to basic public services. For instance, studies of migrant women construction workers in Ahmedabad have shown that they must wake up as early as 3:30 in the morning to undertake open defecation before the city wakes up, since they don't have another way of accessing toilets. 'Women on average were walking an additional 3 km, spending one hour daily accessing toilets. They faced the immense stress that they might not be able to find a toilet or may be delayed in returning to their families. An additional very significant source of stress was that the women and girls may not find time and opportunity to access a toilet for the next 12 hours (ibid.)'.

Access to childcare facilities is another aspect where migrant workers receive negligible support from the state or the employers. Women do not have support systems to enable childcare along with their back-breaking work. Women are routinely prevented from taking breaks to breastfeed infants, which also has a severe effect on the early health and nutrition of

their children. Lack of access to healthcare during pregnancy or sickness is a natural course of life for migrant women workers (ibid.) They must resort to private clinics when they are sick since public facilities are very hard to navigate and would require their husbands also to take time off to accompany them to the hospitals. When very sick, they end up returning to their villages to more familiar pastures.

Migrant women also find it challenging to access antenatal healthcare. Accredited social health activists (ASHAs) and *Anganwadi* (childcare centre) workers are not incentivised to bring migrant families, especially those living in open spaces, on roadside pavements, and at work sites. ASHA workers receive their incentives regularly upon immunising children and pregnant women. This incentive system ends up being misaligned with migrant women and children who are constantly on the move (Thomas *et al.* 2020). Thus, unattended deliveries at the workplace, miscarriages, reproductive health issues, and poor pre- and postnatal care are common on construction sites (Jayaram *et al.* 2019).

IV. Case of Tuberculosis among Labour-Migrants – Convergence of Unsafe Work, Undernutrition, Poor Housing, and Unresponsive Services

Migrant workers are often undernourished, work in unsafe occupations, and reside in crowded and unhealthy spaces. All these factors converge together to cause a high risk of contracting tuberculosis (TB), which spreads rapidly to other co-workers and co-inhabitants due to the highly congested work and living arrangements. Work settings, as in the garment and construction industries, further intensify the risk of the disease by damage to their lungs by smoke, fine dust, lack of ventilation, and other pollutants. Crucially, delayed detection and difficulties in completing treatment due to inconsistency or interruptions significantly increase their vulnerability.

In 2011, through a network of migrant volunteers and a migrant support centre, Aajeevika Bureau, implemented a series of interventions aimed at early detection and management of TB among migrant populations. Volunteers raised awareness, conducted screening camps within factories and residential areas, and educated factory management on tuberculosis among the migrants and its impact on the productivity of workers.

Figure 11.2 explains the impact of the intervention. The blue line indicates the evaluation group – two TB units where the intervention was implemented. The red line indicates the control group. We can see that the city had similar incidence of TB across both the groups. Interestingly, with active case finding and other series of interventions, the incidence of TB increased in the evaluation group. This shows around 200 per 100,000 population of

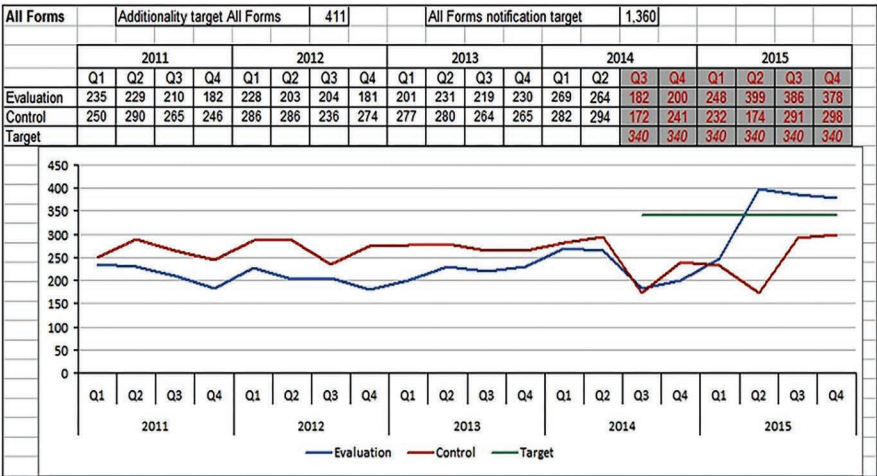


FIGURE 11.2 Tuberculosis among labour-migrants in Ahmedabad city.

Note: The figure was taken from the Grantee Annual Narrative Report for the Project that Aajeevika Bureau and BHS implemented in Ahmedabad called Stopping TB among Migrants in Ahmedabad City, India, supported by TB partnerships. Submitted in April 2016.

TB patients were undetected. They were either not able to reach the health system or vice versa (India Aajeevika Bureau (AB), 2010).

Adherence is another major hurdle for migrant TB patients. Various factors can be attributed to this, such as limited access to correct TB-related information, social stigma and discrimination, lack of awareness of entitlement to health services, and low health-related spending capacity proportionate to household income, as well as migrant-unfriendly health services. All these lead to reluctance in seeking care or adhering to treatment.

Delayed detection followed by irregular, incomplete TB treatment puts the migrant population at high risk. Migrants' difficult life causes them to constantly juggle between the need to work in the city (at the destination) and travel back to villages (at the source) to fulfil responsibilities. This back and forth, coupled with limited social support, long working hours, unfamiliarity with the health systems in the city, and the urgent need to earn a living (inadequate financial resources), makes it difficult for them to seek care during early symptoms and continue treatment subsequently.

V. Policy Responses for Improving Health and Well-Being of Migrants

Integrated Child Development Services

The existing central government guidelines allow all migrant children to avail of nutritional supplementation under the Integrated Child Development

Scheme (ICDS) at destination cities, irrespective of whether they are registered in the area. As a result, all migrant children can benefit from Anganwadi services in or near where the migrants reside. Pregnant women can also avail of antenatal and postpartum care through Anganwadis, which are linked to government health services. Adolescent girls can be given treatment for anaemia at the Anganwadi centres (AWCs) and, in addition, be provided life skills and sex education through ICDS programmes.

An empirical study by CMS Social across six states – West Bengal, Maharashtra, Gujarat, Delhi, Punjab, and Karnataka – reported that while 75% households used to send their children to AWCs at their native place, only a little more than one-fourth send at their destination. While the AWC coverage of children was better in Gujarat with 52% children, it was only 15% in Delhi and 18% in West Bengal. In Delhi, the coverage was only 12% among the children of short-term migrants. Although the average distance of AWCs is about 1 kilometre from the place of residence, two-thirds of the migrant population is not availing the services of the AWC at the destination. It is mentioned that the absence of domicile documents deprives young children from migrant families of early childcare services, such as vaccinations and essential nutrition available to the local population through the ICDS.

Another study in Tamil Nadu reported that out of 176 children aged below 6 years, only 11 children had access to AWCs. Overall, only 6.3% of the children in their sample migrant families had access to AWCs (Vidhyasagar & Shyamalanachiyar 2020).

Ayushman Bharat PMJAY

Pradhan Mantri Jan Arogya Yojana (PMJAY) was launched in 2018. It is the largest health assurance scheme in the world, aiming to provide health cover of INR 5 lakhs per family per year for secondary and tertiary care hospitalisation to over 120 million poor and vulnerable families. The households included are based on the deprivation and occupational criteria of Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas, respectively (Department of Rural Development n.d.).

In the wake of the COVID-19 pandemic in June 2020, when issues of migrant workers came to light, PMJAY benefits were extended to migrant workers, a population especially at risk. The National Health Authority (NHA) also launched a multistate radio campaign to raise awareness of this provision. It was believed that the portability feature of the scheme would enable migrant workers to access healthcare services across different states. A survey (Prakash *et al.* 2022) among migrant populations residing in Hyderabad found that less than 1% of the total respondents had an AB-PMJAY card, while 55% did not have it (but were aware about the scheme). The remaining 44% were unaware of the AB-PMJAY scheme, indicating a serious lack of awareness about it and its benefits among slum populations.

Another study by John *et al.* (2020) showed, e.g., the level of reach of AB-PMJAY (Gujarat – 3.25%, Haryana – 3.5%, and Maharashtra – 3%) to be abysmally low. Complex registration processes and a lack of outreach to women and children are some constraints in accessing the benefits of this scheme.

National Health Policy

The National Health Policy 2017 aims at universal health and well-being yet falls short in addressing the specific needs of migrants. While the policy prioritises urban slum dwellers and other vulnerable groups, it does not explicitly acknowledge the unique health challenges by migrant populations. Furthermore, it lacks concrete plans to ensure migrants receive the healthcare they deserve.

India's National Urban Health Mission (NUHM), a part of the National Health Mission (NHM), acknowledges the healthcare challenges faced by internal migrants living in urban areas. The NUHM recognises them as a vulnerable population. The 2023 NUHM framework outlines a four-tiered system of urban health facilities (Urban Primary Health Centres (UPHCs), Urban Health and Family Welfare Centres (UHWs), Urban Community Health Centre (UCHC), and specialist UPHC), aiming to provide comprehensive primary and secondary care to all urban residents, including outreach programmes focused on preventive healthcare.

However, the effectiveness of these facilities for migrants remains limited. A 2020 study by Santalahti *et al.* (2020) on migrant construction workers in Karnataka highlights several barriers, such as financial constraints, distance and transportation to facilities, lack of awareness about facilities, and clash between work hours and facility timings, among various others.

Employees' State Insurance Corporation

The Employees' State Insurance Corporation (ESIC) is a social security programme in India that provides health insurance to millions of workers and their families. Although a vital programme, a large number of workers are unfortunately missing out on these benefits.

There are two main reasons for this. Firstly, employers often neglect to register their workers for ESIC, although they deduct the employee contribution from their wages. This leaves the workers without health insurance coverage, a big disadvantage particularly when they get injured on the job. Secondly, workers in the informal sector, a large part of the Indian economy, are not covered by the scheme at all.

The problem is significant. A Safe in India (SII) 2023 report found that a large majority of injured workers in two Indian states (68% in Haryana and

85% in Maharashtra) received their ESIC identification card after their accidents, instead of their first day of employment. This suggests a much larger number of workers may not be registered for ESIC at all.

VI. Actions to Improve the Health and Well-Being of Labour-Migrants

Nutrition Security at Source and Destination

Public distribution system: The PDS in India is well-positioned to offer a critical form of assistance to poor migrant households. A large body of evidence reflects on the important contribution it is increasingly making towards food security and poverty reduction in different parts of the country (Chatterjee 2014; Drèze & Khera 2013; Khera, 2011; Sen & Himanshu 2013). With appropriate reforms, the PDS has served well to supplement our food security goals across Odisha, Himachal Pradesh, and Rajasthan, among others. It points to the real potential of the PDS in supporting the efforts of nutrition security by diversifying its food basket to include pulses, oil, and other millets such as ragi and *bajra*. In some states, progress has been on both fronts; e.g., Karnataka and Odisha have been giving ragi through the PDS (Paliath 2024). In Tamil Nadu and Himachal Pradesh, dals and oil have been provided for years, but the union government has yet to adopt or replicate their models on a national scale.

State-run canteens: State-run canteens have emerged as vital resources for food security among urban migrants in India. Many migrants, especially those living alone, lack cooking facilities or the time to prepare meals. These canteens address this gap by providing affordable, hot, and often subsidised meals.

A canteen survey by Khera (2024) conducted in three states – Tamil Nadu’s Amma Unavagams, Karnataka’s Indira canteens, and Rajasthan’s Indira *Rasoi* (kitchen) – revealed that these canteens serve a diverse range of people like working professionals, migrant labourers, students, and the elderly. The study found the canteens offer hygienic, affordable, and homely food for whom hunger and destitution are chronic problems and for those with transient issues.

Many migrants consume irregular and often unhealthy meals because of long working hours and limited cooking facilities. By offering meals at heavily subsidised rates or even for free, community cuisine ensures that migrants, who often live on meagre incomes, access nutritious food without straining their budgets.

Beyond providing sustenance, these canteens foster a sense of community and inclusivity. By bringing together people from different socio-economic backgrounds, they contribute to a more equitable society.

While state-run canteens have made significant strides in providing food security, improving menu options is crucial. Incorporating nutritious foods like eggs, yogurt, buttermilk, fresh vegetables, and diverse grains is essential. By prioritising nutrition, these canteens can effectively compete with often unhealthy street food options.

Furthermore, sustained government funding is necessary to establish canteens as a cornerstone of India’s social safety net. This investment can ensure consistent meal availability, create employment opportunities, and promote a stronger sense of community.

Community-based creches for children: Community-based crèches, both source and destination that provide childcare, nutrition, and a stimulating environment for children, can offer a solution to the problem of care in terms of resources and in transforming unsuitable habits and attitudes around child malnutrition.

This argument is based on our own experience of managing such crèches (phulwaris) in predominantly tribal, high migration areas of southern Rajasthan over the last 11 years. Children enrolled in the phulwaris show a marked improvement of their nutritional status, with levels of wasting coming down significantly. This has also been observed across other day-care centres in the country (Gope *et al.* 2019) (Figure 11.3).

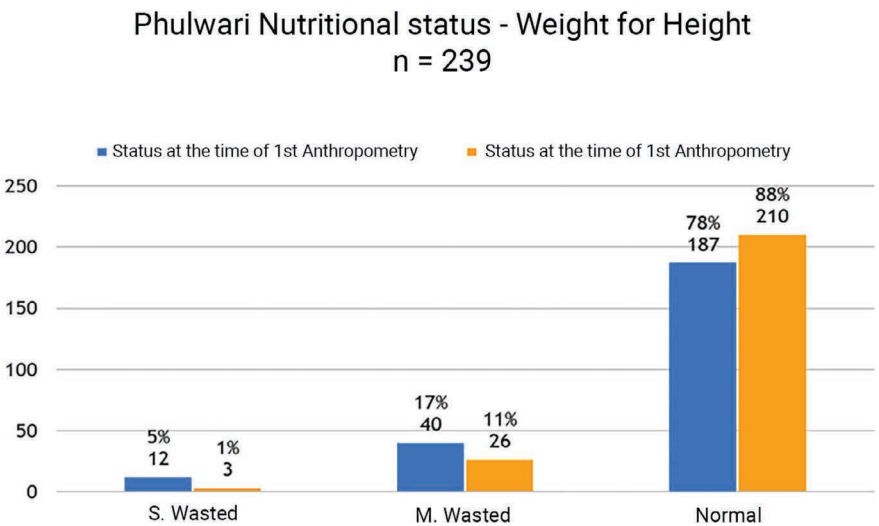


FIGURE 11.3 Change in nutritional status of phulwari children from before to after enrolment.

Source: Created by authors

We do not, however, see such improvement in children going to AWCs (Dixit *et al.* 2018), and there are at least three reasons for the same: high energy and protein content of food offered in the phulwaris compared to the AWCs; phulwaris functioning for full day (8 hours) and not half day as AWCs do; and enrolling children 6 months onwards. The AWCs enrol children aged 3 years and above, by which time malnutrition has already set in.

Safe and Affordable Housing for the Migrant Workers/Families in Cities

Given the extent of housing issues faced by migrant workers in urban destinations, several non-profit organisations and government institutions have piloted and attained varied degrees of success with housing models and solutions on the ground. Worker hostels and dormitories have been a dominant mode of housing set up by non-profits working with migrant communities. ShelterSquare Foundation with the support of Aajeevika Bureau has recently set up a dedicated hostel facility aimed at providing dignified accommodation and food to approximately 200 workers in the power-loom industry in Surat. A core strength of the model is that its management and outreach are led by workers themselves through the Pravasi Shramik Suraksha Manch (PSSM), a migrant workers' union promoted by Aajeevika Bureau.

Other state-run facilities, such as the Apna Ghar in Kanjikode, an industrial area in Palakkad district of Kerala, have been built exclusively for migrant workers. The facility contains dormitory rooms, kitchens, bathrooms, dining halls, and cloth-drying areas. Built by Bhavanam Foundation, the housing authority in Kerala, it offers a chance for employers to reserve spots for workers employed by them. Similarly, *Ren Baseras*, built under the ambit of the National Urban Livelihood Mission, offers spaces for migrant workers as night shelters, beneficial for seasonal workers who otherwise live in open spaces in the city. It helps them save on rent for a family accommodation too. However, some of the state-run housing facilities have been under criticism for the ghettoisation and surveillance of migrant workers in such spaces. Ren Baseras also provide gender-segregated living spaces not conducive for family accommodation.

The Affordable Rental Housing Complex (ARHC) Scheme, the only housing scheme exclusively announced for migrant workers, launched in the wake of COVID, is also plagued with several issues. Conceived as a model to ensure the supply of adequate rental housing units for migrants in cities, both through repurposing vacant units in government housing projects and through public-private partnership (PPP) models to develop a new supply of housing stock, the scheme has seen a sluggish pace of implementation. The economics of the scheme also do not cater to vulnerable migrant workers, effecting monthly rents as high as INR 5,000 (Varma 2023).

Ensuring decent housing for migrant workers and including them in the policy imagination for urban governance architecture related to basic public provisioning are an overarching imperative the state must prioritise. Within that, recognition of migrant settlements in city-based enumeration exercises would be of utmost importance so that basic urban amenities such as water and sanitation are available to migrant workers. It is also important to integrate provision of housing to migrant workers with childcare, education, and health facilities. Regulation of rents as a proportion of minimum wages, especially in migrant-dense settlements, will also go a long way in migrants having access to decent housing in cities.

Making Workplace Safe

Our experience with Aajeevika Bureau and Work Fair and Free Foundation suggests that combining several different interventions is imperative to address the issue of risks and hazardous work effectively. For instance, undertaking safety audits among diverse informal work contexts has proved extremely useful in identifying specific hazards on the work sites. Such exercises have been carried out in a participatory manner with the active engagement of skilled and experienced worker leaders and safety experts who can pinpoint specific points that can pose risks to workers. We have undertaken this across sectors, such as construction and power looms, where the frequency of accidents has been found to be high.

Such exercises have been rolled out within the broad scope of action of worker unions and collectives whose on-ground presence and intimate knowledge of the work settings have proved tremendously useful in ensuring the effectiveness of such exercises. This has also proved to be strong in building worker conscientisation regarding the otherwise normalised issue of worker safety. Our learnings suggest that this needs to be combined with direct delivery of technical inputs in the form of safety trainings by experts, such as in the domain of fire and industrial safety, with a special focus on prevention and mitigation. We are also building on insights from these experiences to establish model work sites in collaboration with employers, often emphasising on the business rationale of investing in basic safety measures to avoid accidents and for a higher payout for worker compensation in the event of accidents.

Another instance of a powerful on-ground intervention is SII, which facilitates compensation through ESIC. Focusing on prominent automobile clusters across the National Capital Region (NCR), and more recently in Pune, SII has set out a high-impact example of ESIC facilitation, ensuring that thousands of injured workers employed in the automobile supply chains can claim medical relief, treatment, disability benefits, and pensions. SII runs worker assistance centres that advice workers of their ESIC benefits and helps

them obtain compensation when they are injured. They also raise awareness about workplace safety and ESIC services through media campaigns. Their efforts have already helped thousands of workers access healthcare and compensation.

As mentioned in the above section, Work Fair and Free has set up a data architecture that will help collect the alarming frequency with which accidents and injuries happen in informal workplaces. The tool has already successfully registered over 650 workplace accidents from three states – Gujarat, Maharashtra, and Rajasthan – and holds immense potential of scaling-up across the country. We believe that this can be an effective tool in battling the data darkness around occupational risks and injury in the country today.

Migrant-Responsive Health Services

AMRIT Clinics: Migrant-Responsive Healthcare among High Migration Communities

BHS is a not-for-profit organisation, driven by the vision of a world where marginalised and vulnerable communities lead a healthy life with dignity. The communities BHS serves lie at the intersection of *high impoverishment*, *critical dependence on migration*, and *lack of access to healthcare*. Faced with high disease burden, indebtedness, and low productivity, families left behind by migrants cannot negotiate healthcare and other social security entitlements (Basic Healthcare Services n.d.).

BHS runs a network of six not-for-profit primary healthcare clinics in remote, rural, and high migration communities in Udaipur district in South Rajasthan, India. Called AMRIT Clinics, they provide promotive and preventive care to these communities. Among the patients seeking care at the clinics, 90% are from migrant families.

Migrant-friendly features of the clinics include the following:

Deep location within the high migration communities: The clinics are located within high migration communities, of which 60–70% households have at least one male family member migrated to a city for livelihood. The close proximity and affordability of the clinics make them convenient for migrant families, especially women and elders, to seek care.

Response to needs of high migrant populations: The clinics progressively developed the capacity to manage health needs – diagnosis and treatment of tuberculosis, silicosis, reproductive tract infections, HIV, etc. – of the migrant populations. Within these, the clinics deal with specific needs of the migrants. As an example, many migrants who suffer from tuberculosis cannot stay back in the village for the entire duration of treatment and must return to the city in between for earnings. Such patients are

encouraged to stay back for the intensive phase and provided medicines for a longer duration, coinciding with their plans of return.

Similarly, partners of men who migrate singly and who return home only seasonally rarely prefer oral contraceptives that need to be taken daily. For them, longer-term contraceptive choices, such as injectables or intrauterine devices (IUDs), or emergency contraceptives are offered.

Women providers: In most families, it is the man who migrates leaving behind the woman, children, and the elders. Women often are most comfortable seeking care from women providers, and, therefore, by design, clinics are staffed by women nurses from similar communities, many of whom have also faced the effect of migration in their families. They are better able to serve these communities.

Mohalla Clinics: Migrant-Responsive Healthcare in Cities

‘Mohalla’ clinics have emerged as a crucial lifeline for the migrant population in Delhi. These clinics offer free primary healthcare services, including consultations, medications, and diagnostics, addressing a critical gap in healthcare access for a community often facing financial and geographic barriers. They are strategically in areas the urban poor communities reside and, hence, enhance the availability and accessibility of healthcare services for the underserved. To accommodate daily wage earners’ schedule, many clinics operate extended hours, reducing the time and cost associated with seeking medical care.

The clinics staff a doctor, a nurse, a pharmacist, and a laboratory technician, with a few variations across clinics, and provide a defined package of services. Despite facing challenges during the COVID-19 pandemic, these clinics remained operational, providing crucial primary care services when larger hospitals were overwhelmed. They played a vital role in delivering outpatient care, testing for COVID-19, and serving as accessible healthcare points for the public during the crisis.

While the full impact of Mohalla clinics on the health of poor migrants is still being assessed, evidence suggests positive outcomes. These clinics have been shown to increase utilisation of healthcare services, reduce out-of-pocket expenses, and improve patient satisfaction (Akhtar & Ramkumar 2023).

A study by Sethi *et al.* (2020) involving 493 women across 25 urban poor settlements with Mohalla clinics found that the clinics’ proximity to homes significantly improved women’s access to healthcare. This is attributed to reduced travel time, costs, and constraints imposed by patriarchal norms on women’s mobility. Notably, 78% respondents who had visited a clinic expressed satisfaction and a willingness to continue using the service. However, challenges such as language barriers, lack of awareness, and limited

specialised care options remain obstacles to full accessibility for migrant communities (Lahariya 2020).

Migrant-Responsive Care for Tuberculosis in Cities

Based on our experience of implementing a TB control project among migrants in Ahmedabad, we have developed the following insights on elements of a migrant-responsive TB detection and treatment programme:

Partnership with organisations working with migrant populations: It is not easy to build trust and relationship with this population because of their exclusion in the city. It is useful to have partnerships with organisations working with the migrants for a long time and having credibility among them.

Focusing on most vulnerable migrants: Within the labour migrant populations, those who have *contractual low-end jobs, those who are recent migrants, and single male migrants* are more likely to have a higher prevalence of the disease and are more likely to have missed interventions focusing on migrants in general. Camps in smaller factories and outreach case detection activities in neighbourhoods with recent migrants are likely to provide a higher yield than camps in big factories (where employment is more formal and working conditions somewhat better).

Engage peer volunteers, key informants, and private provider: Intensive outreach activities through these channels is likely to lead to a much higher yield than household visits. Such an approach is also likely to be much more sustainable. Such an approach is likely to be most useful *when combined with a migrant-friendly drop-in centre*, where referred suspects could be counselled and supported during flexible hours, and their sputum collected and transported. Such a space also helps in following up the patients and ensuring compliance.

Early detection and support services at source villages: Since the migration to cities like Ahmedabad is often by single males and is seasonal, they move between the villages and city often. There is a need to strengthen the early detection and management services in the source villages and improve the linkage between the source and destination.

Providing cooked food helps improve compliance and promotes recovery in the most vulnerable: We encountered a subset of patients (~20%) who had little to eat because of advanced disease and loss of job. Providing cooked food at the doorstep led to a high compliance and recovery in almost all these patients. We believe that this approach should be integrated in programmes that aim to address TB among labour-migrants.

VII. Conclusions

Migration, often circular and seasonal, is a lived reality for millions of people, often the most marginalised. While, on the one hand, migration offers an opportunity to come out of vulnerability, it also creates circumstances highly adverse for the health and well-being of the migrants and their families. The intersection of four factors – inadequate nutrition, poor housing, hazardous occupations, and lack of migrant-responsive healthcare – is responsible for the poor health of the migrants. Health, housing, and nutrition policies and schemes are either blind to the needs of the migrants or are insufficiently implemented to reach the most vulnerable.

There are examples of policies, programmes, and models that are migrant responsive in each of these domains of healthcare, housing, occupational safety, and nutrition, some of which are presented here. It is now imperative on policymakers, programme managers, civil society, and industries to take these examples to scale and make inclusive spaces for living, healthcare, and work for all migrants. There is also an urgent need for a policy on migrant health. Till that time, health for all will remain a rhetoric.

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PART III

Human Resources for Health



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REFLECTIONS FROM TWO DECADES OF ASHA PROGRAMME IMPLEMENTATION

Garima Gupta

I. Introduction

In 2005, India embarked on a comprehensive health system reform agenda and launched the National Rural Health Mission (NRHM), which encompassed multiple sub-reforms. This led to introducing several significant changes in institutional roles, including health facilities and service delivery platforms, which further led to the creation of new institutions or radically changing existing ones (Ministry of Health and Family Welfare 2005).

Communitisation was a key pillar of the five tenets of the NRHM and at its core was the *Accredited Social Health Activist* (ASHA). The design of the ASHA programme was based on lessons learnt from large-scale national- and state-level community health worker (CHW) programmes: Village Health Guides at the national level, the *Jan Swasthya Rakshak* in Madhya Pradesh, and the *Mitanin*, implemented in the newly created state of Chhattisgarh, and the small scale of NGO-run CHW programmes in several states of India from early 1970s (*Jamkhed*, SEARCH, FRCH, *Arogya Iyyakkam*, and *JanSwasthyaSahayog*) (NHSRC 2011).

CHW programmes/policies in India were not entirely new. Various national health committees recommended them, e.g., Sokhey Committee (1947) and Srivastava Committee (1975). Alma-Ata Declaration (1978) articulated it, and government of India's (GoI) National Health Policy (1983) incorporated it.

A vast body of literature exists on the effectiveness of ASHA's role in primary healthcare, particularly in areas of maternal, newborn, and child health, but little on underlying policy interventions triggered by evidence/

lessons from implementation, *a key feature of ASHA programme for enabling programme evolution and modification*. Policy reforms for community health systems, particularly on CHWs, in the face of changing contexts and accommodation of multiple concerns that consider various viewpoints, are an important area of study.

This chapter aims to document the chronology of ASHA-related policies and the basis of this evolution. We highlight the multiple negotiations involved in the complexity of undertaking district and sub-district implementation based on central and state policies, mediations, and adjustments needed to achieve a fit between national mandates and state/district health priorities (adapting to the local context and health system requirements). It illustrates an innovative approach to policymaking, drawing on practice and lessons learnt from the field through multiple reviews, formal evaluations, and periodic publications, which served to tailor policy and programme decisions to the implementation capacity in the state and districts.

1. *Tracing Key Policy Influences in the ASHA Programme*

One of the important contributing factors to ASHA programme's success was the ability to take cognizance of and the agility to adapt to the – policy ecosystem and field requirements. This approach recognised that the implementation of the NRHM necessitated a paradigm shift in the way state- and district-level implementers and practitioners were required to rapidly adapt to the evolving policy and financial environment. A cycle of practitioner-led learning feeding into policy formulation and modification has characterised the ASHA programme since its launch. These changes were reflected through multiple Government orders, guidelines, and training modules.

Policy guidance: Some key policy recommendations that influenced the design and evolution of the various programme components of ASHA include the following:

- ***Eleventh Five-Year Plan (FYP) (2007–2012)*** (Planning Commission 2008) acknowledged GoI's decision to scale up the Home-Based Newborn Care model of Gadchiroli (Bang *et al.* 2005), which had demonstrated a substantial impact of a structured home-based care programme for post-partum women and newborns, delivered by low literate women CHWs trained and equipped to deliver such care. The plan recommended training ASHAs on selected aspects of newborn care, to be delivered through home visits, in a phased approach, beginning with five high-focus states of Bihar, Madhya Pradesh, Odisha, Rajasthan, and Uttar Pradesh (UP). The plan also suggested introducing facilitators to provide on-site mentoring support to a cluster of ASHAs.

- **Report by the Parliamentary Committee on Empowerment of Women on 'Working Conditions of ASHAs'** (Lok Sabha Secretariat 2011) recommended capturing data and reasons of drop out; revising the education criteria of selection to 10th standard pass; assessing workload of ASHAs and reducing the population norm to 700 (if required); ensuring adequate representation of marginalised communities in selection; paying fixed monthly remuneration besides performance-based incentives, timely provision, and refilling of drug kits; streamlining payment process through the use of bank transfers/cheque payments; expediting the rollout of training; issuing ID cards; and providing IEC tools to ASHAs. It also recommended scaling up of some good practices introduced by states, viz. the creation of ASHA restrooms at health facilities, organisation of ASHA sammelans, extension of social security benefits, and creation of career progression opportunities for ASHAs. *Several of these visionary recommendations dating back 2010 were implemented between the period 2010 and 2018.*
- **High-Level Expert Group (HLEG)** (Planning Commission 2011) drawing upon the experiences of the 6 years of ASHA programme implementation in the states, suggested increasing the number of CHWs from one per 1,000 population to two per 1,000 to address health challenges, such as chronic diseases, mental health, and take action on gender-based violence and sanitation. The group also recommended providing fixed honorarium along with performance-linked payments and creating career opportunities to advance to Auxiliary Nurse Midwives (ANMs)/nurses. To strengthen community participation, the HLEG suggested to convert Village Health, Sanitation, and Nutrition Committees (VHSNCs) to Village Health Councils and ensure CHWs were accountable to these councils.
- **Implementation Framework for National Urban Health Mission (NUHM)** (MoHFW 2013) recommended selecting ASHAs in urban poor settlements at one ASHA for 1,000–2,500 urban poor population, covering about 200–500 households and creating *Mahila Arogya Samitis* with 10–12 women members for every 50–100 households, thus expanding the coverage of ASHAs to urban areas.
- **Report of the Task Force on Comprehensive Primary Healthcare (CPHC) Rollout** (MoHFW 2015) envisioned ASHAs as members of the primary healthcare provider team at sub-health centre (SHC)-Health and Wellness Centres to deliver CPHC. It also reinforced that ASHAs along with VHSNCs are vital for community engagement and for promoting gender and health equity.
- **National Health Policy** (MoHFW 2017) supported the certification programme for ASHAs to enable their preferential selection into ANM, nursing,

and paramedical course and advised the consideration of regular terms of engagement for such ASHAs. The policy also suggested that the decision for a second CHW could be taken on the basis of geographical considerations, disease burdens, and time required for multiple tasks to be performed by ASHAs.

- *Operational Guidelines for CPHC through Ayushman Bharat Health and Wellness Centres (AB-HWCs)* (MoHFW 2018) positioned ASHAs as a key member of the primary healthcare team. It reiterated ASHAs continuance to perform the three roles (as a *facilitator*, *health activist*, and *service provider*) but for a wider range of focus areas, such as management of common non-communicable diseases (NCDs); care of the eye, ear, nose, and throat; oral health; and elderly and palliative care. These reforms morphed the role of ASHAs from a frontline worker for a designated population, to a member of the primary healthcare team at the HWCs (now referred to as the *Ayushman Arogya Mandirs*), with tasks related to population enumeration, community awareness generation, mobilisation, and community care provision.

In addition to the various policy documents, assessments and evaluations also influenced the programme. The ASHA programme has been the subject of multiple assessments and reviews, small scale and large scale, conducted independently and in conjunction with other NRHM components.

- An important source of information that provided evidence to modify several components of the ASHA programme is the annual common review mission of National Health Mission (NHM).¹ These annual missions assess all components of the NHM, including the community processes embodying the ASHA programme. A summary of these findings is made available in the Common Review Mission (CRM) reports and shared with states. These reviews from the initial phase of programme rollout acknowledged the enthusiasm and immense potential of ASHAs, while also highlighting operational challenges because of the scale and limited experience of the health system to engage with community health systems. Such operational challenges included the need to adhere to a community-led selection process, improving the pace and quality of training, strengthening supervision, streamlining the supply of drug kits, and paying incentives timely and in full (MoHW CRM 2007, 2008, 2009).
- Large-scale evaluations that significantly influenced the evolution of the ASHA programme to its current avatar include *ASHA Evaluation: Which way forward by NHSRC* (NHSRC 2011), *Evaluation Study of NRHM by Institute of Economic Growth* (Planning Commission 2011), and *Study on Improving Performance of ASHAs in India by the International Advisory Panel of NRHM* (Bajpai and Dholakia 2011). Findings from these

reports documented variations across states on account differences in programme maturity and levels of technical and financial investment made in the programme. These evaluations reported high levels of functionality of ASHAs in increasing access to care, specifically for institutional deliveries, immunisation, and family planning. However they also highlighted gaps in the skills of ASHAs in critical areas, like identifying danger signs of maternal complications, sick newborn and childhood illnesses, and providing counselling on complementary feeding. The findings were linked with the slow pace and variable quality of training across most states. Poor availability of drugs with regular stockouts and delays in payments were few common findings from all states. The reports emphasised the need to strengthen on-the-job mentoring support provided to the ASHAs across all states (except in Chhattisgarh where the *Mitanin* programme was supported actively at all levels, i.e., state, district, block and, sub-block).

2. Evolution of the ASHA Programme

In 2006, the first set of ASHA guidelines was released by MoHFW, covering a range of areas related to selection, roles and responsibilities, institutional arrangements, trainings, budgetary allocations, working arrangements, and compensation. The guidelines were developed with inputs from civil society and state governments.

In 2013, 7 years after the programme launch, based on implementation experience and learning from the field, guidelines were revised and budgetary allocation was increased from INR 10,000 per ASHA to INR 16,000 to support additional elements required for the programme.

The next section presents the evolution of each of the critical ASHA programme components between the time period 2005 and 2023 (Figure 12.1).

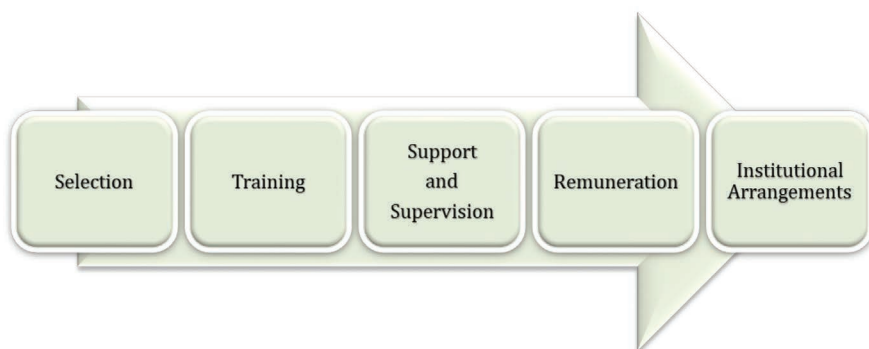


FIGURE 12.1 Key programme components.

Source: Created by authors

A. Selection

The ASHA programme was launched in eight Empowered Action Group (EAG) states² and in the states of Assam and Jammu & Kashmir. However, the ASHA programme scaled up rapidly, since the early experience of ASHA suggested that she was an invaluable resource in improving population health outcomes. Within a year of the launch, nearly 200,000 ASHAs were selected, and the programme was extended to 18 high-focus states³ and tribal/difficult areas of the remaining states in 2006 (MoHFW Oct 2006). The wide acceptance of ASHAs at the community level and the demand from the remaining states to introduce ASHAs in non-tribal and non-difficult areas resulted in the expansion of the programme to all states and UTs by the Fourth Mission Steering Group, an inter-ministerial governance structure responsible for policy and budgetary approvals for the NHM (MoHFW August 2008). In 2013, with the launch of the NUHM, the programme was extended to the urban areas (MoHFW 2013). The programme is currently operational in 34 states and UTs with nearly 10,04,433 in position (9,42,484 in rural areas and 88,508 in urban areas) (MoHFW September 2024).

ASHA selection is critical to the success of the programme, criteria for which is laid out in the ASHA guidelines released in 2006 and updated in 2013. In both sets of guidelines, there was consistency in ASHA's role definition, and in restricting the non-negotiable criteria to women and a local resident of the community.

The 2006 ASHA guidelines (MoHFW 2006) suggest a basic minimum qualification of class VIII with relaxation for remote areas and in communities where educational levels among women are low. In response to Parliamentary Committee recommendations, the MoHFW issued guidance (MoHFW August 2012), encouraging states to preferentially select candidates with a class X certificate. However, the revised Community Process Guidelines issued in 2013 (MoHFW 2013) retained class VIII as the basic qualification based on evidence from field and state inputs that in remote areas selection targets were unmet. Raising the qualification to class X would have exacerbated this issue and resulted in underserved and remote rural areas not finding suitable candidates. The education criterion for urban ASHAs under the NUHM was however increased to class X in view of higher probability of finding suitable candidates in urban areas (MoHFW 2014).

Emphasis on community engagement and equity was reiterated in both sets of ASHA guidelines. The guidance issued in 2006 lays out a rather generic process for community-based and community-led selection in that ASHA will be chosen through a rigorous process of selection involving various community groups, self-help groups, Anganwadi institutions, the block nodal officer, district nodal officer, the village health committee, and

the Gram Sabha (MoHFW 2006). In 2011, the eight-state ASHA evaluation documented differences in selection processes across states but reported that in general the final decision was led by either ANMs or the panchayat members (NHSRC 2011). The revised guidelines in 2013, issued 7 years after the launch, acknowledged that most ASHAs were already in place, nonetheless it laid out in detail the selection process that emphasised community-based selection to be facilitated by the district and sub-district health system. This perhaps emanated from the finding that there was likely to be patronage-based selection if left to the lowest levels of bureaucracy or locally elected representatives. The emphasis on active health system engagement was intended to ensure greater ownership of the system in ASHA selection. The guidelines re-iterated the importance of equity in the selection of the ASHA to ensure she is a representative of marginalised communities. Evaluation findings and data from other studies largely showed adherence to such equity in selection (Kohli *et al.* 2015; NHSRC 2011).

Notwithstanding all the policy flexibility to ensure universal coverage of ASHAs, field reviews have shown persistent gaps in ASHA selection in several states. There are still pockets in the country where suitable candidates, even with lower educational qualifications, are not available, and therefore, special provisions are required for these areas.

The 2006 guidelines allocated one ASHA to 1,000 people, allowing states the flexibility in hilly, tribal, and difficult areas. Population coverage and household allocation norms, in particular, are more explicitly articulated in the revised guidelines. This specificity likely arose from evaluations and field observation findings that despite the adherence to the population norms, households were being missed, and in several areas, they were the households of the vulnerable and marginalised. Thus, for instance, in largely tribal states such as Chhattisgarh and Jharkhand, ASHAs were largely selected at the hamlet level. The average population coverage ranges from 400 in Chhattisgarh to 1,500 per ASHA in Jammu & Kashmir (NHSRC 2023). Hamlet-based ASHA selection allows ASHAs to undertake outreach activities and home visits even in remote and difficult areas as demonstrated by Chhattisgarh and Jharkhand.

B. Training – Skills and Competencies

National guidelines stipulate 23 days training of each ASHA in the first year and 12 days training every year thereafter in an incremental modular approach (Figure 12.2). The first four modules were knowledge-based. Module 1 enabled ASHAs to understand basic health issues and the health system. Modules 2–4 covered maternal and child health, communicable diseases, AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy), reproductive tract infections, and HIV/AIDS. These modules enabled the ASHA to serve as

a facilitator and a mobiliser of women and children to the outreach sessions in the village or to the facility.

Module 5 marked a shift in competency-based training focused on skilling the ASHA to understand her role as an activist through training on skills like negotiation, leadership, communication, and coordination, and build community rapport for the tasks she was expected to undertake. Module 5 also marked a shift that encouraged states to engage with civil society partners, owing to the sensitive nature of the skills covered.

The findings from reviews showed the role of the ASHAs as a community-level caregiver was limited by their lack of skills in maternal, newborn, and child health. For instance, the ASHA evaluation report (NHSRC 2011) highlighted that prioritisation of only the link worker role by states fails to optimally utilise ASHA's ability to improve child health outcomes. It recommended that ASHAs should be supported by skill-based training. A study on ASHAs by the International Advisory Panel (Bajpai & Dholakia 2011) also reported gaps in quality and pace of training. The ASHA's limited understanding of their job responsibilities highlighted the missed potential of expanding the allocated tasks of ASHAs, viz., community-based newborn care. The recommendations from reviews and policy documents culminated in the development of skill-based module 6 and 7 training of ASHAs in 2010 (MoHFW August 2010).

The introduction of module 6 and 7 training was accompanied by a major overhaul of the cascade training structure to enable quality training guided by the revised training framework (developed by the National Health Systems Resource Centre (NHSRC)), focusing on building a robust network of trainers and defining standards (for pedagogy, curriculum, and evaluation) at each level of cascade, i.e., national, state, and district. Such specific definitions and standards enabled scale and rapid rollout of the training. The launch of Home-Based Newborn Care (HBNC) in 2011 marked an important milestone in the ASHA programme as it signified a tacit policy

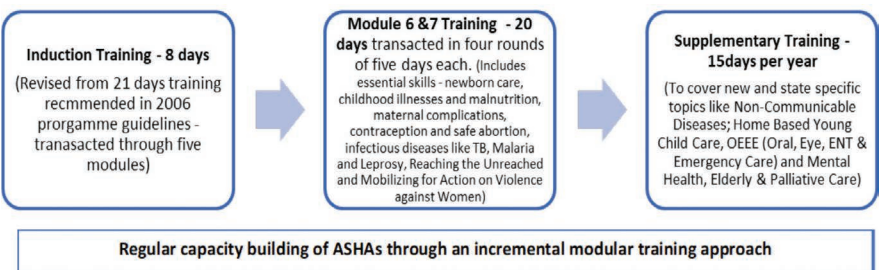


FIGURE 12.2 ASHA training.

Source: Created by authors

acceptance that community care provision by the ASHA was important to improve her credibility in the community⁴ (MoHFW 2011). The introduction of HBNC acted as a catalyst to drive the training of ASHAs on modules 6 and 7. Overall, training on modules 6 and 7 is nearly 90% complete, while in urban areas only 70% are trained in round 3 and 48% in round 4 (NHSRC 2023).

Besides being trained on specific maternal, newborn, and child health competencies, ASHAs were also trained on aspects such as reaching the unreached and mobilising for violence against women. The issue of ensuring equity through the ASHA programme is underlined by specific policy and programme action. Findings from the ASHA evaluation highlighted social exclusion even by the ASHA (NHSRC 2011). In terms of coverage, nearly 70% of women who delivered in the last 6 months and respondents who reported an episode of childhood illnesses in the last 1 month confirmed receiving services from ASHAs, leaving out around 30% potential beneficiaries. The findings highlighted that social and geographical barriers continue to restrict coverage, leading to a significant minority who cannot access ASHA's services. This triggered the development of a specific training module *Reaching the Unreached*. This brochure used case studies to train ASHAs on understanding the forms and manifestations of marginalisation. The module was formally made a part of the ASHA training in 2014.

Findings from the three phases of ASHA evaluation⁵ (NHSRC 2011; NHSRC July 2012; NHSRC January 2014) demonstrated that on an average 21% of the ASHAs reported being engaged in mobilising community against domestic violence, without any formal training. Field reports also indicated that ASHAs face harassment by other health workers and community members, linked to their mobility and public profile (Ved *et al.* 2019). These findings, along with the encouraging experiences from Kerala's pilot model of training ASHAs on action against gender-based violence, led to the development of the training module *Mobilising for action on violence against women*, which was integrated with module 6 and 7 training in 2014.

States routinely use the flexibility to modify existing modules and introduce state-specific modules as per the local context. Such state-level initiatives are rooted as best practices that catalyse national-level guidance for scaled-up implementation. Few such examples are as follows:

- Management of disaster response in Uttarakhand, Jammu & Kashmir, Kerala, and few districts of Assam during floods.
- Action against gender-based violence in Kerala.
- Participatory learning approach in Jharkhand.
- Cancer awareness and screening campaign in Punjab.
- Palliative care and mental health in Kerala.

In recognition of the epidemiological transition in the country with rapidly increasing prevalence of NCDs, a programme for universal screening for common NCDs was launched in 2017. ASHA now has a pivotal role in the NCD programme to undertake risk assessment, mobilise community for periodic screening, and follow-up for referral and treatment adherence. Her scope of work has now expanded to encompass a larger population group that covers women over 30 years of age (including women beyond the child-bearing group) and men. Introduction of the expanded packages of services under Ayushman Bharat Health and Wellness Centres in 2018 entailed that ASHAs would be trained in areas like mental health, oral health, eye and ENT care, elderly care, and palliative care under the ambit of CPHC reforms. Expansion of service domains is likely to have implications on the time commitment and skills of ASHAs, particularly in high reproductive and child health (RCH) burden states.

To augment training of ASHAs, the ASHA certification was rolled out in 2014–2015 through joint collaboration among the NHSRC, MoHFW, and National Institute of Open Schooling (NIOS). As part of this initiative, all components of ASHA's training, i.e., curriculum, trainers, training sites, ASHA facilitators, and ASHAs, are to be certified. In the first phase, training infrastructure has been set up with 232 certified state trainers and 1,006 ASHA trainers, 35 state training sites, and 132 district training sites for certifying ASHAs in skills of reproductive, maternal and child health, and infectious diseases (NHSRC 2021). Subsequently, 1,17,082 ASHAs (11.7%) have been certified across 21 states (ASHA Portal NIOS). In the second phase, the certification will cover newer skills based on expanded packages covered under CPHC Services. To further incentivise ASHAs, the Mission Steering Group of the NHM approved a one-time incentive of INR 5,000 each for certifying ASHAs (MoHFW October 2022).

National- and state-level efforts to standardise multiple training processes have created a robust training network across the country, capable of adapting and providing training to ASHAs on new skills based on national- and state-level priorities. This was evident during the first wave of the COVID pandemic when states used these training systems to train nearly 800,000 ASHAs within a short span of 2 months, April–May 2020. Training in this compressed duration was facilitated by using digital technology, although it varied depending on Internet connectivity (NHSRC 2021).

Despite these investments in training, concerns about pace and quality of ASHA training are often reported during field reviews, highlighting the need to build a strong monitoring system across all blocks and districts, a task made difficult by significant variations in trainer capacity, training environment, and availability of training material (MoHFW CRM 2021, 2022).

C. ASHA Support and Supervision

Support Structure

Policy Guidelines 2006 stipulate the appointment of an ASHA facilitator for every 10–20 ASHAs to enable processes for community-led selection of the ASHA. Over time, and with the introduction of new incentives, particularly those that needed supervision and handholding, and the growing need to streamline payments, it became evident the ASHA programme required dedicated support structures. Reports of the study on ASHAs for the International Advisory Panel and the ASHA evaluation also noted the limited capacity of supervisory staff to support ASHAs and the requirement for on-the-job mentoring and motivation. The notion of state, district, and sub-district ASHA support teams was also well articulated in the revised guidelines released in 2013.

The task of managing the ASHA and VHSNC programme is complicated. It involves maintaining and updating a database of ASHA; developing training calendars; printing and distribution of training material; enabling management of training of multiple batches of ASHA in multiple sites in the district; coordinating monthly meetings of ASHA; enabling drug and equipment kit procurement, replenishment, and distribution; field visits; supervision; community interactions; following up on grievance redressal systems; and, perhaps the most important of all, ensuring timely and correct payments.

Expansion to urban areas, updated programme provisions, and evolving programme requirements gave new impetus to the programme in 2013. Over the past decade, most states have invested in either creating a dedicated support structure for ASHAs or designating and training selected officials to provide continued support to the programme. During the last 8 years (2014–2022), an increase of 66% is noted in sanctioned positions for district community mobilisers, 52% for block community mobilisers, and 18% for ASHA facilitators (NHSRC July 2019; NHSRC 2023). Over 90% of these positions are currently filled. Gaps, however, continue to exist in the areas like regular capacity building of support structure staff (MoHFW CRM 2019, 2021) and the creation of state ASHA mentoring groups across states (NHSRC 2023).

States of Chhattisgarh and UP demonstrated how regular capacity building of ASHA facilitators, structured monthly meetings, and the use of digital tools (in UP) can yield positive results in terms of improved quality of on-the-job mentoring support for ASHAs. In Chhattisgarh, the cluster meetings conducted by *Mitanin* trainers (state name for ASHA facilitators) act as a forum for solidarity building, refresher training, new information sharing, reviewing of work done in the last month, and collecting data on selected 17 indicators on *Mitanin*'s performance (NHSRC January 2015). UP has deployed a

mobile-based *ASHA Sangini* (state name for ASHA facilitators) application to support Sanginis in real-time compilation of ASHA's functionality data on 11 indicators (as per guidelines), documentation of ASHA's grievances, reporting maternal and infant deaths, and tracking ASHA drug kit status (NHSRC January 2016; MoHFW 2017). These strategies have emerged as good practices that have enabled ASHA facilitators in two very different settings – to assess coverage and quality of services provided by ASHAs and to provide structured inputs to ASHAs based on their performance.

Support Mechanisms

With the expansion of the range of activities undertaken by ASHAs, increased engagement with health systems, and being viewed as important functionaries of the health system – the support mechanisms for ASHAs were strengthened and further supplemented with the following measures:

- **Kits** – ASHAs are provided with a drug kit containing a set of medicines and two important points of care diagnostics, i.e., *Nischay* Kit (pregnancy testing kit) and rapid diagnostic kit (RDK) for malaria. After the launch of the HBNC programme in 2011, she was also equipped with an HBNC kit (newborn weighing machine, digital thermometer, blanket, mucus extractor, digital watch, and amoxicillin). Provision of these kits is linked with the completion of requisite training by ASHAs, while replenishment is done by the linked primary health centre. These kits act as important enablers for ASHAs to effectively provide appropriate first-level contact care (NHSRC 2011; Saprii *et al.* 2015). However, issues of inadequate and delayed replenishments have commonly surfaced in field reviews (MoHFW CRM 2019, 2022).
- **Grievance Redressal** Guidelines for ASHAs were launched in 2012 by the MoHFW, to establish forums where ASHAs can register their complaints and seek redressal. These were later subsumed with the revised guidelines on community processes in 2013, which laid emphasis on institutionalising the process by setting up a District-level Grievance Redressal Committee through formal notification by the District Health Society. As per recent data, district-level committees have been formed in 22 states and block-level committees are in place in 14 states (NHSRC 2023). However, field reviews have noted poor functionality and effectiveness of these committees, which have remained an unresolved challenge (MoHFW CRM 2019, 2021).
- **ASHA Restrooms** – To provide safe and comfortable accommodation to ASHAs when they accompanied pregnant women to the health facilities, few states adopted innovative measures to create a dedicated space – a restroom '*ASHA Gruha*' within the facility premises. These states were

Arunachal Pradesh, Assam, Bihar, Manipur, Meghalaya, Sikkim, Tripura Odisha, MP, Jammu & Kashmir, Jharkhand, Karnataka, and Uttarakhand (NHSRC July 2011, July 2014, January 2015). The restroom was identified as a good practice, and in 2016, the MoHFW encouraged all states to create such facilities by making budgetary provisions under the NHM; yet only 22 states and UTs have created restrooms for ASHAs so far (NHSRC 2023).

D. Remuneration

ASHAs are honorary volunteers compensated for their time spent on completion of allocated tasks. The ASHA incentive payment is the most debated issue among stakeholders, ranging from ASHA unions to state/district officials and civil society partners, with persistent calls for fixed and increased payments.

In 2006, the programme focus was solely on institutional delivery and immunisation – the tasks of an ASHA largely related to promoting institutional delivery and mobilising infants and children for immunisation services. With positive findings emanating from the field about ASHA's contribution in improving access to maternal and child health services (Planning Commission 2011; UNFPA 2009; NHSRC 2011), ASHA's scope of work soon expanded to include most vertical programmes – ranging from National Vector Borne Disease Control Programme (NVBDCP) to National Tuberculosis Eradication Programme (NTEP), National Leprosy Elimination Programme (NLEP), and National Programme for Control of Deafness (NPPCD). For example, in 2009, incentives for a few communicable diseases-linked activities, such as making malaria slides or serving as a Directly Observed Treatment Short Course (DOTS) provider for TB, were introduced. This was followed by the introduction of HBNC incentive for undertaking a series of home visits for newborn care in 2011.

At the national and state levels, continuous efforts were made to adequately compensate the ASHAs according to their contribution and efforts. Hence, unit rates of ten incentives were revised, and six new incentives⁶ (MoHFW January 2014, February 2014) were introduced for ASHAs during the first Mission Steering Group (MSG) meeting of the NHM in 2013. A key recommendation of the MSG was to roll out incentives for 'routine and recurring activities' (participating in VHND/UHND, VHNSC/MAS, and PHC/UPHC meetings and monthly update of records) to address the concerns about low honorarium being earned by ASHAs working in remote areas with sparse population and with low birth rate of the catchment (MoHFW 2013). The incentive was revised from INR 1,000 per month to INR 2,000 per month as part of the ASHA benefit package in 2018 (MoHFW September 2018).

After the launch of universal screening of NCDs and CPHC through AB-HWCs in 2018, new incentives have been approved for ASHA activities related to NCDs and other CPHC services. In 2019, ASHAs working

under the catchment of a functional HWC are also eligible to team-based incentives linked with the combined performance of the HWC team members (MoHFW August 2019).

As per current guidelines, ASHAs are now eligible for over 50 incentives in areas of maternal, newborn, and child health; family planning; infectious diseases; and non-communicable diseases, which are common in most states (NHSRC 2023). In the early phase of the programme, incentives were introduced gradually, allowing time for the training systems to mature and for the management systems to become adjusted to the changed paradigm of different components of the ASHA programme and indeed all of the NRHM, which districts were dealing with. Between 2013 and 2016, the programmes added a multitude of incentives. Some of these were across the country, and some restricted to districts where a particular condition was prevalent, such as for lymphatic filariasis and Japanese encephalitis.

At the state level, several states took initiatives to enhance the compensation amount for ASHAs by adding a monthly fixed honorarium or top-up incentives from state funds. These included Sikkim, West Bengal, Kerala, Haryana, Rajasthan (from ICDS budget), Karnataka, Meghalaya, Chhattisgarh, and Tripura. The number of states/UTs that provide such honorariums has risen from 17 to 27 over a short period of the last 4 years, i.e., from 2019 (NHSRC July 2019) to 2023 (NHSRC 2023). This reflects the increasing ownership of the programme by states, which needs to be matched by increasing the decentralisation of ASHA's roles and responsibilities as per state context and disease burden.

Online bank transfer for ASHA incentive payments was introduced by the GoI across all states in 2016 in response to significant delays reported by evaluations and field reviews. The Evaluation Study of the NRHM (Planning Commission 2011) documented payment issues – 69% ASHAs in UP, 50% in Jharkhand, and up to 10% in remaining states reported not receiving payments. The study on ASHAs for International Advisory Panel (IAP) (Bajpai & Dholakia 2011) also reported issues of inadequacy and delays in incentive payments. Odisha was among the pioneers in implementing the Public Financial Management System for ASHA payments since 2013 (NHSRC July 2014). Subsequently, some states developed digital payment portals and applications to streamline the verification process and payment transfer directly to ASHAs. These include Delhi, Rajasthan, Karnataka, Assam, UP, Haryana, and Jharkhand.

The importance of timely and full payment of financial incentives due to ASHAs (Saprii *et al.* 2015; Sarin & Lunsford 2017), and to CHWs in general (Ormel *et al.* 2019; WHO 2018), is reiterated in several studies. Despite being the most discussed programme component and with several focused efforts to streamline the payment process, delays in the payment of incentives

continued to persist in a few states and for a few programme-specific incentives (MoHFW CRM 2019, 2021).

Besides the financial incentives, many policy documents and studies have widely recommended creating provisions of non-financial incentives for ASHAs (Lok Sabha Secretariat 2011; NHSRC 2011; Planning Commission 2011, Abdel-Al *et al.* 2019), in line with the global recommendations of improving motivation and retaining community health workers (Ballard & Montgomery 2017; WHO 2018). This was incorporated in the revised guidelines (NSHRC 2013), and states were encouraged to create provision for awards and exposure visits for good performing ASHAs at the block, district, and state levels. Annual ASHA sammelans/meetings at the block/district level are routinely organised in most states to honour the hard work of ASHAs.

Career Progression

Career progression provisions were created in 2013 based on innovations implemented in Chhattisgarh (preference given to eligible ASHAs for admission in ANM/GNM courses). Weightage for enrolment in ANM/GNM courses is granted in 11 states (Chhattisgarh, Jharkhand, Madhya Pradesh, Uttarakhand, Jammu & Kashmir, Maharashtra, Arunachal Pradesh, Assam, Mizoram, Nagaland, and Tripura) (NHSRC July 2016).

Given that most ASHAs were selected before the higher educational qualification criterion was articulated, the NHM has made provisions for ASHAs to obtain educational equivalence of classes X and XII through financial support, based on experience from Bihar. Around six states support ASHAs in completing their education through equivalency programmes in Bihar, Chhattisgarh, Delhi, Jharkhand, Madhya Pradesh, and UP (NHSRC July 2016).

Another avenue of career progression is the selection of ASHA facilitators from a cluster of 10–20 ASHAs based on their performance and aptitude for mentoring. Around 19 states have adopted this model of giving preference to ASHAs for selection as ASHA facilitator (NHSRC 2021).

Social Security Measures

Drawing lessons from a few states (like Chhattisgarh, Assam, Jharkhand, Kerala, UP, Uttarakhand, Odisha, and West Bengal), which implemented innovative strategies to provide social protection to ASHAs, as medical and/or life insurance, the MoHFW in 2018 introduced the ASHA benefit package.

As part of this package, the coverage of *Pradhan Mantri Suraksha Bima Yojana* (PMSBY), *Pradhan Mantri Jeevan Jyoti Bima Yojan* (PMJJBY), and *Pradhan Mantri Shram Yogi Maan Dhan Yojana* (PMMSYMDY) was extended to all eligible ASHAs and ASHA facilitators (MoHFW September

2018). In the interim budget of 2024, the government has recently announced covering all ASHAs under PMJAY (Ministry of Finance, 2024).

E. Institutional Arrangements

The institutional structures spanning national, state, district, and sub-district levels were critical in addressing the cyclical paradigm of implementation, problem-solving, and improvement.

Building on the extensive process of consultation, followed for designing of the ASHA programme, the MoHFW constituted the National ASHA Mentoring Group (NAMG) at the beginning of the programme on 5 July 2005 (MoHFW July 2005). The group, with members from renowned civil society organisations and state institutions, functions as a standing technical resource group to provide policy guidance and oversight to the ASHA programme. The NAMG has been reconstituted at periodic intervals to include nodal officers on a rotation basis. This reconstitution enabled the inclusion of subject experts, especially after the advent of CPHC and the expanded scope of ASHAs.

At the national level, the NHSRC was established as a technical support institution for the NRHM. It plays a key role in developing guidelines, orienting the states, and providing support in interpreting policy to state- and district-level teams involved with ASHA implementation. The annual state ASHA nodal officer meetings organised by the NHSRC served as a critical platform for translating policy guidelines into implementation through dialogue, consolidating feedback from implementers, sharing best practices, and discussing new programme requirements. It worked as the technical agency that led the development of training materials and supported state teams to identify multiple opportunities afforded by the flexibility of the NHM programme implementation plan (PIP) process to unlock resources for the programme. The NHSRC has also been instrumental in undertaking ASHA evaluation across states, compiling innovations and best practices, and, more importantly, using field-level evidence through multiple channels to provide inputs to NHM decision-makers for policy and programme modulation and to sustain a constant spotlight on the ASHA programme.

Dedicated state nodal teams have been created in the form of the following: 1) a State ASHA Resource Centre (SARC) (which is led by a team leader and a team of programme managers/consultants for ASHA programme, VHSNC, and MAS) in Bihar, Maharashtra, and Tripura; 2) an integrated team within the State Programme Management Units (SPMUs) in 22 states and UTs⁷; and 3) by allocation of responsibility of managing the ASHA programme to existing state officials in eight states and UTs⁸ (NHSRC 2021). Chhattisgarh has demonstrated how a state-level technical institute, the State Health Resource Centre, could successfully develop, scale up, and sustain

the Mitanin programme based on the local context (Nambiar & Sheikh 2016). As the scope of the programme grew, the state ASHA resource cells also expanded, encompassing the district and block community mobilisers and ASHA facilitators (discussed under section C)

The succession of visionary and committed administrators at the central and state levels created an enabling environment that facilitated the conceptualisation and rollout of multiple innovative strategies. The ASHA programme enjoys the ownership not only at the highest administrative and political level but also at the local level, from the community and from the peripheral health system. Thus, at the national level, the NHSRC led the process of evidence generation and policy development with guidance from the NAMG, while the MoHFW provided approval of guidelines and issuance of necessary orders; at the state level, the state administrators and ASHA team members adapted and transacted the guidelines as per their context; and at the district and sub-district levels, the programme managers implemented the new initiatives.

F. Role of the ASHAs

The roles of ASHAs envisaged in the guidelines were that of an activist, of a service provider, and a link worker. The extent of predominance of any of these in her day-to-day activities is determined by the context of her area of operation, i.e., proximity and functionality of health facilities, and by her understanding of the requirement in a particular situation.

The ASHA evaluation showed that although majority of ASHAs were functional, a wide variation persisted across states, in the range of tasks undertaken and the effectiveness with which the tasks were performed (NHSRC 2011). This was attributed to the preference to one of the expected roles of the ASHA by the state, along with the level of responsiveness of the health system. States adapted the guidelines to suit their interpretation of the roles of ASHA, which further influenced financial investments in the programme and technical support provided to ASHAs. The evaluation concluded that for an ASHA to be effective, all three roles are important and complementary in nature. Revised guidelines and newly launched training modules reiterated the importance of the three roles and provided role clarity among the three critical frontline workers, i.e., ASHAs, Anganwadi workers (AWWs), and ANMs.

Multiple studies have shown that ASHAs have led to improved utilisation of maternal and child healthcare services, yet it is difficult to attribute these positive health outcomes to ASHAs alone. Studies have shown high levels of functionality of ASHAs in creating awareness about JSY entitlements and mobilising pregnant women for ANC and institutional delivery (Mishra *et al.* 2024; Paul & Pandey 2020; UNFPA 2009; NHSRC 2011). The role of

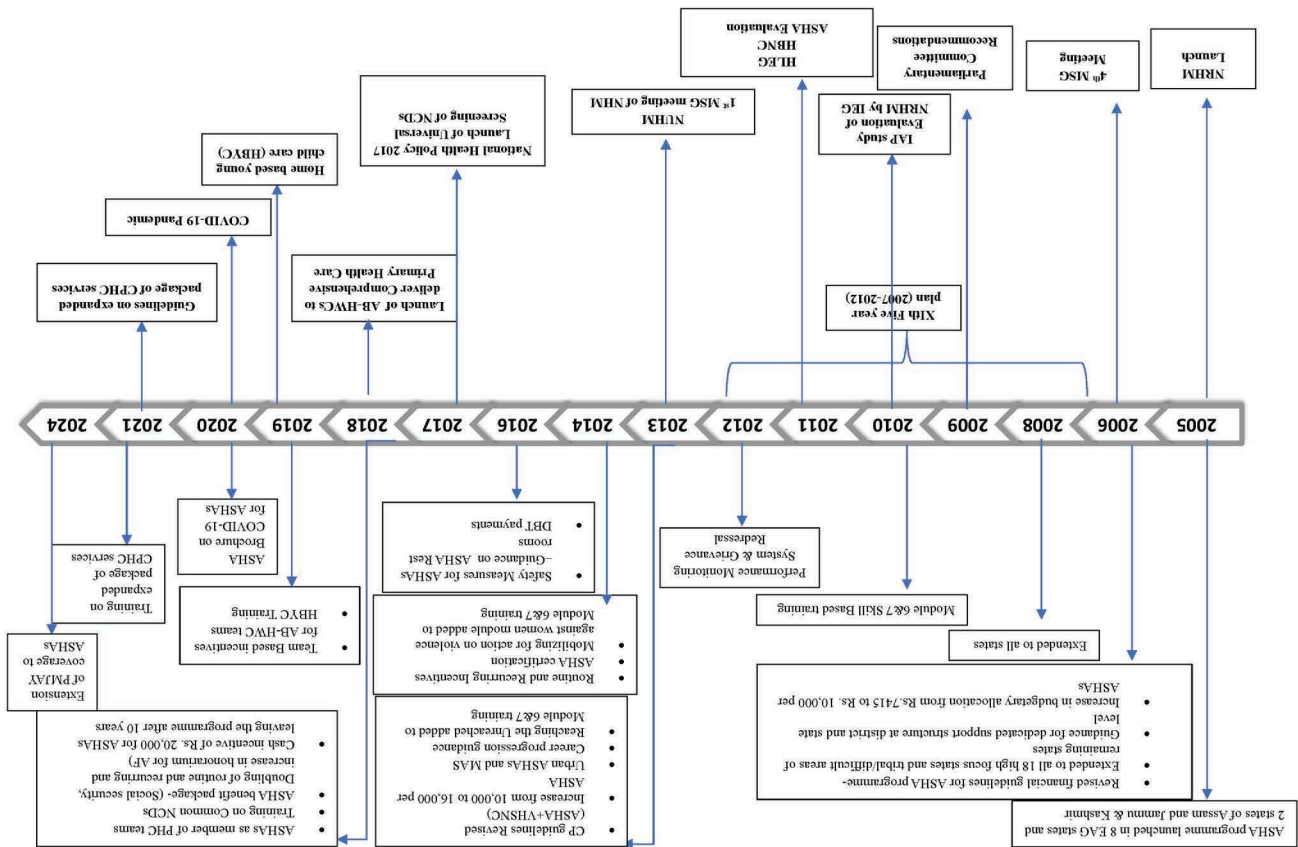


FIGURE 12.3 Brief timeline of the programme.

Note: Figure adapted from Community Process – ASHA National Health Systems Resource Centre (nhsrcindia.org). Copyright by the GoI.

ASHAs in promoting the utilisation of public healthcare facilities for RCH services (including immunisation and family planning) and treatment of chronic diseases has also been documented by HLEG (Planning Commission 2011). The provision of community-level care by ASHAs is validated by data from ASHA evaluations, reflecting a high proportion of respondents seeking advice for care from ASHAs in cases of common childhood illnesses (84%), maternal complications (60%), and newborn complications (50%) (NHSRC 2011; NHSRC July 2012; NHSRC January 2014). In terms of health promotion, strong correlations were reported between adoption of recommended healthy behaviour by mothers and interaction with ASHAs (Burger *et al.* 2022).

Health indicators related to maternal and child health and some infectious diseases have made steady progress since the launch of the NRHM in 2005. The maternal mortality ratio has reduced to 97 per 100,000 live births (2018–2020) (SRS 2020) from 254 per 100,000 live births in 2004 (SRS 2009). The infant mortality rate has declined from 58 per 1,000 live births in 2004 (SRS 2004) to 28 per 1,000 live births (SRS 2020). A comparison of data from National Family Health Survey 3 (NFHS-3) (2005–2006) and NFHS-5 (2019–2021) shows a significant increase in institutional births from 40.8 to 88.6%, full immunisation rate from 43.5 to 76.4%, and adoption of modern methods of contraception from 48.5 to 56.5% (NFHS 2006, 2021).

In early 2020, the COVID pandemic thrust upon the ASHA several roles which cemented her role as being critical for the public health programme. The *WHO Director-General's Global Health Leaders Award* was conferred on the ASHAs at the 75th World Health Assembly for their outstanding contribution towards protecting and promoting health and their crucial role in connecting the community with the health system to ensure primary healthcare services.

ASHAs supported the prevention and management of COVID-19 through community-level surveillance, creating awareness about COVID-19, facilitating early detection and timely referral, following-up with COVID-19 patients, identifying and following up with high-risk individuals with comorbidities, and maintaining important reports. They worked tirelessly for continued access to essential healthcare services, such as immunisation, ANC, safe delivery, and availability of medicines for chronic NCDs and communicable diseases. Some positive stories reported from the states included 1) close collaboration between ASHAs and VHSNCs/MAS; 2) extensive support provided by ASHAs to marginalised individuals/households, especially in cases of migrant returnees, distribution of home care kits to patients in isolation, and mitigating stigma associated with COVID-19; and 3) doorstep delivery of medicines for patients with chronic illnesses like TB, hypertension, and diabetes. During the pandemic, an additional monthly incentive

of INR 1,000 for ASHAs and INR 500 for ASHA facilitators was added for undertaking COVID-related tasks in 2021 (NHSRC 2021).

A key objective of the ASHA programme, with other communitisation efforts of the NHM, is to enable access to care for the most marginalised and the vulnerable. Selection of ASHAs from marginalised communities, combined with the NHM's assured free services and cash entitlements (e.g., Janani Shishu Suraksha Karyakaram (JSSK)), free 108/102 ambulance services, and Janani Suraksha Yojana (JSY), contributed to increased access and coverage for poorer quintiles. Analysis of data from large-scale surveys indicates ASHAs contribute significantly to reducing healthcare inequalities and promoting inclusive healthcare, especially for maternity health services (Agarwal *et al.* 2019; Mishra *et al.* 2024). Findings suggest that women from low socio-economic groups had the highest odds of receiving ASHA's services. However, these reports also mention that the high reach of ASHAs alone could not eliminate the disparities in the utilisation of health services faced by women from different socio-economic groups. ASHAs' impact on improved birth preparedness and institutional delivery rates among women from low socio-economic status was attributed to their strong rapport built with the families through regular home visits.

ASHAs' effectiveness in fully realising the activist role and improving coverage to the marginalised is affected by social barriers (socio-cultural and gender norms within which they function) (NHSRC 2011; Saprii *et al.* 2015; Sarin & Lunsford 2017; Ved *et al.* 2019). Nonetheless, there is also evidence to suggest that ASHAs have established their credibility in the community by exercising their agency and have accrued vast social capital, which can be channelled to enable equitable access to healthcare (Kane *et al.* 2021).

ASHAs have consistently demonstrated their agency when faced with situations demanding immediate action. In many instances, they have gone beyond the call of duty to support their communities. It is worth noting that often, skill-building for ASHAs came subsequent to their immediate response to an emergency situation. Few such documented examples include the role played by ASHAs to support their community during natural or man-made disaster-related emergencies: 1) Odisha, during Fani Cyclone in 2019 (NHSRC July 2019); 2) Assam, during floods in 2014; 3) Jammu & Kashmir, during floods in 2014; 4) Uttarakhand, during floods in 2013; and 5) Assam, during the Bodo and Muslim conflict in 2012 (NHSRC January 2015).

ASHAs are envisaged to play a central role as member secretary of VHSNCs and MAS to advocate for community's health needs and mobilise these committees to act as a platform for addressing the social determinants of health at the community level. On the other hand, VHSNCs and MAS are expected to create an enabling environment for ASHAs to function effectively at the community level. However, progress in terms of training and functioning of VHSNCs/MAS has not kept pace with the ASHA programme (Varshney *et al.*

2022; Azeez *et al.* 2021; MoHFW CRM 2021, 2022; Srivastava *et al.* 2016). Of the total VHSNCs formed, 77% have been trained and only 63% have ASHAs as member secretary (NHSRC 2023). Few states like Chhattisgarh (NHSRC January 2012) and Odisha (NHSRC January 2013) have shown that ASHAs, with adequate inputs and support, can play a facilitatory role in the formation and functioning of these collectives.

3. Conclusion

The past 19 years of health system reforms, including ASHAs, have shown significant positive outcomes, guided by policy shifts informed by multiple sources of evidence. ASHAs themselves were influencers of policy change. The network of support structures extending from the sub-block, block, district, and state levels, financed by the NHM, constituted an important mechanism whereby local ASHA issues, successes, and challenges could be escalated/elevated to state and even national levels. Regularity of incentive payments, creation of ASHA restrooms, and training in gender-based violence are all evidence of ASHA local action, leading to policy change in the national programme.

Over the years, ASHAs have organised themselves along more visible forms such as the ASHA unions (EPW 2022), but lesser known is the local support mechanism they have built independently, which enables them to seek and obtain redress in instances of harassment or payment delays. The basis of this could be attributed to programmatic design that emphasised on community-led selection; ASHA's role as member secretary of community collectives; in-person residential training (as a form of building solidarity and encouraging peer learning); monthly meetings at the cluster and sector levels; and annual meetings at the district level. The various forms of non-monetary/social recognition to the ASHAs also contributed to the social capital garnered over the years.

The increasing centrality of ASHAs within a paradigm of primary health-care strengthening is no longer in question. However, as India moves along the trajectory to achieve universal health coverage, the ASHA programme needs to be reconceptualised across all parameters of functionality so that she continues to be seen as a core element of the primary health system, continuing to serve the function of highlighting community needs and demands to the health system, and interfacing with the system to ensure the delivery of high-quality services to the community.

The ASHA programme was characterised by centralisation in early years, which was important for establishing norms and standards to enable scaling up, but as the capacity for decentralisation improved, more flexibility was afforded to states. India's geographical, demographical, and epidemiological cultural and social context across and within states necessitate that states and districts be provided additional capacity to design locally relevant roles and tasks and corresponding incentives, within a framework of

standardised competencies and performance. Centrally led guidelines that served the programme well in its early years now need to support a centrally funded and state-led programme, with flexibility for local sub-district variations. At the same time, there is also the need to maintain a balance between states' priorities and the centre's policies specifically in the case of programme strategies that may deviate from the core principles and values of the ASHA programme.

The launch of the CPHC reforms, through the AB-HWCs, in 2018, signified the shift in approach from selective to CPHC and triggered several changes not only for the delivery of PHC but also with significant implications for the ASHA. *Report of the Task Force on CPHC Rollout* (MoHFW 2015) clearly articulates the role of the ASHA in delivering CPHC. It states: 'The HWC needs to leverage the network of ASHAs, and the VHSNC to optimize the production of health, which is distinct from the management of disease'. Specific functions include risk assessment and screening for early detection of those at risk, enabling continuity of medication and follow-up with patients for secondary and tertiary prevention, and enhancing the supportive environment in the family and the community. As the burden of chronic diseases increases, ASHAs could also potentially serve as the fulcrum for organising patient support groups to improve treatment compliance, enhance awareness through health promotion, and engage with not only those with disease but also with family members and the community at large.

The ASHA with her community embeddedness and social capital built over the years, which transcend the boundaries of the health system, is well placed to enable such long-term engagement. The design of CPHC reforms and the addition of a community health officer enabled the conceptualisation of a primary healthcare team, making the ASHA in the jurisdiction of the HWC a key member of this team.

Given the evolving multiplicity of the programmes and complexity of activities ranging from household visits for health promotion and follow-up care to outreach and mobilisation activities to health facility visits for patient navigation support, for attending training and meetings, there is reported criticism on the increasing workload of ASHAs. Reports indicate that ASHAs are working for more than the stipulated periods of 3–4 hours per day for 4–5 days per week. ASHAs also perceive they are on call 24x7 for community members (Garg *et al.* 2022; Manjunath *et al.* 2022; NHSRC January 2017). In light of the epidemiological and demographical transition, the inclusion of community-level elements related to chronic diseases in ASHAs' responsibilities is inevitable to keep her role meaningful, relevant, and sustainable. Addressing the complexity and multiplicity of the emerging programme needs a robust primary healthcare team and a highly functional HWC. This reconfiguration will require changes in her training, support, payment, work organisation,

and the ability of the primary healthcare team at the HWCs, as well as the broader system, to internalise this change and view the ASHA as it's integral part. For instance, there is an urgent need to reimagine the way in which outreach campaigns and household visits are conducted by ASHAs to improve their efficiency. This would, however, require true convergence between the vertical programme lead teams at the national and state levels.

With the advent of the CPHC reforms, provisions have been made to equip ASHAs with smart phones along with other members of the primary health teams. A comprehensive and easy-to-use application has the potential to act as a job aid for ASHAs by easing her burden to maintain multiple (duplicate) records and providing her with actionable data insights (for disease surveillance, risk assessment, prioritising follow-up with individuals at high risk and poor treatment compliance) to increase her productivity. However, such IT interventions are only meaningful if they are implemented at all levels of care, linking all programmes, to allow care continuum. In addition, the systems should also link the supervisory cadres of the ASHA programme to support monitoring of important programme components like timely payments, grievance redressal, kit replenishments, and training.

Innovative and interactive mobile-based training packages can also complement the ongoing efforts of periodic training and act as a ready reckoner for ASHAs in few identified areas.

Effectiveness of digital technology in the case of ASHA requires technology to be customised to the ASHA's needs and cognizant of their existing workload, skill sets, and digital literacy.

Given the rapid urbanisation in India and the current organisation of health systems, which are not as well structured as in rural areas, there is a need to strengthen the urban primary healthcare system with ASHAs playing a critical role. However, given the heterogeneity of population and the availability of other employment opportunities, the skills and capacity to address the linked social and environmental determinants require better role clarification and support systems.

The ASHA programme can be characterised as a learning health system, with constant adaptation based on evidence and field insights. It requires substantial investment in research, particularly in areas such as ASHAs in urban areas, action on social determinants including gender and inequity, digital technology, and quality and continuum of care.

Nearly two decades of implementation have built agency in the ASHA who are now empowered to negotiate the system on behalf of the community and to also confront on issues of disrespectful care, lead demands for fair compensation, healthcare access, career progression, social security, and safety measures. The system will need to address these issues to sustain their motivation and spirit of the ASHA programme.

ASHA is not a stand-alone programme; it is interconnected with the multiple health system actors. ASHA's effectiveness is dependent on the responsiveness of the health system, the level of support they receive from the programme management, and the kind of local context in which they operate. Leveraging them as important members requires that their community linkage and social capital is used to minimise the hierarchical boundaries that are characteristic of the health system and to enhance the people-centredness of health services.

Notes

- 1 The NHM encompasses its two sub-missions, the NRHM launched in 2005, and the NUHM launched in 2013. Home:: National Health Mission (nhm.gov.in)
- 2 Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, UP, and Uttarakhand.
- 3 Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, UP, Uttarakhand, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, and Jammu and Kashmir.
- 4 Provision of the HBNC by ASHA also required the ASHA be provided with an equipment kit (a newborn weighing scale, a watch, and a thermometer) and enabled the introduction of cotrimoxazole into the ASHA drug kit.
- 5 ASHA evaluation phase 1 (2010–2011) covered eight states (Assam, Bihar, Odisha, Rajasthan, Jharkhand, Andhra Pradesh, Kerala, and West Bengal); phase 2 (2011–2012) covered three high focus states (Madhya Pradesh, UP, and Uttarakhand); and phase 3 (2013–2014) covered five non-high focus states (Delhi, Gujarat, Haryana, Punjab, and Maharashtra).
- 6 Enhancement of the existing ten incentives for multiple programmes (immunisation, NTEP, NLEP, and NVBDCP) and six new incentives (child health, immunisation, NVBDCP, and routine and recurring incentive).
- 7 Jharkhand, Madhya Pradesh, Odisha, UP, Uttarakhand, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Andhra Pradesh, Delhi, Gujarat, Haryana, Karnataka, Punjab, Tamil Nadu, Telangana, West Bengal, and Ladakh (*Source* – ASHA Update 2020–2021).
- 8 Rajasthan, Kerala, Himachal Pradesh, Jammu and Kashmir, Andaman and Nicobar Islands, Lakshadweep, Daman and Diu + Dadar & Nagar Haveli, and Puducherry (*Source*: ASHA Update 2020–2021).

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BUILDING CAPACITY IN PUBLIC HEALTH SYSTEMS: EXPERIENCE OF THE NATIONAL HEALTH SYSTEMS RESOURCE CENTRE AND THE MITANIN PROGRAMME

T. Sundararaman

I. Introduction

Health sector in general and public health systems in particular are described as complex adaptive systems (Moore *et al.* 2011). This term denotes all systems having numerous components and parts in a relationship with each other and constantly interacting. Each individual component has its own dynamics/autonomy, making the systems more uncertain and unpredictable in delivering outcomes (Moore *et al.* 2011). The changes could be non-linear because small changes in a component can have large effects across the entire system – the butterfly effect.

Typically, these are open systems in continuous interaction with the external environment. Most importantly, there is learning and adaptation because of feedback in the individual components and the level of divisions or clusters and across the system (Savigny & Adam 2009).

Does such an elaborate description have any practical value for health Systems strengthening? One reason the subdiscipline of health policy and systems research has engaged with this concept is to provide a framework to understand the challenges in strengthening public health systems to meet expectations. We present two examples of positive stories which also throw light on some general principles that can guide both policymakers and practitioners in future efforts at health system strengthening. The first example narrates and discusses the emergence of the Mitaniin (a Chhattisgarhi word meaning ‘female friend’) programme in Chhattisgarh and why it was successful, in contrast to many earlier efforts at scaling up community health worker programmes. We also discuss the creation of the National Health Systems Resource Centre (NHSRC) to show how this approach could apply to addressing many

problems of health systems the National Health Mission (NHM) has been facing.

Capacity building is another term increasingly used to describe the entire range of actions/interventions involved in improving the effectiveness of a health programme or systems. In common parlance, capacity building is often referred to just training programmes leading to an increase in knowledge and skills. But, in the health systems context, capacity building is all that goes into creating the ability of an organisation to fulfil its goals and objectives. This includes the skills of the current workforce and also the existing mix of skills and professional competence in the workforce. Capacity building goes beyond human resources to include considerations of whether the organisation has the required mandate that provides it the acceptance and legitimacy and relationships and whether institutional framework required to perform its mandated task. Financial resources too are important. Even with respect to knowledge, while the formal qualifications and stated skills of the staff are important, permeability of knowledge across institutions is more important. This enables the organisation to acquire new knowledge from several sources and stream it into use to improve the effectiveness, efficiency, and quality of services they deliver. Participation in networks play an important role in this. In short, capacity building is a lot about institutional design of organisation to continuously learn and adapt.

We note that this is not the only paradigm in which health system strengthening is presented. It is not even the main paradigm. Since the mid-eighties, a discourse called 'New Public Management' dominated health policy thinking. In this framework, all problems of public services relate to the absence of market mechanisms (Fakhrul 2015; Russell *et al.* 1999). Public health services are inefficient and of poor quality because of no incentive for better performance to management and providers. Budgetary allocations based on bureaucratic decision-making do not adequately assess the requirements or utilisation patterns or even needs. Clients have no alternative options, the lack of choice leads to poor quality, and a lack of attention to client satisfaction prevails. The solution in this framework comprises strategies to make market forces work and set prices right. However, keeping in mind the health markets that occur due to information asymmetry, the proposed solutions are different forms of intervention where the government purchases healthcare from private providers for those who need it. Unlike individual patients, Government can negotiate prices with providers and regulate provider behaviour through appropriate contracting. Furthermore, such a role may be prioritised for those services that are in the nature of public goods and some services that are merit goods or have high externalities. The rest can be left to markets.

The 'new public management' thinking Outline above informed most health sector reforms of the structural adjustment years these reforms did not work (Russell *et al.* 1999). But since this was the only theoretical framework available on health

sector reforms, correctives involved either newer and innovative forms of purchasing or a return to the earlier bureaucratic frameworks. These earlier frameworks sought to locate governance problems in structures and skills and would, therefore, focus on job descriptions, organograms of the administrative hierarchy, training of managers, and improved monitoring and supervision. Innovation was equated with market-based reforms in the former approach and was not a part of the thinking in the latter approach.

With the rise of institutional analysis frameworks, of which the most well-known is the Institutional Analysis and Development (IAD) framework, another approach to health sector reform was articulated in terms of institutional design and closely related concepts of institutional and organisational capacity (Polski & Ostrom n.d.). One simple explanation of the difference between institutions and organisations is given in Elinor Ostrom's Nobel acceptance speech: 'Institutions are the rules of the game, while organisations are players of the game'. The IAD and other institutional analysis can and have been used along with market-based reform understandings. But these can also be used in a non-market-based approach where the key to health system strengthening is conceptualising health systems as complex adaptive systems (CASs) whose institutional design must be tweaked to develop the organisational capacity required to meet their objectives.

II. The Mitanin Programme

Mitanin programme is the name of a now 72,000 strong women community health workers part of the public health systems in Chhattisgarh (State Health Resource Centre (SHRC) n.d.a). In 2000, the state was carved out of the eastern and most under-developed tribal districts of Madhya Pradesh. The reason for creating this state was a high degree of under-development and vulnerability. This was reflected in the public health sector having less than 50% of the required number of public health facilities. Today, 22 years later, these gaps no longer exist, and there are 11 medical colleges compared to one, 33 district hospitals compared to 11, and 187 community health centres (CHCs) and 765 primary health centres (PHCs) compared to 116 CHCs and 517 PHCs previously. In 2001, there were only 3,818 sub-centres compared to 5,245 currently 40% staff positions were vacant (SHRC n.d.). The number of functional institutions of health professional education in 2000 was also limited, and the required workforce could neither be generated nor retained. Health outcomes were one of the worst in India, with infant mortality rate (IMR) highest, and worse than that of the undivided Madhya Pradesh.

An urgent measure for strengthening access to health services in such a crisis was to establish a state-wide community health worker programme.

Their role was envisaged as ensuring the health rights of people; promoting healthy behaviours and health practices, especially on child nutrition; encouraging appropriate healthcare-seeking behaviours; ensuring community participation; enabling community outreach and access to medicines and healthcare; and also training them to provide medical care for certain common ailments where delay in treatment could be life threatening, specifically diarrhoea, childhood pneumonia, and malaria (Garg 2022).

The concept and effectiveness of community health workers (CHWs) were not new. In India, many NGOs had achieved this, usually at the scale of about 30–100 villages. In these programmes, a woman volunteer, chosen by the community and resident of the same habitation, with appropriate training and support, carried out the above roles quite effectively. However, these programmes failed whenever governments tried to scale them up. Notable recent failures were the nation-wide village health guide programme of 1980, the *Jan Swasthya Rakshak* programme in Madhya Pradesh in the end-nineties, and a woman health volunteer programme in Andhra Pradesh in the early 2000s (Reaching health to the grassroots: The Jan Swasthya Rakshak scheme of the government of Madhya Pradesh: A participatory interactive review 1997). As a result of this, the dominant understanding in development partners, public health professionals, health administrators, and a significant portion of civil society was that such a programme was not feasible, and if this was just a low-cost alternative to a regular qualified and trained workforce, it was not desirable.

The failure to scale up and sustain was attributed to a multitude of reasons. One obvious barrier was the governments' inability to appropriately select, train, supervise, and support the huge numbers required. 'Cascade training', as it was called, was associated with poor training outcomes. Another was the challenge of managing incentives and support on scale and the difficulty of sustaining voluntarism over time. A core issue was the lack of clarity and often contestation on the roles and responsibilities of a CHW as different from other frontline cadre and the question of their accountability to the community vis-à-vis accountability to the government. One general question was on the ability of illiterate or semi-literate rural women to play the desired role. Even today, there are about 9% illiterate Mitanins. In the initial days, over 30% of Mitanins were illiterate because in their habitations a suitable literate woman could not be located. But perhaps the most difficult conceptual question was the challenge of leadership and governance. The well-known NGO success stories with CHW programmes were associated with leaders who were inspirational and highly competent and charismatic like Dr Antia or Dr Arole or Abhay Bang. But, would it be possible to manage such a programme with the average bureaucrat or medical officer as the leader?

Every one of these ‘problematics’ persist, although with changes in the health system and political context the solutions could differ. In the first pre-NRHM phase, the Mitadin programme was still evolving, its relevance was contested, and its financial support was part of an externally aided sector investment programme. With the coming of the NRHM, the programme was rolled out state-wide. It had full support from the central and state governments through the NRHM, and its ‘success’ was accepted. The period that followed saw the NRHM and Accredited Social Health Activist (ASHA) programme well established nation-wide and Mitadin as the only state programme among many having to conform and maintain its unique identity. The current period follows the adoption of National Health Policy 2017 and the universal health coverage (UHC) agenda. At every one of the four listed phases, the Mitadin programme was part of a larger health system strengthening effort, with the main themes of strengthening public health facilities, decentralising or at least professionalising management, and improving community engagement (JP 2011).

The first phase of the programme, the pre-NRHM period, began with outsourcing 12 pilot blocks to six NGOs and two pilot blocks to a district health society playing the same role. They were not pilots in the proof-of-concept sense but were a phase of capacity building. In this phase, a State Advisory Group of NGOs and selected officers was formed to guide the programme, including a consultative group of the implementing NGOs. There was also a professional team put together as a newly created institution, the State Health Resource Centre (SHRC), defined as an ‘additional technical capacity’ of the health department. Initially (in 2002–2004), the SHRC was formed as a public–civil society partnership with a rights-based NGO, ActionAid, to help the state with its health sector reform programme (JP 2011). In 2005, it was delinked from the NGO and became a para-statal organisation with the state health society with its own governing board. A civil society leader was the chairperson, the director of the SHRC member secretary, and the three senior officers of the department its members (JP 2011). This ensured transparency to the government of all discussions and decisions that were done in consultation. In its own internal development and functioning, however, it had considerable autonomy. The relationship was of being part of the government, and yet at arm’s length from it (Sundararaman 2023; Samir, G 2022).

It is important to note that three of the six NGOs of the pilot phase were mainly those with total literacy campaigns. This gave them close links with the community and the ability to work on scale. These were the *Bharat Gyan Vigyan Samiti*, the *Durg Zilla Saksharata Samiti*, and *Lok Shakti* in Raigarh. The other three, Rupantar in Dhamtari, RAHA in Jashpur, and Ramakrishna Mission in Kanker district, were NGOs that had ongoing community health programmes in that area for over a decade. The presence of the first set of NGOs built upon the strategy of mobilisation of the total literacy campaigns,

including the extensive use of *kalajathas*, and organised *prerak* selection and training with the involvement of the community. Their inclusion in the leadership gave a firm rights-based mobilisation approach to the programme and overcame some of the traditional problems associated with government managing community programmes (Sundararaman 2023a).

When the programme went into its second phase and scaled up to 66 blocks, more NGOs were added, and some of the existing NGOs allocated more blocks. This did not work. All the effective NGOs were already in the first phase, and the rest couldn't perform. Allocation of more blocks to existing NGOs also did not work, since the increasing burden of administrative and financial management on scale was a challenge to field NGOs. There were increased internal dissensions and poor coordination with district health societies, subsequent to larger money flows. Clearly, going to scale wasn't possible for NGOs. For most of the blocks, governance had to be based on what we had learnt from the two district health society-led blocks of the first phase. In the next phase, when NRHM funds kicked in, the programme expanded to all the remaining 66 blocks of the state; as a result, most NGOs were phased out (Sundararaman 2023a).

This phased evolution served an even more important purpose. In phase one, the basic design of the programme was tested, and the tools were developed. In the list of tools, training manuals, drug kits, programme guidelines, and government orders were included that enabled the programmes and even the informal conventions and norms of how we behave with volunteers and communities and officers. The programme design had to withstand contestation from two other alternatives to the State Advisory Committee's (SAC's) design. One was the Malaria Mitadin approach, which was a very loose form of mobilisation with limited training and support. In contrast, the SAC's *Swasthya* Mitadin programme had a highly structured intermittent training programme, and a full-time trainer provided job mentoring and support to every 20 Mitadins and a team of district and sub-district master-trainers. The other approach was training existing informal/unqualified village health-care providers and linking them to panchayats to provide healthcare on a market-based fee-for-service approach. The relatively slow progress of the *Swasthya* Mitadin programme was compared unfavourably with the other two approaches that went to scale and reached state-level coverage much faster. However, the other two did not sustain nor had a comparable impact, whereas despite dire predictions the Mitadin programme survived, slow but steady like the proverbial tortoise, reaching a total coverage by 2006 and sustaining thereafter.

If phase 1 was about evolving the design, the tools, and the state capacity, phase 2 was about expanding from the pilots to a few blocks from every district helping evolve district capacity and developing the mid-level management structures that scaling up required. By 2006, in the

NRHM period, a mere 3.5 years since the pilots were initiated, the programme reached all blocks in all districts. Two other developments added credibility to the SHRC efforts. One was the remarkable decline in IMR as per the Sample Registration System, considered the most reliable source of such data and improvement in child nutrition performance, especially on selected indicators like breastfeeding. The other was the coming of the NRHM in 2005 and its adoption of nation-wide CHW programme, which drew its inspiration and its strategies from the Chhattisgarh success.

This success was due to the performance of district health societies and several individuals in the state health society and directorate and some key IAS officers. However, the continuity of the Mitadin programme over two decades was because of the preeminent champion, innovator, and implementor (Devaki, N. 2012; Samir G, 2022).

In the first phase, the SHRC's contribution was its ability to network and learn from experiences across the country and to engage local NGOs with considerable domain experience in social mobilisation, community engagement, and community health. Being a part of several civil society and professional networks helped identify barriers past programmes faced; learn from past NGO experience; publish such learnings as internal working papers and address the issues on the field; and institute correctives based on systematic collection of feedback. There was also engagement with the theory and practice of scaling up, a question at that time attracting considerable academic and policy attention. Extensive internal evaluation in late 2004 followed by a combative external evaluation and the withdrawal of external funding support were also major learning opportunities.

In 2005, when the NRHM appeared on the scene, the SHRC led an active engagement with the evolving ASHA programme to shape and adjust key features of its own programme to match it. A reason Mitadin programme remains young, innovative, and creative since formulated 22 years back is because of the institutional memory and the continuity SHRC provides. For every change in the administrative or political level, or even at the district level, it's upon the SHRC team to meet them and sensitise them of the programme strengths and its challenges and share the ownership of the programme with them.

In the first 5 years, five training modules were developed, but every year from thereon new training modules on newer areas of intervention and on reinforcement of earlier messages are introduced, and the entire cycle of training is repeated. In the first 5 years, the focus was largely on child nutrition, child survival, and care in pregnancy. Thereafter, three disease control programmes on tuberculosis, leprosy, and malaria were added. Since then, more and more health priorities were introduced. With the coming of UHC and comprehensive primary healthcare, training on non-communicable diseases, mental health, and elderly care have also been included. Every newly

developed training module requires consultations with the NHSRC, with their field staff and with resource persons across the country to get the content right and adapt it to suit the context. The presence of such an institution with a learning and adaptation mandate, much gets done to ensure top-down instructions are adapted to context and forced to take the programme to the next stage.

Selecting Mitanins followed an intensive process during the first phase with first sensitising the community using kalajathas and then facilitating selection through a trained mentor. After the funding shifted to the NRHM, the eligibility instructions changed and the selection process became less rigorous. As the programme continued into the next decade, rules were required to retire or drop poorly functional Mitanins and fill up the vacancies. So too was with the trainers. Initially all trainers were selected from NGOs, but this changed to fresh recruitment. As the programme matured and went into the next decade, trainers became largely by 'promotion' of well-functioning Mitanins. In the instance of financial support and incentives, the first phase training was completely voluntary except for some full-day compensation when attending training sessions. With the NRHM, certain activities got linked to monetary incentives. The payment was minimum and inconsistent. Till 2009, the average incentive was around INR 300 per month. On paper, several incentivised activities existed, but on the ground the claims and payments were limited to activities like *Janani Suraksha Yojna*, family planning, and immunisation only. In the second decade, a regular monthly incentive of about INR 1,000 was linked to routine, and recurrent activities were introduced by the NRHM. In 2013, the state government supplemented her earnings by introducing 50% top-up against her earnings from the NRHM, and this increased over time. Digitisation of payments also ensured more reliable and convenient access to payment. Going a step ahead, in 2023, the state government introduced a fixed amount honorarium of INR 2,200 per month over and above her earnings from the NHM and 75% top-up from the state government. The programme in its third decade has witnessed honorarium payment to Mitanins along with performance-based incentives. The composition of performance-linked incentives and regular incentives has changed. The Mitanins' performance in the COVID pandemic was incomparable. In the third decade, especially after acknowledging the immense role Mitanins played in the COVID pandemic, the state governments' fixed honorarium and top-ups increased. Now each Mitanin gets about an average of INR 6,800 per month. The thinking about payment has changed, and it is now seen as a right. In the first period, the work was less than 12 hours per week and was additional to her regular earnings from another occupation. But now the rural and urban Mitanins, respectively, spend 25.3 and

34.8 hours per week on their CHW work (SHRC n.d.) and are treated as full-time workers. So, a reasonable and fair expectation, that the strategy of incentives and payment change accordingly.

In short, there is not a single protocol or instruction or programme, component that did not continuously evolve and change over the years. What remained constant were certain principles. Without its ability to evolve and adapt, this programme would never have got far. Today, 22 years after its inception, the programme has over 70,000 Mitanins, about 3,450 Mitanin trainers, and 500 coordinators, all of whom are a part of the public health workforce. But, there are new challenges.

The SHRC's role is far more than managing the Mitanin programme. It is involved in guiding many aspects of the health system's strengthening efforts. The SHRC has now been through seven directors and commands over the 350 million budget. Such a learning was internal and was assisted by the civil society networks and academics the SHRC team had built linkages with. These networks reached out to almost every agency having community work experience within the country and internationally. Mitanin experiences were presented as publications in international conferences. Several internal and external evaluations have been fed into the process. So, when we talk of capacity building in the programme, the single most important aspect is designing and managing an institution like SHRC so that it is a site of active and continuous learning, adaptation, and innovation. The features of institutional design we would draw attention to is how its mandate and constitutional space (vis-à-vis other organisations) are defined so that it has both autonomy and ownership, and how its internal structure and human resource and knowledge management are organised so that it fits the purpose, and finally, how its linkages and partnerships outside the organisation are built and sustained.

III. The National Health Systems Resource Centre

In mid-2004, a centre-left political alliance came to power. Its political agenda had been strongly critical of the earlier governments' programmes in the social sector. The earlier government was assured of its achievements and popularity and attributed it to its economic policy it had captured in their slogan 'India Shining'. However, the centre-left (UPA alliance) that came to power had built its campaign on the platform that enough wasn't done for people's welfare and only the rich benefited from the economic policies. The UPA alliance, therefore, launched a number of welfare measures within its first 3 years. These include the Rural Employment Guarantee Scheme, the Right to Food, a huge expansion of Integrated Child Development Service (ICDS) centres, the Right to Information, and the Right

to Education. In the health sector, the UPA's flagship programme was the NRHM.

The NRHM design took over 18 months. The first draft was returned by the political leadership. Nine task forces were constituted to rework on the draft, which took considerable discussions to finalise. The NRHM was designed on a thesis that could be characterised as follows: It is not enough for the centre to limit itself to family planning and maternal and child health and a few national disease control programmes. It had to play an active role in state health system strengthening. In the previous decade, health system strengthening took the form of external donors funding health sector reforms, which were aligned to the structural adjustment reforms. The UPA, however, was a strong advocate of strengthening public health services but conceded that public health services were far too dysfunctional, and pumping in money without attending to its defects would not be productive. The reforms required differed from the earlier health sector reforms, and to mark the difference, the structural reforms proposed under the NRHM were called *architectural corrections*.

The broad framework of architectural corrections was community engagement, decentralisation in planning and financing, improved human resources and its management, setting of public health standards, and monitoring against such standards and professional public health management.

Since health systems were part of the state list in the constitution, the actual set of interventions within this broad framework had to be proposed by the state government, and through a joint discussion, this programme implementation plan (PIP) and its budget were approved. The record of proceedings (ROP) of the discussions leading to its approval thus became the equivalent of PIP sanction.

There were many challenges to implementing these 'architectural corrections'. The central challenge was of capacity. States, much less the districts, had no capacity to make plans, draft budgets, and then carry out reforms. The technical assistance came from external-aid agencies, which were largely inspired and informed by structural adjustment reforms or focused on individual disease control programmes and reproductive and child health (RCH). There were state and central institutions for capacity building and technical assistance, but they limited themselves to training programmes related to clinical and managerial skills. Seeing themselves as implementors, the understanding of capacity building as different and more than just training was elusive.

In this context, and by recommendations of one of the nine task forces, the NHSRC was created in 2007. Its formation and functioning were kept free of external assistance and 'technical assistance', which was financed by the donors (referred to as the development partners). The main donors had strongly supported creating the NHSRC for technical assistance, but their

vision was of an agency that would mobilise the requirements for technical assistance from states and match it with consultancies providing technical assistance – a sort of clearing house for technical assistance.

A reason the NHSRC could chart a different path was because it was brought a carefully constructed governing board that could provide a different direction and quality guidance. The administrative leadership was willing to bring in system experts from different domains and listen to them. Thus, the NHSRC could emerge as a driver, an innovator, and a think tank for strategic thinking. A criticism was that this was not its expected role, and it should limit itself to implementation functions as assigned by the ministry. But as the NHSRC leadership would characterise it, the NHSRC was *additional technical capacity*, and additional meant additional minds, not just additional hands.

To what extent are the NHSRC or SHRC's think tanks and innovators part of decision-making and to what extent is their responsibility limited to implementation? In what ways do these institutions need to be autonomous to build/sustain their own organisational capacity, and in what ways do they need to be subordinate and an extension of the ministry so that they have an accountability for programme outcomes?

External consultants and technical assistance agencies do not share the accountability for outcomes, but the NHSRC does. Autonomy does not mean the NHSRC can raise criticisms in the public domain, but it needs autonomy to sustain and develop its organisational capacity. Part of this capacity is due to the skills of its recruits and its dependence on work allocation internally, how it is networked externally, and how individuals and teams can develop their skills.

The NHSRC was created with three broad roles: capacity building for the NHM, technical assistance for health system strengthening, and a think tank on health policy. These roles can be traced across documents. More importantly, this is how the leadership perceived the roles (as stated in their testimony).

To implement its mandate, NHSRC divisions were constructed around six themes. The mandate to the new executive director was to talk to all stakeholders and report back. After 3 months of consultations, the format suggested and accepted comprised six divisions: 1) planning, 2) human resources, 3) financing, 4) quality assurance, 5) health information, and 6) community processes. A seventh, public administration (governance), and an eighth, health technologies, were added later. The same year, WHO published its manual on health system matrix with its now very popular six building blocks. This was similar to what the NHSRC arrived at, but these developments happened in parallel. The building blocks differ, despite their similarity. Based on this demarcation of work, six advisors were hired to lead each of these areas, and they recruited two- or three-person teams. Today,

15 years later, the divisions have altered and the teams are much larger, but the principles are the same. This narrative is limited largely to the first 7 years, of which the author has personal experience.

Each of these divisions also represented a domain of capacity building, and each domain had its own characteristics. The main task of the planning division was support to district planning, which was to be the basis of the state plans. This began with the drafting of NHM guidelines for district plans, followed by training teams of officers from every state on these guidelines and supporting the development of the first batch of district plans. But it did not stop there. When the state PIPs came to the NHM for approval, the NHSRC had to appraise these plans and provide feedback to the ministry and the states to ensure their coherence and their technical adequacy. It went further. The NHSRC team by itself and as coordinators of the Common Review Mission (CRM) was to monitor the implementation of the plan, learn from the gaps in the plan, and institute correctives. These activities were done with the active involvement of the corresponding officers of the ministry, although the ministry officials alone did not have the capacity to do this.

Conventionally, capacity building would be used to denote only a step in training of the officers. This is not just a semantic difference. In a highly centralised system, capacity building could mean nearly the same as training, since the rest of the processes are inflexible instructions. The more decentralised the system, the greater the complexity of capacity building.

By about 2012, district planning fell out of favour. Part of this was political, to be found in the changed character of UPA-2 compared to UPA-1. This reflected in an administration now more tuned to an assertive centralised command and control approach and had little patience with decentralisation. But it was also because of some of the problematics of the district planning approach that it could not be resolved satisfactorily. The main limitation of the district planning was the inability to develop a financing system that could match the district plan and yet retain the integrity required of the whole system. Major leakages in the programme were attributed (wrongly, in our opinion) to the flexibility given to the districts. The budget lines became far more numerous and rigid.

Capacity building for the ASHA programme was altogether another challenge. While the development of training modules and the transaction of training were central to the capacity building, much of the initial effort went into clarifying the roles and expectations of the ASHA, across national-, state-, and district-level officers and in orienting them to the different approach and sensitivity required in interacting with a community-based voluntary cadre as different from the regular routine workforce. One challenging dimension was to clarify the relations and work distribution between different frontline workers – of ASHA, auxiliary nursing and midwifery (ANM), and *Anganwadi* (childcare centre). Another was to show why her role had to be a

combination of that of the activist, the link worker, and the service provider. At the national level, there was considerable resistance to both the activist and the service provider role, with officers often pushing back and issuing contradictory guidelines. Eventually a large seven-state internal evaluation done by the NHSRC in the realistic framework helped develop a shared understanding. The CRM feedbacks, and the discussions and contestations in the ASHA mentoring group also helped.

The other big challenge of capacity building in the ASHA programme was the huge numbers involved. There was a need to scale up within 2–3 years, but training cascades were notorious for the loss of training quality. Furthermore, the entire spirit of community engagement and action could get lost in a mechanical scaling up through the administrative hierarchy. A huge and a relatively expensive effort went into building the skills and perspectives of state and national training teams. These were carefully selected, sent to a 2-week programme in the Society for Education, Action, and Research in Community Health (SEARCH) Ghadchiroli, where they not only learnt knowledge and skills but also underwent a ‘field immersion’. In the latter component, they worked daily with one or two ASHAs to fully imbibe perspectives and field realities. There was also the very careful construction of training material and training evaluation. A good training programme required quality certification not only of trainees but also of trainers, training institutions, and training curriculum. Scaling up proceeded on time and was completed within 2–3 years in some states, whereas in others it took a decade, but the adherence to process was largely sustained. Training was conceived not as a one-time activity but a continuous process, with training rounds repeated every year and several times in a year. The ability to engage and contract NGOs on mutually respectful terms was an essential element of capacity building. After training, a high quality of support and responsiveness from the main health system were essential for the ASHA programme to deliver on its objectives, and this too needed considerable work on guidelines, perspectives, and hand-holding. The NHSRC also recognised the need and led the development of an institutional framework – ASHA facilitators, community process block, and district coordinators and state and national community process teams – to work full time on this huge task. There was initial criticism of this being a parallel structure because of a lack of appreciation of the intensity of support required. However, most states soon realised such support was not something an ANM or medical officer could manage in addition to their regular duties.

When the ASHA programme started, or even when the Mitandin programme started, many in the public health and policy community referred the experience of the village health guide’s effort of 1978–1984 as a caution. They even predicted failure. The prediction seemed coming true on several occasions and at various locations. But the difference was the dedicated, sensitised

support structure and an understanding of capacity building, which went far beyond one or two rounds of initial training.

Capacity building for quality management was an altogether different story. The NHSRC and its partners launched several initiatives in the first 7 years. Initially, most efforts started out with a checklist for monitoring quality, that too for selective services. The NHSRC initiated pilot programmes built around ISO certification, using commercial management consultancies working on total quality management to improve and certify public hospital quality. It worked well in the first round, but on scaling up the management support costs shot up exorbitantly, the results varied, and maintenance was poor. This approach allowed excessive flexibility that had risks of misuse. In parallel, many states tried using the National Accreditation Board for Hospitals and Healthcare Providers (NABH) system, but again pilots were difficult and scaling up very difficult. Over time, the top management within the NHM began appreciating the difference it was making and sanctioned developing an indigenous system of quality assurance and accreditation. Named the National Quality Accreditation Scheme (NQAS), this is now the main strategy of quality assurance. Although more sustainable than the earlier efforts, the NQAS also faces the challenge of going to scale. As of now, unable or unwilling to get the necessary institutions in place, the capacity of the NHM to take the NQAS initiative to scale remains limited.

Not every engagement has a successful outcome. The NHSRC's intervention in the construction of a nation-wide Health Management Information System started well in early 2008, rationalising the amount of data sought, and building up data and indicator dictionaries and appropriate training material. Provision of training to newly appointed data-entry managers across the country followed next. An enabling government order called for a decentralised system architecture where states could run their own Health Management Information System (HMIS) applications subject to their ability to provide the information digitally to the centre on the application the centre was building. In parallel, since many states had no capacity to opt for a system and the fact that systems take time to mature, the District Health Information System (DHIS) 2 application was also introduced in the states that asked for it. This was a free and open-source software initiated by the University of Oslo and enjoying an international community of developers and support. A professor from the university was brought on deputation to lead the NHSRC effort. Still at an early stage of development, while the functional advantages of DHIS 2 over other systems were not always evident, it was clearly ahead of other options. The bigger problem was that the NHM as a whole did not buy into the decentralised approach and preferred to go with one centralised information system that would replace all others and in which all states would mandatorily have to enter the data directly. An even bigger problem was that the centralised system disallowed data analysis

and the use of information at the sub-district, district, or even state level. By 2010, states were required to leave DHIS 2 or run it in parallel with the centralised system, an option few states chose. By 2015, no state's HMIS was on DHIS 2. The NHSRC too moved out of its role in the HMIS. Today, despite changes in the centralised applications, national health management information systems continue with more or less the same centralised architecture and an intensified version of the same set of problems as earlier. Huge efforts go into entering large amounts of data, often with duplications, into multiple centralised systems that are not interoperable, while the information is hardly used either for policy or for local action.

There is a small but happy postscript to this narrative. Although DHIS 2 did not get established in India, it is now the pre-eminent application in use in over 70 low- and middle-income countries (LMICs), and its reach and effectiveness continue to expand. This provides immense digital capacity at affordable costs to many LMICs. The role played by the NHSRC in the early development of this tool is forgotten. Behind the success of DHIS 2 is its institutional support and renewal process, an excellent example of constructing a learning and adaptive system. But, as with every problematic, the struggle continues. Although designed primarily as a source of decentralised information for action, as it scales up the contestation between more centralised and more decentralised options continues even within the DHIS 2 community.

In the area of technologies, capacity building by the NHSRC had other priorities and other routes. One challenge it started with was to replicate Tamil Nadu's internationally acclaimed model of public procurement and supply chain management for public health facilities across all states. Another niche area was designing and advocating systems and, therefore, the capacity for biomedical maintenance of electronic equipment – a huge challenge the rapidly modernising public hospitals were facing. Another challenge was in issuing technical specifications, based on health technology assessment that enables procurement, by states of high-end technologies, with the right levels of functional features for the prices being charged. Although all states were grappling with these problems, it is surprising how very few external technical assistance agencies or administrators within had conceptualised such problems as systemic capacity gaps requiring innovative forms of traversing and closure.

In public financing, where everyone was rightly concerned with the quantum of financing, the problematic NHSRC started with the question that was often asked: 'If we allocate more funds, can states absorb these?' This question was raised to either argue against additional finances or outsource services, but clearly there were other problems at work. The extent of internal funds returned unspent was often more than the amount sought as external aid. The question is straightforward, but the answers are quite complex and dynamic. Often the problems lay in the cobweb of rules that enmeshes all

government expenditure. There are insiders who know to negotiate these rules, which is learnable, but often the sustainable solution was to amend these rules. The other big issue that budget line financing faces is allocative efficiency. Here again, decentralisation helps, but the pushback against decentralisation has to be understood and forded.

It would be wrong to view the NHSRC as the main site where most innovations emerged or from where they were replicated. A main form of building NHSRC's own capacity and of NHSRC building the health system capacity was learning from the vast diversity of experiences that characterise the huge multistate Indian public health system. Perhaps, the most illustrative of this approach are the annual CRMs and the National Best Practice Conferences. The CRM also includes learning from field visits and sometimes from carefully constructed evaluations. Some most important initiatives of the NHM were initially state-level initiatives appreciated by other states, which then became national models with a fair amount of adaptation and standardisation. Although they are identified which NHM now, they are not part of the design because these were not part of the approved NHM framework of implementation or the RCH programme. One such example is the Dial 108 programme for emergency response, and the other is Dial 104 for pregnancy transport. The entire Special Newborn Care Unit (SNCU) is another. The *Janani Shishu Suraksha Karyakram* (as different from the Janani Suraksha Yojana) is yet another. ASHA help-desks, ASHA welfare schemes, incentives for postings in rural and remote areas, transparent transfers and posting policies, and even the initial learnings on mid-level healthcare providers were all state-level experiences for a period of time before being adapted and incorporated into the National Programme Design (Sundararaman 2023b).

The best practices conferences began as a sharing of experience of the states once every 1 or 2 years. This has already taken place in Bhubaneswar, Pondicherry, and Bhopal before the one held in Srinagar in 2014, from where it was more formally institutionalised. Although most of the presentations were not innovations, these conferences highlighted a way of thinking about problematics that went beyond mere enforcement to problematising the barrier and designing innovative solutions that could address it.

The CRM was another unique institution of capacity building. To many who direct and participate in it, back then and now, the CRM has been merely another form of inspection visits. But that was not how it was conceptualised and practised in the early years. The guidance and leadership provided by the NHSRC were towards shaping this initiative as a support to decentralisation as one of the pillars of the NHM's architectural corrections. The CRMs were participatory field visits where a multidisciplinary multistakeholder team visited the districts and states to witness the progress of the programme and learn lessons, both positive and negative, to institute necessary correctives. They were given the responsibility to observe if states

were implementing guidelines, more importantly, to observe what the centre could do to improve its guidelines, priorities, and the programme design. It was meant to be an equal conversation between the districts, the states, and the centres, wherein everyone learnt.

In narratives about learning and adaptation, we tend to highlight only the success stories. Much more difficult is to relate the stories of popular programmes not endorsed and pet initiatives given up because of consistent discouraging and negative feedback. There is no way to evidence this, as publications seldom favour documentations of failures. But sometimes, reflection on aspects of the framework that did not get rolled out helps. One such example is public-private partnership. NHM's Framework of Implementation document and considerable effort went into its implementation. But none reached the take-off to replication and scaling up.

To be fair, there was never a consensus on these perspectives of capacity building within the leadership. Depending both on the political context and on the individual leadership in the ministry and in the NHSRC, the pendulum would swing between a trend for a centralised command-and-control mode and a decentralised learning-participatory-adaptation mode. In the short run, administrators would be very pleased with an NHSRC team that responded to immediate implementation requirements of the most mundane sort, leaving all policy and design considerations to the top management. In the long run, the ministry and the entire public health sector required an institution with the institutional memory and a repository of experiences and learnings related to health systems and health policy. The ministry also required an institution that was aware of the latest in research methods and of tools related to health systems and health policy and had the capacity to commission the required research or carry it out itself. The NHSRC was using systems analysis and realist evaluation methods and health technology assessment much before it became mainstreamed within the research community. The NHSRC's robust networking within the health system and health policy research community was an asset. Finally, the ministry required a team that could build capacity in states and districts for implementing the programme, especially when change management was involved. For an institution like the NHSRC (or the SHSRCs) to succeed, response was necessary to the short-run implementation requirements of administrators while keeping intact its function as institutional memory, its skills and networks in health system research, and its engagement in learning from the districts as part of its work in building capacity in districts and states. A carefully constructed annual work plan approved by the governing board and periodic review of performance against this work plan was the main guarantor of ensuring NHSRC capacity and NHSRC effectiveness across the health sector, even as its daily responsiveness to the requirements of the ministry shaped immediate perceptions of its value within the ministry.

IV. Conclusion

Capacity building in complex adaptive systems is always a work in progress. To use a popular Thai quote: ‘It’s a leaking ship that has to be repaired while it is sailing’. The lack of effectiveness and efficiency or quality in service delivery is seldom amenable to solutions that merely comprise clarification of the hierarchical relationships followed by enforcement of a set of rules. There are specific programmes and subcomponents and contexts when such an administrative reform works. More often than not, it fails. Theories of market-based reforms do not work either because for reasons discussed in literature, much of healthcare operates in an area of market failure and because the nature of public health, even where a service is excludable and non-rivalrous, is in the nature of public goods.

A better way to approach strengthening health systems is to conceptualise it as a process of building the institutional capacity of the health systems to deliver the required services while keeping their nature as public goods intact. Institutions define the relationships between different players and are the sources of allocation of power and resources across them. If the lack of effectiveness is manifest across a system, then most likely the problem is in the specific configuration of the institutions concerned. These problems are better conceptualised as ‘problematiques’ – problems that would persist while admitting different solutions based on contexts and perspectives. Addressing these problems is central to building capacity, and these require creative and innovative design solutions. Training is an important part of capacity building but not the main. The main part of capacity building is the art and science of building institutions, which are continuously learning and are adaptive.

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STRENGTHENING THE HEALTH WORKFORCE IN INDIA

Challenges and Priorities for Achieving Universal Healthcare

Sanjay Zodpey and Anup Karan

I. Introduction

1. *The Context*

While a sufficient, equitably distributed, adequately supported, and well-performing health workforce is quintessential to improve population health and achieve universal health coverage (UHC) (Anand and Bärnighausen 2004; Speybroeck *et al.* 2006; WHO 2016a), strengthening the health workforce is also important to contribute to several sustainable development goals (SDGs) (WHO 2016a, 2016b). Accordingly, investing in the health workforce is no more considered as consumptive, but an opportunity to create skilled employment opportunities and spur economic growth and productivity (Cometto and Campbell 2016; WHO 2017), including socio-economic development, particularly by increasing equity, reducing poverty, and contributing to social justice (Scheil-Adlung *et al.* 2015; Scheil-Adlung 2016).

Despite increased realisation of the role of the health workforce in a health system and in an economy, the need-based shortage of the health workforce, particularly in low- and middle-income countries (LMICs), is estimated to be between 14 and 17 million (WHO 2016a, WHO 2016b). India alone contributes to this shortage to the tune of 1.8 million, with an overwhelming share of the shortage in rural areas (Karan *et al.* 2023; WHO 2020). Also, a growing chorus has called for a new focus on the quality of the health workforce (Das *et al.* 2016, 2018; Saxena and Godfrey 2023). The present chapter focuses on understanding the reasons of persisting shortages of health workforce in India and identifying major challenges and priority issues.

‘The Global Strategy on Human Resources for Health: Workforce 2030’, a global health workforce strategy report released by the WHO in 2016, recommended national and local health workforce policies focused on four dimensions: availability, accessibility, acceptability, and quality (AAAQ) (WHO 2016a). While explaining AAAQ, the ‘Global Strategy Report’ emphasised that ‘mere availability of health workers is not sufficient: only when they are equitably distributed and accessible by the population, when they possess the required competency, and are motivated and empowered to deliver quality care, and when they are adequately supported by the health system, can theoretical coverage translate into effective service coverage’ (WHO 2016a; p. 10). The emerging global ageing pattern coupled with an increasing burden of non-communicable disease (NCD) and the health crisis posed by the COVID-19 pandemic further ascertained the criticality of AAAQ in health workforce planning in LMICs, including in India.

The High-Level Commission on Health, Employment, and Economic Growth (ComHEEG), constituted by the United Nations in 2016, called for increased investment in health workforce and highlighted that the returns on investment in health could be 9 to 1 (WHO 2016b). The ComHEEG recommended the need for increased investment in education, production, and in-service training of health workforce; need-based job creation and gender equality of health workforce; and increased use of technology and digital communication to improve access, service delivery, and strengthen health information systems. The ComHEEG argues that the benefits of investing in health workforce go beyond the health sector and have the potential to contribute to several SDGs, including SDG 1 (poverty elimination), SDG 3 (good health and well-being), SDG 4 (quality education), SDG 5 (gender equality), and SDG 8 (decent work and economic growth). The commission also noted the importance of changing health labour market in fostering education and jobs, especially for women and young graduates.

The ‘Global Strategy Report’ (WHO 2016a) recommends different thresholds of skilled health workforce (doctors and nurses/midwives) density per 10,000 persons for achieving different UHC and SDG indicators. For instance, the WHO recommended at least 44.5 health workers per 10,000 persons for achieving a high coverage (80% or above) for the 12 tracer health indicators of SDGs across maternal and child health. For a higher level of achievements of SDG and UHC, i.e., for reducing global maternal deaths due to preventable causes to 50 per 1,00,000 live births by 2035, the WHO recommends a health workforce density of 59.5 per 10,000 population (Table 14.1). In addition, the International Labour Organisation (ILO) recommended a density of 34.5 for achieving UHC in the context of social protection (ILO 2014).

In addition to the quantitative adequacy, the need for improving the quality of the health workforce has been widely discussed in the literature,

TABLE 14.1 WHO Recommended Different Health Worker Thresholds and Indicators

<i>Thresholds</i>	<i>Indicator</i>
22.8 Skilled health workers (physicians and nurses/ midwives) per 10,000 population	This threshold mainly focuses on maternal and newborn health. Reflecting health services (assisted delivery) for achieving 80% coverage by a skilled birth attendant (SBA).
34.5 Skilled health workers (physicians and nurses/ midwives) per 10,000 population	This threshold is based on social protection and its outcomes, which consider the 'staff access deficit' indicator ¹
44.5 Skilled health workers (physicians and nurses/ midwives) per 10,000 population	This threshold is based on 12 tracer health indicators. Focuses on reaching the estimated number of skilled health workers, to have a high achievement coverage (80% or above) for the 12 tracer health indicators ²
59.5 Skilled health workers (physicians and nurses/ midwives) per 10,000 population	This threshold mainly focuses on reducing global maternal deaths due to preventable causes to 50 per 100,000 live births by 2035

Source: WHO (2016a; 2016b); ILO (2014).

including in The Global Strategy Report and the ComHEEG. While the role of structural constraints, such as infrastructure, supply of materials including drugs, and provider training remain important issues in several countries, asymmetric information on quality of healthcare and providers' behaviour are closely linked to quality of healthcare delivery (Das and Hammer 2014; Das *et al.* 2018). Such shortfall in the quality of the health workforce is often linked to the lack of adequate competencies and poor service delivery across both public and private health systems (Das *et al.* 2018). Nonetheless, increased investment in quality of education and in-service training is still considered one of the most effective ways to improve the quality of the health workforce (MoHFW 2017; Mohan and Kumar 2019; WHO 2016a, 2016b; World Bank 2011).

An effective service delivery requires a right skill-mix of the health workforce (Maier *et al.* 2021; WHO 2016b, 2017). Skill-mix changes typically involve innovative reallocation of tasks between healthcare workers, including new supplementary roles, and/or introducing greater team working through 'task-shifting' and flexibility (Winkelmann *et al.* 2022). For instance, policies such as expanding the roles of non-physician providers (such as nurse practitioners, pharmacists, and community health workers), or introducing more multi-professional teams and treatment structures, can increase the productivity of the health workforce and improve continuity and quality

of care for patients (Organisation for Economic Co-operation and Development (OECD) 2023). Although there is no standard skill-mix ratio of different health workers, most OECD countries reported approximately three to four nurses per physician (OECD 2019, 2023). Indian high-level expert group (HLEG) recommendation for the nurse–doctor ratio in India is 3:1 (PHFI 2011). The study also recommended 2:1:1 skill-mix, implying two nurses/midwives and one community-level health worker per doctor.

Several concerns have been raised about the information systems available on health workforce globally (World Bank 2011; WHO 2017). In general, information on the number of health workforce available across countries often mismatches with estimates from labour force surveys. It is argued that most available information systems on health workforce across countries often fail to account for migration, labour market attrition, and possibilities of double counting (World Bank 2011; WHO 2016a). The Global Strategy Report recommends developing an international platform on health worker mobility and understanding health labour market dynamics to develop a robust health workforce information system (WHO 2016a, 2016b).

2. Policy and Strategic Interventions to Strengthen Health Workforce in India

The COVID-19 pandemic significantly exposed health systems globally. With over 45 million COVID-19 infections and the case fatality of over 533,000 in India as of April 2024,³ one of the most important lessons India learnt is the need for improved availability and accessibility of a skilled health workforce.

Even before the onset of the COVID-19 pandemic, India's National Health Policy (NHP) 2017 recommended a matching human resource development strategy to provide comprehensive healthcare. The policy recommended strengthening the existing medical education system and the development of a cadre of mid-level care providers (Ministry of Health and Family Welfare (MoHFW) 2017). The past NHPs (1983 and 2002) focused on establishing new and expanding existing training institutes, task shifting/sharing, preferential expansion of cadres with high local acceptance, and need-based changes in training. Also, over the years, India's NHP increased focus on the accessibility than acceptability of the health workforce (Dubey *et al.* 2021). Similarly, the NITI Aayog's Strategy for 'New India@75' had aimed at generating 1.5 million jobs in the public health sector by 2022–2023 (NITI Aayog 2018). Also, India adopted the target of achieving 45 physicians, nurses, and midwives per 10,000 persons by 2030 under SDG indicator 3.c (NITI Aayog 2019).

More recently, in 2022, India revised the Indian Public Health Standard⁴ (IPHS) and recommended the required thresholds of the health workforce, along with other needed infrastructure for public health facilities. IPHS 2022

guidelines specify a required number of health workforce, ranging from specialists and medical officers (doctors) to community health workers and allied health workers at different levels of care. IPHS 2022 recommended a comprehensive ‘Human Resource Policy’ at state levels, and an efficient ‘Human Resource Management Information System’, for human resource planning and effective utilisation of the existing human resources for health. At each level of care, IPHS 2022 guidelines candidly specified the number of health workforce required for providing services categorised as ‘essential’ (lower limit) and desirable (higher level).

To strengthen the primary healthcare and community-level health services, India introduced a massive accredited social health activist (ASHA) programme. Started with launching the National Rural Health Mission (NRHM) in 2005, the idea behind the ASHA programme was to connect marginalised communities to the healthcare system. The target was to have an ‘ASHA in every village’ in India (MoHFW 2017; Selvaraj *et al.* 2022). Over 1 million ASHAs are now present in nearly all Indian villages. The government policy supports a certification programme for ASHAs for their preferential selection into auxiliary nurse and midwifery (ANM) and paramedical courses. While most ASHAs remain mainly voluntary and remunerated for time spent, those who obtain qualifications for career opportunities are given regular terms of engagement. Policy also supports enabling engagements with NGOs to serve as support and training institutions for ASHAs and to serve as learning laboratories on future roles of community health workers. More recently, the policy recommends revival and strengthening of Multipurpose Male Health Worker cadre to effectively manage the emerging infectious and NCDs at the community level (MoHFW 2017). Through ASHA, the healthcare delivery in primary care is viewed as a continuum from selective care to assured comprehensive care, with linkages to referral hospitals.

The Indigenous medical system, Ayurveda, Yoga, *Unani*, *Siddha*, and Homeopathy (AYUSH) has been a part and parcel of the Indian health system. AYUSH practitioners play an important role in healthcare delivery in India. The MoHFW (2017) clearly emphasises the policy that ensures access to AYUSH remedies through co-location of AYUSH in public facilities. The policy recognises the need to nurture AYUSH medicine, through the development of infrastructural facilities of teaching institutions, improving quality control of drugs, and capacity building of institutions and professionals. In addition, it recognises the need for building research and public health skills for preventive and promotive healthcare. The emphasis on AYUSH is well reflected at the government level as the central government established the Department of Indian System of Medicine and Homoeopathy (ISM&H) in 1995, which was converted into full ministry in 2014. IPHS 2022 recommended recruitment of AYUSH professionals in each health facility, primary health centre (PHC), and above levels of care.

India has taken several other initiatives to overcome the challenges related to the health workforce. The government of India (GoI) constituted a National Medical Commission (NMC) by an Act of Parliament in 2020, replacing the erstwhile Medical Council of India (MCI), with the aim to improve equity and quality, using latest technologies in medical education and increasing the production capacity of the health workforce (GoI 2021; Sabde *et al.* 2014). The government started centrally sponsored schemes to upgrade district hospitals to medical colleges and build new medical colleges with fund allocation in the range of INR 1,890–3,250 million per medical college (GoI 2022). For increasing the intake capacity of MBBS seats in existing medical colleges, INR 12 million per seat is being allocated for strengthening and upgrading medical colleges in states (GoI 2022). The government has also opened a number of new nursing institutions to expand the capacity of nurses/midwives.

3. Medical and Nursing Education

A varied range of professionals trained in different specialties of medicine and healthcare, having varied levels of educational qualifications, and registered with different councils/agencies offer healthcare services in India (Karan *et al.* 2019; Rao *et al.* 2011). For instance, physicians and surgeons possess degree/post-degree qualifications in medicine with varied years of experience and are usually registered with the NMC, while nurses and midwives usually hold a diploma in General Nursing and Midwifery (a 3·5-year course) or a 4-year bachelor's degree or a 2- to 3-year postgraduate degree and are registered with the Indian Nursing Council (Central bureau of Health Intelligence (CBHI) 2019). Practitioners of the indigenous system of medicine are graduates in AYUSH (see Box 2 for more details).

In addition, there are community health workers with 10 years of formal education and a short training course. Health workforce at the ground level also includes many informal medical practitioners, such as registered medical practitioners (RMPs) (including traditional birth attendants, faith healers, snakebite curers, and bonesetters) with or without formal education/skills/training. RMPs are often the first point of contact for treatment for a large proportion of population living in rural and remote areas and may be dispensing either allopathic or traditional drugs or both, as the need arises.

Despite significant policy attention and attempts in the past to improve the health workforce situation, India still struggles with several challenges related to the health workforce. Studies in the past have highlighted a far lower density of the health workforce in India than the WHO recommended density threshold of 44·5 skilled health workers and even ILO recommended 34·5 health workers per 10,000 persons required for achieving the UHC and SDGs and a minimum level of social security, respectively (Anand and Fan 2016;

BOX 14.1 DEFINING HEALTH WORKERS IN INDIA

- Doctors (allopathic): Medical graduates with a bachelor's or postgraduate specialist diploma or degree and registered with the Indian Medical Council.
- AYUSH practitioners: Medical graduates with a bachelor's or postgraduate degree in AYUSH and registered with the Central Council for Indian Medicine or the Central Council for Homoeopathy.
- Nurses: Diploma holders in General Nursing and Midwifery (3-5-year course) or a 4-year bachelor's degree or a 2- to 3-year postgraduate degree and registered with the Indian Nursing Council.
- Dentists: Graduates with a bachelor's or postgraduate degree in dentistry and registered with the Dental Council of India.
- Auxiliary nurse midwives: Diploma holders in ANM (2-year course).
- Pharmacists: Have a diploma or bachelor's degree course in pharmacy.
- Technicians and allied health workers: Professionals who have undertaken specialised studies, including laboratory technicians, radiology technicians, dental assistants, and other technical staff. Allied health professionals include dietitians, nutritionists, opticians, and physiotherapists.
- Community health workers: Professionals with 10 years of formal education, who have undergone a 23-day training course. Other community health workers include health educators and health assistants.

Source: CBHI (2019) and Councils of Health Professionals.

Karan *et al.* 2021, 2023; Rao *et al.* 2016). Past studies (Karan *et al.* 2021, 2023) have also reported the acutely skewed distribution of health workforce across the Indian states, rural–urban regions, and public–private sectors. Concerns have been also raised across the public and private sectors (Das 2011; Seth 2016) about the low quality of the health workforce in India, particularly in nursing and allied healthcare professions. Factors such as low demand for trained nurses, poor quality of nursing education, lack of non-technical skills and knowledge, low desire to join higher education, and a range of socio-economic factors are some reasons for low-quality nursing (Das 2011; Gill 2011; Roy 2022). Low retention capacity of the public health system is identified as one of the main reasons for the health workforce overwhelmingly opting for the private sector (Rajbangshi *et al.* 2017; Buchan 2018; Saxena and Godfrey 2023).

II. Size, Composition, and Distribution of Health Workforce in India

Size of Health Workforce

This section presents latest data on the size of different cadres of the health workforce in India – density and geographical distribution of the health workforce. The section mainly used data from two sources: 1) registration records of different cadres of health workers available from respective registration councils and National Health Profile (NHP) 2022 (MoHFW 2022) and 2) annual Periodic Labour Force Survey (PLFS) conducted by the National Sample Survey Office. While data from different registration councils provide information on the total number of registered health professionals at all India and state levels, PLFS 2021–2022 provides information at much disaggregated levels, including socio-economic and demographic characteristics and educational achievements of individuals. For a better comparability with the registration council data, we analysed PLFS 2021–2022, which contained a sample of 428,525 individuals (249,175 rural areas and 179,350 urban areas) covered in the sample from 101,782 households (55,895 rural and 45,887 urban). We also analysed PLFS 2022–2023 for some supplementary analysis.

In PLFS 2021–2022, the health workforce constituted a little over 1% of total workforce in India, while women constituted over 58% of all health workforce. Approximately 75% of female health workforce is concentrated in nursing/midwifery occupations, and a little over 8% of female health workers, as against 33% of male health workforce, are employed as medical doctors.

Registration council data report a total stock of approximately 1.3 million allopathic doctors, 3.46 million nurses/midwives (including ANM), 1.60 million pharmacists, 0.29 million dentists, and 0.76 million traditional medicine professionals (AYUSH) in 2022 (Table 14.1). Since PLFS records self-reported occupations⁵ and individual reporting engaged as health workers may or may not possess requisite qualification to deliver human health services (Karan *et al.* 2021, 2023), we ascertained adequacy of education of health workers by using the information on levels of education and trainings of individuals available in the PLFS data. Table 14.1 reports the size of currently active health workforce with and without adjusting for adequate qualification as estimated from the PLFS 2021–2022. Both the estimates (with and without adequate qualifications) from the PLFS are lower compared with the registration council data for all the reported cadres. According to the PLFS, the numbers of allopathic doctors and nurses/midwives without adjusting for the right qualifications are 0.92 million and 2.24 million, respectively. Estimates on pharmacists, dentists, and traditional medical practitioners from the PLFS are also significantly lower than those recorded in the registration councils.

TABLE 14.2 Size and Composition of Health Workforce in India as of 2022

HWF	Registration Councils (2021) (Million)	PLFS (2021–2022) (Million)		PLFS Estimate as % of Registration Councils	
		Total Reported	Adequately Qualified*	Total Reported	Adequately Qualified*
Allopathic doctor	1.30	0.92	0.77	70.6	59.5
Nurse/midwives	3.46	2.24	1.21	64.8	35.1
Pharmacist	1.60	0.76	0.67	47.6	41.7
Dentist	0.29	0.21	0.18	72.1	61.8
Traditional medicine/ AYUSH	0.76	0.24	0.15	32.1	19.6
Health associates/ allied**	0.94	0.97	0.70	103.2	74.5
All	8.34	5.34	3.68	64.0	44.1

Sources: MoHFW 2022; PLFS 2021–2022

Note:

* Qualification adjusted: medical degree and/or postgraduate for doctors; higher secondary with diploma in medicine for nurses and midwives, AYUSH workers, and pharmacists; at least higher secondary for other allied health workforce.

** Registration council data include ‘medical and pathology laboratory scientists’ and ‘physiotherapist’; PLFS includes ‘health assistants’, ‘sanitarians’, ‘dietitians and nutritionists’, ‘optometrists’, ‘opticians’, ‘dental assistants’, ‘physiotherapy associates’, and ‘occupational therapist chiropodist’.

Overall, the active health force (adequately qualified), as estimated from the PLFS, is approximately 44% of the total health workforce as recorded in the registration data.

Several explanations uncover the difference between the size of health professionals recorded in the registration councils and estimates of active health workers from the PLFS. Most of these explanations relate to the fact that a large proportion of the health professionals registered with different councils are not actually part of the current health workforce (Karan *et al.* 2021, 2023; Rao *et al.* 2016). One widely discussed reason is the migration of qualified health professionals from India to developed countries (Reema 2011; Walton-Roberts and Rajan 2020). Additionally, there are reasons related to the veracity and updating of the registration council data. For instance, the registration council data are fraught with not accounting for death, retirement, and double counting of professionals (Karan *et al.* 2023; Rao *et al.* 2016).

A prominent reason identified for the differential estimates across the two datasets (Karan *et al.* 2021, 2023) is the large labour market attrition of

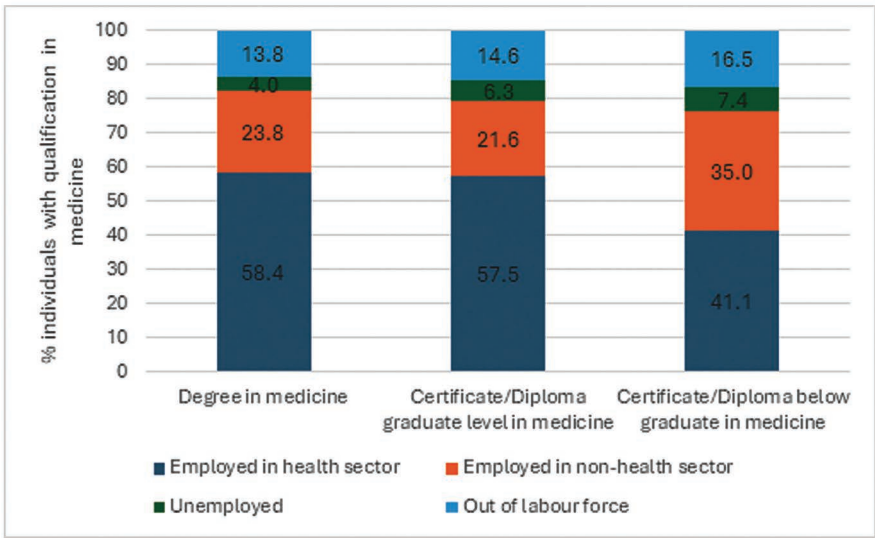


FIGURE 14.1 Percentage of individuals adequately qualified in medicine and their work status.

Source: PLFS 2021–2022

health professionals. PLFS data for 2021–2022 reflect unemployment of approximately 4–7% of individuals with a degree or diploma in medicine, with an additional 14–17% being out of labour force (neither employed nor available for employment) (Figure 14.1). Also, approximately 27% of all qualified in medicine/healthcare do not work in the health sector. This percentage is slightly lower (24%) for those who have a degree in medicine compared to those who have below degree-level education (35%). Overall, over 40% of the individuals adequately qualified in medicine/healthcare are not part of the current health workforce.

A deeper analysis of the PLFS reflects that while the unemployment rates are almost similar across men and women (5–6%) having qualification in medicine/healthcare, the proportion of women out of labour force is significantly higher (24%) compared to men (6%). However, the percentage of employed with qualifications in medicine but working outside the health sector is higher among men than women.

Density of Health Workforce

Registration council data at the all India level reflect the density of doctors and nurses/midwives as 9.5 and 25.2, respectively, and a total of 34.6 skilled health workforce (doctors + nurses/midwives) per 10,000 persons

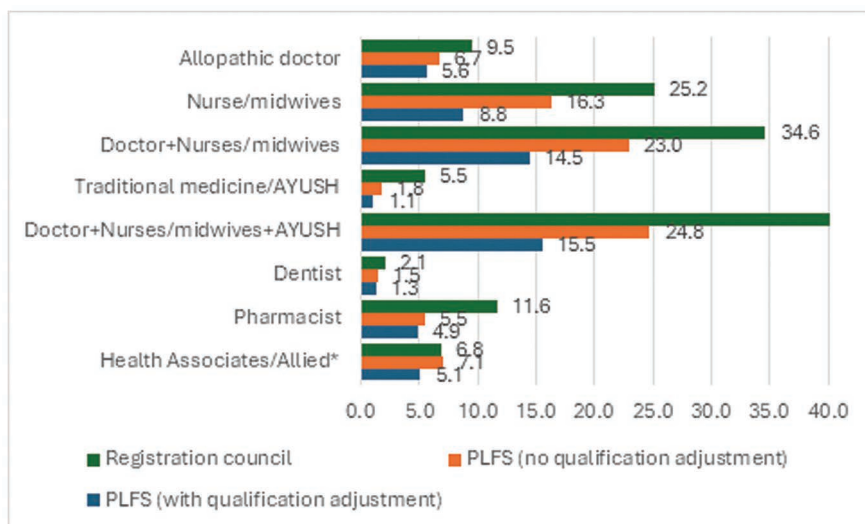


FIGURE 14.2 Density of the health workforce per 10,000 persons, 2022.

Sources: NHP 2022; PLFS 2021–2022; and MoHFW 2019

Note: *As in Table 14.1.

(Figure 14.2). Considering AYUSH practitioners as part of the skilled health workforce, the estimated health workforce density is 40.1 per 10,000 persons. However, the estimated active health workforce (estimated from the PLFS) density of doctors and nurses/midwives (without adjusting for adequate qualification) is 6.7 and 16.3, respectively (total 23), which drop to 5.6 and 8.8, respectively (total 14.5), per 10,000 persons after adjusting for adequate qualifications. Including AYUSH, the estimated active health workforce density is 24.8 and 15.5, respectively, before and after adjusting for qualifications.

Compared to select OECD, Asian, and African countries, the health workforce (doctors and nurses/midwives) density in India is far lower. The density of health workers per 10,000 population is as high as 165 (45 doctors and 120 nurses/midwives) in Germany and approximately 130 in overall OECD countries (Figure 14.3). The density of health workers is also higher in China and Brazil, compared to that in India.

Skill-Mix

The registration council data suggest a doctor to nurse ratio of 2.7:1 at the all India level. The estimated nurse to doctor ratio based on the PLFS data, however, is 2.4:1 without qualification adjustment and as low as 1.6:1 after

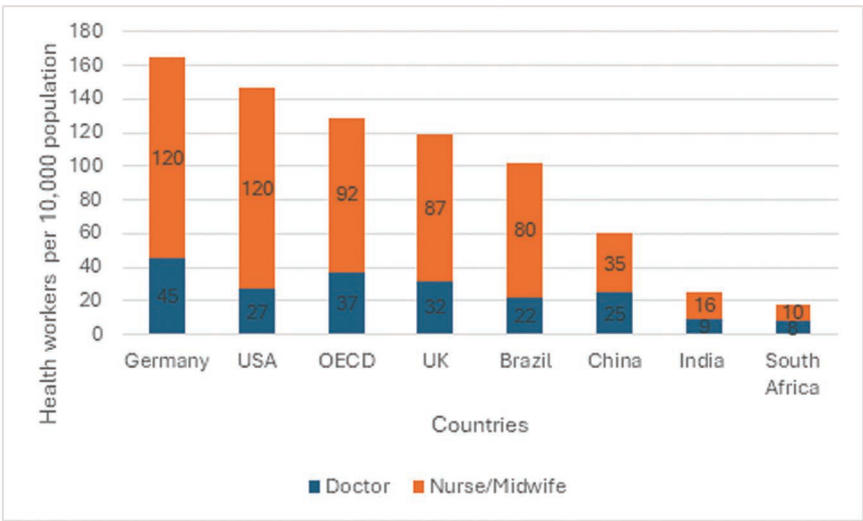


FIGURE 14.3 Density of doctors and nurses/midwives per 10,000 population in different countries, 2021.

Source: OECD Health Statistics, 2023

Note: The estimate for doctors in India in the OECD source is slightly higher. This could be because of a few occupation groups included, which are not identifiable in the PLFS data as presented in Figure 14.2; the OECD average is inclusive of Germany, the US, and UK.

adjusting for right education. As mentioned earlier, adjusting for right education affects the estimates of nurses/midwives more than the estimates of doctors. Also, a large proportion of adequately educated nurses/midwives are not part of the active labour force.

Figure 14.3 indicates the skill-mix ratio of the number of nurses/midwives per doctor in the OECD countries to be 3:1, while that in India, as per OECD estimate, remains at around 1.7 nurses/midwives per doctor.

At the state level, the nurses/midwives to doctor ratio is the lowest in Karnataka (2.2:1) and the highest in Odisha (5.8:1) as per the registration council data. However, the ratio of skill-mix between nurses/midwives and doctor in the actual active workforce is as low as 0.58:1 in Haryana and 1.7:1 in Karnataka. Odisha and Telangana also reflect very low skill-mix ratio (below 2:1) of doctor and nurses/midwives according to the active health workforce data estimated from the PLFS. Both at the all India and state levels, although the total number of nurses/midwives in the registration council data shows comfortably large numbers, as reflected in high nurses/midwives to doctor ratio, the actual workforce data present a very low skill-mix.

Skewed Distribution

Health workers are unevenly distributed across states, rural–urban, and public–private settings. Using the PLFS 2021–2022 education-adjusted estimates of the health workforce, Figure 14.4 presents the density of doctors and nurses/midwives taken together per 10,000 population across major states in India. The PLFS data reflect that the density of active skilled health workforce (doctors and nurses/midwives) per 10,000 persons is the highest in Kerala (29.8) followed by Telangana (21.6), Maharashtra (19.9), Karnataka (19.6), and Delhi (19.3).

The public–private division of sectors of employment and rural–urban locations also reflect skewed distribution of the health workforce. The PLFS

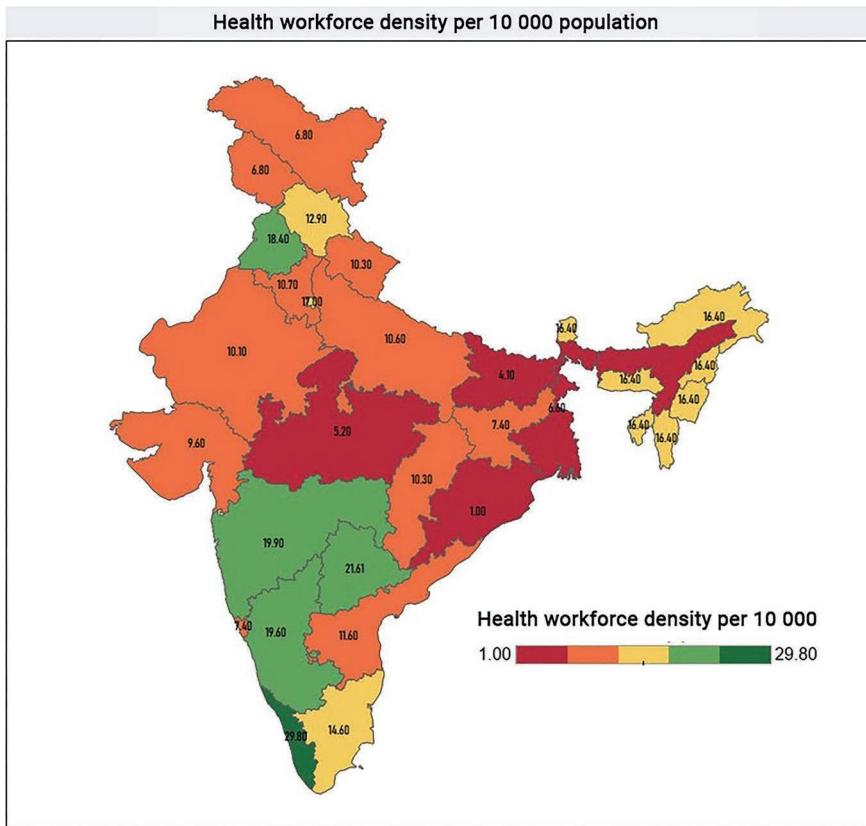


FIGURE 14.4 Active health workforce (doctors + nurses/midwives) density across states.

Source: PLFS 2021–2022

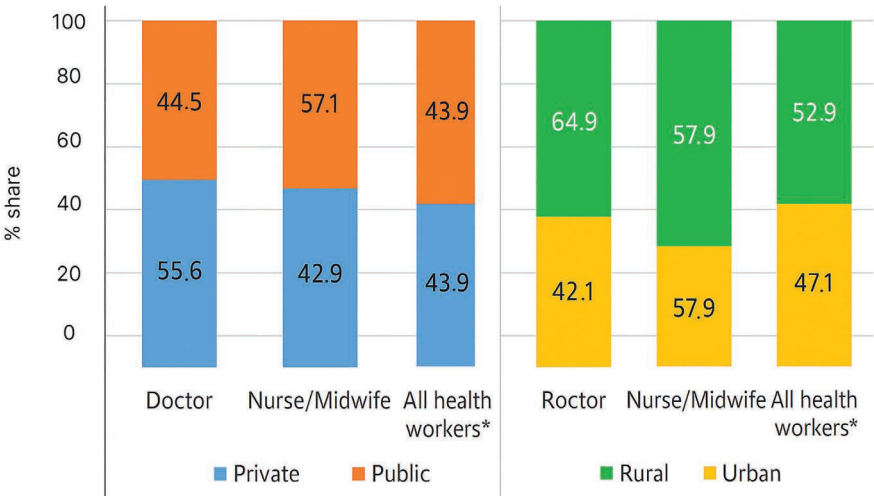


FIGURE 14.5 Percentage share of rural–urban and public–private in total health workforce.

Source: PLFS 2022–2023

Note: Health workforce with right education is considered here; * includes traditional and other health workforce.

2022–2023 data reflect that at the all India level, the private sector employs approximately 56% of doctors and all health workers (Figure 14.5). The public sector employs a slightly higher proportion of nurses/midwives (57%) compared to the private sector (43%). This could be because the nurses/midwives category in the PLFS data includes all or part of ASHA and other community-level workers employed in public facilities. Traditional and other health workforce are overwhelmingly employed in the private sector.

Although the PLFS sample does not support state-level public–private division of cadre-wise health workforce, some broad analysis reflects that among the major states with a higher share of public sector in the health workforce are Chhattisgarh, Jammu & Kashmir, Himachal Pradesh, Madhya Pradesh, North-east states, Odisha, Uttarakhand, and the union territories. The private sector occupied a relatively dominant share in Bihar, Delhi, Jharkhand, Karnataka, Kerala, Punjab, Tamil Nadu, and Telangana.

Although rural India constituted approximately 66% of the population in 2023, rural area has only 47% of all health workers (Figure 14.5). The proportions of doctor and nurses in rural areas are 35% and 58%, respectively. In total health workforce (including traditional and other health workers), the majority (53%) are employed in urban areas.

Quality of Health Workforce

Quality of the health workforce has significant implications for healthcare delivery and overall population health. Several issues related to the quality of healthcare and health workforce have been highlighted in past research. These issues range from personal competencies of health workers with which an examination and/or treatment protocol is implemented to providers' attitudes towards patients (Burdick and Dhillon 2020; Das and Hammer 2014).

Many of these qualities of the health workforce remain to be tested with a wider perspective, as this requires a much deeper study eliciting information on medical protocols, workload, and practices of health workers and providers' behaviour. Nonetheless, a few studies in the past using primary survey data in India highlighted significant knowledge gaps among health workers (including doctors and nurses/midwives) at the primary care level in conducting basic medical protocols such as testing of blood pressure, sputum test for tuberculosis, testing for blood or mucous in the stool in case of dysentery, and other child care tests (Das *et al.* 2022; Mohanan *et al.* 2015). Studies have also highlighted the lack of adequate education, technical competencies, and training among the health workforce in India (Anand and Fan 2016).

Using the latest labour force survey data (PLFS 2022–2023), this section presents some evidence on general and technical educational endowments of the currently active health workers in India (Figure 14.6a and 6b), which

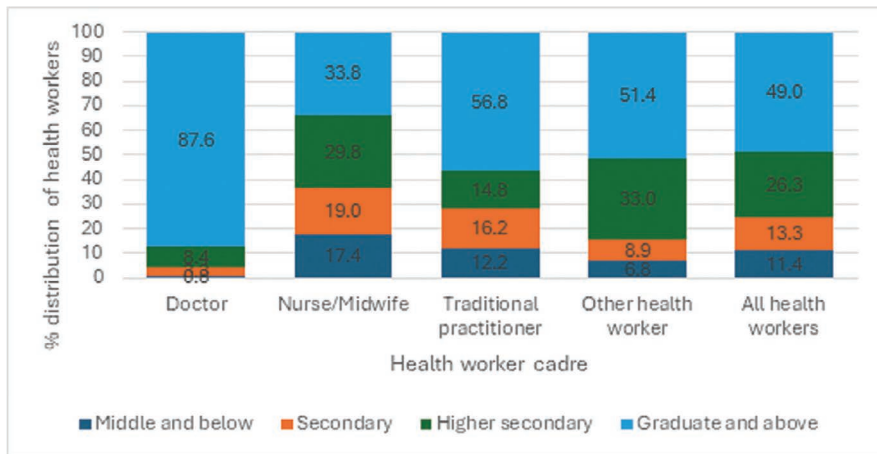


FIGURE 14.6A Percentage distribution of the health workforce by general educational achievements, 2022–2023.

Source: PLFS 2022–2023

Note: Health workforce in this analysis includes all those who reported themselves as health workers irrespective of their education levels.

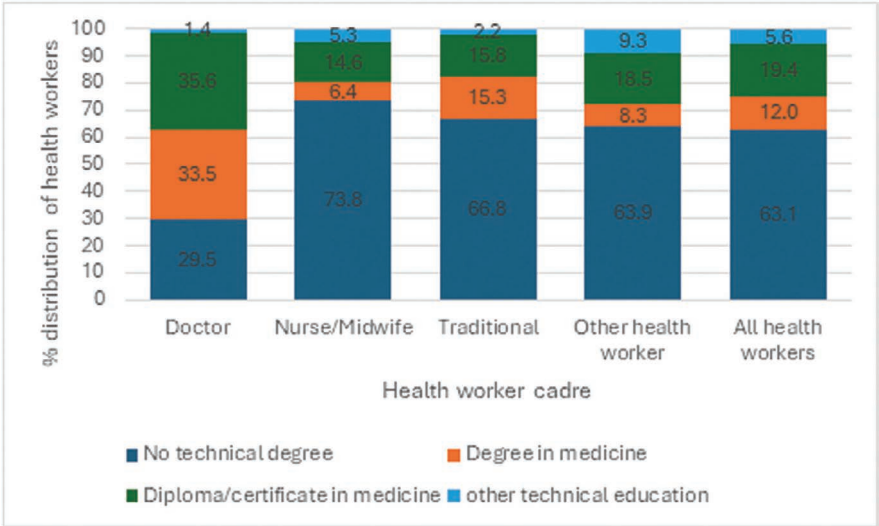


FIGURE 14.6B Percentage distribution of the health workforce by technical educational achievements, 2022–2023.

Note and Source: Same as Figure 14.6a

could be reflective of the competencies and the overall quality of the health workforce.

To start with, the estimated large difference (Table 14.1) in the size of the health workforce across registration councils and the PLFS could also indicate the quality of the health workforce. On the one hand, approximately 16% of those who are working as doctors and as high as 45% of those who are working as nurses/midwives do not possess requisite qualifications, while a large proportion of adequately qualified health professionals (40% of doctors and 65% of nurses/midwives) are not absorbed in the health workforce. This essentially indicates that although demand for the health workforce exists in the healthcare markets, a significantly large share of qualified health professionals is not part of the current health workforce.

With regard to the educational achievement of currently active health workforce, 95% of the currently active doctors reported higher secondary and above (graduate and above 88%) in education. However, over 35% of currently active nurses/midwives reported education below the higher secondary level. Overall, approximately 25% of currently active health workforce reported educational achievements below the higher secondary level (Figure 14.6a).

About 70% of currently active doctors reported at least a diploma or above. Using PLFS 2022–2023, we also ascertained levels of technical education

among all health workers (Figure 14.6b). However, just a little over a quarter of currently active nurses/midwives reported any technical degree. Similarly, approximately 65% of other health workers and over 60% of currently active health workers did not report having any technical education.

The educational endowment of currently active health workers is far lower in rural areas compared with the urban. Although above 90% of all working as doctors in rural areas (against approximately 98% in urban) reported higher secondary and above education, only 57% currently working as doctor in rural areas (against approximately 78% in urban areas) reported a technical degree. Similarly for nurses/midwives, while approximately 20% of those working in rural areas reported less than secondary-level education, 82% reported having no technical degree. In urban areas, the respective shares are 15% and 61% for nurses/midwives.

III. Health Workforce in Public Primary Care – Availability and Adequacy

Strengthening of primary healthcare has been a core focal point in India ever since the *Bhore Committee*⁶ recommendation and frequently highlighted in National Health Policies. The NHP 2017 proposed key policy shift from selective primary care to assured comprehensive primary care with linkages to referral hospitals (MoHFW 2017). For strengthening primary healthcare, IPHS 2012 and 2022 laid down detailed specification of the requirements of the health workforce, including availability of health infrastructure. Primary healthcare is mostly delivered through sub-health centres (SHCs) and primary health centres (PHCs) at the village level and urban primary health centres (UPHCs) in urban areas. However, some primary healthcare is also delivered at the community health centre (CHC) level, with a population coverage of approximately 100,000 population for a group of villages and polyclinics at the sub-district and district hospital levels.

With the launch of *Ayushman Bharat* in 2018, the government announced upgrading all the SHCs, PHCs, and UPHCs to health and wellness centres (HWCs) for the delivery of comprehensive primary healthcare. Currently, over 1.67 lakh SHCs and PHCs have been upgraded to the HWC level. The HWCs are envisaged to provide clinical management for most common ailments, including a range of services beyond the selective package of maternity and child healthcare and communicable diseases, prompt referral to doctor or for specialist consultations at higher facilities, and undertaking the follow-up of down referrals (MoHFW 2022).

The healthcare personnel engaged in the delivery of primary health services consist of the health workforce ranging from community-level workers at the HWC level to specialist doctors at the PHC and CHC levels. For effective and quality delivery of comprehensive healthcare services, the IPHS

2022 provided detailed recommendations on standardised public healthcare services and general principles for infrastructure planning and upgradation of health facilities. Such standards have been envisaged to deliver quality services to citizens with dignity and respect and provide guidance on the health system components, such as the health workforce and also infrastructure, drugs, diagnostics, equipment, quality, and governance requirements for delivering seamless health services at public facilities. The IPHS 2022 also recommended establishing 24 x 7 PHCs and UPHCs.

The IPHS 2022 recommended human resource requirement at the public health facilities classified into two categories: essential and desirable. While essential human resource requirements must be achieved with immediate effect, desirable requirements should be aspired to be achieved in the near future. Converting the existing PHCs into 24 x 7 PHCs is yet another target to be achieved, which will require enhanced level of deployment of the health workforce in such facilities (Table 14.2). However, IPHS 2022 recommendations include a range of workers, such as medical laboratory personnel, technologist/lab technician, optometrist/ophthalmic assistant/vision technician, dental assistant, and health educator/counsellor, at the PHC/UPHC levels. Table 14.2 presents information only on the health workforce involved directly in health delivery.

IPHS 2022 recommendations reflect a requirement of at least one allopathic doctor with one additional AYUSH and dental doctor desirable at the PHC level. The UPHC should have at least two allopathic doctors and one additional dental doctor desirable. However, if the PHC and UPHC are to run 24 x 7, the requirements of allopathic doctors are at least two with one additional desirable. Requirement of staff nurses at the PHC/UPHC level varies from one to seven, with at least one to five additional multi-purpose health workers (female)/ANM depending on the level of care. This essentially implies that IPHS 2022 recommends two to three nurses/midwives/ANM per doctor at the PHC level and 10–12 nurses/midwives/ANM with two allopathic doctors for 24 x 7 PHCs. At the SHC level, the requirement is of at least three health workers comprising one CHO, one multi-purpose health worker (female), and one multi-purpose health worker (male).

Adequacy of Health Workforce in Public Facilities

As of March 2021, 161,829 SHCs (rural – 157,935, urban – 3,894), 31,053 PHCs (rural – 24,935, urban – 6,118), and 6,064 CHCs (rural – 5,480, urban – 584) were functioning (Rural Health Statistics (RHS) 2022). These facilities employed 294,993 health workers (SHCs – 240,535, PHCs – 54,458), 39,859 staff nurses, and 37,155 MBBS doctors at the PHC level. In addition, rural PHC employed 8,709 AYUSH practitioners. RHS 2021–2022 reflects no major shortfall in the health workforce at the SHC and PHC levels,

TABLE 14.2 Required Numbers of Health Workforce Involved in Health Service Delivery at Different Levels of Health Facilities, as Recommended by IPHS 2022

Health Workforce Type	Required Numbers									
	HWC- SHC	UHC	PHC		UPHC		Polyclinic		24 × 7 PHC	
			E*	D*	E*	D*	E*	D*	E*	D*
Community health officer (CHO)	1									
Multipurpose health worker (male)	1	1	1						1	
Multipurpose health worker (female)/ANM	1		1		5		5		1/5	
Health assistant (female)/lady health visitor			1		1		1		1	
Medical officer (MBBS)		1	1	1	2		2		2	1
Medical officer AYUSH				1						1
Medical officer dental				1		1	1			1
Specialist**							1 (rotational)			
Staff nurse		1	2	1	1	1	2		7	
Sanitary staff		1	1		1		2		4	
Pharmacist			1		1		1	1	1	1

Source: MoHFW 2022

Notes:

* E is essential and D is desirable (desirable is in addition to essential);

** includes medicine, obstetrics & gynaecology, paediatrics, ophthalmology, dermatology, and psychiatry.

except in male multi-purpose health workers. For instance, RHS reflects a shortfall of 8,208 (4%) female multi-purpose health workers as against the sanctioned post of 208,235 at the SHC level. However, the shortfall of male multi-purpose health workers against the required strength is over 66%. At the PHC level, the shortfall in female multi-purpose health workers/ANM is approximately 20% of the sanctioned posts, while approximately 75% of required health assistant posts are vacant. In case of MBBS doctors and AYUSH practitioners, 3% and 11%, respectively, of the sanctioned strength at the PHC level are vacant. This implies that except for male multi-purpose health workers and health assistants, there are no major existing vacancy at the SHC and PHC levels as far as main healthcare delivery workforce (doctors, nurses/midwives, and community health workers) is concerned.

A main reason the shortfall in health service delivery workforce is not reflected at the SHC and PHC levels is because of the way health workforce requirement is reported. In the RHS report, the requirement has been estimated on the basis of one female and one male health worker at the SHC level and one nurse/midwife and one doctor per PHC. However, the IPHS 2022 recommends PHCs to function 24 x 7, which requires at least two to three allopathic doctors and at least one AYUSH practitioner per PHC. Similarly, the requirement of nurse staff, midwives, and ANM will be higher compared to that reported in the RHS. Also, the IPHS 2022 mentions additional desired requirements of the health workforce at the SHC, PHC, and CHC levels. Considering these facts, the estimation of the required health workforce will increase at least two- to threefold at the SHC and PHC levels.

Using information on the number of facilities and health workforce, the average number of different types of health workers per facility is presented in Table 14.3 to understand if the existing facilities, on average, are equipped with the IPHS 2022 recommended levels of health workforce. Table 14.3 presents the number of health facilities in rural and urban areas primarily responsible for delivering primary healthcare, number of health workforce, mainly community-level health workers, nurses/midwives (including ANM), and doctors (including AYUSH).

Table 14.3 shows the average number of multi-purpose health workers per SHC as 1.5 (male 0.3, female 1.2), which is far lower compared to at least 3 in rural areas. At the PHC level, 1.1 health workers in rural areas and 5 health workers in urban areas per PHC are employed, which are again far shorter than the IPHS recommendations of 2 in rural and 7 in urban PHCs. The number of 'in position' allopathic doctors is estimated to be 1.3 in PHCs and 1 in UPHCs, while the IPHS recommendation for rural PHCs at the desirable level is to have 1 additional AYUSH and dental doctor each and at least 2 allopathic doctor in UPHCs. For 24 x 7 PHC IPHS, the recommendation is 5 doctors (including AYUSH and dental). Similarly, the current estimated strength of staff nurses is 1.4 in rural and 1 in urban PHCs as against

TABLE 14.3 Number of Health Facilities, Number of Health Workforce and Number of Health Workers per Facility in Rural and Urban Areas, 2021

	<i>SHC</i>		<i>PHC</i>	
	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>
Number of SHC and PHC	156,101	1,718	25,140	5,439
Number of health workforce				
Multi-purpose health workers – male	52,978	NA	NA	NA
Multi-purpose health workers – female/ANM	187,557	NA	27,263	27,195
Multi-purpose health workers – total	240,535	NA	27,263	27,195
Allopathic doctors	NA	NA	31,716	5,439
AYUSH doctors	NA	NA	8,709	2,240
Nursing staff	NA	NA	34,420	5,439
Health assistant	NA	NA	12,428	NA
Health workforce per facility				
Multi-purpose health workers – male	0.3	NA	NA	NA
Multi-purpose health workers – female/ANM	1.2	NA	1.1	5.0
Multi-purpose health workers – total	1.5	NA	1.1	5.0
Allopathic doctors	NA	NA	1.3	1.0
AYUSH doctors	NA	NA	0.3	0.4
Nursing staff	NA	NA	1.4	1.0
Health assistant	NA	NA	0.5	NA

Source: Authors' estimates using MoHFW 2022.

Note: NA is not applicable/available.

the IPHS recommendations of 2 staff nurse in all PHCs with at least 7 staff nurse in 24 x 7 PHCs.

The availability of health workforce and vacancy situation are highly diverse across states in India. Majority of the states, including many low-income states such as Assam, Bihar, Madhya Pradesh, Rajasthan, Telangana, and West Bengal, do not report any shortfall in allopathic doctors in PHCs and UPHCs. Karnataka and Odisha reported only a small shortfall of doctors in PHCs. However, the shortfall in health workforce at the primary health-care level needs to be assessed against the IPHS norms and not according to the sanctioned position norms.

IV. Supply of Health Workforce

Supply of Medical and Nursing Graduates

The supply of health workforce crucially depends on the number and quality of institutions, more specifically medical colleges and nursing institutes, producing doctors and nurses/midwives. The number of medical colleges and nursing institutes in India has significantly increased over the years, particularly during the last decade (Karan *et al.* 2023; Sabde *et al.* 2014). The number of medical colleges (and their admission capacity)⁷ in India more than doubled during the last decade, from 314 (admissions 29,262) in 2011–2012 to over 706 (106,785), with an average intake capacity of 150 admissions per medical college in 2022–2023. Similarly, the number of nursing institutions increased from less than 4,000 (admissions 168,323) in 2011–2012 to 9,250 (admissions 350,679), with an average intake capacity of approximately 40 admissions per institution in 2022.

Since 2011–2012, government share in total number of medical colleges and admissions has increased with increased geographical representation of less developed states, like Assam, Bihar, Jharkhand, Jammu & Kashmir, Rajasthan, Telangana, and Uttar Pradesh. Government share in Andhra Pradesh, Karnataka, Maharashtra, and Tamil Nadu increased since 2011–2012. Till 2010, approximately 50% of all medical colleges (total 311) were in the private sector, mainly under society and trust management, while since 2011 government-owned medical colleges increased to over 60% of all medical colleges in 2023.

Despite a significant increase in the number of institutions and the intake capacities, yearly medical/nursing graduates per 100,000 population in India remain significantly lower compared to that in OECD countries and also a few South Asian countries. For instance, in OECD countries, the number of yearly medical graduates is over 14 per 100,000 population, which is below 8 per 100,000 population in India. Similarly, yearly graduating nursing professionals is significantly lower in India (approximately 25 per

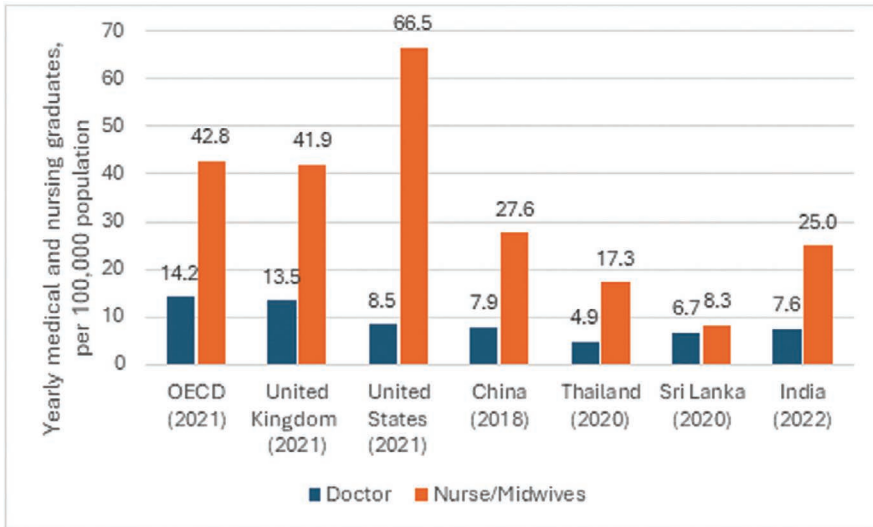


FIGURE 14.7 Density of doctors and nurses/midwives in select OECD and Asian countries.

Source: OECD 2024; National Health Profile 2024; and web search for China, Sri Lanka, and Thailand

100,000 population) as compared with that in OECD countries and China (Figure 14.7).

International comparison of yearly production of medical and nursing graduates clearly indicates India needs to expand the institutional strength significantly to produce increased numbers of medical and nursing graduates. In their detailed study, Karan *et al.* (2023) estimated that India should establish an additional 800–1,000 new medical colleges and over 3,000 nursing institutes to bridge the gap in producing new medical/nursing professionals.

Supply of Medical and Nursing Professionals

As mentioned earlier, all graduates of medical/nursing institution do not register as medical professionals, and all those who register do not join or continue in the active health workforce. The considerable attrition rates at each stage and the final size of the active health workforce depend on a host of factors causing attrition (WHO 2016a).

Given that the number of institutions imparting medical and nursing education has significantly increased in recent years, particularly since 2020, the number of graduating medical and nursing students is likely to significantly increase in the near future. Considering all increase in medical and nursing institutions till 2023, we project the size of doctors and nurses/midwives

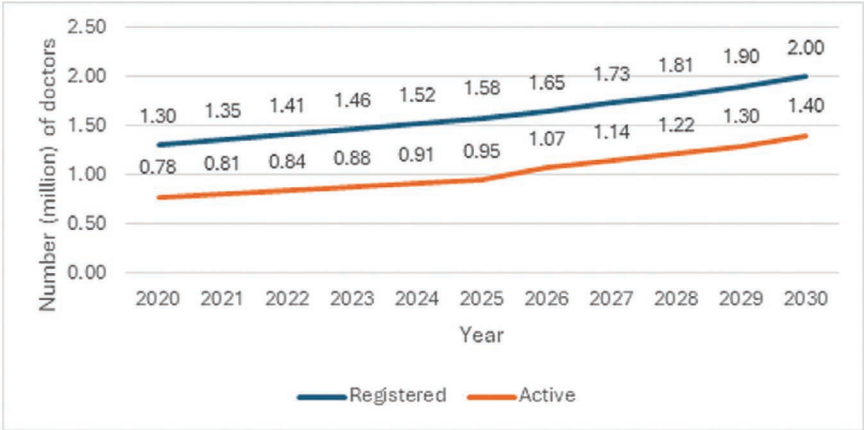


FIGURE 14.8A Projection of number of doctors (in millions) registered with the Medical Council and in active workforce, 2020–2030.

Source: Authors’ estimates using National Health Profile 2022 and PLFS 2021–22 for baseline numbers

Note: For the Medical Council data, we have assumed an annual growth rate of 4% up to 2026 and an increased growth rate of 5% between 2026 and 2030. For doctors in active workforce, we have assumed 60% of registered doctors up to 2026 and a yearly incremental higher proportion reaching to 70% in 2030.

registered with respective councils till 2030 (Figure 14.5a and 14.5b). Similarly, we also did a projection of the active health workforce considering all forms of attrition (migration, retirement, deaths, and labour market attrition) as mentioned in earlier sections.⁸

Figure 14.8a and 14.8b reflects that by the end of 2030, the number of registered doctors and doctors in active workforce would reach up to 2 million and 1.4 million, respectively. Indian Nursing Council data reflect that during 2011–2022, approximately 32,000 ANM and 130,000 nurses and midwives registered each year with the council, with decadal growth rates of 3.8% and 5.5%, respectively. However, the growth rates during 2016–2022 have been 2.9% and 4.3%, respectively. Considering an overall yearly growth of 4%, the number of registered and active nurses/midwives by 2030 will be 4.9 million and 2.2 million, respectively.

This implies that by 2030, the total number of registered technical health workforce (doctors and nurses/midwives) will be 6.85 million, while approximately 52% (3.4 million) of them will be the active health workforce. This turns out to be a density of 47 registered health workers (13.7 doctors and 33.4 nurses/midwives) per 10,000 population in 2030. However, the density of the active health workforce projected for 2030 is estimated to be less than 25 (9.6 doctors and 15 nurses/midwives) per 10,000 population. This

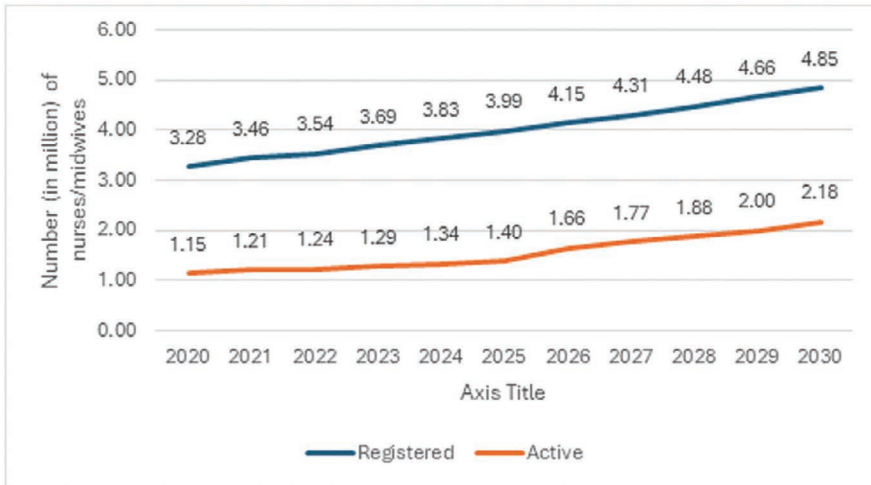


FIGURE 14.8B Projection of number of nurses/midwives (in millions) registered with Nursing Council and in active workforce, 2020–2030.

Note: For Nursing Council data, we have assumed an annual growth rate of 4% up to 2030.

certainly reflects the very little or low access to health workers, although the availability of the registered health workforce is not too bad in the country.

For nurses/midwives in active workforce, we have assumed 35% of registered nurses/midwives up to 2026 and a yearly incremental higher proportion reaching 45% in 2030.

The projection numbers also indicate likely shortages in the health workforce by 2030 for achieving UHC. Although registration council data reflect achieving 44.5 health workforce density by 2030, the active health workforce will be far short of achieving the density of 44.5. With a projected total population of approximately 1.5 billion in 2030, India needs over 6 million health workers to achieve a density of 44.5 per 10,000 population. With an estimated projected active health workforce of 3.6 million, there will be shortage of approximately 3 million health workforce (1.4 million doctors and 2.2 million nurses/midwives). Thanks to the increased number of institutions producing health professionals in recent years, this led to a significant increase in total production of the health workforce. However, it is important to absorb maximum proportion of the new medical and nursing graduates in the health workforce. Reducing the gap between the production and employment of the health workforce will improve the availability and accessibility of the health workforce.

V. Discussions and Policy Implications

The foregoing analysis in this chapter highlights several issues of the health workforce in India. In addition to presenting the latest data on size,

composition, and distribution of the health workforce in India, the chapter identifies the current challenges and priority areas to strengthen the health workforce. We summarise the main findings as follows before jotting down the priorities areas of policy implications.

The Global Strategy Report on the health workforce clearly identifies several dimensions, to be summed up as AAAQ, needing policy attention, particularly in LMICs, including India. Past studies have highlighted shortages in the size of the health workforce in India (Anand and Fan 2016; Karan *et al.* 2021, 2023; Rao *et al.* 2011, 2016) and identified several dimensions of quality of health workers (Das *et al.* 2016; 2022; Das and Hammer 2014).

Using two nationally representative datasets, we highlighted that the current size of the health workforce in India is far short of the international standard and the WHO recommended thresholds of 44.5 health workers per 10,000 population. We also highlighted the acutely skewed distribution of the health workforce across states, rural–urban areas, and public–private sectors, with less developed states, rural areas, and the public sector being at the receiving end. Earlier studies report similar findings (Anand and Fan 2016; Karan *et al.* 2021, 2023; Rao *et al.* 2011, 2016).

The size of different cadres of health workforces estimated from the labour force survey (PLFS) is less than half (45%) of the numbers reported in registration councils of different health professionals. Various prevailing factors (such as migration, retirement and death of registered health professionals, and double counting) explain this difference (Lopes *et al.* 2017). However, labour market attrition is one of the most important factors leading to lower estimates of active health workers compared with the number of health professionals registered with councils' data (Karan *et al.* 2021, 2023). Approximately 40% of doctors and over 65% of nurses/midwives registered with their respective councils are not part of the active workforce.

Such estimated difference across the two datasets could also indicate the quality of the health workforce. On the one hand, approximately 16% of those working as doctors and as high as 45% of those working as nurses/midwives do not possess requisite qualifications, while a large proportion of adequately qualified health professionals are not absorbed in the health workforce. This essentially indicates that although the demand for the health workforce exists in the healthcare markets, a significantly large share of qualified health professionals is not part of the current health workforce.

Another indicative evidence on low quality of the health workforce in India is their low educational endowments. Although general and technical education of the health workforce in India has improved over the years, compared to what is reported in Anand and Fan (2016), currently 30% and 75% of those working as doctors and nurses/midwives, respectively, do not possess any technical degree. While Das and Hammer (2014) and Das *et al.* (2022), using a primary survey data from 19 large Indian states, reported that at

the primary care level availability of doctors and nurses/midwives is not a major problem, competencies and overall quality of those health workers are significantly low. We reported by observing the macro data at the all India and state levels that both the quantity and quality of the health workforce in India are significantly low compared with the international standard and also as per the WHO recommendations.

Public health facilities at the primary care level are supposed to follow the recommendations of the IPHS 2022 for appointing health workers. However, most PHCs and UPHCs reported one doctor and one to two nurses/midwives in-position per PHC. This again seems falling short of the recommended levels by WHO. If PHCs and UPHCs are to function 24 x 7, as recommended by the IPHS 2022, the number of doctors and nurses/midwives needs to be significantly increased to the 'desired' level at the facility levels. Strengthening HWCs, PHCs, and CHCs through increased number of health workers also has the potential to improve the density of the health workforce in rural areas.

India has one of the largest medical and nursing education systems in the world, but the number of annual medical and nursing graduates per 100,000 persons in India is much lower compared with those in OECD and in many South Asian countries. Even after considering the increased supply of medically trained graduates in recent years, India is unlikely to achieve the 44.5 health workforce per 10,000 population by 2030. India needs increased investment in opening more new educational institutions and training and capacity building of the health workforce.

Priority issues of policy recommendations emerging from the analysis in the present chapter are as follows:

Increased investment in opening new medical colleges and nursing institutes (including admission capacities) to produce increased number of health professionals is needed. The increase in the number of medical colleges and nursing institutions may be to the tune of additional 500 and 5,000, respectively, in the near future.

The infrastructure for creating the required health workforce should be improved in the existing institutions. *Increase investment in the development of infrastructure (including faculty strength and quality).* The quality of nursing education and institutions should be upgraded to address the low quality and low graduating rates in nursing institutions.

Increase participation of qualified health personnel in the health workforce.

This needs designing policy framework (say, increase in retirement age, incentives to join workforce, and old age social security) to attract qualified health professionals who are unemployed and out of labour markets. *Target to attract at least 50–60% of health professionals who are currently not part of the health workforce.*

The number of sanctioned post at the facility level, particularly at the primary care level, should be reviewed and increased number of sanctioned post and in-position health workers (particularly doctors and nurses/midwives) should be ensured, which could enable PHCs and UPHCs to function 24 x 7. This will increase the absorption capacity of the health workforce in the public health system and address the issue of low density of the health workforce in rural areas.

There is a need to focus on improving the technical education/knowledge of the health workforce at the primary care level. *A mandatory in-service training course in family medicine at regular intervals should be designed*, and training should be linked with career progression of the health workers.

Improve the health workforce database. For better availability of data, a regular health workforce survey should be conducted using the National Statistical Office platform.

Notes

- 1 The ILO staff access deficit indicator reflects the supply side of access availability – in this case, the availability of human resources at a level that guarantees at least basic, but universal, effective access to everybody.
- 2 The 12 tracer indicators are indicators reflecting reproductive, maternal, newborn, and child health (RMNCH): family planning; antenatal care coverage; skilled birth attendance; and diphtheria–tetanus–pertussis (DPT3) immunisation; indicators reflecting infectious diseases: potable water; sanitation; antiretroviral therapy; tuberculosis treatment; indicators reflecting NCDs: cataract surgery; tobacco smoking; diabetes; and hypertension treatment.
- 3 Data collected from ‘Worldometer’ (<https://www.worldometers.info/coronavirus/>). Accessed June 30 2024.
- 4 IPHS are a set of uniform standards envisaged to improve the quality of healthcare delivery in the country.
- 5 Occupations of individuals in the PLFS 2021–2022 are recorded using the National Classification of Occupations (NCO) 2015, which contains codes for various cadres of health workers including doctors, nurses/midwives, and associate health professionals.
- 6 The GoI in 1943 set up the Bhole Committee, named after the Chair of the Committee Joseph William Bhole, to assess the health condition of India. The major aim of the committee was to survey the then existing position regarding the health conditions and health organisation in India and to make recommendations for future development, to improve the public health system in India.
- 7 A detailed list of medical colleges is available on the National Medical Commission portal: <https://www.nmc.org.in/information-desk/for-students-to-study-in-india/list-of-college-teaching-mbbs/>
- 8 For more detailed methods on projections after accounting for different forms of attrition, see Karan *et al.* (2023); Ridoutt *et al.* (2017).

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PART IV

Sectoral Policy Challenges in Healthcare for All



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15

HEALTHCARE FOR ALL

Challenges in Urban Areas

Mahaveer Golechha and Dileep Mavalankar

I. Introduction

Urbanisation is a global phenomenon with a substantial effect on developing countries, as rapid urban growth has caused a myriad of health issues for urban residents. More than half of the world's population now resides in cities, making urbanisation a defining global trend. Cities are home to approximately 56% of the global population, or 4.4 billion people (Hoornweg and Pope 2017). This trend is predicted to continue, with the urban population more than tripling by 2050, when approximately seven in ten people would live in cities (WHO 2024). This urban transition is especially noticeable in developing countries, where urban population growth is at an unparalleled pace. While urbanisation creates economic opportunities and raises living standards, it also brings several challenges to the urban population. Inadequate healthcare infrastructure is a major problem in developing countries' cities. Healthcare services in overcrowded cities are frequently inaccessible, expensive, and of poor quality, while typically overburdened public healthcare facilities lead to lengthy wait times and inadequate care (Sharma and Popli 2023). This situation places a high burden on governments around the world to address the various vulnerabilities and challenges affecting the health and well-being of urban populations. Because the majority of urban population increase will occur in developing nations, their governments have a unique chance to plan and steer urban development to benefit the health and well-being of urban inhabitants.

Urban health pertains to the examination and implementation of health and wellness strategies within urban settings, with a particular emphasis on the health issues and obstacles that are unique to the urban population. The

accelerated process of urbanisation globally has led to a growing recognition of urban health as a significant public health domain (Gatzweiler *et al.* 2017). Given that urban areas are home to over half of the world's population, their distinct health challenges demand urgent consideration and innovative solutions. Undoubtedly, health constitutes a fundamental aspect of urban development, surpassing mere absence of disease to encapsulate a comprehensive condition encompassing physical, mental, and social welfare. A multitude of components comprise the complex embroidery of urban existence, all of which have a direct impact on the health and well-being of its inhabitants. The profound and multifaceted impact of urban healthcare on sustainable development is evident. As urban areas are engines of an economy, a healthy urban population serves as the foundation of economic productivity, propelling the growth and innovation emblematic of cities. Besides its positive impact on the economy, a healthier population contributes to the overall social cohesion of urban areas. The quality of life, social cohesion, and crime rates are all impacted by health and well-being, which contribute to the creation of more harmonious and habitable urban environments (Sheikh and van Ameijde 2022).

Consistent with the worldwide trend, India is also experiencing rapid urbanisation. The number of people living in cities in India increased from 286 million in 2001 to 377 million in 2011, according to the country's census (Office of the Registrar General & Census Commissioner, India Ministry of Home Affairs, Government of India 2011). There will be more than 550 million people living in urban areas by 2030, making up 31% of India's overall population (Shaban *et al.* 2020). Because of the high population density and intricate social and economic systems in the urban areas of India, healthcare issues such as affordability, accessibility, and quality are particularly pressing and call for creative solutions. Inadequate affordable urban housing and infrastructure, overcrowding, a lack of urban amenities, inequities, and other problems are inevitable outcomes of such unprecedented expansion (Golechha 2020b). There has been little parallel growth in the emphasis on urban health, despite the widening health disparities in urban regions and the often worse health outcomes of low-income urbanites over rural residents (Elseiy *et al.* 2019). Poor housing, malnutrition among children, inadequate water and sanitation facilities, increase in communicable and non-communicable diseases (NCDs), etc., have an impact on the health state of urban populations. According to the National Family Health Survey 5 (NFHS 5), an upgraded sanitation facility is not available to 18.5% of the urban population, and 1.4% do not have access to an improved drinking water source (IIPS and ICF 2021).

Despite the widespread belief that urban areas have easier access to medical services because of the huge number of private sector and public sector providers, health indices of the urban poor are frequently comparable to or

worse than those of rural populations. The urban poor had 57.7% of their children aged 12–23 months immunised, compared to 61.3% in the rural population. Anaemic youngsters make up 62.7% of the urban poor, against 59.5% of the rural population. Most urban poor women between ages 15–49 years do not seek preventative healthcare; among the urban poor, just 20% have had cervical exams, 9% have had breast exams, and 10% have had oral cavity exams (IIPS and ICF 2021). The NCD burden is higher in cities, and the urban poor are especially vulnerable to communicable and vector-borne diseases due to poor living and health conditions (Elsey *et al.* 2019).

Examining data by wealth level, a distinct discrepancy in urban health condition shows. Life expectancy in the lowest wealth quintile is 9.1 years and 6.2 years lower for men and women, respectively, than in the richest quintile. Even for NCDs like hypertension and diabetes, widely regarded as problems primarily affecting the wealthy, the difference in prevalence between 15- and 54-year-old men in the lowest and highest wealth quintiles is insignificant. Some health issues, such as childhood obesity, TB, and underweight, have a higher disease burden among the urban poor than among the rural poor. The urban poor are far more exposed to risk factors such as alcohol, *khaini* (edible betelnut and tobacco powder), and smoking than the urban rich or rural poor. Mental illness is also more common in cities, particularly among lower-income individuals and women (Mishra *et al.* 2021).

Since India's independence, the topic of urban health has arisen numerous times. Although it is identified as an issue to be addressed in various project documents and policies, no action has been taken to address the situation. During the first two 5-year plans, metropolitan regions were to get more than three-quarters of medical care funding, and the emphasis remained on curative treatments, with preventive, promotive, and rehabilitative health services being overlooked (Kumar *et al.* 2016).

The National Health Policy (NHP) of 2002 has talked about public health services in cities being limited and poorly structured. 'Even when these services are provided, they do not percolate to urban slums, requiring individuals to pay for private healthcare out of pocket' (NHP 2002). The NHP has also mentioned about unsafe drinking water, poor sanitation, and air pollution as significant contributors to the illness load in metropolitan areas. NHP 2002 proposed establishing an organised urban primary healthcare system by adopting acceptable demographic norms via a two-tiered structure.

The National Urban Health Mission (NUHM) was the first significant programmatic response at the national level to comprehensively address the urban health needs of the urban poor and vulnerable population. Government of India introduced it in May 2013 as a sub-mission of the National Health Mission (NHM) (NUHM 2013). Urban residents 'living in listed and unlisted slums and all other vulnerable population such as homeless, rag-pickers, street children, rickshaw pullers, construction and brick and lime

kiln workers, sex workers and other temporary migrants' are the target of particular attention from the NUHM.

This NUHM framework, implemented in 779 cities (NUHM 2013), appropriately acknowledges the distinct institutional capabilities of these urban local governments (urban local bodies (ULBs)). Notwithstanding the difficulties associated with staff retention, 41,442 ULB staff, 8,609 medical officers, 7,634 staff nurses, 8,031 auxiliary nurse midwives (ANMs), and 1,712 programme management staff underwent training in diverse domains through September 2022 (NHM 2022). The NUHM prioritised urban impoverished individuals by establishing 5,025 operational Urban Primary Health Centres (UPHCs) from 2014 to 2022 (NHM 2022). After implementing NUHM, community outreach initiatives such as Mahila Aarogya Samitis (MAS) and urban accredited social health activists (ASHAs) have increased access to facility-level care and stimulated demand for preventive services. The Ministry of Health and Family Welfare (MoHFW) deployed approximately 80,000 urban ASHAs and established 81,000 MAS to assist their respective catchment populations in urban areas under the NUHM.

The current primary healthcare facilities are woefully insufficient in quantity, differ greatly in standards and calibre, and offer a narrow range of services – mainly focused on Maternal and Child Health (MCH)/reproductive and child health (RCH). Prior to the NUHM, the lack of a comprehensive health system in urban areas caused uncertainty and substantial inequality, particularly among the poor and migrant population (Raichowdhury *et al.* 2023). With the urban poor as its primary target, the NUHM was designed to be a comprehensive, multidimensional, and holistic programme. The NUHM was made up of one UPHC for every 50,000 people and one Urban Community Health Centre (UCHC) for every 500,000 people in larger cities and smaller cities. A population of up to 2,500 receives outreach services by frontline workers, such as one ANM for every 10,000 residents and a female volunteer or certified social health activist (USHA/ASHA) (Raichowdhury *et al.* 2023). By means of city-level integrated planning, the NUHM intends to establish a system of convergence for all programmes addressing communicable and NCDs, including HIV/AIDS. It would advance the position of ULBs in urban health programme management. Consequently, planning could be city-specific and tailored to local requirements.

Urban health systems have an edge over their rural equivalents in terms of human resources for health, as the urban density of doctors is approximately four times that of rural areas, and the density of nurses three times (Nair *et al.* 2022). However, the results of the NUHM have not been steady across the country's urban areas. In India, urban health is at crossroads: At the current rate of urbanisation, the number of urban poor will increase, posing a significant threat to urban health systems. Without immediate systematic action, and given the pandemic's long-term destruction of the poor's economic, social,

and health outcomes, a significant increase in health inequalities is projected in the coming years. Furthermore, urban health concerns extend beyond the provision of medical services and inextricably relate to urban planning, water, sanitation, housing, and infrastructure. Access to green spaces, pollution control, effective waste management, and safe housing are all important aspects of urban health with direct impact on urbanites' well-being (Panagopoulos *et al.* 2016). As a result, tackling urban health challenges is a multidisciplinary effort requiring the cooperation of healthcare professionals, urban planners, environmentalists, and lawmakers. Urban healthcare is a complicated and multidimensional system that must address the unique issues presented by densely inhabited areas. This system is made up of numerous critical components, each of which plays an important role in preserving and improving the health of urban communities (Tonne *et al.* 2021).

The NUHM has effectively directed essential resources towards urban health. Nevertheless, the mission is encountering specific difficulties because of the complex urban health condition and design of the programme. The achievement of India's universal health coverage (UHC) and improved national health indices depends on the capacity of its health system to provide high-quality healthcare services to its rapidly expanding urban population.

This chapter seeks to analyse the complex health challenges faced by the people in Indian cities, with a focus on elements, such as insufficient healthcare facilities, growing disease burden, sanitation concerns, infectious diseases, inefficient governance, under-provision of funding, and the social aspects that determine health. The discussion has also included India's endeavours to address these health concerns, initiatives, policies, and solutions for tackling challenges in urban areas for attaining UHC in India.

II. Methodology

The methodology involves a comprehensive literature review to obtain relevant studies related to the challenges of healthcare in urban areas. An attempt has also been made to identify innovative solutions via case studies on improving urban health. We have also looked for relevant policies, programmes, and guidelines related to urban health in India. The electronic databases PubMed Central, Science Direct, and Scopus are searched with relevant search terms.

III. Challenges for Urban Healthcare in India

Growing Burden of Diseases

Urban areas face significant public health challenges, including an increasing burden of NCDs, risks of infectious disease epidemics, and vulnerability

to violence and injury (WHO 2024). This combination of three elements includes unhealthy living and working conditions, insufficient green area, various forms of pollution (such as noise, water, and soil contamination), urban heat islands, and a lack of space for physical activity. These exacerbate NCDs, such as heart disease, asthma, and diabetes (Blanchard *et al.* 2020). The prevalence of processed foods, along with the rapid urban lifestyles, frequently results in dietary selections rich in fats, carbohydrates, and salts (Chowdhury 2023). Urbanisation is positively correlated with a higher incidence of depression, anxiety, and mental illness (Krabbendam *et al.* 2021). Children, young adults, older individuals, and underprivileged groups are particularly vulnerable to injuries, including road traffic accidents, and interpersonal violence due to unfavourable working and housing conditions. Infectious diseases, such as COVID-19, tuberculosis, dengue, and diarrhoea, flourish in impoverished and densely populated areas and are strongly linked to unsanitary living conditions and inadequate waste management (WHO 2024). In addition, individuals living in urban areas face significant risks from both natural and man-made calamities, including floods, internal displacements, migrations, occupational diseases, and illnesses caused by air



FIGURE 15.1 Challenges for urban healthcare in India.

Source: Created by authors

pollution (Manawadu and Wijeratne 2022). Overcrowding, inadequate sanitation, and restricted healthcare access make Indian cities fertile grounds for infectious diseases. Diseases such as TB, HIV/AIDS, and dengue fever increase in these surroundings, posing an ongoing hazard to urban people (Bankar *et al.* 2022). Inadequate disease surveillance and primary public health actions can aggravate infectious disease spread (Zhang *et al.* 2023).

Poor Access to Healthcare Services

The disparity in access to high-quality care is one of the pivotal problems faced by the urban population (Kasthuri 2018). Even though there are state-of-the-art medical facilities nearby, many urban residents, especially the poor, lack the access to healthcare (Bhat *et al.* 2018). Low-income families are severely impacted by the high expenses of healthcare at private health facilities (Bhat *et al.* 2018). Geographical obstacles also worsen the problem, making it more difficult for people of underprivileged neighbourhoods to receive timely care (Kumar *et al.* 2016). One example of such a barrier is the concentration of medical services in particular urban districts over others. This discrepancy highlights the need for more fair allocation of health resources and adoption of policies meant to lower the cost of healthcare and increase its accessibility to the urban population.

Even though health facilities are geographically accessible, most private and public health facilities are inaccessible to the urban poor because of overcrowding in secondary and tertiary health services, lack of adequate services and personnel in primary health services, and unaffordability. In such situations, most urban poor use unqualified quacks, local healers, or self-medication. Urban marginalised people have trouble accessing health treatments. Because urban basic care services are lacking, person residing in slums or squatters have trouble getting access to health facilities (Gupta and Guin 2015).

Private healthcare is uncontrolled and inconsistent (Chaudhuri and Datta 2020). A varied and uncontrolled private sector has made cheap healthcare a major issue for the poor and disadvantaged. Evidence is mounting that these groups' high out-of-pocket costs lead to chronic illness care discontinuation (Sharma *et al.* 2020).

Inefficient Urban Health Governance and Implementation of the NUHM

The multiplicity of healthcare providers in urban areas – the state, ULBs, NGOs, employees state insurance service (ESIS), public sector undertakings (PSUs), and private entities – is a major obstacle to accessibility, quality, and accountability (Nambiar and Mathew 2022). Urban healthcare faces

significant governance issues due to overlapping authorities among administrative entities, a lack of coordination among service providers, and a lack of accountability to the community it serves (Rao 2016). Urban healthcare provision is unusually complex because health services are provided by various governmental departments and institutions (state health department, industrial hospitals (ESIS), ULBs, and central government health schemes), and each city and town have a unique combination of such architecture (Mullen *et al.* 2016). Such dispersed duty has a negative impact on the delivery of equitable, accountable, and responsive public healthcare, frequently pushing even the urban poor to seek care in the private sector.

The role of state governments and municipal entities as healthcare providers in metropolitan areas is unclear, and there are no population-based norms. There are several agencies offering services, with little coordination and cooperation (NHSRC 2021). The ULB is often seen as responsible for primary healthcare, with secondary and tertiary care falling under the purview of the state government. The ULBs do not have adequate financial resources, power to function, or human resources to handle the urban public health system.

The NUHM faces several implementation issues, including the scheduling and placement of health services. The NUHM requires states to create health facilities inside or within half a kilometre of a slum or slum-like habitation, open at least 8 hours a day, ideally from 12 p.m. to 8 p.m. However, the majority of states have not implemented these policies (NUHM 2013). States have claimed challenges in finding room to build an UPHC in congested slum areas, and health workers, particularly women, are hesitant to work in the evenings in slums because of security concerns. Another implementation challenge is the establishment of the MAS. It has been noticed that mobilising and empowering urban poor groups, particularly mobile and migrant populations, through MAS is a difficult task.

The 74th Constitutional Amendment (1992) was intended to clarify the framework of urban governance, including healthcare, by defining the functions and responsibilities of ULBs (Gopi 2016). However, the issue of overlap between ULBs and state government jurisdictions has not been addressed, affecting the organisation and development of urban health facilities. The constitutional need for decentralised governance consequently has a direct impact on the organisation of healthcare in urban areas. The present situation highlights the complexities of health governance in urban locations, with little or no institutional coordination (NHSRC 2021).

Health Inequities

In contrast to prevailing beliefs, the health conditions of impoverished urban dwellers in India are sometimes more detrimental than those of the rural

counterpart (Lahariya *et al.* 2016). Although urbanisation can yield economic and health advantages, unplanned and hasty urbanisation can lead to numerous adverse social and environmental health consequences, disproportionately affecting the most impoverished and vulnerable members of society. Migrants and other marginalised populations are frequently concentrated in ecologically deteriorating and poor localities that offer limited educational and occupational prospects, inadequate healthcare accessibility, and substandard health conditions. A matter of utmost importance is the health disparity experienced by the expanding urban impoverished, who constitute nearly 30% of the entire poor population (Ghia and Rambhad 2023). The presence of health inequity can be primarily attributed to the convergence of three elements: inadequate provision and accessibility of health services, inadequate governance, and an unaccountable urban health system (Mishra *et al.* 2021).

In India, urbanisation is altering environmental, lifestyle, and other determinants of health outcomes and the epidemiological composition. The urban poor bear a disproportionate burden of diseases and illnesses compared to non-poor households residing in urban areas, as supported by an increasing body of evidence. Anjana *et al.* (2017) revealed that the incidence of diabetes is comparatively greater in urban regions of India (11.2%) than in rural areas (5.2%). In India, NCDs have surpassed infectious diseases as the leading cause of disease burden. At present, NCDs constitute approximately 60% of the overall burden, with NCDs and traumas combined accounting for 72% (Menon *et al.* 2022). The health vulnerability of individuals residing in urban poverty is exemplified by the significantly increased risk of mortality they face. Specifically, men from the poorest urban households had a 2.3-fold greater chance of dying than those from the wealthiest households; for women, the probability was 3.7 times (Asaria *et al.* 2019). Urban impoverished individuals are exceptionally vulnerable to communicable diseases because of the poor conditions prevalent in their working and residential environments.

It has been reported that the life expectancy of individuals in the lowest wealth quintile is 9.1 years for men and 6.2 years for women, compared to the wealthiest quintile (Asaria *et al.* 2019). The urban impoverished, comprising 26% of the total urban population, are further disadvantaged in health and nutrition due to insufficient access to essential services. About 58% of urban impoverished children fail to receive all recommended immunisations, compared to nearly 36% of urban children (NITI 2019).

Environment and Occupational Public Health Challenges

Pollution, insufficient waste management, and a scarcity of green areas are among the most serious threats to public health in cities (Addas 2023). Air

and water pollution caused by industrial activity and vehicle emissions have been related to a variety of respiratory and cardiovascular diseases (Bikis 2023). Poor waste management practices promote the growth of vectors, such as mosquitoes and rats, resulting in the spread of infectious diseases. The scarcity of green areas, which are essential for recreation and mental health, exacerbates the urban health issue by reducing physical exercise and community connection. Occupational healthcare is essential in metropolitan areas where the industrial and service industries dominate.

In developing countries' metropolitan areas, air pollution poses a serious health risk. The concentration of automobiles, industrial activity, and construction projects adds to increased levels of air pollutants, such as particulate matter (PM) and hazardous gases (Manisalidis *et al.* 2020). Longer exposure to such pollutants can cause respiratory ailments and cardiovascular issues, and lead to higher mortality rates, especially among vulnerable people (Al-Kindi *et al.* 2020). Cities consume almost two-thirds of global energy and account for over 70% emission of greenhouse gases (Dasgupta *et al.* 2022). Urban populations are particularly vulnerable to climate change, with inland cities experiencing temperatures 3–5°C higher than rural areas due to the urban heat island effect caused by concrete expanses and lack of green and blue infrastructure (Vujovic *et al.* 2021).

Poor Urban Primary Healthcare

Primary healthcare is the cornerstone of urban health and is intended to be the patient's initial point of contact with the healthcare system. The primary health system is necessary to provide fair access to fundamental health services to urban dwellers, regardless of the socio-economic background. Primary healthcare is essential for the prevention and management of communicable diseases, which is especially important in metropolitan areas where high population densities can enhance the transmission of disease.

Rural areas have been the focus of public health since independence. As a result, the provision of comprehensive healthcare services to the urban population has been neglected, as was the methodical planning for the infrastructure supporting healthcare. Urban areas continue to have a woefully inadequate primary health infrastructure in sub-centres and primary health centres (Abraham *et al.* 2023). In addition to the difficulties experienced by the urban poor, the nation's tier-2 and tier-3 cities lack enough basic health infrastructure. The 2019 NITI Aayog Report states that compared to their rural counterparts, primary health centres in cities are not providing quality of care to the citizens. The fact that the central government spent INR 850 crores on urban health services in 2019–2020 compared to roughly INR 30,000 crores in rural areas indicates that the majority of attention has been focused on rural areas (NITI 2019).

The significance of community perceptions is in the implementation of effective community-based healthcare services. The sustainable transition of optimal health-seeking practices is contingent upon the community's effective utilisation of these services. Urban health services in India are regarded as inferior in quality. The quality of care, unavailability of pharmaceuticals, lack of human resources, and attitude of healthcare professionals are the primary reasons communities are unwilling to utilise services at UPHCs.

Across the nation, the availability of urban public health services through UPHCs is approximately 40% below the government's stated standards. The amenities offered are disproportionately distributed and often located far from impoverished neighbourhoods and other areas where the most vulnerable individuals reside. Because of this, the private sector becomes the primary provider of both inpatient and outpatient treatments in urban areas, even forcing the impoverished to seek its services. A major reason people fall farther into poverty is high hospitalisation costs, a reality for the majority of urban poor people without access to state-run or commercial insurance programmes (Bhat *et al.* 2018). Their financial burden is further increased because the private and public facilities differ in cost by a factor of ten (Bhat *et al.* 2018). The impoverished, especially those with chronic diseases needing long-term care, end up delaying or forgoing health services completely because of these disparities in access and expense.

Lack of Convergence for Addressing Social Determinants of Health

Social determinants of health, such as access to nutrition, pure water, and education, are critical determinants of health disparities in urban areas (Chelak and Chakole 2023). Because these determinants contribute to a recurring pattern of negative health outcomes, it is critical to resolve them to advance urban health (Montel 2022). India acknowledges the significance of addressing social determinants of health. India has executed initiatives to advance education, alleviate poverty, and foster skill development to improve the socio-economic condition of urban residents. Particularly detrimental to the health of the urban poor are inadequate sanitation, substandard nutrition and water, ineffective waste disposal, and substandard water quality (Vilar-Compte *et al.* 2021). Enhancing the primary healthcare infrastructure and ameliorating social determinants of health are intrinsically linked to improving the health status of the urban poor (Montel 2022; Ompad *et al.* 2007).

Collaboration and co-operation with non-governmental and governmental development stakeholders are necessary to address social determinants. Despite being widely recognised as a critical element in programme design on a global scale, convergence has proven to be a challenging concept to achieve (Prasad *et al.* 2013). Practically, convergence consists primarily of 'convergence meetings' and the constitution of collective committees. It entails a

fundamental shift in the perspective of various stakeholders to establish a shared understanding of objectives, targets, resources, work plans, successes, and setbacks. The social environment is crucial to comprehending the manner in which urban areas impact population health. While social determinants of health hold significant importance in a broad sense, their impacts can vary across contexts, including urban and rural environments, countries, cities, and even within cities. Any initiative to enhance the well-being of the populace will be impeded if the function of sub-divisional hospital (SDH) in health and access to social services is not recognised, and more significantly, realised.

Underfunded Urban Public Health

Underfunded government health budgets constrain the public-sector primary care infrastructure, including preventative, promotional, curative, and rehabilitative services in urban areas. The private sector, although extremely fragmented, accounts for a considerable amount of outpatient treatment, is of variable quality, and includes a variety of providers. Some providers are informal and underqualified (Montagu and Goodman 2016). The lack of funding for urban public health has resulted in inadequate healthcare facilities, a shortage of healthcare personnel, and limited access to essential drugs and treatments (Lahariya *et al.* 2016). As a result, India has major obstacles in achieving universal healthcare and reducing the illness burden in the country.

Heavy reliance on the private health sector results in high out-of-pocket (OOP) health spending, which places a financial strain on households, particularly the poor, and leads to insufficient health seeking (Bhat *et al.* 2018). Even poor people who seek care may have to forgo other necessary basic requirements, such as food, clothes, shelter, and education, and in certain situations, healthcare costs force the household into poverty. Furthermore, a substantial portion of the population is the working urban poor who continue to be uninsured and risk deteriorating health or impoverishment if they do seek medical care. The working urban poor constitute 'the missing middle', a sizeable proportion of the population that lacks financial security, situated between those who can afford healthcare and those who benefit from government-sponsored health insurance systems (Bhat *et al.* 2018). The OOP spending per outpatient visit in cities is increasing at a faster rate than in rural areas. According to NSSO data, just 17.8% of urban people were covered by a risk-pooling mechanism. Only 9.7% of people in the lowest quintile of income were insured, compared to 36.4% in the highest quintile (Ravi *et al.* 2016).

A research conducted for the XV Finance Commission on 37 municipal corporations (MCs) from 53 metropolitan agglomerations/cities with

TABLE 15.1 Public Expenditure on Health and Budgets for the NHM and NUHM (INR 100 Crores)

<i>Item</i>	<i>FY2016</i>	<i>FY2017</i>	<i>FY2018</i>	<i>FY2019</i>	<i>FY2020</i>
NHM budget	284.00	374.24	525.35	517.42	563.17
NUHM budget	7.52	11.35	13.90	14.80	16.03
Share of NUHM in total budget of NHM (%)	2.65	3.03	2.65	2.86	2.85

population greater than 1 million found that MC finances have remained unchanged or have fallen across states. GST currently covers most consumption taxes, including octroi, local body tax, entry tax, and advertisement tax, previously levied by local governments (ICRIER 2019). This has significantly reduced the total municipal revenue in GDP.

Another significant issue is the security of migrants' finances and health. The urban system frequently falls short of protecting the financial and health needs of migrants (Suphanchaimat *et al.* 2015). A major reason for the low availability and quality of service is the inadequate funding for urban health and nutrition. The country's funding for primary healthcare in urban areas is reducing, and prediction is that a three-fold increase is required to cover all essential primary services. Since most ULBs have competing goals and inadequate funding, ULB finances cannot make up for this shortfall (Mishra *et al.* 2021).

Possible Solutions for Tackling Urban Health Challenges

Urban health should be a high priority for the union, state, and local governments for achieving healthcare for all in India. Urban health concerns require coordinated, multi-sectoral, multidisciplinary, and strategic approaches. Better air, water, sanitation, healthy urban planning, successful convergence of social determinants, increased financial resources for urban health, promotion of health equity, avoidance of violence and injury, provision of primary healthcare in urban areas, and environmental management of vector-borne diseases are all important aspects of addressing urban health challenges. Priority to address the needs and dangers faced by particular demographic groups, such as children, the elderly, and immigrants, is necessary. Because urban health issues are interconnected, taking action in one area can benefit many other areas. An attempt has been made to identify solutions in this part for dealing with urban health issues in order to achieve health for all in India.

Effective Convergence of Social Determinants of Health

Several determinants that lead to convergence in urban health include malnutrition reduction, provision of adequate drinking water and sanitation, occupational health hazards protection, and improved health education. A coordinated approach and the convergence of policies and programmes by the relevant departments become critical for implementing health in all policy approaches. Urban planning should be holistic and consider the overall health of the metropolitan population. Integrated plans would provide adequate sanitation, water supply, access to nourishment, road and traffic safety, injury prevention, and the provision of health services, as needed. Interdepartmental coordination, collaboration, and cooperation would also result in a shared understanding of priorities across all line departments. Once the integrated plan is developed, many stakeholders can carry out actions within their scope, resulting in the coordinated attainment of urban health objectives.

The NUHM should encourage both inter-sectoral and intra-sectoral convergence to avoid duplication of resources and efforts. Convergence is an important component in reducing duplication of effort and making the most of available resources. Develop better convergence methods during the planning stage, as a lack thereof can complicate mission objectives and impede effective execution (NHSRC 2021). According to the social determinants approach, increasing living conditions in areas such as income, housing, transportation, employment, education, social support, and health services is critical to improving urban population health (Hoernke 2020). To effectively improve India's urban health landscape, we must address broader health determinants.

Strengthening Urban Primary Healthcare

The NUHM framework outlines comprehensive planning for urban healthcare infrastructure (NUHM 2013). Majority of states are not able to use all the funding granted by the ministry for NUHM. State governments must prioritise the planning and establishment of primary healthcare infrastructure in urban areas by establishing UPHCs; recruiting a workforce to deliver preventative, promotional, and basic clinical care; and providing referral services to those in need. The planning and delivery of services should involve mapping vulnerable populations and mapping available health facilities established under various government schemes, non-governmental groups, and the private sector. Address the existing inadequacies comprehensively. Setting standards for organisations that provide primary healthcare and holding them accountable to the local government and, ultimately, to the population are critical factors for improving urban primary care. To offer service delivery, an enabling environment with enough autonomy and built-in controls

must be constructed, as well as a procedure for providing managerial oversight to UHCs.

Gujarat Model of Urban Health

Ahmedabad and Surat had their own public health department under Medical Officer of Health (MoH) at the helm, with deputy MoH, assistant MoH, etc., below them. In addition, they had UHC, maternity homes, ward-level public health supervisor office, registrar of birth and death, vaccination superintendent, and other such posts before the NUHM. They were involved in many public health functions such as cleaning of the city/garbage removal, water testing, providing vaccination, food safety and hygiene, control of vector and malaria, control of infectious diseases and epidemics, registration of births and deaths, primary care and MCH with delivery care, etc. The municipal corporations of Ahmedabad and Surat also have tertiary healthcare institutions, which include a medical college and hospital.

Surat has established a model of comprehensive urban healthcare that includes features of primary healthcare and strong public health. The Gujarat Urban Development Mission was formed in 2005–2006 to accelerate urban restructuring and planned development (Kumar *et al.* 2018). There has been a strong focus on urban healthcare reforms, with a standard urban primary healthcare system, with each Urban Public Health Centres (UPHCs) serving a population of 100,000. Surat has 32 Urban Public Health Centres (UPHCs), 11 of which have maternity homes attached, and they provide a variety of services such as outpatient and inpatient departments, maternal care, services under national health programmes, birth and death registration, health education, immunisation, and disease surveillance (Kumar *et al.* 2018).

Community health departments at medical colleges must become involved in primary healthcare services in their local regions. Because they can develop comprehensive primary healthcare services, they must be involved in the process. ULBs and higher authorities must employ technical experts in epidemiology and health service planning. Gaps in the health system grew even more visible during the pandemic, with considerably underfunded and patchy public health systems, along with large disparities among states, posing challenges to India's disease containment plan (Chetterje 2020). By addressing health challenges at the primary level, urban healthcare systems can lessen the burden on more specialised higher levels of care, hence increasing overall system efficiency and health outcomes.

Improving Access and Quality of Care

While closeness to health services is one of the primary benefits of living in an urban environment, treatment at public health facilities remains 'out

of reach' due to high patient loads, limited timing, and long wait periods. An approach for reducing overcrowding is to strengthen primary health services and implement a strong referral mechanism to higher-level hospitals. Social barriers in the form of discriminatory behaviour by providers serving the socially and economically underprivileged people are also a significant concern requiring urgent attention. Sensitisation of urban providers, and the establishment of health facilities near vulnerable and disadvantaged communities are strongly suggested for enhancing access to healthcare.

Policymakers and programme administrators should provide a full range of services to the urban population, including NCD, deaddiction, and rehabilitation services. This package of services should have provision for free drugs and diagnostics and proper preventative and promotional care. The emphasis should be on improving primary healthcare and delivery methods, and providing preventative and promotional health services in urban areas. This is especially important for growing NCD concerns, which the primary healthcare system can handle at a low cost.

The effective collaboration, cooperation, and coordination can also be a way forward for improving access to affordable quality of care in urban areas. For instance, in Gujarat, industrialists/philanthropists have established many hospitals. These hospitals are providing quality of care to urban populations at very low cost. In Gujarat, charitable trusts have also adopted public health facilities in urban areas. Such models can be easily replicated in other cities as well.

The task of improving urban health services may appear daunting; however, the key is to begin with necessary steps at both the policy-planning and implementation levels – agreeing on a service package, enrolling providers (improving access) and identifying beneficiaries (coverage), focusing on primary healthcare, and improving quality of and effective collaboration with the private sector. There is no ideal or one-size-fits-all solution, and each state may choose its own course. There is plenty of room for innovation and learning as the process progresses. Recognise improved health services in urban areas as critical to India's progress towards UHC. States must take advantage of the NUHM's flexibility to create creative models, examine existing models, and scale them up appropriately. The Delhi government's Mohalla (community) Clinic, Basti Dawakhana, and Urban Health Kiosk (UHK) are all successful examples of urban healthcare innovation. The Delhi government launched an ambitious PHC programme in 2015 by establishing Mohalla Clinics, with the goal of eventually opening 1,000 urban PHC clinics. Mohalla Clinics provide a basic set of vital health services, including 110 medicines and 212 diagnostic tests, at no cost to beneficiaries. The UHK is an NHM programme in Punjab that provides limited medical services to slum dwellers and the impoverished right at their doorstep. Each UHK has a pre-fabricated building with a partition for ANMs, privacy for an examination

area and immunisation cabins, a toilet and running water supply, an electricity connection, and a power backup (Maheshwari and Ray 2018).

IV. Addressing Health Equity

Bringing together the various stakeholders involved in healthcare delivery in urban settings, both public and private, under a broad policy umbrella is critical to establishing a universal health system and improving healthcare access in urban areas. This would lessen the fragmentation of urban health systems while also leveraging available health resources towards a shared goal: addressing changing urban health demands and health disparities. Combine this with stricter regulation and oversight of private health providers to address concerns about the cost and quality of care. Urban health systems are underfunded and struggling to cope, resulting in health disparity. The government's NUHM standards for human resources at UPHCs (doctors, nurses, and other paramedics) and strengthening PHC infrastructure for integrated care from screening and diagnostics to treatment and follow-up in one location are the need of the hour for reducing the health inequity. The government should provide free medicines and therapy to reduce OOP expenses for the urban poor. This will reduce the health inequity.

Efficient Urban Health Governance

The MoHFW, ULBs, and various state governments play a role in managing India's urban health system. It is widely agreed that overlapping jurisdictions and stakeholders' autonomy have resulted in less accountability and inadequate planning and delivery of healthcare services for the urban population. NUHM fund utilisation is only up to 67%. This calls into question the governance mechanisms in existence, fund flow, and authorisations as well as cooperation among numerous decision-makers. ULBs should be encouraged and empowered to increase their revenue-generating capacity, and their capacity to employ these resources to provide more healthcare services. Improving ULB finance choices can help address human resource problems in both implementation and monitoring (NITI 2019). The devolution of powers in governance has provided ULBs with the tools they need to control any actor in the health sector, with the goal of improving health equity in the decentralised structure. The movement of funds from the NHM to state governments to ULBs has resulted in a complex web of approvals, bureaucratic friction, and avoidable delays. Therefore, there is an urgent need to improve financial planning and the release of fund to ULBs. A distinct Urban Health Directorate that reports to the Ministry of Urban Development can be created as a coordinating authority. Recognising health as a critical component of urban planning and governance will assist policymakers in translating

the goal of sustainable urban development for all into ground-level action (Observer Research Foundation (ORF) 2019).

Reforming the institutional, administrative, and governance frameworks – which frequently operate in parallel without combining – will necessitate significant changes that have a significant impact on other crucial areas besides the health sector. Putting all urban health institutions under one roof, whether in an already-existing ministry or by establishing a new organisation specifically for urban health, could be a first step. Evidence suggests that enhanced results at the lowest echelons of governance depend on a robust local administration with well-defined duties and responsibilities.

Improving Population Health

The government should work with other ministries to promote healthy lifestyles, such as promoting non-mechanised transportation and encouraging physical activity and healthy eating habits at educational institutions and businesses. Cities sometimes lack water sanitation, leading to epidemics of water-borne diseases. Many water collection places in cities cause mosquito breeding, leading to dengue, chikungunya, and malaria. To improve overall health outcomes in India, expand access to primary healthcare and more thoroughly link with financial risk protection plans for the urban poor. India has a strong health insurance business with considerable knowledge of insurance products and their design.

The most important method for improving health outcomes in cities is to understand the dynamic and complicated nature of the urban population's health vulnerabilities. A 'one-size-fits-all' strategy will not work in metropolitan environments, since the needs of residents living in the same slum area may differ as they migrate from diverse contexts and cultures. To respond appropriately and properly to enhance health outcomes, a detailed analysis of vulnerable groups and their susceptibility is the need of the hour. Vulnerability mapping should be done in each city. This process will yield significant benefits in urban community health and social inclusion. Establishing a primary healthcare system in urban areas is crucial to address health challenges such as vector-borne diseases, NCDs, air pollution, acute respiratory infections, road traffic accidents, and injuries.

Reducing Environment and Occupational Health Burden

The government should prohibit industries that harm the environment by producing dangerous effluents or polluting materials, and enforce stricter emission standards for cars. Odd–even vehicle number drives can improve situations by limiting personal vehicle ownership and boosting carpooling. The Delhi government has previously implemented an 'odd–even number'

programme to reduce traffic congestion and air pollution. The Delhi state government has also implemented numerous initiatives to reduce air pollution in the city, for example, prohibiting heavy trucks from entering the main city and redirecting them to different routes. The National Green Tribunal has restricted industrial activity and prohibited garbage burning in Delhi. In addition, the government has planned more metro lines and increased the number of public transportation vehicles to help lessen Delhi's air pollution. Addressing such diverse health requirements necessitates a comprehensive array of resources, including human, infrastructure, and financial support. Addressing these environmental health risks necessitates a multifaceted approach that includes tighter pollution control, enhanced waste management systems, and incorporation of green spaces into urban design initiatives like Nagar Van Yojna (city forest initiative).

Better Urban Health Financing

A significant issue in urban health is the lack of systematic planning and finance. Urban governments and cities must also work to develop equitable and efficient health systems. Urban governments have the authority to engage with private providers constructively, and finance can be a powerful tool for doing so. Urban health indices are poor, and if UHC is to be reached in India, action must be taken in urban health to increase access and provision of equitable care and provide financial protection to the population. Cooperatives and other community-based organisations can considerably benefit health insurance expansion by providing structures, community outreach, and accessibility. As policymakers look for new ways to deliver inexpensive healthcare to the urban poor, they will need to use a two-pronged approach that includes programmatic (supply-side) interventions and demand-side finance measures, most notably insurance-financial protection. The government can use a variety of health policy tools to affect the implementation of initiatives to enhance access and provide financial protection, including information, availability, price, and regulation. Information communication and social marketing tools can be used to raise awareness, literacy, and information about various health and financial services, including health insurance.

In terms of the sustainable development goals (SDGs), boosting urban health financing in India is critical to attaining SDG 3 – guaranteeing healthy lives and fostering well-being for all at all ages. India has committed to providing universal health coverage by 2030. Improving health financing is critical to accomplishing that objective. By strengthening health financing, India can ensure that all people, particularly the poor and marginalised, have access to basic healthcare services.

Additionally, it is crucial to acknowledge that numerous local public goods functions have been reclassified as national priorities, with the implicit

expectation that central or state funds will fund them. This has reduced the opportunity for local entities to address the immediate requirements of their target populations, including health, water, and sanitation. Consequently, the central and state governments should allocate sufficient funding to municipal entities according to national priorities.

The actual collection of property tax has been quite low, ranging from 5 to 20%, despite the property tax constituting approximately 50% of the own-source revenue (Awasthi and Nagarajan 2020). There is an immediate necessity to optimise the efficiency and effectiveness of municipal tax collection. This will ensure that municipal entities have sufficient financial resources. It is crucial to analyse the allocations and expenditures under the NUHM, as there are no definitive guidelines for urban health spending. The clear-cut guideline for spending under the NUHM will solve the issue of under-utilisation of funds available under the NUHM.

Strengthening Community Engagement

Improving community participation in the governance of urban health systems is necessary for increasing accountability and accessibility to the health services. Community platforms in urban areas, such as MAS, engage communities in the management process. This enables communities to take ownership and keep the health system responsible for their demands. The government should establish an Urban Local Governance Board (ULB) at the community level, empowering and funding Ward Committees to strive towards more responsive healthcare in their neighbourhoods. Long-term community engagement through a network of volunteers, peer leaders, and women's groups can strengthen urban health governance and accountability. Finally, many more frontline workers like ASHAs, ANMs, and Anganwadi Workers (AWWs) should be recruited and strengthened, with the goal of empowering them to meet the needs of the communities they serve proactively. For effective community engagement, the health department at the city level should collaborate with various NGOs working at the community level. In the city of Ahmedabad, many community-based organisations like SEWA, SAATH, and Sanchetna, and many more are supporting the health department in improving access to healthcare services for the urban poor. They have good reach and connect to the community. Historically, many UHCs and urban family planning centres were run by NGOs in Ahmedabad and other cities. This model should be encouraged in other cities.

Under the Community-based Monitoring and Planning (CBMP) programme, the NHM assisted civil society networks in conducting extensive participatory monitoring to enhance the quality and accessibility of health services. Community-based monitoring is a concept that is present in the process of evolution and is being implemented in nine states of India: Assam,

Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, and Tamil Nadu. Depending on the number of districts in each state, three to five districts have been selected. For this phase, three blocks in each district, three PHCs in each block, and five localities in each PHC have been selected. While some states chose to end the CBMP, others decided to keep up some community-based initiatives while significantly reducing the role of nodal civil society organisations (CSOs).

V. Success Stories from Other Countries

Barcelona: Using Urban Design to Improve Urban Health

In 2016, Barcelona made headlines by introducing its first Superilla, or ‘Superblock’. This initiative aims to revolutionise the public realm of a city by prioritising the inclusion of individuals and communities. The primary focus of this initiative is the redesign of spaces to accommodate pedestrians, with bicycles and public transportation following in order. The assessment conducted in 2021 demonstrated the beneficial effects of this initiative on urban health, including a decrease in air pollution in the Superblock surrounding Barcelona’s central area and an enhancement in mental well-being because of the reduction in noise pollution. Additionally, it is anticipated that the Barcelona Superblocks could prevent nearly 700 fatalities annually because of their health benefits (Mueller *et al.* 2020).

Providing Healthcare to Vulnerable Communities in Athens (WHO 2020a)

Athens is one of the 70 cities that are a part of the Partnership for Healthy Cities, a global network dedicated to preventing injuries and NCDs in order to save lives. Since cities are essential to the COVID-19 response, the partnership grew during the emergency to handle the pandemic immediately. During the pandemic, the city authorities, with the assistance of other CSOs, bolstered their efforts to provide vital supplies and health information to underprivileged areas. The city also established a specialised support centre for individuals who inject drugs, and interim accommodation for homeless individuals. Athens is working to create a more equitable health system and a more just city.

Turning Data into Action against COVID-19 Inequalities in Kampala (WHO 2020b)

City officials adopted a data-driven and equity-oriented approach to the COVID-19 response in order to analyse the vulnerability of local communities

to the virus's impact. They have gathered information on how COVID-19 affects equity to influence decision-making and the use of scarce resources. These data points form the COVID-19 Vulnerability Index, an interactive map that shows COVID-19 vulnerability by parish. Kampala received assistance in implementing a monitoring system to track COVID-19 occurrence among its population. These real-time data enable city officials to allocate limited resources to communities that are affected by COVID-19 the most.

Promoting a Healthy Diet – London, United Kingdom

The Healthy Early Years London (HEYL) initiative was designed to mitigate health disparities by promoting a healthy start in life through early cognitive development, physical activity, and diet. The main metrics of the programme incorporated the measurement of inequality. The Health Inequalities Index was used to monitor the reach and impact of the programme, enabling municipalities to evaluate the extent to which their HEYL efforts were benefiting children from disadvantaged backgrounds. In general, the HEYL experience underscored the potential advantages of connecting health and well-being to other concerns, such as education.

VI. Conclusion

India's rapid urbanisation has created several significant health issues that call for coordinated action and a multi-sectoral strategy to addressing them (Golechha 2020a). A growing number of vulnerable and impoverished urban residents exhibit numerous health and development indicators that significantly worsen compared to their rural counterparts. Urban health is a difficult field of public health that requires creative problem-solving. Apart from the administrative and implementation obstacles, the most challenging aspect is that majority of diseases have origins that fall outside the scope of the health system. Not only must the health department keep trying to develop and implement new programmes, but other areas of social policy also require significant improvements. Additionally, the health system must acknowledge the diversity of health service providers and focus more on research on raising the standard and accessibility of healthcare across government, private, and non-profit establishments. Enforcing environmental rules and bridging policy gaps to introduce social support for migratory communities are critical measures in advancing urban health. Improving collaborations with NGOs and capitalising on their community outreach can additionally enhance the accessibility of healthcare services for the impoverished in metropolitan areas. All levels of government must engage in efficient knowledge-based health planning, implementation, monitoring, evaluation, and governance to guarantee equitable access, affordability, and quality of care at urban health facilities.

This will definitely lead to equitable health outcomes for the complex and dynamic urban populations. The country's efforts to achieve universal healthcare are seriously hampered by growing urbanisation. The NUHM and other such initiatives have been the centre of government attempts to improve urban health systems. However, India's urban health system would struggle to meet universal health coverage unless there is a significant increase in public expenditure for health. It is important to understand that tackling India's urban healthcare issues is essential to the country's progress towards universal health coverage.

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16

ADDRESSING COMMERCIAL DETERMINANTS OF HEALTH TO PROMOTE HEALTH FOR ALL

Monika Arora, Shalini Bassi, and Ankur Sharan

I. Commercial Determinants of Health

The field of public health has long recognised the complex and multifaceted nature of health determinants. While traditional public health education predominantly addresses biological, environmental, and social determinants of health, there is a vital often overlooked aspect known as the commercial determinants of health (CDoH), which is continuously evolving. Several researchers argue that CDoH should receive equal consideration to social determinants of health (SDoH) in disease prevention and research efforts (Hastings 2012; Kickbusch 2012). These determinants include the influence of profit-driven industries, such as tobacco, alcohol, ultra-processed food, and pharmaceuticals, on health behaviours and outcomes. These unhealthy commodity industries (UCIs) have been the significant drivers behind some of the most critical health issues worldwide. These commercial actors span from small, locally owned enterprises to large corporations or financial institutions and influence social, physical, cultural, and political environments within communities (World Health Organisation (WHO)).

Most simply, CDoH were termed as *‘factors that influence health, which stems from the profit motive’* by West and Marteau (West 2013). The WHO defines CDoH as *‘the conditions, action and omission by corporate actors that affect health. Commercial determinants arise in the context of the provision of goods or services for payment and include commercial activities, as well as the environment in which commerce takes place. They can have beneficial or detrimental impacts on health’* (WHO 2023a). Gilmore *et al.* define CDoH as *‘systems, practices, and pathways through which commercial actors drive health and equity’* (Gilmore 2023). This

definition includes all commercial entities, recognises both their positive and negative impacts, and focuses on both human and planetary health and equity as the primary concerns. The *Lancet* Series on CDoH delves into the expanding influence of ‘commercial actors’ and their complex impact on exerting a diverse and intricate influence on the health and well-being of the public (Lacy-Nichols 2023).

CDoH is a relatively new topic in public health, and by understanding them, we can effectively address the negative health impacts of corporate practices and implement policies to protect and promote public health. CDoH have a syndemic relationship not only with various diseases but also with climate change (Swinburn 2019). Industries driven by the ‘profit motives’ of CDoH include tobacco, alcohol, food & beverage, gambling, textile, and pharmaceutical. However, for this chapter, we focused on traditionally harmful industries like tobacco, alcohol, and unhealthy foods, which are major contributors to non-communicable diseases (NCDs), including cancers, cardiovascular diseases (CVDs), diabetes, and mental health issues. These products pose significant health risks, especially in low- and middle-income countries (LMICs). The drivers of these three risk factors, and the solutions to address them, are also common.

II. The Impact of CDoH on Public Health and Equity

There is mounting evidence indicating that commercial entities increasingly have adverse impacts on human health, overall well-being, and social and health inequities (Chang 2012; Krippner 2005; Lacy-Nichols 2023; Smith, Bambra and Hill 2015; White, Pfister and Mauelshagen 2018; Whitmee 2015). Widespread promotion of products and increasing exposure to advertisements, coupled with a lack of supply chain transparency, characterise the current commercial landscape. Additionally, privatisation of services, influencing governments towards deregulation, seeking regulatory advantage through lobbying, employment conditions, compensations, marketing strategies, tax evasion, preferential shaping of products, services, corporate tax contribution, and research funding are some other strategies being observed to be used, allowing harmful influence on health (Baum 2023). Commercial entities strive to maintain the existing system that favours their profitability over public health, influence policy and regulatory environments to suit their interests, and increase their profit margins. They exert their structural power and influence through strategies like marketing, investment, production, and employment. Public health advocates vehemently opposed the engagement of these harmful product industries in the COVID response on the grounds of a clear conflict of interest (Collin 2020).

CDoH can perpetuate social inequalities by influencing the availability and affordability of health-promoting resources. Health inequities are systematic

disparities in the health outcomes of various population groups. These inequities have substantial social and economic impacts on both individuals and societies (WHO 2018b). CDoH significantly contributes to health inequities by exploiting social, economic, and environmental vulnerabilities and by hindering efforts to promote health equity through policy and action. This can result in weakened regulations, inadequate labelling, and limited access to healthier alternatives while being flooded with advertisements for unhealthy options, further widening the gap in health equity. Hitherto, after an extensive study of these associations within tobacco and alcohol industries, evidence on other health-harming industries is now being built. Studying the strategies of these CDoH is crucial to understanding their pathways of influence and design of appropriate monitoring. Implementing effective public health actions to address these commercial determinants is crucial to building back better after COVID-19.

Just four industries – tobacco, alcohol, ultra-processed foods, and fossil fuels – are responsible for 19 million deaths globally each year, accounting for one-third of all preventable deaths worldwide (Health Policy Watch, 2024). These include the escalating burden of NCDs, communicable diseases, injuries, mental health issues, and the global threat of climate change (Stuckler 2012; Swinburn 2019). A systematic review of defining CDoH revealed that tobacco, alcohol, and unhealthy foods were the most frequently cited, appearing together in 28 out of 32 papers or 87.5% of the total (de Lacy-Vawdon 2020). The WHO and other international health bodies have identified the reduction of tobacco use, harmful alcohol consumption, and unhealthy diets as key priorities in their NCD prevention and control strategies. The strategies employed by the tobacco, alcohol, and food industries often intersect, creating synergistic effects that compound their impact on public health. For example, marketing strategies for tobacco, alcohol, and unhealthy foods often target similar demographic groups, such as adolescents and youth.

NCDs make the largest contribution to mortality both worldwide and in LMICs. These nations bear the largest burden, with 80% (28 million) of the NCD burden, underscoring their significant impact on poverty and highlighting their urgency as a development issue. The South-East Asia region (SEAR) countries are anticipated to experience the highest absolute number of NCD-related deaths (NCD Alliance). The roots of NCD-related behaviours lie in physical inactivity, dietary habits, alcohol consumption, and tobacco use. Nonetheless, there is growing acknowledgement that these behaviours are socially shaped choices heavily impacted by commercial agendas (Freudenberg 2008). Some refer to NCDs as ‘industrial epidemics’ or ‘profit’ or ‘corporate-driven diseases’ because of the substantial involvement of commercial interests, entities, and products (Gilmore 2011; Buse 2017; Kickbusch 2015). In 2017, the WHO introduced its ‘best buys’ initiative to counter the rise of

NCDs and the influence of UCIs. Their recommendations largely emphasised taxation, advertisement bans, restriction on sales, and standardised packaging as crucial measures to tackle the growing burden of NCDs like CVDs, diabetes, and cancers.

The growing consumption of ready-to-eat foods has a significant impact on children's nutritional status, often raising their lifetime risks of weight gain, overweight, obesity, and NCDs (Sadeghirad *et al.* 2016). These foods are typically high in calories, sugars, unhealthy fats, and salt, while being low in essential nutrients such as vitamins, minerals, and fibre. The influence of CDoH extends across all demographics but has a profound effect on the health and well-being of children and adolescents. This is because the industry employs various innovative strategies and marketing promotions to broaden its reach and introduce a new generation of consumers to its products (Pitt 2024). Understanding fully well that behaviours get etched at an early age, these UCIs target young children through aggressive and at times misleading advertisements to ensure long-term customers for their products.

III. How Do Industries Influence Individual Behaviours?

Industries employ a diverse array of tactics to shape individual and public behaviours, including advertising, marketing, sponsorships, product placements, pricing strategies, engaging packaging, and leveraging social media trends. They employ these strategies to expand their market reach. To optimise their impact, industries work in parallel to influence 1) policymakers (Michaels 2008) and 2) the public, often downplaying the adverse effects of their products (Maani, Petticrew and Galea 2023; Supran 2017). Sectors such as the alcohol and the food & beverage industry have adopted these behaviour-altering tactics, originally identified in the tobacco industry. A central element of these strategies is the normalisation of consuming harmful products like tobacco, alcohol, and unhealthy foods from a young age.

Tobacco

In 1929, the American Tobacco Company launched a media campaign to attract a new demographic – women. Edward Bernays orchestrated the ‘Torches of Freedom’ march to promote smoking as a symbol of women's equality, showcasing women smoking during New York City's Easter Day Parade (Amos 2000). Anti-smoking education materials funded by the tobacco industry often present mixed messages and intelligently encourage smoking (Landman 2002). This is the only industry which kills its 8 million loyal customers every year and needs to advertise aggressively to replenish these consumers every year to stay in business (WHO 2023c).

Alcohol

The alcohol industry similarly utilises strategic tactics, emphasising peer pressure in its educational materials rather than overt advertising to drive youth consumption (Petticrew 2016). In the UK, educational campaigns from alcohol industry-backed organisations encourage children to view alcohol as an adult product to be ‘consumed responsibly’ (van Schalkwyk 2022). The pervasive depiction of alcohol in television and film contributes to its normalisation, particularly among youth who often celebrate reaching the legal drinking age by purchasing and consuming alcohol (Public Health Foundation of India 2013).

Unhealthy Food

Global giants like PepsiCo, Coca-Cola, McDonald’s, and Kraft Foods operate in at least a quarter of all countries worldwide (Kraak 2012). These companies tailor their marketing to different cultures, using mascots to promote unhealthy foods to children (Kraak 2015). These mascots help establish brand relationships with children, fostering brand loyalty that extends into adulthood (Connell 2014; Garretson 2004), focusing particularly on capturing the youth market for sustained sales. The food industry produces and promotes foods with high fat, salt, and sugar (HFSS) because of affordability, convenience in storage, extended shelf-life, and frequent consumption as snacks (World Health Organization India 2023). Sponsorship agreements with organisations like FIFA, the International Olympic Committee, and the International Cricket Council strategically position products to influence consumer behaviour through product placement.

IV. Commercial Products and Their Prevalence

The WHO classifies substances such as tobacco, alcohol, and processed meat as Group 1 carcinogens, meaning there is sufficient evidence to prove they cause cancer in humans (WHO 2023b). A study in the UK evaluating drugs’ overall harm found alcohol to be more harmful than heroin and crack cocaine, with tobacco exhibiting similar harmful effects. Both alcohol and tobacco also impose substantial economic costs (Nutt 2010). Therefore, one must scrutinise the widespread availability, acceptance, and use of these Group 1 carcinogens.

Tobacco consumption has globally declined since the 1990s, especially after the WHO Framework Convention on Tobacco Control (FCTC). However, LMICs still face significant health burdens from tobacco use. In SEAR, high consumption of tobacco remains a public health challenge, with India, Pakistan, and Bangladesh seeing high rates of chewable tobacco use contributing to oral cancers (Bryazka 2022; Murray 2020). The Global Adult Tobacco

Survey (GATS) reported a decrease in tobacco use in India from 34.6 to 28.6% between 2009–2010 and 2016–2017, although certain states, particularly in the Northeast, have higher prevalence rates. While smoking rates have dropped significantly, the decline in smokeless tobacco use is modest (GATS Collaborative Group 2022; Chugh 2023). Tobacco causes 25% of all cancer cases worldwide (Action on Smoking and Health 2023a), with LMICs bearing a higher burden, accounting for 50% of cases and 65% of related deaths (Lee 2014; Torre 2015). The International Agency for Research on Cancer (IARC) established the causal link between tobacco and cancer in 2004 (Louis 2018). Tobacco also increases diabetes risk by 15–30% (Pan 2015; Sun 2020), exacerbates vascular disease when combined with high blood glucose, triples the risk of CVD mortality among smokers (Thun 2013), and reduces life expectancy by over 5 years (Mons 2015). Smoking is linked to mental health issues, with higher prevalence among individuals with mental health conditions, and is used as a coping mechanism for stress and anxiety, further associated with higher depression rates (Klungsoyr 2006; Royal College of Physicians of London 2013; Williams 2004).

Alcohol consumption is widespread, with about 43% of the global population aged 15 and over as active consumers. Europe, the Americas, and the Western Pacific region have the highest consumption rates. Over the past two decades, per capita alcohol consumption has risen globally, particularly in India and China. Spirits are the most consumed alcoholic beverage globally, followed by beer, which is prevalent in SEAR. In India, alcohol consumption has significantly increased, with per capita consumption doubling from 2.4 litres (in 2000) to 5.7 litres (in 2016). Men consume more alcohol than women, spirits and country liquor being the most popular. Health risks from alcohol vary by beverage type, with spirit drinkers facing the highest risks (Jani 2021; Money Control; WHO 2018b). There is a concerning rise in alcohol consumption among adolescents and young adults globally and in India (Afshin 2019; Murray 2020; Bryazka 2022). Alcohol consumption contributes significantly to NCDs, various cancers, liver cirrhosis, CVDs, diabetes, depression, cognitive impairments, and violence (American Psychiatric Association 2013; Bagnardi 2015; Peterson 1990; Rehm 2017; Sullivan 2005; WHO 2011, 2018a).

Dietary patterns show an imbalance, with a low intake of essential foods like fruits, whole grains, and vegetables, and a high intake of unhealthy foods like sugar-sweetened beverages (SSBs) and processed meat. Men and young adults, aged 25–49, consume more unhealthy foods, a trend decreasing with age. In SEAR, dietary habits reflect global trends, with high consumption of processed meats and trans-fats and a low intake of healthier foods. These patterns contribute to diet-related health issues, particularly in India, where dietary trends mirror those of SEAR, contributing to high rates of diabetes, making India the ‘diabetes capital’ of the world (Afshin 2019; O’Hearn Meghan 2023).

Unhealthy dietary habits exacerbate NCDs, particularly in LMICs, where dietary factors contribute to premature deaths and disability-adjusted life years lost (DALYs) (Mozaffarian 2014; Renata 2017; Singh 2015a, 2015b; Wang 2016). Diets high in sugar, salt, sodium, and trans-fats, and low in fruits, vegetables, legumes, fish, and healthy fats increase the risk of CVDs and diabetes (Renata 2017). High sodium intake is linked to a significant percentage of CVD deaths, particularly in LMICs (Mozaffarian 2014). SSBs contributed to 0.4% of all BMI-related CVD deaths in 2010, with nearly half of all DALYs attributed to CVDs (Singh 2015a, 2015b). Saturated fatty acids contribute to coronary artery disease, while low yoghurt intake and high processed meat consumption increase diabetes risk. Diets high in glycaemic load and SSBs also contribute to diabetes, with SSB consumption linked to 5.3% of diabetes-related deaths, predominantly in women and LMICs, affecting young adults aged 20–44 years (Singh 2015a, 2015b).

V. Commercial Products and Inequities

The consumption of tobacco and alcohol is closely associated with socio-economic status, with lower-income and less-educated individuals exhibiting higher rates of use and experiencing greater health impacts. The LMICs observed the same trend, with men generally having higher use rates than women with the gender gap narrowing among youth (Rani 2003; Warren 2006; WHO 2007). Tobacco companies exploit gender-specific marketing strategies, targeting women by promoting smoking as a symbol of independence. Furthermore, the economic burden of tobacco use is profound, with low-income households spending a larger portion of their budget on tobacco. Those from disadvantaged backgrounds face more difficulties in quitting (Graham 1999; WHO 2007).

Alcohol consumption also exhibits the same pattern of individuals from lower socio-economic strata suffering extreme health consequences – men drinking more and experiencing higher rates of alcohol-related deaths (Fillmore 1997; Mäkelä 2003). Binge drinking is more prevalent among less-educated and lower-income groups, further exacerbating health inequities (Bloomfield 2006; Mäkelä 2002).

Socio-economic status significantly influences dietary choices. Those from higher income and education levels generally have healthier diets. Individuals who can cook meals at home and have access to fresh ingredients tend to maintain better diets (Larson 2014). However, affordability remains a major barrier for lower socio-economic groups, leading to a higher consumption of processed foods due to cost and accessibility issues (Donkin 2000; Irala-Estevez *et al.* 2000). Neighbourhood characteristics, including access to supermarkets, impact food choices with better access linked to healthier eating patterns (Ball 2006). Availability of nutritional

knowledge does not always translate into healthier eating habits, particularly in lower socio-economic settings (Kearney 2000; de Almeida 1997). Gender disparities in food consumption are evident among men who, especially in urban areas, are more likely to consume unhealthy foods contributing to higher fat intake and increased Body Mass Index (French 2001; Trapp 2015). Adolescents in urban LMICs also prefer unhealthy foods, indicating poor dietary patterns from a young age (Jena 2023; Veena 2018).

VI. Strategies Employed by the Commercial Actors

The strategies employed by the UCIs focus on maximising profits and fulfilling operational needs, often disregarding individual and overall public health concerns. These tactful strategies enhance industry credibility and influence policy-making, agenda-setting, public choices, and behaviours (Lacy-Nichols 2021). They range from upstream approaches, like targeting policies to downstream tactics aimed at influencing individual choices and behaviours. This section highlights the commercial sector's practices and adopted strategies in India across industries, including tobacco, alcohol, and HFSS foods.

1. Political Practices

Commercial actors engage in practices that influence laws and public policies at all levels of governance for commercial interests. These include practices to secure preferential treatment from those in power and ameliorate regulatory obstacles. These practices include lobbying and disseminating misleading information to undermine policies often as 'expert' opinions (Fooks 2013; Lauber 2021; Legg 2021; Lima 2018a). This also takes the form of influencing policymakers through offering donations to government-run activities. Documentation of such activities exists for tobacco, alcohol, and the SSB industries in India.

Although India is a party to the FCTC, there have been reports of the state governments, senior officials, and police joining trainings organised by FICCI CASCADE, a lobbying body headed by the head of Corporate Affairs of a prominent Indian tobacco industry (Federation of Indian Chambers of Commerce and Industry 2021).

In India, the tobacco tax rate for all tobacco products falls below the WHO recommended levels (of at least 75%) primarily because of tobacco industry interference (Lo 2023).

During the COVID-19 pandemic, government's relief fund received significant donations from leading industry players in India, who benefitted from tax exemptions, illustrating a practice of corporate influence on political decisions and processes (India Tobacco Company 2020). Efforts to enhance tobacco productivity through agricultural research projects reveal another

facet of industry influence (Ministry of Agriculture 2020). The recruitment of retired IAS officials as independent directors and board members highlights a practice of industry influence extending into governance structures (Gupta 2022; India Tobacco Company Limited 2019).

2. *Reputational Management Practices*

These are aimed at enhancing a commercial actor's legitimacy and credibility (Fooks 2013; Legg 2021; Ulucanlar 2023). Section 135 of the Companies Act, 2013, requires that every company with a net worth of at least INR 500 crores (~\$65 million), or turnover of INR 1,000 crores (~\$131 million) or more, must allocate 2% of its average net profits to corporate social responsibility (CSR) activities. Commercial actors, especially those engaged in unhealthy commodities, often use CSR activities to legitimise their operational activities in the public eye and project themselves as a responsible industry.

In recent years, India has witnessed an increase in CSR activities conducted by the tobacco industry (Assunta 2021). While the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply, and Distribution) Act (COTPA 2003) prohibits the advertisement, sponsorship, and promotion of tobacco products (Article 5, COTPA), the industry promotes its brand name through CSR activities (Government of India 2003). Research conducted in eight LMICs, including India, Bangladesh, and Sri Lanka, found that the tobacco industry, through their CSR, conducted activities in the health, education, and environment, in addition to sponsoring local sports teams and providing support to their tobacco farmers (Matthes 2021).

Tobacco companies in India committed US\$ 37 million in donations to various government funds as part of the COVID-19 relief activities (Yadav 2022). During the same time, they engaged local NGOs to initiate livelihood programmes for farmers and daily earners under the Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MGNREGA), the government of India's flagship employment programme (Sally 2020).

During the pandemic, the alcohol industry also provided direct financial contributions to support relief funds while also advocating for the resumption of alcohol sales to help states provide minimum subsistence allowances, free food, and healthcare during a resource-constrained time (WHO 2022a). Activities of both the tobacco and alcohol industries during the pandemic have set out concerning precedents, as their products have a direct and grave conflict of interest with health outcomes and their funds supported health relief operations.

CSR activities also act as an entry point for commercial actors to build public-private partnerships, e.g., tree plantation programmes to support

environmental causes (India Tobacco Company Limited 2022), with leading academic institutes to support research in science, technology, engineering, and mathematics (STEM) areas (Verma 2022).

3. *Advertising and Marketing Practices*

Commercial actors focus their marketing and advertising practices on increasing demand and consumption of products and services by enhancing the desirability of these products. Marketing tactics often aim to interfere with people's ability to make healthy choices. Consumers are subjected to aggressive marketing that alters their behaviour to consume ultra-processed foods (BPNI and NAPi 2023; Pandav 2021). The industry typically presents food marketing as an issue of 'choice'.

HFSS food industry often focuses its marketing on the younger population. An analysis of advertisements on Indian television showed that advertisements of unhealthy food items (chocolates, biscuits, and potato chips) were significantly higher on children's channels as compared to mainstream channels (Bassi 2021; Vijayapushpam 2014).

Commercial actors also employ strategic marketing, including surrogate advertisement and use of social media. This kind of practice is more evident where there is a restriction on marketing. For instance, while there is a prohibition on advertisement, sponsorship, and promotion (TAPS) of tobacco products in entertainment media (such as television and radio) and other platforms like billboards, the tobacco industry is strategically using digital and social media, including social networking sites (SNS) for TAPS (WHO). The industry utilises SNS to normalise the use of tobacco through innovative strategies such as paid influencers, posting images of celebrities using or promoting tobacco, and leveraging popular hashtags (Kirkham 2019). Social media is becoming increasingly popular as a marketing platform, largely because of its extensive utilisation by the youth and limited enforcement restrictions (Soneji 2018; Hébert 2017). Evidence indicates that exposure to tobacco use in Bollywood movies is independently associated with every tobacco use among adolescent girls, aged 12–16 years in India (Arora 2012). A similar correlation might also exist for social media (Bahl 2023).

There has been an increased display of tobacco use, including tobacco imagery and brand placement in on-demand web series on streaming platforms like Netflix and Amazon Prime Video, with 70% of series depicting tobacco use popular among young adults (Arora 2021).

While there is a complete ban on the advertising of alcohol brands, the industry is resorting to surrogate advertising (Public Health Foundation of India 2013; WHO 2022b). This form of advertising involves advertising for products (non-alcoholic) that use the same brand name as the alcohol products. For example, advertising for packaged drinking water, merchandise,

and other items under the same brand name as their alcohol product. The alcohol industry also often sponsors major sports events including cricket, which is the most popular sport in the country and is widely watched across all age groups (Public Health Foundation of India 2013). Viewing the lockdown as an opportunity, the Confederation of Indian Alcoholic Beverage Companies urged various government bodies to permit online alcohol sales.

4. Practices Impacting Health-Enabling Legal Environments

These practices aim to undermine legal and regulatory environments that go against commercial profit-making objectives. There has been extensive litigation in India by the tobacco industry against regulations, including pictorial health warnings, the prohibition of smoking in public places, the ban on TAPS, the sale of smokeless tobacco in plastic sachets, and *gutka* (smokeless tobacco) (Yadav 2018). Despite a ban on *gutka* in India since 2012, *gutka* remains widely used and available. The industry has found ways to circumvent the existing regulations. It circumvented the ban by producing pan masala (a non-tobacco product) under the same brand name hence, leaving it for users to prepare their *gutka* by mixing the two packets (Welding 2022). Trade Representatives of Electronic Nicotine Delivery System (TRENDS) opposed all government-led efforts right from issuing an advisory to making an ordinance and passing ‘The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement)’ 2019 Act. TRENDS wrote to all state chief ministers demanding the state governments conduct an independent study to evaluate the effects of these e-cigarettes (Sabari 2019; The Wire 2019).

5. Supply Chain, Waste Practices, and Environment Degradation

Commercial actors, particularly multinational and transnational corporations, have extensive supply chains and engage in practices that adversely impact the environment. In Kerala, India, the establishment of an SSB industry bottling plant in 2000 resulted in groundwater contamination and the release of toxic waste (Bijoy 2006). States where ‘*tendu*’ harvesting takes place frequently reported uncontrolled forest fires leading to wildlife destruction, increased carbon emission, increased soil erosion, and reduced water-capturing potential (Lal 2012). In March 2021, a petition was filed before the National Green Tribunal urging the Maharashtra government to uphold its 2012 commitment to prevent forest fires and enforce a complete ban on the harmful practice of extracting *tendu* leaves followed by forest burning (Singalkar 2021).

6. *Scientific Practices*

The tobacco industry has actively engaged in funding research studies to discredit proven science that adversely impacts their interests (Goel 2023). They sponsor and promote research that produces results in favour of their products. Discrediting scientific evidence misguides consumers on the harms of their products and discourages them from quitting (Goel 2021).

The International Life Sciences Institute (ILSI), an alliance of leading food and drinks industries, organised workshops, symposia, conferences, training programmes, research projects, and publications on public health, including nutrition and health. These were aimed at influencing the setting of food standards. In 2006, WHO restricted the ILSI from taking part in activities related to food standards. In 2000, the Indian Council for Medical Research (ICMR) released a report on health costs and the immense health burden of tobacco use in India. The tobacco industry, along with the head of the Tobacco Institute of India, made significant efforts to discredit the report and hinder its wider dissemination by the MoHFW (WHO 2022b).

VII. Existing Policy Measures to Counteract Commercial Determinants

The government of India has enforced COTPA, 2003, in line with WHO FCTC (WHO 2003). Article 5 of COTPA prohibits the advertisement, promotion, and sponsorship of tobacco products (Government of India 2003). To protect public health policies from the vested interests of the tobacco industry, several Indian states have issued protocols and guidelines to implement Article 5.3 concerning industry interference and engagement of the industry with government policy and programmes. At the national level, in 2020, to comply with Article 5.3 of WHO FCTC, the MoHFW issued a code of conduct for public officials to prevent any interference from the tobacco industry and avoid conflicts of interest. The code of conduct applies to all officials of the MoHFW, its departments, and all autonomous institutions and offices under its jurisdiction, as well as any individual acting on their behalf. These guidelines aim to protect tobacco control policies and programmes from interference from the tobacco industry, and commercial and other vested interests of the tobacco industry (MoHFW 2020). The Cable Television Network (Amendment) Rules 2021 read with the Cable Television Networks (Amendment) Act 1995 regulate the content of programmes and advertisements broadcasted through cable television and impose penalties for violations of the code. The code requires cable service providers to adhere to provisions that prohibit the direct and indirect advertisement of cigarettes, tobacco, wine, and other similar products.

India still lacks a comprehensive national policy on alcohol, but instead, individual states are responsible for drafting and implementing their own alcohol policies, including setting the legal drinking age, imposing restrictions on places of sale, and excise taxes on alcohol products (WHO 2018a).

Marketing of HFSS foods negatively affects consumption patterns, especially among young children, leading to increased lifetime risks of weight gain, overweight, obesity, and NCDs. In India, various guidelines and directives have been issued to limit the availability and accessibility of HFSS foods. ‘Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements 2022’ were introduced by the Central Consumer Protection Authority (CCPA) under the Ministry of Consumer Affairs in the exercise of powers conferred by the Consumer Protection Act 2019 (35 of 2019). These guidelines apply across all forms, formats, and media. As per the guidelines, an advertisement targeting children should not suggest that certain goods, products, or services are superior to natural or traditional foods typically consumed by children. Additionally, the guidelines discourage any advertisements that offer promotional gifts to persuade children to buy goods, products, or services without necessity or that promote illogical consumerism.

The Food Safety and Standard (Advertising and Claims) Regulation 2018 aims to ensure fairness in the claims and advertisements of food products and holds food businesses accountable for such claims and advertisements to protect consumer interests. The regulation includes various sections detailing definitions – general principles for claims and advertisements. It sets the criteria for nutrition claims (nutrient content or nutrient comparative claims), non-addition claims (non-addition of sugar and sodium salts), health claims (reduction of disease risk), claims related to dietary guidelines or healthy diets, and conditional claims (e.g., naturally low sugar food). It also specifically prohibits certain claims (e.g., recommended by health professionals). Additionally, it outlines procedures for the approval of claims and the redressal of non-compliance under this regulation.

The Food Safety and Standards (Safe Food and Balanced Diets for Children in School) Regulation 2020, introduced by the Food Safety and Standards Authority of India (FSSAI), ensures that school children have access to safe and balanced diets. The regulation covers various aspects to protect and conserve the school food environment, including the promotion of a safe and balanced diet in and around the school campus. It also imposes restrictions on advertisements, marketing, and selling of HFSS foods and beverages on the school campus or to schoolchildren in an area within 50 metres from the school gate (in any direction). Additionally, the regulation mandates regular monitoring and surveillance through designated authorities, corporations, and committees.

TABLE 16.1 Summary of Existing Policies Regulating the Industry in India

<i>Policy Regulation</i>	<i>Tobacco</i>	<i>Alcohol</i>	<i>Unhealthy Foods</i>
Taxation	WHO-FCTC	State Excise Policies	N/A
Advertisement	Section 5, The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act – Cigarettes and Other Tobacco Products (COPTA), 2003 Guidelines for Influences Advertising in Digital Media, ASCI 2021 Cable Television Networks (Regulation) Act, 1995	State Excise Policies Guidelines for Influencers Advertising in Digital Media, ASCI 2021 Cable Television Networks (Regulation) Act, 1995	Food Safety and Standards (Advertising and Claims) Regulation, 2018 The Food Safety and Standards (Safe Food and Balanced Diets for Children in Schools) Regulation, FSSAI 2020 Guidelines for Influencers Advertising in Digital Media, ASCI 2021 Guidelines for Prevention of Misleading Advertisement and Endorsement for Misleading Advertisement CCPA, 2022
Sponsorship	Section 5, The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act – COPTA, 2003	State Excise Policies	N/A
Sale restrictions	Section 5, The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act – COPTA, 2003	State Excise Policies	The Food Safety and Standards (Safe food and balanced diets for children in school) Regulation, 2020
Age restrictions	WHO-FCTC, WHO 2003	State Excise Policies	N/A
Industry interference	Protocols and guidelines to implement Article 5.3 of WHO-FCTC at the state level, 2020	N/A	N/A

Source: Authors

As digital media becomes increasingly pervasive and engages with advertising on various digital platforms, it is crucial to understand the peculiarities of these advertisements and how consumers perceive them. As the distinction between content and advertisements becomes increasingly blurred, consumers need to recognise when something is being promoted to influence their opinions or behaviour for immediate or future commercial gain. Consumers may encounter such messages without recognising the commercial intent of these, making them inherently misleading, violating clauses 1.4 (misleading by omission) and 1.5 (abusing consumers' trust or exploiting their lack of experience or knowledge). According to the 2021 Guidelines for Influencers Advertising in Digital Media, issued by the Advertising Standards Council of India (ASCI), all advertisements published by social media influencers or their representatives on such influencers' accounts must include a disclosure label that identifies it as an advertisement. As the marketing landscape evolves and influencer marketing becomes mainstream, consumers must have a right to know which content has been sponsored by brands. These guidelines aim to ensure transparency in influencer marketing.

VIII. Call to Action: Approaches and Strategies for Mitigating the Harmful Health Effects of CDoH

As evidenced by the above discussion, commercial industries impose a significant burden on public health, ranging from encouragement to unhealthy behaviours among the population to the global surge of NCDs. From the data presented above, it is evident that CDoH significantly contribute to the prevalence, incidence, morbidity, and mortality of NCDs. How can we address these challenges effectively? What strategies can we implement to better address the needs of the population and reduce the NCD burden? These questions are complex and multifaceted, requiring a comprehensive and multi-sectoral response. The first step is to acknowledge the influence of commercial interests on health outcomes and health inequities among individuals and populations. Then it needs to be strengthened by collaborations between governments, civil societies, and the private sectors, united by a common goal and mutual understanding. As outlined below, by implementing policies to mitigate their impacts, we can promote healthier environments and enhance public health outcomes for all.

Defining CDoH and Monitoring

In public health, the importance of understanding CDoH and its impact on health has grown rapidly over the past decade (Global Burden of Disease 2024). There is a necessity to establish a universally acceptable definition of CDoH and their multifaceted components. Equally important is the widespread adoption of CDoH terminology in describing industry influence and

practices towards health and NCDs. Adopting an approach like the Global Burden of Disease (GBD) study is essential in understanding the long-term trends, with an emphasis on LMICs and densely populous nations, notably India, where the NCD burden is disproportionately high and healthcare resources are scarce, particularly in remote, rural areas.

Policies Resembling the FCTC

Policies and regulations promoting health and, simultaneously, regulating commercial interests are essential for mitigating the impact of these determinants on public health outcomes. This may include implementing measures, such as proportionate taxation on unhealthy products, strict restrictions on marketing, and promoting sustainable and healthy food ecosystems with healthier choices. For instance, measures such as standardised labelling (like in the WHO FCTC), reducing access to alcohol and unhealthy foods, increasing taxes on these items, and making fruits and vegetables more accessible will be effective in reducing the burden of CDoH and NCD. Additionally, graphic health warnings on tobacco products have proven effective in decreasing tobacco use prevalence. The global success story of the FCTC underscores the potential efficacy of such approaches in curbing the prevalence of harmful tobacco products. Similar models are required in the domain of alcohol and unhealthy foods as well. Given the WHO classification of these substances as a Group 1 carcinogen, governments and policymakers must enforce stringent regulations, including, but not limited to, restrictions on advertisements and sponsorships, taxation, implementation of standardised packaging bearing health warnings, and even contemplating a ban on the access of the public to Group 1 carcinogens.

Governance

The whole of government and not just the Ministry of Health should address industry interference and related practices. Thus, the whole of government and a multi-sectoral response is needed to adequately address the adverse impact of CDoH. India's NCD multi-sectoral action plan can be effectively implemented and monitored in consideration of CDoH by integrating robust regulatory frameworks, fostering intersectoral collaboration, and conducting regular evaluations to mitigate industry influence and ensure public health priorities (Arora 2011).

Research Advancement

The past decade has witnessed a surge in CDoH research and its ramifications on public health. In this vein, systematic reviews and meta-analyses will be vital for informed decision-making, particularly concerning CDoH and NCDs. To achieve this, embracing the CDoH and Evidence Synthesis (CODES) approach represents an important initial step (Petticrew 2023).

Furthermore, expanding funding for CDoH and NCD research is crucial to keep pace with evolving insights into disease burden.

Research endeavours should prioritise health promotion and impact assessments, while also delving into the economic ramifications of CDoH, including healthcare and productivity costs. Evaluating the efficacy of existing policies, alongside understanding CDoH's impact on social and environmental determinants, is important in reducing health disparities prevalent in different regions of the global population.

Health Impact Assessments

Health impact assessments (HIAs) serve as an invaluable tool for evaluating the potential health repercussions of policies and programmes. By providing credible insights into the ramifications of decisions, HIAs facilitate the development of policies aimed at easing the burden of CDoH and NCDs, potentially enhancing social and economic determinants of health. By engaging closely with the public, HIAs enable constructive feedback on public concerns. Regular HIA evaluations are also essential to gauge compliance and industry improvements.

Increase the Level of Health Literacy and Encourage Behaviour Change

Raising the awareness of the population about the detrimental effects of products, such as tobacco, nicotine, alcohol, and unhealthy foods, by targeted educational campaigns in schools and among parents is of utmost importance. This approach is also required for healthcare professionals and caregivers, a significant number of whom themselves may also be ill-informed on causative agents and contents, and the real health issues associated with such behaviours. The level of motivation is understandably suboptimal among healthcare providers. Changing this situation requires extending capacity-building programmes to educational institutions and healthcare facilities, targeting cessation among adults, as well as fostering abstinence and behaviour modification among adolescents and children. Raising awareness regarding NCDs and their economic ramifications is pivotal to the effective installation of comprehensive information. Establishing incentivised programmes to reward behaviour modification and abstinence could expedite the transition towards healthier lifestyles, in both rural and urban areas.

Civil Society Activism

Civil society activism offers invaluable lessons in effecting change. For instance, Revant Himatsingka utilised social media to scrutinise and raise

awareness about deceptive advertising practices by a leading health drink brand in India, highlighting the influence of grassroots movements (Javaid 2023). Similarly, documentaries like ‘Super-Size Me’ by Morgan Spurlock have encouraged industry reform (Veltman 2004). In the wake of the 74th World Health Assembly, WHO is working on an innovative tool to assist member states in deciding on engaging with private sector entities for the prevention and control of NCDs (WHO). The adoption of this tool will help manage the significant influence of CDoH on NCDs.

CDoH as a Part of a Political Party’s Agenda

Highlighting the impact of CDoH and NCDs is crucial. This issue should be a priority for everyone, especially policymakers. Therefore, it is essential to integrate CDoH into the manifestos of all elections or political parties.

Establishing a Monitoring Framework

Developing a robust monitoring system with well-defined, robust parameters is indispensable for quantifying the negative impacts of CDoH, thereby providing policymakers with empirical evidence to drive regulatory reforms where needed. A standardised framework is imperative to assess industries’ effects on public health, ensuring global applicability and facilitating health impact assessments.

Capacity Building

Integrating CDoH into public health curricula at medical, public health and nursing schools, and universities, alongside targeted training for healthcare professionals, represents a crucial step towards holistic disease management. Long-term capacity-building initiatives, underpinned by sustained funding and collaborative partnerships, are essential to address the NCD burden comprehensively and strengthen capacity-building initiatives to effectively leverage legal frameworks to protect public health against industry challenges.

Enforcement of Compliance and Accountability

Ensuring industries adhere to regulatory frameworks is imperative in safeguarding public health. Therefore, it is important to hold them accountable for any breaches of legislation and misleading practices such as imposing monetary fines, revoking licenses, or imposing sanctions to uphold the integrity of regulatory policies and protect the welfare of the population.

IX. Case Studies

Chile's Food Labelling and Advertising Law

The Chilean food labelling and advertising law was implemented in three progressively strict phases starting in 2016. The law mandated warning labels on unhealthy pre-packaged products, comprehensive restrictions on food marketing directed to children (<14 years), and prohibited in schools sales and promotion of foods and beverages high in sugar, sodium, saturated fat, or calories. The study evaluated the changes in calorie, sugar, sodium, and saturated fat content of food and beverage purchases following the first phase of the law's implementation. It found that overall calories purchased decreased by 16.4 kcal/capita/day (95% CI -27.3 to -5.6; $p = 0.0031$). Sugar intake dropped by 11.5 kcal/capita/day (-14.6 to -8.4; $p < 0.0001$) or 10.2%, while saturated fat declined by 2.2 kcal/capita/day (-3.8 to -0.5; $p = 0.0097$) or 3.9%. Sodium content in overall purchases fell by 27.7 mg/capita/day (-46.3 to -9.1; $p = 0.0035$) or 4.7% (Taillie *et al.* 2021).

Ban on E-Cigarettes in India

The rising use of e-cigarettes among the youth poses a significant public health concern, given the extent of potentially harmful effects beyond the demonstrated nicotine addiction. Based on the available scientific research, the Indian Council of Medical Research (ICMR) released a white paper that recommended a total ban on Electronic Nicotine Delivery Systems (ENDS) or e-cigarettes in India. This recommendation follows a precautionary principle of preventing public harm from a noxious agent to protect public health (Indian Council of Medical Research 2019). India is among the countries that have implemented a comprehensive e-cigarette ban aimed at protecting youth from vaping-related harm by enforcing the 'Prohibition of Electronic Cigarettes (production, manufacture, import, export, transport, sale, distribution, storage, and advertisement) (PECA) Act by the MoHFW, government of India, in 2019 following continuous industry interference (The Wire 2019; Sabari 2019). However, the supply continued despite opposition from the TRENDS against all government-led efforts right from issuing an advisory to making an ordinance and passing the PECA 2019. The Act encompasses all forms of electronic cigarettes, including 'Electronic Nicotine Delivery Systems, Heat Not Burn Products, and e-Hookah'. It prohibits all forms of advertisement and sale of e-cigarettes across all media, including electronic media, the Internet, websites, or social media, with violations subject to penalties (Ministry of Law and Justice 2019).

Implementation of Larger Pictorial Health Warnings on All Tobacco Packages in India

Despite several legal and administrative challenges from multi-national tobacco companies, smokeless tobacco companies, and local ‘*bidi*’ producers, India enforced the rule requiring larger pictorial health warnings (PHWs), covering 85% of both the front and back of tobacco packages starting from 1 April 2016. This was followed by the mandate to print the National Tobacco Quitline number on all tobacco packages, including bidis starting from 1 September 2018. A scoping review assessing the impact of graphic warnings on tobacco consumers revealed that these warnings are an effective way to raise awareness about the risks associated with smoking (Mudey 2023). The Global Adult Tobacco Survey–2 (2016–2017) also reported that 62% of cigarette smokers and 54% of bidi smokers considered quitting because of warning labels on tobacco packets (GATS Collaborative Group 2022).

X. Conclusion

It is critical to delve into and analyse the diverse sources of corporate influences and their manifestations globally with emphasis on LMICs, including India, to understand how various commercial entities influence health outcomes and equity. This may help eliminate industry interference in policy-making and their deceptive engagement in promoting health and well-being.

Addressing CDoH in India requires a multifaceted approach. This entails strengthening regulatory mechanisms, fostering stakeholder engagements, and advancing research on the legal landscape to address CDoH and capacity-building initiatives. This approach will provide multi-sectoral government officials, healthcare professionals, and CSOs to better comprehend, identify, assess, act, and monitor the effects of CDoH.

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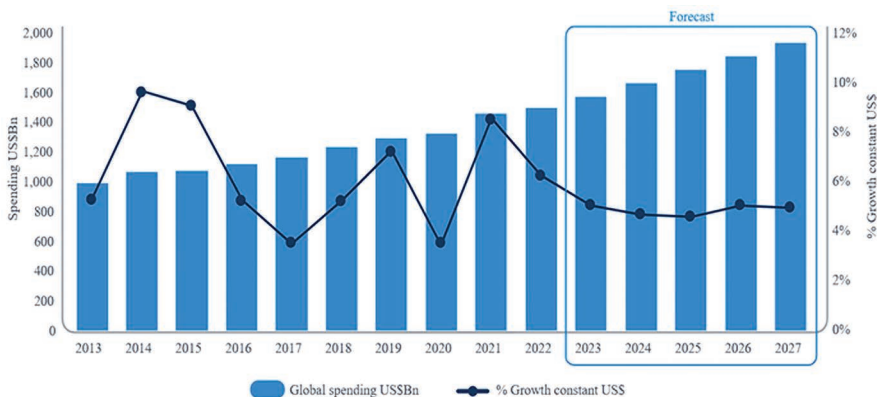
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EVOLVING LANDSCAPE OF INDIA'S PHARMACEUTICAL SECTOR

Preeti Kumar, Aashna Mehta, and Senthil Ganesh

I. Global Pharmaceutical Sector

Pharmaceutical products such as drugs and vaccines play a significant role in providing healthcare services to the population. Both globally and nationally, governments and multilateral organisations, with support of civil societies, have been designing and implementing policies to ensure people can access essential and life-saving pharmaceutical products. Pharmaceutical consumption worldwide has grown and has been partly driven by a growing need for drugs to treat ageing-related and chronic diseases and changes in clinical practice. The DrugBank database 2019 (version 5.1.3, released on 2 April 2019) contained 13,336 drugs; 10,256 small-molecule drugs, and 1670 biotech drugs, of which 3,732 were approved, 2,593 were approved small-molecule, 130 were nutraceutical, 6,304 were experimental, 205 were illicit, and 256 were withdrawn drugs. Between 2000 and 2015, consumption of cholesterol-lowering drugs nearly quadrupled, the use of antidepressant drugs doubled, and the consumption of antihypertensive and antidiabetic drugs nearly doubled in Organisation for Economic Cooperation and Development (OECD) countries. Demand for local and imported pharmaceutical products increased as economies grew, and healthcare provision and insurance mechanisms expanded. Not only did demand increase, but the diversity of pharmaceutical needs also expanded as emerging markets increasingly address non-communicable diseases (NCDs), including diabetes and hypertension, already prevalent in stronger economies. Communicable diseases such as acquired immunodeficiency syndrome, malaria, and tuberculosis that afflict many emerging markets persist. The growth in the global population is also contributing to increased pharmaceutical consumption.



Source: IQVIA Market Prognosis, Sep 2022, IQVIA Institute, Nov 2022

Notes: Does not include estimate for COVID 19 Vaccines and therapeutics

Report: The Global Use of Medicines 2023 Outlook 2027. IQVIA Institute for Human Data Science January 20223

FIGURE 17.1 Global spending on pharmaceuticals in USD billion over the years with projected figures.

Source: Created by the authors based on IQVIA

The global pharmaceutical market has been growing at an annual rate of 5.8% since 2017. The same year, the pharmaceutical market worldwide was USD 1,143 billion and was expected to reach 1,462 billion in 2021. North America contributes the largest share of this revenue because of the leading role of the US pharmaceutical industry. However, over the past decades the pharmaceutical industries in China and India have grown the highest worldwide. Several factors, such as tax breaks, a GDP growth rate over 6% in China and India, industrialised data services in research and development (R&D) enabling the use of clinical trial data in trial simulations, lowered regulatory barriers for new drugs in the US, and high urban pollution levels increasing the incidence of conditions, such as asthma, are driving the healthcare market growth (The Business Research Company 2018). The increase in ageing-related and chronic diseases, changes in clinical practice, and growing population and emerging economies that have been improving their healthcare provision have been increasing pharmaceutical consumption worldwide (Mars *et al.* 2017).

II. Pharmaceutical Sector in India

The Indian pharmaceutical industry ranks third globally in pharmaceutical production by volume through the production and export of generic medicines and low-cost vaccines. The sector had a total annual turnover of INR 3,441.25

billion (USD 42.34 billion) in the fiscal year 2021–2022 and accounted for around 1.32% of the gross value added (at 2011–2012 constant prices) of the Indian economy in 2020–2021. Major segments of Indian pharmaceutical industry include generic drugs, over-the-counter (OTC) medicines, bulk drugs, vaccines, contract research and manufacturing, biosimilars, and biologics. India is one of the biggest suppliers of low-cost vaccines in the world accounting for 60% of global vaccine production, contributing 40–70% of the WHO demand for diphtheria, tetanus, pertussis (DPT) and *Bacillus Calmette–Guérin* (BCG) vaccines, and 90% of the WHO demand for the measles vaccine.

India has over 500 active pharmaceutical ingredients (API) manufacturers contributing about 8% in the global API Industry. It is also the world's largest supplier of generic medicines. It manufactures about 60,000 different generic (off-patent) brands across 60 therapeutic categories and accounts for 20% of the global supply of generics. Access to affordable HIV treatment in India is one of the greatest success stories in medicine. Because of the low price and high quality, Indian medicines are preferred worldwide, making it the 'pharmacy of the world' (Ministry of Pharmaceuticals, India 2022–2023).

Indian pharmaceutical industry plays a significant role globally, supplying affordable and low-cost generic drugs to millions across the globe. The sector offers lower-cost drugs without compromising on quality because India has the highest number of United States Food and Drug Administration (USFDA)-approved pharmaceutical plants outside the US and also a significant number of World Health Organisation (WHO) good manufacturing practices (GMP)-compliant plants and plants approved by regulatory authority of other countries. India's pharmaceutical sector forms a major component of the country's foreign trade. During 2021–2022, total exports of pharmaceuticals were at INR 1,749.55 billion (USD 23.5 billion), while total imports were about INR 600.6 billion (USD 8.06 billion), resulting in a trade surplus of INR 1,148.95 billion (USD 15.44 billion).

III. Universal Health Coverage

Universal health coverage (UHC) means all people have access to the full range of quality health services they need, when and where they need them, without financial hardship. It covers the full continuum of essential health services, from health promotion to prevention, treatment, rehabilitation, and palliative care.

To deliver on this promise, countries must have strong, efficient, and equitable health systems rooted in the communities they serve. As a foundation for UHC, WHO recommends orienting health systems with a primary healthcare (PHC) approach. PHC is increasingly considered the most effective and cost-efficient way to achieve UHC. Every country has a different path to achieving UHC and to decide what to cover based on their population needs and the resources at hand. Investing in PHC ensures all those needs are identified,

prioritised, and addressed in an integrated way; there's a robust and equipped health workforce; and all sectors of society contribute to confronting the environmental and socio-economic factors that affect health and well-being, including preparing for responding to and recovering from emergencies.

Health is also an essential part of the sustainable development goals (SDGs). For example, SDG 3.8 aims to 'achieve universal health coverage, including financial risk protection, access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all'. In addition, SDG 1, which calls to 'end poverty in all its forms everywhere' could be in peril without UHC, as globally, almost 90 million people are impoverished by health expenses every year. Access to affordable, quality primary healthcare is the cornerstone of UHC, but many people around the world still struggle to fulfil their basic healthcare needs, including access to essential medicines.

IV. Access to Medicines

The goal of UHC envisioned by the SDGs depends on ensuring accessibility and affordability of quality pharmaceutical products as highlighted by the recent World Health Organisation (WHO) handbook for the members of the Inter-Parliamentary Union. 'Access' has been defined as 'the timely use of services according to needs' (Peters *et al.* 2008). Barriers to access can be from both the supply side and/or the demand side (Ensor & Cooper 2004). The sub-optimal setup of the health system and delivery of various healthcare services can contribute to a lack of healthcare service uptake in a community or population that contributes to the supply-side barriers to access, whereas factors that influence individuals' households and communities' ability to utilise the services available contribute to the demand-side barriers to access. Other factors that also have an impact on access to medicines (ATM) include geographical and financial aspects of access, availability, acceptability, and quality (Peters *et al.* 2008).

V. Available Frameworks on Access to Medicines

A WHO-MSH consultative meeting in Ferney-Voltaire in 2000 set the ground for the first ATM framework based on the 4As of 'availability', 'accessibility', 'acceptability', and 'affordability', with 'quality' of products and services as a cross-cutting determinant. The WHO 2004 'equitable access to essential medicines framework' presents four dimensions of access:

- 'Rational selection' proposing to rationalise therapeutic choices and improve the use of medicines by consumers.

- 'Affordable prices' dealing with the supply-side aspect of affordability.
- 'Sustainable financing' addressing resource mobilisation and pooling; reduction of out-of-pocket expenditures (OOPEs) and catastrophic expenditures.
- 'Reliable health and supply system', including all aspects of health system strengthening that are not covered by the other three dimensions, viz., procurement and supply of medicines, regulation, and human resources.

Quality assurance and management systems are assumed to underpin all access components. These and other frameworks have been formulated at a certain point in time, corresponding to the evolution of the debate on health systems strengthening, but insufficiently encompassing the complex role of medicines in dynamic health systems. ATM barriers are interrelated, and they occur simultaneously at different levels of the health system, where multiple stakeholders operate. The Bigdeli Framework on ATM has been developed to address health system complexities embedded in a social and political context and also the complex social construct of health systems, which must consider international, national, sub-national, and local areas. This framework also places the population at the centre and acknowledges that the population is an integral part of a health system. The different components in this framework have been used to explain the interconnectedness of factors and their influence on access to medicines.

VI. Health and Pharmaceutical Expenditure in the World and South-East Asian Region

Globally, health spending doubled in the last two decades, from USD 4.2 trillion in 2000 to USD 8.5 trillion in 2019 (Figure 17.1). The share of global GDP health spending increased from 8.5 to 9.8% in the same period. High-income countries (HICs) spend significantly more on health as a share of their GDP compared to other income group countries (Figure 17.2). Whereas HICs accounted for 80% of global health spending, upper-middle-income countries (UMICs) accounted for 17%, lower-middle-income countries (LMICs) for only 2.8%, and low-income countries (LICs) for a mere 0.24%. While HICs relied primarily on government sources to finance healthcare, the reliance of LICs was predominantly on external aid and out-of-pocket spending.

There is considerable heterogeneity among countries in the South-East Asian region in health and pharmaceutical spending. Current health expenditure (CHE) as a percentage of GDP is the highest in Maldives (11%) and lowest in Bangladesh, India, and Indonesia (~3% each). OOPE as a percentage of CHE is the highest in Myanmar (78%) and lowest in Timor-Leste (7%) (Figure 17.3). The share of OOPE on medicines ranged from 34% in Sri Lanka

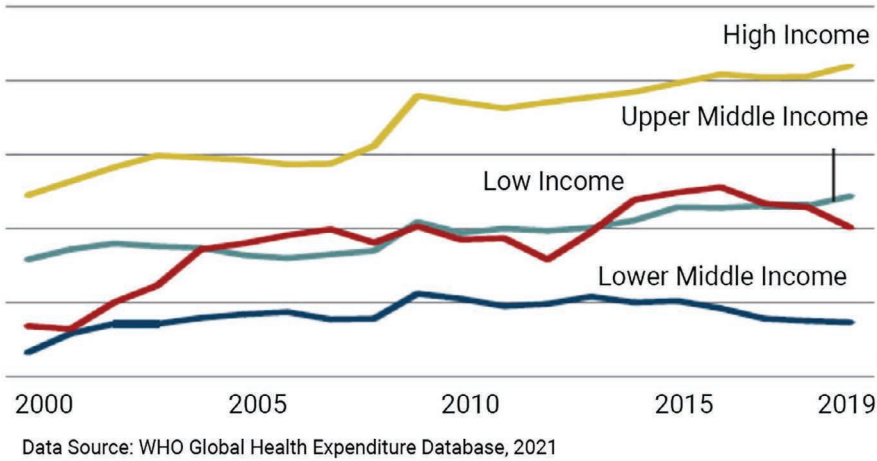


FIGURE 17.2 Health spending (% of GDP).
Source: WHO Global Health Expenditure Database 2021

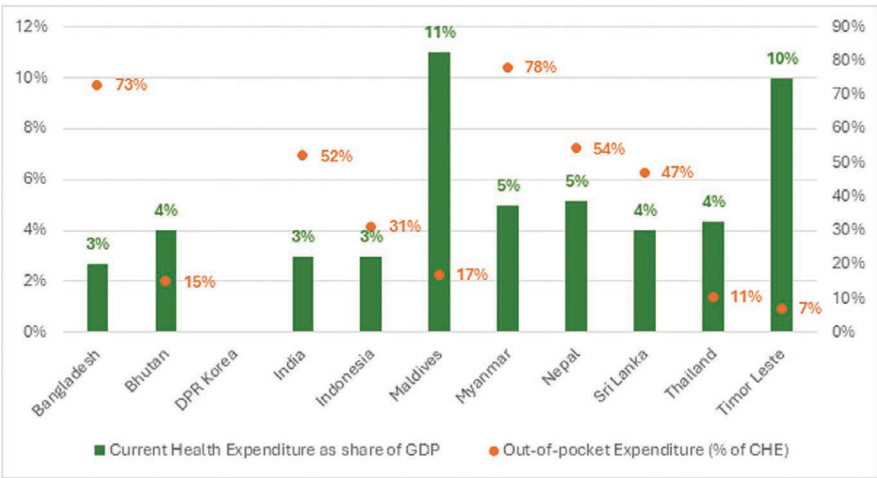


FIGURE 17.3 CHE as share of GDP.
Source: WHO Biennium Report 2023

to 82% in Timor-Leste (Figure 17.5). Pharmaceutical expenditure as a percentage of CHE is generally higher in countries with lower per capita CHE, ranging from 46.5% in Bangladesh to just 2% in Timor-Leste (Figure 17.4). Healthcare structure is set up in varied ways among different countries, combining private and public players in different ratios. These structures

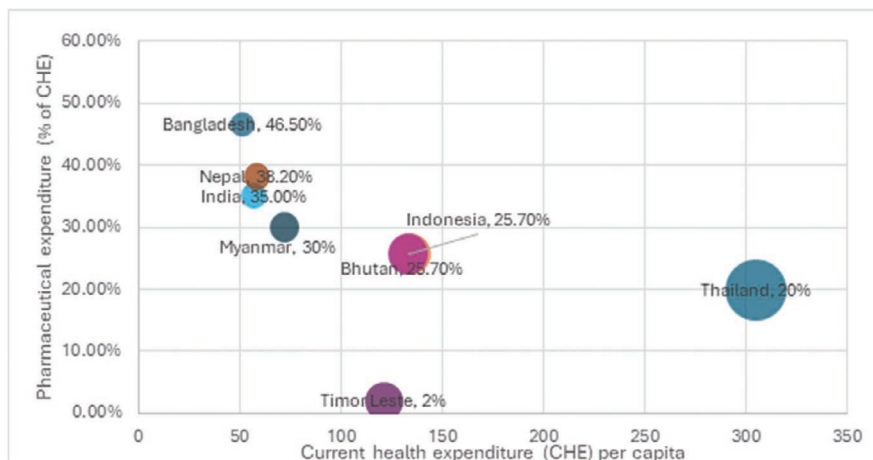


FIGURE 17.4 Per capita health expenditure.

Source: WHO Biennium Report 2023

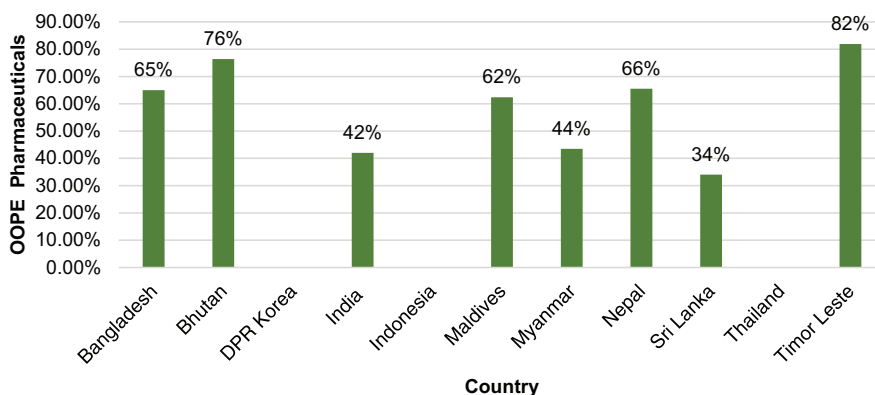


FIGURE 17.5 Out-of-pocket pharmaceutical expenditure.

Source: WHO Biennium Report 2023

range from a private sector-dominated Bangladesh and Indonesia (where a significant number of private diagnostic centres and clinics exist and over twice the number of beds are available in the private sector versus the public sector hospitals) to Sri Lanka's predominantly public sector healthcare infrastructure that provides for over 95% of inpatient care and around 50% of the outpatient care of its population (BIDA 2023; Rajapaksa *et al.* 2021).

Bangladesh is among the top countries producing over 90% of its pharmaceutical needs through domestic pharmaceutical industry (ITA 2022). In Thailand, the healthcare infrastructure is mostly public sector hospitals, but

a recent boom in the private sector healthcare seeks to leverage the international health tourism market. Public health sector predominantly provides healthcare in Maldives, although private investments are on the rise due to recent initiatives by its health ministry to improve access to healthcare in the country. However, the public hospitals and dispensaries for a large part of their pharmaceutical needs rely on the import of medicines by private importers from countries such as India and Bangladesh (Badeeu *et al.* 2019). In India, the private sector delivers a significant share of healthcare with 81% doctors, 58% hospitals, and 29% beds in the country (Thayyil & Jeeja 2013). The public health system also plays a vital role by providing primary healthcare in both urban and rural regions of the country.

VII. Health Expenditure in India

During 2019–2020, the total health expenditure (THE) for India was estimated to be INR 6,558.22 billion (INR 4,863 per capita). THE as a share of GDP decreased from 4% in 2013–2014 to 3.3% in 2017–2018, further reducing to 3.2% in 2018–2019 and slightly increasing to 3.3% in 2019–2020 (Figure 17.6). Government health expenditure (GHE), including capital expenditure, is INR 2,715.44 billion (41.41% of THE, 1.35% GDP, and INR 2,014 per capita). This amounts to about 5.02% of general government expenditure in 2019–2020. Household’s OOPE on health is INR 3,087.27 billion (47.07% of THE, 1.54% of GDP, and INR 2,289 per capita), and private health insurance expenditure is INR 458.38 billion (6.99% of THE) (NHA 2023). As the share of government in THE increased from 28.6%

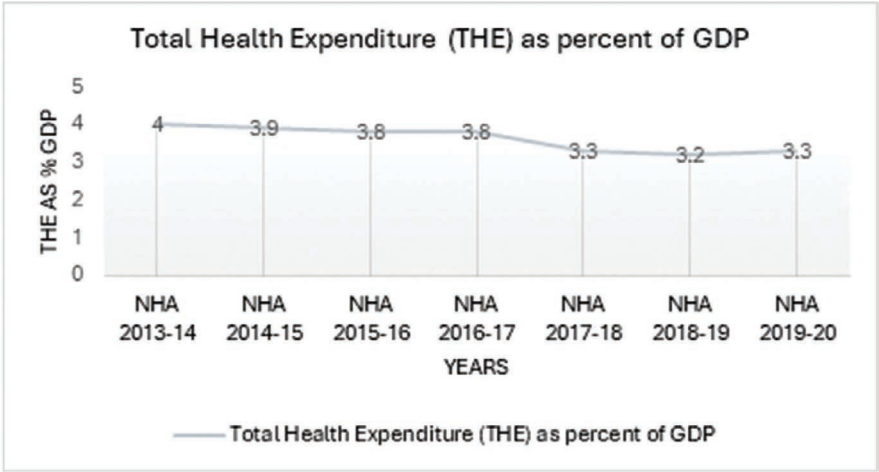


FIGURE 17.6 GHE and OOPE.

Source: Created by the authors based on National Health Accounts (NHA)

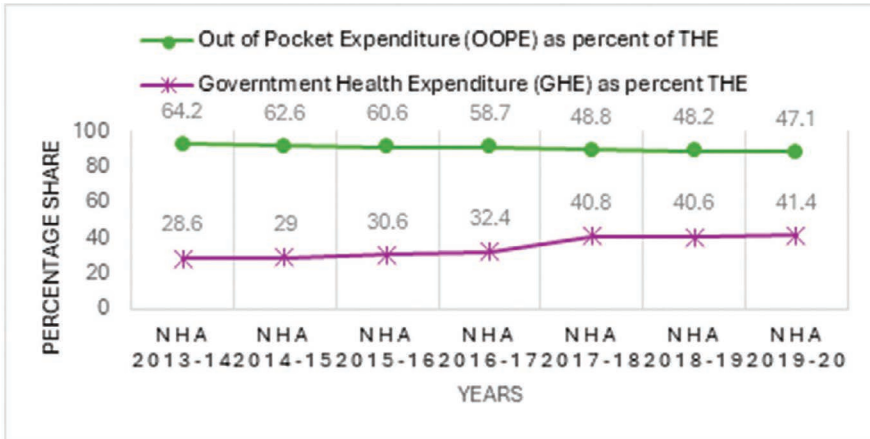


FIGURE 17.7 OOPE as % of THE and GHE as % of THE.

Source: Created by the authors based on NHA

in 2013–2014 to 41.4% in 2019–2020, the share of OOPE declined from 64.2% in 2013–2014 to 47.1% on 2019–2020 (Figure 17.7).

Of the THE, CHE, which includes the share not included in capital expenditure, is INR 5,936.59 billion (90.52% of THE), and capital expenditures is INR 621.63 billion (9.48% of THE). Of the CHE, the union government's share is INR 720.59 billion (12.14% of CHE) and that of the state governments is INR 1,189.27 billion (20.03% of CHE). Local bodies' share is INR 58.44 billion (0.99% of CHE) and households' share (including insurance contributions) about INR 3,517.17 billion (59.24% of CHE), with OOPE being 52.0% of the CHE. Contribution by enterprises (including insurance contributions) is INR 327.09 billion (5.51% of CHE), and NGOs' contribution is INR 90.99 billion (1.53% of CHE). External/donor funding contributes to about INR 33.04 billion (0.56% of CHE).

The CHE attributed INR 2,015.58 billion to inpatient curative care (33.94% of CHE), INR 1,145.48 billion to outpatient curative care (19.29% of CHE), INR 29.15 billion to day curative care (0.49% of CHE), INR 208.79 billion for patient transportation (3.52% of CHE), INR 239.83 billion to laboratory and imaging services (4.04% of CHE), INR 1,098.35 billion to prescribed medicines (18.50% of CHE), and INR 205.81 billion to over the counter (OTC) medicines (3.47% of CHE). Therapeutic appliances and medical goods of about INR 7.25 billion (0.12% of CHE), preventive care of about INR 602.5 billion (10.16% of CHE), and others of about INR 128.95 billion (2.17% of CHE) are the other constituents of CHE. About INR 254.9 billion (4.30% of CHE) are attributed to governance and health system and financing administration.

As shown in the figure below, the share of pharmaceutical expenditure as share of the CHE as per the NHA shows a steady increase from 33.4% in

2017–2018 of the CHE to 35.1% in 2019–2020 (Figure 17.8). These data must be understood while also considering that the purchase of medicines in outpatient settings is a significant share of out-of-pocket expenses incurred by patients seeking healthcare services from both public and private sector healthcare providers. Expenditure on traditional, complementary, and alternative medicine (TCAM) is 4.36% of CHE.

The share of states in GHE went up from 59.2% in 2017–2018 to 65.7% in 2018–2019 and fell slightly to 64.2% in 2019–2020 (Figure 17.9). The GHE varied considerably across states and union territories (UTs), ranging from

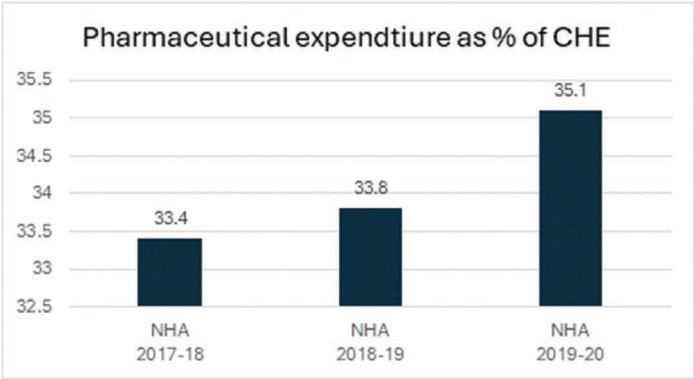


FIGURE 17.8 Pharmaceutical expenditure as percentage share of CHE, 2017–2020.
Source: Created by the authors based on NHA 75th Round

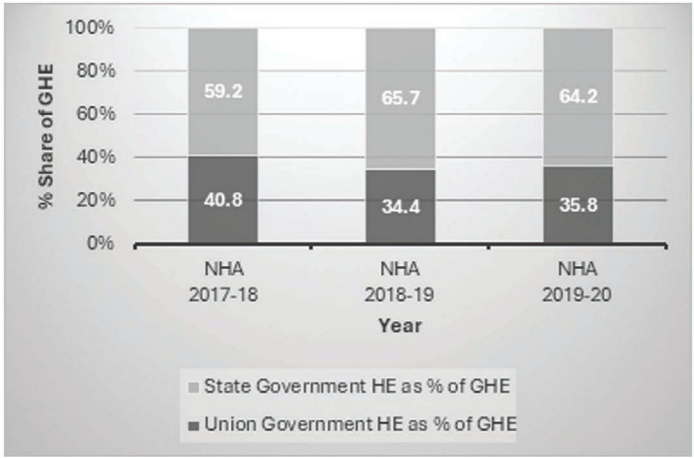


FIGURE 17.9 THE as percentage share of India’s GDP over the years.
Source: Created by the authors based on NHA 75th Round

just 0.7% of the gross state domestic product (GSDP) in Karnataka to 3.4% in Mizoram (Table 17.1). As a percentage of general government expenditure (GGE), GHE ranged from just 3.2% in Jammu & Kashmir to 18.7% in Delhi. In per capita terms, Goa (INR 5,740) had the highest total general health expenditure (TGHE), followed by Arunachal Pradesh (INR 5,090 per capita) and Delhi (INR 4,226). Bihar (INR 701) had the lowest per capita TGHE followed by Uttar Pradesh (INR 951) and Jharkhand (INR 1,014). Such stark variations reflect the differing priorities of the states and UTs in the country.

TABLE 17.1 GHE across States and UTs (2019–2020)

Sl. No.	State	GHE as% of GSDP %	GHE as % of GGE %	Per Capita the in INR	GHE in INR
1	Assam	1.7	7.3	1,657	5,798
2	Arunachal Pradesh	3.4	6.4	5,090	1,018
3	Andhra Pradesh	0.9	6	1,699	9,005
4	Bihar	1.5	6.2	701	8,477
5	Chhattisgarh	1.5	6.3	1,790	5,190
6	Delhi	1.1	18.7	4,226	8,451
7	Goa	1.5	8.7	5,740	1,148
8	Gujarat	0.8	7.7	1,861	12,843
9	Haryana	0.8	6	2,106	6,107
10	Himachal Pradesh	1.7	7.5	3,829	2,680
11	Jammu and Kashmir	1.2	3.2	1,554	2,020
12	Jharkhand	1.2	5.8	1,014	3,853
13	Karnataka	0.7	5.2	1,655	10,920
14	Kerala	1.1	8	2,590	9,066
15	Madhya Pradesh	1.1	5.8	1,249	10,364
16	Maharashtra	0.8	6.1	1,675	20,606
17	Manipur	2.2	6.1	2,300	690
18	Meghalaya	2.7	8.9	3,133	940
19	Mizoram	3.4	6.7	7,200	720
20	Nagaland	2.3	5.3	3,415	683
21	Odisha	1.3	5.6	1,494	6,723
22	Puducherry	2.1	10.5	3,770	754
23	Punjab	0.9	4.9	1,541	4,624
24	Rajasthan	1.3	6.8	1,662	12,963
25	Sikkim	1.4	6.3	4,360	436
26	Tamil Nadu	0.9	6.6	2,039	15,494
27	Tripura	1.7	6.5	2,335	934
28	Uttar Pradesh	1.3	6	951	21,688
29	Uttarakhand	1.1	6.5	2,273	2,500
30	West Bengal	1.1	7.4	1,346	13,191
31	Telangana	0.9	6.7	2,263	8,374

Source: NHA 2019–2020 (published 2023)

VIII. Procurement for Public Healthcare

Different procurement mechanisms and purchasing options are available to address constraints operating nationally or internationally. In India, health and other health-related services are under the purview of the state government and local governments (for urban areas) as per the 67th constitutional amendment of India. Various models of procurement and distribution of medicines and other medical supplies observed in different states of India are a function of state-level institutional capacity, priority, demography, and other factors. The efficiency of the procurement model can be predicted on level of transparency, decision-making process, level of decentralisation/centralisation, selection of medicines and medical supplies, tendering process (including scope of competition, timeline, bidding process, evaluation, and selection process, quality checks, and penalty clause for supply default and quality default), and payment mechanism.

Different Indian states employ diverse mechanisms for public procurement of medicines, including through state-level autonomous bodies, state-owned agencies, procurement division of the state government, and public-private partnerships. The experience of Indian states suggests that states with autonomous procurement bodies have witnessed improved governance, reduced wastage, improvement in availability of quality drugs, and lower OOPE burden, thereby outperforming states that have adopted other models.

States such as Tamil Nadu and Rajasthan are often cited as examples of successful procurement and supply chain management, which rely on centralised medicine procurement and decentralised distribution systems, through efficient, autonomous procurement agencies. These agencies procure drugs based on essential medicine lists, use scientific forecasting techniques, transparent tendering and bidding, and IT-based systems, which underlie procurement and inventory management system. Such a system has resulted in low procurement rates and high availability of essential medicines across public health facilities in these states. Other states have, however, been less successful. Challenges stem from gaps in implementation and inefficient quality assurance mechanisms, among others.

A multi-state study found that the average availability of medicines on the day of the survey varied substantially across the eight states. While Tamil Nadu and Rajasthan excelled with 81 and 79% medicine availability at the point of care, respectively, other states such as Jammu and Kashmir and Uttar Pradesh struggled with the lowest availability at 38 and 57%, respectively. Another study found that the overall availability of medicines in the public health sector in Punjab and Haryana was 45.2 and 51.1%, respectively (Prinja *et al.* 2015).

IX. Out-of-Pocket Expenditure

OOPE defined by the World Bank is any direct outlay by households, including gratuities and in-kind payments, to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups. It is a part of private health expenditure.

As discussed earlier, OOPE in India is declining but continues to be a substantial proportion of national health expenditure. Such excessive reliance on OOPE creates a disproportionate burden on low-income individuals, accentuating income inequality and medical poverty trap. Medicines account for a considerable proportion of OOPE in the country. Findings from a study using household survey data revealed that while on an average 29.1% of OOPE was accounted for medicines among inpatients, for outpatients the share of medicines is much higher at 60.3% (Ambade *et al.* 2022). Unavailability of medicines in the public sector leads to people buying medicines from the private sector, thereby incurring OOPE. This leaves considerable room for intervention to make medicines affordable.

The *Pradhan Mantri Bhartiya Janaushadhi Pariyojana* (2008), recently revamped, aims to provide quality generic medicines at affordable prices. Currently, 8,012 Jan Aushadhi stores provide 1,451 drugs and 240 surgical items, 50–90% cheaper than medicines with the same chemical composition in non-Jan Aushadhi stores. It has saved up to INR 4,000 crores of citizen money on drugs in 2020–2021.¹ However, regulation of the pharmaceutical market is necessary to reduce information asymmetry. To do this and reduce irrational OTC drug use, Jan Aushadhi stores can collaborate with local doctors to provide information. Websites in local languages along the lines of WebMD that provide information about medicines, their costs, local availability, doctors near the individual, and disease-specific information may foster informed decision-making among patients. In this context, a mobile application and online search tool named *Pharma Sahi Daam* provides ceiling prices for all scheduled medicines under the National List of Essential Medicines.

Consumption

The pharmaceutical market in India was worth INR 1,671.23 billion in 2021. Medicines for cardiovascular system were sold the most, with sales turnover accounting for 14.21% of sales in value-terms followed by anti-infectives (12.98%), gastrointestinal medicines (11.66%), anti-diabetic preparations (9.40%), and vitamins/minerals/nutrients (8.96%) (Table 17.2). The country is home to over 3,000 companies and over 10,500 pharmaceutical

TABLE 17.2 Therapeutic Segment-Wise Sales in the Private Market in India, 2021

<i>Therapeutic Segment</i>	<i>Sales Value (INR Crores)</i>	<i>Market Share (%)</i>
ANTI-INFECTIVES	23,754.13	14.21
CARDIAC	21,687.89	12.98
GASTROINTESTINAL	19,492.73	11.66
ANTI-DIABETIC	15,714.91	9.40
VITAMINS/MINERALS/NUTRIENTS	14,981.43	8.96
RESPIRATORY	12,838.72	7.68
PAIN/ANALGESICS	11,499.50	6.88
DERMA	10,715.30	6.41
NEURO/CNS	9,811.75	5.87
GYNAECOLOGICAL	7,961.67	4.76
HORMONES	3,068.96	1.84
ANTI-NEOPLASTICS	3,011.39	1.80
OPHTHAL/OTOLOGICALS	2,640.41	1.58
UROLOGY	2,380.82	1.42
VACCINES	1,877.71	1.12
BLOOD RELATED	1,825.75	1.09
OTHERS	1,420.83	0.85
STOMATOLOGICALS	990.32	0.59
SEX STIMULANTS/REJUVENATORS	895.42	0.54
ANTI-MALARIALS	562.39	0.34
GRAND TOTAL	167,132.02	100.00

Source: Author’s computations based on PharmaTrac data

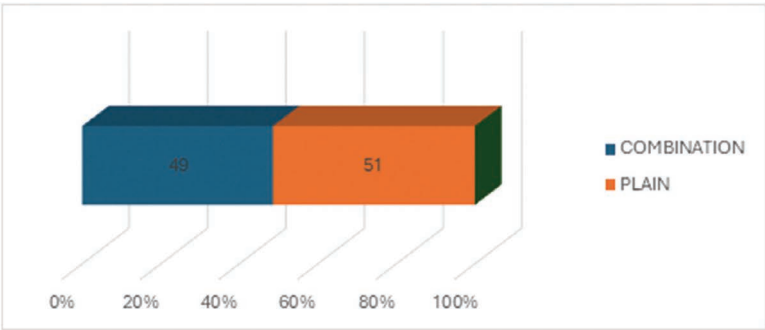


FIGURE 17.10 FDCs in the Indian pharmaceutical market.

Source: Author’s computations based on PharmaTrac data

manufacturing facilities. There are 8.6 pharmacists per 10,000 population (WHO 2023).

It is interesting to note that fixed dose combinations (FDCs) account for about half of the Indian pharmaceutical market (Figure 17.10). Such combination drugs are often unnecessary and irrational. In sales turnover, the

highest share of FDCs was in the segment vitamins/minerals/nutrients (83%), followed by respiratory (73%), stomatologicals (59%), anti-diabetic (55%), and gastrointestinal (55%). Studies have pointed out that not only are several antibiotic FDCs not recommended for use by WHO being marketed in India, several FDCs are being sold without the necessary regulatory approvals and have continued to be sold even after being banned.

Among single antibiotics too, WHO's watch category drugs contribute a substantial share of sales in volume terms. Rampant OTC sales of medicines, including antibiotics, is another worrisome feature of the Indian pharmaceutical market. Inappropriate prescribing practices by clinicians are often to blame for the inappropriate use of medicines, including antibiotics in the country, as evidenced by the high prescription rates of antibiotics for viral and self-limiting conditions, such as upper respiratory tract infections, cough, acute nasopharyngitis, and acute pharyngitis. These patterns of consumption are a cause for concern especially because of the increasing rates of antimicrobial resistance in India and across the globe.

The Indian market primarily comprises generics, accounting for 97% of consumption of medicines. The overwhelming majority of generics sold on the private market in India are branded, meaning they are sold under a brand name rather than the international non-proprietary name (INN). Unbranded or generic drugs marketed under their INN comprise only about 10% of medicines in the domestic market mainly dispensed in public health facilities.

A report by the Competition Commission of India (CCI) observed that during August 2019–July 2020, 47,478 brands of 2,871 medicines were sold in the pharmaceuticals market in India, which on average is 17 brands being sold for every medicine. There were, however, stark variations in the number of brands across therapeutic segments. Companies were also observed to have been marketing multiple brands of the same formulation with identical strength and dosage at notably different price points. The commission noted that product differentiation in the Indian market is introduced via brand differentiation even in otherwise identical generics, and consumers typically pay a premium for brands. Market leaders often charge a higher price compared to other market players despite the presence of multiple brands and companies.

Another interesting observation in the commission's report was that generics were conspicuous through their absence in the private pharmaceutical market in India. Instead, CCI found through their investigation trade generics being sold under lesser-known brand names rather than theirs. INNs were largely understood as generics.

Apart from unavailability in the private sector, challenges with promotion of generics stem from a lack of confidence in quality among prescribers and the likelihood that pharmacists would dispense their favoured brands if prescribers prescribed generics.

With the emergence of digital technology, the introduction of online pharmacies or e-pharmacies is transforming the retail pharmaceutical market in India. While the share of online pharmacies is still small compared to the overall market, the COVID-19 pandemic provided an impetus to online pharmacies. The CCI found that specifically for chronic conditions, e-pharmacies are perceived to be more likely to be the preferred as opposed to emergency and acute conditions where brick-and-mortar pharmacies are likely to continue to be preferred by consumers.

Structure of Pharmaceutical Supply Chain in India

The pharmaceutical supply chain is complex, with multiple intermediaries at the wholesale and retail levels between the manufacturers and retail consumers. Free and fair competition at all stages of the supply chain is crucial for access in the private sector. The CCI has observed market distortions within the supply chain, such as the requirement of no objection certificates by trade associations to appoint stockists and steps taken to remedy these issues through advocacy efforts and issuance of orders.

Another issue of the pharmaceutical supply chain in the private sector in India is that of high trade margins or mark-ups contributing to the final prices paid by retail consumers. Manufacturers often compete by offering higher margins to pharmacies to encourage them to stock and sell their products. Even though pharmacies are not allowed by law to substitute one brand for another, inadequate enforcement allows such practices to continue. The drugs price control order (DPCO) lays out margins of 16% for retailers and 8% for wholesalers for scheduled drugs, i.e., medicines under the national list of essential medicines. Variations in mark-ups were observed across therapeutic segments and across drugs, based on modes of administration (solids versus injectables) within therapeutic segments.

The commission observed from market data that the median margins were much higher than the regulatory cap for both scheduled and non-scheduled medicines. Trade generics commanded even higher retail margins than branded generics as they are directly supplied by pharmaceutical companies to pharmacies, including those run by hospitals and doctors who are incentivised through higher retail mark-ups to sell the products. This results in such medicines often being sold at even higher prices to consumers than branded generics.

X. WTO and IPR

As a member of the World Trade Organisation (WTO) and signatory to the Trade-Related Intellectual Property Rights (TRIPS) agreement, India grants product patent on pharmaceuticals. Prior to 2005, India granted only process

patents to pharmaceuticals, which was credited to be more responsible for boosting the domestic industry. The country amended its patent law to incorporate the product patent regime in 2005 and began granting market exclusivity to new innovations for a 20-year period from the date of filing of the patent application.

The TRIPS agreement allows certain flexibilities in accordance with the Doha Declaration on TRIPS and public health. The Indian Patent Act incorporates several such flexibilities, such as section 3(d), which defines the scope of patentability and seeks to prevent evergreening by the pharmaceutical industry. This entails filing fresh patents for existing molecules in a bid to extend patent protection by introducing minor modifications, giving them novel appearance without altering efficacy. One routinely comes across the example of such an attempt made unsuccessfully by the Swiss multinational Novartis with its blockbuster medicines Imatinib only to be thwarted by both the Indian government and the Supreme Court. It has been observed that most pharmaceutical patents granted in India are for only marginal improvements over existing patented medicines (Ali *et al.* 2018).

Another noteworthy flexibility is the provision of compulsory licensing, which allows for the authorisation for a company by the government, other than the originator, to produce and market a patented medicine in public interest. This flexibility has been utilised only once in the country for a cancer medicine sorafenib tosylate marketed under the brand name Nexavar by a German pharmaceutical company. The compulsory license was granted to the Indian manufacturer Natco on grounds that the medicine was priced unreasonably high and not available in sufficient quantities in India (Dhar & Joseph 2019). It has been noted that the cumbersome process of issuing a compulsory license in India allows for considerable delays by the patent holders.

The Indian law incorporates certain procedural safeguards allowed under TRIPS for preventing the grant of frivolous and legally invalid patents. Pre-grant oppositions can be filed on 11 grounds, and post-grant oppositions are also allowed within a year from the publication of the grant of patent on similar grounds. Studies, however, suggest that such provisions are underutilised in the country because of barriers in information access, awareness, and capacity among generic companies, among others.

Affordability

The price of drugs in the market is decided by many inputs, such as the cost of ingredients, infrastructure costs to manufacture them, patent licensing fees (if any), cost of research, development, and testing (in case of a new formulation or molecule). These aspects reflect the manufacturing cost of the drug, which is further modified when the drug is marketed in either wholesale or

retail. ‘Maximum Retail Price’ (MRP) is the highest price that can be charged by a retailer to a consumer or patients for a particular drug or formulation. The objective of MRP is to prevent overcharging consumers/patients and maintain transparency in drug pricing. This is especially useful in countries with high OOPE in healthcare, where the patients/consumers pay a significant share for the medicines they buy.

The control and regulation of pharmaceutical prices is key to ensuring the essential and life-saving drugs are within the financial reach of a country’s population. Increasing OOPE, as seen in recent times in many LMICs, such as those in the Southeast Asian region also highlights the need for such regulations. Bangladesh and Myanmar show a high OOPE as share of CHE in 2020 at over 78% as per the World Bank OOPE dashboard, with India and Pakistan following at 51% and Vietnam and Indonesia at around 41%. Drug price regulation, especially drug retail price regulation, can be a key tool through which a government can endeavour to reduce high OOPE among its population.

The National Pharmaceutical Pricing Authority (NPPA), under the Department of Pharmaceuticals (DoP), Ministry of Chemicals and Fertilisers, is responsible for the fixation and revision of prices of scheduled formulations, and monitoring and enforcing prices. The National Pharmaceutical Pricing Policy (NPPP) 2012 is currently in effect and regulates prices of essential medicines (finished formulations only) defined as those medicines under the national list of essential medicines (NLEM) using a market-based formula. The NLEM is updated from time to time. The last update was in November 2022. The provisions of NPPP 2012 were implemented through DPCO 2013.

Under the market-based approach adopted in DPCO 2013, the ceiling price of a formulation is determined by first working out the simple average of price to a retailer (PTR) for all branded-generic and generic versions of the formulation having a market share of 1% and above, and then adding a notional retailer margin of 16% to it. The MRP for that formulation must not exceed the notified ceiling price plus applicable taxes. The NLEM 2015 contained 966 scheduled drug formulations (including formulations as per explanation 1 to Schedule I of DPCO 2013) spread across 31 therapeutic groups. The NPPA has fixed the ceiling prices of 890 formulations under DPCO 2013 till 31 December 2022.

Price rise proportional to the Wholesale Price Index is allowed for medicines under the NLEM, and 10% price increase is allowed for all other medicines. The policy is a significant departure from the erstwhile cost-based pricing. The policy has been critiqued for its limited coverage and leaving out strength, dosage forms, combinations, therapeutic equivalents of even medicines under the NLEM, and unimpressive price reduction.

Para 19 of DPCO 2013 allows the government to introduce ceiling prices of any medicine under extraordinary circumstances, in public interest. The

NPPA invoked para 19 in 2019 to regulate trade margins on some 42 anti-cancer medicines, capping the margin at maximum 30%. A significant reduction in prices of these medicines was reported. However, a flat rate of margin is contrary to the WHO's recommendation of regressive margins, wherein higher prices medicines should have relatively lower rates of margins in comparison with lower price margins, which should have higher margins.

XI. Quality of Pharmaceutical Products

Whether a drug is branded or not, pharmaceutical products not meeting the specifications of pharmacopoeia, including quality parameters, are considered 'not of standard quality' (NSQ). The NSQ or sub-standard drugs fail to meet the desired standards for several reasons – assay, disintegration, delayed dissolution, contamination, presence of foreign matter, fungus growth, non-dispersible lump formation, addition of non-permissible colours, toxicity, sterility, etc. On an average, approximately 3% drugs failed to meet the standards of pharmacopoeia during March 2019–April 2021. These data are largely of branded generic drugs sold in the retail market.

More comprehensive evidence comes from a national survey by the government of India (GoI) during 2014–2016, drawing a sample of 47,954 drugs involving retail chemists and government pharmacies (National Institute of Biologicals 2014–2016). About 72% samples were drawn from private retail outlets, about 18% from government distribution points (state government medical store depots, civil/district hospital stores, Central Government Health Scheme dispensaries, and ESI dispensaries), while the remaining 10% sourced from ports (imported drugs). A key objective of this survey was to investigate the magnitude of NSQs and spurious drugs in the country. On an average, approximately 3% of all sampled branded generics turned out to be sub-standard, and roughly 0.03% spurious. The key reasons for test failure were dissolution (25%), followed by assay (23%) and description issues (12%). State-wise NSQ magnitude ranged between 0 and 9%, with an average 3% for branded generics. As per the survey, the presence of NSQs in unbranded/generic generics was higher. Approximately 10% of all samples tested for NSQ in government sources failed, indicating a higher share of medicines failing quality test. The key reasons contributing to NSQ test failure in the government facilities were assay (24%), dissolution (22%), and related substances (14%). Here, too, the extent varied across states, ranging up to 12% in some states. In states that follow pooled procurement systems, the relative share of substandard drugs was found to be lower in comparison. Some experts and stakeholders, however, pointed to the limitations of such sample surveys for quality assessment because of small sample size and the inability of the tested samples to represent variability across batches and thus

cautioned against drawing generalised conclusions from one-off surveys for policy purposes.

Pharmaceutical Regulation and Policy

The regulation of pharmaceutical industry in India is split between the state and the central authorities. While the state regulates the manufacture, sale, and distribution of the drugs, the centre regulates other related activities, such as approval of new drugs and clinical trials in the country, approval and quality control of drugs imported into the country, approval of certain licenses as Central License Approving Authority, overseeing the Drugs Consultative Committee (DCC) and Drugs Technical Advisory Board (DTAB), and the coordination of various state drug control organisations (SDCO).

Till the 1940s, most pharmaceuticals marketed in the country were imported, and the drugs were among the most expensive in the world. After India's independence from the colonial rule in 1947, the National Planning Committee of the Congress Party proposed that India should be self-sufficient in supply of drugs and that no firm should hold patent rights in a medical product in the country. Hindustan Antibiotics Limited (HAL), established in 1954 in Pune, Maharashtra, was the first public sector undertaking in the Drugs & Pharmaceutical sector in the country, which started the first commercial production of antibiotics like penicillin, streptomycin, gentamicin, ampicillin, and amoxycillin, among others. This was followed by the establishment of Indian Drugs and Pharmaceuticals limited in 1961, conceived as a part of developing healthcare infrastructure.

In 1957, GoI appointed Justice N. Rajgopala Ayyangar Committee to examine the question of revision of the patent law and advice the government accordingly. The committee recommended retention of the patent system, despite its shortcomings, and suggested major changes in the law, forming the basis of Indian Patents Act, 1970, which repealed and replaced the 1911 Patents and Copyright Act so far as the patents law was concerned. This was further amended through the Patents (Amendments) Act, 1999, which provided for filing of applications for product patents in drugs and pharmaceuticals. Through the Act, only process patents were allowed. However, these applicants could be allowed exclusive marketing rights (EMR) to sell or distribute these products in India, subject to fulfilment of certain conditions (Office of the Controller General of Patents, Designs, & Trade Marks 2019). The Act was further amended in 2005 to allow for product patent framework for medicines, which had not been the case earlier in response to the WTO's TRIPS.

Multiple organisations in India regulate pharmaceutical development, manufacturing, and distribution, each focusing on different aspects. While the Central Drug Standard Control Organisation (CDSCO), under the

Ministry of Health and Family Welfare (MoHFW), deals with product licensing and clinical trials for drugs, which it performs along with the Drugs Controller General of India (DGCI), price regulation and controlling unethical drug promotion is undertaken by the NPPA and DoP under the Ministry of Chemicals and Fertilisers. Meanwhile, biologics are under the purview of the Ministry of Environment and Forests. The Ministry of Commerce manages pharmaceutical trade negotiations and TRIPS, and the Ministry of Information Technology regulates the e-pharmacies, which sell drugs through online portals. The states, however, regulate the manufacturing, marketing, and distribution of the drugs.

The definition and parameters of the quality of a drug are set out in Schedule 2 of Drugs & Cosmetics Act (DCA) 1940, and its amendments. 'Misbranded' drugs are those labelled wrongly or propose a false claim. 'Adulterated' drugs are those with unclean packing, or have toxic or harmful substances in them. 'Spurious' drugs are those imported under different names, are imitations of other drugs that is not made by the original manufacturer, or have incorrect labelling to suggest other manufacturers or brands. 'Substandard' drugs are NSQ as laid down by the manufacturer or pharmacopeia. The quality of the drugs manufactured and marketed both within and outside the country are undertaken through various practices, such as routine inspections by state food and drug safety authorities.

Schedule M of the DCA enlists Good Manufacturing Practices (GMP) guidelines. GMP inspections of manufacturing units are carried out by qualified inspectors from CDSCO and inspectors from the states and product experts from central drugs laboratory (CDL). These include pre-approval inspections, routine annual inspections, complaint inspections, etc.

The *Mashelkar Committee Report* highlighted the lack of uniformity in interpretation and implementation of the provisions of the law across states. The committee was also critical of the drug control infrastructure in the country at both the central and state levels, including inadequate testing facilities, shortage of drug inspectors, and unavailability of data bank and accurate information. The shortage of trained personnel for drug testing and licensing procedures has had adverse implications on medicine quality (Selvaraj 2014).

SUGAM, an e-governance portal, has been set up at the central regulatory authority and linked with the state regulatory authorities for enabling online issuance of licences. The portal allows import registration and licencing of drugs and medical devices, registration of cosmetics, registration of ethics committees, permission to conduct clinical trial, permission to conduct bio-availability and bioequivalence study for export purpose, personal permit for import of drug by individual patient, and test licence for import of small quantities of drugs for test and analysis purpose (Gupta *et al.* 2017).

New Draft Pharma Policy

The GoI has taken the initiative to draft a new Ministry of Pharmaceuticals, India (2022–2023) to address the burgeoning healthcare demands, both locally and globally, rapid technological advancements in the pharmaceutical sector, and the evolving global standards. The Indian pharmaceutical sector is also dependent on import of API and key starting materials (KSMs) for a majority of the generic and branded drugs manufactured in the country, which serves as a bottleneck affected by the global economy, international trade, and the global situations, such as the recent COVID-19 pandemic. The new National Pharmaceutical Policy 2023 is being drafted to serve as comprehensive framework to address the challenges faced by the Indian pharmaceutical sector and provide policy intervention to improve the manufacturing ecosystem (Department of Pharmaceuticals 2023).

The DoP under the Ministry of Chemical and Fertilisers has also identified other key areas of the pharmaceutical sector that need improvements in the next few years the new policy aims to address. Issues such as the development of biologics, biosimilars, and novel vaccine modality – such as the recent development of mRNA (messenger ribonucleic acid) vaccines, inefficiencies in regulation that lead to prolonged waiting time in approval of new drugs and patents, lack of skilled human resource that could cripple innovation and infrastructure development, and the lack of funding towards innovation in the pharmaceutical domain in the country. Presently low-value generics account for most of the Indian pharmaceutical exports, whereas the country's demand for patented drugs is met through imports because of the lack of research and development within the country and production of high-value drugs.

CDSCO Approval

The CDSCO under the Directorate General of Health Services, MoHFW, is the National Regulatory Authority (NRA) in India. The Drugs & Cosmetics Act, 1940, has entrusted the responsibility of regulation of drugs and cosmetics in India to the central and state regulatory authorities. It envisages uniform implementation of the provisions of the act to ensure the safety, rights, and well-being of the patients by regulating the standards of drugs and cosmetics manufactured and distributed in the country.

Under the Drugs and Cosmetics Act, CDSCO approves drugs and clinical trials, laying down the standards for drugs, controlling the quality of drugs imported into the country, and coordinating the activities of the State Drug Control Organisations, by providing expert advice with a view to bringing uniformity in the enforcement of the Drugs and Cosmetics Act. The CDSCO, along with state regulators, is jointly responsible for grant of licences of certain specialised categories of critical drugs, such as blood and blood products, I.V. fluids, vaccines, and sera.

The regulatory authority is responsible for product registration, which includes drug evaluation and authorisation and monitoring drug efficacy and safety. It regulates drug manufacturing, importation, and distribution in the country; regulates drug promotion and information; and monitors adverse drug reaction. CDSCO handles licencing of premises, persons, and practices in drug manufacturing. It also maintains quality control of the drugs manufactured in India.

While the CDSCO handles the overall standards and drug approval in the country, the state-level drug control regulatory bodies issue licenses to drug testing laboratories. They monitor quality of drugs and cosmetics manufactured and marketed in the respective states. They are involved in pre- and post-licencing inspection of drugs and manufacturing facilities and recall of sub-standard drugs.

XII. Summary and Conclusion

Medicines are a crucial building block of the health system and the demand for medicines is growing worldwide. India has a thriving pharmaceutical industry, supplying low-cost quality generics across the globe, and is often referred to as the pharmacy of the world. However, Indians, like citizens of many LMICs, grapple with several barriers in accessing healthcare in general and medicines in particular. There is a predominant reliance on out-of-pocket payments for accessing healthcare and medicines. An overburdened and inefficient public health system along with medicine unavailability and frequent stockouts results in an overwhelming dependence on the private pharmaceutical market.

Despite recent attempts by the government to promote generics, the Indian medicines market continues to be dominated by branded generics. Affordability is a major issue warranting government intervention for price regulation. India follows market-based pricing for regulating prices of NLEM and has more recently ventured into trade margin rationalisation for select cancer medicines. Other barriers include inappropriate use, especially in the context of antibiotics amidst increasing antimicrobial resistance, and quality issues indicate the need for more stringent regulation and enforcement of medicines and their use.

Addressing the barriers to medicine access would require concerted policy efforts. Increasing public spending on healthcare in general and medicines in particular is required to further reduce the dependence on out-of-pocket spending. While the government has plans to expand the number of Jan Aushadhi stores from existing 10,000 to 25,000, in comparison to the number of private pharmacies in the country, this number is still very low. Further expansion is, therefore, the need of the hour for promoting the use of generics and reducing expenditure. Encouraging

clinicians to prescribe generics is equally important for bringing down medicine expenditure further and improve access. This requires efforts to reassure both prescribers and consumers of the quality of generics through better enforcement of the existing regulations and norms as well as information, education, and communication efforts to counter poor perception about the quality of generics. The government should also mandate dispensing generics under government insurance schemes, such as Central Government Health Scheme (CGHS), Employee State Insurance Corporation (ESIC), and Pradhan Mantri Jan Arogya Yojna (PMJAY).

There is a need to explore other measures for regulating medicine prices besides market-based pricing and expand the coverage of the existing policy. Trade margin rationalisation is a great initiative and should be expanded to cover other therapeutic segments, but there is a need to rethink the flat rate ceiling of 30% and move towards regressive margins. The government must also consider tax exemptions for all essential medicines.

India must reduce its substantial reliance on API imports, mainly from China, and encourage local production for at least key API, which would play a vital role in ensuring medicine security in the country. The government has taken recent steps in this direction through production-linked incentive (PLI) schemes. The impact of such schemes shall be clear in the years to come. There is, however, a long way to go. In addition to fulfilling local requirements, focus should also be on the growing export of API from India and replicating the success the country has seen with export of generics through outreach efforts with industries in the US and EU as well as exploring multi-lateral partnerships with them.

Finally, public investments in R&D are needed if India's pharmaceutical industry is to maintain its competitive edge. Developing new chemical and biological entities, innovative drugs, and vaccines will need to be a priority for the domestic industry. Supportive policies are required to balance the commercial interests of the industry with the health needs of the population.

Note

- 1 Raushan Kumar Chaudhary, Melwin Johns Philip, Ashly Santhosh, Satish S. Karoli, Ramesh Bhandari, M.S. Ganachari, Health economics and effectiveness analysis of generic anti-diabetic medication from Jan Aushadhi: An ambispective study in community pharmacy, *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, Volume 15, Issue 6, 2021, 102303, ISSN 1871-4021, <https://doi.org/10.1016/j.dsx.2021.102303>.

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MOVING BEYOND CORPORATISATION: ADVANCING PUBLICNESS IN HEALTHCARE SYSTEMS

Abhay Shukla

I. Introduction

India's healthcare system comprises of various sectors and major actors, which generally tend to be studied and analysed discretely, even though they are densely interconnected. The complex interactions among different sectors and compartments frequently lead to 'emergent' phenomena, which cannot be simply understood by analysis focused on particular sectors or compartments. For example:

- Growing corporatisation of healthcare influences not only the private healthcare sector but also the way public health policy is configured. This includes trends like disproportionate emphasis on public-private schemes and undue promotion of digitalisation of health records.
- When the legislation focused on the right to *public* healthcare is enacted in one Indian state, it evokes strong negative reactions from the *private* healthcare providers across the country.
- Expansion of highly commercialised private medical colleges churning out doctors mostly for the private sector affects the availability of specialist doctors in public health services.
- Development finance institutions supported by Western governments provide significant funding in India, with claimed objectives of improving access to healthcare for the poor. However, this financing often fuels commercial growth of corporate hospitals associated with the expansion of expensive, higher-end healthcare and widening of healthcare inequities.

In this chapter, we will argue that along with building upon numerous existing studies in the Indian context concerning various aspects of public health

services, private healthcare sector, government health insurance schemes, pharma industry, etc., it is also imperative to view all the sectors related to the healthcare system (listed below) in an interactive and integrated manner. Taking such a 'view of the whole, embedded in understanding of the parts, as well as their complex interactions' can lead to creative synthesis, yielding important additional insights. Although it's not possible to fully explore such a large subject in a short chapter, we'll make an attempt here to sketch some outlines of such an approach. We will analyse some contemporary features of the corporatised private healthcare sector and constrained public health systems, followed by an analysis of public-private interactions in the health sector in India. We conclude by appealing for development of the overarching framework of 'advancing publicness' in healthcare systems.

A. *Taking a Comprehensive View of Actors, Sectors, and Influencers Involved in India's 'Healthcare Ecosystem'*

Each of the seven sectors related to healthcare in India, briefly mentioned below, are significantly linked with and in some cases overlap with other sectors. This categorisation is not watertight but can guide analysis and further synthesis to understand the entire healthcare system in a comprehensive manner.

- 1) *Healthcare users, communities and social support systems*: These also include diverse communities that utilise and relate with healthcare providers, community-based groups and actors (like local elected representatives and women's groups), patients' groups (like networks of HIV-positive people), various kinds of social organisations, and formal and informal actors involved in facilitating people's access to healthcare.
- 2) *Public healthcare services and implementation bodies*: State health departments and related public healthcare institutions, large portion of union health ministry concerned with regular service implementation (including oversight and coordination of the National Health Mission (NHM), national health programmes, and Health and Wellness Centres (HWCs)).
- 3) *Public health governance and regulatory bodies*: Health policymaking agencies (including PMO and Niti Aayog), sections of the union health ministry mainly concerned with wider governance (including clinical establishment act authorities and the National Council), National Health Authority and State Health Authorities, National Medical Commission, State Medical Councils, etc.
- 4) *Private healthcare providers*: Corporate hospitals and diagnostics, for-profit large private providers, 'charitable' and not-for-profit providers, small and medium private providers, and individual practitioners (including formally qualified and informal providers).

- 5) *Public–private schemes and arrangements*: National- and state-level health insurance/assurance schemes, public–private partnerships (PPPs) including transfer of public health assets to private management, etc.
- 6) *Medical industries*: Pharmaceutical and vaccine industry, medical equipment industry, private medical colleges, and health insurance industry.
- 7) *Financial systems related to healthcare*: Union and state government financial systems and allocations; patterns and modalities regulating flow of finances for public healthcare, including centre–state financial relations; dynamics of transnational finance and development finance institutions related to healthcare; foreign and domestic financing and investments in private healthcare sector.

It is natural that most analyses of the healthcare sector choose to focus on one of these specific components or programmes and do not necessarily include in their scope these sectors and actors in an integrated manner. While such focus is understandable from a pragmatic research perspective, we will argue here that there is a major need to take an integrated view of these sectors and actors and their interrelationships. Some experts might challenge

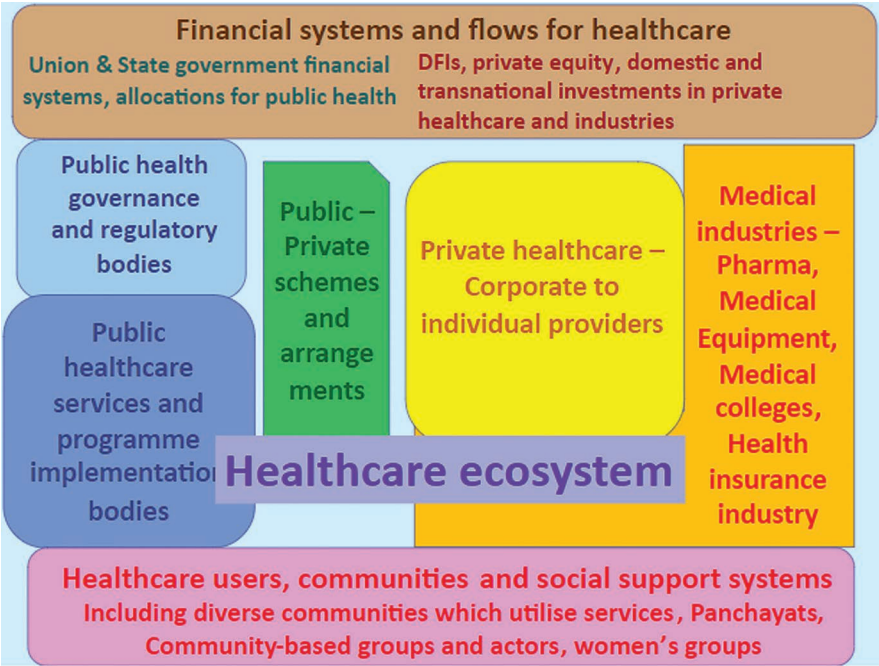


FIGURE 18.1 Healthcare ecosystem.

Source: Created by authors

the inclusion of healthcare users and communities, on the one hand, or wider financial systems (including transnational capital flows and public fiscal policies), on the other hand, under what is classically termed as the ‘health system’ or the ‘healthcare system’. Avoiding such definitional debates, we will term the ensemble of all these sectors and actors as the *healthcare ecosystem*, which needs to be envisaged in entirety, while building upon and complementing existing analyses of each component.

It is not the objective of this chapter to deal with each of these sectors. We will only outline some key points concerning the financialisation and corporatisation of healthcare, along with certain features of public health services and public–private schemes in the current situation. While doing this we will emphasise the importance of addressing two ends of the spectrum – healthcare users and communities, on the one hand, and financial systems for healthcare, on the other – often regarded as ‘given’ and ‘external’ to the healthcare delivery system, and may not be centrally addressed as actors of critical importance, even though they play very important roles in shaping the ‘healthcare ecosystem’. Such omissions could lead to certain important dynamics getting missed; hence, it is desirable to explicitly address these actors in an integrated manner during any comprehensive analysis of healthcare in India.

Prioritising the Social Lens: Social Embeddedness versus Social Alienation of Healthcare

Healthcare systems and institutions are subjected to interlinked processes at political-legal, economic, technical, organisational, and social levels, through interactions and interplay involving all these levels in complex ways. Every healthcare provider, programme, or sector is influenced by, and also encapsulates, processes at each of these levels in particular forms. We cannot understand the status and further evolution of any healthcare formation without understanding the dynamics at each of these levels. Certain existing healthcare sector studies tend to focus on the political economy of healthcare. Some analyse in depth various legal arrangements or organisational structures and processes, while others describe evolution and impacts of healthcare technology, or historical or modern forms of health knowledge, which exert a major influence on the entire healthcare system. We learn much from insightful studies that analyse processes across more than one of the mentioned levels. Undoubtedly, understanding processes at the first four levels – political-legal, economic, technical, and organisational – is essential for understanding any healthcare system.

However, we will argue that *analysis concerned with social interactions of healthcare providers and systems has been relatively neglected in the Indian context*. Despite certain important works that analyse health systems as core

social institutions (Freedman 2005; Gilson 2003), greater insight is required into how *social embeddedness versus social alienation of healthcare provisioning* intersects with processes at other levels, including the political and economic levels. This is because whether healthcare interactions are based on trust or mistrust, it fundamentally shapes the functioning of healthcare systems. *This is applicable to public healthcare provisioning and private healthcare providers.*

We will also present here a line of analysis according to which *corporatisation and commercialisation of healthcare, as well as its alternatives focused on advancing publicness in healthcare systems, cannot be properly understood without addressing the crucial dimension of social alienation/social embeddedness of healthcare provisioning.* While doing this, we can draw upon Karl Polanyi’s deeply insightful approach of bringing the social context centre stage while seeking to understand modern economic processes.

B. Growing Financialisation and Expanding Corporatisation Reshape Private Healthcare

A Hidden Headline: Healthcare Billionaires Emerge on Top in 2022

India is a paradoxical country, which boasts of having the third largest number of dollar billionaires in the world, and also has the largest number of poor in the world. What is perhaps not so well-known is the major role played by the healthcare and pharmaceutical industries in generating India’s billionaires.

In 2020 itself, fuelled by thriving business during the COVID pandemic, seven new billionaires were added from the healthcare and pharma industry. This striking fact that in 2022 healthcare and pharma corporates contributed the largest number of billionaires in India compared to any other industry or sector deserves to be widely noted, at least by analysts of the healthcare sector. Yet this potential headline seems to have been generally ignored, or perhaps was considered irrelevant. The massive growth of healthcare corporates

TABLE 18.1 Industry-Wise Dollar Billionaires in India in 2022 (Top Five Industries)

Rank	Type of Industry	Number of Indian Dollar Billionaires in 2022
1	Healthcare, including pharmaceuticals	32
2	Manufacturing	31
3	Technology	16
4	Diversified industries	16
5	Fashion and retail	15

Source: Adapted from Oxfam 2023

in India – which has continued apace after the COVID pandemic – indicates that something new and unprecedented is happening here, building upon but moving beyond widespread commercialisation of healthcare since the 1980s and the 1990s.

This ‘something new’ is large-scale financialisation and corporatisation of the private healthcare sector, which is significantly driven by foreign institutional investments. Several of the largest healthcare corporates in India, such as Max Healthcare, Apollo Hospitals, and Fortis Healthcare, might no longer be regarded as ‘Made in India’, since their majority holdings or controlling shares are now with foreign institutional investors.

Financialisation – ‘Elephant’ in the Healthcare Room?

Today, it is important to analyse the rapidly growing financialisation that affects the Indian economy and increasingly penetrates healthcare. Epstein’s widely used definition of financialisation describes it as ‘the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies’ (Epstein 2005). Globally anchored financialisation and its close companion corporatisation have a huge and growing influence on the private healthcare sector in India. They significantly shape the larger healthcare ecosystem, including the manner in which public healthcare systems are financed and operate. Here, we quote from a relevant article on this phenomenon (Hunter & Murray 2019):

We will argue that an examination of the interaction between healthcare and a financialisation-development nexus helps us to distinguish the distinctive nature of the latest emerging phase of health system change – that of the transformation of healthcare into saleable and tradeable assets for global investors . . . *Healthcare financialisation represents a new phase of capital formation that builds on, but is distinct from, previous rounds of privatisation and neoliberal health care reform . . .*

(Emphasis added)

Financialisation of healthcare in India is strongly promoted by powerful international Development Finance Institutions (DFIs), which work as arms of developed country governments, investing large-scale finances, and reshaping Indian healthcare markets. Official development agencies and consultants working for developed country governments can significantly influence healthcare policies and implementation in India. For example, DEG, the German government’s financial institution, provides large-scale finances for commercial expansion of certain Indian corporate hospitals, while the German official development agency GIZ has been centrally involved in detailed design and technical support in the implementation of the national Pradhan

Mantri Jan Arogya Yojna (PMJAY) scheme, through a large team of consultants working directly with National and State Health Authorities (Marathe & Shukla 2023). The rapid growth of commercial health insurance, including the proliferation of state-supported health insurance schemes, is another manifestation of financialisation in the health sector, which needs separate treatment. Given this situation, financialisation and corporatisation of healthcare in India and associated processes must be understood in detail to comprehend the current trends in private healthcare, public–private schemes, and even aspects of public health policy.

Corporatisation Is a Process That Extends Far beyond Corporate Hospitals

Corporatisation is much wider than just the expansion and operation of corporate hospitals. This process reshapes all other private providers, management practices, and culture of the entire healthcare sector. Corporatisation of healthcare is not only about corporate hospitals, but it is also an all-encompassing hegemonic project that pushes to reshape the entire healthcare sector.

Barnett and Brown (2006) link the corporate institutional form to the goal of profits. According to them, the ‘corporatisation of hospital services involves private companies investing in health care for the purposes of acquiring and increasing profits, diversifying risk and increasing dividends to shareholders.’ According to Steck (2003), corporatisation (of education) can be viewed as a process of fundamental transformation, going beyond business entanglements in education to a far deeper penetration of the university by corporate economy-culture practices The corporatised university is characterised by ‘processes, decisional criteria, expectations, organisational culture, and operating practices that are taken from the modern business corporation’.

(Chakravarthi et al. 2023)

To understand the background of corporatisation, we need to briefly review the evolution of the private healthcare sector in India, which has undergone significant transformations through three distinct phases since independence:

- 1) *1950s to 1970s*: Healthcare was mostly socially embedded, characterised by public hospitals, charitable institutions, and family doctors working in close contact with their communities.
- 2) *1980s and 1990s*: This period saw the onset of healthcare commercialisation with the rise of private nursing homes and small and medium-sized private hospitals. There was an increase in medical specialisation, with more medical colleges producing large numbers of postgraduate doctors.

This growth was mostly funded by individual, local, NRI, and public sector finance. This phase marked a decline in trust-based healthcare interactions, shifting towards more commercial and transactional patient-provider relationships.

- 3) *2000 onwards*: Corporatisation of healthcare accelerated, with substantial foreign investment and the rise of corporate hospital and diagnostic chains. Foreign investments in Indian private healthcare expanded more than one hundred times between 2001–2002 and 2013–2014 (Hooda 2015), along with major growth of corporate hospital and diagnostic chains. The power of commercial managers has replaced the autonomy of most medical professionals in the management of healthcare institutions (Marathe et al. 2020). Clinical targets now often lead to medically unindicated admissions and procedures and aggressive marketing overshadows patient-doctor relationships (Gadre & Shukla 2016). Healthcare has become more alienated, with ‘brand value’ being aggressively promoted, while trust between patients and individual doctors and healthcare providers continues to break down.

Corporatisation is associated with social disembedding of healthcare

We would recognise that historically in any society, including India, healthcare providers and institutions are deeply social embedded. Social ties and trust between healers and patients, relationships of patients with their doctors and health workers . . . these are all shaped through a complex web of social relationships . . . with growing commercialisation of healthcare, previously socially embedded individual and private (including not-for-profit) providers have become more and more hijacked by market forces *This process takes its extreme form with corporatisation of health care, whereby the healthcare enterprise becomes completely socially disembedded and detached from any social anchoring and becomes exclusively dictated by finance capital driven by aggressive profit maximisation, at huge cost to patients, health workers and society.*

(Emphasis added, Marathe et al. 2022)

It should also be noted that Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy (AYUSH) and traditional healing practices in India have traditionally been more socially embedded than modern biomedicine. However, commercialisation and corporatisation are now impacting Ayurvedic medicine production as well. To preserve AYUSH’s strengths and accessibility, these systems need to be socially reclaimed and integrated into public healthcare reforms while avoiding the negative impacts of commercialisation and corporatisation.

Need to socially re-embed healthcare through public action

It's time to re-socialise healthcare. In his classic work 'The Great Transformation', Polanyi also describes the 'Double Movement' which takes place under capitalism. The 'first movement' consists of push by various sections of capital to enlarge the scope of markets, greatly expanding commodification. This inevitably results in various socially damaging impacts, and is then followed by the 'second movement' for social protection, consisting of counter-initiatives by a wide range of social actors to protect social life from the destructive influences of commodification and unfettered market dynamics.

(Marathe et al. 2022)

Such social re-embedding is relevant for public and private healthcare provisioning, although in different forms. There are several instances of exceptional public measures taken during the COVID period to protect social interests. For example, around 15 state governments attempted interventionist regulation for regulation of rates in private hospitals. This was linked with an impactful social movement, which reversed overcharging of COVID patients by private hospitals in Maharashtra, a remarkable experience of promoting social accountability regarding private healthcare (Shukla 2022). While these measures were undertaken in an emergency, they show the potential for public action – from both above and below – to deal with unregulated private healthcare when an urgent need is perceived. We need to learn from these while crafting modalities to deal with corporatised and commercialised private healthcare in India today. This includes the need to implement 'socialised' regulation (Shukla et al. 2021), bringing in civil society and patients' groups as stakeholders along with private providers in governance bodies, rather than implementing this as a purely bureaucratic function (Shukla et al. 2018).

C. Constrained and Hyper-Centralised Operation of Public Health Systems

Financial constriction: Despite the urgent need for expanded public health services highlighted by the COVID-19 pandemic, the union government's healthcare spending as a percentage of GDP has remained largely stagnant over the last several years (see chart).

India ranks 179 out of 189 countries of the world in public healthcare budget allocation (Department of Economic Affairs 2021). Added to these inadequate allocations, frequent delays in fund releases from the central to state governments exacerbate financial deficits. This is often justified by 'under-spending' at lower levels, which is a product of historically starved systems and bureaucratic procedures.

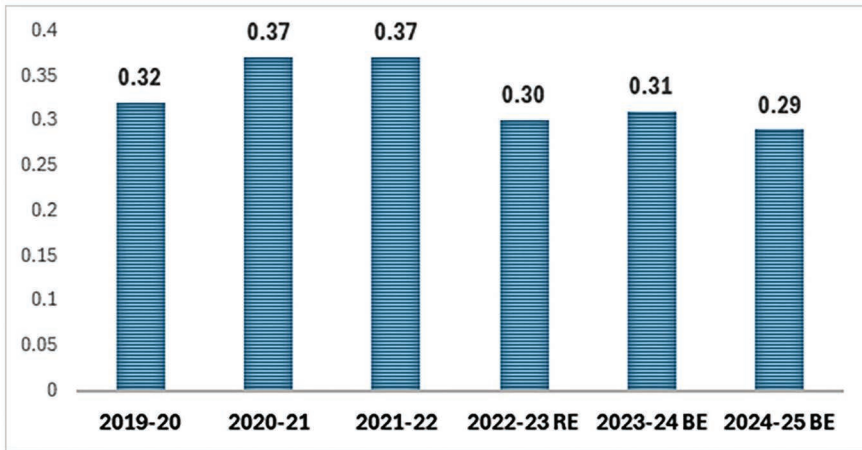


FIGURE 18.2 Union government allocations on public health services as % of GDP.

Source: Created by authors; various union government budget documents

Hyper-Centralisation: Over the last decade, a greater unilateral control of health finances from the national level has been eroding federalism. State public health officials report concerns about inadequate allocations and delayed fund releases, leading to forced under-utilisation of health services. Unrealistic top-down targets and politically motivated campaigns tend to neglect local socio-economic contexts, stifling decentralised healthcare efforts. Mechanisms like district Programme Implementation Plans (PIPs) and encouragement for locally flexible use of funds during the early phase of the National Rural Health Mission (NRHM) allowed for some decentralised deployment of finances. However, in the current situation, PIPs have been reduced to routine calculation exercises, neglecting local contexts and diverse community priorities.

Skewed Digitalisation: Aggressive promotion of Ayushman Bharat Health Account (ABHA) cards under the National Digital Health Mission (NDHM) appears more to support PMJAY and private sector reimbursements, rather than aiding patients. The flow of digital data is entirely one-way from patients and frontline workers to central authorities, while neglecting the need for reverse flow of relevant analysed information back to the grassroots. Excessive emphasis on digital means of control also sidelines local supportive supervision and interactive problem-solving. To change this scenario, more democratic uses of digital information systems are needed to strengthen public healthcare, support decentralised decision-making, and empower patients and community-based actors.

Major expansion of financing for corporate and private healthcare, on the one hand, and lack of significant expansion and constriction of funds for

public health services (despite the COVID experience), on the other, are not mutually isolated occurrences. These are part of a single policy framework, whether this is publicly declared or not. Perusal of Niti Aayog documents (Niti Aayog 2021) makes explicit this thrust to promote further inflow of finance capital, accelerating corporatisation and privatisation of India's healthcare sector, which is presented to foreign and domestic investors as a major 'business opportunity', while public health services are relegated to playing second fiddle.

*Two Strategies Regarding Public Healthcare Systems:
Contained versus Universal-Comprehensive*

The national healthcare policy currently appears increasingly favourable towards commercial interests, with significant promotion of private healthcare and barely any expansion of public health services. The above-mentioned features of public health governance, primarily flowing from the national level, need to be viewed in context of overall financialisation–corporatisation of the healthcare ecosystem, which has been briefly described in the previous section. National policy formulation and decision-making have increasingly shifted towards the PMO and associated bodies (like Niti Aayog and the National Health Authority, which closely interact with the private healthcare industry). At the same time, the role of Ministry of Health and Family Welfare (MOHFW) has become more circumscribed, deepening the trend of 'contained public health systems'. With this background, let us briefly describe two options for long-term strategies concerning the role of public health systems in the context of a mixed healthcare system.

Contained public health systems tend to remain focused mostly on certain levels (e.g., primary health care). They may be targeted to certain sections of the population (e.g., rural population and low-income groups) or certain types of services (e.g., cost-effective 'packages' as prescribed by the World Bank). The well-known 'Selective Primary Health Care Approach' is a classic example of such 'contained' public health services. This leaves the remaining field wide open for flourishing of commercial private healthcare across the more lucrative areas – secondary and tertiary care, specialised healthcare, healthcare markets for urban middle class, etc. Contained public services generally do not significantly reshape the larger healthcare ecosystem; rather, they adapt to and reinforce the existing ecosystem, which is dominated by corporate oriented market-driven healthcare. Such services remain more focused on those areas where the market is less lucrative (e.g., poorer sections of rural and urban communities) or those which by nature cannot be left to private actors (disease surveillance, preventive activities, etc.)

In contrast, universal-comprehensive public health systems seek to serve the entire population while organising the full spectrum of healthcare and involving non-public providers appropriately. The state takes responsibility for organising care for the entire population, while engaging with private providers in a manner that strengthens (rather than weakens) its own capacity for provisioning, regulation, and sector-wide management. We will argue that even though existing public health services in India are generally ‘contained’ in nature at the national level, in most Indian states the alternative direction of developing universal-comprehensive public health systems is the desirable way forward.

Need for socially re-embedded public health services: Strengthening public health services with an approach towards universality and comprehensiveness requires various integrated policy measures, most of which are well-known – ensuring adequate budgets, availability of human power, procurement and distribution of medicines, upgraded management systems, etc. Along with these, one important front is socially re-embedding public health services, especially at the primary care level. One major example of such social embedding is the officially supported community-based monitoring and planning, which was implemented in several states, including Maharashtra, especially in the earlier phases of the NRHM. These processes demonstrated significant improvements in primary healthcare through collaborative social accountability on a large scale, e.g., involving more than 1,000 village communities in Maharashtra (Shukla et al. 2023). Community-based monitoring and community action for health should extend beyond the village level, to also guide and reorient higher levels of the health system. Such systematic initiatives with active multi-stakeholder bodies across various levels can significantly energise public health system strengthening processes.

D. Public–Private Arrangements: Whether Profit Logic or Social Logic Prevails?

What happens when two large systems (the public health system and the private healthcare sector) that have widely differing goals in modes of functioning and financial models are made to closely interact with each other? *These public–private engagements are highly complex interactions, leading to many emergent and unexpected consequences*, which cannot be directly predicted just by reading legal agreements and text of MoUs. Processes that emerge on the ground, when patients approach engaged private hospitals for care through these schemes, often look quite different from what is projected in the policy documents. These inevitable emergent phenomena can either be dismissed as aberrations, or these can be expected, understood, and proactively addressed through socially embedded processes. Here are some

suggested principles that can enable more in-depth understanding of these arrangements:

- *Public–private interactions need to be understood as operating at multiple levels (economic, legal, technical, and social) in an interlinked manner*, rather than addressing only one or two levels of interaction (such as financial or legal). Interactions organised with a myopic approach, which are limited to addressing only one level of dynamics, are likely to not achieve even their limited stated objectives. For example, existing government health insurance/assurance schemes focus mostly on financial processes linked with purchasing and reimbursement, and linked technical aspects regarding procedure packages, etc. However, they pay hardly any attention to legal (current lack of regulation of private providers) or social (need for collective accountability and participatory governance) levels, which have a significant bearing on the interaction.
- *The healthcare ecosystem decisively shapes all public–private interactions*. All public–private interactions unfold in the context of the larger *healthcare ecosystem*. The dominant reality of the Indian healthcare ecosystem today is the highly commercialised, corporate-oriented market, where publicly organised services are largely subordinated. *This healthcare ecosystem powerfully shapes the nature of all interactions*, including public–private schemes. For example, when rates of services are entirely unregulated and subject to the vagaries of an unregulated market, then the terms for purchase of services by public agencies are also largely ‘market determined’, which may not be the most rational method of costing these services. Similarly, treatment practices, use/misuse of technology, referral patterns (cut practice), etc., are determined by the ecosystem, which operates based on corporate oriented market logic, and these factors significantly influence and adversely affect the functioning of public–private schemes.
- *Markets in healthcare are inherently and inevitably prone to market failure*. As seen during the COVID pandemic, unregulated markets can even lead to ‘market disaster’. Only public regulation and intervention can protect society against market failures. Unless the healthcare ecosystem is reshaped in a conducive manner, ongoing market failures and distortions will seriously constrain the ability of specific public–private schemes to achieve their public objectives. Keeping this in view, public engagement with private healthcare should not be viewed as just one more ‘scheme’ that remains subordinated to the larger commercialised, corporatised healthcare ecosystem prone to market failure.

Hence, public engagement with private providers needs to be configured as part of a larger strategy to progressively transform the healthcare ecosystem, enabling structural changes for achieving public health and social goals.

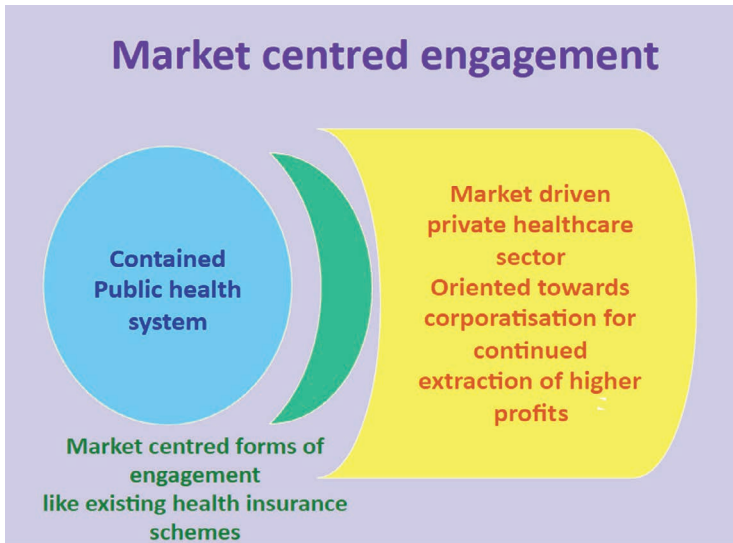


FIGURE 18.3 Market-centred engagement.

Source: Created by authors

Features of Current Market-Centred Engagement (MCE) of Private Providers

Most ongoing public–private engagements in the health sector fall under this category, such as national- and state-level health insurance/assurance schemes. Arrangements involving MCE generally have the following characteristics:

- Rates for services remain unregulated in the larger market, and these also heavily influence rates in context of the specific arrangements, due to the lack of overall rationalisation. Treatment and referral practices continue to be less rational, generally distorted by commercial pressures.
- Control of admissions remains completely in private hands, allowing discretion to private hospitals to refuse/refer patients who are considered less lucrative (cherry-picking).
- There is an overall 'fee for service' environment in the empanelled private health facilities. Most patients in the private hospital are already paying out-of-pocket, which strongly shapes the ethos even for scheme-covered patients who are nominally supposed to receive free treatment but are often powerless to resist demands for 'side payments' in the given fee-driven environment.
- These are usually targeted schemes, which exclude significant, socially influential, and vocal sections of the population (e.g., large sections of

middle class). There is no differential approach to different kinds of private providers (e.g., the enrolment criteria for not-for-profit versus corporate hospitals are the same).

- There are no social accountability or collective rights-claiming mechanisms in schemes like PMJAY; there is only an individual grievance redressal system, and that too is distant, impersonal, and apparently not particularly responsive. The overall approach is oriented to promote individual *labharthis* (beneficiaries), and not empowered citizens supported by social collectives.
- Overall, in such a setting, the contained nature of public provisioning gets perpetuated. Involved public hospitals are required to compete and operate in a market-like environment, operating as discrete entities rather than strongly integrated in a chain of services. The public health system as a whole does not get strengthened because of substitution by the private sector through these arrangements. These schemes seem to work well for some sections of the private sector but not so well for the ordinary people.

A Significant Alternative – Public-Centred Engagement

Public Centred Engagement or PCE takes the explicit direction of reshaping the healthcare ecosystem, regulating market forces in healthcare for public welfare, and progressively converting healthcare into a social good. Any engagement with the private sector would be part of a larger strategy, which is based on progressively expanding the public healthcare system and moving towards the public sector, becoming more universalised and comprehensive. *PCE would be part of a larger integrated strategy for moving towards universal healthcare* (not to be confused with ‘universal health coverage’).

This chapter is not the place to describe the features of universal healthcare based on major public health system strengthening and reshaping of the healthcare ecosystem, a major topic that deserves separate detailed treatment. However, some characteristics of such public-centred engagement (PCE) will be briefly mentioned here.

- Such engagement would encourage the operation of private providers based on rationalised reimbursement rates and standard levels of financial returns but would seek to eliminate unregulated profiteering. Care would be purchased in a regulated environment, accompanied by reshaping the market, and ensuring transparency and appropriate standardisation of rates across the entire private sector. Treatment, investigation, and referral practices would be rationalised through enforcement of appropriate protocols.

(A somewhat unique example of private healthcare providers operating in a socially regulated environment is the healthcare system in Japan, an

avowedly capitalist country. Here, a single framework of rates for services are fixed for all healthcare providers across the country, eliminating arbitrary charging. Private healthcare is effectively not allowed to make profits, since distribution of dividends from healthcare business is prohibited by law. Hence, despite a predominance of private healthcare providers, these function in a socially regulated and accountable manner, an example of socially embedded healthcare.)

- Commercial insurance companies and other commercially oriented intermediaries would be completely replaced by public bodies, which have the requisite capacity to monitor and regulate involved private providers. There would be a major shift from covering selected medical procedures (more convenient for private providers) to covering all medical conditions, with only selected exclusions (required by patients).
- There would be a much stronger role of primary health centres (PHCs), community health centres (CHCs), and public healthcare facilities as mandatory gatekeepers. There could be dedicated wards in empanelled hospitals where all patients are expected to be provided only free care, effectively ‘insourcing’ entire wards and sections of hospitals where treatment is provided in ‘free care’ mode. This would be complemented by community-based social accountability systems to eliminate double charging, denial, or compromise on quality of care.

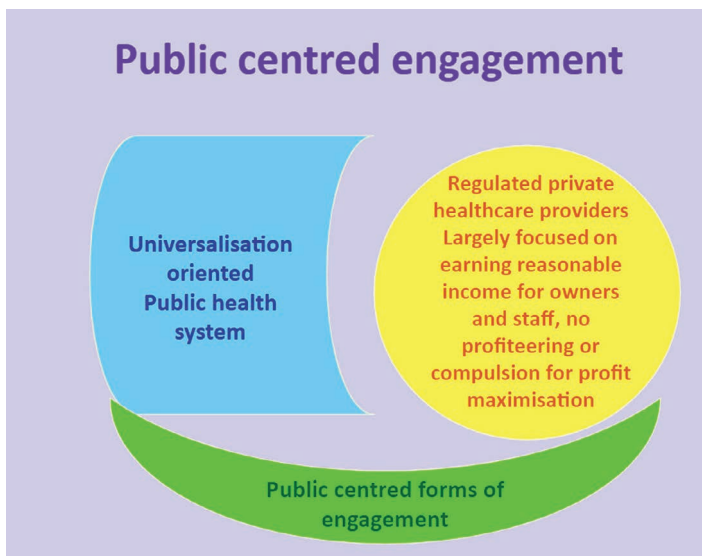


FIGURE 18.4 Public-centred engagement.

Source: Created by authors

Certain General Principles Would Underlie PCE

- *Public resources first for public provisioning:* Public funds should be primarily spent on strengthening, enlarging, and upgrading the public health system across various levels of care, with continued expansion in keeping with population needs. Wherever possible, to fill gaps in provisioning, the preferred option is to invest public resources for upgrading public services in the area, rather than providing public funds to private providers on a continued basis.
- *No public resources without public regulation:* Implementation of mandatory regulation across the sector would precede or accompany engagement of specific private providers.
- *No public resources without public gatekeeping:* Referrals to involved private providers should be only through regularly audited public health facilities. Public system should shape the scheme, and not the other way round.
- *No public resources without public accountability:* Include systematic provisions for community monitoring, protection of patient's rights, and social oversight involving various social stakeholders, as part of a wider healthcare system for participatory governance.
- *Move from targeted, fragmented care and restricted procedures to universalised services providing comprehensive healthcare entitlements.*
- *Upgraded regulatory capacity to anchor and govern the entire system.*

As we move forward in the third decade of the 21st century, with the memories of the COVID pandemic still recent, as a society we need to decide which kind of healthcare system we want in the coming period. Governments are pulled between the huge economic clout of corporates, who throw their weight to claim 'market friendly' policies for higher profit-making, and the demands of people who desperately require affordable and quality healthcare. Two broad policy directions are emerging, which we as people, and our governments as custodians and representatives of people's interests, need to choose from.

Continued corporatisation, associated with limited healthcare 'coverage', would continue to promote accelerated corporatisation and MCE, while enlarging some healthcare 'coverage' for the poor (e.g., through expansion of PMJAY-type schemes). Government hospitals would be handed over to private players, including private medical colleges. The state will further actively subsidise the growth of corporate healthcare, with unregulated market dominance, and associated worsening market failures.

Moving towards public-centred universal healthcare based on expanded public health services and reshaping the market, with PCE helping convert healthcare into a public good. This would involve progressive 'socialisation'

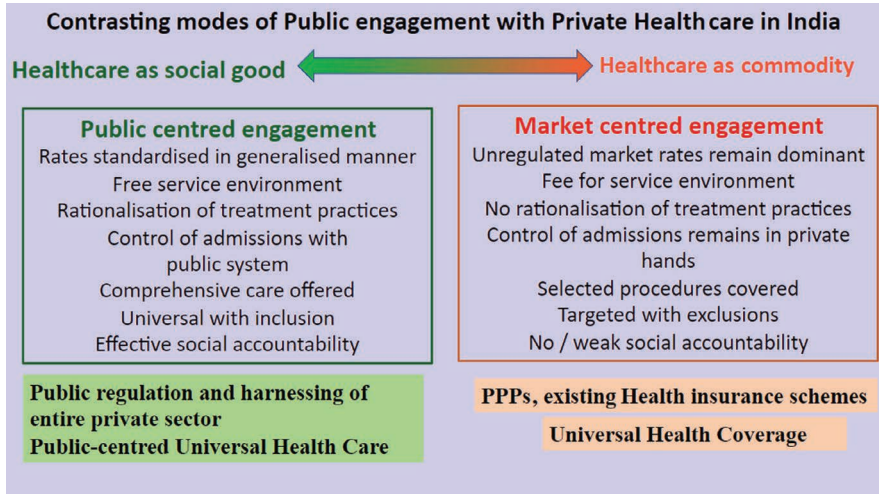


FIGURE 18.5 Contrasting models of public engagement with private healthcare in India.

Source: Created by authors

of large sections of involved private providers, who would function as part of a sustainable and secure publicly organised system, but abstain from profiteering. Key features would be universality and comprehensiveness of care, which would be available to all based on social accountability and participatory governance. The universal health coverage (UHC) system in Thailand provides a pragmatic yet relevant example India could learn from.

E. Conclusion: Exploring the Framework of ‘Publicness’, People-Centred Choices to Transform Healthcare Systems

Exploring the Concept of ‘Publicness’

As a health activist working with grassroots organisations in rural and tribal India for over three decades, I often face a dilemma. Ideologically, I believe that public health services should be the first option for people, as commercial private healthcare cannot sustainably meet healthcare needs. However, people’s actual experiences in public health facilities are usually mixed as they face insufficient resources, staff, medicines, and often insensitive behaviour, discrimination, and lack of accountability. These concerns are not only found at lower levels, but they also persist at higher system levels, where bureaucratic and corrupt practices can actually get magnified. We want to save public systems from privatisation, but the question arises: Should this system be ‘saved’ as such and preserved in its existing form? Or does it need

to also be ‘saved’ from its existing negative features, reforming the system in various ways to meet the genuine needs and aspirations of society?

One way of tackling this complex issue at the conceptual and strategic level is to develop and apply the framework of ‘publicness’. Obviously, government ownership and government funding of any facility or service are important basic parameters in deciding whether the concerned organisation is likely to serve the public good adequately. While meeting these core conditions is necessary, it is not sufficient to satisfy the stated social goals. Something more is required to enable proper achievement of public purposes. Not all existing public health facilities in India today would fulfil the range of attributes we expect from a service that functions optimally to achieve public good.

This comprehensive range of socially oriented attributes can be considered the basis for assessing the degree of ‘publicness’ of any facility or service. *Publicness can be defined as the extent to which organisations express attachment towards and provide for public values during their functioning* (adapted from Moulton 2009). A recent work (McDonald 2023) proposes the following kinds of normative criteria to assess public services, which can be considered as possible *markers for ‘publicness’*.

TABLE 18.2 Some Normative Criteria for Evaluating Public Service Provisioning

(Universal) Access	Availability of the service in a convenient manner for all who require it
Affordability	Prices that ensure economic accessibility for all
Quality	Reliable, satisfactory services that create positive relations with users
Equity	Equality of opportunity to access quality services for all
Efficiency	Cost-effective use of resources to meet service mandates
Solidarity	Cohesion among various producer and user groups and across sectors that build commitment to public services
Accountability	Obligation to account for activities, accept responsibility for them, and disclose the results transparently
Participation	Citizen involvement in policy-making and implementation of service delivery
Quality of workplace	A place of work that provides a safe environment, trust between employees and management, fairness, and a sensible workload that contributes to quality service delivery
Transparency	Policy decisions and budgets of the service being made readily available at various levels to the public in an understandable manner
Public ethos	Helping create stronger ‘public ethos’ around service delivery among concerned groups, including communities, workers, officials, and politicians. Explicitly opposing privatisation and commercialisation

Source: Adapted from McDonald & Ruijters (2012); McDonald (2023)

Naturally, more points could be added to this list, and not all of these criteria might be relevant or applicable in each context. Probably all of them taken together would rarely be satisfied. Keeping in view experiences in the Indian context, we could also suggest the following additional criteria:

- Eliminating/minimising corruption or misuse of resources.
- Responsiveness to needs of users and communities, especially marginalised groups.
- Fulfilling core public standards to ensure provision of standard care and reliability in provision of care.

How Can the Concept of 'Publicness' Help Us in the Context of India's Healthcare System Today?

- 1) *Improving public healthcare services*: Publicly owned services, including healthcare, often fall short of their mandates. The concept of 'publicness' offers a framework with practical parameters that can help promote necessary improvements.
- 2) *Evaluating market-oriented reforms*: Market-oriented reforms in public healthcare, such as introduction of user fees or making public facilities financially autonomous, can detract from the value of public services. The 'publicness' framework can help evaluate these reforms, keeping public interests at the centre.
- 3) *Scrutinising PPPs*: Public-private schemes like PMJAY and state health insurance schemes claim to fulfil public objectives but require scrutiny. The 'publicness' framework can help critique these arrangements, scrutinising whether they meet public value criteria and enabling the dismissal of those models that fail to fulfil the basic criteria of publicness.
- 4) *Analysing and navigating universal health coverage/universal healthcare models*: Today, different models of UHC are being debated. Dominant versions of 'coverage' implemented by governments and international agencies often seek to reorganise the healthcare system in a particular manner, which perpetuates the existing commercialisation of healthcare. Adopting a publicness approach can help refine our vision and define choices, as we navigate complex processes of healthcare system reform.

The publicness framework can enable pro-public forces to constantly work for the improvement of existing public services, while analysing and critiquing various kinds of public-private arrangements. By continuously working to maximise publicness of health systems, we can engage with concrete present realities on the ground, while maintaining a sense of the overall direction for change that is required by the society. Publicness can be forged as a sturdy tool for the long haul.

Making People-Centred Choices Concerning Healthcare Systems in India

This chapter attempts to apply systems thinking to India's complex healthcare field, considering the entire set of sectors, actors, and influences as a coherent 'healthcare ecosystem'. Financialisation of the ecosystem is driving corporatisation and commercialisation, and the historical social embeddedness of healthcare is now increasingly replaced by social alienation. In this context, socially re-embedding health services is crucial for reclaiming healthcare provisioning.

As we seek to socially re-embed healthcare, we need to accept that it is only an 'empowered public' consisting of reoriented governments, grassroots institutions including panchayats and civil society groups, and organised people in all their diversity that can work together to reclaim healthcare as a social good. This would need to be backed by expanded public financing based on strongly redistributive policies. The dominant paradigm of *MCE*, which helps promote ongoing commercialisation, promoting fragmented 'schemes' subordinated to the unregulated market with all its failures, is clearly unable to fulfil the health needs of society. Therefore, we urgently need the paradigm changer of *PCE*, which would significantly redefine the terms of engagement and would aspire to reshape the market and the healthcare ecosystem itself in wider social interest. Society needs to choose between these two directions, between an emerging dystopia and a realistic utopia.

Here, the framework of advancing publicness can help show the directions that need to be consistently followed during further health system transformations. Publicness can become an orienting point of 'the simplicity which lies beyond complexity' in healthcare. Learning deep lessons from the COVID pandemic, we realise that a very broad range of public-oriented, non-market actors are latent in our society – neighbourhood groups, volunteers, activated panchayats, a wide range of informal and formal civil society formations, and community health workers – who can support, energise, and partner with formal public health services when the need arises. Hence, we need to conceptualise and forge an *expanded public* that brings together diverse forces from society – especially the deprived and marginalised – and government systems. Those of us who believe that the future is public, that all policies should be 'public first', need to accelerate dialogues and networks to help these diverse forces converge around shared agendas for reclaiming the public. If this chapter helps in a small way to further such discussion and contributes to our conceptual apparatus for moving beyond corporatisation of healthcare while advancing publicness in healthcare systems, its purpose will be achieved.

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AIR POLLUTION: PUBLIC HEALTH IMPACTS AND POLICY MEASURES

Bhargav Krishna and Nazneen

I. Introduction

Air pollution and its impact on human health represent a slow and ongoing public health emergency. The detrimental effects of air pollution span from respiratory and cardiovascular diseases to adverse pregnancy outcomes and developmental problems in children and contribute to premature mortality across the developed and developing world. Air pollution, including microscopic PM and gaseous pollutants, can harm lung function and affect the cardiovascular system by causing oxidative stress, inflammation, altered heart rhythms, and disruptions in blood pressure. PM_{2.5} (PM smaller than 2.5 microns) can also penetrate deep into the lungs and bloodstream, affecting multiple organs and systems (Izzotti *et al.* 2022). The International Agency for Research on Cancers (IARC) has classed PM_{2.5} as a cause of lung cancers, building on evidence showcasing the carcinogenic effects of both vehicular diesel pollution and coal-burning emissions (Balakrishnan *et al.* 2015).

The 2019 India sub-national burden of disease study estimated that exposure to ambient and household air pollution contributed to 1.67 million deaths and 53.5 million disability-adjusted life years (DALYs) lost, amounting to 17.8% of total deaths and 11.5% of total DALYs, respectively. The economic loss associated with this exposure was estimated at \$36.8 billion or 1.36% of GDP (A. Pandey *et al.* 2020). More recent results using similar approaches indicate an increase in air pollution's burden of death to over 2.1 million deaths annually in India (State of Global Air 2024). Death rates from various sources of air pollution have changed substantially since 1990, with death rates from ambient PM_{2.5} increasing by 115.3% and that from household air pollution (primarily from traditional biomass-burning cookstoves) declining by 64.2%.

While the declines in household air pollution impacts are heartening, the increases in death rates from ambient air pollution are only likely to increase in coming years with India rapidly urbanising and industrialising. Many of the world's most polluted cities in the world are in India, several of them tier-2 and 3 cities (IQAir 2023). Combined with the growing evidence base on air pollution's health impacts and the need to capitalise on its demographic dividend, there is a greater urgency than ever to tackle the all-pervasive challenge of air pollution

II. Pollutant Profiles, Sources, and Toxicity

The pollutants comprising air pollution can be broadly classified into two categories: 1) PM and 2) gaseous pollutants. PM is a complex mixture of tiny particles and droplets in the air. Comprising dust, dirt, smoke, and soot, PM varies in size, with PM_{10} comprising largely dust visible to the naked eye (particles smaller than 10 microns) and the invisible $PM_{2.5}$ (particles smaller than 2.5 microns), which is far more harmful. For comparison, an average human hair is approximately 70 microns in diameter, making it 30 times larger than the largest fine particle ($PM_{2.5}$) (Figure 19.1). PM_{10} causes respiratory irritation and can aggravate conditions like asthma and bronchitis. $PM_{2.5}$ is more harmful because of its smaller size and its ability to penetrate deep into the respiratory system (Brook *et al.* 2010; Xing *et al.* 2016). From

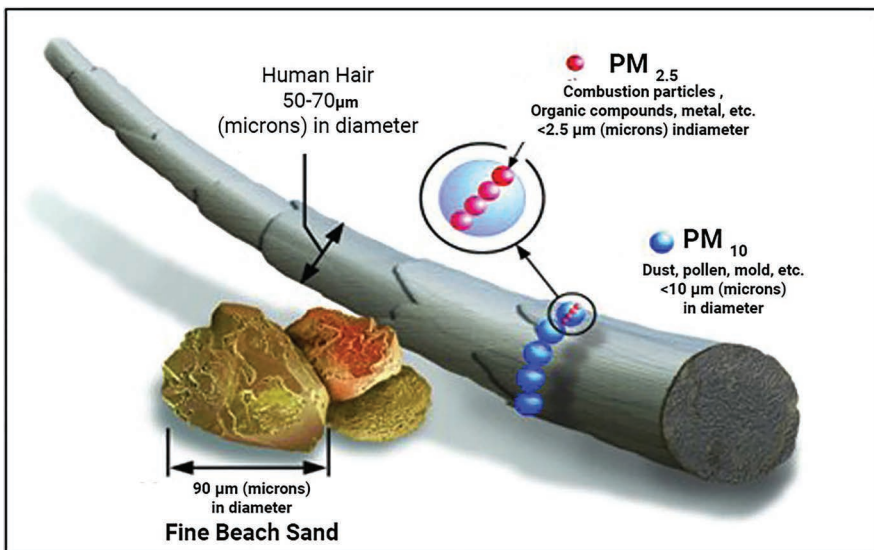


FIGURE 19.1 Size comparison of PM with beach sand and human hair.

Source: United States Environmental Protection Agency (US EPA), 2024

there, it can enter the bloodstream and affect various organs. $\text{PM}_{2.5}$ exposure is linked to numerous health problems, including heart attacks, strokes (Hayes *et al.* 2020; Rajagopalan *et al.* 2018), chronic obstructive pulmonary disease (COPD) (Liu *et al.* 2017), lung cancer (Ciabattini *et al.* 2021), and exacerbation of asthma (Zhang *et al.* 2023).

Gaseous pollutants such as nitrogen dioxide (NO_2), sulphur dioxide (SO_2), ozone (O_3), and carbon monoxide (CO) are also known to cause health impacts. The major route of exposure of all these pollutants is primarily through inhalation. NO_2 can lead to respiratory issues such as asthma and reduced lung function (Nori-Sarma *et al.* 2021). SO_2 causes eye irritation, respiratory illnesses, and cardiovascular diseases (Khalaf *et al.* 2024). O_3 aggravates respiratory problems, reduces lung function, and can lead to COPD (J. (Jim) Zhang *et al.* 2019). Additionally, these gases can react with PM to form secondary pollutants, exacerbating health risks.

Sources of Air Pollution and Toxicity

Air pollution is broadly categorised as ambient (or outdoor) and household (or indoor) air pollution. Ambient air pollutants originate from combustion processes (such as vehicular emissions, power plants, and residential heating), industrial processes, and natural sources (such as wildfires, dust storms, and weathering). Household air pollution (HAP) is primarily produced by burning combustible material (wood, dung, coal, etc.) for cooking or heating purposes and is often exacerbated by poor ventilation within homes.

Exposure to air pollution can lead to several chronic and acute health effects, including respiratory, cardiovascular, cardiometabolic, and cerebrovascular diseases. The source profile of ambient air pollutants can vary in nature. While pollutants such as SO_2 , NO_2 , CO, and ozone are harmful, the exposure to PM, particularly $\text{PM}_{2.5}$, poses the greatest health risk. The toxicity of PM depends on its chemical composition, which varies by the source. PM from vehicular emissions is a significant source and contains harmful substances, including toxic metals and polycyclic aromatic hydrocarbons (PAHs). For instance, studies have shown that PM from vehicles contains metals such as lead, cadmium and nickel, as well as PAHs, which are organic compounds formed during the incomplete combustion of organic material. Both toxic metals and PAHs have been linked to various forms of cancer and other serious health conditions (P. Pandey *et al.* 2013). Similarly, HAP exposures are well-known to be heterogeneous in composition. Combustion of HAP releases significant amounts of PM ($\text{PM}_{2.5}$ and PM_{10}), CO, volatile organic compounds (VOCs), and PAHs. In rural Indian households, $\text{PM}_{2.5}$ concentrations can be as high as $337 \mu\text{g m}^{-3}$, far exceeding the WHO guideline of $35 \mu\text{g m}^{-3}$ and the Indian standard of $40 \mu\text{g m}^{-3}$ (Balakrishnan *et al.* 2013).

Paradoxically, the traditional method for measuring air pollutants, including in India, relies on pollutant mass concentrations. Countries like the US, Europe, and China and the WHO use this parameter for reporting PM standards. However, this approach ignores the complex and more toxic PM constituents specific to their sources, raising questions about its effectiveness in addressing health issues due to $PM_{2.5}$. Studies have shown that $PM_{2.5}$ toxicity varies by location and time, and treating all $PM_{2.5}$ particles uniformly overlooks this (Wei *et al.* 2023). $PM_{2.5}$ is a mixture of multiple chemical species with varying toxicity (Lippmann *et al.* 2013), meaning its true health impact could be much higher than estimated by mass. Several studies indicate that certain $PM_{2.5}$ constituents like potassium, zinc, nickel, titanium, elemental carbon, silicon, and ammonium, black carbon, and vanadium are more toxic than PM mass concentration alone (Levy *et al.* 2012; Thurston & Balmes 2017). Therefore, air quality standards should assess these toxic components, not just total PM mass. Ignoring these elements underestimates health risks and leads to poorly informed regulations. Indian National Ambient Air Quality Standards (NAAQS) should include these toxic $PM_{2.5}$ constituents in future standards.

What Is the Scale of Exposure?

India is home to some of the most polluted cities on the planet, with much of North India often experiencing air pollution between 10 and 50 times greater than levels considered acceptable by the WHO (Mandal *et al.* 2024).

Rural and urban areas are both affected by poor air quality. However, the sources and pollutant profiles usually differ. PM varies significantly between ambient and household settings. Ambient air pollution, driven by traffic, industrial activities, power generation, and agricultural practices, affects both urban and rural populations. In urban areas, a significant portion of air pollution arises from traffic emissions, including cars, trucks, and buses, which release pollutants like nitrogen oxides (NO_x), CO, PM, and VOCs. Industrial activities also contribute substantially, with factories and plants emitting PM, SO_2 , heavy metals, and other hazardous substances. Additionally, construction and infrastructure development generate dust and PM, further exacerbating air quality degradation in cities. In rural areas, biomass burning for cooking and heating, crop residue burning, and industrial activity contribute to poor air quality both within and outside homes (GBD MAPS Working Group 2018).

HAP, primarily from the use of solid fuels for cooking and heating, poses significant health risks, particularly in low-income settings. Household 24-hour concentrations of $PM_{2.5}$ during cooking have been estimated at $450 \mu g/m^3$ within kitchens, over 30 times the WHO guideline for safe exposure (Balakrishnan *et al.* 2013). Successive policy interventions over the last three

decades have focused on transitioning rural Indian households to cleaner cooking methods, including the use of different cookstoves and fuels. Relatively more successful efforts include those carried out under the Pradhan Mantri Ujjwala Yojana (PMUY), which has provided access to new stoves and liquified petroleum gas (LPG) cylinders to 90 million rural households at subsidised rates (Kar *et al.* 2020). While this initiative has substantially improved access, resulting in a lowering of the disease burden from HAP over the last 5 years, sustained and exclusive use remains elusive, with households choosing to ‘stack’ fuels. As a result, many households continue to concurrently use LPG and biomass for differing purposes for a variety of reasons including cost and dietary preference (Gupta *et al.* 2020). The salience of addressing HAP cannot be underestimated, with various studies highlighting its significant contribution to air pollution not only within homes but also outside in the ambient air (Chowdhury *et al.* 2019; GBD MAPS Working Group 2018).

Exposure Profiles Also Differ Based on Work, Socio-Economics, Etc.

Exposure profiles of air pollution primarily depend on occupation, socio-economic status, and geographical location. Outdoor workers, individuals living in high-traffic areas, and those in lower socio-economic groups often face higher exposure levels and subsequent health risks. For example, outdoor workers, like construction workers, agricultural labourers, toll plaza workers, traffic police, and daily wage workers, face higher pollution levels due to direct exposure to dust, emissions, and chemicals, increasing their risk of respiratory and cardiovascular diseases. Lower socio-economic groups often experience greater exposure because they live in areas with poorer air quality and have limited resources to mitigate pollution. Geographical location further influences exposure, with residents near high-traffic areas or industrial sites facing elevated pollution from traffic emissions or industrial activities, while rural areas might encounter pollutants from biomass burning and agricultural practices. PM_{2.5} exposures have also been mediated by other socio-economic factors, with one study finding that exposures were often higher in SC and OBC households compared to the population median (deSouza *et al.* 2023).

Are There Safe Levels of Exposure?

Air quality is considered safe based on specific standards set by various countries and organisations. In India, the NAAQS define safe levels of various pollutants. For PM_{2.5}, the annual average should not exceed 40 µg m⁻³ and the 24-hour average should not exceed 60 µg m⁻³. For PM₁₀, the annual average should be below 60 µg m⁻³, and the 24-hour average should be below 100 µg m⁻³. The WHO provides stricter guidelines, recommending an annual PM_{2.5}

average of $5 \mu\text{g m}^{-3}$ and a 24-hour average of $15 \mu\text{g m}^{-3}$. These standards are considered safe for assessing air quality and implementing measures to protect public health. More recent work has, however, shown that there is likely no safe level of exposure, with even lower concentrations of pollutants causing health harms to vulnerable populations such as the elderly or those with pre-existing health conditions (Boogaard *et al.* 2024; Di *et al.* 2017), indicating that there is no safe level of exposure that has no effect on human health.

III. Health Effects of Air Pollution Exposure

Air pollution poses significant health risks across the entire life course, from pregnancy to old age. Different demographical groups have varying vulnerability profiles, making infants, young children, individuals with pre-existing chronic illnesses, and the elderly particularly susceptible to its adverse effects. The health effects of air pollution have been documented extensively both nationally and globally, with epidemiological data driving policy decisions on standards and technology transitions. India also has a long history of engagement on the subject, with one of the first studies on air pollution's effect on cardiovascular disease published in 1959 (Padmavati & Pathak 1959). Over the last decade, spurred on by the use of novel exposure assessment techniques, a range of new studies published look at health impacts across the life course (Krishna, Krishnan *et al.* 2022; Krishna, Ghosh *et al.* 2024). Below, we catalogue some of the evidences of the health harms of air pollution across the life course.

Pregnant Women

Exposure to air pollutants, such as PM ($\text{PM}_{2.5}$ and PM_{10}), CO, O_3 , and NO_2 , during pregnancy is associated with adverse outcomes including early pregnancy loss, congenital birth defects, low birth weight, and preterm birth, induced by pregnancy (Ayseli & Cetinkaya 2024). Fine PM also tends to cross the placental barrier, affecting foetal development. Furthermore, studies have also shown that pregnant women exposed to high levels of $\text{PM}_{2.5}$ have an increased risk of complications, including preeclampsia and gestational diabetes (Wan *et al.* 2024). Indian evidence suggests that prenatal $\text{PM}_{2.5}$ exposure is associated with low birth weight (Balakrishnan *et al.* 2018; Parchure *et al.* 2024), childhood anaemia (Mehta *et al.* 2021), stunting (Spears *et al.* 2019), and infant mortality (deSouza *et al.* 2022).

Infants and Young Children

Infants and young children are highly vulnerable to air pollution because of their developing organs and immune systems. They are also exposed to higher levels of resuspended air pollutants because of their proximity to the

ground, and their higher respiratory rate means they inhale a higher proportion of air pollution relative to their body weight. Exposure to pollutants can lead to respiratory infections, impaired lung development, and an increased risk of childhood asthma. Early-life exposure is also linked to long-term health issues, including reduced lung function and increased asthma in children (Salvi *et al.* 2021).

Adolescents and Adults

During adolescence and adulthood, continued exposure to air pollution contributes to the development and exacerbation of respiratory and cardio-metabolic diseases. In adults, long-term exposure to air pollution has been associated with the development of hypertension and increases in blood pressure (Prabhakaran *et al.* 2020); higher rates of diabetes and increased glycaemic indices (Mandal *et al.* 2023); and varying lipid levels that could contribute to cardiovascular diseases (Anand *et al.* 2024). Long-term air pollution exposure is also harmful to the circulatory system (Ranzani *et al.* 2020) and has been associated with cognitive decline (Jana *et al.* 2022).

Elderly Populations

The elderly population is particularly susceptible to the effects of air pollution due to pre-existing health conditions and reduced physiological resilience. Air pollution exacerbates chronic illnesses, such as COPD, heart disease, and diabetes, leading to increased hospital admissions and premature mortality. Studies conducted in India have shown increased mortality from short-term exposure to air pollution among the elderly (de Bont *et al.* 2024; Krishna *et al.* 2021). These studies observed that day-to-day variations in exposure are particularly harmful to elderly individuals with pre-existing health conditions. Long-term exposure to indoor air pollution has also been shown to drive cognitive decline in Indians across several studies (Adar *et al.* 2022; Krishnamoorthy *et al.* 2022; Shaw *et al.* 2024).

A survey of the landscape of health evidence from India shows categorically that air pollution is harmful to health across the life course, from conception to old age. A challenge faced by Indian researchers, however, has been that baseline air pollution levels are often so high in India that the counterfactual exposure levels are often too high compared to WHO guidelines (de Bont *et al.* 2024). As a result, we have to rely on evidence from elsewhere in the world, which shows that ambient air pollution below current WHO guidelines, and well below the Indian NAAQS, continues to be harmful to the health of vulnerable populations. A series of studies conducted in the US, Canada, and Europe involving long-term cohorts documented the association between long-term low-level air pollution exposure and mortality from cardiovascular diseases,

cancers, and other respiratory mortality (Brauer *et al.* 2022; Brunekreef *et al.* 2021; Dominici *et al.* 2022). The positive associations observed below current US national standards led the US Environment Protection Agency to emphasise in their proposed rules that there is no safe level of exposure to $PM_{2.5}$.

As India continues to build out its monitoring capacity in less polluted areas and builds the data architecture necessary to study long-term health impacts at scale, it would be prudent to align Indian standards with global norms to emphasise the long-term deleterious effects of air pollution, particularly to vulnerable and elderly populations.

IV. What Would an Effective Policy Response to Air Pollution Entail?

1. Historic Policy Developments

Air pollution has evolved through various stages of policy response, reflecting a growing recognition of its health impacts. Initially, the focus was on regulating industrial emissions and vehicular pollution. Over time, this expanded to include comprehensive air quality management strategies, focusing particularly on cities. India has taken several short- and long-term measures to tackle air pollution. The state's response to air pollution can be characterised broadly through three overlapping generations of action (Figure 19.2).

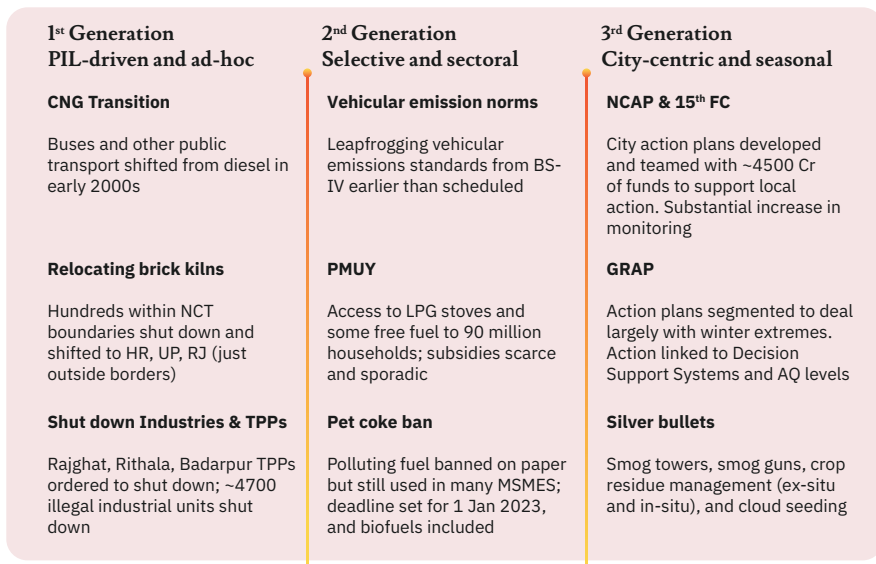


FIGURE 19.2 Three generations of air pollution action.

Source: Krishna, Ghosh *et al.* (2024)

The first generation, driven primarily through public interest litigations and in an ad hoc fashion, focused on transitioning public transport in Delhi to compressed natural gas (CNG), relocating brick kilns outside national capital territory (NCT) boundaries, and shutting down polluting industries and thermal power plants within the NCT. The second generation, characterised by selective sectoral action, included bans on pet coke (a highly polluting fuel used by small industries) in the National Capital Region (NCR), implementing Bharat Stage VI (BS VI) fuel and emission norms, and the provision of subsidies to expand the electric vehicle (EV) bus and personal vehicle fleet. The third generation adopted a city-centric approach with the National Clean Air Programme (NCAP), city action plans, the formation of the Commission for Air Quality Management (CAQM) for the NCR, and the adoption of Graded Response Action Plans (GRAP) for extreme pollution events.

These actions have often been reactive in nature and been guided by the Supreme Court either directly or through its appointed Environment Pollution (Prevention & Control) Authority (EPCA) and subsequently the CAQM. Accorded wide-ranging powers, both institutions failed to effectively utilise the breadth of these powers accorded either by the court or through an act of parliament, as in the case of the CAQM.

Despite these three generations of action, air quality in large parts of the country (particularly in northern India) remains very poor, with cities in the region often featuring among the most polluted in the world. Progress made because of these actions have stalled primarily due to the following reasons (Krishna, Ghosh *et al.* 2024):

- *Seasonal attention:* Attention to air quality is largely focused on seasonal extremes when in fact air quality is poor throughout the year. The excessive focus on Delhi's air quality also inadvertently obscures the poor air quality across much of India.
- *Disregard for rural and peri-urban areas:* Barring the PMUY and its limited success, very little has been done to address poor air quality in rural and peri-urban areas. With household air pollution being the primary contributor to poor air quality in these areas, along with industrial emissions (GBD MAPS Working Group 2018), the scaling back of subsidies for gas cylinders will only serve to prolong the much needed transition to cleaner cooking fuels (Gupta *et al.* 2020; Kar *et al.* 2020).
- *Low institutional capacity:* India's frontline environmental regulators, its State Pollution Control Boards and equivalents in union territories, are deeply understaffed and lack technical expertise, leadership, or financial autonomy necessary to meet their statutory mandate as independent regulators (Ghosh *et al.* 2022; Krishna, Karkun *et al.* 2022; Mahajan *et al.* 2023).

- *Reactive policy actions:* Whether it be the installation of smog towers, closing down schools, or the use of policy instruments, like road rationing, the use of palliative sticking plasters must be replaced with the development of proactive, long-term sectoral actions (Harish 2020; Sekar & Karkun 2023; Sekar & Krishna 2023).
- *Missing health frame:* The lack of appropriate health expertise in designing and developing policy actions on air quality means our actions are often focused on the extremes of pollution rather than the year-round poor air quality. Recent work has shown that the majority of mortality risk in particular is concentrated in low-to-moderate levels of air pollution exposure, indicating a need to 1) expand action beyond winter months, and 2) expand action to cities previously considered relatively less polluted (de Bont *et al.* 2024).

2. What Can the Health Sector Do?

The Ministry of Health and Family Welfare (MoHFW) has been less engaged on air pollution issue, although it's earlier work foresaw a significant role for it in developing and mainstreaming air pollution policies. In its landmark 2015 report (Balakrishnan *et al.* 2015), the Steering Committee on Air Pollution and Health-Related Issues of the MoHFW outlined several areas in which the ministry could have a key role:

- 1) *Better integration of air pollution and public health policy:* The report envisioned a more syncretic partnership between the MoHFW and Ministry of Environment and Forests and Climate Change (MoEF&CC) in designing and monitoring air pollution policy, with health integrated at every stage. This included utilising health end-points as metrics of progress on policy, requiring the MoHFW to establish the data infrastructure necessary.
- 2) *Strengthen policy-making capabilities in the area of air pollution and health:* The MoHFW could consider establishing a standing expert group on air pollution and health to provide ongoing advice on programme monitoring, evaluation, and the latest scientific developments and their policy implications.
- 3) *Building the data backbone:* Health research on air pollution faces challenges regarding high-quality available and accessible data. The MoHFW could work to strengthen surveillance systems to collect digitised data relevant to air pollution and make these data available to researchers to build out India's evidence base.
- 4) *Capacity building for medical personnel:* Healthcare providers should be trained to deliver harm-reduction strategies related to air pollution and have educational modules integrated into medical curricula at the MBBS

stage. Developing national clinical criteria for evaluating patient risk from air pollution is essential to help health workers identify symptoms and recommend protective measures.

- 5) *Information-dissemination strategies to reduce air pollution-related health impacts:* The MoHFW can leverage its health infrastructure to disseminate air pollution-related information and reduce exposures, especially among vulnerable groups like pregnant women and young children. A targeted messaging campaign on the harms of biomass cooking fuel delivered to pregnant mothers that are enrolled in the mother and child tracking system (MCTS) through accredited social health activists (ASHAs) and *Anganwadi* workers or courtyard shelter workers would substantially heighten awareness of the need to transition to cleaner cooking fuels.

The National Centre for Disease Control (NCDC) has implemented some of these suggestions by rolling out a pilot surveillance mechanism to track air pollution and climate-related illnesses as part of the Integrated Disease Surveillance Programme. The NCDC, through the National Programme for Climate Change and Human Health, has also been messaging around the health harms of air pollution to lower levels of the health system. However, much remains to be done regarding raising awareness within the health system on the harms of air pollution. Immediate first steps the MoHFW could take to remedy this situation would be to fast-track the development of course material on environmental health (with a focus on air pollution) into the medical curricula of MBBS degrees and developing training manuals for ASHA workers to deliver messaging on clean cooking to pregnant mothers and those with young children.

V. How Do We Revamp National Policy to Better Meet Health Needs?

The current policy ecosystem with respect to air pollution, while resulting in marginal improvements in air quality overall, has done little to reduce the health harms associated with exposure, particularly to combustion sources. This is reflected in the way the current NCAP is designed. The NCAP, launched in 2019, initially aimed to reduce $PM_{2.5}$ and PM_{10} levels by 20–30% by 2024, with a revised target of 40% reduction by 2026, and based on a 2017 baseline (Ganguly *et al.* 2020). Given the paucity of air monitoring data for the vast majority of the 131 cities covered under the NCAP (Guttikunda *et al.* 2023), the metric of progress was swiftly changed from reductions in $PM_{2.5}$ to reductions in PM_{10} . This minor alteration has had wide-ranging ramifications with respect to the kinds of sources that are given most attention, with PM_{10} largely comprising coarse particles from sources such as road and construction dust. As a result, the far more toxic sources such as emissions from

vehicles, diesel gensets, waste burning, and industrial emissions have received little to no attention.

Making Health the Basis for Crafting Mitigation Actions

The principal approach utilised by regulators everywhere to manage air pollution has been to conduct source apportionment studies, identify the largest contributors, and craft policies to address those sources. This raises a set of challenging questions in the Indian context with 1) the plurality of sources (often 4–5 in each city) and their diffused nature and 2) the overt focus on dust as the lowest hanging fruit. Similarly, a focus on particle size alone will not provide us with the progress needed to reduce health harms. Viewing PM_{2.5} as an unvarying metric when it comprises combustion byproducts, ammonia, silica, sulphates, nitrates, elemental, and organic carbon obscures the larger challenge of identifying and tackling the most toxic sources (Krishna, Ghosh *et al.* 2024).

A health-focused mitigation strategy would, therefore, identify those sources that are most toxic to human health, contribute to the highest level of exposure (not simply ambient concentration), and prioritise those for action. In the case of cities, this would mean planning more effective policies to tackle transport, waste burning, and other localised combustion sources, since these are the sources most proximate to the largest number of people.

Centring health in air pollution policymaking would also mean integrating health at every stage of the policy process from development to monitoring and evaluation. As it stands, health does not feature in any meaningful way in any flagship air pollution programme aside from the cursory mention of it as the basic rationale. Proposals to revamp the way air quality standards are set have laid out what such an integrated and interdisciplinary process would look like and could be replicated for other programmatic efforts as well (Krishna & Sekar 2023). The ultimate goal of these efforts would be to move health from being merely one of several equally important facets in environmental policy, to a feature of it, and eventually the function of the policy apparatus itself (Krishna & Dey 2022).

What Steps Can Be Taken across Other Sectors?

Action on air pollution, as with any complex, adaptive challenge, requires cross-sectoral action. Many actions individual sectors could take are listed in the MoHFW's Steering Committee Report. In addition, there are opportunities to synergise solutions across sectors to ensure that health goals are met, while also addressing broader socio-economic issues. An immediate example of a programme that did so is the PMUY, which not only expanded access for households to clean cooking technologies and fuels but also opened up

new markets for oil marketing companies and provided employment opportunities in rural areas by creating new distribution networks. Similar actions across other sectors could have compounding effects in meeting health, economic, environmental, and other goals.

To illustrate, let us take the example of crop residue burning in Punjab and Haryana. Both states primarily focus on a cropping duopoly of rice and wheat as a byproduct of the decades-old policy instruments of the green revolution (Agricultural Sciences & Applications Group 2022). Distorted market mechanisms have continued to promote the growing of these crops despite their continued impact on groundwater in a water-scarce region, especially with a guaranteed buyer in place through the Food Corporation of India (Singh *et al.* 2022). Initially aimed at plugging a hole in caloric needs, these grains do more harm than good from a public health perspective, with the growth in obesity and metabolic diseases among urban Indians.

A holistic approach that aims to slowly transition farmers from these crops towards more culturally relevant, ecologically sensitive, and climate-resilient crops such as maize, bajra, and millets or cash crops such as oilseeds would go a long way in addressing multiple goals. Firstly, it would provide a pathway to reduce the public health burden of metabolic diseases. Secondly, it would, with adequate financial protections, provide farmers an alternate path to financial sustainability. Thirdly, it would immediately end the seasonal contribution to air pollution from crop residue burning, and finally, it would reduce the impact on groundwater currently being felt in the region. Such a solution would also address economic concerns of electricity distribution currently being felt because of the provision of free electricity to farmers for pump sets (Krishna, Shahbaz *et al.* 2024).

Similar such win-win opportunities are waiting to be found across other sectors, and identification of these compounding opportunities is a vehicle for building policy that is holistic in nature and addresses multiple sectoral goals simultaneously.

VI. Conclusion

The pervasive issues of air pollution exist as a formidable public health concern globally, with a profound impact in a country like India. Over past several years, the burden of diseases attributed to air pollution has increased significantly, underscoring the need for effective action at all levels. The burden absorbed by the health sector to manage conditions associated with air pollution is only likely to increase with rapid urbanisation and industrialisation. This necessitates a review of whether our current policy instruments can effectively manage the health harms generated by air pollution, and centring health much more fundamentally in air pollution policymaking. In this, the health sector can play a crucial role not only as a moral arbiter but also as an

actor that raises awareness to generate public demand for action, creates data architectures to support research and development, and builds the capacity of healthcare providers and frontline health workers to better tackle ailments linked to air pollution.

Simultaneously, however, air pollution, by its very nature, is an inter-sectoral challenge, and addressing it requires developing appropriate frameworks to support inter-sectoral action. In this, health can play a key role as the basis for formulating, deploying, and evaluating actions in a way that it currently does not. Making health the basis for action has the potential to unlock compounding effects, viz. economic social and environmental goals. India must embrace this policy frame at the current inflection point to ensure that future generations can achieve their full potential, absent the health impacts of air pollution.

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THE FUTURE OF MENTAL HEALTH CARE IN INDIA

Policy Innovations with a Community Focus

Satish Suhas and Pratima Murthy

I. Introduction

Mental health, as defined by the World Health Organisation (WHO), goes beyond the absence of illness to encompass well-being, resilience, and functional contribution to society. It integrates personal traits, social environments, and life events, influencing a dynamic continuum from illness to optimal functioning (Galderisi et al., 2015). Throughout life, specific stages and experiences can heighten vulnerability to mental health challenges. Early adversity, such as abuse or neglect (included under the broad rubric of adverse childhood events (ACEs)), on the one hand, can have lasting impacts (Carr et al., 2013). On the other, nurturing environments during childhood and the critical phase of adolescence can provide opportunities for positive mental health and well-being (Rutter, 1985).

Over the past few decades, significant advancements in mental health have profoundly enhanced our understanding of psychiatric disorders. Basic sciences, particularly genetics, have uncovered hereditary factors and specific genetic markers associated with mental health conditions. In neurosciences, including psychopharmacology, researchers have illuminated the biochemical pathways involved in these disorders, leading to the development of more targeted and effective medications. Advanced imaging techniques now provide detailed insights into brain structures and functions, identifying anomalies linked to various mental health issues. Additionally, behavioural sciences have contributed through structured assessments and evidence-based treatments (which focus on the person and the environment), offering systematic approaches to diagnosis and management. These interdisciplinary advancements have facilitated a more nuanced understanding of mental

health, resulting in personalised treatment approaches and improved patient outcomes.

Over the past few decades, India has made significant strides in mental healthcare delivery, evolving from primarily institutional care to a more integrated, community-based approach. The National Mental Health Program (NMHP), launched in 1982, aimed to make mental healthcare accessible, affordable, and integrated with general healthcare. Despite slow initial progress, the NMHP laid the foundation for district-level mental healthcare, particularly through the Bellary Model developed by the National Institute of Mental Health and Neurosciences (NIMHANS). The Mental Health Act of 1987 and its successor, the Mental Healthcare Act of 2017, marked important legislative milestones, emphasising patients' rights and aiming to reduce stigma. In 2014, India released its first National Mental Health Policy, focusing on universal access to mental healthcare, suicide prevention, and the protection of patients' rights. Over the past three to four decades, the National Human Rights Commission has significantly improved mental healthcare standards, especially in institutions. Surveys such as the National Mental Health Survey (NMHS) (2015–2016) have provided valuable data to guide policy and programme development, highlighting the prevalence of mental health disorders and the need for enhanced resources and infrastructure (Murthy, 2023). Despite these advancements, challenges such as inadequate human resources, uneven distribution of services, and the need for greater community engagement persist, requiring ongoing efforts and reforms to ensure comprehensive mental healthcare for all. Therefore, while much progress has been made, there are many more reforms and advancements that can be achieved in mental healthcare delivery (Gururaj et al., 2016; Suhas, Arvind et al., 2023). An optimal strategic delivery of interventions that include community-based support and planned care across varying severity levels is needed. The recently released economic survey by the government of India includes a report on mental health that highlights the escalating mental health issues, particularly among children and youth, alongside the substantial burden of disease imposed by mental illnesses. The report presents several policy recommendations, such as increasing the number of mental health professionals (MHPs), prioritising health promotion and primary prevention, enhancing mental health services in schools, engaging with community stakeholders, and combating stigmatisation. Additionally, it underscores the interconnected nature of mental health with various life domains and emphasises the necessity of involving all stakeholders in addressing these challenges (Government of India, 2024, pp. 2023–2024). It is essential to raise more mental health awareness, update outdated laws, promote inclusive policies, and extend mental healthcare to vulnerable and underserved communities.

This chapter explores key determinants, core challenges, and opportunities for the evolution of mental healthcare delivery in India. It additionally

highlights the critical policy areas and essential questions that must be addressed to propel reforms in the mental health sector.

II. Interconnected Stakeholders in Mental Health

Mental illnesses have a bio-psycho-social model of causation (Engel, 1977). The multifaceted nature of mental health, as described, emphasises that effective community management of mental illness extends beyond the purview of MHPs alone. Figure 20.1 provides a comprehensive overview of the interplay between individual vulnerability and stress, in conjunction with positive and negative environmental factors. These dynamics reflect the varying susceptibility of individuals and the manifestation of illness based on a multitude of stressors and environmental influences. The understanding of the multifaceted impact of social determinants of health across multiple domains is very germane to the planning for primordial and primary prevention.

Primordial prevention strategies, such as maintaining physical health and practising yoga, have significant effects on enhancing resilience and preventing mental illness (Bhargav et al., 2023; Khalsa et al., 2012). Physical exercise and yoga are known to reduce stress and improve mood through the modulation of neurotransmitters and neural circuits. These activities also promote neuroplasticity, enhancing the brain's ability to adapt to new stressors by strengthening neural connections. Moreover, Yoga has an important role in mitigating the impacts of chronic stress (Pascoe et al., 2017). When combined with healthy parenting and supportive environments, these

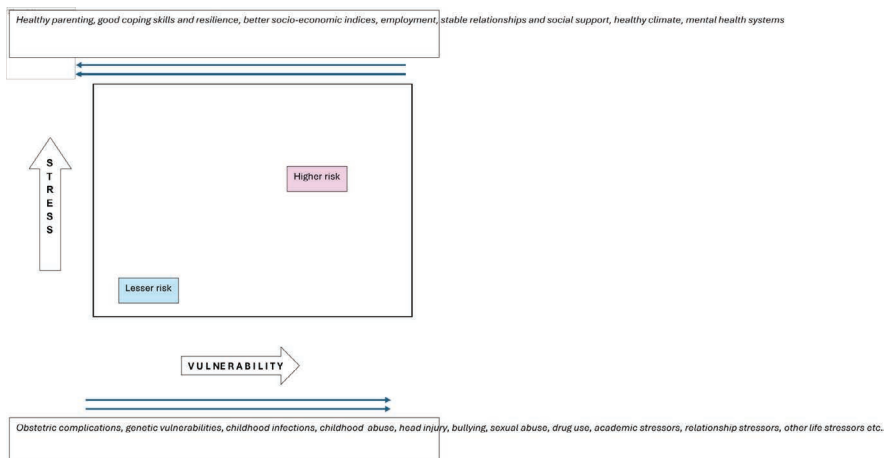


FIGURE 20.1 Dynamics of stress: exploring catalysts that heighten or mitigate vulnerabilities.

Source: Created by authors

interventions synergistically promote robust neurodevelopment. Healthy parenting practices, characterised by emotional warmth, consistent positive discipline, and secure attachment, contribute to the development of resilient neural pathways and stress-response systems. A nurturing environment further reinforces these effects by providing stability and reducing exposure to adverse experiences. Together, these elements create a foundation for mental well-being, decreasing the likelihood of developing mental disorders, and enhancing the brain's resilience to stress and trauma.

Understanding the spectrum of mental health involves recognising the different dimensions of normality, and their association with well-being or physiological distress, leading to either positive mental health or disorder and disease. Normality encompasses a wide range of emotional, cognitive, and behavioural experiences. This varies across cultures, contexts, and individuals. Within this spectrum, individuals may experience transient periods of distress or discomfort in response to life events, often falling within the bounds of normal functioning (Oepen et al., 1990). However, when these experiences become pervasive, persistent, or severe, they may signify the onset of a mental health disorder. Distress that is often associated with symptom dimensions of anxiety and depression can also arise from various stressors, including interpersonal conflicts, financial difficulties, traumatic experiences, and societal pressures (Brown & Harris, 1986). These stressors generally trigger emotional, cognitive, and physiological responses that are adaptive in nature and serve as mechanisms for coping and survival (Welford, 1973). However, when these stressors become overwhelming or prolonged, they can exceed an individual's capacity to cope effectively, leading to distress and impairment in functioning. While distress is a common human experience, not all individuals develop mental health disorders in response to stress. Factors such as genetic predisposition, neurobiological vulnerabilities, early life experiences, and coping abilities can increase susceptibility to the development of psychiatric conditions. For example, individuals with a family history of depression or anxiety may have a heightened risk of developing similar disorders due to genetic factors. Similarly, early life trauma, neglect, or abuse can disrupt neurodevelopmental processes and increase vulnerability to mental illness later in life (Carr et al., 2013). The transition from distress to disorder involves a complex interplay of predisposing, precipitating, and perpetuating factors that influence the onset, course, and severity of mental health conditions. Predisposing factors, such as genetic vulnerabilities or early life experiences, create a foundation of susceptibility to mental illness. Precipitating factors, such as acute stressors or traumatic events, trigger the onset of symptoms and precipitate the development of a diagnosable disorder. Physical injury and illness can also influence the development of psychiatric conditions in later life (Fleminger, 2008). Perpetuating factors, such as maladaptive coping strategies or social factors, maintain or exacerbate symptoms over time,

contributing to the chronicity and severity of the disorder (Gibbons et al., 2024).

To address the complex determinants of mental health, collaboration and engagement are required from a diverse range of stakeholders. Some of the important stakeholders include the following:

Healthcare Systems: In India, healthcare systems play a crucial role in addressing the burgeoning need for mental healthcare, which is an integral component of overall health. Beyond MHPs, primary care providers, social workers, and other healthcare professionals play essential roles in identifying and addressing mental health needs within the community (Barnett et al., 2018). Integrated care models that combine mental health services with primary care can improve access and coordination of care for individuals with mental illness. It is essential that all healthcare professionals, including those specialising in physical health, are equipped to offer basic mental health support. This encompasses the ability to identify mental health issues, provide initial care, and facilitate coordination with dedicated mental health services through referrals and co-management strategies. Integrating mental health into the broader healthcare framework ensures a holistic approach, allowing for timely intervention and continuous support, which is vital given the significant mental health burden in the country. Effective training and collaborative practices among healthcare providers have helped bridge the gap between physical and mental health services to an extent, thus promoting a comprehensive and inclusive healthcare system.

Health Policy and law: Health and mental health policies play a pivotal role in shaping the provision of mental healthcare in India. Judicial advocacy and interventions have often dictated important policy directives in India across different time periods (Murthy & Isaac, 2016). Policies related to education, employment, housing, healthcare, and social welfare can either mitigate or exacerbate mental health disparities. Therefore, law-makers need to prioritise mental health in policy agendas and allocate resources towards community-based interventions and preventive measures. The Mental Health Care Act of 2017 is a case-in-point that shows the overarching impact of law on the delivery of mental healthcare services (Ministry of Law and Justice, 2017). These policies serve as a framework guiding the development, implementation, and evaluation of mental health services across the country. A robust mental health policy ensures the allocation of adequate resources, the establishment of comprehensive mental health programmes, and the integration of mental health services into general healthcare. It advocates for accessible, affordable, and equitable mental healthcare, aiming to reduce the stigma associated with mental health issues and promote awareness and education. Health policies also

emphasise the importance of training healthcare professionals in mental healthcare, ensuring that they can provide holistic care and appropriate referrals. Additionally, these policies encourage research and data collection to inform evidence-based practices and policymaking. By addressing the social determinants of mental health, such as poverty, education, and social support, health and mental health policies can foster an environment that supports mental well-being and improves the overall quality of life for individuals in India.

Mental health professionals: MHPs play a pivotal role in diagnosing, treating, and supporting individuals with mental illness, ensuring comprehensive wellness. Their expertise is critical in accurately identifying mental health conditions through thorough assessments and evidence-based diagnostic tools. Once a diagnosis is established, they develop and implement personalised treatment plans that may include psychotherapy, medication management, neuromodulation, psychosocial interventions, and holistic approaches tailored to the individual's unique needs. Beyond treatment, MHPs provide ongoing support and education to patients and their families, fostering a better understanding of mental health issues and promoting coping strategies. Their work extends to advocating for patients' rights, reducing stigma, and improving access to mental health services. By integrating their clinical skills with compassion and advocacy, MHPs are essential in guiding individuals towards recovery and sustained mental wellness.

Civil society organisations: NGOs, community-based organisations, and advocacy groups play an important role in raising awareness, reducing stigma, and providing support services at the grassroots level. These organisations often have a deep understanding of local needs and can implement culturally sensitive interventions that address the specific challenges faced by marginalised communities (Thara & Patel, 2010).

Educational institutions: Schools and universities are important settings for promoting mental health literacy, providing early intervention services, and fostering supportive environments for students (Robertson et al., 2004). Educators can incorporate mental health education into curricula, train staff to recognise early signs of mental distress, and establish referral pathways to mental health services.

Employers and workplaces: Work-related stressors contribute significantly to mental health problems, making workplaces crucial sites for intervention (Warr, 1994). Employers can implement workplace wellness programmes, offer mental health support services, and create supportive work environments that prioritise employee well-being.

Community stakeholders: Various community stakeholders hold significant influence over community norms and attitudes towards mental health. By promoting acceptance, empathy, and support for individuals with mental

illness, they can help reduce stigma and facilitate access to care within their communities (Thara et al., 2008).

Media and communication channels: Media outlets and communication channels have the power to shape public perceptions of mental health and contribute to stigma reduction efforts. Responsible reporting, accurate portrayal of mental illness, and dissemination of evidence-based information can help promote understanding and destigmatise seeking help for mental health concerns.

In essence, addressing the multifaceted determinants of mental health requires a collaborative and holistic approach involving various stakeholders across sectors. By working together, these stakeholders can create supportive environments, enact policies that promote mental well-being, and ensure that all individuals have access to the resources and support they need to thrive mentally and emotionally within their communities.

What Are the Key Challenges?

- 1) How do we strengthen the various systems in the community, and who should anchor the change?
- 2) At what level of leadership does the onus of integration of all these changes occur?

III. Moving beyond the Singular Narrative of Deinstitutionalisation and Stigma

Building upon the foundation laid by the NMHP, the District Mental Health Programme (DMHP) was introduced in 1996 to decentralise mental health services and extend them to the grassroots level. The DMHP aimed to establish mental health teams in every district, comprising psychiatrists, psychologists, psychiatric social workers, and psychiatric nurses, to deliver a range of services including screening, diagnosis, treatment, and rehabilitation. By integrating mental health into the existing healthcare infrastructure, the DMHP sought to improve access to care and reduce stigma associated with mental illness. In 2014, India adopted its first National Mental Health Policy, which provided a comprehensive framework for promoting mental health, preventing mental illness, and ensuring access to quality mental healthcare services. The policy emphasised the integration of mental health into general healthcare services, the promotion of community participation, and the protection of the rights of persons with mental illness. It also highlighted the need for multi-sectoral collaboration, capacity building, and research to address the mental health burden effectively.

Solely focusing on deinstitutionalisation in mental healthcare without developing alternative models (particularly in countries that have no other

arrangements for mental healthcare) has been extensively debated and critiqued. While the movement aimed to shift away from large, centralised psychiatric institutions towards community-based care, it often overlooked the fact that community structures themselves can function as institutions, albeit in different forms. These include social norms, economic systems, and cultural frameworks that shape individuals' experiences and access to resources. The emphasis would be on focusing care and support to the individual at home and in the community, while developing a set of well-networked resources including residential care and hospitalisation when necessary.

India stands at an important juncture in its approach to mental healthcare. While stigma remains one of the key barriers, there are deeper systemic issues, including human resource development and improving availability and access to care, that need to be addressed in order to improve the pace of progress in improving mental healthcare and outcome.

What Are the Key Challenges?

- 1) Can India effectively integrate mental health into its general healthcare infrastructure despite disparities in training and resources among healthcare providers?
- 2) What should be the dominant narrative for mental healthcare delivery in a post-deinstitutionalised era?

IV. Navigating the Threshold of Caseness: Recognising When Self-Care Is Adequate and When Professional Intervention Is Necessary

Self-care is fundamental to maintaining mental well-being and enhancing resilience and coping abilities. By prioritising self-care, individuals can manage stress more effectively, reduce the risk of mental health issues, and maintain a balanced lifestyle. Engaging in regular self-care practices such as adequate sleep, healthy eating, physical activity, mindfulness, and leisure activities helps replenish emotional reserves, improve mood, and foster a positive outlook. These practices coupled with good social affiliations and support systems build resilience by providing individuals with the tools to navigate life's challenges, adapt to change, and recover from setbacks. Self-care also promotes self-awareness, enabling individuals to recognise early signs of mental distress and seek support promptly. Thus, integrating self-care into daily routines is essential for sustaining mental health and developing robust coping mechanisms in the face of adversity.

In navigating the complexities of mental illness, it is crucial to acknowledge the multidimensionality inherent in its manifestations. Four key pillars –

dysfunction, distress, deviant behaviour, and drug use – provide a framework for determining when professional help should supersede self-help strategies (Wakefield, 2007). Firstly, persistent dysfunction, characterised by ongoing impairment in daily functioning, underscores the necessity of professional intervention to address underlying issues and facilitate recovery. Secondly, when distress reaches a level of persistent or acute severe intensity, self-help measures may in itself prove insufficient in completely alleviating symptoms, necessitating the expertise of MHPs to provide comprehensive support and treatment. Thirdly, large deviations from cultural norms of behaviour signify a need for professional assessment and intervention to address underlying psychological factors contributing to deviant behaviours. Lastly, problematic drug use, whether substance abuse or dependency, warrants professional assistance to address the complex interplay of biological, psychological, and social factors involved in addiction. While self-help strategies can be beneficial, it is imperative to recognise the limitations of self-care and prioritise seeking professional help when mental health concerns align with the aforementioned pillars, ensuring comprehensive and effective treatment approaches tailored to individual needs.

Defining caseness in psychiatric disorders involves identifying clinically significant symptoms that meet diagnostic criteria outlined in classification systems such as the Diagnostic and Statistical Manual of Mental Disorders (DSM) or the International Classification of Diseases (ICD). Diagnosis requires a comprehensive assessment of symptoms, duration, severity, and functional impairment, guided by standardised criteria and validated assessment tools. Symptoms of psychiatric disorders may manifest across various domains, including mood, cognition, behaviour, and perception, with different disorders characterised by distinct symptom profiles. For example, major depressive disorder is characterised by persistent feelings of sadness, hopelessness, and loss of interest or pleasure in activities once enjoyed, accompanied by changes in appetite, sleep, energy level, and concentration. Similarly, anxiety disorders are characterised by excessive worry, fear, or apprehension, often accompanied by physical symptoms such as palpitations, sweating, trembling, or shortness of breath (Association, 2013).

In addition to symptomatology, the diagnosis of psychiatric disorders also considers the individual's subjective distress and impairment in social, occupational, or other important areas of functioning. Functional impairment refers to difficulties in carrying out daily activities, maintaining relationships, or fulfilling responsibilities due to symptoms of mental illness. This criterion helps distinguish between normative emotional experiences and clinically significant psychiatric disorders, ensuring that treatment and support are targeted towards those most in need.

Determining caseness in psychiatric disorders involves a thorough clinical evaluation conducted by trained MHPs. Validated assessment tools, such as

structured interviews, rating scales, and self-report questionnaires, may be used to gather information about symptoms, functioning, and relevant psychosocial factors. Collaboration among clinicians, allied health professionals, and family members is essential to gather collateral information, provide support, and develop a comprehensive understanding of the individual's presenting concerns.

By adhering to standardised diagnostic criteria and utilising evidence-based assessment methods, clinicians can accurately identify individuals with psychiatric disorders, facilitate appropriate treatment planning, and promote recovery and well-being. It is essential to approach diagnosis with sensitivity, cultural competence, and empathy, recognising the subjective experience of distress and the unique context in which symptoms manifest.

What Are the Key Challenges?

- 1) How can individuals and healthcare providers effectively navigate the threshold between self-care and professional intervention, particularly when symptoms of dysfunction, distress, deviant behaviour, or drug use are present?
- 2) What strategies and assessment tools are most effective in distinguishing between normative emotional experiences and clinically significant psychiatric disorders, ensuring timely and appropriate interventions tailored to individual needs?

V. Decoding the Illness Spectrum to Deliver Help to the Right Persons at the Right Time in the Right Manner

There is a spectrum of normalcy within the continuum of wellness and illness, reflecting a dimensional range of mental health states. Specific stressors (biological/social/environmental) when severe or at vulnerable periods of life and neurodevelopment can precipitate individuals to express mental health symptoms, and in those with more vulnerabilities, the psychological distress often manifests as a syndromal psychiatric disorder (McEwen & Gianaros, 2010). This creates substantial challenges in the artificial distinctions of who is within normal, who has minor non-syndromal distress, and who has a syndromal psychiatric disorder that demands the attention of an expert mental health professional. However, due to the large scarcity of MHPs in the country, not everyone can be screened at the primary care level by expert MHPs (Suhas, Arvind et al., 2023). Some possible solutions include evolved stepped care models (Cornish, 2020). The stepped care model presented in Figure 20.2 shows the dimensions of mental health symptoms to the other extreme of severe resistant psychiatric disorders. The figure also depicts the possible expertise in mental health that is necessary to handle the related challenges.

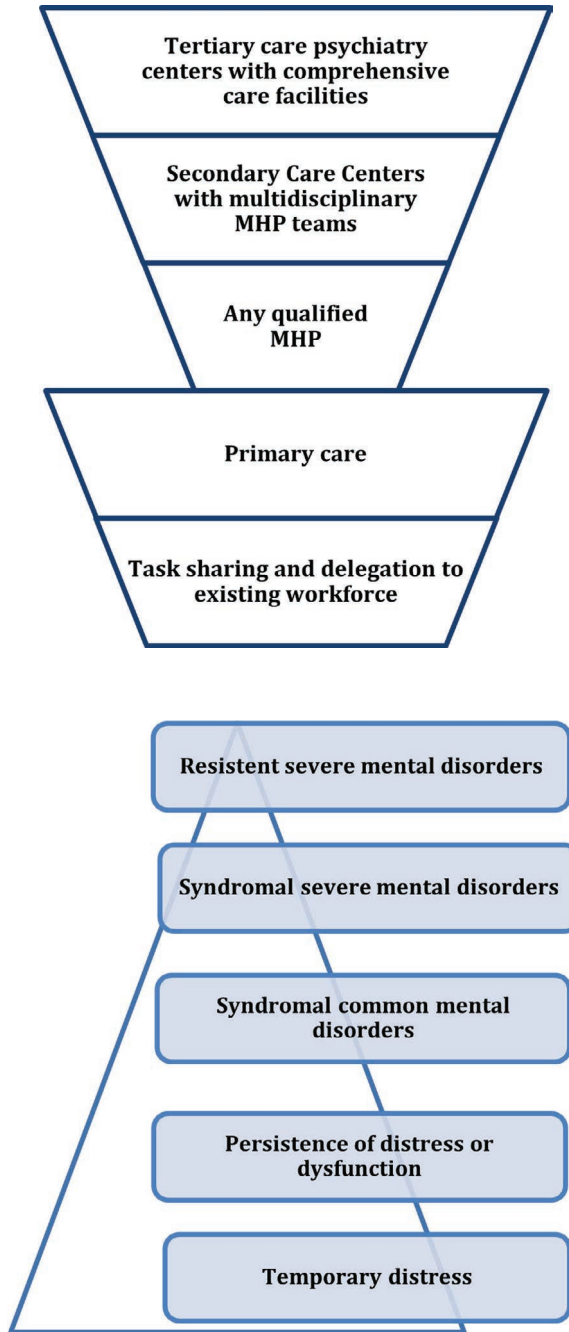


FIGURE 20.2 Stepped care model and the illness pyramid.

Source: Created by authors

Although this is an oversimplified model, it depicts that the demand for mental health resources is high at both the extremes. At one end, there is a need for all individuals who experience mental health symptoms to be able to quickly seek help to understand their problems and take adaptive decisions to quickly overcome the same. Counselling services provide first-level structured interventions for individuals experiencing distressing symptoms or difficulty coping with life stressors focusing on cognitive-behavioural techniques, interpersonal skills, or emotion regulation strategies to address specific issues with positive lifestyle modifications. These interventions can be largely provided through training of voluntary counsellors, and non-specialist cadre of trained community health workers who can intervene to screen and appropriately provide the first-level intervention to the people in need of healthcare. When voluntary counsellors and community health workers do identify that the pattern of distress and dysfunction is severe or persists beyond a reasonable period, a prompt referral to the primary care health network should be made. Here, the primary care doctor must have the expertise to do detailed screening and initiate first-line pharmacotherapeutic or psychosocial interventions. Collaborative approaches involving primary care physicians, social workers, and family members contribute to comprehensive care for individuals with mental health concerns. Substantial burden and morbidity due to severe mental disorders in India are well-established (Hegde et al., 2023; Vajawat et al., 2023). However, there is an increasing focus on the burden, treatment gap, and morbidity due to common mental disorders that need priority attention as well (Chandna et al., 2023; Jayasankar, Satish et al., 2023; Jayasankar, Suhas et al., 2023; Manjunatha et al., 2022; Suhas, Jayasankar et al., 2023). Primary care providers play a crucial role in initial assessment, diagnosis, and management of common mental health conditions, such as depression or anxiety. Accredited social health activists and community health workers represent the most common community health workers in India. However, mental health training risks add substantial burden to their already busy schedules. Therefore, there is a need for developing simplified screening instruments that can be applied by them in communities that are culturally valid and have high sensitivity. Secondly, DMHP teams should simplify and train them in first-line psychological interventions in addition to the ability to recognise severe mental disorders and suicide risk, which should prompt them to refer the patient immediately to primary or secondary care. These community health workers must also be able to administer basic information about addiction and offer support for addiction-related problems in the community.

They may offer brief interventions, monitor medication compliance and side effects, or refer individuals to specialised mental health services as needed. Social workers provide advocacy, case management, and support services to address social determinants of health and promote recovery. Family members and caregivers offer emotional support, practical assistance, and

encouragement throughout the treatment process, enhancing the individual's overall well-being and resilience. This posits a challenge as most primary care doctors in our country have inadequate knowledge about psychiatry and treating mental health problems. If they can be trained to provide first-line care, the subsequent referrals for more severe patients can be made to qualified MHPs and specialists in secondary care, and the tertiary care centres can be reserved for care of people with most severe mental disorders.

Clear referral pathways and ongoing supervision are essential components of task delegation initiatives to ensure quality of care and optimal outcomes for individuals with complex mental health needs. Primary care providers collaborate with specialists to coordinate care, monitor treatment response, and adjust interventions as needed. Regular case discussions, clinical supervision, and continuing education opportunities help maintain the competence and confidence of non-specialist providers delivering mental health services. By leveraging the skills and expertise of a diverse workforce, task delegation approaches contribute to the equitable delivery of mental health care and the promotion of population mental health. Strengthening of the two peripheries, i.e., strengthening the first level of care and primary care, at one end, and then strengthening the tertiary care to treat those with severe resistant mental illnesses with an additional focus on policy and research, can be a pivotal strategy to address the mental health challenges faced by the country.

What Are the Key Challenges?

- 1) How can the healthcare system effectively differentiate between individuals experiencing normal variations in psychological distress, those with minor non-syndromal symptoms requiring structured interventions, and those with syndromal psychiatric disorders demanding expert mental healthcare, given the scarcity of MHPs in India?
- 2) What strategies and training models that impart skills are necessary to empower primary healthcare workers including physicians with the necessary skills to screen, triage, and provide initial treatment for mental health conditions, thereby optimising referral pathways and improving access to timely and appropriate mental healthcare services?
- 3) How do we rapidly upskill primary care teams and equip voluntary counsellors and community health workers in screening, identification, and first-line supportive care?

VI. Confronting the Crisis: Shedding Light on the Growing Concern of Youth Suicide and Suicidal Behaviour

Suicide represents a significant global public health concern, with profound social, economic, and emotional ramifications for individuals, families, and

communities. Beyond its medical causes, suicide often emerges from a complex interplay of social and environmental factors, reflecting broader societal challenges and inequities. Socio-economic disparities, including poverty, unemployment, and lack of access to education or healthcare, increase vulnerability to suicidal behaviour by exacerbating stressors and limiting opportunities for support and intervention (Sharma et al., 2023; Vijayakumar et al., 2022). Discrimination, stigma, and social isolation further compound the risk, particularly among marginalised or underserved populations facing systemic barriers to mental healthcare. In addition to individual risk factors such as mental illness or substance abuse, social determinants such as adverse childhood experiences, interpersonal violence, and family conflict significantly contribute to suicide risk. Traumatic life events, including loss of loved ones, relationship breakdowns, or financial crises, can precipitate feelings of hopelessness and despair, amplifying suicidal ideation and intent. Cultural factors, including gender norms, beliefs, and societal attitudes towards mental health and help-seeking, shape perceptions and responses to suicide, influencing its prevalence and patterns within communities. The government of India has introduced the National Suicide Prevention Strategy to address the burden of suicide in India (Ministry of Health and Family Welfare, 2021).

Addressing the burden of suicide requires a multifaceted approach that addresses both individual vulnerabilities and systemic challenges. Prevention efforts encompass upstream interventions aimed at reducing risk factors at the population level, such as poverty alleviation, social support programmes, and suicide awareness campaigns. Additionally, targeted strategies focus on improving access to mental health services, enhancing crisis intervention and postvention services, and promoting community resilience and protective factors. Collaboration among government agencies, NGOs, healthcare providers, educators, and community leaders are essential to develop and implement comprehensive suicide prevention initiatives that address the underlying social determinants and promote mental well-being across the lifespan. Effective management of suicidality requires a collaborative and multidisciplinary approach that addresses the complex interplay of individual, interpersonal, and societal factors contributing to suicidal behaviour. Primary care providers play a crucial role in identifying and triaging individuals at risk, conducting comprehensive assessments, and initiating appropriate interventions to mitigate immediate risk and enhance safety. This may involve implementing safety plans, restricting access to lethal means, and coordinating referrals to specialised mental health services for further evaluation and treatment.

Specialised psychiatric interventions, including psychotherapy, pharmacotherapy, and crisis intervention, offer targeted support for individuals experiencing acute suicidal crises. Psychotherapeutic approaches such as cognitive-behavioural therapy (CBT), dialectical behaviour therapy (DBT), and interpersonal therapy (IPT) address underlying psychological distress,

maladaptive thought patterns, and interpersonal conflicts contributing to suicidal ideation and behaviour. Psychiatric medications, including antidepressants, mood stabilisers, and antipsychotics, may be prescribed to alleviate symptoms of depression, anxiety, or psychosis and reduce suicide risk. Community-based initiatives, such as suicide prevention hotlines, crisis intervention teams, and peer support networks, provide additional layers of support and intervention for individuals at risk of suicide. These services offer non-judgemental listening, emotional support, and linkage to resources, empowering individuals to seek help and engage in recovery-oriented activities. Peer support groups, comprising individuals with lived experience of suicide, offer validation, empathy, and hope, fostering a sense of belonging and resilience among participants.

In addition to clinical interventions, addressing suicidality requires broader societal efforts to reduce stigma, promote mental health literacy, and create supportive environments that foster resilience and connectedness. Collaboration among healthcare providers, mental health advocates, policymakers, educators, and community leaders is essential to develop and implement comprehensive suicide prevention strategies that address the underlying determinants of mental health and promote well-being across the lifespan. By working together to raise awareness, reduce barriers to care, and strengthen protective factors, communities can create safer, more supportive environments for individuals at risk of suicide.

What Are the Key Challenges?

- 1) How can comprehensive suicide prevention initiatives effectively address the complex interplay of social determinants such as poverty, discrimination, and social isolation, which significantly contribute to youth suicide risk in India?
- 2) What collaborative strategies among government agencies, NGOs, healthcare providers, educators, and community leaders are most effective in promoting mental health literacy, reducing stigma, and creating supportive environments that enhance resilience and connectedness among youth, thereby mitigating the risk of suicidal behaviour?

VII. Addressing the Mental Healthcare Gap

Closing the mental healthcare gap requires a comprehensive approach that addresses barriers to access, enhances capacity, and promotes community-based interventions. Instruments such as needs assessments, epidemiological surveys, and health system reviews provide valuable data to identify gaps in mental health services, assess the burden of mental illness, and inform resource allocation and policy development. These instruments help prioritise

interventions, allocate resources effectively, and monitor progress towards achieving mental health objectives.

Capacity-building models focus on enhancing the knowledge, skills, and competencies of MHPs, paraprofessionals, and community members to deliver evidence-based interventions and support services. Training programmes, workshops, and supervision mechanisms ensure that providers are equipped to screen, assess, and manage mental health problems competently and confidently. Task-sharing models delegate specific mental health tasks to non-specialist providers, such as primary care physicians, nurses, or community health workers, to expand access to care in resource-constrained settings. Alternative models of care, such as stepped care approaches, collaborative care models, and digital health interventions, leverage technology, and interdisciplinary collaboration to optimise service delivery and improve outcomes. Stepped care models offer a range of interventions matched to the individual's needs, with lower intensity interventions delivered first-line and more intensive interventions reserved for those who do not respond adequately. Collaborative care models integrate mental health services within primary care settings, facilitating coordinated, patient-centred care across disciplines.

Community-based interventions engage diverse stakeholders, including individuals, families, community leaders, educators, employers, and policy-makers, in promoting mental health, preventing mental illness, and addressing social determinants of health. These interventions encompass health promotion activities, mental health education, stigma reduction efforts, and community empowerment initiatives that foster resilience, social support, and connectedness. These interventions promote equity, empowerment, and social inclusion by engaging communities as partners in mental health promotion and advocacy.

The discourse around psychiatric care often focuses narrowly on the 'treatment gap' – the percentage of individuals with mental health conditions who do not receive adequate treatment. According to the NMHS of India, the treatment gap for common mental disorders ranges from 70 to 92%, indicating a significant portion of the population with mental health issues remains untreated (Gururaj et al., 2016). This alarming statistic underscores the urgent need to address the inadequacies in mental healthcare. With rapid strides through the expansion of the DMHP, TeleMANAS initiative, and other initiatives such as eSanjeevani, the treatment gap is already being addressed, in at least the dimension related to the initiation of appropriate first-line treatment after appropriate identification of the mental health problem. However, while addressing this treatment gap is crucial, it is equally important to shift our attention towards the broader 'care gap' for those with long-term psychiatric disorder. This care gap encompasses not only access to treatment but also the quality and continuity of care, social support, and

integration of services that ensure comprehensive well-being. By reorienting our focus, we acknowledge the multifaceted needs of individuals with chronic mental health conditions, advocating for a holistic approach that includes psychosocial support, community integration, and sustained therapeutic relationships. This paradigm shift is essential for truly transformative mental healthcare that moves beyond mere symptom management to fostering resilience and improving overall life quality for those affected.

What Are the Key Challenges?

- 1) How can mental health systems ensure sustained and comprehensive care beyond initial treatment initiation to effectively support individuals with chronic psychiatric disorders?
- 2) What strategies are needed to bridge the broader ‘care gap’ in mental health, encompassing not only treatment access but also continuity of care, social support systems, and integration of services for long-term well-being?

VIII. The Burden of Apparent Well-being: The Neglected Aspect of After-Care

People are getting better, living longer, and having decreased morbidity. But the absence of evident physical morbidity is no guarantee of the presence of mental wellness or functional normalcy. The so-called demands of ‘normalcy’ can be so very challenging even for the mentally healthy that when the mentally ill becomes better with treatment and is placed back into the same ecosystems that contributed the illness in the first place, there is a higher risk for relapse, recurrence, and poor outcomes. There is also a societal expectation of needing to appear normal and, therefore, the expectation that they should be working, earning, contributing, entering into long-term relationships and being productive in all areas of life. In India too, the journey of individuals with chronic psychiatric illnesses who experience improvement through treatment often encounters this complex reality. While medical interventions can alleviate symptoms and reduce morbidity, the challenge lies in achieving functional normalcy and sustainable well-being. The societal pressure to conform to norms of productivity and social engagement can be daunting even for those without mental health concerns. For those with mental illness, it becomes challenging to conform to typical norms of productivity, even as the conundrum of self-disclosure of mental illness looms large (Sethi et al., 2023). For individuals recovering from psychiatric illnesses, reintegration into communities that may have been contributory to their illness poses significant risks of relapse and poor outcomes. There is a critical need for India to prioritise reasonable community accommodation and support mechanisms

that facilitate the reintegration of these individuals. This includes fostering environments that acknowledge the complexities of mental health recovery; providing supportive workplaces, educational institutions, and social structures that accommodate diverse needs; and promoting policies that safeguard against discrimination based on mental health status. By creating inclusive environments and ensuring access to ongoing support, India can significantly enhance the long-term outcomes and quality of life for individuals recovering from chronic psychiatric illnesses.

What Are the Key Challenges?

- 1) How can societal expectations of ‘normalcy’ be balanced with the diverse needs of individuals recovering from mental illness to prevent relapse and support sustained well-being?
- 2) What policy frameworks and community supports are needed to facilitate successful reintegration of individuals recovering from mental illness into environments that historically contributed to their health challenges?

IX. Towards the Integration of Mental and Physical Healthcare: Dispelling the Illusion of Differences

More often than not, individuals experiencing physical or mental morbidity are burdened with various comorbidities spanning both categories (Buckley et al., 2009; Scott et al., 2009; Srivastava et al., 2010; Zavala et al., 2023). This underscores the critical issue of multimorbidity, where the coexistence of multiple conditions complicates treatment and care. Multimorbidity in psychiatry refers to the concurrent presence of multiple mental health conditions within an individual. For instance, someone diagnosed with both depression and anxiety disorders exemplifies psychiatric multimorbidity. This complexity often extends beyond mood disorders to include comorbidities such as substance use disorders, personality disorders, or psychotic disorders. Addressing psychiatric multimorbidity necessitates a comprehensive treatment approach that accounts for the interplay between various conditions, their shared risk factors, and their impact on overall well-being. While unique approaches have been developed to address each specific morbidity, integrative, person-centric approaches remain scarce (Kathol et al., 2010; Thornicroft et al., 2019). This gap highlights the need for healthcare strategies that not only target individual conditions but also consider the complex interplay between them. By adopting a holistic perspective, we can better tailor interventions to the needs of each person, ultimately improving health outcomes and quality of life. When we talk of integration, particularly in the context of mental health and physical disorders, we must recognise the profound interconnections that exist among mental health, neurological, and

substance use (MNS) disorders. The WHO Mental Health Gap Action Programme (mhGAP), launched in 2008 with its first intervention guide in 2010, aims to address MNS conditions globally. Updated in 2015, the mhGAP guidelines are used by over 100 countries and translated into up to 20 languages, significantly impacting training and patient care. These guidelines address the significant treatment gap for MNS conditions, which accounted for 10.1% of the global disease burden in 2019. The mhGAP guidelines support policy and systemic change, enhancing access to essential medicines, and call for further research and adaptation of interventions to improve global mental healthcare delivery (Brohan et al., 2024). Traditionally, these disorders have been addressed in isolation, with mental health, neurological conditions, and substance abuse often managed in separate silos. However, emerging research underscores the significance of understanding their inter-relationships and advocating for a more unified approach (Kathol et al., 2010). This holistic perspective is crucial as it acknowledges shared aetiologies and the mutual influences these disorders exert on one another. By examining the overlaps and intersections among MNS disorders, healthcare providers can develop more comprehensive treatment strategies that address the full spectrum of an individual's health. This integrated approach not only enhances the effectiveness of interventions but also aligns with a growing body of evidence that supports the interconnected nature of these conditions, ultimately fostering better health outcomes and improving overall quality of life (Bhugra et al., 2014; Mazumdar et al., 2023).

Combining pharmacotherapy, psychotherapy, and psychosocial support, integrated interventions are essential for effectively managing these overlapping conditions and promoting holistic recovery. Moreover, understanding the intricate relationships between psychiatric disorders and their physical health counterparts, such as the bidirectional influence between depression and cardiovascular diseases, underscores the importance of integrated care models that bridge the gap between mental and physical healthcare domains. By acknowledging and addressing psychiatric multimorbidity, clinicians can better tailor interventions to meet the diverse and interconnected needs of patients, ultimately improving treatment outcomes and enhancing their quality of life. The imperative for integrating physical and mental healthcare emerges from a confluence of strategic healthcare directives and empirical evidence underscoring the interconnectedness of these domains. The National Health Service in England echoes a similar view and has proposed the 5-year forward view that advocates for what has been termed 'triple integration', including the fusion of physical and mental healthcare alongside health and social care and primary and specialist care (Naylor et al., 2016). Despite this, mental health prevention and promotion often receive inadequate attention in public health initiatives. These activities are not well-integrated with other public health efforts such as tobacco control, prevention of substance use

disorders, or obesity prevention. To address these challenges, a more integrated approach to population health is necessary. This would involve coordinated efforts to tackle the determinants of both physical and mental health using ‘place-based’ strategies that combine resources from various sectors. Ayushman Bharat Health and Wellness Centres (HWCs) or Ayushman Mandirs are pivotal platforms for implementing such integration. These centres are strategically positioned to provide comprehensive primary healthcare, encompassing both preventive and curative services. By incorporating mental health services into the existing framework of HWCs, we can ensure holistic care that addresses both physical and mental health needs. The roadmap for future mental healthcare should include a comprehensive action plan covering various services, such as child services, transitional care, psychogeriatrics, and substance abuse treatment. These areas should be integrated rather than treated in isolation. Special attention is needed for designing community mental health services in low- and middle-income countries, aligning with global development goals and ensuring basic service types are operationalised. This integration would leverage the extensive reach and accessibility of HWCs to promote mental well-being, facilitate early detection and intervention for mental health issues, and deliver targeted health promotion activities. Additionally, training healthcare workers at these centres to recognise and manage mental health conditions alongside physical ailments would foster a more inclusive health system, ultimately improving overall health outcomes and reducing the burden on secondary and tertiary care facilities.

What Are the Key Challenges?

- 1) How can healthcare systems effectively integrate comprehensive mental and physical health services into existing primary care frameworks like Ayushman Bharat HWCs to ensure comprehensive care for individuals with psychiatric multimorbidity?
- 2) What strategies are needed to overcome the historical separation between mental health promotion and other public health initiatives such as tobacco control and obesity prevention, thereby fostering a more integrated approach to population health that addresses both physical and mental health determinants?
- 3) How should the communities be equipped to provide long-term care for persons with chronic severe mental health conditions?

X. Lifespan Approach and the Need for Mental Health Promotion

The need to adopt a lifespan approach in mental health promotion and addressing problems is crucial, as mental health is influenced by various life

stages. This perspective acknowledges that mental health challenges and opportunities for promotion can arise at any point in life, and early detection and continuous support can significantly mitigate long-term impacts.

Mental health, as defined by the WHO, is more than the absence of mental illness; it is a state of well-being where individuals realise their potential, cope with normal stresses, work productively, and contribute to their community. This positive mental health concept includes emotional, psychological, and social well-being. Emotional well-being involves happiness and life satisfaction; psychological well-being includes self-acceptance, purpose in life, autonomy, positive relations, environmental mastery, and personal growth; and social well-being encompasses coherence, acceptance, actualisation, contribution, and integration within society. Research supports the two continua model, which posits that mental health and mental illness are related but distinct dimensions (Westerhof & Keyes, 2010). For instance, a person can experience mental illness while also having a moderate level of mental health, and vice versa. This model has been validated across various populations and highlights the importance of promoting flourishing mental health alongside preventing and treating mental illness. Adopting a lifespan approach ensures that interventions are timely and appropriate, ultimately leading to better mental health outcomes across the population.

Example of developmental disorders and neurodivergence:

For example, developmental disorders such as autism spectrum disorder (ASD) often manifest in early childhood, but their effects can extend into adulthood, affecting social skills, communication, and daily functioning. By employing a lifespan approach, interventions for ASD can be tailored to different stages, offering early behavioural therapies for children and support for adults in employment and social integration. This comprehensive strategy enhances the effectiveness of mental healthcare, fostering resilience and well-being throughout an individual's life. Developmental disorders, such as intellectual and developmental disabilities (IDD), birth trauma, and childhood infections and their sequelae, present unique challenges that require specialised interventions and support services. While these conditions may not fall under the traditional definition of mental illness, they impact cognitive, emotional, and behavioural functioning and often co-occur with mental health concerns. Individuals with IDD may experience difficulties with communication, social interaction, and adaptive functioning, requiring tailored interventions that address their unique strengths and challenges. Early intervention services, educational supports, and community-based programmes promote skill development, independence, and social inclusion for individuals with IDD, empowering them to achieve their full potential and participate meaningfully in society.

Birth trauma, including complications during labour and delivery, can result in neurological impairments, physical disabilities, and cognitive deficits

that impact development and functioning. Early identification, specialised medical care, and rehabilitation services are essential to optimise outcomes and mitigate the long-term effects of birth trauma on physical and mental health.

Childhood infections, such as encephalitis, meningitis, or severe respiratory illnesses, can cause neurological damage, cognitive impairments, and psychiatric symptoms that persist into adulthood. Integrated care models, interdisciplinary assessments, and comprehensive treatment plans address the complex needs of individuals with neurological sequelae of childhood infections, promoting recovery and enhancing quality of life.

It is increasingly recognised that neurodevelopmental disorders and neurodivergence are not ‘mental illnesses’ per se. However, often the same mental health systems provide care for these individuals.

What Are the Key Challenges?

- 1) How can mental health systems be adapted or integrated to better meet the unique needs of individuals with developmental disorders and neurodivergence, considering their distinct challenges in communication, social interaction, and adaptive functioning?
- 2) What strategies are needed to ensure early identification, specialised care, and comprehensive support services for individuals affected by birth trauma, childhood infections, and other neurodevelopmental conditions within the framework of integrated healthcare models?
- 3) How should the communities change to accommodate divergent individuals?

XI. Prioritising the Protectors: Fostering Mental Resilience for Care Providers in Mental Health

Families play a pivotal role in the landscape of mental illness in India, serving as primary sources of support, care, and advocacy for individuals grappling with psychological distress. Within the Indian cultural context, family bonds are deeply entrenched, and familial relationships often form the cornerstone of social networks, providing crucial emotional and practical assistance to those navigating mental health challenges. Research, such as the International Pilot Study of Schizophrenia (IPSS), has underscored the profound impact of familial support on treatment outcomes, particularly in developing countries like India (Sartorius et al., 1974). In such settings, where formal mental health services may be limited or inaccessible, the involvement of families can significantly enhance the effectiveness of interventions and contribute to better long-term prognosis for individuals with conditions like schizophrenia. However, despite their potential as sources of support, families may also perpetuate barriers to help-seeking behaviour

due to negative expressed emotions, stigma, and cultural beliefs surrounding mental illness. Stigmatisation within families can lead to reluctance in seeking professional assistance, exacerbating the suffering of affected individuals and hindering their access to appropriate care. Thus, while families wield considerable influence in the realm of mental health, efforts to address stigma and promote positive family dynamics are imperative to ensure comprehensive support systems for individuals grappling with mental illnesses in India (Chadda, 2014).

Effective mental health interventions are inherently person-centred, recognising the unique experiences, preferences, and needs of individuals. By involving individuals in treatment planning, decision-making, and goal setting, interventions can be tailored to their specific circumstances and priorities. Additionally, family-centred approaches acknowledge the impact of mental illness on familial relationships and functioning, involving family members in the treatment process to provide support, education, and resources (Chadda & Deb, 2013). Furthermore, interventions should also be society-centred, considering the broader social, cultural, and environmental factors that influence mental health outcomes. This involves addressing systemic barriers to care, reducing stigma and discrimination, and promoting policies and practices that support mental well-being at the societal level. By adopting a multidimensional approach that considers the interconnectedness of individuals, families, and society, interventions can be more holistic, effective, and sustainable. Planning mental health services requires collaboration among diverse stakeholders, including healthcare providers, social service agencies, policymakers, and community members. This collaborative approach involves assessing community needs, identifying gaps in services, and developing strategies to address them effectively. By engaging stakeholders in the planning process, interventions can be more responsive to local priorities, culturally sensitive, and aligned with community resources and capacities.

The provision of adequate care for caregivers of psychiatric patients is paramount within the community, primarily due to the chronic and fluctuating nature of severe mental disorders over a lifetime. Caregivers play a pivotal role in facilitating favourable outcomes for individuals with mental illness. However, this responsibility often exacts a heavy toll on caregivers, both emotionally and physically. Without comprehensive support mechanisms in place, such as mental health assistance, respite care, robust community networks, and ongoing care support, caregivers are at risk of burnout, leading to their own decompensation. Recognising the interconnectedness between the well-being of caregivers and the overall health of those they care for underscores the imperative for prioritising caregiver support within psychiatric care frameworks. Failure to address the needs of caregivers not only jeopardises their own health but also compromises

the quality of care provided to psychiatric patients, ultimately undermining the effectiveness of community mental health initiatives. Thus, investing in the health and resilience of caregivers is not only a moral imperative but also a strategic imperative for optimising mental health outcomes within communities.

Communities can implement a range of strategies to support caregivers of psychiatric patients, thereby fostering their well-being and enhancing their ability to provide quality care. Firstly, mental health education and awareness campaigns targeted at the general public can help reduce stigma surrounding mental illness, creating a more supportive environment for caregivers. Providing accessible and affordable mental health services specifically tailored to caregivers, such as counselling, support groups, and psychoeducation programmes, can equip them with coping strategies and emotional support. Moreover, respite care services can offer caregivers much-needed breaks from their caregiving responsibilities, allowing them to recharge and attend to their own needs. Community organisations and local governments can collaborate to establish robust networks of social support, connecting caregivers with resources and assistance in their area. This can include practical support such as meal delivery services, transportation assistance, and help with household chores. Additionally, flexible workplace policies that accommodate the needs of caregivers, such as remote work options or flexible hours, can alleviate some of the stress associated with balancing caregiving duties and employment. Financial assistance programmes or subsidies for caregiving-related expenses can also lighten the financial burden on caregivers (Wirsén et al., 2020). Furthermore, fostering a culture of appreciation and recognition for caregivers within the community can go a long way in validating their efforts and promoting a sense of belonging and support. This can be achieved through initiatives such as caregiver appreciation events, awards, and public acknowledgements.

Overall, a multifaceted approach that addresses the various dimensions of caregiver support, including emotional, practical, financial, and social aspects, is essential for creating a supportive community environment conducive to the health and well-being of caregivers of psychiatric patients. By investing in caregiver support initiatives, communities can strengthen their capacity to provide effective care for individuals with mental illness while promoting the overall resilience and health of their residents.

What Are the Key Challenges?

- 1) Who will care for the carers?
- 2) How can mental health services effectively integrate support mechanisms specifically designed to mitigate caregiver burnout and enhance the resilience of those caring for individuals with severe mental disorders?

XII. Focus on Loneliness – The Silent Epidemic

In India, social connection – comprising our interactions with family, friends, and communities – is vital for health, safety, resilience, and prosperity. Despite its importance, many Indians experience loneliness and social isolation, leading to severe health issues such as heart disease, stroke, anxiety, depression, and dementia. The economic costs are significant, as isolation impacts workforce productivity. Despite technological advances, humans remain biologically wired for social connection. Recently, the United States Surgeon General released a report comparing the risk of loneliness to the risks associated with smoking 15 cigarettes a day (Office of the Surgeon General (OSG), 2023). Addressing this issue requires recognising loneliness and isolation as critical public health concerns and fostering stronger social ties within Indian communities.

In India, certain groups are at a higher risk of social disconnection, including individuals with poor physical or mental health, disabilities, financial insecurity, single parents, those living alone, and both younger and older populations. Studies indicate that social isolation is prevalent among the elderly, while young adults report higher rates of loneliness. Financial insecurity exacerbates loneliness, with lower-income adults feeling more isolated than their wealthier counterparts. Ethnic minorities, LGBTQ+ individuals, rural residents, victims of domestic violence, and those facing discrimination also experience heightened social disconnection. Technology's role is complex, offering both connectivity and isolation. High Internet usage among Indians, especially younger populations, can lead to reduced face-to-face interactions and increased feelings of isolation. Understanding and addressing these dynamics is crucial for mitigating the health and social impacts of loneliness in India (Heinrich & Gullone, 2006; Lahiri et al., 2021).

The strength of communities has historically fostered profound positive impacts on individuals' lives, including those grappling with mental illness. Factors such as deep-rooted belongingness, robust family support systems, community acceptance, relationships beyond familial ties, shared communal goals, reciprocity, and strong social identities have traditionally contributed to a more favourable prognosis for individuals, as highlighted by global studies like the IPSS. However, contemporary shifts such as rapid urbanisation, weakening family structures, the breakdown of traditional social ecosystems, widespread migration for economic opportunities, empty nest phenomena, rising divorce rates, declining fertility rates, reduced cohabitation, and a paradoxical increase in virtual rather than meaningful interpersonal connections through social media are collectively precipitating an imminent loneliness epidemic. Urgent strategic interventions are required to address this societal shift and reinforce meaningful social connections, ensuring that the invaluable support networks that historically bolstered mental health resilience remain intact and accessible in the face of modern challenges.

Community mental healthcare should include culturally universal tasks aimed at mitigating schisms in society. These tasks should leverage the person's extended kinship systems, relational communities, and social movements in addition to enabling them to develop purposeful lives within their communities.

The need for a promotion of social connectedness in India is increasingly urgent, especially in light of recent global challenges like the COVID-19 pandemic that have exacerbated issues of social isolation and loneliness (Hwang et al., 2020). Social connection is crucial not only for individual well-being but also for societal health, resilience, and prosperity. In India, where community ties and familial bonds traditionally play a significant role, there is growing recognition of the adverse impacts of social disconnection on physical and mental health outcomes (Wickramaratne et al., 2022). Reports indicate a significant portion of the population experiences loneliness, a trend that has likely been exacerbated by urbanisation, migration, and societal changes. Implementing a comprehensive national strategy, akin to those proposed in other countries, would involve identifying and addressing barriers to social cohesion, promoting inclusive community initiatives, and leveraging social infrastructure such as public spaces, community centres, and digital platforms to facilitate meaningful interactions. Emphasising equitable access to these resources is essential, particularly for marginalised and vulnerable groups. Furthermore, investing in programmes that strengthen interpersonal relationships, cultural ties, and community engagement within diverse settings – from urban neighbourhoods to rural villages – will be crucial for fostering resilience, promoting well-being, and achieving societal harmony in India.

In India, designating social connection as a priority within public health and policy agendas is essential to address pervasive issues of loneliness and social isolation exacerbated by modern challenges like urbanisation and demographic shifts. By integrating social connection into national health policies and educational curricula, India can foster inclusive community initiatives and strengthen social infrastructure such as public spaces and digital platforms. Establishing a dedicated leadership position to coordinate across sectors and implement pro-connection policies will be crucial. This approach should encompass all relevant sectors including health, family welfare, and education, ensuring policies not only mitigate factors driving disconnection but also promote opportunities for meaningful social interactions. Regular evaluation and revision of policies, along with standardised measures to monitor social connection metrics, will be essential to guide effective decision-making and enhance societal well-being across diverse Indian communities.

What Are the Key Challenges

- 1) How can India's public health policies effectively prioritise and integrate strategies to mitigate loneliness and social isolation across diverse demographics, considering factors such as urbanisation, migration, and societal changes?

- 2) What role can community-based initiatives and digital platforms play in fostering meaningful social connections among vulnerable populations in India, such as the elderly, low-income groups, and ethnic minorities, to reduce the health impacts associated with loneliness and *enhance overall societal resilience*?

XIII. AI-Augmented Telehealth as a Key Player in Future

In the landscape of India's community mental healthcare, the evolution of tele mental health services stands out as a pivotal development. Utilising AI-enhanced tele mental health, these services bridge the gap between mental health professionals and patients in remote and underserved areas. Digital technologies enable virtual consultations that facilitate timely assessments, accurate diagnoses, and effective treatments, thereby overcoming geographical barriers and enhancing access to specialised care. Furthermore, India has witnessed the emergence of innovative community-based models such as the Tele-MANAS programme. These initiatives integrate with platforms like e-sanjeevani to decentralise mental healthcare delivery (Suhas et al., 2022). By empowering community health workers, engaging local stakeholders, and nurturing peer support networks, these programmes exemplify the potential of bottom-up approaches in addressing the diverse mental health needs of vulnerable populations.

AI-augmented telehealth is poised to become a key player in the future of Indian mental healthcare, offering scalable and accessible mental health support across diverse populations. By integrating AI-driven diagnostics and personalised treatment plans, telehealth can enhance the reach and efficiency of mental health services, addressing the significant gaps in care delivery in India.

What Are the Key Challenges?

- 1) How can India effectively implement and scale AI-augmented telemedicine solutions in mental healthcare to bridge the gap in access to specialised services, particularly in remote and underserved areas?
- 2) How should Tele-MANAS further evolve?
- 3) What policy frameworks and community engagement strategies are essential for fostering inclusive environments and supportive structures that facilitate the successful reintegration of individuals recovering from chronic psychiatric illnesses into society, thereby improving long-term outcomes and quality of life?

XIV. Examining the Future Role of Pioneering Institutions

In the discourse on mental healthcare delivery in India, large apex bodies and centres of importance have played a pivotal role in shaping the trajectory of care provision and community integration for individuals with mental

illnesses. These institutions serve as pillars of knowledge, research, and advocacy, driving innovations in treatment modalities and policies (Murthy & Jain, 2012). However, it is essential to differentiate their role from that of institutionalisation, which has often been stigmatised as regressive and detrimental to individuals' well-being. Instead, these centres prioritise community-based care, emphasising holistic approaches that address not only the symptoms of mental illness but also the social determinants that contribute to its onset and exacerbation. While general hospitals in the community serve as essential entry points for mental health services, they often lack the specialised resources and expertise required to manage the diverse needs of individuals with mental illnesses effectively. Therefore, large psychiatric institutions of repute serve as crucial hubs for specialised care, offering comprehensive treatment options, multidisciplinary support, and long-term rehabilitation programmes. As we chart the way forward for mental healthcare in India, it is important to recognise and strengthen the role of these institutions in bridging the gap between community-based care and specialised treatment, ultimately fostering a more inclusive and responsive mental health system.

The future role played by these large institutions is not limited to only their leadership or legacy. They are poised to become leading research institutions that play an important role in shaping policy and governance and are in close liaison with government stakeholders. In addition, they offer locations for testing and evolving complex models of clinical care, research into newer domains of both experimental and translational research, and policy development.

What Are the Key Challenges?

- 1) How can pioneering psychiatric institutions in India balance their roles as specialised care centres with their evolving responsibilities in research, policy advocacy, and governance?
- 2) What strategies are needed to enhance collaboration between large psychiatric institutions and community-based healthcare providers to ensure seamless integration of services and holistic care for individuals with mental illnesses?

XV. Conclusions

A comprehensive approach to understanding mental disorders necessitates a convergence of psychiatric, biological, social, and ecological perspectives. Traditionally, psychiatric frameworks have focused extensively on the biological underpinnings of mental health conditions, leveraging advancements in imaging techniques, genetics, and neurocircuitry to elucidate the physiological and genetic bases of these disorders. These advancements have significantly enhanced our understanding of the biological predispositions that

contribute to mental health issues. However, it is equally important to recognise the profound impact of external and environmental influences on mental health. Social factors, such as community support, socio-economic status, and cultural contexts, play critical roles in shaping mental well-being and distress. Furthermore, ecological considerations, including exposure to natural environments and broader environmental changes, also influence psychological health. Therefore, an integrated approach that synthesises insights from biological sciences with social and ecological understandings is essential. Such a holistic perspective not only acknowledges the multifaceted nature of mental disorders but also promotes more effective and comprehensive strategies for prevention, intervention, and treatment. By embracing this interdisciplinary convergence, we can better address the complex interplay between internal predispositions and external influences on mental health.

In conclusion, addressing the key challenges explored in this chapter and implementing the contextualised recommendations for mental health delivery are essential for advancing mental healthcare delivery in India and ensuring that all individuals have access to quality, equitable, and culturally sensitive care. By strengthening community-based interventions, advocating for policy reforms, and fostering collaboration among stakeholders, India can build a more resilient, inclusive, and responsive mental healthcare system that promotes the well-being and dignity of all its citizens, serving as a template for the rest of the world.

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