

# ASSESSMENT OF STATE **PUBLIC HEALTH CADRE**

STUDIES COMMISSIONED BY



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## **FOREWORD**

This publication is a result of a conversation that we had within the Thakur Family Foundation back in 2020 on the capacity of various states in India to deliver public health services to their respective citizens. No state can improve public health without having a cadre of professionals who are capable of organising and delivering health services. The few published studies on the public health cadres in India at that time were limited to particular regions and states in India. There was never a national study that covered all states in India.

Given our interest in the issue of public health in India and our commitment to evidence-based policy making, we decided to commission studies that would cover all states in the Union. We invited academics to contribute to the project through a combination of a public call for applications and personal invitations to established academics. We were ultimately able to assemble an impressive cohort of academics who covered every state in the country, with the exception of Arunachal Pradesh, Bihar, Goa, Mizoram, Sikkim and Tripura.

Given that India is a vast country with each state facing its own challenges, we refrained from prescribing a common template for all the studies, leaving it to the judgment of each group to frame their reports for their respective state(s) in a manner they thought fit. The result has been a fascinating collection of studies from across the country highlighting the different challenges faced by the states while trying to improve public health.

The first draft of the studies contained in this publication were discussed in a workshop hosted by the Institute of Social & Economic Change (ISEC), Bengaluru. We are particularly thankful to Prof. Mohan Rao and Prof. Sobin George for organising the logistics of the conference. We are also thankful to all the participants who participated in the workshop and ensured a robust exchange of views on the subject.

The Foundation would also like to thank Preeti Mehra for copy-editing the report, MONIMO LLP for designing the report and Chitrakshi Jain for overseeing the final production process.

This study was the last project that the late Keshav Desiraju led in conceptualization and commissioning for the Foundation's Advisory Board. We dedicate this piece of research to his memory.

We are hopeful that policymakers in India take the recommendations in this report to their logical end.

**Dinesh S. Thakur**  
**President and Founder,**  
**Thakur Family Foundation**

**Chapter 1**  
**DESIRABILITY,**  
**CHALLENGES AND**  
**PATHWAYS TO A PUBLIC**  
**HEALTH CADRE IN INDIA**

Anjali Chikersal

## **ACKNOWLEDGEMENTS**

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Heartfelt thanks to the late Mr. Keshav Desiraju, Former Secretary, Ministry of Health and Family Welfare, Government of India, for his generous guidance in the initial stages of this study.

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## **EXECUTIVE SUMMARY**

India has instituted many new initiatives in its public healthcare system in the last two decades in an effort to improve health outcomes. Establishment of a specific Public Health Cadre to implement community services has long been advocated by experts as a particularly effective mechanism to do so. The present study explored the desirability and possible challenges to the institution of such a cadre in six states and Union Territories (UTs) of north-west India in order to provide practical policy recommendations on the subject. We placed this work within the global debate on essential functions of a public health system and the capacities required in the health workforce to deliver them. We studied the current organization, structure and strength of the health workforce in the six states/UTs and conducted a review of their health expenditures and key health indicators. We examined previous experiences of the study states and UTs with establishment of new cadres of human resources for health and delved into their perspectives on the prospect of the institution of a Public Health Cadre. We also carried out brief reviews of the expenditures and indicators in the states of Kerala and Tamil Nadu to provide context to the study.

The review of state health expenditures and key indicators showed largely expected results with one exception. We found that Kerala and Himachal Pradesh had the best indicators but also the highest health expenditures. Tamil Nadu also had similarly good indicators but lower than average health expenditure. Its consistently good indicators despite low expenditure have been attributed to the long-standing presence of a Public Health Cadre and Act in the state. Haryana and Punjab fell within the averages for both expenditure and indicators, while Uttarakhand had low expenditure and the poorest indicators. An unexpected result was that from Jammu & Kashmir and Ladakh, where the health outcomes matched those of Tamil Nadu, despite significantly lower health expenditures and absence of any Public Health Cadre.

All the studied states and UTs have major deficits in the available health workforce. All cadres face this shortfall—medical, paramedical nursing and technical, and frontline staff—though the extent of shortages and the service level at which they are present, vary. A common finding across all states and UTs was the severe shortages in male frontline workers, the Multi Purpose Health Worker (MPHW) (male). Difficulties in managing the Covid pandemic shone an acute spotlight on the challenges these shortages in particular have created. Another common feature was the apparent weakness in management and leadership capacities for public health. Both medical and non-medical personnel hold these managerial positions at block and district levels, while senior administrative posts are held by doctors and administrative officers. Majority of these personnel have no qualification in public health. Neither is any in-service public health training mandatory for these postings in any state/UT. There are, therefore, serious limitations in existing capacities for delivering essential functions of a public

healthcare system—the analytic, research, financial, legislative and public dealing aspects of health services delivery. Exercises for strengthening these capacities are universally lacking despite recognition of this weakness.

None of the states or UTs at present has a Public Health Cadre. Some states have previously experimented with establishing different cadres for doctors, chiefly a 'Specialist' cadre. Others brought in pay and promotional differences within the same cadre for doctors with and without postgraduate qualifications. Still others have experience with autonomous corporate structures within the existing system, and differences in the autonomy and authority of doctors posted to these bodies, similar to what separate cadres would create. These experiences have universally been difficult and largely unsuccessful thus far.

Uttarakhand and Haryana had instituted or recommended establishment of separate cadres, either for all specialist doctors or specifically for those with public health qualifications. Both states faced several administrative and judicial challenges to the idea. There were major agitations by several doctors' associations—generalists, non-public health specialists and all specialists together. The chief reason for the agitations was differential career prospects for the various cadres; these arose due to differences in number of doctors in the two cadres while promotional avenues open to both were the same. Attempts to overcome these issues could not be successful and the cadres were either rescinded or not implemented. Punjab's experience with doctors from within a single service and cadre posted to an autonomous body, and thereby having greater autonomy and authority than those who are outside this body, has also been difficult. It can be reasonably expected that any new Public Health Cadre instituted will face similar challenges.

Currently there appears to be limited appetite for establishing a Public Health Cadre in all the states and UTs studied. The administrations universally acknowledge the need for building public health capacities and better provision of services, but there is also broad hesitation regarding institution of a new cadre for this purpose. Doctors are divided on the need; those with public health qualifications deem it necessary while those from other disciplines do not. Haryana is the only state at present where a new 'Specialist' cadre, which will include doctors with both public health and non-public health postgraduate qualifications, is being created.

Based on our study, it is evident that the three main challenges facing public health services, viz. the kind of services envisioned, shortages in workforce availability, and deficient capacities to administer services, need to be addressed urgently. We believe the establishment of a Public Health Cadre without addressing these fundamental issues will do little to improve services. On the other hand, tackling these deficits, whether within the existing workforce structure or in a new cadre that may be established, will be key to improving both the kind of services provided and their delivery. In particular,

the post of MPH (male) needs to be revived; appropriate effective trainings in epidemiological analysis, financial and legislative tasks, strategy and leadership development, and public dealings, must be put in place for both medical and non-medical managerial workforce; and regular performance evaluations of the system must be built in. An increase in public health capacities can be attempted by supplementing the current structure with additional techno-administrative posts. The initial positive experiences with the new posts of Community Health Officers in another government programme are a good example of enhancing systemic capacities without disbalancing existing structures and relationships. Establishment of a Public Health Cadre can be an incremental next step once these key initial measures have taken root.

## **INTRODUCTION**

Since its Independence in 1947, India has achieved extensive improvement in the health of its people. Life expectancy has more than doubled from a mere 32 to over 70, infant mortality has reduced from 146 to 35, number of doctors available to provide healthcare has risen from fifty thousand to over a million today, while the population has increased only about four-fold (Zodpey and Negandhi, 2018; www.ETHealthworld.com, 2019). Yet the progress seems to be stagnating. Rampaging epidemics such as malaria were controlled largely in the first two decades after Independence and have seen little decline since. The average improvement in indicators also hides the immense rise in newer communicable challenges such as HIV/AIDS, the continuing burden of diseases such as tuberculosis, the exponential rise in non-communicable diseases, and enormous regional, socio-economic and inter-state disparities. And while the total number of doctors may be close to the WHO recommendations, concentrated as they are in urban areas and in the private sector, the common Indian man, woman and child has little access to them. The ongoing Covid-19 pandemic has amply demonstrated the acute challenges facing Indians seeking healthcare. The tiered pyramidal public healthcare system developed in post-independent India has little capacity today to serve its intended beneficiaries adequately as it struggles with substantial shortages of health workers and widely reported quality of care issues (Mohan, Hay and Mor, 2016; Kruk et al., 2018).

Literature suggests that many of these drawbacks can be mitigated with a strong focus on primary and preventive healthcare and dedicated community level public health services distinct from clinical and curative services (Macinko, Starfield and Erinosh, 2009; van Weel and Kidd, 2018; White, 2015). Delivery of such services via a specialized Public Health Cadre (PHC) has been strongly suggested as a means to achieve this end. Tamil Nadu is oft cited as an example of the achievable with such a cadre in place (Gupta et al, 2010; Kumar, Bothra and Mairembam, 2016). Indeed, the state, along with Kerala, has the best health indicators in the country. A PHC, separate from the clinical services,



has been in place in the state since 1923, while an Act governing it was put in place in 1939. Doctors trained specifically in public health man the cadre. A similar structure across all states has been recommended by several government committees and academicians (HLEG Report, 2011; Sathyanarayan and Babu, 2011; Priya and Chikersal 2013; Reddy, 2020).

Can such a cadre if instituted lead to better health for the population in other states as well? What should the structure of such a cadre be? What services must it provide? What challenges is it likely to face? How should these be addressed? These are some of the questions this study sought answers to.

We chose to situate this work within the current global debate on the role of a public health system and its essential functions, and the attempts of the international public health community to delineate core skills and knowledge critical to public health work.

The report is presented in two parts. Part I examines the debates around, and the current global understanding of, essential public health services that a healthcare system must deliver, and the core individual competencies required in the health workforce to do so. Is there a common global understanding of what these services should be? What skills and knowledge must health personnel possess to be able to provide these functions? Part II of the study examines the structure and availability of human resources for health (HRH) in the public health system in the states and Union Territories of Haryana, Punjab, Himachal Pradesh, Uttarakhand, Jammu & Kashmir, and Ladakh, and their previous experiences with, and current perspectives on, a public health cadre. These states represent both those that are economically progressive but lag considerably in social and/or health indicators, as well as those that face both economic, and social and health challenges. The report then analyses these findings within the context provided by the first section. We conclude with some practical policy recommendations that can be applicable to states as well as nationally.

## **PART I : WHAT ESSENTIAL PUBLIC HEALTH SERVICES MUST A HEALTH SYSTEM PROVIDE?**

Human resources are an invaluable key component of any healthcare delivery system. It is universally acknowledged that the outcome of a healthcare system is directly related to the availability of its workforce, and how best they are trained, applied and utilized. It is also accepted that community level public health services, distinct from clinical healthcare, are central to a health system. However, a universally accepted definition of which public health services should be considered a must within public health systems, in order to ensure population needs are met optimally, has evaded experts. In the

context of examining the desirability of institution of a PHC in India, it is imperative that the services this cadre needs to provide are clearly delineated. It is also imperative that such delineation be in tune with international thinking and standards. A discussion on the issue and how it has been addressed is presented.

While there isn't yet a set international definition of 'essential public health functions' (EPHFs), many organizations have sought to address this issue in the last two to three decades. As a start, WHO in 1997 had set up an international Delphi study group that sought to develop a consensus on the key features of EPHFs (Bettcher, Sapirie and Goon, 1998). It identified nine categories of functions/ services that it considered essential (Table 1).

Prevention, surveillance and control of communicable and non-communicable diseases
Monitoring the health situation of populations
Health promotion
Public health legislation and regulations
Protecting the environment
Occupational health
Public health management, which includes policy formulation, management of services, research and international collaboration
Specific public health services such as public health laboratories, school health services and disaster services
Personal care for vulnerable and high-risk populations

*Table 1: 1998 WHO Delphi study identified Essential Public Health Functions*

Since then, WHO has revised the concept several times with a comprehensive guide published in 2018 (Martin-Moreno and Harris, 2018). This identifies two sets of functions or operations—a vertical set that delineates the areas in which services are required, and a cross-cutting horizontal set which identifies the kind of functions or resources required across the verticals (Table 2).

<i>Essential Verticals</i>	<i>Cross-cutting EPHFs</i>
Health Promotion	Governance
Health Protection	Financing
Healthcare	Human Resources
Disease Prevention	Health Information Systems
Preparedness for Public Health Emergencies	Research

Table 2: 2018 WHO—Sets of EPHFs

Many international and national public health organizations have also attempted to delineate EPHFs. The main bodies include a Latin American/American consortium, World Bank, National Health Service of UK, the New Zealand Public Health Network, Ministry of Health of British Columbia and Centers for Disease Control and Prevention (CDC). A summary of their inclusions is worth examining and is presented in Table 3.

Organizations / Functions	WHO 1998	CDC, CLAISS & PAHO 2001	NHS UK 2001	World Bank, India 2004	MoH, British Columbia 2005	PHCN, New Zealand 2011	WHO European region 2007-2014	CDC 2020
Monitor, evaluate, analyse health status	✓	✓	✓	✓	✓	✓	✓	✓
Respond/ Control Health Emergencies/ Hazards	✓	✓	✓	✓	✓	✓	✓	
Prevention of diseases	✓	✓	✓	✓	✓	✓	✓	
Health promotion	✓	✓	✓	✓	✓	✓	✓	
Social participation in health, IEC		✓	✓	✓		✓	✓	✓
PH Planning & Policy Development	✓	✓		✓				✓
PH regulation & enforcement	✓	✓	✓	✓				✓
Strengthen Organizational structures/ Capacity development				✓		✓	✓	✓
HR development & training in PH		✓	✓	✓			✓	✓
Quality assurance		✓	✓	✓	✓			
Research in PH	✓	✓	✓	✓			✓	
Ensure effective delivery of healthcare services			✓			✓		
Ensure Equitable Access to services		✓		✓				✓

Financing							✓	
Governance							✓	
Environmental Health					✓		✓	
Occupational Health	✓						✓	
Specific services— Public health laboratories, school health services	✓							
Personal care to high risk and vulnerable populations	✓							

*Table 3: Summarization of EPHFs as defined by key international and national bodies (modified from Martin-Moreno et al 2016)*

As is evident, there is general agreement that monitoring the population health status, responding to public health emergencies, preventing diseases, promoting health and social inclusion, must all be considered essential functions of a public health system. There is also considerable concurrence on the inclusion of policy and regulation development, strengthening organizational capacities and human resources, and quality assurance and research, within the essentials of a public health system. There is, however, little overlap on the issues of delivery of effective healthcare services, financing public health, and specific services such as environmental health, occupational health, public health laboratory services and healthcare services to specific vulnerable populations. The UK and New Zealand national recommendations and those from WHO European Region include these as essential within public health services; definitions from the American and World Bank bodies do not. It seems apparent that descriptions adopted are closely related to the politico-social philosophies of the agencies, and the resource and administrative constraints within which they operate. It is therefore for the national polity and legislatures of countries to adopt or extrapolate from these broad definitions those functions that they view as crucial to the health of their peoples. The same stands true for the Indian health system as well.

## **WHAT HEALTH WORKFORCE CAPACITIES ARE ESSENTIAL FOR DELIVERY OF EPHFS?**

Whatever services/ functions a public health system may consider the essential core of its responsibilities, human resources manning these services need to be adequately trained to deliver those. A set of cross-cutting HRH capabilities can be identified as necessary for this. It is these capacities that will determine the effectiveness of the public

health services provided by a system. As with EPHFs, there have been debates on what these capacities should be. Potter et al (2000) describe efforts in the 1990s to define such 'universal' public health capacities to facilitate training for public health professionals and ensure effective delivery of EPHFs. They define the six domains of analysis, communications, policy and programme planning, culture, basic science, and finance and management, as the core public health capacities required in a workforce.

Subsequently, several public health agencies have developed frameworks for 'universal competencies', all of which essentially recognize the fundamental or core skills required in all public health professionals from junior grassroots level workers to medical practitioners to senior policy makers, albeit with varying degrees of proficiency, depending on the specific cadre or position level of the professional. In 2014, a comprehensive collaboration between 20 national organizations, The Council on Linkages Between Academia and Public Health Practice, explored fields of public health training that required strengthening, and the means of doing so. This led to the adoption of the 'Core Competencies for Public Health Professionals' framework (Core Competencies for Public Health Professionals, 2014). This framework and its adaptations have formed the basis for many subsequent assessments of skills of public health professionals in multiple health systems (Grimm et al., 2015, Bhandari et al., 2020). In India however, its usage to assess public health competencies has been extremely limited (Beaglehole and Dal Poz, 2003); the few available studies examining health workforce capacities in the country have largely assessed clinical skills amongst maternal and childcare providers (Sodani and Sharma, 2011) with barely any exploring the 'core competencies' required of public health professionals, a reflection of the focus of the Indian health system on a single health programme. The few studies that examined 'public health capacities' in the Indian health workforce have found that most capacity building efforts are directed towards technical programmatic services, while a significant need for strengthening administrative, management and financial skills remains unmet (Chaudhuri et al., 2013, Devdasan and Elias, 2008).

The core competencies, as described by the Council framework, fall into eight broad categories. These domains and their brief descriptions are given in Table 4.

<i>Core Competency</i>	<i>Description</i>
Analytical / assessment skills	ability to define and determine a problem, use appropriate data and statistical tools, ability to use evidence to make informed policy decisions
Policy development/ programme management skills	ability to develop mechanisms to monitor and evaluate programs
Communication skills	ability to communicate effectively scientific evidence and programmatic information to both lay people and professionals
Cultural competency skills	ability to recognize the impact of population diversity and health workforce on outcomes, and incorporate these into approaches

Community dimensions of practice skills	ability to recognize, support and establish relationships that impact community health
Public health sciences skills	understanding principles of basic public health sciences such as epidemiology, biostatistics, social sciences, environmental public health, and ability to apply this knowledge
Financial planning and management skills	ability to plan for financial aspects, work within budgets and evaluate financial health
Leadership and systems thinking skills	ability to identify facilitators and barriers to community health, have a vision and develop/ implement policies for it, enhance capacities of health systems and self

**Table 4: Core Competencies required in Public Health Professionals (Council on Linkages Between Academia and Public Health Practice 2014)**

The document also describes three tiers (levels) of public health professionals who would be expected to have different levels of the same competency depending on their qualifications, the positions they hold and the stage of their career. Tier 1 applies to entry level public health professionals; Tier 2 to individuals with management and/or supervisory responsibilities; Tier 3 to senior managers and leaders of public health organizations. Datta (2009) has defined six categories of public health personnel in the Indian healthcare system, which can be cross classified into the three tiers described by the Council (Table 5).

<i>Category</i>	<i>Detail</i>	<i>Corresponding Council Tier</i>
Public health physicians	health officers at district/municipalities, disease control programme managers, directorate level officers and public health physicians working with industry etc	Tier 3
Public health educationists	medical college public health physicians, non-physician public health experts, nursing schools	Tier 3
Non-physician public health experts	epidemiologists, health managers, environmental health specialists, occupational health and safety personnel, health economists, health educators, public health/sanitary engineers, health promotion specialists, community health/rehabilitation workers, veterinarians and veterinary health workers	Tier 3/ Tier 2
Public health nurses	midwives, trained dais, MPW(F), health assistant (F), health supervisor (F), PHN, LHV, BPHN, DPHNO	Tier 2/ Tier 1
Other paramedical workers	MPW (Male/Female), sanitary inspector, block sanitary inspector, district sanitary inspector, food inspector, block health supervisor, block extension educator	Tier 1
Grassroots health workers	ANM, ASHA workers, village health guides	Tier 1

**Table 5: Datta's six categories and corresponding Council defined tiers**

Such categorization will make it easier to identify 'core public health personnel' who would populate a specific PHC that may be instituted in the country. It will also aid in identifying the core competencies these various cadres of personnel must possess, and to develop training exercises accordingly.

## **PART II**

The second part of this study examined the structure of HRH organization, its availability, previous experiences with specialized health cadres, and current perspectives on the issue of a PHC, in six north-western states and UTs. There already exist such cadres in some Indian states, notably Tamil Nadu. Other states with either a full-fledged PHC or a version of it in place include West Bengal, Maharashtra, Delhi, and more recently, Odisha. There is also a public health sub-cadre within the central (federal) government health service. Only doctors with a public health qualification can be recruited to this cadre. There is however no field posting in this cadre; officers work either at the National Centre for Disease Control (NCDC) or in vertical disease control programmes within the federal government, thus denying these specialists field experience in planning public health activities or preparing for potential public health threats on the frontlines. Specialists at NCDC are however key technical resources in helping states and the centre address any serious and unusual outbreaks that do occur.

Tamil Nadu at present is the only state with a well-structured separate cadre overseeing public health activities. It is mandatory for all doctors joining the state health services to opt for either the public health or clinical cadres within a specified time period. Either before or upon joining the public health cadre, the officers need to gain a public health qualification. Post this, they are posted in the field where they oversee environmental and primary care services; in addition, they undertake long term planning and capacity building against any potential disease outbreaks or resurgence.

Delhi also has a public health cadre within its municipal health services. Only doctors with public health qualifications can join this service; they are responsible for overseeing environmental public health activities such as food safety, clean drinking water availability, solid waste disposal, clean establishments and outbreak control, along with delivery of preventive services such as vaccinations. Implementation and oversight of vertical disease control programmes lies with the Department for Hospital Administration, not the PHC. Similar to Delhi, Maharashtra also has a separate PHC; officers recruited to it must have a public health qualification. They man positions at the district level and above, and are responsible for population level programmatic services, outbreak control and long-term public health planning. Primary responsibility for environmental health activities, however, lies with local bodies.

West Bengal, as with other Indian states in pre-independent India, had a separate Directorate of Public Health which continued till 1967 when it was merged with the

clinical services on the recommendation of the Jungalwalla Committee (Gupta et al, 2010). A separate administrative cadre was reinstated later; for doctors to join this cadre a public health qualification is considered desirable, but not mandatory. The work of this cadre, however, is to implement or oversee vertical disease control programmes with little if any environmental or broader public health responsibilities.

Against this backdrop the present study sought to examine the structure and organization of health services in the states and UTs of Haryana, Punjab, Himachal Pradesh (HP), Uttarakhand, Jammu and Kashmir (J&K), and Ladakh. It explored the availability of the present health workforce, the paucities felt during the Covid epidemic, presence or not of a specific PHC, previous experiences with specialized cadres of health workers, and current perspectives on possible institution of one. The chief questions the study sought to address were:

- What is the governance structure and organization of the public health workforce in the study states/ UTs?
- What is their role/responsibilities? What essential public health functions (EPHFs) do they discharge?
- What specific workforce positions perform these functions?
- How do the services differ under routine and epidemic situations?
- What are the current health workforce capacities for said services?
- What qualifications and experience are necessary for these positions?
- Is there a specialized PHC in place for delivery of community level public health services? If not, would institution of one positively impact services and health outcomes?
- What challenges can institution of a specific cadre expect?
- What are the means to best address these challenges?

The study adopted a mixed method approach with primary focus on the qualitative elements. A detailed literature review of published and grey literature was conducted. Sources included state and central government reports, national health surveys, health committee reports, academic journals, newspapers, websites of state and national government health departments, and reports and websites of international and national health organizations. Quantitative data on health workers' availability was collected from respective state departments. Data on health expenditure and health indicators was collected from secondary national and state government sources. Field visits were carried out for primary data collection. Key informant interviews were held with policy



makers, administrators, public health implementers, finance officers, clinicians and grassroots level health workers. Observational visits were conducted to primary health centres, block community health centres and district hospitals. Expert opinion was sought from current and former senior government officers, academic experts, health economists, and health experts from non-government agencies.

## Findings

Before viewing in detail the health services, workforce availability and perspectives on a specific PHC, a brief review of the social and health indicators, and health expenditure in the study states/UTs, is presented below. Taking these health indicators as proxy for overall health outcomes, these figures provide us a glimpse of the health situation of their populations and the current financing of their health systems. It is against the backdrop of these circumstances that any debates on institution and characteristics of a PHC must take place.

Indicator	India	TN	Kerala	Haryana	Punjab	Himachal Pradesh	Uttarakhand	Jammu & Kashmir	Ladakh
LE <sup>1,2</sup>	69	72	75	70	73	73	71	74	
IMR <sup>3</sup>	35	19	4	33	28	6	39	16	20
MMR <sup>4</sup>	113	60	43	91	129	N.A.	99	N.A.	
U-5 mortality <sup>3</sup>	42	22	5	39	33	29	46	19	30
Female literacy rate <sup>3</sup>	70 <sup>5</sup>	84	98	80	79	92	80	77	77
GDP per capita (\$) <sup>6</sup>	2100	3184	3327	3840	2536	3118	3250	1636	
THE/ capita <sup>7</sup>	4297	3955	9264	4329	4231	6541	2963	3109	
PHE/ capita <sup>7</sup>	1753	1621	2272	1428	1086	3177	1625	1679	
Private expd/ cap	2544	2334	6992	2901	3145	3364	1338	1430	

(THE PHE)	–							
PHE as % of THE <sup>7</sup>	41	41	25	33	26	49	55	54
OOPE as % of THE <sup>7</sup>	49	46	69	50	69	49	42	43

*Table 6: Selected indicators in study states and UTs*

*Some figures have been rounded off to the nearest single digit for simplification.*

*(<sup>1</sup> Economic Survey 2021-22, 2022; <sup>2</sup> Handbook of Statistics on Indian States, 2020; <sup>3</sup> National Family Health Survey (NFHS -5). Compendium of Fact Sheets 2019-21, 2022; <sup>4</sup> Special Bulletin on Maternal Mortality in India 2016-18, 2020; <sup>5</sup> Key Indicators of Household Social Consumption on Education in India. NSS 75th round, 2018; <sup>6</sup> [statisticstimes.com](http://statisticstimes.com), n.d.; <sup>7</sup> National Health Accounts. Estimates for India 2017 - 18, 2021)*

These figures present a complex picture. It can be seen that Tamil Nadu, despite being economically much better off than the average Indian state, spends slightly lower on health. This is true for both government and private expenditure on health per capita. Despite this, its health indicators are substantially better than the national average. It thus presents a low cost, high outcome model which is the reason for its oft citation as an exemplar.

Kerala and Himachal Pradesh have similar GDP/ capita as Tamil Nadu but spend significantly more on health; in fact, more than twice in the case of Kerala. Both public and private expenditures show this trend. Health indicators in both states are amongst the best in the country; Kerala's figures match those of developed countries. Both states thus present a high cost, high outcome model in the Indian context.

Haryana is the richest large state in the country while Punjab also has a higher than national average GDP/ capita. Despite this, their public expenditures on health are much lower than the national average, especially in Punjab. Private and out of pocket (OOP) expenditure make up for this shortfall, raising the total expenditure to close to the national figure. Their health indicators fall within the averages as well.

Uttarakhand also has a substantially higher than average GDP/ capita but spends significantly less on health than the national average. Most of this difference is due to lower private and OOP expenditure, while government spending on health remains similar to the Indian figure. Its health indicators, especially those related to infant and child mortality, are considerably worse than the Indian figures. It is thus a lower cost, lower outcome state.

Jammu & Kashmir and Ladakh are considered together as most figures available currently include both geographies. The region is the only site in the present study which

is economically poorer than the average Indian state. GDP/ capita is about 20 per cent less than the Indian figure. The total expenditure on health is also substantially lower than the national average; most of this, as is the case with Uttarakhand, is due to low private and OOP expenditure, while public expenditure is close to the national average. Despite this low total spend, health indicators are significantly better than the Indian average. These UTs thus present the second low cost, high outcome model in this study.

Making note of these characteristics, details of the public health services, workforce and experiences with specialized cadres in the study sites are presented below. The first section discusses the organization of the workforce and the services provided in all the study states and UTs together, since this is largely a standard pattern with some individual variations. Findings on HRH, experiences with specific cadres and perspectives on a PHC from individual states and UTs are presented thereafter.

## Common Features

### Health Workforce Organization

Health departments in all Indian states and UTs principally have a similar organizational structure. They are headed by a political appointee, the 'Minister', under whom a senior Indian Administrative Service (IAS) officer, the 'Secretary' or 'Principal Secretary', oversees all work. There are several officers subordinate to her/him who provide oversight to specific services and programmes. The two main officials amongst these are the 'Director, Health Services' or the 'Director General, Health Services', who is usually the senior most doctor in the state and administers the technical wing of the department, and the Mission Director of National Health Mission, who is a junior administrative officer and oversees this scheme of the central government. Other services or government schemes, such as food and drug administration, PM-JAY, procurement of departmental supplies, provision under the Indian system of medical services (ISM or AYUSH), and general administration, logistics and financial tasks, are supervised by senior officers reporting to the Secretary either directly, or through the offices of the DHS or MD, NHM. Within each state, the responsibility of these services may be shifted between officers over time, depending on the number of senior officers posted at the state headquarters.

A major point of individual state variation is the inclusion or exclusion of 'Medical Education' from the jurisdiction of the health department. In Haryana and Punjab this forms an unrelated independent department headed by a different officer and minister; in other states it is included within 'Health'. Another main difference is the presence or not of a corporatized autonomous body for procurement of all medical supplies. When present, as in Haryana, Punjab and Jammu & Kashmir, it is headed by an IAS officer or a senior technocrat.

'Food and Drug Administration' (FDA) is part of the Health Department but officers discharging these duties form a separate vertical unrelated to the clinical, medical or national programmatic services.

District level departmental structures are also similar across states, with minor variations. The Chief Medical Officer (CMO) or the Civil Surgeon (CS) has offices at the district headquarters and heads all clinical and programmatic activities provided at Sub-divisional hospitals (SDH), block level Community Health Centres (CHC), village level Primary Health Centres and the frontlines. Services provided at the larger hospitals, whether the District Hospital (DH) or those associated with medical colleges, come under the jurisdiction of their respective Medical Superintendents (MSs). The MSs report on the clinical services directly to DGHS or Secretary of the department, while services provided under national health programmes at these hospitals are overseen by 'Nodal Officers' who report to the MD, NHM or the DGHS.

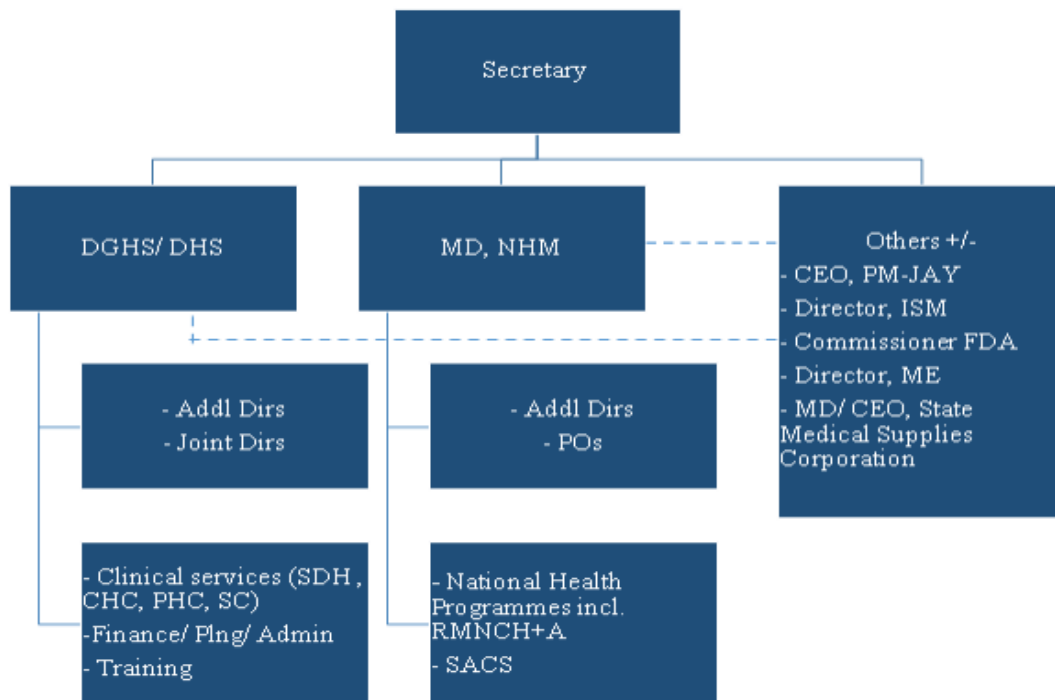
The CMO is assisted by a team of deputy CMOs, District Programme Officers (DPO), one District Surveillance Officer (DSO), one District Epidemiologist (DE), and one District Programme Manager (DPM) at the district headquarters. At the SDH or CHC, a team headed by a Senior Medical Officer (SMO) or Medical Officer (MO) and assisted by the Block Programme Manager (BPM), nursing, paramedical and support staff provides both clinical and programme services. Further down the hierarchy, field workers such as Multi Purpose Health Worker (MPHW—male and female) and community workers (ASHAs) are supervised by Health Supervisor (HS—male), Lady Health Visitor (LHV) and ASHA coordinators.

### Existing Cadres

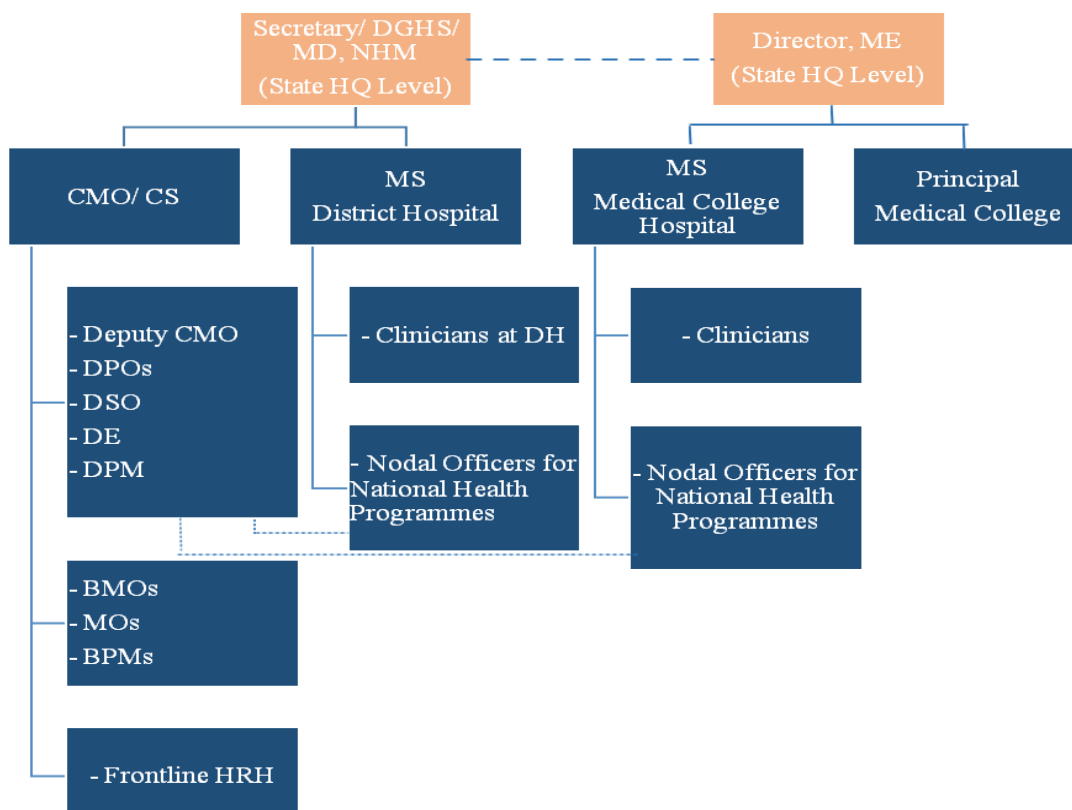
Health workers in all categories, medical, paramedical, and support staff, in all Indian states, fall in two categories. Those who are employed through the State Public Service Commissions in permanent posts are considered 'regular' employees in the offices of the DGHS. Others, employed on contractual basis under the National Health Mission (NHM), whether directly by NHM offices or through a third party, are NHM or contractual employees. The strength of the sanctioned workforce is based on population norms.

At present there is no Public Health Cadre for any category of worker in any of the states/UTs studied. Doctors in permanent positions serve in a single cadre in each state though there is some difference in career progression between 'Generalists' and 'Specialists' in some states. Doctors on full time contractual employment serve in various posts without being considered a 'cadre', as do similarly contracted paramedical and support staff. Details of significance regarding these aspects are described under individual state findings.

## Representative Organogram At State/ UT Headquarters



## Representative Organogram At District



## Services Provided And Qualification Criteria

As with the HRH organization, services provided by all states and UTs are also similar. Direct service delivery by the departments to the population focuses on two aspects—clinical care to patients at health centres and hospitals, and implementation of national vertical health/ disease control programmes. As part of the former, departments provide clinical care to patients who seek it. This is provided at all administration levels from district headquarters downwards, but the type of services available and the quality is highly variable. Most routine specialized clinical care is available at the DHs; SDHs and CHCs provide some surgical, gynaecological, obstetric and general medical services. Depending on the availability of specialists, some services for ophthalmology, ENT or skin diseases etc. may also be available. Primary Health Centres only provide general Out Patient Department (OPD) consultation and minimal medicines; village level services essentially provide only programme related services.

For implementation of the centrally sponsored national programmes, the departments provide services for disease prevention such as childhood vaccination, maternal care related to pregnancy, treatment for specific diseases under the respective programmes, and respond to emergency situations/ epidemic outbreaks, conduct Information, Education and Communication (IEC) activities, and provide school health services and screening for Non-Communicable Diseases (NCDs). All programmes are overseen by Programme Officers (DPOs) at the district level and SMO/MO at the block; both positions are held by doctors. In all states/UTs, these positions require chiefly administration or management of health services with no or minimal responsibility for provision of clinical care. The DPOs and SMOs are assisted by the DPM and the BPM at the district and block respectively. Posting to none of these supervisory administrating positions, from junior-most to the CMO, mandates any form of public health qualification or training in any of the states/ UTs in this study; all respondents posted in these positions spoke of acquiring skills needed to discharge their duties by 'learning on the job'.

Other functions undertaken by the departments, not directly interfacing with the population, include monitoring the status of certain communicable diseases under the Integrated Disease Surveillance Programme (IDSP). In addition, the DE and DSO, both posts outside IDSP, are meant to conduct monitoring and surveillance activities for other communicable and non-communicable diseases and potential health threats; there is no epidemiological or public health qualification criteria for these posts, neither is any training specifically provided when officers take up these roles.

Since the 12th Five Year Plan for the country was implemented, a framework for assuring quality at public health institutions has also been put in place. One Quality Assurance Manager's post at district headquarters has been created to ensure adherence to the framework guidelines by all health institutions in the district. No public health qualification is required of these managers.

Another important function of the departments is to build capacities in the health workforce. Most of the trainings across all study states and UTs are based on central government recommendations and guidelines; they focus on providing knowledge and technical skills required for implementation of the national health programmes. The chief programme in focus at the vast majority of these trainings is the maternal and child health programme. Some trainings relate to non-communicable and communicable disease programmes. No training requirements are sought from the trainees; post-training support is universally weak or lacking. Capacity building exercises to strengthen administrative and managerial skills of technocrats, to build capacities for leadership or policy and regulation development and enforcement, or for carrying out financial duties required in senior posts, are held only very occasionally. All respondents posted to such positions, without exception, reported seeking informal guidance from more experienced colleagues and subordinates in order to perform their duties.

In all study sites the senior most technocrats are part of the policy formulation and decision-making processes, but their roles and contributions are not based on formal institutional frameworks for departmental governance; rather, they depend upon the individual officer heading the department. Technocrats may be vital to the final policies and choices made or their participation may be perfunctory, depending upon their personal relationship with the Secretary.

None of the departments studied undertakes any environmental or occupational health activities; these are the jurisdiction of other 'non-health' departments. Some degree of inter-departmental interaction on environmental services is undertaken at times of epidemic outbreaks; this is detailed in following sections. The health departments also do not conduct any research into population health. Preventive and Social Medicine (PSM) departments of medical colleges, working independently of the health departments, carry out any that may be undertaken.

## **HARYANA**

The 'Health Department' in Haryana, as it is officially named, is responsible for clinical and programmatic services, but medical education, medical and dental colleges, and research, are the jurisdiction of a separate department headed by a different officer. This has implications for the numbers and kind of HRH produced, the practical trainings they receive during their education, and the suitability of the research undertaken. A complete separation between the two departments hinders good coordination on these issues. It has also led to duplication of clinical facilities in the largest cities and towns where both departments run hospitals providing specialized care, while population needs in smaller municipalities have been left unaddressed.

## Health Workforce Availability

The tables below give a picture of the extent of shortages of staff in various positions in Haryana. Only positions with high vacancies are listed here.

<i>Position</i>	<i>% Vacant</i>
Technicians	
X Ray technician	70
Lab technician	65 – 70
ECG technician	69
Nursing Staff	
Staff nurse	51
Matron/ PHN	58 – 76
OT assistant	57
Computer clerk/ DEOs	51
Frontline Staff	
MPHS (F)	41
MPHW (F)	25
SMO	29

*Table 7: Haryana Regular Staff Position Status*

<i>Position</i>	<i>% Vacant</i>
Specialists	49
ENT specialist	100
Radiologist	93
Physician	63
Anaesthetist	67
Paediatrician	37
Orthopedician	40
Gynaecologist	30
District Programme Coordinator	51
MO	21



Epidemiologist	8
State Headquarter positions	22

*Table 8: Haryana NHM Staff Position Status*

It is evident from the numbers above that health workforce shortages are critical in Haryana. The biggest deficits are in hospital and health centre-based positions—specialist doctors, technicians, and nurses, all of whom together form the backbone of clinical care. Most of these positions have over 50 per cent vacancies, ranging up to 100 per cent in the case of certain specialist doctors. Even at the state headquarters, where most positions are in managerial capacity, more than one in five is currently vacant. Thus, both the actual delivery of services and their management capacities are severely lacking. Additional temporary staff recruited on emergency basis to deal with the sudden and devastating onslaught of the Covid pandemic gives another view of the key positions which are required (table below). As can be seen, technicians and nurses form the bulk of these positions; medical officers, public health managers and general support staff were other key short-staffed positions.

<i>Position</i>	<i>Number Recruited</i>
Lab technicians	342
Staff nurse	166
Class IV/ Helper	159
Pharmacist	29
Public Health Manager	34
MO	24
Others	307
Total	1059

*Table 9: Haryana Special Recruitment for Covid*

## **Previous Experience With Specialized Cadres And Current Perspectives From The State**

Haryana has put in place several measures to strengthen services available to its population, chief among these are efforts to improve recruitment and retention of health workers in the public health system (Chikersal, 2015). As a continuation of these efforts, and in light of the recommendations of public health and academic experts, it commissioned a study on institution of a PHC in the state in 2013. The study was carried out by the Haryana State Health Resource Centre (HSHRC) and gave detailed recommendations on the subject. It proposed that a Public Health Act be implemented

and a PHC be put in place. It advocated for two posts of Director Generals in the state; one DGHS as is currently the practice, and the second as DG Public Health. It recommended that the cadre include Deputy CSs, and the junior officers and paramedical staff currently reporting to them. New posts of Public Health Officers (PHO) and Junior PHOs should be created at the block and primary health centre levels; existing paramedical staff should report to these officers for the relevant services.

The proposal faced stiff resistance from doctors in the state services as they felt it would lead to major advantages in promotion opportunities for those with a public health postgraduate qualification as compared to those with none or with other specializations, given that both streams would have the same number of senior positions while total number of public health specialists were far fewer than other disciplines. In fact, there has been a long-standing demand from doctors to institute a 'Specialist' cadre in the state, as separate from the 'Generalist' doctors (those without postgraduate qualifications). The lack of one is often cited as a key reason for specialists not joining the state service. The Covid epidemic brought into sharp focus the extreme shortage of specialists in the department and has led the government to accept this demand; an order creating a 'Specialist cadre' of doctors was issued in September 2021. It announced the creation of 584 new posts of 'Specialists' and transfer of an additional 1,516 posts from the general cadre to this. It also created a second post of DGHS in this cadre. Doctors with all postgraduate qualifications, including public health, will be considered part of this new cadre once it comes into place; they will receive higher pay, and be posted as per their specialization. Public Health Specialists will hold administrative posts in the larger hospitals. The functions to be discharged by this new cadre, however, will continue to be the same as before.

## **Challenges To Current Public Health Services And Potential Public Health Cadre**

Current public health services in the state are directed predominantly towards Government of India's vertical health programmes. There is little, if any, emphasis on environmental and community health services. A 'Public Health' division exists on paper within the offices of the DGHS but is not populated for the last several years. Environmental engineering is the jurisdiction of a separate department with no coordinated service provision under routine circumstances. Only in the event of a major water or vector borne disease outbreak do the two departments coordinate to deal with the situation. This coordination typically happens at the level of the districts and below, on the directions of the senior administrative officer in-charge of the district.

Separation of medical education from health services is also detrimental to coordinated health workforce development and service provision. Production of medical and paramedical professionals occur in a silo, not considering the needs of the health department. This departmental separation has also led to duplication of specialist and

super-specialist services in the bigger cities and towns, whereas smaller towns have not been provided for by either department.

Apart from this, trainings for personnel in the health department, both medical and paramedical, are focused on technical aspects of the vertical programmes. There is scant training given on the essential public health functions—public health administration, management, financial and legislative aspects, technical public health disciplines such as epidemiology and biostatistics, data analysis, and cultural competencies; these are universally reported deficient. Both doctors in administrative roles and programme managers, and their superior officers, expressed felt the need for training in these EPHFs.

As described previously, there was a long-standing demand from specialist doctors in the state for a separate cadre. While they demanded such separation, they were opposed to a separate public health cadre for those with public health qualifications due to the reasons cited. At the same time, there was intense pressure from 'Generalists' to continue with the status quo as they viewed institution of a 'Specialist' cadre with better remuneration and promotion opportunities as discriminatory against them. Given this tussle, the government took no action to change the status quo even after the State Health System Resource Centre (SHSRC) recommended institution of a PHC till the dire situation created by the Covid pandemic forced action. Now, creation of a 'Specialist' cadre has been ordered, but functions discharged by these specialists will continue to be the same as at present. No specific posts for delivery of EPHFs have been created, neither have the roles of public health specialists been redefined to include any EPHFs. No restructuring of capacity building exercises has also taken place.

## **PUNJAB**

The health department in Punjab is called the 'Department of Health and Family Welfare' (DoHFW). As is the case with Haryana, medical and dental colleges, medical education and research form a separate department. Environmental services are also looked after by a different department.

The DoHFW includes an autonomous body, the Punjab Health Services Corporation (PHSC), which is responsible for all infrastructure construction and maintenance, procurement, quality assurance and ancillary services in hospitals from the block level upwards. It is headed by an IAS officer who reports directly to the departmental Secretary. This body has a district level functionary, the Deputy Medical Commissioner (DMC). The post is held by a doctor who functions as per the requirements of the CMO's and MS's offices but independent of them, reporting directly to the MD, PHSC.

There is no specialist or public health cadre in Punjab; all doctors serve in a single cadre. Postings and promotions are as per seniority. No public health qualifications, training or

experience is essential for any administrative/supervisory/managerial/analytic post.

## Health Workforce Availability

The tables below give an indication of the posts that face the most shortages and where maximum temporary staff has been recruited to manage the Covid epidemic.

<i>Position</i>	<i>% Vacant</i>
Frontline Staff	
MPHW (F)	51
MPHW (M)	13
Doctors	
Specialist doctors	41
GDMOs/ Casualty doctors	22
Lab technician	30
Staff nurse	25
Pharmacist	20

*Table 10—Punjab Regular Staff Position Status*

<i>Position</i>	<i>% Vacant</i>
Frontline Staff	
MPHW (M)	54
MPHW (F)	6
Doctors	
GDMOs/ Casualty doctors	37
Specialist doctors	32
Technicians	
Lab technician	14
X Ray technician	45
Staff nurse	31
Pharmacist	28

*Table 11: Punjab NHM Staff Position Status*

In Punjab the highest vacancies are in the posts of field workers, who, under both routine and epidemic situations, form the frontline of public health service delivery. These comprise the regular posts of Female Multi Purpose Health Workers and the contractual positions of Male Multi Purpose Health Workers. Doctors, junior General Duty Medical Officers (GDMOs)/casualty doctors, and postgraduate trained specialist doctors are also severely short; contractual positions also have high vacancies. Punjab also has high shortages of paramedical technical and nursing staff.

<i>Position</i>	<i>Number Recruited</i>
Computer Operator/ DEO	20
Lab technicians	15
Epidemiologist	12
Microbiologist	12

*Table 12: Punjab Special Recruitment for Covid*

The frontline work for Covid management in Punjab was done by temporarily shifting staff from other departments and health programmes, notably the Education department and the School Health Programme where staff could be spared due to the closure of schools and colleges. Special recruitment focused on strengthening district level laboratories and data management by hiring technicians, microbiologists, data entry operators (DEOs) and epidemiologists on contract.

## **Previous Experience With Specialized Cadres And Current Perspectives From The State**

Although there is no ‘Specialist’ or ‘Public Health’ cadre in the state, the autonomous PHSC serves as a distinct vertical, replicating issues that can be expected with a separate cadre. The district level functionaries of the corporation, the DMCs, are doctors who are junior to the CMOs within the service but hold independent charge. Given the unevenness in seniority and considerable authority resting with the DMC, there is a major lack of coordination between the two offices. In the absence of strong political backing for such corporate structures, the effectiveness of PHSC has been severely compromised.

There have been other measures attempted to improve public health services. In 2021, following recommendations of the central government, the state government tabled a ‘Draft Public Health Bill’ in the legislature. The bill outlines the responsibilities of the state government towards the health of the people and the health rights of the citizens. It proposes the formation of a ‘Public Health Board’ with a political appointee as

chairperson and Secretaries of various departments as members. It also proposes district units of the board. The ostensible aim of the bill is to develop evidence-based health policies and strategies, set norms and put in place monitoring and auditing structures. The bill is, however, a policy statement and does not lay down specifics. It also does not call for establishing a separate PHC.

## **Challenges To Current Public Health Services And A Potential Public Health Cadre**

Punjab has over the last few decades developed a strong culture of politicization of services and staff. Departmental priorities appear to be based not on evidence or needs but on political expediency. There are frequent changes in both administrative and technical leadership in the department. This has led to discontinuous policies, which has affected services adversely.

A very high health worker shortage in the field positions is another major challenge. Frontline workers are key to the delivery of EPHFs at the point of contact with the population; a scarcity of these workers is a serious impediment to effective departmental outputs. The paucity of hospital and health centre based clinical care workforce adds further to this lacuna.

Training of all HRH is based on central government recommendations; as with Haryana, this focuses on the technical aspects of few vertical programmes. Core skills required for delivery of EPHFs are scarcely included in any training curricula.

Budgetary inflexibility in the face of the state's dependence on central funds is another constraint that hampers both the capacity building for administrative and core public health functions as well as delivery of these services.

Scarcity of both medical and non-medical public health specialists and a lack of buy-in for core public health services from the rest of the medical fraternity and the politico-administrative set up, are barriers to the establishment of a specific PHC. The possibility of differential salary structures and promotion avenues for any potential PHC is causing stiff resistance to the idea from non-public health specialists in the state. The hierarchical Indian attitudes and differentials in autonomy, jurisdictions and authorities, as evidenced by the experience of the PHSC officers, will add to these challenges.

## **HIMACHAL PRADESH**

The Department of Health and Family Welfare in Himachal Pradesh (HP) has two main verticals under officers designated 'Special Secretary'; one oversees the clinical and programme services, general administration, Food and Drug Administration (FDA) and dental services, the other medical education and services provided in hospitals

associated with medical colleges. Both Special Secretaries report to the Principal Secretary of the department.

The district organization is similar to the one in Haryana, except that the department has authority over the MS of medical college hospitals and the principals as well.

There is no specialist or public health cadre in the state. Postings and promotions are based on seniority.

Services provided are similar to the previous two states with focus on selected vertical health programmes. Public health qualifications or training is not mandatory for any post.

## Health Workforce Availability

Highlights of the current health workforce availability are presented in tables below.

Maximum vacancies are in field staff or frontline worker positions, especially male workers. Staff nurses and technicians form the next major short-staffed categories. The third major cadre facing serious shortages is that of junior doctors/ additional MOs. There is thus a reverse pyramid of health workforce in HP, with adequate specialists and senior doctors but scarcity of junior doctors, paramedical staff and frontline workers.

<i>Position</i>	<i>% Vacant</i>
Frontline Staff	
MPHW (M)	78
MPHS (M)	99
MPHW (F)	43
MPHS (F)	24
Nursing Staff	
Staff Nurse	23
Sister Tutor	62
Lab Technician	62
Pharmacist	29
Statistical Assistant/ DEO	61

*Table 13: HP Regular Staff Position Status*

<i>Position</i>	<i>Numbers recruited</i>
Epidemiologist	1
Staff Nurses	282
DEO	232
BPM	70
Lab Technicians	88
Pharmacists	109
Junior Doctors	
Additional MO (M)	127
Additional MO (F)	115
ANM/ FHW	129

*Table 14: HP NHM Staff Position Status*

Highest additional recruitment during Covid was for hospital/ health centre-based positions of staff nurses, technicians and support staff, indicating the wide gap between the need for clinical care and its availability at the time.

<i>Position</i>	<i>Number Recruited</i>
MO	48
Staff Nurses	481
Lab Technicians	75
CI IV/ Helper/ Safai Karamchari	445
DEO	29
Others	140

*Table 15: HP Special Recruitment for Covid*

## **Previous Experience With Specialized Cadres And Current Perspectives From The State**

The state does not have any Specialist or Public Health Cadre in place either for the medical fraternity or non-medical personnel. All doctors serve in a single cadre where promotions are based on seniority. As doctors move to positions of SMO and higher, they take on increasingly administrative roles, unless serving specifically in clinical posts in hospitals. They do not require a public health qualification for these posts, though a need for greater capacities to manage public health and to retune services was expressed by most senior officers interviewed. At present however, there is little debate and no consensus on the specifics of the needs or the modalities best suited for



achieving the desired ends.

## **Challenges To Current Public Health Services And Potential Public Health Cadre**

The greatest challenge to service delivery at present is a reversal of human resource availability with sufficient numbers in management positions at the top of the pyramid at the district and state levels, but severe inadequacies in frontline positions. The other major challenge is lack of adequate skills and competencies in doctors to administer the services. Very few capacity building exercises are conducted to strengthen management skills, financial decision making or ability to deal with legislative issues. All officers universally expressed a need for strengthening these capacities.

Services also face difficulties due to irrational postings of officers dictated by political patronage rather than requirements of the system and the candidate's suitability. It was felt that institution of a separate PHC without resolution of these issues would do little to improve service delivery.

## **UTTARAKHAND**

The Department of Medical Health and Family Welfare (DoMHFW) in Uttarakhand has five verticals—the general health services (clinical services), National Health Mission (all national health programmes), medical education, food and drug administration, and the State Authority for PMJAY. Medical education was previously a separate department with a different Minister and Secretary but has recently been brought under the umbrella of DoMHFW to improve coordination in service delivery and HRH production. The district workforce organization follows the regular pattern. At present there is no Specialist or PHC in the state. Public health service provisioning also follows the typical model with primary focus on maternal and child health, followed by communicable and non-communicable disease programmes. No public health qualification or training is necessary for holding any posts in the department. DoMHFW bears no routine responsibility for environmental health services. It has no jurisdiction over occupational health services. Research into public health issues is carried out only in the PSM departments of medical colleges but this is conducted independently despite the recent merger of the Department of Medical Education (DoME) with DoMHFW.

## Health Workforce Availability

Chief highlights of availability of health workers in the state are as below.

<i>Position</i>	<i>% Vacant</i>
Director	33
Assistant Director	37
MO	50
Staff Nurse	31
X Ray Technician	56
Lab Technician	52
Pharmacist	7 – 27
MPHW (F)	24

*Table 16: Uttarakhand Regular Staff Position Status*

<i>Position</i>	<i>% Vacant</i>
MO	62
Microbiologists	62
Specialists	
Gynaecologists	100
Anaesthetists	50
Paediatricians	30
Pathologists	40
Nursing Staff	
Staff Nurses	34
Nurse Trainers	100
Technicians	
OT Technicians	100
Lab Technicians	64
X Ray Technicians	40
ECG Technicians	100

ANM	54
DPO	75
Epidemiologists	23
District Coordinators	100
TB Programme Officers	45 – 100
Quality Managers	30
State Health System Resource Centre	100

*Table 17: Uttarakhand NHM Staff Position Status*

It can be seen that Uttarakhand has a high percentage of vacancies in all cadres—medical, paramedical, frontline workers and support staff. Vacancies also exist at all levels i.e. from the peripheral village level to the district and state headquarters. The degree of shortages is also very high; it is routinely more than 50 per cent and up to 100 per cent in several cadres. The State Health System Resource Centre (SHSRC) itself is unpopulated and non-functional at present.

Emergency temporary recruitment done to manage Covid further highlighted these insufficiencies. Greatest need was felt in hospital based clinical care paramedical staff such as nurses and technicians, in office staff such as DEOs, and general support staff. Emergency MO positions were also under severe constraint. Extensive support was taken from other departments to manage the pandemic—education, police and public health engineering.

<i>Position</i>	<i>Number Recruited</i>
Staff Nurses	283
Lab Technicians	98
Pharmacists	59
DEO	171
Ward Boys	301
CI IV/ Sweepers	91
Others	120

*Table 18: Uttarakhand Special Recruitment for Covid*

## **Previous Experience With Specialized Cadres And Current Perspectives From The State**

Uttarakhand is the only state in the present study which has previous experience with a

'Specialist' cadre for doctors. Doctors with any postgraduate qualification were part of this cadre. However, there was resentment against its structure and rules amongst members of the cadre itself, and several agitations were held against this format. This was because there were fewer non-specialists than specialists in the state, but promotional avenues were the same for both. This led to much faster promotions for the generalists, which the specialists considered discriminatory and a reversal of the desired. The state government, therefore, merged the two cadres. This continues to date.

The state also had two separate departments for health services and medical education, headed by different ministers and officers. This seriously hampered coordination with the type of HRH being produced and educational syllabi poorly connected to those required by the health services. Poor coordination also affected the clinical services provided in the state. At several places, notably the larger towns and cities, services were duplicated due to establishment of both hospitals associated with medical colleges and those under DoMHFW, while smaller towns suffered neglect from both departments. The present state government, therefore, merged the two departments to improve coordination on all these fronts.

The state administration in discussions held during this study expressed in principle belief that institution of a PHC would be beneficial, but it is hesitant to experiment with creation of another new cadre given its past troubled experiences. There are currently no formal deliberations on the subject.

## **Challenges To Current Public Health Services And Potential Public Health Cadre**

The extremely high vacancies in existing posts are a major challenge for the state. The fact that all kinds of positions face this shortage—clinical care, public health services and management—makes this particularly difficult. Delivery of public health services is especially challenging due to the extreme shortage of male workers who are crucial for field work while a similar shortage of staff nurses, compromises clinical care severely.

As with other states, capacities for administering and managing public health functions or dealing with political and public figures are limited. Little training is given to build these capacities; the view was articulated that though doctors who are posted as Block Medical Officers (BMOs) acquire a basic level of these skills through practical experience, this does not compensate for the lack of formal training or qualifications in public health. Moreover, many doctors get posted in positions requiring a high degree of competency in EPHFs without any kind of practical experience in the same. Many others would prefer to work only as clinicians rather than in administrative posts managing programmes or public health activities.

Uttarakhand also faces serious budgetary constraints due to poor state revenues. This has put a virtual halt on any recruitment for regular posts, while attracting suitable qualified candidates for positions under NHM is difficult due to the poor remuneration offered and difficult topography of the state.

These challenges must be considered before any restructuring is undertaken.

## **JAMMU & KASHMIR AND LADAKH**

The Union Territories of Jammu & Kashmir and Ladakh were a single state till August 2019 when they were bifurcated into two separate Union Territories. They are considered together here because the data available for the two UTs often provides combined figures (Table 5). Where possible, findings are presented for both separately.

The Department of Health and Medical Education in J&K has four divisions, namely those of Health, Medical Education, NHM and PMJAY. The UT has an autonomous Medical Supplies Corporation responsible for procurement of all supplies; at present this is included within the Medical Education (ME) division. The department in Ladakh is much smaller in comparison. There are two divisions in the department with the DHS overseeing clinical services while the MD, NHM oversees all national health programmes. There is no medical college in the UT; it is proposed to start one in 2022.

The organization at district levels is similar to other states. Service provision in the UTs and trainings of HRH also follows the same path and emphasis as the states.

The UTs do not have a Specialist or Public Health Cadre. Postings and promotions are based on seniority. There is no public health qualification or experience mandatory for any posting. No training on EPHFs is provided upon posting either.

### **Health Workforce Availability**

The two divisions of Kashmir and Jammu present quite different pictures on the availability of health personnel. The tables below point to the main positions and their status.

<i>Position</i>	<i>% Vacant</i>
Doctors	
Senior Consultants	57
Consultants	12
Mos	11
Nursing Staff	

Staff Nurse/ Senior Nurses	12
Junior Nurses	5
Technicians	
X Ray Technician	9
Lab Technician	21
Radiographer	100
Blood Bank Technician	100
Office Staff	
Statistical Officers/ Assistant	35
Accounts Officers/ Assistant	15
Frontline Staff	
Sanitary Inspectors	0
MOHW (M)	7

*Table 19: Kashmir division Staff Position Status*

<i>Position</i>	<i>% Vacant</i>
Doctors/ Non-medical Specialist Posts	
Mos	45
District Malaria Officer	83
Surveillance Officer	100
Nursing Staff	
Matron/ Nursing Tutor/ Nursing Supervisor	50 – 100
Staff Nurse	34
Junior Nurse	30
Pharmacist	12
Technicians	
Blood Bank Technician	18
OT Technician	86
X Ray Technician	17
Lab Technician	16

ECG Technician	100
Programmatic Posts	
TB Officers	100
Malaria Inspector	79
Frontline Staff	
LHV	41
MPHW (M)	33
Orderly/ Safaiwala/ Ward Boy/ Helper	46 – 87
Office Staff	
Statistical Officer/ Assistant	55
Accounts Officer/ Assistant	47

*Table 20: Jammu division Staff Position Status*

It is evident that Jammu division is facing shortage of personnel in far more cadres than Kashmir. The degree of deficit is also much more severe. While shortage in Kashmir is largely limited to senior doctors, certain categories of technicians and office staff, deficiencies in Jammu span all cadres—medical, paramedical, nursing, technical, office staff, support staff and frontline workers. The consequences of these differences were evident during the worst phases of the Covid pandemic when Jammu division had nearly twice the mortality than Kashmir even though incidence of the disease was far higher in the latter. The situation is especially difficult in urban areas of Jammu division as the National Urban Health Mission (NUHM) has so far established only smaller Urban Primary Health Centres (UPHCs). Larger referral hospitals are very limited. There is also much more shortage of administrative staff in the newer urban positions than in the old established rural health system.

In terms of the verticals/ institutions within the divisions that face these shortages, the table below highlights key differences. Hospitals and medical colleges bear the greatest brunt of the deficiencies in filled posts; shortages in departmental headquarters are mostly moderate. This is true for both Jammu and Kashmir divisions.

<i>Organization/ Institution</i>	<i>% Vacant</i>	
	<i>Gazetted Post</i>	<i>Non-gazetted Post</i>
DHS Kashmir	4	9
DHS Jammu	23	17
Directorate of FW, MCH & Immunization	34	13

Directorate of ISM	7	25
Controller Drugs & Food Control	44	38
Govt Medical College (GMC) Srinagar & associated hospitals	40	27
GMC Jammu & associated hospitals	30	34
GMC Anant Nag	71	89
GMC Baramulla	70	90
GMC Doda	70	90
GMC Kathua	72	90
GMC Rajouri	87	89

*Table 21: Organization/ Institution wise Vacancies in Jammu & Kashmir*

Availability of health workforce in Ladakh presents a moderate picture. Vacancies range from 21 per cent to 75 per cent. Most severe shortages are in positions for senior and gazetted officers, while paramedical non-gazetted and supportive posts face fewer vacancies.

<i>Organization/ Institution</i>	<i>% Vacant</i>	
	<i>Gazetted Post</i>	<i>Non-gazetted Post</i>
DHS Ladakh	50	21
Drugs & Food Control Organization	33	25
Directorate of ISM	75	0
Total	51	21

*Table 22: Organization/ Institution wise vacancies in Ladakh*

## **Previous Experience With Specialized Cadres And Current Perspectives From The UTs**

Both UTs do not have any 'Specialist' cadre for doctors but those with postgraduate qualifications are given a higher 'Grade' whereby they receive faster promotions. The only experience of separate or new cadres in recent times is with the Community Health Officer (CHO) cadre recruited for Health and Wellness Centres (HWCs) under PMJAY. While this recruitment has been considerably beneficial in populating remote sub-centres and conducting screening and surveillance for Covid, the Mid-Level Healthcare Providers (MLHPs) recruited are now agitating for conversion of their contractual positions to permanent posts. It is also proving challenging because although the posts are specifically based in remote areas and are non-transferable, there is pressure on the



department to transfer many of these workers to larger towns and cities. In view of these experiences, there is considerable hesitation towards establishment of any new cadre. The view was also expressed that all NHM staff is involved only in public health activities for national programmes and thus work practically as a separate PHC.

## **Challenges To Current Public Health Services And Potential Public Health Cadre**

Shortages in health personnel providing field services present a key challenge in the Jammu division, while a severe shortfall in many cadres at most hospitals other than in the largest cities of Srinagar and Jammu is another major difficulty. Lack of staff in urban Jammu is a foremost problem.

Deficient capacities to administer public health functions were cited several times by officers during this study. They receive no training to perform financial tasks, take financial or policy decisions, manage procurement or legislative enquiries, or interface with political and public figures. This seriously compromises their ability to effectively discharge their duties outside the clinical/ medical sphere.

The need for strengthening public health services was acknowledged; however, doubts over instituting a new cadre were also expressed. The administration suggested that the means for such strengthening needs to be considered further and details thought through carefully before taking any steps.

## **DISCUSSION**

The institution of a Public Health Cadre in India, at both state and national levels, has long been advocated by health professionals and academic experts. The rationale is that a separation in provision of clinical care from core public health activities will bring back the necessary focus on the latter. India has a history of such separation; health services in pre-independent colonial India were divided between the Indian Medical Service (IMS) and the Commissioners of Public Health. Post-independence, the two were merged; the merger was expected to build a holistic and socially responsive healthcare system. It can now be acknowledged that it has in fact done precisely the opposite; it shifted focus to the curative aspects with neglect of the 'public' in public health.

This lacuna has been noted by many government committees set up to examine modes of strengthening the health system (Mudaliar Committee 1962, Mukherjee Committee 1966, Bajaj Committee 1996). They recommended, variously, instituting a cadre of 'Central Health Services' (a cadre of doctors taken from state services), district level administrative head of medical services to be kept free of clinical responsibilities, and having personnel with public health qualifications in the system, as means of addressing this neglect. The National Commission on Macroeconomics and Health in 2005

recommended institution of a specific PHC and the National Health Policy in 2017 has provided specifics of its vision of such a cadre.

Indeed, there are several models for such a cadre to choose from. Babu (2011) has suggested a structure similar to that of Tamil Nadu, whereby doctors after a certain period of rural service will have to opt for either a Public Health cadre or a medical cadre. The former will then mandatorily acquire specified public health qualifications and serve at block levels to provide community level public health services, while the latter will provide clinical care. Subsequent promotions are to be based on experience and seniority. Sathyanarayan and Babu (2011) have provided more detailed recommendations emphasizing the 'public health' aspects of such a cadre. They have advised strengthening the core public health skills such as health assessment and surveillance, and leadership skills such as strategy and policy development. They view technical skill upgradation as an add on to this expertise. They also recommend a common accreditation system for institutions providing such training. Priya and Chikersal (2013) have emphasized the need to address equity and the social determinants of health by such a cadre, while Salunke and Lal (2017) advocate the multi-sectoral approach to address the same lacunae.

Whatever structure is decided for India's public health services, it is essential to begin with clearly defining the role they are envisaged to play. Examining the variations in EPHFs that have been recommended by various agencies, it seems apparent that this role is guided by the underpinnings of a healthcare system and different national priorities. Countries with a social welfare approach to services have included provision of clinical healthcare as intrinsic to EPHFs, while those in which privatized healthcare is the norm, are focused primarily on monitoring population health and information dissemination. India needs to firmly decide where it wishes to sit within this spectrum in order to adapt measures to the specific needs of such a system.

India's approach to the 'preventive' must also be realigned. At present its services emphasize a verticalized strategy and focus within that on sharply circumscribed priorities. They have been reactionary rather than pro-active, emphasizing 'disease' control programmes as opposed to 'health'. For it to be a system that responds to health needs of its population as opposed to disease occurrence, it needs to provide for both the existing, and evolving, health needs. It therefore needs to be able to foresee and predict main trends, and guide and implement preventive services accordingly. Importantly, it must regularly conduct self-evaluation exercises and respond pre-emptively to its systemic shortfalls. In order to perform all these essential functions, it needs to build the necessary capacities. These will necessarily have to be multidisciplinary capabilities, not just technical clinical expertise. Given the varied facets and complexities of present-day healthcare, it will require a blend of clinicians, epidemiologists, statistical experts, social scientists and many more, to effectively provide these functions. At present, publicly available government data from key health

agencies such as the Central Bureau of Health Intelligence does not reflect the status of many important public health positions such as epidemiologists, biostatisticians, management or finance experts, and others, neither is any budget set aside for specific workforce training in EPHFs. This demonstrates the low priority set by these components. Instead, the system has focused on infrastructure and vertical maternal, child and disease control programmes. While these are important facets, adequately trained human resources that provide these services are the essential core of any healthcare system. Building effective public health capacities in its HRH must therefore be a fundamental principle of India's healthcare system.

An examination of services, workforce and health outcomes in the various states in this study, and differences in these parameters, raises several questions. What differences exist between states with poor and good outcomes? Can differences in health expenditures explain the differentials? Do states with better indices all have PHCs in place? We see from Table 5 that of the best performing states, Kerala and HP are high expenditure states, TN is not. Neither of the first two has a PHC in place while TN does. Thus, both high healthcare spending and presence of a specific PHC in a state are associated with better health outcomes and can reasonably be inferred to contribute significantly to them. These observations also suggest that a skilled set of public health personnel can compensate for lower average health expenditure without compromising the extent or quality of services, and thereby the health outcomes. This is a critical aspect for a country such as India that has struggled to increase public health expenditure for long.

These conclusions, however, do not provide answers to all the questions that arise. For instance, it cannot explain the good indicators in J&K and Ladakh, UTs which have lower GDPs than the Indian average, lower health expenditures and no specific PHCs in place. What explains the better health indicators here? While further study is needed to delineate the precise reasons for this apparent anomaly, it seems likely that it is the better than average availability of health workers, especially in Kashmir and Ladakh, that is a key factor in these positive outcomes. This study found that vacancies in field positions in both regions (though not in Jammu) were significantly lower than in all other states. It is also possible that the workforce is better skilled, and the quality of care provided, both clinical and preventive, adds to these positives. It should also be noted that the higher-than-average workforce availability is at field level posts, not hospital based. On the other end of the spectrum, Uttarakhand also sits with J&K and Ladakh in its lower-than-average health expenditure and absence of a PHC, but its health indicators are the worst amongst all states studied. The extreme shortfalls in health workers in the state lend further credence to the assertion that workforce availability and capacities are key to better health outcomes.

Whether this workforce is structured as a separate cadre, as in TN, or available within the existing arrangements, as in J&K and Ladakh, appears secondary. It is the capacity

within the system—numbers, knowledge, skills, management—that is crucial.

Nevertheless, a separate cadre can reasonably be expected to help bring about a change in the institutional approach from an individualistic techno-curative centered to a public health centric system. It is likely to help develop more socially and epidemiologically relevant policies and services and instill these approaches in non-public health professionals in the system as well. But this can only happen if the basic approach to public health shifts. A dedicated cadre that continues to provide the same services without expanding its core activities of surveillance and quality assurance, research, self-evaluation, capacity building, and abilities to develop and enforce policies and regulations, would defeat the very purpose of restructuring the current system. It is essential that as India moves forward on its path to a PHC there is a shift in the approach adopted, the core functions the system sees as its principal responsibilities, and the capacities developed in its human resources, not just in the path to delivering existing services.

Another critical role of a PHC can be in decentralizing public health planning. A country as vast and diverse as India, with wide socio-economic disparities and varied political situations, calls for in-depth understanding of local issues and health needs, and specific responses moulded to these. A separate PHC can be a means to building the required institutional capacities at the peripheral level in lieu of the system's current dependence on central leadership. It can also aid in building long term strategies for addressing both existing and recognized health needs, and unforeseen ones that arise. Moreover, it will allow non-public-health physicians to provide clinical care without diverting their time and effort towards administration of services. A Public Health Act can greatly aid in these efforts. It is a means of building these capacities and providing the needed authority to the state systems. It is needed to delineate the responsibilities of each role and position in public health and provide the necessary authority to these positions to carry out their duties. It is also needed to demarcate accountability within the system. A cadre created without such an Act in place is unlikely to have the teeth to perform its role fully.

Despite these strong positives, it is prudent to examine the challenges the institution of such a cadre is likely to face. Previous experiences from multiple states show that establishment of any new cadre is fraught with administrative, judicial and logistical difficulties. Experiences of Chhattisgarh and Assam can be taken as key lessons amongst these. Chhattisgarh experimented with a new cadre of 'Rural Medical Assistants' in the early 2000s aided by the passage of an Act to legislate the same. Despite this, there was stiff resistance, rising demands and several legal challenges from the Medical Council of India (MCI), the institution owners providing the course for such assistants, and the students themselves, due to ambiguity in the role and absence of a well-defined path to employment for the graduates. After numerous efforts at addressing their diametrically opposing demands, the course was finally suspended in 2008 (Raha, Bossert and Vujjic, 2010). Assam had a similar experience with its cadre of 'Rural Health Practitioners'.

Despite a specific Act and clearly defined employment pathways for the graduates, students have agitated many times for better career opportunities and have attempted to bypass rules of the medical councils governing medical practice by non-physicians. Institution of the cadre has seen several legal challenges and the state High Court in 2014 judged the Act to be unconstitutional and struck it down. The cadre is currently in limbo (Borah, 2015).

The experiences from the states studied have also been similar. Uttarakhand had a 'Specialist' cadre but uneven career opportunities as compared to Generalists led to major agitations and a final merger. Doctors' associations in Haryana also held similar stirs to protest the proposed PHC in 2013 as the structure envisaged gave undue career advantage to those with one type of postgraduate qualification (Public Health) as opposed to all others. The proposal was finally not implemented. Punjab's experience is more nuanced. The district level functionary of the PHSC, the DMC, is a doctor from the same service as the district CMO and other officers. Yet, coordination between the two offices has been difficult given that s/he is junior to the CMO within the service but has considerable independent authority, highlighting the practical difficulties that arise in a hierarchical system. It needs to be recognized that the healthcare system and its workforce cannot be isolated from the social milieu it sits within, and the aspirations, needs, authority, and political and bureaucratic leverage of all agencies, will need to be carefully balanced before taking any steps. All factions will need to be on board with the final proposals if previous failed experiences are not to be replicated.

In contrast to these experiences, the introduction of the post of 'Community Health Officer' (CHO) under the PMJAY programme has not reported many impediments. The post has been set up with well-defined criteria for recruitment and job description; trainings for the post are properly defined and well suited for the recruits it seeks; the post provides employment opportunities for mid-level healthcare personnel; and its establishment within a government programme appears uncontested and non-controversial. Although it is a relatively new position (it was initiated in 2020), initial reports indicate that the post has support from medical and health organizations and has led to positive outcomes for the populations covered. Because the post fills a gap in the healthcare system without impinging upon the rights and jurisdiction of other existing cadres, it has not faced resistance. The clarity of its role and precise outlining of career possibilities are also key to its acceptance. A strengthening of the current system with similar creation of additional posts, with clearly defined public health roles, can be a good approach to reinforcing capacities without drastic re-structuring.

## RECOMMENDATIONS

This study explored the subject of instituting a Public Health Cadre in Indian states not as an end in itself, but as a means of strengthening the country's public health system. To this end, it makes the following four principal recommendations:

1. India's institutional conception of 'public health' must be expanded to better align with the global understanding of the term. Its public health services should be able to sit comfortably with the internationally recognized Essential Public Health Functions. At the very least these must include, in addition to services already in place:
  1. Periodic population health assessments, and macro and granular analysis of data captured routinely in the health information system.
  2. Periodic evaluations
  3. Systems evaluation.
  4. Qualitative assessments of services provided.
  5. Impact evaluation followed by necessary systemic modifications.
  6. Population health research.
  7. Adequate and effective financing of the public health system.
  8. Organizational and HRH capacity building.

While these may appear of secondary importance to the vertical programmes under current conditions, they are the critical central elements of public health. Their inclusion will enhance the effectiveness of India's public health system tremendously by making its services more epidemiologically pertinent, more equitable and more cost-effective.

2. Capacities to deliver services, both existing and EPHFs, must be emphasized over pathways for their provision. No structural re-arrangement of an organization and its workforce can yield positive outcomes if it continues to harbour existing weaknesses. Capacities of both must therefore be built up as a priority. The latter means building not just technical knowledge and skills for vertical health programmes in its HRH but providing the necessary trainings for systems thinking and policy development, public health sciences, health assessments, quality and impact evaluations, emergency and disaster preparedness, conceptualizing research needs, and management of services. Institutional capacities that need to be prioritized include identification and strengthening of key processes, setting

organizational performance standards at the granular level, reinforcing information systems, the training architecture, financing, infrastructure, and partnerships.

3. A judicious approach to strengthening the system taking previous experiences of states on board dictates an incremental approach. It is desirable to initiate system strengthening by first fortifying current norms and positions and only later attempt to establish new structures that will face professional resistance and administrative and legal challenges. Key initial low-risk high-yield measures for this incremental approach should be:
  - a. Ensure adequacy in numbers
    - i. Existing vacancies in all positions must be filled. A system with more than 50% vacancies in key public health positions cannot reasonably be expected to provide effective services, whatever its structure might be.
    - ii. Selective additional techno-administrative positions should be created at the block, district and state levels for supporting delivery of EPHFs. The block is the key level amongst these.
    - iii. Set up a nodal position for EPHFs in the central ministry. This position should be held by a senior public health qualified and experienced technocrat from either the central services such as at National Centre for Disease Control in Delhi (NCDC) or from a state. This officer would provide oversight to EPHF implementation in the states and coordinate programmatic and EPHF services in the central ministry.
  - b. Reinstate key field positions
  - c. Field positions are key to public health services at the population level, especially those of Male MPH. This post needs to be revived; salaries for this post should come from central funds in order to ensure its longevity, similar to those for Female MPH.
  - d. Build the required relevant capacities. As detailed in Recommendation 2 above, these should be both for the organization and HRH. HRH capacity building exercises must emphasize EPHFs in addition to technical trainings. The competency level of these trainings should be tiered to match the position of the trainees in the health system.
  - e. A qualification in public health or in-service training must be made

mandatory for holding techno-managerial and senior administrative positions at district, state and central government levels. In-service training must be provided to those without public health qualifications when they take charge of such positions at the block level. Trainings will be most beneficial at this stage as they will help build field experience that is based upon knowledge and skills. Periodic in-service trainings should be held for all officers who continue in administrative or public health technical posts. Trainings must be of adequate duration; they can be a combination of online and field trainings in institutes of excellence such as NCD, Delhi or JIPMER, Pondicherry. Leadership trainings can be provided at state institutes for administrative trainings.

- f. Adequate post-training assessment and support must be provided.
4. If states choose to put a PHC in place, whether as a primary or later measure, the following structure and qualification criteria are suggested:
- a. There should be a single DG in the state. This is important in order to ensure unitary command of the services. Two or three ADGs—for public health, medical care and medical education—next in order should head each of the verticals.
  - b. The Public Health Cadre should start with the ADG (Public Health).
  - c. A deputy CMO in each district should oversee EPHF delivery and be part of this cadre. S/he will report to the CMO and the ADG (PH). S/he should be supported by a district Public Health Unit (PHU), similar to the units recommended by the 15th Finance Commission and PMJAY, which should have positions for an epidemiologist, social scientist, microbiologist, communications specialist, finance specialist and management experts.
  - d. One to two deputy CMOs must be specifically designated for oversight of clinical services in the district.
  - e. Deputy CMOs overseeing vertical health programmes and officers subordinate to them would be part of the PHC, while deputy CMOs and subordinates overseeing clinical services will not.
  - f. Additional public health positions created at blocks can initially combine functions of two PHU posts, such as social/behavioural scientist with communications specialist, or finance with management, etc. These personnel would report to the SMO/ BMO.
  - g. Only doctors with qualifications or adequate trainings in public health, management and leadership should be posted as DGs, ADG (PH), CMO,



deputy CMO (PH) and SMO/BMO. As a corollary, the posts of hospital MSs should be open only to non-public health specialist clinicians.

- h. Work experience as a BMO must be mandatory for holding the position of deputy CMO (PH) or CMO; only those with experience as CMO should be considered for post of ADG (PH).
- i. Post of DG should be open to both public health and non-public health specialists, i.e. to all the ADGs; subject to them receiving the required training. Non-public health specialists must receive training in fundamental facets of public health to qualify for the position, while training in key dimensions of clinical care, that pose challenges to clinicians while delivering services, should be mandatory for public health specialists to be considered.
- j. PHC should be built as a fluid cadre. Lateral flow between the PHC and the medical cadre is a must. This will lead to a better, more comprehensive understanding of issues by personnel of both cadres. It will allow for even and more pertinent development and distribution of capacities. It will also lead to better buy-in from doctors' associations as it will allow space for clinical aspirations of doctors who otherwise have to give up their clinical vocation in favour of administrative work as they become senior within the service. Adopting this inclusive approach will also pose fewer hierarchical challenges and allow a smoother transition to a newer structure.
- k. This lateral movement must extend to medical education; doctors with experience of both highly sophisticated healthcare provided at medical college hospitals and the challenges of attempting this care in poorly equipped primary and secondary set ups, will be a tremendous asset to a holistic, systems approach, and can alter the current techno-centric individualistic ethos of medical education.
- l. Paramedical and non-medical personnel in managerial posts should be part of this cadre. Frontline workers will straddle the two verticals; they should be considered part of both.
- m. Promotional criteria and pay structure for all cadres must be the same; personal choice and availability of posts for senior doctors will be incentives for doctors to choose one or the other.
- n. Annual evaluations of any new structure must be conducted; modifications can then be introduced as needed, based upon the results.

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# **Chapter 2**

## **DOES THE NORTHEAST NEED A PUBLIC HEALTH CADRE?**

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## **EXECUTIVE SUMMARY**

The World Health Organization (WHO) defines Public Health (PH) as, 'the art and science of preventing disease, prolonging life and promoting health through the organised efforts of society. Public health is frequently used synonymously with provision of clinical services or health care services. Clinical health deals with individual health care as opposed to PH that concerns itself with the health of the entire population. The idea of establishing a Public Health (PH) cadre in India has long been the intent of policy planners in the country and has firmly taken root following the disaster left behind by the COVID pandemic.

This study focuses on the need and challenges of having a PH cadre in the North Eastern (NE) states of India, with a specific focus on four states: Assam, Manipur, Meghalaya, and Nagaland. We used a combination of research methods, which included expert consultations, literature and policy reviews, personal interviews of stakeholders, and primary and secondary data analyses to evaluate the prerequisites for a public health cadre in the above states. Semi-structured interviews with government officials and consultations with PH experts (from non-governmental organisations, academia, and retired officers) were conducted to gather their perspectives on the need for a dedicated PH cadre, its implications and challenges, cadre structure, eligibility and qualifications, pre-conditions for having a successful cadre, and other foreseeable advantages and limitations. An attempt was also made to understand the extent to which the current health care system in the four states incorporated the WHO's 12 Essential Public health functions (EPHF) by administering an EPHF mapping tool to district level health officials.

The study was conducted between the second and third waves of COVID-19, which led to cancellation of field plans. We had limited success in administering the EPHF mapping tool as officials were unable to give us information beyond their programme area as they were also extremely burdened with COVID duties and hence were unable to spare time for interviews. Other challenges included the non-availability of documents with description of roles and responsibilities of the PH leadership/management with the health departments.

The North East Region (NER) houses 7.9% of India's population. All of the North East states have to overcome geographical challenges including frequent floods, landslides as well as being in the high risk seismological area. This makes provision of infrastructure and therefore transport difficult. The states' also have low own source revenue and are hence heavily dependent on the central government for funds. Most central government schemes in the NER are funded in the ratio of 90:10 with the state's contribution only being 10 percent. This holds true for the National Health Mission (NHM) as well, which undertakes expenditures on almost all areas of public health within the health department. In Assam, Meghalaya, Manipur, and Nagaland, NHM expenditures averaged to more than 50% of their PH expenditure, as per the individual state budget

analysis between 2018 to 2021. Due to its high monetary contribution to health expenditure in the NER states, the NHM wields greater influence on decision making processes in the states. The programme also funds a large PH workforce, without whom the health system in the state will be stalled. However, this workforce does not possess the benefits of permanent state employment. Introduction of a PH cadre cannot ignore the presence of this scheme, be it for its funds or for the large PH workforce it provides.

What follows below is a summary of findings for each of the four states in the study; for more details, please see the respective state chapters in the full report.

## ASSAM

Assam is the largest state in NER, consisting of 35 districts. 85% of its people live in villages, about 20% belong to the tea growing communities and 12.4% belong to the Scheduled Tribes (ST). The state's own revenues and borrowings together account for only 42% of the state's revenue while the remaining consisted of GoI transfers. The state's health expenditure as proportion of total expenditure, during this period averaged at 6.6% of which NHM expenditure constituted an average of 43% from 2015-16 to 2021-22. Statistics from NFHS-3, NFHS-4, and NFHS-5 (2005-06 to 2019-20) show that there have been significant improvements in child mortality rates it had better rates than the national average. However, delivery of health care services like percentage of institution births, immunisation coverage, etc. remains below the national average especially affecting vulnerable populations like the tea communities, populations living in Char, etc. The state also has a high burden of communicable as well as non-communicable diseases in a time when the burden on communicable diseases is reducing in other states in the country. In addition to the above its typical geographical features make it prone to annual floods and its resultant fiscal and health burdens. Another problem of the area is the high levels of arsenic and fluoride in the ground water.

Majority of the PH functions rest with the Department of Health and Family Welfare which is mainly responsible for health situation monitoring and analysis, disease surveillance, budget and financial management, health promotion and education. Areas of research, health policy and decentralized planning, development of quality workforce and assuring equitable distribution of population health services is poor in the state. Currently policy and planning occur at the level of state and then only gets executed at the district level. Infact, given the contribution by NHM, policy and planning can be said to be occurring at the centre. Other public health functions like environmental and health sanitation (under State Pollution Control Board), disaster management (under State Disaster Management Authority), and law enforcement are not within the health department's purview.

The administration within the health department is undertaken by an administrative



cadre called the Assam health services cadre. The eligibility rules which hold true since 1995, state that only candidates with an MBBS or an equivalent degree are eligible to be part of the cadre. Most public health administrative positions within the health department are looked over by officials of this cadre. The cadre initially undertake a combination of public health and clinical duties below the district level. With seniority, the positions involve more public health administrative responsibilities and at the state level is purely administrative. In addition to the cadre, over 6,000 staff of NHM in the state also perform PH duties in varying degrees.

Interviews pointed out to the lack of public health training both as an eligibility, as well as part of in-service training in the state's 3,450 plus staff of health services. Most programme managers in the NHM generally have a Master of Business Administration degree, while other PH staff like microbiologists, counsellors and block programme coordinators receive only respective programme-specific training, and therefore have no PH orientation. In addition, almost all interviews referred to a shortage of workforce in the state. In this context where the adequate staff is not in position, it becomes a major challenge to organise any detailed training. The state has no institutions offering Master of Public Health (MPH) courses at present, and NER has only four institutions. Medical colleges do offer Doctor of Medicine course in community medicine, but this is restricted to medical graduates only, leaving limited avenues for non-medical graduates who could be important in filling the skill gap. Although officials agree to the need for a public health cadre in the state, at the time of the study, the state planned to introduce a separate specialist cadre for the clinical specialists in the state.

## **MANIPUR**

Manipur is a state of hills and valleys, where almost 43% of its people live in hilly areas. It has 16 districts, with 75% of its population living in villages. Manipur is situated in seismic zone V, which is the most earthquake prone zone in the country and also witnesses frequent floods. From 2017-18 to 2021-22, the transfers from the GoI (tax devolution and grant-in-aid) made up about 80% of the revenues, while its own revenues and borrowings together account for only for 20%. The state's expenditure on health decreased from 6% in 2017-18 to only 4% in 2021-22 of total state expenditure. The share of NHM also decreased from 21% to 16% in the same period. Despite its lower expenditure on health, the state performs better than the other 3 states in child mortality and as well as health delivery indicators according to NFHS 3,4, and 5. However, the tribal population in the state have much poorer health status than the general population in the state. Manipur has a higher burden of non-communicable diseases with ischaemic heart disease and stroke being the leading cause of death. The state also has one of the high prevalence of substance abuse in India, one of the causes for high prevalence of HIV/AIDS in the country. The state is highly vulnerable to various forms of natural disasters because of its distinct geo-climatic, geological, and physical features.

Unlike other NE states, Manipur is in a comparatively better position with no shortfall in the number of required PHCs and CHCs. However, the state reports shortfall in terms of human resources, where only 3% of the total specialist posts are filled in the state.

The public health functions in the state are carried out by the department of health and family welfare. These functions include health situation monitoring and analysis, disease surveillance, budget and financial management, health promotion and education. Areas of research, health policy and decentralized planning, development of quality workforce and assuring equitable distribution of population health services is poor in the state. Policy, planning and budgeting occurs under the NHM, however it is done at state level with limited inputs from the districts. Other subjects of PH importance such as water treatment, sanitation and solid waste disposal are regulated by either the local government, pollution control board, or the PHED with minimum involvement of the health department.

The Manipur Health Service cadre is a single cadre comprising of both non-specialists (only MBBS degree holders) and specialists. But there, is also an informal public health wing under the additional director (PH) at the DHS. There are a total of 2,792 sanctioned posts in the cadre, of which 34 of them have a specialisation in PH/community medicine. These posts are seen as public health specialists' posts at the district and state level and there is no separate defined career path for those specialised in PH. There is also high vacancy with only about half (14 of 27) PH specialist posts at district level being filled. There are also other PH related posts in the cadre (e.g., CMOs, district nodal officers, senior MOs, etc.), which do not specify, PH qualification or training as an eligibility criterion. The state government does not sponsor any PH-related courses or training programmes for the incumbents of PH-related posts and any training received via NHM was programme specific.

The state public health officials recognized the need for a separate public health cadre alongside the current largely clinical cadre. The officials also agreed that the PH cadre in the long run also needed to include non-medical professionals within the NHM staff like the programme manager, front line workers and other technical staff like entomologists who performed non-medical public health functions. However, the "non-public health officials", felt that creation of separate PH cadre will lead to formation of silos, widening the gap between PH and clinical services as was already seen between the directorates of family welfare and health services. It was recommended instead to focus on strengthening of block public health units as envisioned in the 15th Finance Commission report. As with Assam, the current health services cadre needed training in public health and a clearer distinction of clinical and public health roles.

## MEGHALAYA

The state holds the record for being one of the wettest regions with world. It has 11 districts, with 80% of its people living in villages. The state has a large tribal population (86%) with 3 tribes, the Khasi, Garos and Jaintiyas being the most populous. The state has very poor connectivity due to its landscape and forests; only 34% of the state is connected by roads. The transfers from the Gol (tax devolution and grant-in-aid) make up about 69% of the state revenues, while its own revenues and borrowings together accounted for only 31% from 2017-18 to 2021-22. The share of health expenditure in the total expenditure of state has hovered around a healthy 8.5% to 9% between 2017-18 to 2021-22. The share of NHM expenditure during the same time period varied from 23% to 20%. Statistics from NFHS-3, NFHS-4, and NFHS-5 show that from 2005-06 to 2019-20, there were significant improvements in infant mortality rates in Meghalaya, and the rates remained better than the national average in 2019-20. Although the state has made improvements in health care access indicators, the number of institutional births, percentage of children who are fully vaccinated is lower than the national average. The state like Assam has a large burden of infectious as well as non-infectious diseases. It also shows a severe shortage of specialists is CHCs like the other three states. In addition, a large percentage of the rural population prefers going to informal health care service providers.

As with Assam and Manipur, PH function of health situation monitoring and analysis, disease surveillance, planning and policy, budget and financial management, health promotion and education are undertaken by the department of Health and Family Welfare. Disease surveillance and health promotion are two functions that are clearly defined in the state. Although there is a directorate for research in the state, its activities are related to providing of laboratory services and production of some vaccines and PH research is largely ignored. Policy and planning are undertaken the state level with few inputs from the district level. Environment, sanitation, and hygiene, and disaster management are outside the purview of the health department and are carried out by other departments like the State Disaster Management Authority, PHED and pollution control board, etc.

Meghalaya health services splits the cadre into generalists and specialists, providing a clear delineation between administrative officials and clinical physicians. In addition to the 44 administrative officers, the state also had 608 MOs and 162 specialists in position as of July 2021. Vacancies were observed in various administrative positions of the state's 11 districts. Very few of the administrative officials, however, came with a PH background. Although, the senior officials were fully convinced about the need to strengthen the PH function in the state they not sure whether a public health cadre was the best way to achieve that. In order, to undertake training in public health, the officials would need extended period away from their official duties which may compromise their

current responsibilities. A strong case was also made to include nurses by providing them PH training.

## NAGALAND

Nagaland is a mountainous state with many of its villages being situated in the hill tops. About 86% of the population belongs to ST, which are further divided into several sub-tribes having their own distinctive languages and cultures. Nagaland is also a very rural state with close to 71% of the population living in rural areas and has a total of 12 districts. The state falls under the seismic zone 5 and is at high damage risk from earthquakes. It is also prone to floods and landslides. The transfers from the Gol (tax devolution and grant-in-aid) make up about 59% of the receipts, while the own revenues and borrowings together account for only 41% for the period 2015-16 to 2021-22. The share of health expenditure in the total expenditure of state has increased from 4.8% in 2017-18 to 6.5% in 2021-22. The share of NHM in total health expenditure has decreased from 21% to 6% within the same period.

Statistics from NFHS-3, NFHS-4, and NFHS-5 show that the state consistently performed better than the national average in the infant mortality rate, which has been declining since 2005-2006. Like the other four states, the accessibility to health services remains an issue and it is visible in the low rates of institution births and vaccination coverage compared to the national level. The prevalence of non-communicable diseases have doubled in the state between 1996 and 2014, while that of communicable diseases has halved during the same time. The state is vulnerable to all kind of natural disasters such as earthquakes, flash floods, landslides, and forest fires owing to its geo-climatic, geological, and physical features. Lack of medical colleges in the state has also led to a shortfall in human resources and only 10 of specialist posts (namely, OB/GYNs, paediatricians, surgeons, and physicians) have been filled in CHCs that typically serve as first referral units.

Two important PH functions—population health monitoring and epidemiological surveillance—were well established in the state despite challenges such as difficult terrain and poor transportation facilities. As was observed in the other NE states, PH functions such as policy and decentralized planning as well as budgeting and financing were completely managed by the state level officials and the district health administration was only confined to its execution. Intersectoral collaboration between the health department and other bodies such as local governments, pollution control board, and PHED needs to be further strengthened so that they can play an active role in enforcing laws that protect environmental health and sanitation.

The state initially (1992) had two distinct directorates, where doctors having only an MBBS degree were part of the generalist cadre and would work in the DHS and doctors who had a specialisation/post-graduate degree were part of the specialist's cadre and

worked in the DMS (Directorate of Medical Services). However, issues in seniority, promotion avenues and parity in pay led to the merger of these two cadres / directorates in 2006. The experience has made officials vary of having a separate directorate for public health, however it is generally agreed upon that, rules for a PH cadre need to be carefully drafted to ensure that there is parity and similar promotional avenues when compared with other cadres in the health department. Currently the state has an acute shortage of doctors, and officials in public health positions do not have any public health training and learn on the job. This could open doors for non-medical candidates for PH positions in the state, but job responsibilities, promotional opportunities, need to be thought out carefully. Training of current incumbents in public health although preferred, is problematic given that officials may need at least 6 months leave of absence which may burden the already short-staffed system.

In conclusion, there are several factors that need to be carefully evaluated before embarking on the journey of creating a dedicated PH cadre. Foremost among them is to understand the desirability for having a cadre, followed by what cadre structure would be most effective for the state. Then comes identifying a talent pipeline along with training requirements and, last but not the least, the financial resources to support cadre formation. In Chapter 8 of our report, we have created a table that summarizes the pros and cons or enablers and disablers towards the creation of a PH cadre in the four NE states under five distinct themes of – i) desirability, ii) cadre structure, iii) talent pipeline, iv) training, and v) financial resources. This table serves as a ready reckoner for key stakeholders who would be involved in formulating a pathway for creating a PH cadre for their respective states. The decision about PH cadre is ultimately a political and economic decision that needs to consider the issue of desirability and feasibility from various perspectives. The states in NER are very unique when compared to other Indian states in terms of challenging terrains, long international borders, and low revenue generating capacity, thus leading to an increased dependency on support from the centre. Thus, many of their governance decisions are led by the centre's directive.

We recommend that states should work towards a long-term vision of realigning their health department based on the 12 Essential Public health functions (EPHF). This would also mean that (i) the outlook shall not be limited to curative and individual care but include and prioritise preventive and population level health care, and (ii) it will adapt the 12 EPHF such that it aligns with the state's health care priorities. The existing DoHFW should be rechristened as 'Department of Public Health' since the EPHF extend beyond just PH to also encompass clinical care, medical education, research, disaster management, and health promotion to name a few. One of the conclusions from our study is that a PH cadre is not a magic bullet that can alone revamp the entire PH system. There are much larger issues to contend with, especially in terms of how the entire PH system is organised and governed. Thus, a PH cadre requires an enabling environment for it to create the desired impact. It is in this context, that we recommend a comprehensive pathway for states to undertake such that it goes beyond the creation

of a dedicated PH cadre.

To traverse along the recommended pathway, we recommend that NE states should undertake the following ten steps:

1. Determine the EPHF that are most critical for the state and suitably adapt them as required. States could also look at combining synergistic EPHF to ensure effective implementation of the same.
2. Map how the EPHF will be executed at each level: state, district, block, and primary care level. For e.g., what aspects of data collection for disease surveillance need to be carried out at the primary health care, block, district, and state levels.
3. Mapping of EPHF should also include envisioning a newly organised workforce that can effectively implement it across all levels. Apart from clearly defining the roles and responsibilities of the various positions of this newly organised workforce, the mapping exercise should identify the infrastructure needs as well.
4. Classify the positions as i) cadre or non-cadre from a roles and responsibilities perspective, and 2) clinical, PH, or common/both from a functional perspective. Finalise the eligibility criteria/educational qualifications and desired experience needed for these positions, along with pathways for career progression.
5. Based on the above point, arrive at a cadre structure for PH and clinical specialists along with sub-cadres for other positions that are classified as either frontline, technical, or support functions.
6. Identify the gaps between the existing workforce and the newly organised workforce in terms of i) labour and ii) training.
7. Develop a blueprint that provides solutions to how these gaps can be potentially filled, such as a specific short-term training program or setting up of a training institute in PH to build a talent pipeline.
8. To begin with, implement the blueprint at the directorate level within the first five years (short-term). The reason for going top-down is due to the criticality of the directorate level while also having lesser gaps to fill in terms of workforce.
9. Next, implement the blueprint at the district level within five to ten years (mid-term).
10. Finally, implement the blueprint at block level and below within the next 10 to 15 years (long-term).

## **INTRODUCTION AND BACKGROUND**

The idea of establishing a Public Health (PH) cadre in India has long been the intent of policy planners in the country. The task force on universal health coverage, in 2011, recommended the formation of two new cadres, namely the health systems management and PH cadre (Planning Commission of India, 2011)(Planning Commission of India, 2011). This was further reiterated by the National Health Policy in 2017(Ministry of Health and Family Welfare, 2017) (Ministry of Health and Family Welfare, 2017). However, this need for a cadre has firmly taken root in the aftermath of the COVID-19 pandemic. The Ministry of Health and Family Welfare has introduced a curriculum for the Master of Public Health course in 2017-18, and an expert committee for the formation of a PH management cadre has come out with recommendations for the same in 2020-21. Although PH is a state subject, health schemes and policies in almost all states have been following the centre's directive, especially during the last two decades. This mainly started with arrival of the National Health Mission (NHM). Our review of PH expenditure in the states of Maharashtra (Raghuraman et al., 2019a) and Rajasthan (Raghuraman et al., 2019b) showed that NHM comprised an average of 20% of the states' health expenditure (2012-13 to 2017-18), and it required a complex and detailed process of budgeting and planning by each state. However, this detailed planning did not apply to the remaining 80% of the states' health expenditure. Except for health insurance schemes, only a few states have developed health schemes focusing specifically on their own health priorities. We need to examine the issue of PH cadre in this context, especially for the north-eastern states who are highly dependent on the centre for their finances.

Public health is frequently used synonymously with provision of clinical services or PH care services. Clinical services are, in fact, a smaller part of PH, which are more visible due to their very evident results. Clinical health deals with individual health care as opposed to PH that concerns itself with the health of the entire population. The World Health Organization (WHO) defines PH as, 'the art and science of preventing disease, prolonging life and promoting health through the organised efforts of society' (Acheson, 1988).

Tamil Nadu is one of the few states in India that already has a separate directorate for PH cadre established in 1922. This cadre is separate from medical services cadre and focuses on the management of health care measures at the population level as well as at the primary care level. This separation has been credited with the states organised approach to health planning as well as cost-effectiveness of health care in the state (M. Das Gupta et al., 2009). Furthermore, the study points out that this is replicable in other states.

## The North Eastern Region

This study focuses on the need and challenges of having a PH cadre in the North Eastern (NE) states of India, with a specific focus on four of the seven states: Assam, Manipur, Meghalaya, and Nagaland; Arunachal Pradesh, Mizoram, Tripura, and Sikkim are the other four states that with the aforementioned states together comprise the North Eastern Region (NER) and form 7.9% of India's land mass. The NER is connected to the rest of India by means of a narrow 22 km long strip of land. Fifty-five per cent of its land is covered by forests and 98% of its borders are shared with neighbouring countries. Its mountainous terrain and high rainfall make roadways difficult and expensive to build and render far away areas inaccessible. Each of these states is diverse and has different languages and religions. The region also houses over 200 of the 635 different tribal groups in the country. The population of these states accounted for 7.9 percent of the total population in the country as per the 2011 census (Table 1.1). The region is rich in natural resources and tourism is a big sector across the NER. Tea and rice are main crops of the region.

State	Area (in sq km)	Percent in total area	Population (Person)	Percent of total population	Density per sq km	Sex Ratio	Literacy (%)
Assam	78,438	2.4	3,12,05,576	2.6	398	958	72.19
Manipur	22,327	0.7	25,70,390	0.2	115	992	79.21
Meghalaya	22,429	0.7	29,66,889	0.2	132	989	74.43
Nagaland	16,579	0.5	1,97,85,02	0.2	119	931	79.55
All India	32,87,240	4.3	1,21,01,93,422	3.2	382	940	74.04

*Table 1.1. Basic Demography of the study states of North East India*

*Source:* <http://databank.nedfi.com/>



Although unique and beautiful, NER's remoteness has led to poor health indicators in the states. A study on the health status of these eight states revealed that health indicators, especially the Maternal Mortality Ratio (MMR), were poor in half of these states and distribution of PH facilities was poor in all the states. Based on a composite health index, the best performing state was Sikkim, while Meghalaya was the poorest



*Figure 1.1. Physical Map of North Eastern Region*

(Goyal, 2020). In addition, in most centralised schemes like NHM, the central contribution to NER is 90%, emphasising the importance of central support to these regions. Problems due to sharing of international borders have led to unique challenges in these areas such as higher incidence of Acquired Immunodeficiency Syndrome (AIDS), drug trafficking, etc. In addition, due to the presence of numerous rivers and their tributaries, these areas are prone to frequent floods in the monsoon. In addition, they are also earthquake prone. Hence, PH challenges in NER are somewhat different and unique when compared to the rest of India.

## **THE RESEARCH QUESTIONS**

The central theme of the study is to investigate if the presence of a PH cadre plays an important role in responding to the diverse challenges of the NER region, especially in resource poor settings. The detailed research questions are as follows:

1. How do Assam, Meghalaya, Manipur, and Nagaland fare in terms of health indicators and health delivery systems?
2. What is the governance structure in relation to PH, and what is the mechanism of implementing PH policies in each of these four NE states? [Sub questions are related to (a) current capacity of health departments across the four states in terms of human resources/qualification/vacancies and (b) role of local bodies at various levels and locations]
3. What are the states' budgetary outlays for PH?
4. What are the state approaches to PH issues in general and PH disasters in particular (for e.g., floods)?
5. Do these NE states warrant a specialised PH cadre? What are the associated implications and challenges?

The report is organised in eight parts. The first three chapters give an introduction to our study along with the methodology, followed by a brief description of the NER. The next four chapters are each dedicated to findings from Assam, Manipur, Meghalaya, and Nagaland, respectively. The eighth and final chapter provides conclusions and a roadmap for states to follow while setting up a PH cadre.

## **STUDY METHODOLOGY AND CHALLENGES**

We used a combination of research methods, which included expert consultations, literature and policy reviews, personal interviews of stakeholders, and primary and secondary data analyses. We examine the need for a PH cadre using the following five different lenses before making inferences and arriving at conclusions:

1. Health landscape of the state
2. Governance structure, including health service cadre
3. Essential Public Health Functions (EPHF)
4. Health and PH finances
5. Perspectives of PH experts and government health officials

# **ANALYTICAL LENSES**

## **Health Landscape Of The State**

We analysed the secondary data of state level health indicators (especially in relation to maternal and child health (MCH), Communicable Diseases (CDs), and Non-Communicable Diseases (NCDs). This included mapping the overall trends in health indicators. Data was traced from the third and fifth rounds of National Health & Family Survey (NFHS), NFHS-3 and NFHS-5, which were conducted between 2005-06 and 2019-20, respectively. A literature review was simultaneously undertaken to understand the key PH issues of the state and the underlying causes for the health indicators to be what they are, that is, the influence of local factors such as climate, community, occupation, and region. We also looked at the current status of health facilities and specialists' posts (especially obstetricians-gynaecologists [OB/GYNs], paediatricians, surgeons, and physicians) in terms of the states' current requirements and shortfall. For this, we analysed the secondary data obtained from the Rural Health Statistics (2019). We referred to the 75th National Sample Survey (NSS) report on health services to understand the percentage of population that utilizes government health facilities and prefers going to a formal health care provider for medical advice.

## **Governance Structure Including Health Service Cadre**

We mapped the organogram of the health department at all levels—with a specific focus on the governance structure in relation to PH. We reviewed the state's health service rules and consulted concerned state officials to understand the existing health services cadre of the state, which is responsible for both clinical health and PH. The cadre structure, eligibility criteria, number of posts, various grades/levels, composition, and breakup along with job responsibilities were studied in detail. Based on that, we identified ten key PH-related positions (across state/district/block levels) for a further deep dive with respect to the academic qualifications and trainings completed by the incumbents of these posts. We also planned to analyse the workforce distribution of the cadre (clinical health versus PH) and mode of employment (permanent versus contractual).

## **Essential Public Health Functions**

The Institute of Medicine's 1988 report (Walker, 1989) was one of the first efforts to clarify what PH entails on a practical level. It emphasised on three core PH functions: assessment, policy development, and assurance. Over the next decade, several researchers and PH agencies proposed different ways of framing these three core PH functions. The key global health actors involved in this initiative were the various WHO regional offices, Pan American Health Organization, the World Bank (WB), and the

Centers for Disease Control and Prevention (CDC), the United States. In 1994, the Public Health Functions Steering Committee<sup>a</sup> led by the CDC developed the 10 Essential Public Health Services (EPHS) as a means of communicating the key PH services needed to protect and promote the health of the public. A revised version of the EPHS intended to bring the 1994 framework in line with current and future PH practices was released in September 2020 (Centers for Disease Control and Prevention, 2020). Meanwhile, on the other side of the Atlantic Ocean, the collapse of the then Soviet Union and the resulting fragmentation of public services in the New Independent States led the WHO Regional Office for Europe to develop its own Essential Public Health Functions (EPHF) (Bettcher et al., 1998) as a way to assist these newly formed states in establishing a minimum portfolio of PH services.

When comparing the CDC's EPHS with WHO's EPHF, a significant overlap is seen between the two frameworks. However, while the main focus of the EPHS is on building and improving capacity of existing PH services, the EPHF focuses more on minimum services required and gap identification for developing countries. Furthermore, WHO cites the CDC's EPHS as a successful framework for assessing and improving PH services in the United States and notes its emerging use as an approach for lower- and middle-income countries to build their PH capacity. Both these frameworks are very synergistic and share a common aim of establishing a practical inventory of competencies and capacities in PH and have been developed for use in the policy arena. These two frameworks help in understanding gaps in the performance of the basic functions that an effective PH system must fulfil. Since the development of these two frameworks at the turn of the last century, several other international, national, and subnational agencies have also adopted a functional, system-wide approach to defining and assessing PH.

In 2004, WB adapted to India an EPHF framework that was originally developed by the CDC and the Pan American Health Organization for Latin American countries (M. Das Gupta et al., 2004). This EPHF framework was specifically designed to identify the most pressing gaps in India's PH services. Known as the Governance Knowledge Sharing Program, WB implemented this EPHF framework at the national, state, and district levels of India, and more specifically in Karnataka. Twelve EPHF were finalised based on inputs and feedback received from various PH experts of India. World Bank (WB) also developed survey instruments (World Bank, n.d.) to help understand and assess the PH system's performance against the above 12 EPHFs. Separate survey instruments were developed and administered at the national, state and district levels.

Based on a review of these 12 EPHF by WB, the associated survey instruments and juxtaposing it with the requirements of our study, we developed an EPHF-based mapping tool to understand the functioning of the state's PH system. The EPHF based

mapping tool includes the following functions:

- 1) Health situation monitoring and analysis
- 2) Epidemiological surveillance/disease prevention and control
- 3) Research and development on PH
- 4) Policy and planning
- 5) Budgeting and financial management
- 6) Health promotion and education
- 7) Reducing the impact of emergencies and disasters on health
- 8) Regulation and enforcement of PH
- 9) Assuring a competent PH workforce
- 10) Ensuring quality of population-based health services
- 11) Environmental health and sanitation

In each state, the EPHF based mapping tool is administered to six district level health officials such as the Chief Medical Officer (CMO), district nodal officers of various PH programmes, district surveillance officer, and the district programme manager. The responses gathered from this mapping tool give us an understanding of how a specific EPHF is being discharged, who is responsible for it, their qualifications, and the manner in which it is being discharged. This helps us in identifying the lacunae in the existing PH system.

## **Health And Public Health Finances**

We also studied the finances of the four NE states (Assam, Manipur, Meghalaya, and Nagaland) to provide an overview of the economic activity by looking into the Gross State Domestic Product (GSDP), its growth and its share across various sectors. This served as a context to better understand the health expenditures.

Analysis of state budget documents of the four NE states (Assam, Manipur, Meghalaya, and Nagaland) on expenditure and allocations on public health department/health department for 5 years (2016-17 to 2020-21) was carried out. Total Health Expenditure (THE), Public Health Expenditure (PHE), Total Expenditure (TE) and National Health Mission (NHM) were calculated. Total Health Expenditure included all expenditures under the Major Heads 2210 (Medical and Public Health), 2211- Family welfare and Capital expenditure 4210 (Medical and Public Health). Public Health Expenditure

included all the expenditure under Sub Major Head-06 (Public Health) within Major Head 2210 (Medical and Public Health) and expenditures related to public health such as training pertaining to Maternal and public health, school health scheme, public health programs like TB, National Health Mission , cancer, Malaria, cholera, dysentery, leprosy, filaria, goitre, AIDS and STD Immunization, health and family welfare training centres and capital outlay related to public health programs (within 4210). Public health expenditure also included public water supply expenditures (state level program expenditures under Major Head 2215) and portion of (10%) under disaster management (Major Head 2245)

Total Expenditure of the state from the consolidated fund. This includes revenue expenditure, capital expenditure and loans and advances.

National Health Mission includes all expenditures relating to the scheme including National Aayush Mission. This is either accounted under Sub Major Head-06 (Public Health) within Major Head 2210 or Sub Major Head -03 (Rural Health Services).

Expenditures incurred by the North Eastern Council (NEC) were also examined but since only 2.5% of their expenditure is being spent on health/PH-related activities for the entire NER, it has not been included in our final analysis. The personnel related cost is an important aspect of any health expenditure analysis. However, NE states have very low own-source revenues and greater dependency on Gol transfers coupled with high deficits; thus, it is prudent not to consider personnel cost in the analysis. Schemes in CSS have a 90% contribution from Gol, and tax share is a significant revenue for the state to fund its expenditure; therefore, this makes the personnel cost analysis insignificant.

## **Perspectives Of Public Health Experts And Government Officials**

Semi-structured interviews with government officials and consultations with PH experts (from non-governmental organisations, academia, and retired officers) were conducted to gather their perspectives on the need for a dedicated PH cadre, its implications and challenges, cadre structure, eligibility and qualifications, pre-conditions for having a successful cadre, and other foreseeable advantages and limitations. Government officials included key PH personnel in the state, district, and block level of health departments, and it specifically included those who are part of the current health service cadre under the Directorate of Health Service (DHS).

## **STUDY CHALLENGES**

The study commenced in February 2021 but within the first couple of months, it faced unprecedented challenges due to the devastating second wave of the COVID-19 pandemic that hit the country between April and June 2021. We had to cancel our planned field visits during this time period. In parallel, we also had to disengage the

services of a few local research assistants (based in the NER) who we had specifically hired to support our field work. This led to a significant wastage of programme funds. We subsequently took up field work from September 2021 onwards and while we were able to achieve many of our planned objectives, a majority of the field team members unfortunately contracted COVID-19 towards the end of this period. This again impacted a few of the planned project deliverables during that time-period. Apart from working through the second and third waves of the pandemic, a few other challenges that we faced have been described below.

### **Non-Availability Of Data Related To The Workforce**

Officials across all four states were unable to provide us with a description of roles and responsibilities for different posts, including their own posts. The workforce data shared seldom had information on PH leadership/management staff and instead was largely confined to availability/non-availability of medical specialists, nurses, and others who work in health facilities. Data on the current health service cadre was also not available at any directorate (except in Nagaland to some extent) as the health service cadre was posted across various directorates health service, family welfare, and medical institutions.

### **Limited Success In Administering The EPHF Based Mapping Tool**

Mapping of the EPHF was met with limited success as it was difficult to get information from most officials beyond their own programmatic area. Even senior officials in the district office such as the CMO) or the District Medical and Health Officers (DMHOs) were unable to take stock and provide their insights on the overall functioning of the PH system.

### **Limited Availability Of Health Officials**

Bulk of our field work and consultations with government officials were between the second and third wave of the pandemic; hence, most health officials were extremely burdened with COVID-19 related duties. Many officials were not available in their offices and those who were present too had very limited time for us.

These challenges also point towards the fact that health governance systems are not necessarily organised around clearly defined health functions and job roles—this is something we discuss in detail later. We discuss the macroeconomic context of the four NE states in detail in the following chapter, which is critical in NER because of specific provisions that the region has vis-à-vis the fund transfers from the Gol.

## SETTING THE CONTEXT: MACRO-ECONOMY OF THE NORTH EASTERN REGION STATES

It is very important to understand the finances of the NE states, especially the four study-states, in the context of their geography, have high costs and revenue disabilities and are compensated by the Finance Commission grants through tax devolution. The low revenue generating capacity accompanied by the higher cost for provision of services in the hilly terrain makes these states highly dependent on the GoI. Successive finance commissions have tried to address these through their recommendations using general purpose transfers (tax devolution) and special purpose transfers (grant-in-aid). Transfers from Government of India (GoI) in the form of grant-in-aid for implementation of developmental schemes has been decided at a 90:10 ratio for special category states, which includes all eight states in NER along with Himachal Pradesh and Uttarakhand. Thus, the grants for Centrally Sponsored Schemes (CSS) receive support of GoI to an extent of 90% while the rest 10% is to be provided by the state. A good understanding of the state finances with these provisions and dependency of the states on GoI transfers (both tax devolution and grant-in-aid) is very essential.

### Gross State Domestic Product (GSDP)

A recent article which looked into the growth of Gross State Domestic Product (GSDP) in the NE states indicated that these states together accounted for only 2.8% of Gross Domestic Product (GDP) of the country in 2019-20, of which Assam had two-third share (Das & Vaibhav, 2021)(. In 1993-94, all of them (except Mizoram) contributed to 3.7% of national GDP; similarly, the share of Assam fell from 2.8 % to 1.6 % of the national GDP during the same period. The per-capita income (PCI), which was higher than the all-India average, in all NE states in 1980 has seen a steady decline in Assam, Manipur, Meghalaya, and Nagaland; however, there has been a steady increase in the PCI of Tripura and Mizoram. The growth rates for GSDP (at constant prices) during the last five years does not show a clear pattern (Table 3.1).

STATE	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Gross Domestic State Product (INR in Crores)</b>						
<b>Assam</b>	1,55,599	1,80,674	1,87,123	2,06,807	2,08,921	2,12,778
<b>Manipur</b>	15,025	15,978	16,343	18,155	18582	19,904
<b>Meghalaya</b>	19,134	18,758	19,513	20,923	22,091	23,313
<b>Nagaland</b>	14,297	14,448	15,251	15,908	16,411	17,654
<b>Growth Rates of the Gross Domestic State Products (in percent)</b>						
<b>Assam</b>		16.1%	3.6%	10.5%	1.0%	1.8%
<b>Manipur</b>		6.3%	2.3%	11.1%	2.4%	7.1%



<b>Meghalaya</b>		-2.0%	4.0%	7.2%	5.6%	5.5%
<b>Nagaland</b>		1.1%	5.6%	4.3%	3.2%	7.6%

*Table 3.1. Gross State Domestic Product (constant prices) (INR in Crore) and its growth over years (by percent)*

*Source: <http://databank.nedfi.com/>*

The services sector accounted for the highest share of the GSDP across the four states. Nagaland had the highest PCI, (at constant prices) followed by Meghalaya, Assam, and Manipur (Table 3.2). The growth of PCI during 2015–20 was the highest in Assam, followed by Manipur, Nagaland, and Meghalaya.

State	Agriculture (%)	Industry (%)	Services (%)	PCI (Rs) 2019-20	PCI Growth 2015-20
Assam	16	34	50	60660	6.3%
Manipur	28	11	61	53930	4.2%
Meghalaya	22	20	58	62435	2.3%
Nagaland	33	12	56	71247	3.4%

*Table 3.2. Sectoral share of Gross State Domestic Product (2019-20) and the per-capita income (PCI)*

*Source: <http://databank.nedfi.com/>*

While the share of agriculture in GSDP is declining, which is similar to the national trend, the share of manufacturing has not gone up unlike the national level. Government expenditure forms a significant proportion of GSDP. The share of government expenditure in the GSDP reduced from 57% in 1993-94 to about 46% in 2017-18 but rose to 50% in 2019-20, which is much higher compared to the all-India average of about 18% for this period.

## **Financial Support Mechanism For The NE Region**

In order to have a clear developmental focus, the Development of North Eastern Region (DoNER) department was converted into a full-fledged ministry at Gol in 2004. The Ministry of DoNER coordinates with various ministries and departments at Gol concerned with the implementation of programmes for the region, including the Non-Lapsable Central Pool of Resources and North -East Special Infrastructure Development Schemes. At Shillong, the NEC, which was set up in 1971 as a regional planning body for the region, comes under the administrative control of DoNER (Ministry of Development of North Eastern Region, n.d.).

Since 1996, Gol announced a policy decision of allocating 10% of the Plan budgets to NER. As a nodal ministry, DoNER has the responsibility of ensuring the 10% gross budgetary support under the Non-Lapsable Central Pool of Resources. The allocation and expenditure from 2014-15 to 2021-22 in the last seven years is presented in the Table 3.3. The expenditures against the revised estimates have been good hovering above 90%

Year	Budget Estimates	Revised Estimates(RE)	Expenditure	% Expenditure of RE
2014-15	36,108	27,359	24,819	91%
2015-16	29,088	29,669	28,674	97%
2016-17	29,125	32,180	29,368	91%
2017-18	43,245	40,972	39,753	97%
2018-19	47,995	47,088	46,055	98%
2019-20	59,370	53,374	48,534	91%
2020-21	60,112	51,271	32,478*	
2021-22	68,020			

*Table 3.3. Cumulative Allocation and Expenditure by different ministries for North Eastern Region (INR in Crores)*

*Source: DoNER Annual Report, 2020-2021. \*This is up to December 2020.*

Though the NEC largely focuses on creating an enabling infrastructure that would complement the investments of the states, the size of their investments is thinly spread across sectors. The release of funds under various sectoral works in the last six years are presented in Table 3.4. The releases towards 'Medical and Health' are the lowest at 2.55% of the total and are mainly concentrated towards the establishment of health infrastructure. Hence, the major expenditure on health from the centre comes through the NHM.

Sector Name	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total	(%)
<b>Agriculture And Allied</b>	106	192	189	324	195	143	1148	19.87
<b>Irrigation Flood Control</b>	46	38	87	46	51	23	290	5.02
<b>Industries</b>	34	52	33	43	43	61	266	4.60
<b>Transport And Communication</b>	341	344	540	188	454	140	2007	34.72
<b>Medical And Health</b>	17	26	30	17	13	43	147	2.55
<b>Human Resource Development</b>	82	150	161	96	140	62	691	11.96
<b>Science And Technology</b>	26	25	28	35	14	38	166	2.88
<b>Information And Public Relations</b>	12	20	30	18	14	18	113	1.95
<b>Evaluation And Monitoring</b>	1	4	3	4	6	2	20	0.34
<b>NLCPR</b>	0	0	0	0	197	145	342	5.91
<b>Power Development</b>	70	62	99	65	55	16	367	6.35
<b>Tourism</b>	25	37	36	40	42	42	222	3.84
<b>Grand Total</b>	<b>762</b>	<b>951</b>	<b>1234</b>	<b>876</b>	<b>1224</b>	<b>733</b>	<b>5780</b>	<b>100</b>

*Table 3. 4.Sectoral releases by North Eastern Council over years (INR in Crore)*

*Source: [http://shillong.nic.in/oasis/sectorwise\\_yrwise\\_plan.aspx](http://shillong.nic.in/oasis/sectorwise_yrwise_plan.aspx)*

## **The National Health Mission (NHM) And Its Significance In Public Health**

A flagship scheme of GoI, the NHM was created to improve the overall health status of the country by providing universal access to equitable, affordable, and quality health care services that are accountable and responsive to people's needs (MoHFW, n.d.) It was first launched in 2005 as National Rural Health Mission, with a focus only on the rural areas of the country. However, in 2013, it was relaunched as NHM encompassing both the rural mission and the National Urban Health Mission. As it is a CSS, NHM is largely funded by the central government. With its special status, NER had a sharing pattern of 90:10 (GoI:State). Even after the recommendations of the 14th Finance Commission came into effect in April 2015, the share has remained to 90:10 (GoI: State) for NER though this changed to 60:40 for most other Empowered Action Group states.

Like in all other states, the routing of the funds from the central government has changed from 2015. Before 2014-15, the funds were routed directly to the designated state level implementing agency, State Health Society. However, post-2014-15 the central funds are being routed through the state treasury to the State Health Society, as is the case for the state government's share.

By virtue of how its envisioned, NHM undertakes expenditure on most all areas of the PH system. All national programmes except AIDS come under the NHM. Although its major area of focus remains Reproductive, Maternal, Child, Newborn and Adolescent Health and all CD and NCD programmes also come under its ambit. In addition to expenditure on programme management, NHM also spends on service delivery in terms of human resources, community services, and facility services; it also spends on procurement of drugs and machinery, research, training, infrastructure, quality control and Information Education Communication/Behavior Change Communication (IEC/BCC) materials. National Health Mission is supposed to aid the states in strengthening their PH system. In Assam, Meghalaya, Manipur, and Nagaland, NHM expenditures average to more than 50% of their PH expenditure, showing how important this scheme is to these states.

National Health Mission has its own financial and planning structure within state governance structures At the state level, the mission functions under the overall guidance of the State Health Mission. The State Health Society carries out the functions under the mission where every district has a District Health Society. At the state level, the NHM is headed by an Indian Administrative Service (IAS) officer as the mission director at the secretariat level., Its functions extend to all directorates within the health department. Each state must submit a detailed programme implementation plan for every year. This plan includes the Financial Management Report that separates expenses

under almost 2000 line items. Each state must give in detail descriptions of the previous year's expenses as well as coming year's expected budget. Funds under NHM lapse yearly if utilization certificates are not produced for the said expenses. Hence, states spend a good amount of time in preparing programme implementation plans.

Hence, the NHM plays an important part in delivering PH functions in all the states and has significant influence on how health care is delivered in the state. It brings in efficiency in the system by placing emphasis on planning and budgeting. The programme also funds a large PH workforce, without whom the health system in the state will be stalled. Introduction of a PH cadre cannot ignore the presence of this scheme, be it for its funds or for the large PH workforce it provides.

With this broad perspective and using the analytical lenses described earlier, the following four chapters look at issue of PH cadre in the states of Assam, Manipur, Meghalaya, and Nagaland.

## ASSAM

Assam is the largest state in NER both by population and area. It has 35 districts, which are grouped into five divisions: Upper Assam, Central Assam, Lower Assam, North Assam, and Barak Valley. The river Brahmaputra flows through 24 districts. Almost 85% of its people live in rural areas (*Census 2011*) (Census 2011). Gender parity is in favour of women in some areas such as literacy; 88% women as against 84% men were literate in 2019-20 (IIPS & ICF, 2021b)). About 20% of Assam's population belong to the tea growing communities and 12.4% belong to the Scheduled Tribes (ST). Seven districts—Hailakandi, Barpeta, Goalpara, Darrang, Dhubri, Baksa, and Udalguri—in Assam have been identified as aspirational districts<sup>b</sup> by NITI Aayog.



Figure 4.1. Physical Map of Assam

## Financial Status

The finances of the state indicate that despite its own revenues growing at an annual average of 14% per year, the annual growth rate has declined since 2019-20 (Table 4.1). Similarly, the growth rate for the share of taxes has also declined since 2018-19, while its annual average growth for the period 2015-16 to 2021-22 remained at 5%. Grant-in-aid has grown at an annual average growth of 25% owing to higher transfers during the years 2019-20 and 2020-21, the COVID-19 pandemic years. Borrowings were the highest among the revenue components of the state and have grown at an annual average growth rate of 29%.

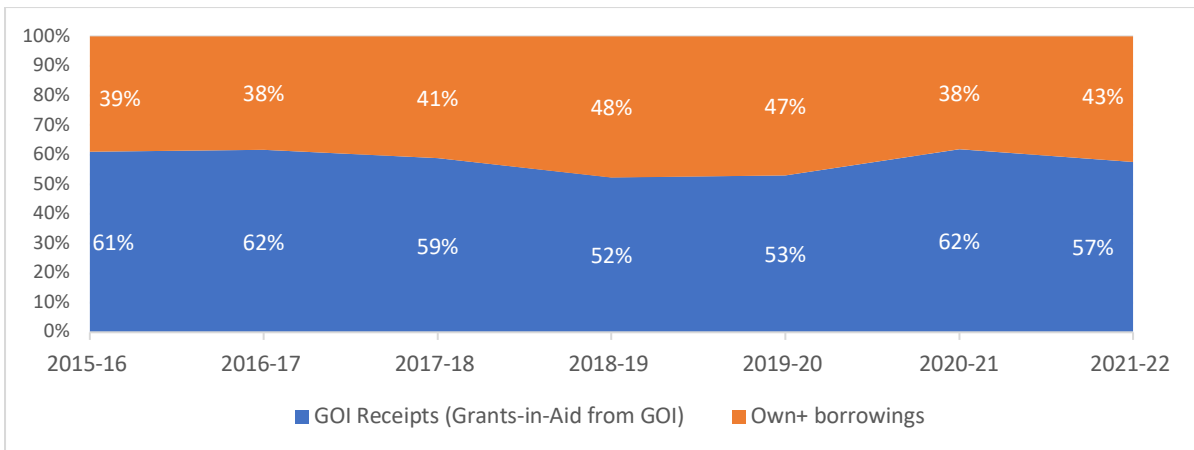
Revenue	2015-16 AC	2016-17 AC	2017-18 AC	2018-19 AC	2019-20 AC	2020- 21RE	2021- 22 BE
Own Revenue	12,847	16,433	17,288	24,146	22,068	23,409	27,276
Share of Taxes	16,785	20,189	22,302	25,216	21,721	26,776	20,819
Grant in Aid from Government of India (GoI)	12,825	12,598	14,542	14,117	20,706	39,599	40,885
Non debt capital receipts	510	19	4	3	1141	300	13
Borrowings	5,498	3,902	8,447	11,755	14,250	17,231	18,326
Total Receipts	48,465	53,141	62,583	75,237	79,886	1,07,315	1,07,319
	2016-17	2017-18	2018-19	2019-20	2020-21	2021- 22	Average
Own Revenue	28%	5%	40%	-9%	6%	17%	14%
Share of Taxes	20%	10%	13%	-14%	23%	-22%	5%
Grant in Aid from GoI	-2%	15%	-3%	47%	91%	3%	25%
Non-debt capital receipts	-96%	-79%	-25%	37933%	-74%	-96%	6261%
Borrowings	-29%	116%	39%	21%	21%	6%	29%
Total Receipts	10%	18%	20%	6%	34%	0%	15%

*Table 4. 1 Components of Revenue (INR in Crore) and its growth over the years (in percent) in Assam*

*Source: Analysis of Assam state budget documents.*

*Note: AC is Actuals, RE is Revised Estimate, and BE is Budgeted Estimate.*

The transfers from the GoI (tax devolution and grant-in-aid) make up about 58% of the revenues, while the state's own revenues and borrowings together account for 42% (Figure 4.2). The total liabilities estimated for the year 2021-22 stood at 26% of GSDP or 112% of the revenue receipts.



**Figure 4. 2. Share of Government of India transfers and Own revenue + borrowings (percent)**

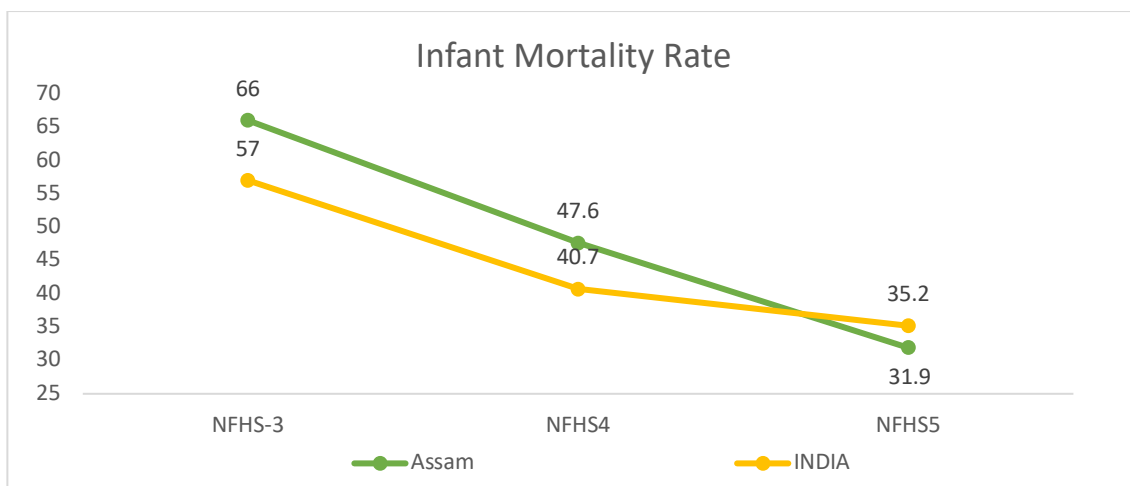
## Health Status

The areas of major concern in Assam have been MCH, CDs, and NCDs.

## Maternal And Child Health

The state has seen improvements in the number of institutional deliveries from just 22% in 2005-06 to 84% in 2019-20, with the percentage of mothers having least four antenatal visits increasing at a slower pace from 23.5% to 50% during the same time. Statistics from NFHS-3, NFHS-4, and NFHS-5 also show that from 2005-06 till 2019-20, there have been significant improvements in child mortality rates in Assam. In 2019-20, it had better rates than the national average (Figure 4.3). However, despite improvement in child mortality rates, Assam had the highest MMR in the country at 215 deaths per 100,000 births in 2016-18 (Ministry of Health and Family Welfare, 2021).

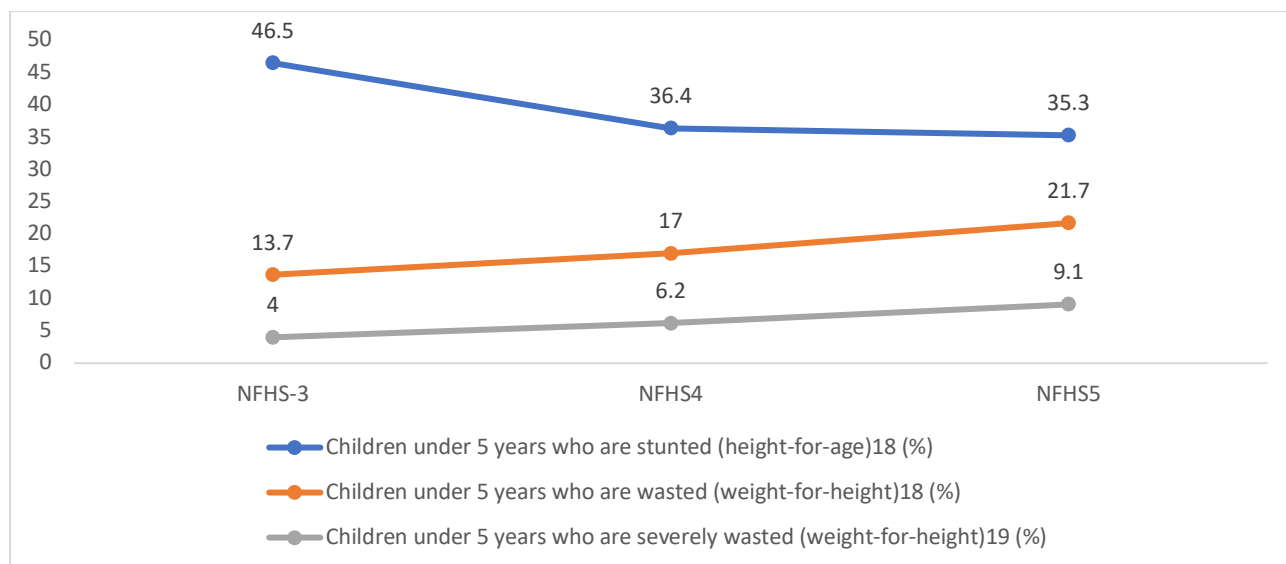
Although health indicators are improving, some communities are still lagging behind, which is pulling down the averages in the state. A study of causes of maternal deaths in four districts of Assam between 2016 and 2018 showed a significant association of maternal deaths in those belonging to the tea community ( $p=0.000$ ) (Rane et al., 2019). The tea community comprises roughly 20% of Assam's population, and studies have shown that women and children in these communities have poorer health indicators and access to health services as compared to the rest of the state (Medhi et al., 2006; Rajbangshi & Nambiar, 2020; Rane et al., 2019).



**Figure 4.3. Infant mortality rate per 1000 live births from 2005-06 to 2019-20**

**Source: National Family Health Surveys (3, 4, and 5) Assam and India fact sheets**

Similarly, higher prevalence of underweight among children was seen in a cross-sectional study for Muslim children residing in the Char (riverine areas) of Barpeta district (Begum, 2019). Hence, it is obvious that certain communities and locations are at a greater disadvantage when it comes to health indicators. Though the percentage of children who are wasted or who have low weight for height has increased in the past 15 years in the state (Figure 4.4), the percentage of children under 5 years of age who are stunted has decreased, and the number of children under 2 years of age who are fully immunised has improved over the years <sup>c</sup>.



**Figure 4. 4.Nutritional Status of children under 5 years of age in 2005-06, 2015-16, and 2019-20 in Assam**

**Source: National Family Health Surveys (3, 4, and 5) Assam State fact sheets**

## Communicable And Non-Communicable Diseases

The report on the disease burden in Indian states showed that in 2016, Assam's Epidemiological Transition Level (ETL)<sup>d</sup> was 0.61, that is the burden of deaths due to non-communicable diseases and injuries were almost equal to deaths due to infectious causes (Indian Council for Medical Research(ICMR) et al., 2017). This is suggestive of large burden of both CDs and NCDs. According to a report, 'Non-communicable diseases in Assam account for 51.2% of the total disease burden in the state and the major risk factors for NCDs are Malnutrition (17.4%), High Blood Pressure ( 7.6%) and Tobacco (5.7%)' ("Non-Communicable Diseases Claim 5.2 Million Lives in India," 2019).

In addition to NCDs, Assam was flagged in the study for having one of the highest number of Disability-Adjusted Life Years (DALYs), i.e., healthy years lost due to disability caused mainly by diarrhoeal disease, lower respiratory tract infections, and tuberculosis (TB). The tropical monsoon rainfall climate of Assam is a conducive environment for vector-borne diseases. Large paddy fields, water bodies, and pig farms make it ecologically favourable for the spread of diseases. Among vector-borne diseases, malaria and Japanese encephalitis are the major PH problems in Assam(Ahmed, 2020; Dev et al., 2015).

In addition, the National Mental Health Survey, 2017 found that 27.35% of the survey population had substance use disorders (the highest was contributed by tobacco followed by alcohol), harmful use and dependence on drugs, and use of other illicit drugs.

## Health Care Service Delivery In Assam

The delivery of health care services in Assam are through a system of state-run Sub-Centres (SC), Primary Health Centres (PHC), Community Health Centres (CHCs), District Hospitals (DH), and medical colleges. Table 4.5 shows that there exists a shortfalle in the number of PHCs and CHCs. This shortfall becomes more pronounced when we look at the human resources, where there is a shortage of 81% (only 136 of the 708 positions were filled in 2019) when it comes to specialists' posts (namely, OB/GYNs, paediatricians, surgeons, and physicians) in CHCs, which typically serve as first referral units. These shortages have implications for the health care provisioning as 80% of Assam's population lives in villages, and 52% of those people utilize government health facilities (NSS, 2018)(NSS 75th round, 2018-19). The report also showed that 14% of Assam's people preferred going to an informal health care provider for medical advice emphasising the use of traditional medicine by the local people.



Type of facility	Number of facilities Present	Required	Shortfall
Subcentres	4643*	6374*	27.2%
Primary Care Centres	946*	1040*	9%
Community health Centres	177*	260*	32%
Sub divisional/district Hospital	14**	NA	NA
District hospitals	25**	NA	NA
Medical colleges	6**	NA	NA

Figure 4.5. Number of health facilities in Assam, 2019-20

Source : \*Rural Health Statistics, 2019; \*\*NA is Not Available <https://hfw.assam.gov.in/portlets/health-care-institutions#btabs> as on 9 May, 2020

## Other Public Health Issues

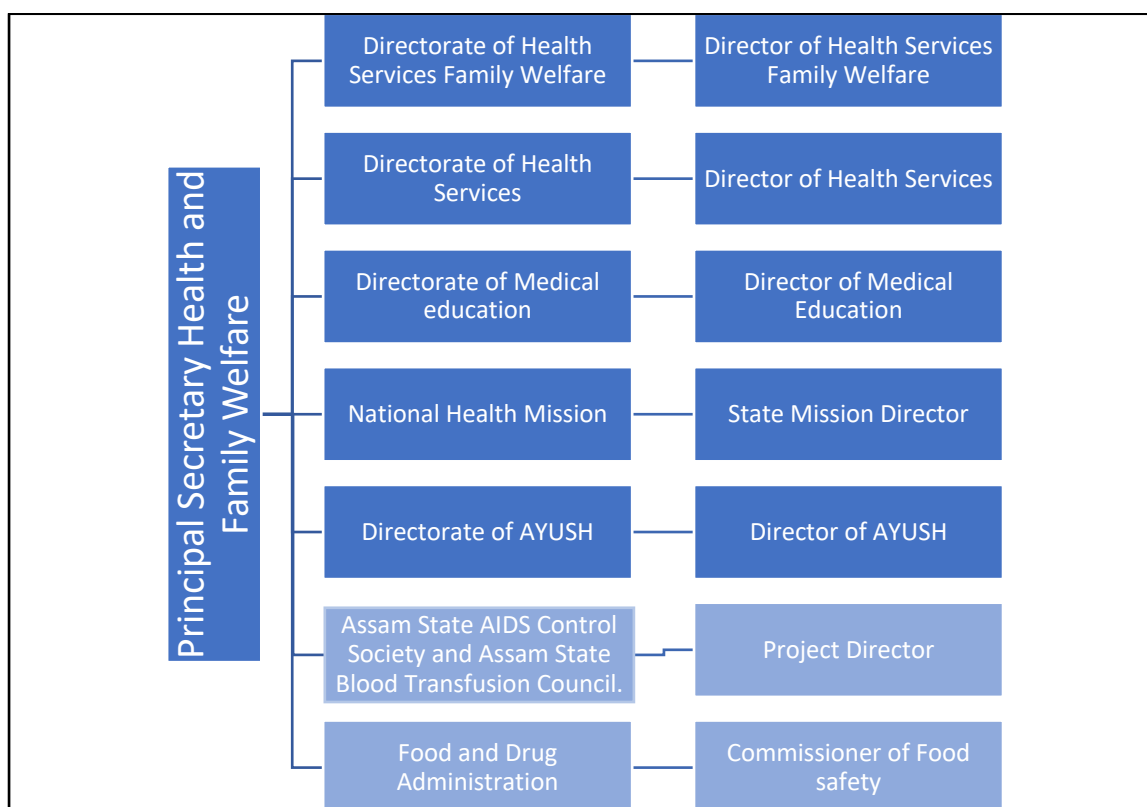
Assam is the second highest arsenic-affected habitation state after West Bengal in the country. There is a high prevalence of arsenic contamination in groundwater, affecting 12 out of 34 districts in the state (Simran, 2021). In addition, 23 districts also report presence of fluoride contamination of ground water, resulting in skeletal deformities in children (Zahan, 2017). Moreover, floods have been occurring in Assam almost every year. As per the Assam State Disaster Management Authority, more than 56 lakh people living in 30 of the 33 districts were affected by the floods in 2020 (Agarwala, 2020). According to the Joint Needs Assessment Report of 2017, which assessed 32 villages affected by floods, 69% of the villages had no access to safe and clean drinking water, and 84% of villages were found to be practising open defecation (Inter Agency Group, 2017). Although Assam's measures for sanitation and hygiene have improved over the years, some of the poorest communities still practice open air defecation.

In conclusion, while Assam faces the burden of poor MCH indicators coupled with high prevalence of CDs and NCDs, the state's health care system faces a shortage of specialised medical professionals. In addition, the state is also facing health concerns due to its geographical features. This obviously points towards the need for strengthening population health measures, which can play an important role in prevention of diseases and therefore also easing the burden on the health care system.

## Structure of Department of Health And Family Welfare

As with most state governments, a majority of the PH functions rest with the Department of Health and Family Welfare (DoHFW), which is responsible for health situation monitoring and analysis, disease surveillance, research, planning and policy, budget and financial management, health promotion and education, assurance of a competent PH workforce, and surety of quality population-based services. However, certain other functions like environmental and health sanitation (under State Pollution Control Board), disaster management (under State Disaster Management Authority), and law enforcement are not within the department's purview.

The Department of Health and Family Welfare is under the health minister, and it is headed by a principal secretary at the secretariat level and directors of individual sub-departments at the directorate level (Figure 4.6). The directorates of Health Services, Family Welfare and Medical Education have some PH role to play. The Directorate of Health Services (DHS) has authority over all the PH facilities as well as health programmes in the state. The Directorate of Health Services & Family Welfare oversees programmes and workforce who deal with reproductive and child health (e.g., immunisation and family planning). The Directorate of Medical Education manages teaching institutions and hospitals under them. Other organisations that also come under the DoHFW include the Directorate of AYUSH, Assam State AIDS Control Society, Food and Drug Administration and the Assam State Blood Transfusion Council.



**Figure 4.6** Directorates under Assam Department of Health and Family Welfare

Although not a separate directorate, NHM functions as an entity separate from the above three directorates and has a mission director who is more senior than the directors and comes from the IAS. It contributes significantly to all three directorates in terms of workforce, planning, and funding, thus leading to a kind of duality in terms of control. Most contractual workforce (e.g., state consultant, epidemiologist, entomologist) as well as ground staff (e.g., Accredited Social Health Activist [ASHA]) are provided under the NHM, while the programme nodal officers (e.g., malaria officer, TB officer, and permanent staff like MO and auxiliary nurse midwives) are under the DHS.

As NHM is CSS with its own complicated budgeting and planning mechanisms, it stands out separately from the rest while still being deeply imbibed into the state's health architecture.

### Role of non-health departments

Although health care provision and treatment are the roles of the health department, population health is seldom confined only to these roles. For example, maintenance of sanitation and hygiene, testing of water for levels of fluoride, provision for disaster management, etc. are critical areas for population health, and the health department does not have any direct control over these. Public Health Engineering Department (PHED) is the department responsible for undertaking measures for preventing fluorosis and arsenic poisoning in the state. Similarly, disaster management comes under the Assam State Disaster Management Authority, which during floods or other emergencies co-ordinates with the health department for prevention and treatment of epidemics due to contaminated water and vector borne diseases. The Department of Woman and Child Development co-ordinates with the DoHFW for immunisations of pre-school children at the anganwadi centres. The health department mainly undertakes the treatments required for severely malnourished children within nutrition. In addition, pollution control boards, various urban and local bodies also contribute to maintenance of population health in the state, prevention of pollution, sanitation and hygiene, food safety, etc.

### Assam Health Services Cadre

The Assam Health Services Rules, 1995 describes the positions, eligibility, and other rules that govern officers of the Assam Health Services, who are recruited by the Assam Public Service Commission. Currently, both clinical specialists and general physicians are part of this health services cadre and are mainly part of the DHS, Directorate of Health Services & Family Welfare, and Directorate of Medical Education. According to these rules, the minimum eligibility for direct recruitment to health services cadre is a Bachelor of in Medicine and Bachelor of Surgery (MBBS) or an equivalent degree. The candidate starts as a Medical and Health Officer (MHO) at the Primary Health Centre and is promoted to become a senior medical and health officer after five years of service and then to the Sub Divisional Medical and Health Officer (SDMHO) at the district level. Figure 4.7 shows the structure of health services cadre in the state.

On par with the SDMHO post are the posts of district immunization officer, superintendent grade II, epidemiologist/assistant to director of health services. After two years, the candidate is eligible for promotion to the post of the Joint Director (JD) or equivalent post at the district level—this is the highest post at the district level, under whom are the chief medical and health officer who is charge of the DHS and the additional chief medical and health officer who oversees the Directorate of Health

Services & Family Welfare. These posts are mainly administrative but may involve some clinical duties from time to time. Equivalent posts at this grade include of superintendent of TB hospital, Superintendent mental hospital as well as district leprosy officer, zonal malarial officer, etc. At the state level, JDs are posted for TB, malaria, nursing, public health, etc. There are state nodal officers for various health programmes and have more than one charge. Above the JDs are the additional directors of health services who all come under the director of health services.

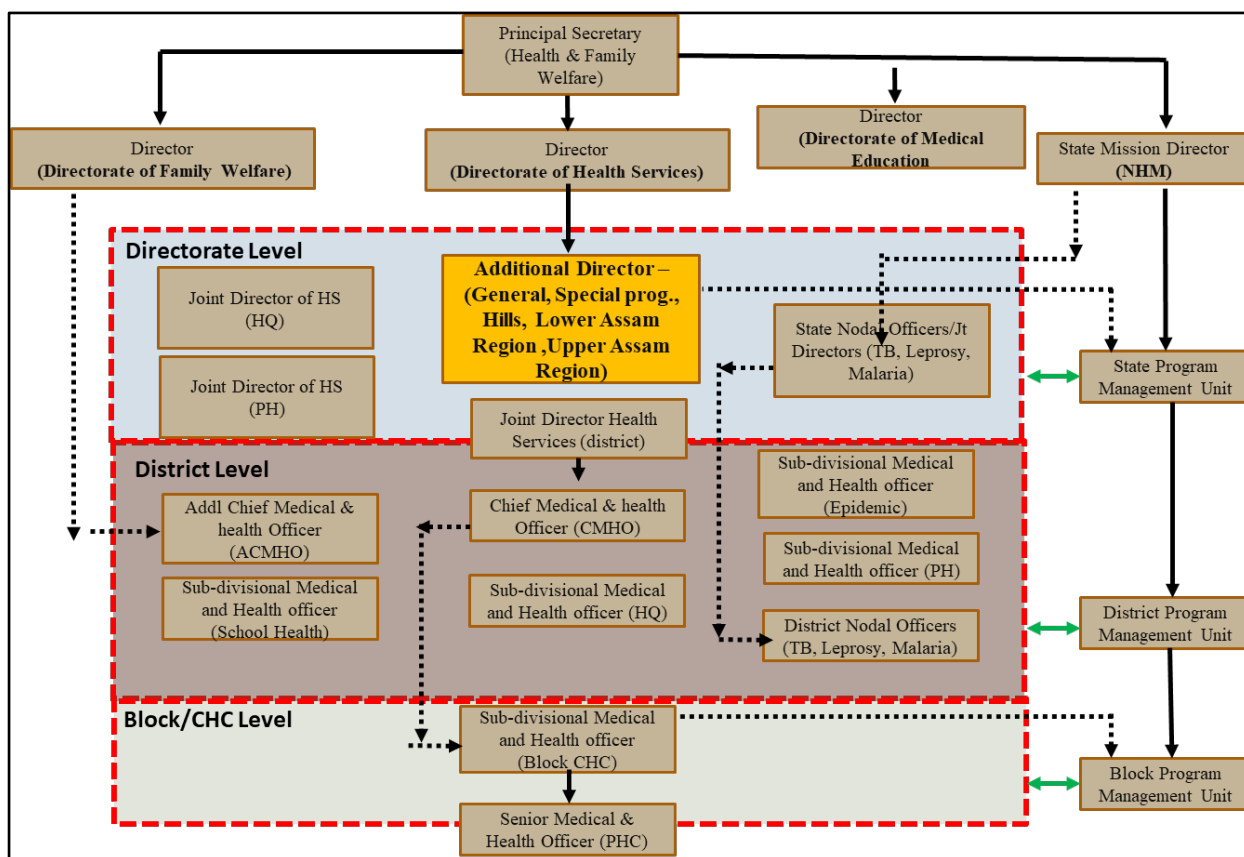


Figure 4.7. Administrative structure of Department of Health, Assam

As mentioned earlier, NHM has its own separate set-up at the state, district, and the block, headed by the mission director at the state level. The state's health services rules put the number of recruits in the health services cadre at 3450 in 1995. However, since then the number of districts in the state has increased from 18 to 33, the number of personnel should be more than 5,000. However, we were unable to obtain the total number of personnel under the health services cadre in the state.

In general, training on administrative or PH issues did not emerge as a priority in the state. Our interviews with officers posted at various levels of the department pointed out towards the lack of training in administrative and PH duties of incumbents<sup>f</sup>. One joint director pointed out, 'Training in PH should be given as a choice, depending on whether an MBBS graduate wants to go for administrative line or clinical line. There are other

trainings as well that can be helpful; for instance, hospital management course could help in the present system, where many doctors have to look into both administration and clinical part under their duties'. Currently the only trainings available were through NHM and were specific to the programme where the nodal officer was posted, e.g., TB or leprosy. Senior officials considered cadre positions as a cushy pre-retirement positions and did not feel the need to upgrade their skills, as in clear form this statement by one of the senior officials: "The JD, additional directors, and chief medical and health officers should go for orientation programmes, but letters of exemption, giving reasoning of their age barrier or health issues are common".

Documents stipulating the roles and responsibilities of each post were also unavailable. It was also seen that programme officers had little knowledge of outside of the programme/post that they were assigned to, especially in matters of budgeting and financing. Officials relied on NHM programme managers in matters of programme planning and budgeting given the complex NHM processes. Of the various positions interviewed in the state, only the NHM state programme manager had a degree in community medicine. The technical staff as well as programme managers in NHM in Assam are also not trained in PH.

The health department in Assam has recognised the need for a PH cadre and is looking into various means on how this can be achieved. The state has decided that they would separate specialist doctors from this cadre. Currently, specialists like ophthalmologists, ear, nose, and throat doctors, etc. hold administrative posts like that of SDMHO, chief medical and health officer, etc. In a state that faces severe shortage of specialists, having a separate cadre for specialists should help in bridging the service gap and opening up PH cadre positions for those with training in PH.

The state has also decided to extend benefits of state employees (except pension) to NHM employees who have completed 10 years of service. The NHM provides technical expertise as well as grass roots workforce in the state where 50 percent of its budget is spent on personnel. Assam had passed a Public Health Act in 2010 but the state never formed the rules and hence it was never put in use.

## **Essential Public Health Functions**

Table 4.2 shows how Assam's health department fares in executing various PH responsibilities. These grades are based on five EPHF interviews that were conducted at the district level with a District Programme Manager (DPM,) SDMHO (PH), SDMHO (epidemic), district MO, and a District Surveillance Officer (DSO). Like most states, the main responsibility of the district health office lies in execution of the various central and state schemes (mainly NHM).

Function	Status	Remarks
Health situation monitoring and analysis	Orange	Currently all data are in silos, with some like infectious diseases, maternal and child health getting most importance.
Epidemiological surveillance	Green	Well-established system under the Integrated Disease Surveillance Programme (IDSP) strengthened due to COVID-19
Research	Red	Little to no research done
Planning and Policy	Orange	Minimal involvement of district. Undertaken by the National Health Mission (NHM).
Budgeting and Financial Management	Orange	Minimal involvement of district. Undertaken by NHM at state level. brought structure to financial processes.
Health Promotion and Education	Green	Every programme has a separate Information, Education, Communication (IEC) cell
Reducing the Impact of Outbreaks, Emergencies and Disasters on Health	Orange	Separate disaster management authority at the district level under District Commissioner who coordinates from NHM, IDSP
Regulation and Enforcement in Public Health	Red	Does not come under the purview of health department except to some extent food safety.
Assuring a Competent Public Health Workforce	Orange	Limited PH training which is mainly programme specific. Under NHM all are contractual postings with no specific career pathway.
Ensuring the Quality of Population-Based Health Services	Orange	Presence of IPHS standards for institutes
Environmental Health and Sanitation	Orange	Not responsibility of health department but of the pollution control board in the state.

Function	Status	Remarks
Health situation monitoring and analysis		Currently all data are in silos, with some like infectious diseases, maternal and child health getting most importance.

*Table 4.2. Essential Public Health Functions Assam*

*Note: Green colour denotes that the function is fairly defined and operational in the state. Orange colour denotes that the function is not well defined but operational to some extent in the state. Red denotes that this function is carried out poorly or not the responsibility of the health department.*

It was seen that epidemiological surveillance and health promotion were two responsibilities that were well established in the state at the district level. However, policy, planning, budgeting, and financing were completely taken over by the state officials. Although under NHM, district and block officials can voice their requirements in budget as well as facilities, the final decisions are taken by the state which seldom considers the districts' opinions. The department does not look into environmental health and sanitation as these come under the purview of the PHED and the pollution control board. Disaster management in the state is coordinated by the district commissioner and the health department is an important part of the team. Research is another area ignored by the department.

## **Analysis of Public Health Expenditure**

Assam state's total health expenditures have grown at an Annual Average Growth Rate (AAGR) of 20% over the period 2015-16 to 2021-22, while the PH expenditure of the state has grown at AAGR of 21% and that of the NHM expenditures at 24% for the same period. The share of PH expenditure in Total Health Expenditure (THE) averaged at 52% for the period 2015-16 to 2021-22. The share of PH expenditure as a proportion of THE has shown a decline from 58% in 2017-18 to 49% in 2021-22 (Figures 4.8 and 4.9).

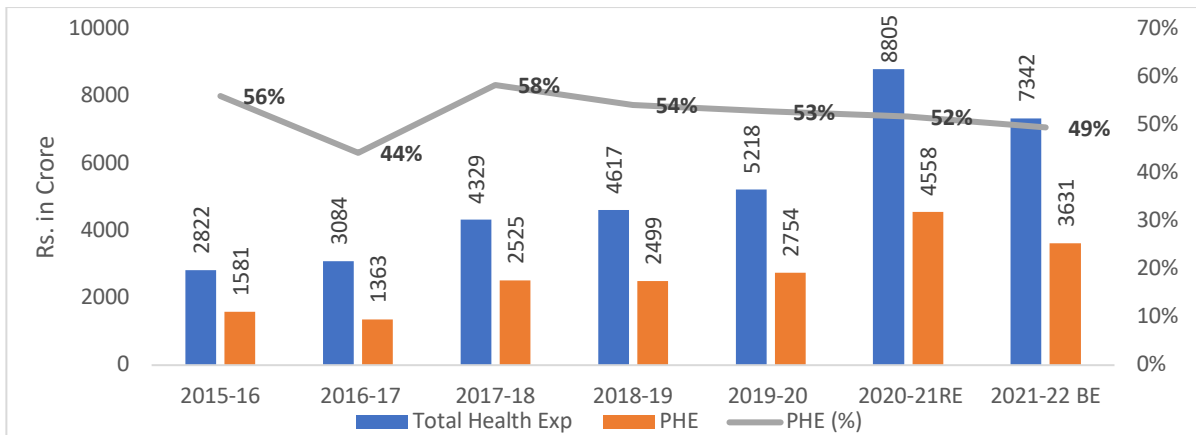


Figure 4. 8. Total Health Expenditure and Public Health Expenditure over years (INR in crore)

The share of NHM expenditures in THE increased to 49% in 2017-18 decreased to 42% in 2021-22 (Figure 4.9). The share of NHM in the PH expenditure has averaged at 83% over the period 2015-16 to 2021-22. The share of health expenditure in the total expenditure of state has recorded a steady decline since 2015-16 from 7.1% to 6.8% in 2021-22 with exception in 2020-21 at 7.2%, which was a COVID-19 pandemic year that necessitated a higher PH expenditure.

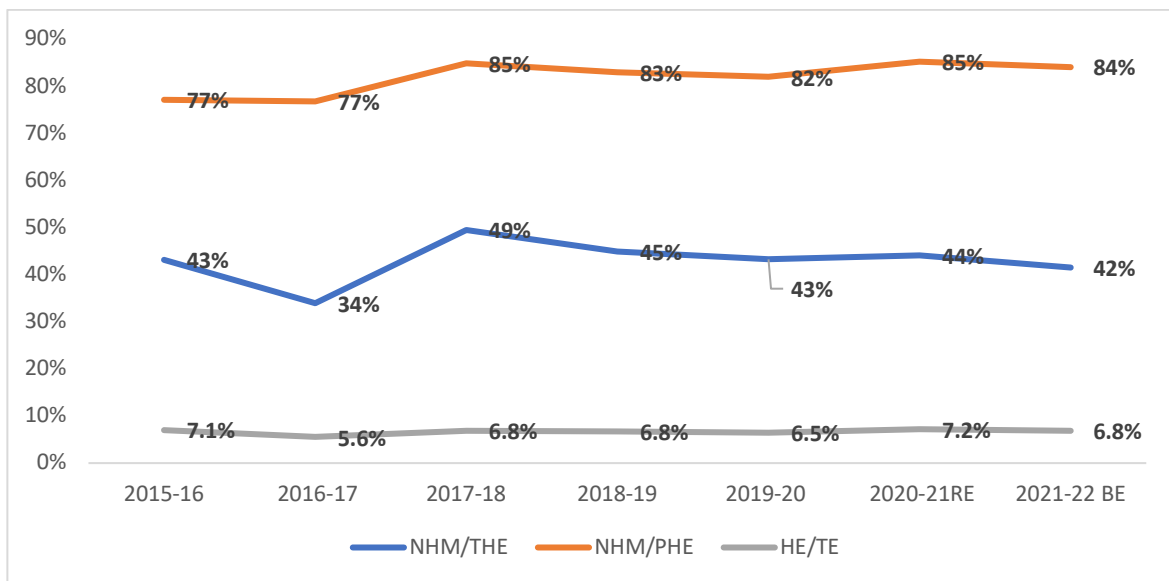


Figure 4. 9. Share of NHM expenditure and Health expenditure

## Health Cadre: Insights And Takeaways

Following were the key takeaways on the current health administrative structure.

### Lack Of Public Health Training

Currently, the state health services rules of 1995 does not mandate any PH training;



therefore, very few of the state's 3,450 plus staff of health services have any PH training or PH degree. Specialists (non-PH) and generalists occupy most administrative positions in the cadre. The over 6,000 staff of NHM in the state also perform PH duties of varying degrees. Most programme managers in the NHM generally have a Master of Business Administration degree, while other PH staff like microbiologists, counsellors and block programme coordinators receive only respective programme-specific training, and therefore have no PH orientation. The PH training or health administration emerged as one of the most important needs in the interviews.

### Shortfall Of Skilled Human Resource

The state reported a shortage of more than 1000 doctors and 3000 nurses in August 2019(Assam Department of Health and Family Welfare, 2021). Almost all interviews referred to a shortage of workforce in the state. In a context where the adequate staff is not in position, it becomes a major challenge to organise any detailed training. The state seems to have decided to attract specialists into the government sector by proposing the creation of a separate specialist cadre but no such steps for the creation of a separate PH cadre were visible in the state.

### Lack Of Educational Infrastructure For Education And Training

The state has no institutions offering Master of Public Health (MPH) courses at present, and NER has only four institutions. Medical colleges do offer Doctor of Medicine course in community medicine, but this is restricted to medical graduates only, leaving limited avenues for non-medical graduates who could be important in filling the skill gap. Hence, opening up avenues for non-medical professionals as well as nurses for MPH degree could help in creating a potential work force. The state has a Bachelor of Science in Community Medicine programme that trains community health officers, who have paramedical training and work under the MO at the SC level. They supervise the auxiliary nurse midwives and ASHA workers under them and have various programme management and health promotion roles. However, not much information is available on the vacancies or how this is functioning is available. Interviews with key personnel and current incumbents of the health services posts showed that creation of a separate PH cadre would be beneficial. It would be crucial to understand the role and potential of these supervisors before proposing a PH cadre and also promoting MPH courses in the state.

## MANIPUR

Manipur is a strategically located state in the NER. It is surrounded by Nagaland in the north, Assam in the west, Mizoram in the south, and it shares a long international border with Myanmar in the east and the south. It is a state of hills and valleys with more than

90% of the state being hilly. However, only 42.8% of the total population lives in the hilly areas, while the remaining 57.2% live in the valleys. It has 16 districts and one of them, Chandel, has been identified as an aspirational district by NITI Aayog.

Almost 71% of the population lives in rural areas; the percentage of Hindu population (41.39%) is almost the same as that of Christian population (41.29%). Nearly 41% of the total population belongs to the ST (Census 2011). The sex ratio of the total population (females per 1,000 males) was 1,066 in 2019-20 with 95.2% of men and 87.6% percent of women being literate (NFHS-5). Manipur is situated in seismic zone V, which is the most earthquake prone zone in the country and also witnesses frequent floods.

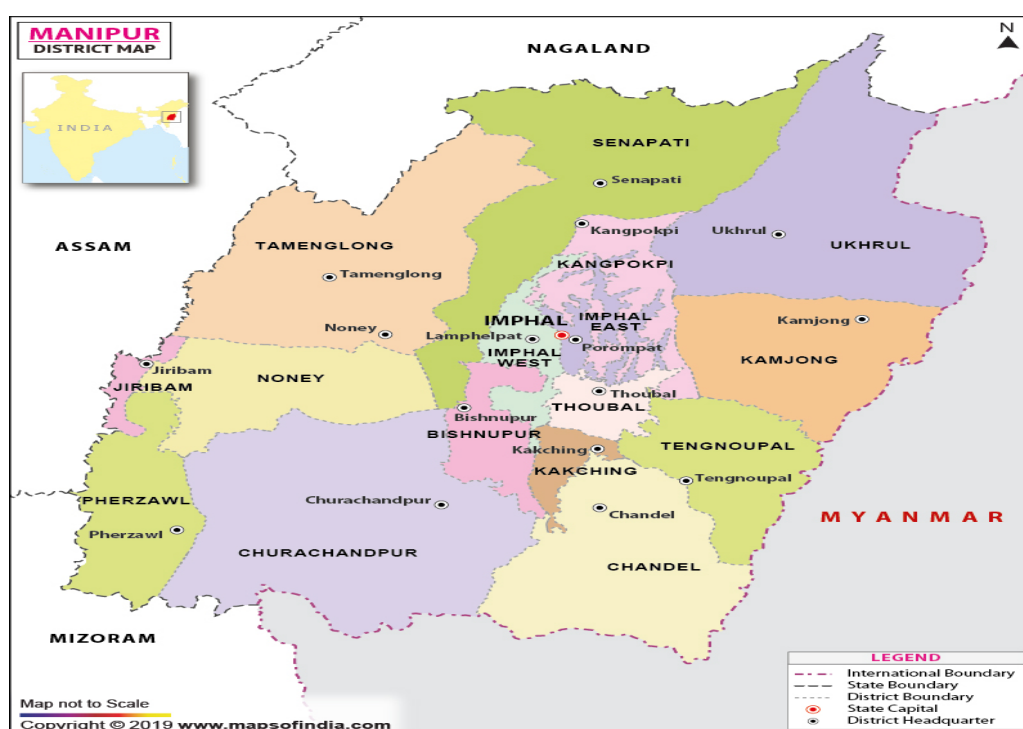


Figure 5.1. Physical Map of Manipur

## Financial Status

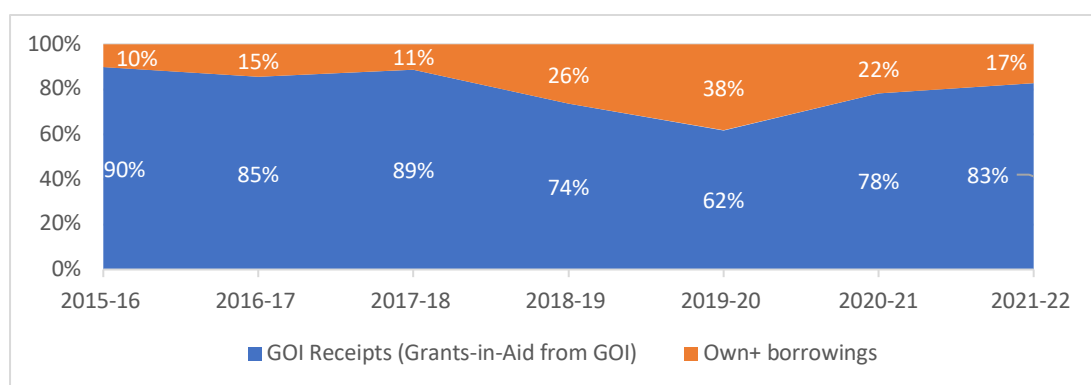
The state's own revenues have healthily grown at an AAGR of 24% (Table 5.1). However, the share of taxes from Gol has declined in their growth in 2018-19 and 2019-20, while their annual average growth for the period 2015-16 to 2021-22 remained at 8%. Grant-in-aid has grown at an AAGR of 28% owing to higher transfers during the years 2019-20 and 2020-21, which are pandemic years. Borrowings declined during the COVID-19 period owing to higher transfers from Gol to the state.

Revenue (in INR Crores)	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Own Revenue	700	751	965	1,212	1,336	1,571	2,442
Share of Taxes	3,142	3,757	4,154	4,699	4,048	3,949	4,765
Grant-in-aid from Gol	4,438	4,621	5,238	4,651	5,301	11,998	14,312
Non debt capital receipts	1	1	8	1	1	4	4

Borrowings	926	1,551	1,296	3,780	6,590	4,849	4,500
Total Receipts	9,207	10,682	11,662	14,342	17,275	22,370	26,024
Year on year growth rate	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>Average</b>
Own Revenue	7%	28%	26%	10%	18%	55%	24%
Share of Taxes	20%	11%	13%	-14%	-2%	21%	8%
Grant in Aid from GoI	4%	13%	-11%	14%	126%	19%	28%
Non debt capital receipts	13%	597%	-93%	36%	374%	0%	154%
Borrowings	68%	-16%	192%	74%	-26%	-7%	47%
Total Receipts	16%	9%	23%	20%	29%	16%	19%

*Table 5. 1. Components of Revenue (INR In Crores) and their growth over years (2015 to 2022, in percent) in Manipur*

The transfers from the GoI (tax devolution and grant-in-aid) make up about 80% of the revenues, while the own revenues and borrowings together account for 20% (Figure 5.2). The total liabilities estimated for the year 2021-22 stood at 32% of GSDP or 63% of the revenue receipts.



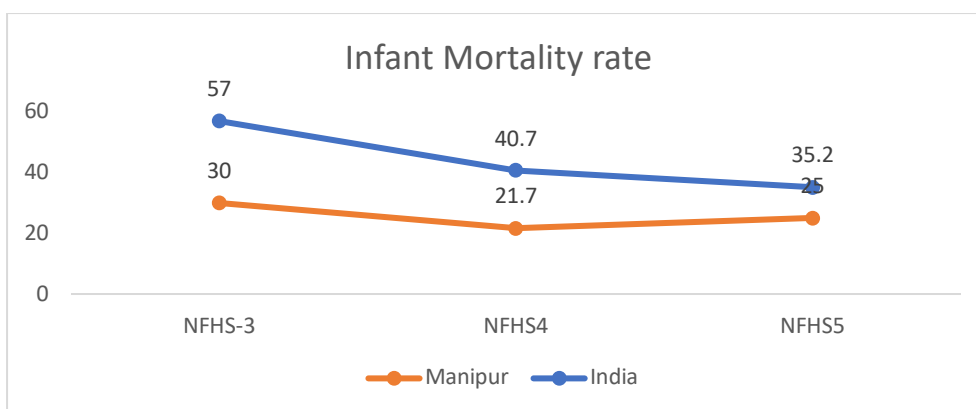
*Figure 5. 2. Share of Government of India transfers and Own revenue + borrowings (percent), Manipur (2015-15 to 2021-22)*

## Health Status

The major PH related issues in Manipur are related to MCH, CDs, and NCDs.

## Maternal And Child Health

Statistics from NFHS-3, NFHS-4, and NFHS-5 show that though there had been a drop in both infant and under 5 mortality rates between 2005-06 and 2015-16, the infant mortality rate has slightly crept up in 2019-20 (Figure 5.3). However, these rates remain lower than the national average in 2019-20. The Indian Council for Medical Research's (ICMR) 2016 report on disease burden in states showed that the largest cause of deaths (37%) in children aged 0 to 14 years in the state were due to diarrhoea and lower respiratory tract infections, followed by deaths due to neonatal disorders (36%).

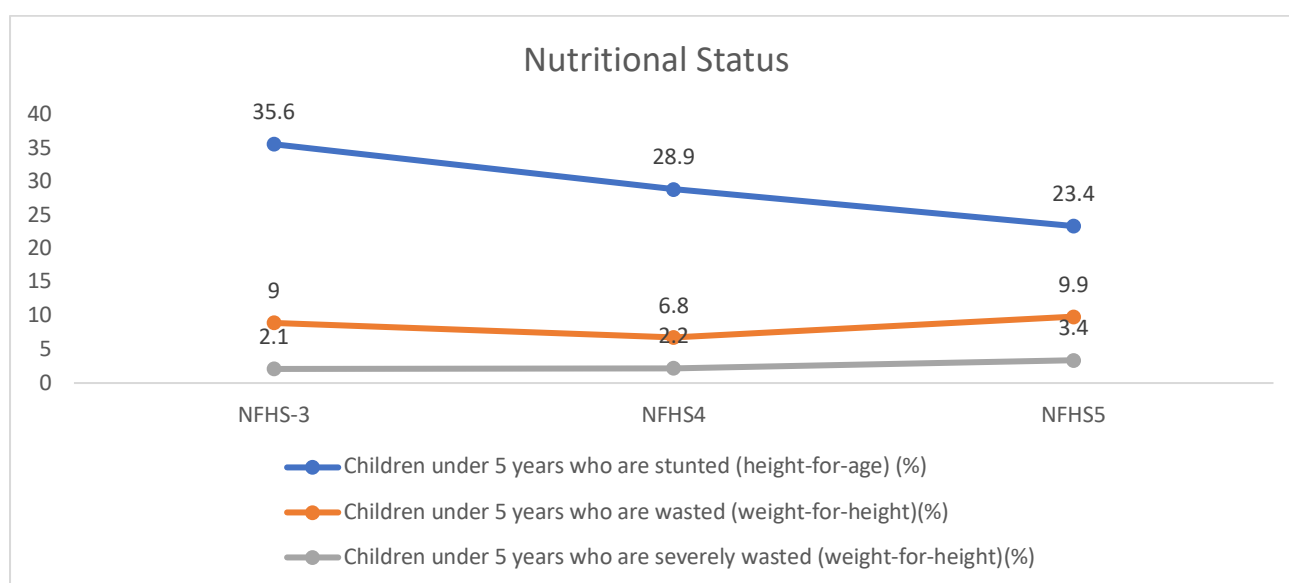


**Figure 5.3. Infant mortality rate per 1,000 live births from 2005-06 to 2019-20, Manipur and India**

*Source: National Family Health Survey state fact sheets.*

However, Manipur has performed better in other key PH indicators. The state has seen significant improvements in the number of institutional deliveries from just 45.9% in 2005-06 to 79.9% in 2019-20, with the percentage of mothers having at least 4 antenatal visits also steadily increasing from 54.1% to 79.4% during the same time period.

The percentage of fully vaccinated children between aged 12-23 months also increased from 46.8% in 2005-06 to 68.8% in 2019-20. In terms of nutritional status of children under 5 years of age (Figure 5.4), the surveyed result shows a non-uniform pattern. The proportion of children under 5 years of age who are stunted (height-for-age) declined from around 35.6% in 2005-06 to 28.9% and 23.4% in 2015-16 and 2019-20, respectively. On the other hand, the proportion of children under 5 years of age who are wasted (weight-for-height) decline to 6.8% in 2015-16 from 9% in 2005-06, but again slightly increased to 9.9% in 2019-20.



**Figure 5.4. Nutritional Status of children under 5 years of age in 2005-06, 2015-16, and 2019-20, Manipur**

*Source: National Family Health Survey state fact sheets*

Though the state fares reasonably well in key PH outcomes when compared with other states in India, there is a significant difference observed between the hilly districts and the valley districts within the state. There exist huge inequalities in accessing Maternal Health Care (MHC) services, and it is observed that the percentage of institutional deliveries in the valley districts (for example, 96 % in Imphal West) is significantly higher than the hilly districts (for example, 45 % in Ukhrul). The same holds good for the vaccination coverage of children as well.

The inequality in accessing MHC services was also more pronounced among the hilly districts, and the mother's educational level, economic status and exposure to mass media were the main determinants that were driving this inequality (Mishra et al., 2021). The poorer MCH status among the tribal population of Manipur is also highlighted in several studies conducted in the hilly districts of the state. A study on the Rongmeis tribal community of Tamenglong district (Maheo & Devi, 2017) asserts that around 90% of - married women surveyed delivered their babies at home, and a majority of them did so without the support of a trained health care personnel. Lack of availability, accessibility, and affordability of MHC services are the main reasons for low institutional deliveries coupled with customs and beliefs in traditional practices. Similarly, another study in Senapati district (Kipgen, 2018) examining the MCH status revealed low antenatal care (62%), institutional delivery (12%), and post-natal care (13%) among the Thadou-Kuki tribal population. The prevalence rate of underweight (27%), stunting (45%), and wasting (12%) in children under 5 years of age from the Meitei community (which is considered a socio-economically advanced community of Manipur) were significantly higher than the state level estimates (Loukrakpam et al., 2020), which shows that poverty may not be the root cause of these concerns.

## **Communicable And Non-Communicable Diseases**

The report on the disease burden in Indian states showed that Manipur's ETL dropped from 1.37 in 1990 to 0.42 in 2016 and is the lowest among all the NE States, showing a higher proportion of deaths due to NCDs and injuries. The death rates due to stroke and diabetes in Manipur are significantly higher than the national average. While diarrhoea and lower respiratory infections were the leading cause of DALYs in the 1990's, by 2016 they had been replaced by NCDs such as ischemic heart disease and stroke.

Yadav and Shekhar (2019) examined the trend and regional variation in CDs and NCDs in India during 1996-2014 using various rounds of the NSS office. They observed a decrease in the prevalence rate of CDs and NCDs in the valley region and an increase in the hilly regions of the state during this period. Gupta and Xavier (2018) studied the variation in the prevalence rate of hypertension—one of the most important risk factors of NCDs among in India. Their study revealed that Manipur had one of the highest

prevalence rates in India at 20%, 11%, and 16%, respectively among men, women, and total population. Manipur is one of the states with the highest prevalence of substance use in India (Ambekar et al., 2019; Ningombam et al., 2011; Saikia & Debbarma, 2020). The causal relationship between NCDs and consumption of tobacco products, alcohol, cannabis, opiates, etc. is well established in health literature.

## Public Health Disasters

Manipur is highly vulnerable to various forms of natural disasters because of its distinct geo-climatic, geological, and physical features. It has witnessed an increasing trend of natural disasters such as earthquakes, floods, droughts, and landslides, rendering people homeless and dead. The floods in 2015 was one of the worst in the last 200 years; it affected around 600 sq km of area with more than 500,000 population and claimed at least 20 lives (Davies, 2015). The worst affected areas recorded a 70%–80% increase in cases of water-borne diseases (Sphere India, 2015). The Department of Relief and Disaster Management in collaboration with other departments is also responsible for PH including prevention of water-borne diseases, epidemics and managing solid waste.

## Health Care Service Delivery In Manipur

The delivery of health care services in Manipur, as elsewhere, are through a network of state run SCs, PHCs, CHCs, DHs, and medical colleges. Table 5.2 shows that, unlike other NE states, Manipur is in a comparatively better position with no shortfall in the number of required PHCs and CHCs. However, the state reports shortfall in terms of human resources, where only 3% of the total specialist posts (namely, OB/GYNs, paediatricians, surgeons, and physicians) have been filled in CHCs that typically serve as first referral units. Eighty two per cent of the sample population had their ailments treated on medical advice provided by a government healthcare service provider, while less than 1% preferred going to an informal health care provider (NSS, 2018)(NSS 75th round, 2018-19).

Type of facility	Number of facilities Present	Required	Shortfall
Subcentres	490	537	8.8%
Primary Care Centres	90	84	-7.1%
Community health Centres	23	21	-9.5%
Sub divisional/district Hospital	1		
District hospitals	8		
Government Medical colleges	2		

*Table 5. 2. Number of health facilities in Manipur 2019-20*

*Source: Rural Health Statistics, 2019*

## Manipur: Public Health Governance Structure

The Department of Health & Family Welfare headed by the principal secretary consists of two directorates—Directorate of Family Welfare and DHS; in parallel, the State Program Management Unit (SPMU) is led by the state mission director (Figure 5.5.). The Directorate of Family Welfare is responsible for activities/programmes such as immunization, family planning, and MCH, while the DHS is responsible for disease surveillance, PH programmes (such as TB, leprosy, and malaria) and management of healthcare facilities such as DHs, CHCs, and PHCs; the SPMU is responsible for supporting both the directorates in regard to management, planning, financing, monitoring and evaluation of PH programmes funded by the NHM. There are four key positions in the SPMU: state programme manager, state finance manager, state accounts manager and state data officer.

A director heads the DHS, and under the director is an additional director exclusively for PH. The additional director (public health) leads a fairly organised but ‘informal’ public health wing under the DHS, though not designated as cadre. As a part of this public health wing, at the state level, there is an epidemiologist (who also functions as joint director of public health) and deputy directors from both medical and non-medical streams. There are deputy directors (from medical stream) who have been appointed as state level nodal officers for large PH programmes related to CDs such as TB, leprosy, and malaria. Deputy directors from medical stream also manage other smaller NHM programmes on NCDs, while deputy directors from non-medical stream are responsible for functions such as biostatistics, school health, and health intelligence.

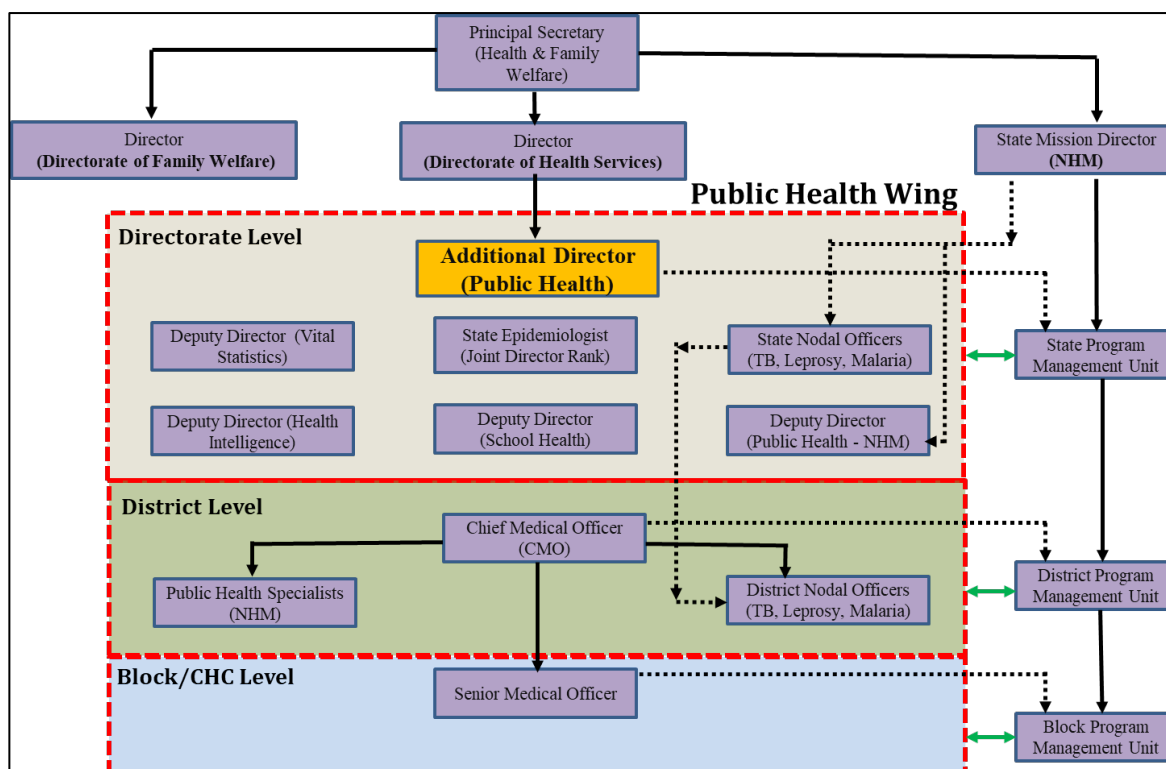


Figure 5.5. Manipur's Public Health Governance Structure

At the district level, the CMO is the senior most PH position and is responsible not only for the implementation of PH programmes but also managing all the health facilities within the district. Under the CMO, there are again dedicated district nodal officers for family welfare, TB, leprosy, and malaria, and there are PH specialists who are responsible for NHM programmes that focus on NCDs. The district nodal officers and PH specialists administratively report to the CMO but functionally report to the state nodal officers/deputy directors at the DHS. The CMO also oversees the functioning of the District Programme Management Unit (DPMU). The key role of the DPMU (comprising of the district programme manager, district finance manager, and district data manager) is to support the district health administration in the successful implementation of NHM programmes.

At the block level, a senior medical officer is in charge of managing a CHC along with implementation of NHM programmes. The block program manager (appointed by the NHM) supports the senior medical officer in the implementation of all PH programmes at the block level. In Manipur, the CHCs also have a community health officer. They are non-medical graduates and typically start off as female health workers at the entry level. They support the Integrated Disease Surveillance Programme (IDSP) and report to the senior MO. Their other responsibility is to also collect and maintain household records and advise them (senior MOs) on various health care services.

### Manipur: Health Service Cadre & PH Leadership Workforce

Manipur does not have a dedicated PH cadre. The Manipur Health Service cadre is a single cadre comprising of both non-specialists (only MBBS degree holders) and specialists (MBBS with medical or public health specialisation). Thus, the cadre comprises of only medical doctors (with or without a specialisation). There are a total of 2,792 sanctioned posts in the cadre, of which 34 of them have a specialisation in PH/community medicine. There are five grades in the cadre: special cadre followed by grades I to IV. Table 5.3 describes the structure of the cadre.

Grade	Designations	Total Number of Sanctioned Posts	Permanent	Temporary
<b>Special</b>	Director	2	2	0
<b>Grade 1</b>	Additional Director & Consultant	14	13	1
<b>Grade 2</b>	Joint Director, Chief Medical Officer, Medical Superintendent, State Programme Officer & Senior Specialist	131	124	7
<b>Grade 3</b>	Deputy Director, Deputy Medical Superintendent, Senior Medical Officer, District Programme Officer & Specialist	615	580	35



<b>Grade 4</b>	Medical Officer (MO)	1385	1350	35
	Total	2147	2069	78
	Leave Reserve @10%	215		
	Training Reserve @10%	215		
	Deputation Reserve @10 %	215		
	Grand Total	2792		

*Table 5. 3. Structure of the Manipur Health Service Cadre*

*Note: The above cadre structure is based on the Manipur Health Service (Public Health & Medical) Rules, 2018 – Latest Draft Proposal.*

As per the cadre rules, to be considered a PH specialist, one must have specialised in any of the following subjects after a MBBS degree-- community medicine, epidemiology, social and preventive medicine, PH, health and hospital administration. However, there is no eligibility criterion specified in terms of either PH qualification or training for any of the PH related posts in the cadre (e.g., CMOs, district nodal officers, senior MOs, etc.). Appointments to these PH-related posts are also open to medical/clinical specialists and are based only on tenure and promotion by selection. On the other hand, the cadre rules clearly specify medical/clinical specialisation as an eligibility criterion for posts such as specialists at health facilities or consultants at the directorate. Neither the DHS nor the district health administration was able to provide us with a detailed description of the roles and responsibilities for each of these cadre positions.

Although the current director of health services has previously held other PH positions, their experience and specialisation are in Anaesthesiology. The CMO we interviewed didn't have any specialisation in PH, while the senior MO we interviewed at a CHC had specialised in microbiology. Only the 'public health specialists' that we interviewed had all specialised in community, medicine. Even though there is an informal public health wing under the additional director (PH) at the DHS, there exists no defined career path for those specialised in PH. The state government does not sponsor any PH-related courses or training programmes for the incumbents of PH-related posts. Only the programme officers received training that was specific to their respective programmes—this was similar to what we saw in Assam. We also observed that several key PH positions were vacant. From our interviews we gathered that, as on June 2021, 7 out of the 16 districts in Manipur did not have a permanently appointed CMO, and 14 out of the 27 sanctioned "Public Health Specialist" posts were still lying vacant. Despite our persistent follow up, the Directorate was unable to provide us with additional details such as the academic qualifications, trainings completed, gender, vacancies and type of post (permanent or contractual) of all the incumbents in key PH positions.

## **Manipur: Essential Public Health Functions**

To understand the status and implementation of the Essential Public Health Functions (EPHF), we interviewed a few health officials at the district level.<sup>8</sup> While these officials did attempt to give us a comprehensive picture of the EPHF to the best of their abilities, we

need to acknowledge the fact that the summary that has been stitched together (Table 5.4) is solely based on inputs from these limited cohort of officials. Their inputs haven't been validated with any secondary data or government documents as these either do not exist at all or are not in public domain.

EPHF	Status	Remarks
Health Situation Monitoring & Analysis	Green	There is a robust process for collecting data on the population's health status. The data also gets segregated program-wise. The National Health Mission (NHM) programme provides technological support and training for the same. Monitoring of data quality, data analysis, and dissemination needs to be further improved.
Epidemiological Surveillance/Disease Prevention and Control	Green	Under Integrated Disease Surveillance programme (IDSP), data is collected on epidemic prone diseases on a weekly basis. (6 syndromes & 20 diseases) Medical officers focus only on their clinical responsibilities, and their poor reporting on diseases & diagnosis makes surveillance very challenging.
Research & Development on Public Health	Red	No institution is conducting research on local issues, e.g., the increasing cases of non-communicable diseases in the state.
Policy and Planning	Yellow	The NHM did bring rigor to planning process, which was lacking earlier. Policy and planning are a top-down approach wherein programme guidelines specified by the centre are being executed by the state/district. Lack of a decentralised planning process.
Budgeting and Financial Management	Yellow	Public health (PH) is entirely supported by NHM. The state government does not run any programmes to address state specific issues. While the district programme manager (NHM) said that they fully received the allocated budgets, the district nodal officers disagreed on the same.
Health Promotion and Education	Green	Information, education, and communication activities are regularly conducted especially for the big programmes. Cooperation and support from the community to follow guidelines.
Reducing the impact of emergencies and disasters on Health	Green	A disaster management team led by the district commissioner has been constituted in each district. The chief medical officer is part of this team. Inter-departmental collaboration needs to be further strengthened and happen throughout the year and not only during disaster response.
Regulation and Enforcement of Public Health	Yellow	Apart from food safety, the health department is not involved in any enforcement. Regulations and enforcement related to sanitation & waste management bylaws are addressed by the Pollution Control Board & local bodies.

Assuring a Competent Public Health Workforce		Recruitment of workforce trained in PH is not being prioritised. Post recruitment, lack of training programmes on PH.
Ensuring Quality of Population-Based Health Services		Apart from the Indian Public Health Standards for health facilities, there are no other standards for evaluation of population-based health services.
Environmental health and Sanitation		The health department does not play an active role in this domain even though this function has a direct impact on population health. Public Health Engineering Department, local bodies and Pollution Control Board play a bigger role.

*Table 5. 4. Status of Essential Public Health Functions (EPHF) in Manipur*

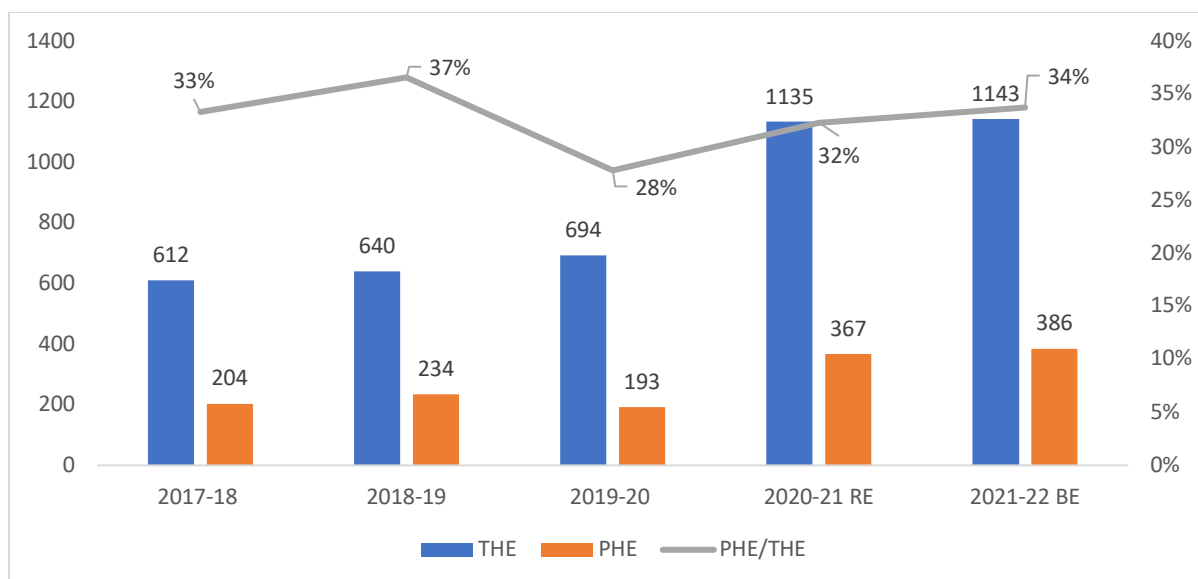
*Note: Green colour denotes that the function is fairly defined and operational in the state. Orange colour denotes that the function is not well defined but operational to some extent in the state. Red denotes that this function is carried out poorly or not the responsibility of the health department.*

A fairly established process is in place for collecting and analysing data on the population's health status, disease surveillance, and also health promotion-related activities. However, one of the officials mentioned that the findings from analysing the population related data is hardly ever communicated back to the community. Planning and prioritisation with respect to PH programmes largely happens at the state level. That the DHS does not even consult district level officials was identified as one of the major gaps in policy making and planning.

The state's budget allocation towards PH is minuscule in comparison to the funds received under NHM for implementing PH programmes. According to the DPM (a NHM staff member), every district prepares its own health budget by consolidating proposals at every level: SC, PHC, and block. While the government officials at the district level agreed that this exercise is being carried out, they also highlighted that the decisions taken at the state level with regard to budget allocation is seldom based on these proposals. While the enforcement of regulations related to food storage and handling is under the purview of the health department, other subjects of PH importance such as water treatment, sanitation and solid waste disposal are regulated by either the local government, pollution control board, or the PHED with minimum involvement of the health department. The state has also not come up with any specific agenda for research on local PH issues.

## **Analysis Of Public Health Expenditure**

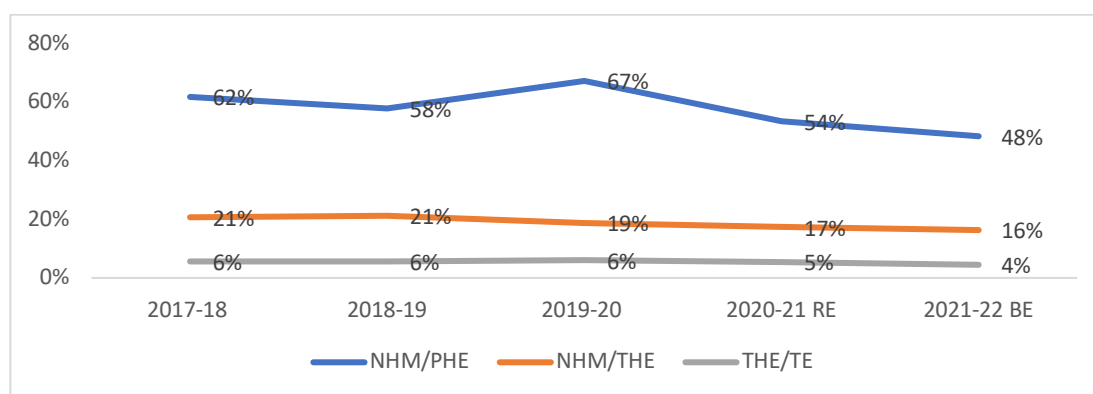
Manipur state's total health expenditures have grown at an AAGR of 19% over the period 2017-18 to 2021-22, while the PH expenditure of the state has grown at an AAGR of 23% and that of the NHM expenditures at 12% for the same period. The share of PH expenditure in THE averaged at 33% for the period 2017-18 to 2021-22 and hovered between 28% to 37% during the same period (Figure 5.6).



**Figure 5.6. Total Health Expenditure and Public Health Expenditure over years (INR in crore)-Manipur**

*Note: Note: PHE : Public health Expenditure, THE : Total Health Expenditure*

The share of NHM expenditures in the PH expenditure and THE serves as a proxy of the share of Gol in the state health expenditure because of its share of 90% in CSS. The share of NHM in THE decreased from 21% in 2017-18 to 16% in 2021-22 (Figure 5.7). The share of NHM in the PH expenditure has averaged at 58% over the period 2017-18 to 2021-22. The share of health expenditure in the total expenditure of state has decreased from 6% to 4%.



**Figure 5. 7.Share of National Health Mission (NHM) expenditure and Health expenditure in Manipur**

*Note: PHE is Public Health Expenditure, THE is Total Health Expenditure, and TE is Total Expenditure in state.*

## Public Health Cadre Formation: Insights & Takeaways

### Current Scenario With Regard To PH Administration

In Manipur, key PH positions have traditionally been occupied by clinicians who come

with a curative care mindset and perceive PH as only hospital/health facility administration. The CMO and the senior MO are very critical PH positions but are largely held by doctors who do not have any PH qualification or training. The Manipur Health Service is a common cadre comprising largely of clinical specialists and a small fraction of PH specialists. In the absence of a dedicated PH cadre, a majority of PH positions are occupied by clinical specialists. For e.g., one of the senior MO's we interviewed at a CHC in Imphal district is a psychiatrist by training. In the absence of PH training and orientation, MOs and senior MOs tend to focus only on the curative/clinical side and ignore their PH responsibilities. Lack of clinical specialists at CHCs further adds to the need for them to focus only on the curative/clinical side. Hence, they tend to rely heavily on NHM staff such as the programme, finance and data managers for PH programme planning and implementation. In Manipur, there have been 16 directors of health services so far, and only two of them have had PH qualification/training.

### Clinical And PH Specialists Have Very Divergent Mindsets

The senior PH officials that we spoke to were of the opinion that clinical specialists and PH specialists have very divergent viewpoints when it comes to looking at community health. Clinical specialists tend to have a curative/individual patient mindset whereas PH specialists have a preventive/population-based mindset. As one senior PH official put it, 'Clinical specialists believe that a patient should go to the doctor, whereas it is the other way round for a PH specialist'. Hence, they feel that from the entry level itself, there need to be two MOs working in a PHC: one dedicated for individual patient care and the other for managing PH programmes and community health-related initiatives at the grass root level.

### Demand For A Dedicated PH Cadre Along With A Separate PH Directorate

In the current pandemic era, with an aim to bring increased attention to PH issues of the state, many senior PH officials are pushing for the creation of a separate Directorate of Public Health. They would like the existing DHS to be bifurcated into two directorates: one for PH and another for medical/clinical services. Correspondingly, they want the Manipur Health Service cadre to be also bifurcated into PH cadre and a medical specialist cadre. The PH cadre rules will define the eligibility criteria in terms of qualifications/training for key PH positions along with a clear career progression. The PH cadre rules will also provide other details such as the composition, breakup, number of posts, and pay scales. Senior PH officials in the health department are already working on a blueprint for both the directorate & PH cadre structure. The state government is in discussion with the centre to come up with a Manipur Public Health Act. The formation of a separate PH cadre is being recommended to be included in this act. While preparing this blueprint, one of the needs that has been identified is the position of a deputy CMO who can act as a bridge between the CMO and district program officers and also to

support the CMO in administration of both PH programmes and health facilities.

### **An All-Encompassing PH Cadre That Should Also Include Non-Medical Professionals**

A senior PH official was also of the opinion that roles such as data manager, finance manager and program manager (which are currently part of the NHM contractual staff) should also be included under the larger umbrella of the PH cadre as permanent staff, thus paving the way for non-MBBS professionals to become part of the PH cadre. He recommended that the current NHM staff should be completely subsumed within the proposed Directorate of Public Health and that the NHM programme funds should also be, therefore, managed by the Directorate of Public Health. In the long term, apart from MBBS professionals with a PH specialisation, he also envisioned the creation of various sub-cadres within the larger PH cadre so that clear career paths are defined for various non-MBBS professionals, such as i) frontline PH workers, ii) technical experts (such as epidemiologists/entomologists), and iii) programme managers—these roles can enable them to grow to senior administrative positions. He strongly felt that one needed to treat the PH cadre as a sort of an all-encompassing umbrella organisation/association/union that could strengthen boundaryless collaboration between NHM staff and state-appointed officials. Those arguing for a separate PH cadre in the state consider lack of defined career paths for PH specialists a barrier and question how a gynaecologist is considered qualified to become the additional director of PH, but a PH specialist, on the other hand, cannot practice as a gynaecologist at a district hospital.

### **Need For A Workforce Trained In Various Aspects Of Public Health**

The consultations with officials suggested that the research on local PH issues was absent, and even the state wing of the ICMR (Indian was not functioning anymore. Apparently, a lot of data is being collected but very little of it is being analysed. One way to address this issue is by also including non-medical professionals such as biostatisticians and data scientists within the PH cadre. The Tamil Nadu model was considered appropriate where the responsibility of secondary and tertiary health care services could be managed by a medical/clinical specialist cadre, whereas the PH services along with PH could be managed by the PH cadre.

According to the district level officials<sup>h</sup> engaged with PH responsibilities, all PH specialists at the district level were doctors with a specialisation in community medicine/PH. However, due to shortage of clinicians, the PH specialists were also being regularly assigned clinical duties, more so during the pandemic. One of them remarked, 'In our health department, anyone can be asked to do anything since the job roles are not being assigned as per an individual's qualifications'. They too felt that the creation of a dedicated PH cadre would ensure that PH specialists pursue only a PH career path. One of the senior health officials informed us that the unspent balance of NHM programme

funds is piling up in Manipur since the utilization rates are extremely poor. One of the reasons she attributed this to is that most CMOs come with only a clinical background and are not trained in health financing and management. Public health in Manipur, as elsewhere, is synonymous with the NHM. The state government does not allocate any separate budget for local PH programmes or initiatives that could be critical to the state.

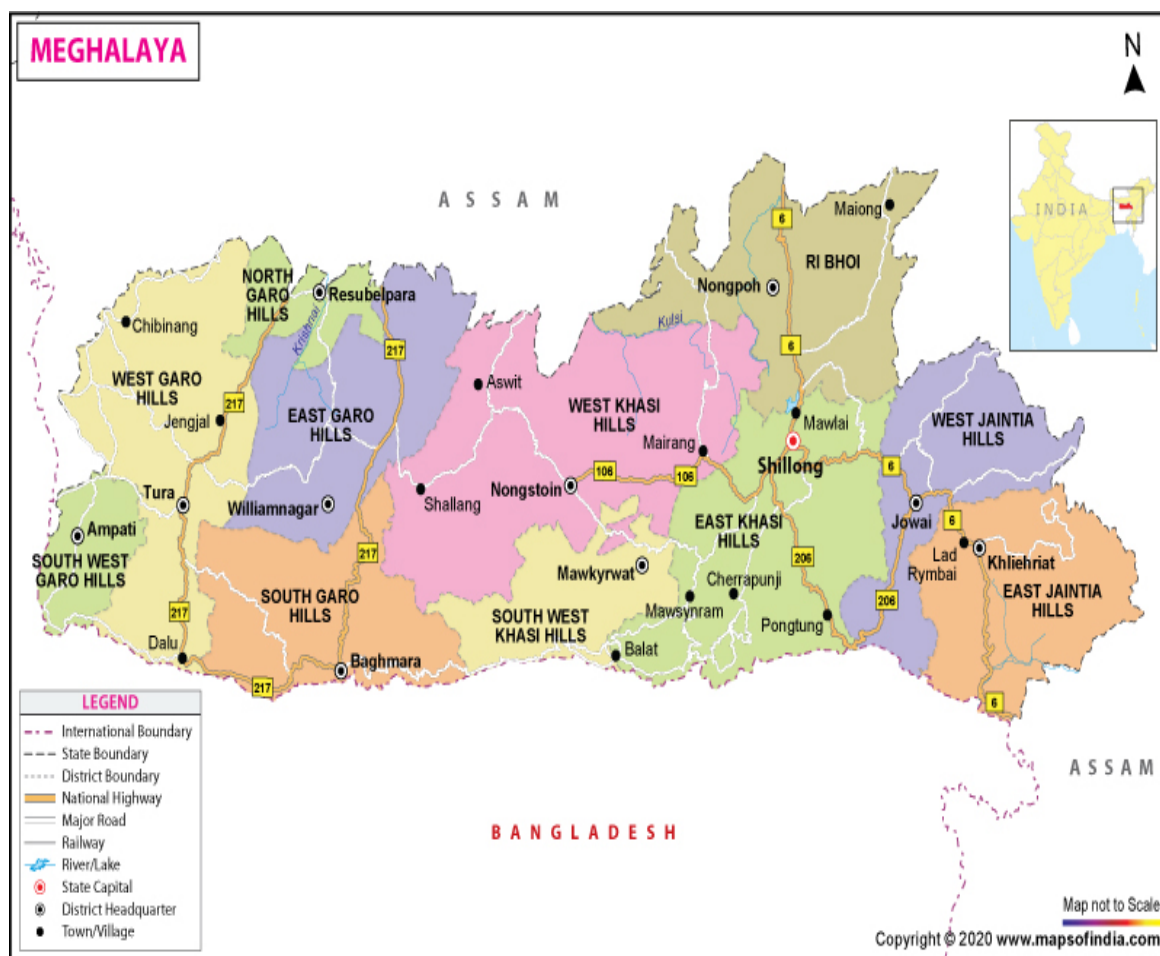
### PH Cadre Creation May Further Promote Working In Silos

The non-PH officials as well as senior officials posted in the health department did not share the same opinion about the need for a separate PH cadre. They expressed concern that the creation of a dedicated PH cadre could further widen the gap between PH and clinical services. According to them, the existing two directorates—health services and family welfare—already work in silos and do not collaborate with each other. Their view was that many of the governance-related decisions that could perhaps work for large states may not work well for a small state such as Manipur. One of the senior Indian Administrative Service officers felt that instead of creating a dedicated PH cadre it may be more effective to instead implement the recommendations of the 15th Finance Commission, which emphasises on the creation and strengthening of block public health units.

Manipur was the only one out of the four study states, where a significant number of health department officials had PH qualifications. However, when issues such as working in silos, primacy of clinical health care, and lack of clarity in terms of roles and responsibilities are compared, there is not much difference between Manipur and Assam.

## MEGHALAYA

Meghalaya is known for its difficult and inaccessible hilly terrain, which ranges from 500 to 2089m of heights. The wettest region of the world is present in Meghalaya, the Cherrapunji–Mawsynram belt, with an average of 7500 mm of rainfall per year. It has 11 administrative districts. Almost 80% of its people live in rural areas; 86% belong to the ST, wherein more than 90% of its tribal population lives in rural areas (Census 2011). The Khasi people form the largest tribal group, followed by the Garos and then the Jaintiyas. Khasis and Garos mainly live in the separate areas of rural Meghalaya, referred to as the Khasi Hills region and the Garo Hills region. Four districts are in the Khasi Hills region and three in the Garo Hills region. Ribhoi is the only district of Meghalaya that has been identified as an aspirational district by NITI Aayog.



*Figure 6. 1. Meghalaya Political Map*

The percentage of literate women is higher in Meghalaya (82.8% in 2015-16, NFHS-4) than in all-India (68.4%) in the same year. The same is true for the sex ratio at birth, which is 1,009 (NFHS 4)—this is also higher than the all-India average. However, the sex ratio at birth in urban Meghalaya is 891 (lower than the Indian average), whereas in rural Meghalaya is as high as 1,030. Meghalaya is also a matrilineal society.

The state has very poor connectivity due to its landscape and forests; only 34% of the state is connected by roads. Insurgency and terrorism, border disputes with the neighbouring state of Assam and the neighbouring country Bangladesh as well as internal unrest due to demand for a separate statehood are commonly known issues in the state. These issues impede the smooth functioning and implementation of the healthcare services in the state. However, the state has seen gradual improvements, e.g., the number of households with improved drinking water was 79.2%, while the percent of households with improved sanitation stood at 82.9% in 2019-20 (IIPS & ICF, 2021a)(NFHS-5 Meghalaya factsheets).



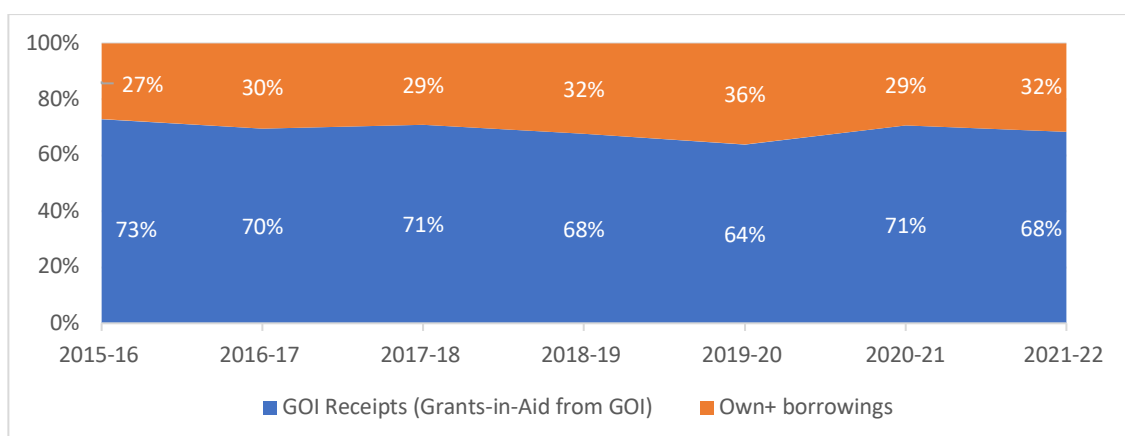
Revenue	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Own Revenue	1,285	1,871	1,817	2,221	2,421	3,067	3,273
Share of Taxes	3,276	3,911	4,323	4,889	4,212	5,999	5,105
Grant in Aid from GoI	2,481	3,157	3,134	2,609	2,780	6,286	6,854
Non debt capital receipts	19	19	17	18	31	27	30
Borrowings	837	1,210	1,225	1,325	1,496	1,995	2,248
<b>Total Receipts</b>	<b>7,899</b>	<b>10,168</b>	<b>10,516</b>	<b>11,061</b>	<b>10,941</b>	<b>17,375</b>	<b>17,510</b>
	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>Average</b>
Own Revenue	46%	-3%	22%	9%	27%	7%	18%
Share of Taxes	19%	11%	13%	-14%	42%	-15%	9%
Grant in Aid from GoI	27%	-1%	-17%	7%	126%	9%	25%
Non debt capital receipts	-1%	-7%	3%	74%	-12%	10%	11%
Borrowings	45%	1%	8%	13%	33%	13%	19%
<b>Total Receipts</b>	<b>29%</b>	<b>3%</b>	<b>5%</b>	<b>-1%</b>	<b>59%</b>	<b>1%</b>	<b>16%</b>

*Table 6. 1. Components of Revenue (INR in Crores) and its growth over years (in percent) (2015 to 2022) in Meghalaya*

## Financial Status

The own revenues has been growing at an annual average growth rate of 18% per year in recent past, indicating a very steady progress (Table 6.1). However, the share of taxes from GoI has declined in their growth in 2019-20, while their AAGR for the period 2015-16 to 2021-22 remained at 9%. Grant-in-aid has grown at an annual average growth of 25% owing to higher transfers during the years 2019-20 and 2020-21, which are pandemic years. Borrowings have grown at an annual average growth rate of 19%, which is the second highest among the revenue components of the state.

The transfers from the GoI (tax devolution and grant-in-aid) make up about 69% of the revenues, while the own revenues and borrowings together account for 31% (Figure 6.2). The total liabilities estimated for the year 2021-22 stood at 37% of GSDP or 93% of the revenue receipts.



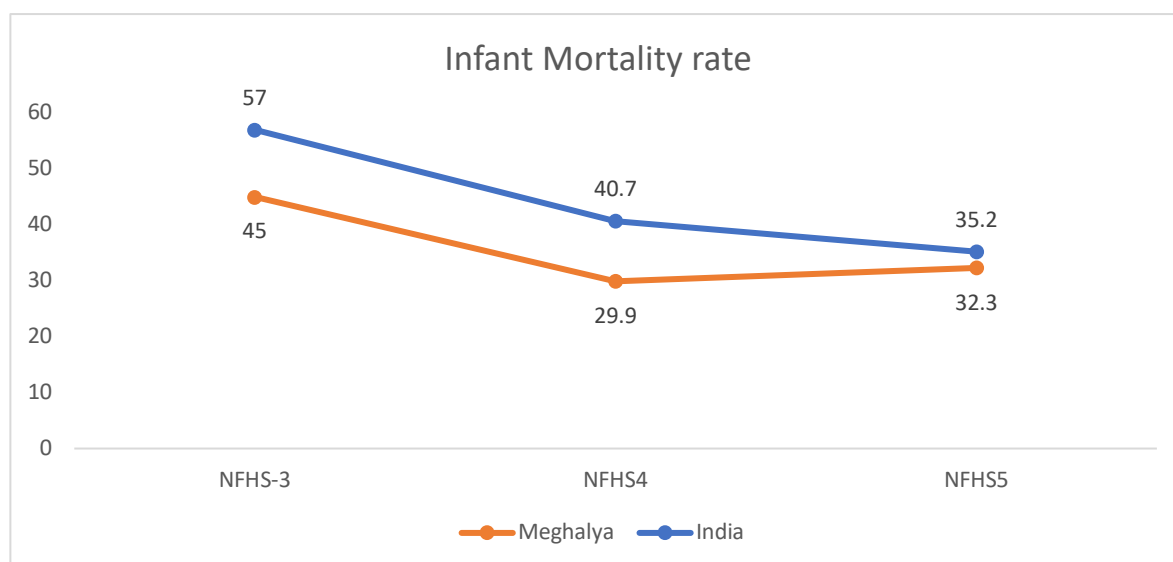
*Figure 6. 2. Share of GoI transfers and Own revenue + borrowings (percent)*

## Health Status

The areas of major concern in Meghalaya have been MCH, CDs, and NCDs.

### Maternal And Child Health

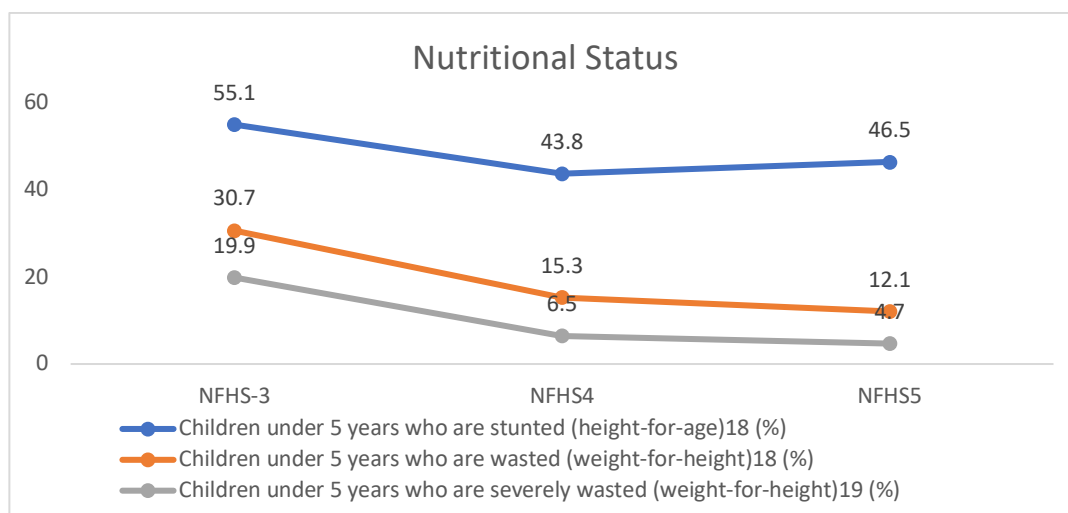
Statistics from NFHS-3, NFHS-4, and NFHS-5 show that from 2005-06 to 2019-20, there were significant improvements in infant mortality rates in Meghalaya, and the rates remained better than the national average in 2019-20 (Figure 6.3). The report by ICMR on disease burden in states showed that the largest causes of deaths (38.4%) in children aged 0 to 14 years in the state were diarrhea and lower respiratory infections in 2016, followed by death due to neonatal disorder (30.4%). Meghalaya also has the one of highest MMR in the country at 211 deaths per 100,000 births (2015-16)(NHM Meghalaya, n.d.). The state has seen some improvements in the number of institutional deliveries, from just 29% in 2005-06 to 58.1% in 2019-20, but only 52.2% of women had at least four antenatal visits in 2019-20. The national average for the% of institutional births was already at 88.6% in 2019-120, which shows how dire the situation for maternal indicators is in Meghalaya. The percentage of institutional deliveries in rural Meghalaya is almost half of in urban areas. In urban areas, the percentage of institutional deliveries is 82.7%, whereas in rural it is just 54.3% according to NFHS-5 factsheet. Due to poor infrastructure and a strong preference for traditional medicine, women are scared of going to hospitals and so they deliver babies at home at risk to their lives, pointing to the low institutional deliveries (Shah, 2018).



**Figure 6. 3. Infant Mortality Rates in Meghalaya and India from 2005-06 (NFHS-3) to 2019-20(NFHS-5)**

Looking into nutritional status of children in the state (Figure 6.4), the percentage of children under 5 years of age who were stunted was 46.5% in 2019-20, which is amongst

the highest in the country. However, figures for wasting show that the percentage of children suffering from wasting has actually decreased from 30.7% in 2005-06 to 12.1% in 2019-20.



**Figure 6. 4. Nutritional status of children under 5 years in Meghalaya 2005-06 to 2019-20**

*Source : National Family Health Surveys 3, 4, and 5 Meghalaya fact sheets.*

## Communicable And Non-Communicable Diseases:

Meghalaya too, like Assam, has an epidemiological transition level of 0.64, which is suggestive of large burden of both CDs and NCDs. The largest cause of deaths in people aged 40 to 69 years in 2016 was cancer at 24.9%, followed by cardiovascular diseases at 20.6%. Cardiovascular diseases were the cause of largest number deaths in the age group of above 70 years. The report also showed that lower respiratory infections, diarrhoeal diseases, TB, and malaria were the most common diseases causing premature mortality in the state (Indian Council for Medical Research(ICMR) et al., 2017).

## Health Care Delivery In Meghalaya

Table 6.2 on the number of health facilities in Meghalaya shows a shortfall of 42% in the number of SCs in the state. Although the number of nurses and doctors in PHCs seem to be adequate as per the health management and information system, there is a severe shortage of specialists that is 97% of posts for paediatricians, surgeons, OB/GYNs, and physicians at CHCs is not filled. According to the 75th NSS, the percentage of ailment treated on medical advice by healthcare service providers by government/public hospitals is 54.9% and by private doctors/ clinics is almost 15% in rural areas. However more than 30% of the rural population preferred going to informal service providers.

As on 2019	Meghalaya		
	Required	In Position	Shortfall
Sub centres	822	477	42%
Primary Health Centres	124	118	5%
Community Health Centres	31	28	10%

*Table 6. 2. The number of public health facilities in Meghalaya, 2019-20*

*Source: Rural Health Statistics, 2019*

Most tribal people in Meghalaya prefer to opt for traditional medicine, indigenous tribal traditional medicine, as practiced by the traditional healers of Khasi and Garo tribes of Meghalaya who use medicinal plants to cure (Shah, 2018). Indigenous traditional medicines and traditions are largely undocumented. Tribal medicine is reported to be used for both minor ailments and major diseases. The prevalence of reported preference for tribal medicine is higher for minor ailments than for major diseases (Albert S. et al. 2015). Studies have shown that the treatment of diseases in tribal communities needs to take into account these traditional practices to bring about improvements in health indicators through BCC methods.

## Other Public Health Issues

According to the disaster-prone map of the country, Meghalaya is a multi-hazard state, having hazards such as earthquakes, flash floods, landslides, cyclonic wind etc. (Meghalaya State Disaster Management Authority, 2016). Though the state reports the highest rainfall in the world, most of the villages situated in the higher slopes suffer mainly from shortage of drinking water throughout the year. This according to a study has led to people depending on unhygienic surface water for drinking purposes. (Laloo & Hemalatha, 2011). The percentage of households with no access to bathrooms is 22% in rural areas and 1% in urban areas (NSS, 2018) (NSS 76). Meghalaya government. partnered with Water and Sanitation Programme in 2009 to start a community-led and decentralised approach to bring collective behavioural change at community level. These measures resulted in the increase of the toilet coverage (safe toilets) in rural Meghalaya to 71% in 2013 from near nil figures of 2004-06 (Lyngdoh, 2014). This further improved to 82% at the time of NFHS-5 (2019-20).

## Structure Of Department Of Health And Family Welfare

A majority of the PH functions in the state rest with the DoHFW. In other words, PH function of health situation monitoring and analysis, disease surveillance, research, planning and policy, budget and financial management, health promotion and education, assurance of a competent PH workforce, and surety of quality population-based services rest with DoHFW. However, certain other functions like environmental

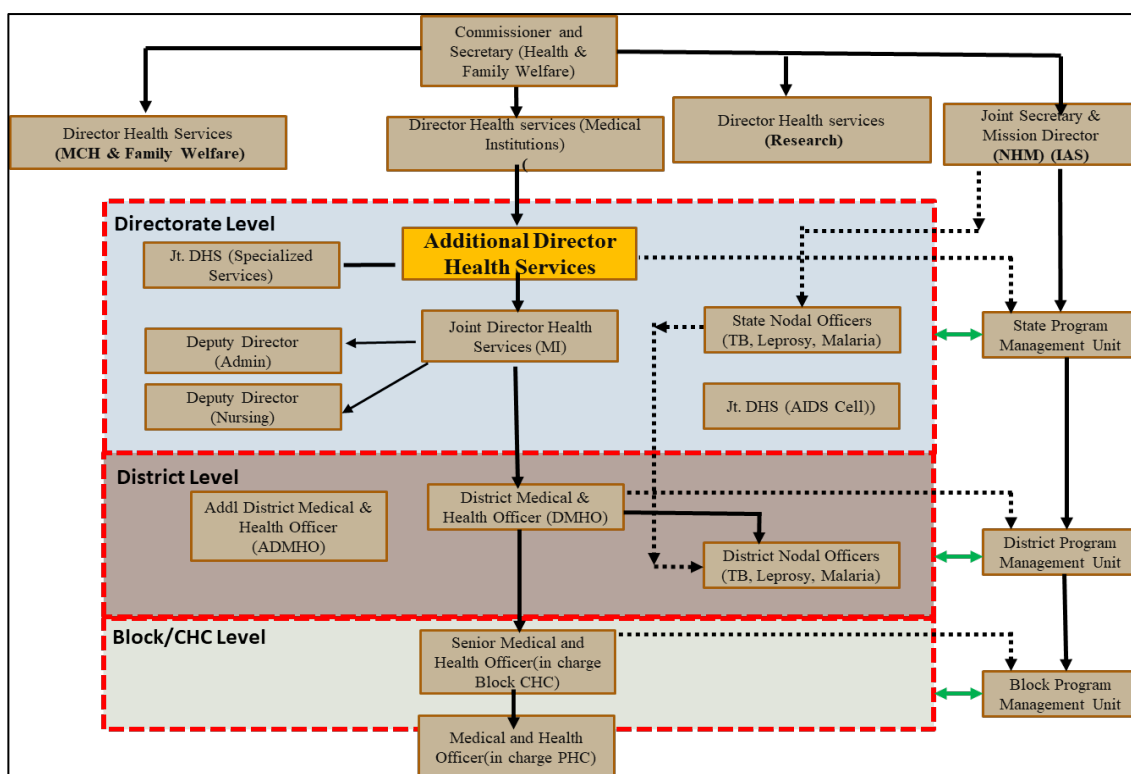
and health sanitation (under state pollution control board), disaster management (under state disaster management authority) as well as law enforcement are not within the department's purview.

At the Secretariat level, the principal secretary leads the DoHFW under the Ministry of Health and Family Welfare. There are various joint secretaries and under-secretaries under the principal secretary. The mission director for NHM is also the joint secretary in this state and is an IAS officer. Below them, there are three directorates of health services: DHS-medical institutions (MI), DHS-MCH and Family Welfare (MCH&FW), and DHS-Research. Each is headed by a director at the state level. The largest of the three directorates is DHS-MI, and it looks after personnel, service delivery, and all national programmes except those related to MCH&FW. The latter is looked after by the DHS-MCH&FW.

Under the mission director for NHM at the secretariat level is the state programme manager at the state level, the district programme manager at the district level, and the block programme manager at the block level.

### **Meghalaya Health Services Cadre**

The Meghalaya health services rules document of 1982 and 1990 describe in detail the processes of recruitment and promotion of various posts under the Meghalaya health services. There are three types of posts under the health services: i) general duty stream appointed for general duties, ii) specialist stream appointed for specialist posts, and iii) common posts, which are posts included in the senior grade for which the first two streams are considered for promotion. There are four grades of services: senior grade, and grades I to III, with the senior grade being the most senior of the services. (Figure 6.3)



**Table 6. 3. Structure of Meghalaya Health Services for General Duty Stream Only**

The structure of the largest of the three directorates, DHS-MI, is described in detail below. At the level of entry into the services, the candidate is posted as an MHO, within the general duty stream. If the candidate has a postgraduate degree, they are taken on as a junior specialist, and they are also given an option of either joining the generalist or specialist stream. The specialist stream candidate then goes on to become a senior specialist (grade II) and finally to become superintendent of the hospitals in grade I. Hence, candidates of the specialist stream have clinical roles as opposed to those from a generalist stream who have PH duties.

The senior medical and health officers and MHOs get promoted to posts of SDMHOs, as well as officers of various programme officers like district TB officer, zonal leprosy officer, district MCH officer, assistant director of Pasteur Institute in grade II. Specialists are promoted within their streams like surgery, obstetrics and gynaecology, ophthalmology, etc. Grade I posts include positions of DMHOs, additional DMHOs (ADMHOs), superintendents and additional superintendents of hospitals and principal of Regional Family Welfare Training Centres. From here, appointments to senior grade posts can be from any of the two duty streams and based on the select list prepared by the department promotion committee. The following are included under this category: DHS-MI, DHS-MCH&FW, director of the Pasteur Institute, additional director of health services and joint director or consultants.

The overall health administration at the district level is taken care of by the DMHO, who

reports to DHS-MI, while the ADMHO's role is largely within the DHS-MCH&FW). The total authorised strength of the health services cadre was 281 in 1982. At present, all the important PH positions are filled in all the 11 districts of the state. According to the list provided by the officials, currently there 44 officers at the level of district and above in the state. However, nodal officers for malaria, leprosy, TB and Integrated Disease Surveillance Programme (IDSP) are vacant in the four districts of East Jaintia Hills, Southwest Khasi Hills, Southwest Garo Hills, and North Garo Hills. At least three districts, did not have an ADMHO and an MCH officer. In Southwest Khasi hills, there are no official present except for the SDMHO who holds charge as a DMHO. As all CHCs and PHCs come directly under the purview of the DMHO, it was felt that block medical health officer or an additional post under the DMHO would ease the burden of administration at the district. On a positive note, it was observed that the DMHO, district leprosy officer, and DSO in East Khasi Hills district had qualifications in PH or field epidemiology. In addition to the 44 administrative officers, the state also had 608 MOs and 162 specialists in position as of July 2021. However, it was not possible to decipher how many of the above were currently contractual under NHM.

## Essential Public Health Functions

Function	Status	Remarks
Health situation monitoring and analysis	Green	Every institution/ department carry out separately.
Epidemiological surveillance	Red	It is done by the District Surveillance Officer (DSO) who is specialised in their concerned department, also a PH specialist who does the evaluation. It is not up to the mark, lacks in laboratory tools and dedicated staff.
Research	Orange	There is no specific research agenda at district level
Planning and Policy	Orange	Only inputs are taken but no consultation from the district officials
Budgeting and Financial Management	Green	The budgets are prepared only for National Health Mission at the district level. The final decision is at the state level.
Health Promotion and Education	Orange	The non-governmental organisations, village head, Accredited Social Health Activist [ASHA]—all are involved in awareness and health campaigns
Reducing the Impact of Outbreaks, Emergencies and Disasters on Health	Red	Through the district commissioner's office, meetings and instructions are released for emergency preparedness in collaboration with disaster management department
Regulation and Enforcement in Public Health	Orange	Although there is awareness on laws, there is no clear information on enforcement. Associated public health concerns like water and sanitation, and solid waste disposal do not come under the purview of the health department except for food storage, where they have a food inspector.

Assuring a Competent Public Health Workforce		All appointments are done at the state level or at the level of Directorate of Health Services, and there is no political influence. There exist vacancies and infrastructure shortfall, and there is no PH training/
Ensuring the Quality of Population-Based Health Services		Internal quality assurance of internal evaluation and central evaluations is done every year.
Environmental Health and Sanitation		The pollution control board is the main authority who co-ordinates with other concerned departments.

**Table 6. 4. Essential Public Health Functions (EPHF) in Meghalaya**

**Note:** *Green colour denotes that the function is fairly defined and operational in the state. Orange colour denotes that the function is not well defined but operational to some extent in the state. Red denotes that this function is carried out poorly or not the responsibility of the health department.*

Table 6.4 shows how Meghalaya’s health department fares in executing various PH responsibilities. These grades are based on four EPHF interviews that were conducted at the district level with a state program manager, district medical officer, DPM and a district tuberculosis officer. Like most states, the main responsibility of the district health office lies in execution of the various central and state schemes (mainly NHM). Disease surveillance and health promotion are two functions that are clearly defined in the state. Although there is a directorate for research in the state, its activities are related providing of laboratory services and production of some vaccines and PH research is largely ignored.

Policy and planning are undertaken the state level with few inputs from the district level. As one interviewee said, ‘Individual programmes lost the decision-making capacity after advent of NHM. The programme officer used to make the plan earlier, under the supervision of the DMHO and if the amount was not enough, then the DMHO would release the fund, and if not, the deputy commissioner joins the DMHO as they both have a joint account for releasing funds of programmes. Now, the state single-handedly deals with every programme funding. Hence, the planning is pre-set by the state without consulting the district. The district has no power in planning’.

Environment, sanitation, and hygiene, and disaster management are outside the purview of the health department and are carried out by other departments like the State Disaster Management Authority, PHED and pollution control board, etc.

## **Analysis Of Public Health Expenditure**

Meghalaya state’s total health expenditures have grown at an AAGR of 14% over the period 2015-16 to 2021-22. while the PH expenditure of the state has grown at AAGR of 17% and that of the NHM expenditures at 14% for the same period. The share of PH expenditure in THE averaged at 27% for the period 2015-16 to 2021-22 and hovered between 22% to 35% during the same period. The share of PH expenditure as a proportion of THE has shown a decline from 58% in 2017-18 to 49% in 2021-22 (Figure



6.5).

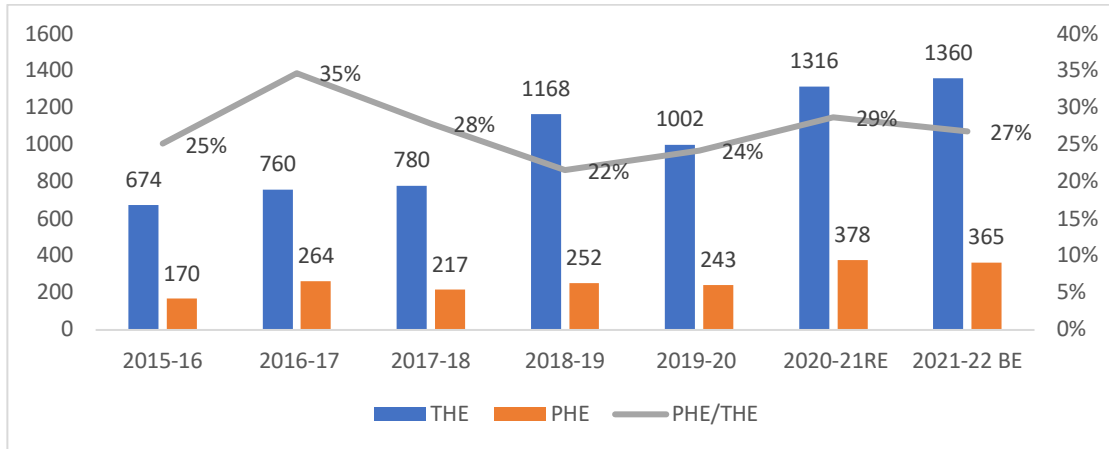


Figure 6. 5.Total Health Expenditure and Public Health Expenditure over years (INR in crore)

The share of NHM expenditures in the PH expenditure and THE serves as a proxy of the share of Gol in the state health expenditure because of its share of 90% in CSS. The share of NHM in THE decreased from 23% in 2015-16 to 10% in 2018-19 and again increased to 20% 2021-22 (Figure 6.6). The share of NHM in the PH expenditure has averaged at 66% over the period 2015-16 to 2021-22. The share of health expenditure in the total expenditure of state has hovered around a healthy 8.5% to 9%. This had reached 10% during 2018-19.

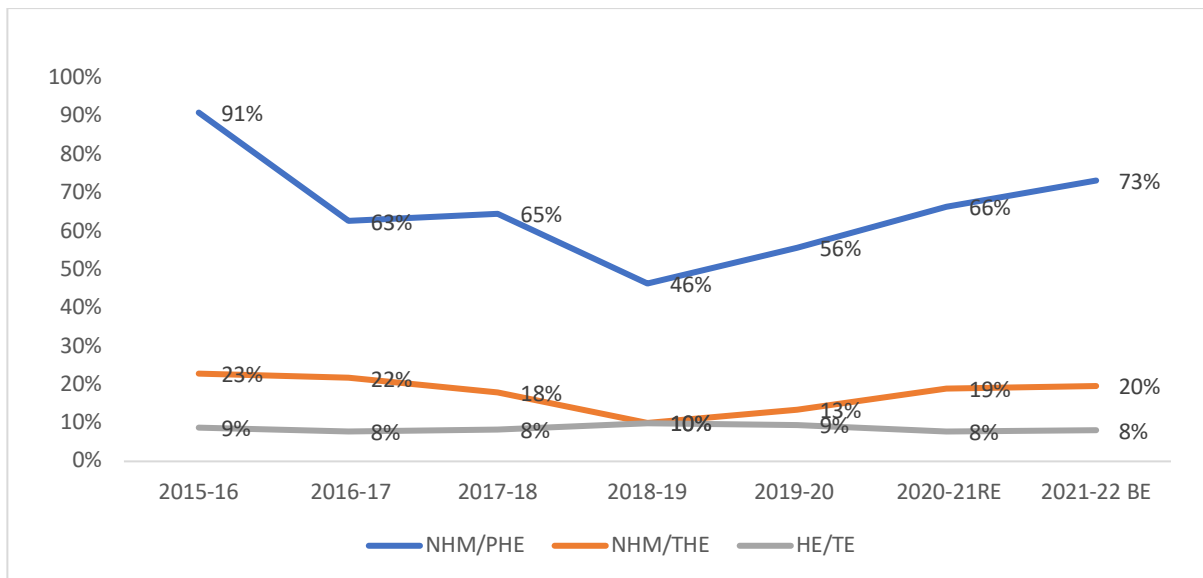


Figure 6. 6.Share of NHM expenditure and Health expenditure

## Public Health Cadre: Insight And Takeaways

The state recently came out with the Meghalaya Health Policy, 2021 which talks about a positive health model to address issues such as gender inequality and poverty along

with provision of health care for its citizens to lead a longer, healthier life. The policy also hopes to undertake a decentralised approach where-in it aims to 'actively engage medical officers, frontline workers, civil society, grassroots organisations and CHCs & PHCs, and build their capability to collaborate with the State on all aspects of the decision-making process such as problem diagnosis, policy design, implementation and evaluation' (Meghalaya Health & Family Welfare Department, 2021)

### Current Health Services Cadre

Meghalaya health services splits the cadre into generalists and specialists, providing a clear delineation between administrative officials and clinical physicians. Very few of the administrative officials, however, came with a PH background. As explained by a senior official, 'There is no proper PH orientation for the health cadres in the department. The orientation is largely focussed on the delivery of PH programmes under NHM'. Although in our interviews with East Khasi Officials we saw some with PH qualifications, this district is the capital district and cannot be taken as representative of other districts.

### Need For A PH Cadre

Another issue of whether the current set-up was adequate was garnered a mixed response by interviewees. Some district level officials were of the opinion that there needed to be an additional administrative official under the DMHO or an official who is in charge of the block administration. Currently, it is only the block programme manager under the NHM who takes care of programmes at the block level, while senior MHOs oversee individual health facilities like CHCs or PHCs. While a senior official felt that three officials were needed at district level: one dedicated to public health, one for administration and one for medical institutions.

Another senior state official cited the example of how NHM has helped the state improve the health infrastructure and programme implementation in the state since its inception, which was due to NHM's administrative capacity. He felt that this itself was a strong case to have a PH cadre that would provide the required administration and management capacities that current medical officials lacked. However, he added that one needed to be mindful that though a separate cadre could bring focus to public health, it was not an answer; only when the medical officers/ doctors at the PHC/SC perform their dual roles of curative and preventive care effectively can the health system address the PH issues in a comprehensive manner.

These two opposing views indicate that whether Meghalaya chooses to have a separate PH cadre or not, PH training is essential. The question then arises on who should be provided this training.

## Training In Public Health

'Minimum eligibility should be an MBBS degree with diploma or Master of PH; Doctor of Public Health, (Master of Applied Epidemiology, Doctor of Medicine in Community Medicine fall under the PH. For non-medical posts, training must be provided in public health.' The aforementioned statement sums up the most common reply to the question on eligibility for the PH cadre. Most officials felt minimum eligibility should be an MBBS degree. Meghalaya is one of the states that has as an Institute for Public health, started as a joint endeavour by the Government of Meghalaya and Public Health Foundation of India. Interviews showed that although the institute offered PH courses, it was difficult for current employees to pursue a full-time two-year course due to time constraints.

Training nurses in PH was also a suggestion that was put forth by some officials. It was suggested strongly that these nurses should be separate from those practicing in hospitals. This statement also shows the importance of separating clinical duties from PH ones. The current cadre structure to some extent separates clinicians from PH administrators; however, a majority of them only have clinical training and they lack PH training. The officials and staff are given programme-specific training under the NHM. Thus, like their respective programmes, the officials exist in silos, hence rarely contributing to planning and budgeting policies even within their programme areas.

Meghalaya is a state where senior officials were fully convinced about the need to strengthen the PH function but were not sure whether the cadre is the best way. However, they were also convinced that the entire health department and even the government needs an understanding of PH issues and respond accordingly. The state has taken reducing MMR as an important goal that they have been monitoring on a weekly basis with the senior district administrators. The state is also willing to experiment with the issue of PH cadre is some innovative suggestions with high potential are made.

## NAGALAND

Nagaland is surrounded by the Indian states of Manipur in the south, Assam in the north and the west, and Arunachal Pradesh in the north-east; it also shares an international border with Myanmar on the East. Topographically, the state is mountainous, and the altitude goes up to 3,000 m above sea level. Many of the villages are situated on the hill tops and at a higher elevation because of security reasons. About 86% of the population belongs to ST, which are further divided into several sub-tribes having their own distinctive languages and cultures. Nagaland is also a very rural state with close to 71% of the population living in rural areas. The villages are usually divided into khels, or quarters, each with its own head and administration. There are a total of 12 districts in Nagaland and one among them, Kiphrie, has been identified as an aspirational district

by NITI Aayog. Seven per cent of households in Nagaland have Hindu household heads, only 1% of households have Muslim household heads, and 92% have Christian household heads. The sex ratio of the total population (females per 1,000 males) was 1,007 in 2019-20 with 92% men and 83% women being literate (Meghalaya Health & Family Welfare Department, 2021) (NFHS-5). The state falls under the seismic zone 5 and is at high damage risk from earthquakes. It is also prone to floods and landslides.



Figure 7. 1. Political Map of Nagaland

## Financial Status

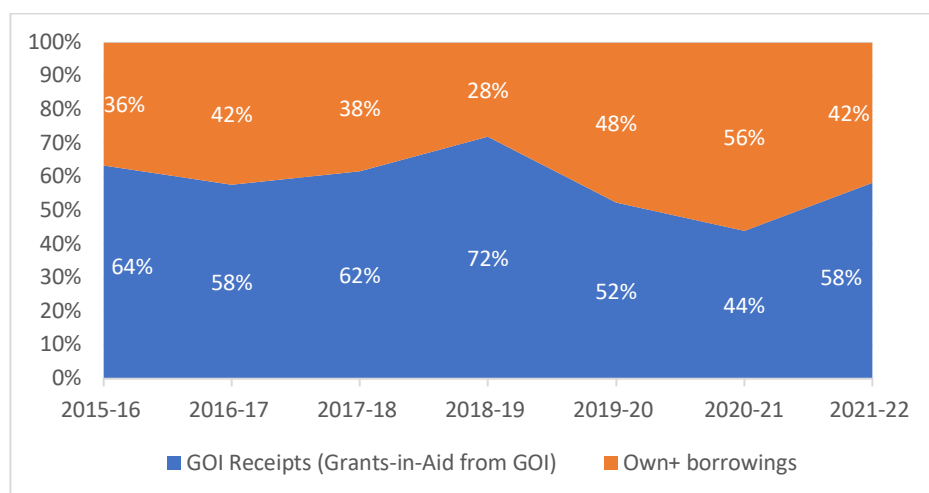
Despite the own revenues growing at an AAGR of 15% between 2015-16 to 2021-22, Nagaland’s economic growth rate was negative in 2020-21 (Table 7.1). The share of taxes from Gol declined owing to decrease in transfers in absolute terms during 2019-20 and 2020-21, while the annual average growth for the period 2015-16 to 2021-22 remained at 8%. Grant-in-aid has grown at an AAGR of 12% recording a moderate growth, while borrowings have grown at an annual average growth rate of 32%, which is the highest among the revenue components of the state.

Revenue	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Own Revenue	681	854	1,027	1,102	1,298	1,197	1,553
Share of Taxes	2,541	3,033	3,353	3,792	3,267	3,151	3,787
Grant in Aid from Gol	4,819	5,553	6,639	6,543	6,859	6,892	9,317
Non debt capital receipts	1	1	1	1	1	1	2
Borrowings	3,546	5,444	5,141	2,907	7,870	11,588	7,793

<b>Total Receipts</b>	11,587	14,885	16,161	14,346	19,294	22,830	22,452
	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>Average</b>
<b>Own Revenue</b>	25%	20%	7%	18%	-8%	30%	15%
<b>Share of Taxes</b>	19%	11%	13%	-14%	-4%	20%	8%
<b>Grant in Aid from GoI</b>	15%	20%	-1%	5%	0%	35%	12%
<b>Non debt capital receipts</b>	118%	0%	-1%	1%	0%	39%	26%
<b>Borrowings</b>	54%	-6%	-43%	171%	47%	-33%	32%
<b>Total Receipts</b>	28%	9%	-11%	34%	18%	-2%	13%

*Table 7.1. Components of revenue (INR in Crore) and its growth over years (in percentage)*

The transfers from the GoI (tax devolution and grant-in-aid) make up about 59% of the receipts, while the own revenues and borrowings together account for 41% (Figure 7.2) for the period 2015-16 to 2021-22. The total liabilities estimated for the year 2021-22 stood at 42% of GSDP or 101% of the revenue receipts.



*Figure 7. 2.Share of Government of India transfers and Own revenue + borrowings (in percentage)*

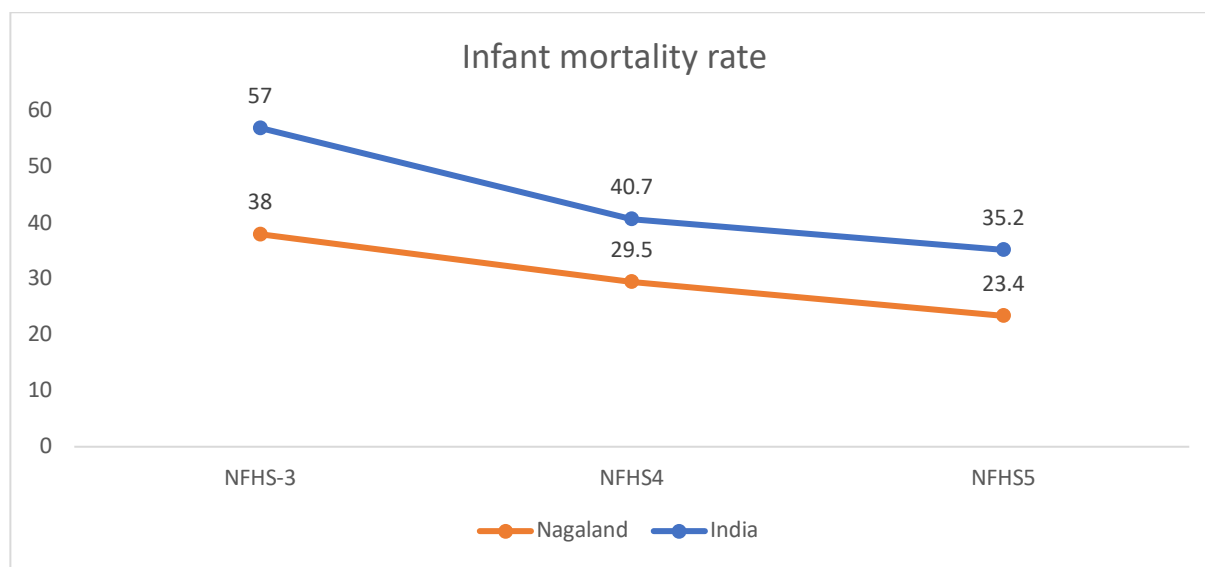
## Health Status

Public expenditure on health care in Nagaland is one of the highest in the country. In 2015-16, the per capita annual public expenditure on health in Nagaland amounted to INR 2,450 with an estimated PH spending at 2.97% of the total state GDP, which is significantly higher than the national average of INR 1,112 and 1.02%, respectively (Central Bureau of Health Intelligence, 2018). However, the same cannot be id in terms of PH outcomes of the state though some improvements have taken place over the years. The major PH related issues in Nagaland are related to MCH, CDs, and NCDs.

## Maternal And Child Health

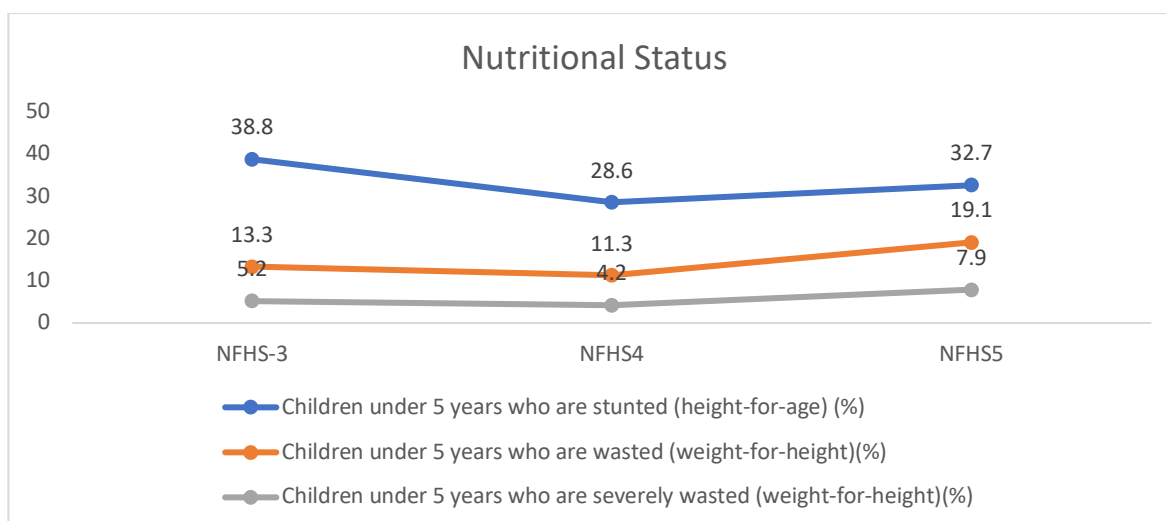
Statistics from NFHS-3, NFHS-4, and NFHS-5 show that the state consistently performed better than the national average in the infant mortality rate, which has been declining since 2005-2006 (Figure 7). A 2016 report by ICMR on disease burden in states showed

that the largest causes of deaths (37%) in children aged 0 to 14 years in the state were due to diarrhoea and lower respiratory tract infections, followed by deaths due to neonatal disorders (32%). The state has seen huge improvements in the number of institutional deliveries from just 11.6% in 2005-06 to 45.7% in 2019-20, with the percentage of mothers having at least 4 antenatal visits also steadily increasing from 12.1% to 20.7% during the same time period. The percentage of fully vaccinated children aged 12–23 months also increased from 21% in 2005-06 to 57.9% in 2019-20.



**Figure 7.3. Infant mortality rate per 1,000 live births from 2005-06 to 2019-20**

However, the average in Nagaland continues to be lower than the national average on three major health indicators proportion of children who are stunted (height-for-age), wasted (weight-for-height), and severely wasted (weight-for-height). In terms of nutritional status of children under 5 years (Figure 7.4), the surveyed result shows a non-uniform pattern over the years. All the three vital indicators of nutritional status among children under 5 years of age declined in 2015-16 when compared to 2005-06, but they increased slightly in 2019-20.



**Figure 7.4. Nutritional Status of children under 5 years of age in 2005-06, 2015-16 and 2019-20**

Humtsoe and Soundari's (2019) examination of MHC practices among the Lotha tribal women (aged 15-45 years) of Wokha district, Nagaland found that the utilization of MHC services was comparatively lower than the state level estimates. Although around 77.8% of the sampled women received at least one antenatal care, only about a quarter of them had delivered their child at an institution and received post-natal care services. The study also revealed that the non-availability of health care facilities or functional health care facilities in the vicinity, low cost of childbirth at home, and poor transport services were some of the main reasons for low utilization of MHC services in the district.

A World Bank (2019) study of 55 villages (who participated in the Nagaland Health Project) across all the districts of Nagaland on MCH and nutrition services highlighted a strong preference for home delivery, which was attributable to geographic access, apprehensions about quality of care at healthcare facilities, particularly fear of surgical malpractices during a delivery, and the comfort of delivering within the community in the presence of family members. Interestingly, Longvah et al. (2017) in their study of the Chakesang tribal community residing in twenty villages of Phek district in Nagaland found that there was a much lower prevalence of malnutrition, anaemia, and vitamin A deficiency among their children when compared to both state and national level averages. They highlighted that the ease of access and consumption of agro-biodiverse and wild foods by the Chakesang tribe was one of the factors for their better nutritional and health outcomes compared to the rest of the country.

## Communicable And Non-Communicable Diseases

The report on the disease burden in Indian states showed that Nagaland's ETL dropped from 1.52 in 1990 to 0.47 in 2016. The DALYs due to CDS, and maternal, neonatal, and nutritional diseases was lesser than NCDs. The proportion of total disease burden in 2016 from communicable, maternal, neonatal, and nutritional diseases was 32.2%,

57.2% from NCDs, and 10.6% was due to injuries. The death rates due to stomach cancer and intestinal infectious diseases in Nagaland are on the rise and higher than the national average. While diarrhoea, lower respiratory infections, and TB were the leading cause of DALYs in the 90's, they were replaced by NCDs such as ischemic heart disease and stroke in 2016.

According to data available from the National Vector Borne Disease Program, CDs such as malaria, Japanese encephalitis, and dengue are endemic in Nagaland, and the number of cases over the years have declined gradually. In Nagaland, Yadav (2019) found that while the prevalence rate of CDs had declined by half, the prevalence rate of NCDs had doubled between 1996 and 2014. However, Gupta and Xavier's (2018) study using NFHS-4 data shows a prevalence rate of hypertension at 23%, 16%, and 20% among men, women, and the total population, respectively—this is one of the highest among the states of India. A study by Tushi et al. (2018) reported that the increasing use of tobacco and alcohol consumption were the two major risk factors for NCDs in the rural population of Mokokchung district in Nagaland.

## **Public Health Disasters**

Nagaland is vulnerable to all kind of natural disasters such as earthquakes, flash floods, landslides, and forest fires owing to its geo-climatic, geological, and physical features. The impact of natural disasters increases with increase in population growth, expansion of settlements in hazardous environment and inadequate infrastructure. The severity of natural disaster in the state has been increasing over the years and continues to claim lives apart from damaging properties and livelihoods of the people (Jamir & Khan, 2018).

## **Health Care Service Delivery In Nagaland**

The delivery of health care services in Nagaland is through a network of state run SCs, PHCs, CHCs, and DHs. Table 7.4 shows that Nagaland is comparatively in a much better position with an excess number of SCs, PHCs, and CHCs than what is required for the state's population. However, Nagaland is the only state in India without a medical college. While two medical colleges have been approved for construction, in Kohima and in Mon, there is no clarity yet on when they will become functional.

Lack of medical colleges in the state has also led to a shortfall in human resources and only 10 of specialist posts (namely, OB/GYNs, paediatricians, surgeons, and physicians) have been filled in CHCs that typically serve as first referral units. Almost 100% of the sampled population had their ailments treated on medical advice provided by healthcare service providers working in either a government or an non-governmental organisation-run/charitable hospital (NSS, 2018)(NSS 75th round, 2018-19).



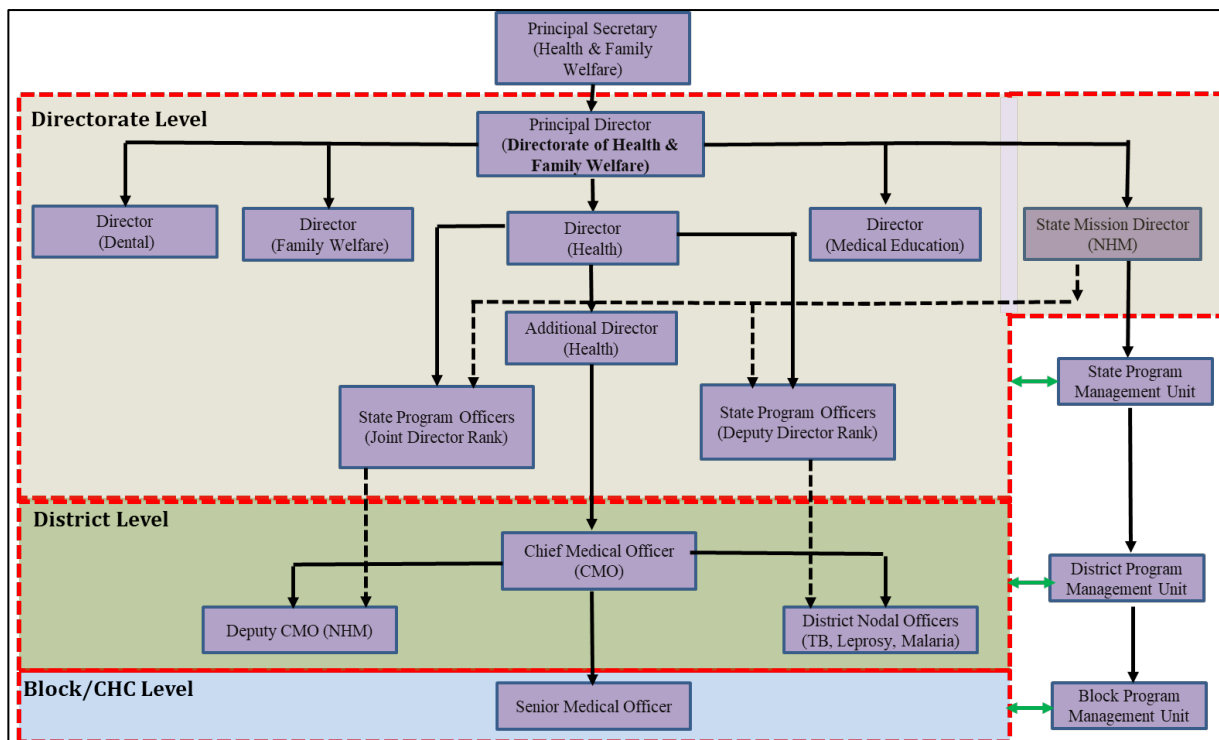
Type of facility	Number of facilities Present	Required	Shortfall
Subcentres	433	414	-4.6%
Primary Health Centres	126	62	-103.2%
Community Health Centres	21	15	-40%
Sub divisional/district Hospital	0		
District hospitals	11		
Government Medical colleges	0		

*Table 7. 2. Number of health facilities in Nagaland 2019-20*

*Source: \* Rural Health Statistics, 2019*

## **Nagaland: Public Health Governance Structure**

The principal secretary leads the DoHFW, but unlike in many other states of India, Nagaland has only one directorate, Directorate of Health and Family Welfare. This directorate is headed by a principal director, and they acts as the connecting link between the directorate and the state government. Under the principal director, there are four directors, one each for health services, family welfare, dental services, and medical education. The mission director of NHM is also a doctor from the health service cadre (not from the IAS cadre, unlike other three states) and reports to the principal director. This single directorate is responsible for both family welfare related activities/programmes such as immunization, family planning, maternal & child health along with health services such as disease surveillance, implementation of PH programmes (TB, leprosy, and malaria) and management of healthcare facilities such as DHs, CHCs, and PHCs. The SPMU supports the directorate in regard to management, planning, financing, and monitoring and evaluation of PH programmes funded by the NHM. The SPMU has key positions such as the state programme manager, state finance manager, state accounts manager and state IEC officer.



*Figure 7. 5. Nagaland's Public Health Governance Structure*

The directorate also has 5 additional directors, 11 joint directors, and 13 deputy directors. They assist the four directors in the administration of all the government health facilities and also act as programme officers for implementing national PH programmes in the state. Apart from these, they are also responsible for other key functions such as procurement, store/supply chain, quality assurance, disaster management, road safety, planning & coordination, training and medical education. The administrative head of the health department in the district is the CMO, who is responsible not only for the implementation of PH programmes but also managing all the health facilities within the district. Apart from the district nodal officers (such as district tuberculosis officers, district vector borne control officer, and a district immunization officer), the medical superintendent of the DH also reports to the CMO, who is also the focal for driving intersectoral collaboration with other line departments at the district level, especially PHED, disaster management, and women and child development.

Except in emergencies or in health camps, the CMO does not have any clinical duties. Under the CMO, there is a position of a deputy CMO who assists the CMO in the administration of various health units in its jurisdiction and also serves as a nodal officer for a few NHM programmes. In a few district offices, there are also MOs working as district programme officers for managing other smaller programmes. The CMO also oversees the functioning of the DPMU. The key role of the DPMU (comprising of the district programme manager, district finance manager and district data manager) is to support the district health administration in the successful implementation of NHM programmes. In a DH, while the specialists (both senior and junior grade) are primarily

responsible for individual patient care, they also support PH programmes by reporting data such as number of pregnant women, institutional deliveries, tests conducted for Human Immunodeficiency Virus, Hepatitis B, or COVID-19. At the block level, a senior MO is in charge of managing a CHC along with the implementation of NHM programmes. The block program manager (appointed by the NHM) supports the senior MO in the implementation of all PH programmes. The MOs who work at the CHC report to the senior MO; they are mainly responsible for individual patient care but also support in the implementation of PH programmes.

## **Nagaland: Health Service Cadre & Ph Leadership Workforce**

Till 2006, Nagaland had two separate directorates along with two separate cadres, directorate (medical services), which comprised of medical specialists, and DHS, which comprised of non-specialists/generalists (only MBBS graduates). All PH programmes were managed by the DHS. In 2006, the two directorates were amalgamated into a single directorate with an aim to improve the health care delivery system by bridging the gap between the two cadres. This led to the formation of a single health service cadre and currently the total sanctioned cadre strength is 54,8k. However, only seven out of these 548 doctors (MBBS/Bachelor of Dental Surgery) have a specialisation in PH/community medicine (six of whom are posted in the Directorate itself). There are a total of six grades in the cadre: super selection, special selection, higher selection, selection, senior, and junior grade. Table 3 shows the structure of the Nagaland health service cadre.

<b>Grade</b>	<b>Designation</b>	<b>Total Number of Sanctioned Posts</b>
<b>Super Selection</b>	Principal Director	1
<b>Special Selection</b>	Director	4
<b>Higher Selection</b>	Additional Director	5
<b>Selection</b>	Joint Director, Consultants, Chief Medical Officer, Medical Superintendent	52
<b>Senior</b>	Deputy Director, District Programme Officer, Senior Specialist and Senior Medical Officer	179
<b>Junior</b>	Junior Specialist and Medical Officer	307
<b>Total</b>		548

*Table 7. 3. Structure of the Nagaland Health Service Cadre*

The minimum qualification for direct recruitment is a MBBS/Bachelor of Dental Surgery

or equivalent degree from a recognised university under either the Medical Council of India or the Dental Council of India. The various posts in the cadre are filled by promotion from the confirmed members of the health service who have rendered a specified number of years of service in the immediate lower grade and have also fulfilled the mandatory roster posting as specified in the Transfer and Posting Policy. As per the Transfer and Posting Policy (2018), all health facilities have been categorised as A, B, and C (with C category being the most remote). To be eligible for a promotion, depending upon the grade, doctors need to have served a specified number of years in categories B and C. Apart from this, there are no eligibility criteria specified in terms of either qualification or training for any of the PH related posts in the cadre (CMOs, district nodal officers, senior MO etc.). The DSO we interviewed had specialised in pharmacology, while the deputy director (planning) has specialised in physiology. However, a clinical specialisation (post graduate degree/diploma) is an eligibility criterion for posts such as junior or senior specialists who are usually posted in CHC's and district hospitals. It is important to note that the grade is the same for a MO and a junior specialist or senior MO and a senior specialist.

As of September 2021, all the key PH positions such as CMO, deputy CMO and all state/district nodal officers had been staffed with the only exception being the zonal leprosy officer, wherein 5 out of the 11 positions were still lying vacant. The directorate was unable to provide us with additional details such as academic qualifications, gender, and type of post (permanent or contractual) of the incumbents of all the key PH administrative positions.

Upon induction to the cadre, MOs are oriented on the various national health programmes being implemented in the state. They are also attached to a DH under the supervision of the medical superintendent/CMO to gain experience in providing individual patient care for a period of three to six months. Apart from this, no other PH related training on subjects such as epidemiology, biostatistics or health financing is being provided by the health department.

## **Nagaland: Essential Public Health Functions**

To understand the status and implementation of the EPHF, we interviewed a few health officials at the district level.<sup>1</sup> Unfortunately, these interviews were not sufficient to provide us with a comprehensive picture of the EPHF. Table 7.4 is an attempt to stitch together all the pieces of information provided by these officials with regard to the EPHF. Their inputs have not been validated with any other secondary data or government documents.

EPHF	Status	Remarks
Health Situation Monitoring & Analysis	Green	The district programme officers along with partnership agency (United Nations Development Programme), chief medical officer (CMO), and deputy CMO ascertain if the data can be used for analysis. There is a Lack of adequate frontline workers to regularly collect data on the population's health status.
Epidemiological Surveillance/Disease Prevention and Control	Green	The Integrated Disease Surveillance Programme (IDSP) unit at the district level is functioning well to identify and monitor the levels of various diseases. There is a need to improve coordination with local communities. However, transportation and road network is very poor to access remote locations.
Research & Development on Public Health	Red	The state does not have a public health (PH) research agenda.
Policy and Planning	Yellow	Policy and Planning in relation to PH is largely driven by the National Health Mission (NHM) and, hence, it is highly centralised.
Budgeting and Financial Management	Yellow	Public health is entirely supported by NHM. The proposed budget is never fully approved. Whatever gets approved too is released very late. The delay in release of funds leads to under-utilization, but the percentage of funds utilized has a bearing on next year's allocation. So, it has become a vicious cycle.
Health Promotion and Education	Green	The involvement and support of the church, church-affiliated organisations and women's organisations has been very good in creating awareness. One of the key challenges for health promotion is accessibility to remote areas. Transportation facilities and road network is very poor.
Reducing the impact of emergencies and disasters on Health	Green	A rapid response team has been constituted in each district to respond to any outbreak or health disasters. There is a need for a better trained workforce and equipment to handle emergencies.
Regulation and Enforcement of Public Health	Yellow	In terms of regulation, the main focus is on enforcing the Nagaland Healthcare Establishments Act, which looks at setting up and operations of private hospitals, nursing homes, and clinics. Apart from food safety, health department is not involvement in any enforcement of regulations related to water, sanitation and waste.
Assuring a Competent Public Health Workforce	Yellow	Most of the training is confined to programme specific requirements.
Ensuring Quality of Population-Based Health Services	Black	No Response
Environmental health and Sanitation	Red	The health department does not play an active role in this domain. Public Health Engineering Department, local bodies, and the Pollution Control Board play a bigger role.

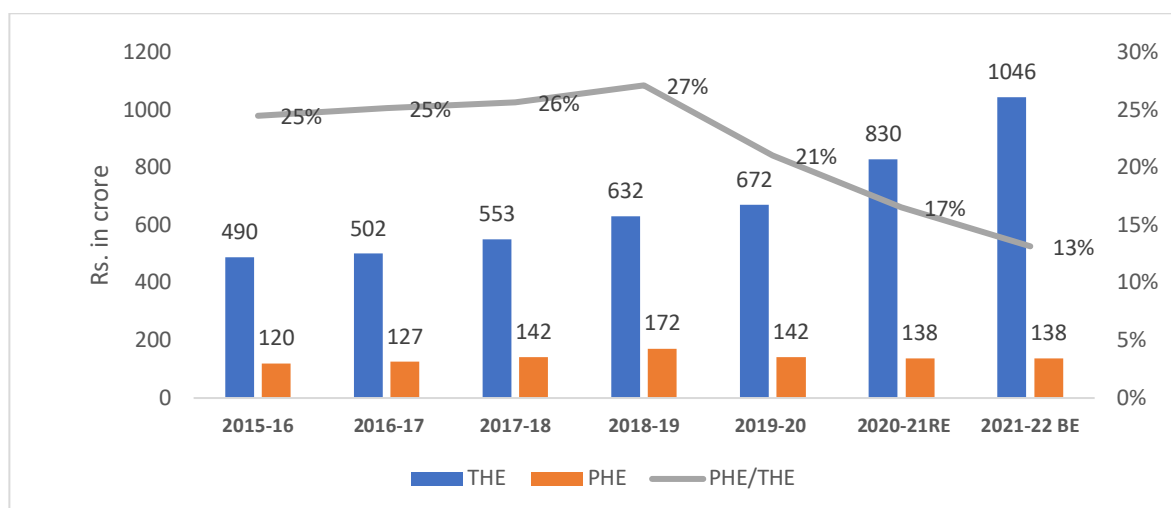
**Table 7.4. Status of Essential Public Health Functions (EPHF) in Nagaland**

Note: Green colour denotes that the function is fairly defined and operational in the state. Orange colour denotes that the function is not well defined but operational to some extent in the state. Red denotes that this function is carried out poorly or not the responsibility of the health department.

According to the officials we interviewed, two important PH functions—population health monitoring and epidemiological surveillance—were well established in the state despite challenges such as difficult terrain and poor transportation facilities. As was observed in the other NE states, PH functions such as policy and planning as well as budgeting and financing were completely managed by the state level officials and the district health administration was only confined to its execution. Intersectoral collaboration between the health department and other bodies such as local governments, pollution control board, and PHED needs to be further strengthened so that they can play an active role in enforcing laws that protect environmental health and sanitation.

## Analysis Of Public Health Expenditure

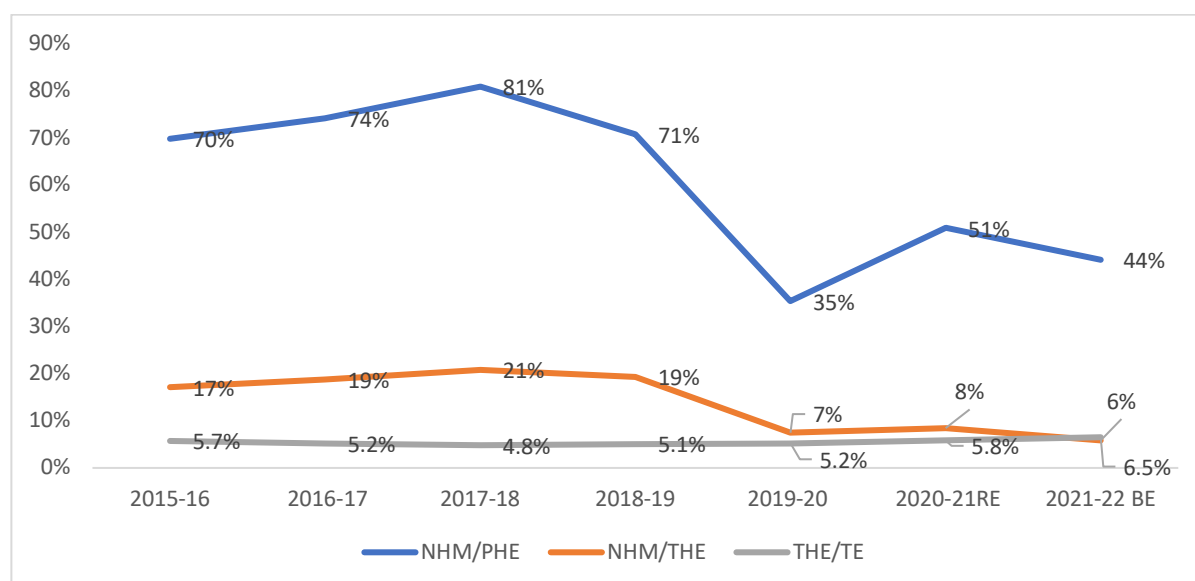
Nagaland state’s total health expenditures have grown at an AAGR of 14% over the period 2015-16 to 2021-22, while the PH expenditure of the state has grown at AAGR of 3% and that of the NHM expenditures at 1% for the same period. The share of PH expenditure in THE has averaged at 22% for the period 2015-16 to 2021-22 and has decreased from 27% in 2018-19 to 13% in 2021-22 (Figure 7.6).



**Figure 7.6. Total Health Expenditure and Public Health Expenditure over years (INR in crore)**

The share of NHM expenditures in the PH expenditure and THE serves as a proxy of the share of Gol in the state health expenditure because of its share of 90% in CSS. The share of NHM in THE has decreased from 21% in 2017-18 to 6% in 2021-22 (Figure 7.7). The share of NHM in the PH expenditure has averaged at 61% over the period 2015-16 to 2021-22. The share of health expenditure in the total expenditure of state had decreased

to 4.8% in 2017-18 and has been improving since to reach 6.5% in 2021-22.



**Figure 7. 7. Share of National Health Mission expenditure and Health expenditure**

**Note:** NHM is National Health Mission, PHE is Public Health Expenditure, THE is Total Health Expenditure, and TE is Total Expenditure.

## Public Health Cadre Formation: Insights & Takeaways

### Challenges Of Ensuring Parity Across Different Cadres

Through the interviews, we collected some interesting perspectives by reflecting on the history of Nagaland state's health department. In 1992, the DoHFW was bifurcated into DHS and Directorate of Medical Services. This also led to the formation of two separate cadres, where doctors having only an MBBS degree were part of the generalist cadre and would work in the DHS and doctors who had a specialisation/post-graduate degree were part of the specialists cadre and would work in the Directorate of Medical Services. Two separate and distinctive channels of seniority were established too, so that at any given point in time there would be one director from each cadre. The option to change the cadre was allowed only in the case of a generalist doctor becoming a specialist after acquiring a post graduate degree/diploma.

The administration of all centrally sponsored PH programmes, including family welfare, was the responsibility of the DHS. However, the formation of two separate cadres within the health department led to several issues. Two doctors' associations, one representing generalist doctors and the other comprising of specialists started warring over inconsistencies in promotion and career progression—this crippled the state's health care delivery system many a times. It also led to several petitions being filed in the high

court, one among them being the appointment of doctors from the specialist cadre to the position of programme officers in the AIDS and blood safety centrally sponsored programmes. (High Court of Gauhati, 1994) The crux of the issue was that while this scope of work came under the DHS (as per the cadre rules) and provided doctors belonging to the generalist cadre with promotional avenues, it was being usurped by the specialist cadre on the grounds that such programmes need to be managed by experts who have adequate training in the subject.

Finally, in 2006, the two directorates were once again merged into a single DoHFW. This also resulted in drastic changes to the state's health service rules especially with regard to posting, promotions, and seniority. The additional director also informed us that after the merger of these two cadres, the specialists were being paid an extra 'specialist' allowance (apart from the non-practicing allowance given to all doctors). While he believes that having a dedicated PH cadre is a good idea, he doesn't feel the need for having a separate directorate for PH. Instead, he recommends that a director, exclusively for PH, can be appointed who reports to the principal director (similar to the recently created director post for dental services). He also cautioned that the rules for the PH cadre need to be carefully drafted to ensure that there is parity and similar promotional avenues when compared with other cadres in the health department.

A few officials pointed out that there was dual reporting of data in NHM programmes due to the involvement of both the state health department officials and the NHM appointed staff. They felt that the creation of a PH cadre could also help in establishing a single chain of command/reporting of data.

### Acute Shortage Of Medical Professionals

A challenge that was highlighted by almost all the senior health officials we spoke to was the acute shortage of doctors/generalists, let alone specialists trained in PH. Nagaland has one of the worst statistics when it comes to the doctor-population ratio. Against a WHO recommended 1 doctor for every 1,000 people, the state's doctor-population stands at 0.58 every 1,000 people or roughly 1 doctor for every 2,000 people. The national average stands at 1.34 every 1,000 people. The state ratio is inclusive of private practitioners registered with the Nagaland Medical Council (Walling, 2020). 'How can we create a dedicated PH cadre when there is such an acute shortage of doctors?' was the question on most senior health official's mind. A senior officer in the secretariat expressed that in a state having only about 500 odd government doctors, managing clinical services, health facilities, and PH programmes is extremely challenging and requires a great deal of multi-tasking. Hence, doctors can't be confined only to clinical or PH roles. The situation becomes even more bleak when one takes into account the fact that most doctors are required to work in very remote and difficult terrains of the state. An official at the directorate recollected that recently when the health department advertised for recruitment of doctors under the NHM program, only a handful applied



as many did not want to work in remote places and preferred working in a private hospital even if it meant working in another state.

### Including Non-Medical Professionals In PH Cadre

One can argue here that this would make a strong case for including non-MBBS professionals who are trained in PH into the PH cadre. While senior officials were open to this idea, they also felt that the entry level positions and career progression for MBBS and non-MBBS professionals (both with a PH specialisation) cannot be the same. An official remarked, 'The efforts involved in traversing the path of MBBS with MPH is not the same as a non-MBBS with MPH; hence, it would be unfair to compare them using the same yardstick'. They felt that even if non-MBBS professionals had a PH qualification, they would not be suitable for roles such as CMO or senior MO since that requires managing health facilities/doctors or even as district nodal officers since that too occasionally requires them to treat patients (e.g., leprosy, malaria, and TB).

### Clinical Specialists Occupying Key PH Positions

A senior official qualified in PH opined that very often PH related positions such as senior MO, CMO or district officers are held by clinical specialists who neither have the qualification nor interest towards administration or programme management. He felt that the main reason behind this is the belief at the top that these roles can be discharged by any doctor and does not require any specialised PH qualification or training. He remarked, 'If I go to a hospital for an illness, then I do not question the wisdom of a clinician who is diagnosing me. The same respect should be given by clinicians to a PH specialist'. In addition, by assigning these PH posts to clinical specialists, CHCs and DHs are being deprived of them as well. A senior specialist in a DH in Kohima put it as 'if you want to be in administration, then why waste 3 more years in acquiring a clinical specialisation'. He believes that the only specialists who are interested in taking up administrative roles should be assigned these postings after they have completed a foundation training on PH /community medicine. Many of the clinical specialists find the transfer and posting policy irrational and give up their clinical practice so that they can take up administrative/programme management positions in Kohima.

### Importance Of PH Training And Its Implementation

Officials who are in charge of planning, coordination, and programme management definitely see the value of a PH training. A district immunization officer we spoke to had specialised in forensic medicine and he acknowledged that a formal training in PH would definitely help him in discharging his role more effectively. However, an official responsible for planning and training was of the opinion that any foundation course on PH needs to be at least 6–12 months long for it to be comprehensive and effective. But

considering the severe shortage of doctors that Nagaland is facing, providing such a long study leave for doctors in service would severely impact programme implementation. Currently, only programme specific trainings (example: on oral health and sanitation) are being provided to doctors in PH roles.

### Impact Of PH Cadre On The Career Progression Of Clinical Specialists

The creation of a dedicated PH cadre would also mean a creation of a separate cadre for medical/clinical specialists who are responsible for individual patient care. While most officials believe that this bifurcation of the cadre is a good idea, a few of them also raised questions regarding the career progression of medical/clinical specialists in such a scenario. Senior positions such as additional director, director, and principal director are predominantly PH roles. If the new cadre rules specify PH qualification or formal training as an eligibility criterion for these roles, then most medical/clinical specialists would be denied these promotional avenues. Clinicians will then be able to grow only up to the role of a consultant, which is at the joint director level. However, one of the directors strongly argued that in a state like Nagaland where skilled workforce is not easily available, the only option is learning on the job. According to him, any clinical specialist who has risen to a senior administrative position in the directorate would have already gained considerable PH experience by being earlier in posts such as CMO/district nodal officer/senior MO. On a lighter note, he added, 'I have an MD degree and at the beginning I didn't even know where to sign on a file, but pretty soon I figured things out by learning on the job'.

### Focus On Curative Health Care Instead Of Preventive Health Care

One of the senior officials with a PH specialisation shared a very broad perspective on the status of PH in Nagaland. He said that there are two sides to any health care system: preventive and curative. But it is the curative side that usually gets more prominence from elected representatives as its activities are immediately visible to the general public, such as the construction of a super specialty hospital. On the other hand, the preventive side involves activities such as disease surveillance, creating awareness, and driving behavioural change on the ground, which go unnoticed as they are invisible in a way. In preventive health care, it often takes time for the efforts to bear fruit. Preventive health care typically requires a multi-pronged approach and the involvement of various other departments such as social welfare, transport, women and child-development, thus adding to the complexity. While the COVID-19 pandemic has brought attention to preventive health care and PH along with discussions regarding creating a PH cadre, a sustained investment in PH programmes/initiatives needs to be also made for the PH cadre to be effective.

The current reality was succinctly summed up by a senior IAS officer working in the



secretariat, 'While a PH cadre is desirable, a small state such as Nagaland may not be able to afford it especially if it results in the creation of new posts, for two reasons: resource constraints and fight of turfs in government machinery'.


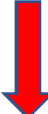
## **CONCLUSIONS AND WAY FORWARD**

### **Creation Of A Public Health Cadre In Four Northeastern States: Points To Ponder**





There are several factors that need to be carefully evaluated before embarking on the journey of creating a dedicated PH cadre. Foremost among them is to understand the desirability for having a cadre, followed by what cadre structure would be most effective for the state. Then comes identifying a talent pipeline along with training requirements and, last but not the least, the financial resources to support cadre formation. The states in NER are very unique when compared to other Indian states in terms of challenging terrains, long international borders, and low revenue generating capacity, thus leading to an increased dependency on support from the centre. Many of their governance decisions are led by the centre's directive. However, the decision to form a dedicated PH cadre should take into account local factors and ground realities of this region.



The table below summarises the pros and cons or enablers and disablers towards the creation of a PH cadre in the four NE states that we focussed in our study, under the five distinct themes of – i) desirability, ii) cadre structure, iii) talent pipeline, iv) training, and v) financial resources. This table serves as a ready reckoner for key stakeholders from these four NE states who would be involved in formulating a pathway for creating a PH cadre for their respective states. The decision about PH cadre is ultimately a political economic decision that needs to consider the issue of desirability and feasibility from various perspectives.

<b>DESIRABILITY</b>	
	
A public health (PH) cadre can help in extending the government's focus beyond just hospital-based healthcare to also address the social determinants of health, health promotion, and community health.	Creation of a dedicated PH cadre can lead to the gap between PH and clinical services being widened. It will further promote working in silos and lack of collaboration between each other.

<p>A majority of PH positions are being held by clinical specialists who aren't qualified/adequately trained in PH. Hence, they tend to focus only on curative/clinical side and ignore preventive/public health. Creating a dedicated PH cadre will ensure that only trained professionals become eligible to occupy these positions.</p> <p>Creation of a dedicated PH cadre can provide a career pathway for the entirety of PH workforce (including Accredited Social Health Activists [ASHAs], district programme managers, and other contractual workers). If done so, it would ensure that individuals who are knowledgeable and experienced in PH issues manage the state's PH system and have parity in income and promotions.</p> <p>Essential public health functions such as research, policy planning and budgeting, regulation and enforcement in public health, environmental health, and sanitation will be given due importance by an administration that is qualified/trained in PH.</p> <p>National Health Mission (NHM) is an example of how health infrastructure and programme implementation can be improved by strengthening administrative capacity. Similarly, a dedicated PH cadre will further infuse administrative and managerial capacity to the state's health department.</p>	<p>There will be challenges in ensuring parity with regard to promotions and career progression between the clinical and PH cadre, both belonging to the same department. For example, in Nagaland, this had led to the two doctors' associations warring legally over this issue for decades and completely crippling the state's health system.</p> <p>Instead of creating a dedicated cadre, a rigorous PH orientation to the current health service cadre is the need of the hour. Only when a medical officer performs their dual role of curative and preventive care effectively, can a state's health issues be addressed in a comprehensive manner.</p> <p>For effective functioning of a separate PH cadre, support from PH consortium as well as financial support is a must. Both of these do not exist in the current scenario.</p> <p>The PH cadre is not a magic bullet that can alone revamp the PH system. There are larger issues to contend with. How many states even have a health policy in the first place? How much does the state prioritise PH (e.g., on disease surveillance, prevention, etc.) in its budget allocation?</p>
<b>CADRE STRUCTURE</b>	
	
Levels: Create an Indian Public Health Services (IPHS) cadre that is responsible	Creating a dedicated PH cadre will require a comprehensive overhaul of the cadre

<p>for all PH functions starting at the block level and going up to the state and all the way till the national level. This cadre should be supported by a state PH cadre and could be akin to the civil services.</p> <p>Regional: Create a single regional cadre for a bunch of smaller neighbouring states, such as the North-East (NE) states except Assam. This will help in addressing the paucity of trained PH professionals in the region. Government of India (GoI) and North Eastern Council (NEC) will need to play an active role in implementing it.</p> <p>Entry Level: Clinical and PH specialists have very divergent thinking and approach to healthcare (curative versus preventive). Hence, the separation of clinical and PH positions should be made at the entry/Primary Health Centre (PHC) level itself and then continue as parallel career paths at block, district, and state levels.</p> <p>Entry Location: A block is a good starting point for a PH cadre. A block public health officer qualified in PH can manage supervisors (at a cluster level), who, in turn, can manage the frontline PH workers. Similar to the Integrated Child Development Scheme's organisation structure.</p> <p>Career Progression: A PH cadre will help mandate PH-related qualifications/training as an eligibility criterion for the PH positions within the health department.</p> <p>Sub-cadres: The PH cadre structure should also provide promotional avenues for various professionals who are not medical doctors, such as 1) frontline workers (ASHA and auxiliary nurse midwives) 2) technical staff (such as epidemiologists and entomologists), and</p>	<p>and recruitment rules at both state and national levels. Public health cadre needs to be state based because of the deep linkages that need to be established with local communities for it to be effective. However, there needs to be an organic link/career progression for the state PH cadre to the director general of health services in the health ministry, GoI. This will take years for it to be implemented.</p> <p>Health being a state subject, the seven NE states (except Assam) will need to come together and frame common cadre and recruitment rules, including posting and transfers across the states. This could be a challenge.</p> <p>Having a PH official from the PHC level will lead to almost doubling of the number of positions of the existing health service cadre. This will have huge financial implications.</p> <p>At the entry level, the cadre should gain experience in both clinical services and PH. This is because at the PHC level, primary healthcare and PH are highly interlinked.</p> <p>Creating a PH cadre can have an impact on the career progression of clinical specialists since most of the senior positions in the directorate are largely administrative in nature and will require PH qualification/training.</p>
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<p>3) programme management (including data and financial management).</p> <p>The creation of a PH cadre needs to go hand in hand with the creation of preferably a separate PH department (along with a secretariat) or at least a separate directorate under the health department. This will ensure that there is accountability in the higher echelons of the state government.</p>	
<p><b>TALENT PIPELINE</b></p>	
<p style="text-align: center;"></p>	<p style="text-align: center;"></p>
<p>Qualifications: To address the paucity of talent, apart from medical doctors, non-medical graduates coming from diverse backgrounds but with a post-graduate specialisation in PH and allied disciplines such as epidemiology, biostatistics, socio-behavioural science, health promotion, programme management, research methods, programme evaluation and health management information systems should also be considered.</p> <p>Programmes similar to the Bachelor of Community Health for the position of community health officer in Assam can be considered as a solution for providing necessary skilled workforce in these states.</p>	<p>Many NE states are facing an acute shortage of doctors/generalists, let alone specialists trained in PH. A state such as Nagaland does not even have a single medical college.</p> <p>These multi-disciplinaries are highly valued, but it will require creating new positions in the health department/cadre. Many of the existing PH-related positions such as chief medical officers, senior medical officers, etc. also require clinical training and, hence, can only be performed by medical professionals.</p>
<p><b>TRAINING</b></p>	
<p style="text-align: center;"></p>	<p style="text-align: center;"></p>

<p>A foundation course on PH needs to be at least 6–12months long for it to be comprehensive and effective. Short term courses/programme based trainings give a very limited orientation.</p> <p>States can opt for collaborating with institutes that offer six months online certificate course/ PH training to train the existing health service cadre officials occupying various PH positions.</p> <p>A foundation course on PH can be planned for the recruited cadre officials prior to them reporting for their jobs.</p> <p>Training/skills upgradation in PH related disciplines should also be provided to frontline health workers and technical staff so that it can create opportunities for them to join the PH cadre.</p>	<p>Considering the acute shortage of doctors, it is not feasible to either sanction study leave or give any time off from work for the officials can attend long term PH training.</p>
<b>FINANCIAL RESOURCES</b>	
	
<p>State governments need to evaluate if certain PH-related posts can be surrendered as they are no longer relevant to the existing disease burden of the state.</p> <p>Gol support (grant-in aid funding for NHM) if channelled through or tied to the PH cadre can pave the way for its smooth implementation in these states.</p> <p>The health expenditure, on an average, hovers around 7% of the state's expenditure, which is a good fraction, but it is also subject to the higher funding</p>	<p>State governments typically push back on incurring additional costs on personnel towards creating new posts and employment. Ensuring that an entire PH workforce is part of the cadre will be financially challenging for most states as this translates to a huge number of employees who will need to be provided with government social security benefits.</p> <p>The average share of own revenue (tax and non-tax together) for the period between 2015-16 and 2021-22 accounted for 27%, 8%, 19% and 6% for Assam, Manipur, Meghalaya, and Nagaland, respectively. This indicates a very heavy</p>

<p>support by Gol.</p> <p>Training current employees in PH is one of the most cost-effective options while the state undertakes a long-term plan of setting up a PH cadre.</p>	<p>dependence on the Gol transfers in the form of both tax share and grant-in-aid.</p> <p>The transfers from Gol (tax devolution and grant-in-aid) are very critical for the states and account for 58%, 80%, 69% and 59% of total revenues for Assam, Manipur, Meghalaya, and Nagaland, respectively. This fiscal position inhibits state govts from making big ticket expenditures especially where Gol has a role.</p>
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*Table 8.1. Enablers and Disablers in creating a Public Health Cadre*

*Source: Conceptualised by Centre for Budget and Policy Studies.*

## Recommended Pathway For States To Consider

One of the key conclusions from our study is that a PH cadre is not a magic bullet that can alone revamp the entire PH system. There are much larger issues to contend with, especially in terms of how a PH system is organised and governed. Thus, a PH cadre requires an enabling environment for it to create the desired impact. It is in this context, that we recommend a comprehensive pathway for states to undertake such that it goes beyond the creation of a dedicated PH cadre.

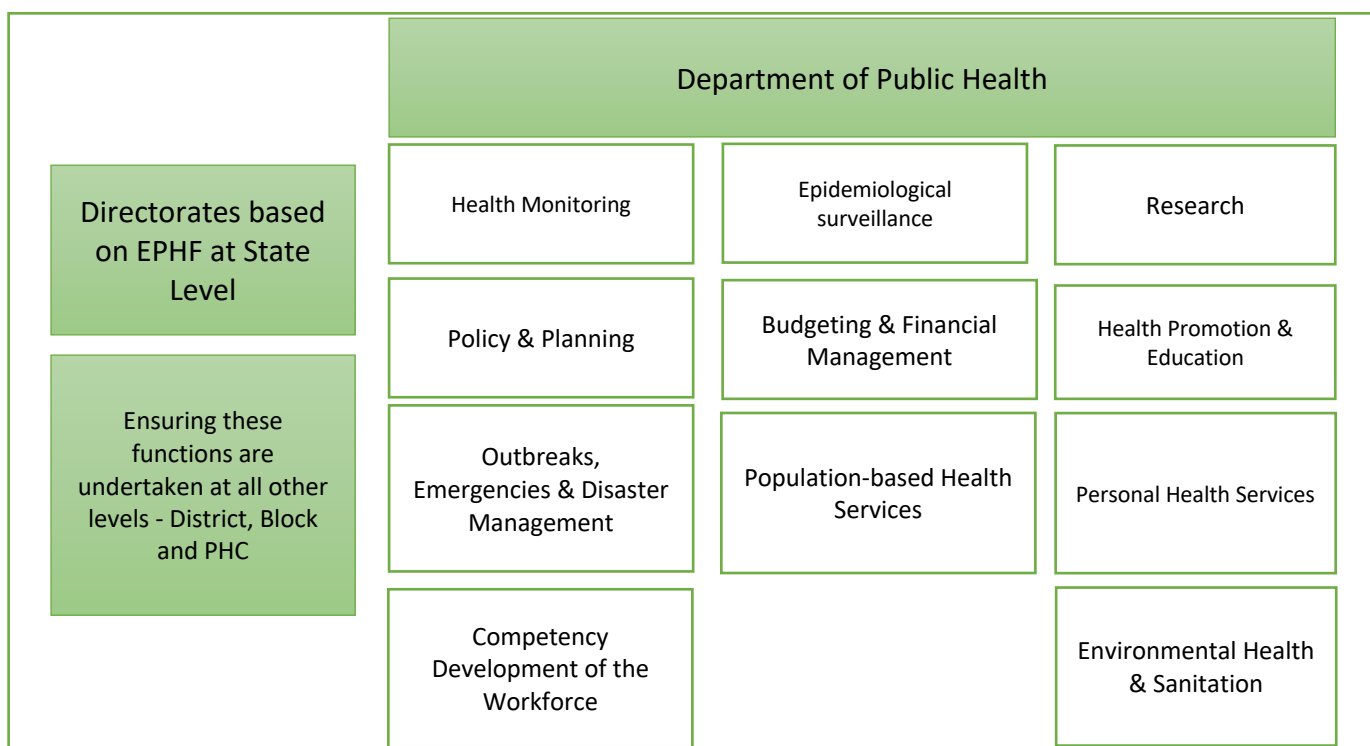
Since the WHO first published the list of EPHF in 1998, the EPHF framework has been frequently used by WHO regions, member countries and other global health actors to comprehensively define PH competencies and chart various health system reforms. Most member countries have used the EPHF framework to conduct a performance assessment of their existing PH system. Their respective health ministries and/or secretariats identified strengths and weaknesses within the system and developed specific interventions that were designed to sustain good practices and bridge gaps.

However, the rationale behind creating the EPHF framework was always to go beyond performance assessment and foment concrete action to improve PH practice, thus ultimately strengthening the overall health system. According to WHO (India is a member country of the WHO), the EPHF framework helps countries to better organise capacities and institutions that underpin their PH services. A couple of countries that have done this are Costa Rica and Argentina. Between 2004 and 2005, Costa Rica leveraged the EPHF framework to readjust its existing organisational structure of the Ministry of Health (for example, through the creation of a research department). Since 2007, Argentina has been using the EPHF approach to strengthen the organisation of



the Ministry of Health (for example, through the creation of directorates of chronic NCDs and vector-borne diseases at the national level and health promotion units at the provincial level).

We recommend that states should work towards a long-term vision of realigning their health department based on the 12 EPHF (Figure 8.1). This would also mean that (i) the outlook shall not be limited to curative and individual care but include and prioritise preventive and population level health care, and (ii) it will adapt the 12 EPHF such that it aligns with the state’s health care priorities. The existing DoHFW should be rechristened as ‘Department of Public Health’ since the EPHF extend beyond just PH to also encompass clinical care, medical education, research, disaster management, and health promotion to name a few.



**Figure 8. 1. Department of Public Health based on Essential Public Health Functions (EPHF)**

*Source: Conceptualised by Centre for Budget and Policy Studies.*

To traverse along the recommended pathway, we recommend that NE states should undertake the following **ten steps** :

- 1) Determine EPHF that are most critical for the state and suitably adapt them as required. States could also look at combining synergistic EPHF to ensure effective implementation of the same.
- 2) Map how the EPHF will be executed at each level: state, district, block, and primary

care level. For e.g., what aspects of data collection for disease surveillance need to be carried out at the primary health care, block, district, and state levels.

- 3) Mapping of EPHF should also include envisioning a newly organised workforce that can effectively implement it across all levels. Apart from clearly defining the roles and responsibilities of the various positions of this newly organised workforce, the mapping exercise should identify the infrastructure needs as well.
- 4) Classify the positions as i) cadre or non-cadre from a roles and responsibilities perspective, and 2) clinical, PH, or common/both from a functional perspective. Finalise the eligibility criteria/educational qualifications and desired experience needed for these positions, along with pathways for career progression.
- 5) Based on the above point, arrive at a cadre structure for PH and clinical specialists along with sub-cadres for other positions that are classified as either frontline, technical, or support functions.
- 6) Identify the gaps between the existing workforce and the newly organised workforce in terms of i) labour and ii) training.
- 7) Develop a blueprint that provides solutions to how these gaps can be potentially filled, such as a specific short-term training programme or setting up of a training institute in PH to build a talent pipeline.
- 8) To begin with, implement the blueprint at the directorate level within the first five years (short-term). The reason for going top-down is due to the criticality of the directorate level while also having lesser gaps to fill in terms of workforce.
- 9) Next, implement the blueprint at the district level within five to ten years (mid-term).
- 10) Finally, implement the blueprint at block level and below within the next 10 to 15 years (long-term).

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## Notes For References

- <sup>a</sup> *The Public Health Functions Steering Committee included the American Public Health Association, the Association of Schools of Public Health, Association of State and Territorial Health Officials, the Environmental Council of States, the National Association of County and City Health Officials, the National Association of State Alcohol and Drug Abuse Directors, the National Association of State Mental Health Program Directors, the Public Health Foundation, U.S. Public Health Service agencies: the Agency for Health Care Policy and Research, the Centers for Disease Control and Prevention, the Food and Drug Administration, the Health Resources and Services Administration, the Indian Health Services, the National Institutes of Health, the Office of the Assistant Secretary for Health, and the Substance Abuse and Mental Health Services Administration. Source: Public Health in America Statement, 1994/5.*
- <sup>b</sup> *The most underdeveloped districts in India are identified by the NITI Aayog and termed as Aspirational districts. Under NITI Aayog's direction, various ministries at the district level work to improve indicators in the areas of Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development, and Infrastructure through inter-sectoral collaboration; 112 such districts have been identified under the Aspirational Districts Programme, 2018.*
- <sup>c</sup> *The percentage of children aged 12-23 months who were fully vaccinated improved from 31.4% in 2005-06 (NFHS-3) to 47.1% in 2015-16(NFHS-4) and 66.4% in 2019-20 (NFHS-5).*
- <sup>d</sup> *Epidemiological transition level (ETL) based on the ratio of the number of DALYs in a population due to communicable, maternal, neonatal, and nutritional diseases to the number of DALYs due to non-communicable diseases and injuries together. A decreasing ratio indicates advancing epidemiological transition with an increasing relative burden from non-communicable diseases as compared with communicable, maternal, neonatal, and nutritional diseases.*
- <sup>e</sup> *The Indian Public Health Standards (IPHS) guidelines prescribes one Primary Health Centre for every 30,000 population and 1 in 20,000 for hilly terrains.*
- <sup>f</sup> *We interviewed the principal secretary, director of health services, state and district programme officers, state and district statistical officers, district malaria officer, and SDMHOs. The post of the JD for PH was vacant as the previous official had retired.*
- <sup>g</sup> *They included the chief medical officer, district surveillance officer, district tuberculosis officer and district programme manager of Imphal East district and district surveillance officer and district tuberculosis officer of Imphal West district.*
- <sup>h</sup> *We also spoke to a few public health specialists who worked as district nodal officers for various NHM programs and one of them was also the district surveillance officer for the IDSP.*
- <sup>i</sup> *As per the IPHS guidelines, a block public health unit is envisaged at the CHC and shall include a public health specialist.*
- <sup>j</sup> *The Nagaland Health Project (NHP) is a project supported by the World Bank that aims to improve management and delivery of health services and increase their utilization by communities in targeted locations in Nagaland without duplicating existing government programmes.*
- <sup>k</sup> *Data provided by the directorate and as on 31 October, 2020.*
- <sup>l</sup> *They included the CMO, deputy CMO, and district nodal officers such as the DIO, DSO and DTO of Kohima district.*

**Chapter 3**  
**PUBLIC HEALTH CADRE**  
**FOR 21<sup>ST</sup> CENTURY:**  
**ASSESSMENT OF NEEDS,**  
**GAPS AND HEALTH**  
**MANAGEMENT OF PUBLIC**  
**HEALTH SERVICES**

International Institute of Health Management Research (IIHMR)

## **EXECUTIVE SUMMARY**

India has successfully completed its 75th year of Independence and has made remarkable progress in public health since that time. There have been significant improvements in health indicators across all the states of the country but still a degree of disparity remains among the states.

In India, there was always a felt need of a Public Health Cadre, as defined by having a systematically trained and structured public health set up from the grassroots level to higher administrative levels, with a separate public health directorate. The national commitment to have a dedicated Public Health Cadre dates back to the recommendations of the Bhore Committee in 1946. In the current scenario, the National Institution for Transforming India (NITI) Aayog has urged for the introduction of public health cadres across the country. The cadre is supposed to comprise of trained and competent multidisciplinary public health professionals. There is a commitment at both national and state levels to this end. However, the states are in different stages of implementation of a Public Health Cadre.

The current study is part of a larger pan India study which was planned to undertake a situational analysis of the Public Health Cadre in India. IIHMR Delhi was assigned the task of reviewing the status in Odisha, Gujarat, West Bengal and Maharashtra.

The methodology of the study included desk-based reviews and primary data collection using qualitative research in the form of in-depth offline interviews of the respondents across various cadres in the states starting from state level till district level (ten districts from each state). The districts were selected purposively by the state government based on the geographical location, health profile and feasibility of data collection owing to the COVID pandemic. The stakeholders included officials holding administrative positions in state governments, the districts and non-governmental sectors, and those involved in implementation of public health services at the district level.

The health systems model proposed by the World Health Organization (WHO) was the framework for the assessment. Topic guides were developed for data collection that followed a holistic approach focussing on each of the six-health building block of WHO— leadership, financing, technologies, health workforce, information system and service delivery. The principles of qualitative research were followed while conducting the interviews. The study followed all the laid down rules of ethics by taking consent from the Institutional Review Board, to starting the study post approval from state governments and keeping all the interviews confidential.

### Findings and recommendations

A total of 78 respondents were interviewed from different states from different positions



starting from the director of public health to the level of district programme managers. The interviews were conducted between 01st April 2021 to 15th January 2022.

Currently, all the four study states viz. West Bengal, Gujarat, Odisha and Maharashtra, have a dedicated cadre for public health in the form of a separate hierarchical structure and directorate. All the states studied had a state specific clear cut job description and defined roles and responsibilities for their workforce. However, all the states reported deficits in having skilled human resources who could manage and implement public health across all levels. This could be due to lack of permanent positions for institutionalizing a Public Health Cadre, absence of career progression pathways, disparity in remuneration, especially for those in contractual positions and lack of incentives. The recent pandemic underscored the importance of positions such as epidemiologists, entomologists, and lab technicians in the public health sphere. The state health missions were providing varying degrees of training support to manpower responsible for public health. There was a difference of opinion in considering ASHAs as part of the Public Health Cadre.

All the respondents agreed that health in India is majorly funded by the Central government. Approximately 80-85 per cent of the state budget goes into salaries, pensions and maintaining human resources, leaving the remaining 10-15 per cent for managing other activities. In fact, revisions of roles and responsibilities in the existing workforce to a certain extent would be enough to undertake the activities expected out of a Public Health Cadre leaving only a small window for hiring and recruitment of new human resource.

A major criticism of the existing system highlighted was that all decisions were being mainly taken at the bureaucratic and political levels. Therefore, implementation of the Public Health Act in the true sense can give powers for better, smoother and efficient functioning. It was also noted that the hierarchical level of the reporting system being followed was such that senior technocrats with years of work experience had to report to junior bureaucrats—a situation that did not always remain cordial.

The state governments were currently using technology-based Health Management Information System (HMIS) for routine reporting. A definite reporting schedule was being followed in which all the data that was gathered from all levels were compiled and analysed. However, there were certain glaring gaps in the existing MIS, as reported by the stakeholders. Duplication of data was a major issue that occurred due to multiple reporting channels, portals, formats and data sources in the system. The HMIS was being underutilized for public health purposes. Decisions were not data driven yet was the biggest criticism received about the HMIS.

The biggest strength of the study was that it provided a comparative picture of each state's Public Health Cadre using representation of people interviewed at various levels—national, state and district, including developmental partners. There was

identification and representation of the good and poor performing districts. The study methodology included data collection based on mainly offline interviews with less than 10 per cent refusals from the participants. All ethical practices were followed for the purpose of data collection.

A need is envisaged for a standardized structure for a Public Health Cadre at the central level with defined job roles and qualifications. Developing a provision of supporting the creation of well-defined career progression pathways would lead to higher motivation, retention and efficient working of the Public Health Cadre and the professionals who work within it.

## INTRODUCTION

India has made remarkable progress in public health since Independence. There have been significant improvements in health indicators across all the states of the country[1]. However, the health system continues to grapple with several challenges resulting in our inability to meet the targets laid down.

Experiences from developed countries have highlighted the importance of having a structured and organized sector with trained manpower to manage and deliver public health services. Institutionalization of public health delivery systems has resulted in improved population health outcomes[2]. Strengthening health systems is a means to progress towards Universal Health Coverage (UHC)[3].

In India, there is a felt need of a Public Health Cadre, as defined by having a systematically trained and structured public health set up from the grassroots level to higher administrative levels with a separate public health directorate[4-6]. This finds mention in historical documents of the Bhore Committee (1946), Mudaliar Committee (1962) and Kartar Singh Committee (1973)[4, 7].

Health systems have grown increasingly complex with multiple stakeholders and tasked with meeting the health aspirations of the population. Despite having numerous trained public health functionaries in the country, the system lacks regulatory authority to enforce all interventions and legislation effectively[4]. Creation of a Public Health Cadre with minimal restructuring and disruption of the existing administrative and service delivery structures is a priority of the country. Several meetings and high level discussions have iterated the importance of establishing it by different states[8]. The critical components that are advocated for, include public health administrative and leadership posts (to be held by doctors trained in public health), technical staff and management staff trained in public health and grassroots level functionaries[4].

NITI (National Institution for Transforming India) Aayog, a national level think tank urged for the introduction of an all India and state level Public Health Cadre comprising of public health professionals with multidisciplinary education[1]. There is a commitment at both national and state levels to this end. Though there appears to be a general acceptance, the states are in different stages of the introduction of a Public Health Cadre. Based on the implementation status, the states have been categorized as those having a well-established cadre, those that are evolving in establishing one, and those that are in the contemplation phase[4].

It was necessary to conduct a situational analysis of the Public Health Cadre in select states to gain an in-depth understanding of the progress and explore the gaps and challenges in its implementation.

## **METHODOLOGY**

The study followed a two-pronged approach that included desk-based reviews and primary data collection using qualitative research. Four states were selected across the country (Gujarat, West Bengal, Odisha, and Maharashtra) based on the various levels of implementation of the Public Health Cadre and in consultation with the funding partner. The profiles of the state are in Annexure 1. From each state, ten districts were selected for in-depth interviews of key stakeholders. The districts were selected purposively by the state government based on the geographical location, health profile and feasibility of data collection owing to the COVID pandemic. The stakeholders included officials holding administrative positions in state governments, districts, non-governmental sectors, and those involved in implementation of public health services at the district level.

The health systems model proposed by the World Health Organization (WHO) was the framework for the assessment (Table 1). Topic guides were developed for data collection that followed a holistic approach focussing on each health building block. (Annexure 2)

<b>Table 1: Framework for assessment of Public Health Cadre in India</b>	
<b>Parameters</b>	<b>Questions included in the topic guide</b>
Leadership and governance	<ul style="list-style-type: none"> <li>• Is a Public Health Cadre a state and district priority?</li> <li>• What is the level of willingness of the states to support the roll out of the Public Health Cadre programme?</li> <li>• What is the current capacity of health departments across all state governments in India to have qualified personnel in health systems?</li> <li>• What is the plan of readiness of the states to accommodate professionals in a Public Health Cadre?</li> <li>• How many states have set up a dedicated Public Health Cadre?</li> <li>• Is there any organizational structure available for a Public Health Cadre?</li> </ul>
Health financing	<ul style="list-style-type: none"> <li>• Is there a separate budget or line item available for the programme?</li> <li>• What is the level of willingness of the districts to have alternate sources of funds if required?</li> <li>• What are the provisions for incentives or compensation for a specialized Public Health Cadre at every level?</li> </ul>
Health workforce	<ul style="list-style-type: none"> <li>• What are the qualifications required for a specialized Public Health Cadre according to levels of health systems?</li> <li>• What are the anticipated impediments/roadblocks to setting up dedicated Public Health Cadres?</li> <li>• Are there adequate numbers of trained staff for public health (MBBS, MD in Community Medicine, Diploma in Public Health, Master of Public Health) available across facilities?</li> <li>• What proportion of health or medical professionals are qualified in public health or health management or epidemiology?</li> </ul>

	<ul style="list-style-type: none"> <li>• Are non-medical public health professionals a part of the Public Health Cadre?</li> <li>• Should ASHAs be included in the Public Health Cadre?</li> <li>• Is there a predefined career progression pathway for those who are in the Public Health Cadre?</li> </ul>
Health information systems	<ul style="list-style-type: none"> <li>• Is there a regular reporting of activities conducted under the Public Health Cadre separately?</li> <li>• What is the current system of registration of vital events? (Birth and death registration)</li> <li>• What is the level of coordination between public health and health departments to manage and report routine health data?</li> </ul>
Health service delivery	<ul style="list-style-type: none"> <li>• What is the mechanism of supervision of activities under a Public Health Cadre?</li> <li>• Who should control and administer Public Health Cadres?</li> <li>• Are states and districts equipped to handle public health emergencies?</li> <li>• What are the challenges in addressing public health emergencies in the current set up?</li> </ul>

To maintain the confidentiality of the respondents, every respondent was given a unique ID. All the Interviews were translated into English and then transcribed. Based on findings, contextual themes and codes were developed. There was one data coder who provided the codes based on the framework used for the study. Data analysis was done manually using the thematic analysis method. The process of data collection was not iterative.

The interviews were conducted both through online and offline modes, depending on the feasibility due to the pandemic. The interviews were conducted in English or the local language, depending on the comfort level of the respondents. All the interviews were conducted by teams of faculty members and research staff. The faculty members (with MD or PhD degrees) had vast experience of conducting programme relevant research using qualitative techniques. The research staff appointed for the study had a Master's degree in Health and Hospital Management. An orientation was provided to all the members on the study protocol and conduct of qualitative research.

All the interviews conducted were in one-on-one mode and information were kept confidential. Each interview (lasting 20-40 minutes) was conducted by a team of two people who were conversant with qualitative research. The interviews were recorded after taking consent from the participants. In case of refusal, the same was recorded through handwritten notes. The names and credentials of the respondents were kept confidential due to ethical reasons. Data collection was continued till the point of data saturation in every state. The transcripts were not shared with the respondents for their comments and feedback.

The project was approved by the Institutional Review Board of IIMR Delhi. The

respective states were informed about the study. Permissions were sought from them before the start of data collection. We could not obtain permission from the state of Maharashtra due to constraints resulting from COVID and hence limited ourselves to national level informants with an experience of working in the public health sector in Maharashtra.

Reporting of findings followed Consolidated criteria for Reporting Qualitative research (COREQ) checklist. All the interviews and transcripts would be kept confidential and under the custody of the research team for a period of five years after completion of the study.

## **RESULTS**

A total of 78 respondents were interviewed from different states. The profiles of the respondents are described in ***Annexure 5***.

The findings emerging from the study have been summarized according to the themes as under:

### **Political commitment:**

The first step towards successful implementation of any initiative is ensuring that strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system design, and accountability.

The national commitment to have a dedicated Public Health Cadre dates back to 1927–28, with Tamil Nadu leading and showing the path for the rest of India. Currently, all the study states viz. Maharashtra, West Bengal, Gujarat, and Odisha have a dedicated cadre for public health in the form of a separate hierarchical structure and directorate. However, a difference in the nomenclatures exist in the states partly owing to the fact that health is a state subject in India. For instance, it is known as Public Health Cadre in Odisha, Public Health Department in Maharashtra and West Bengal, and Public Health Division in Gujarat.

At the highest level of the hierarchy is the Commissioner Health (an administrative officer). Below that level are Directors representing the Directorates pertaining to Medical Education, Health Services, Administrative Services and Public Health. (***Annexure 6***) While Odisha and Gujarat have a clearly demarcated Public Health Directorate with clear cut roles and responsibilities, the same is not true for West Bengal and Maharashtra. Directorate of Health Services oversees the activities earmarked as those of the Public Health Cadre in these two states. A respondent observed:

“Earlier public health was separated, so, public health, medical education and medical services were separated but at some point, the health ministry took a decision to merge public health and medical services and medical education remained as separate because of MCI Regulation.” - P9\_PH XVI\_RX3\_3

Each Director has a team of Deputy Directors to support various activities. Every state has Deputy Directors (below Director Public Health in Odisha and Gujarat and below Director Health Services in West Bengal and Maharashtra) to manage public health activities at the state level and oversee district level activities. The Chief District Medical Officer or Civil Surgeon is the nodal person at the district level. In Gujarat, Additional District Health Officer and in West Bengal Deputy Chief Medical Officer (Health) at the district level manage all public health programmes, who report to the nodal person. In Maharashtra the district is led by two people, one is the civil surgeon responsible for looking after the district and taluk hospitals and the other is the District Health Officer with the mandate to have a MD in community medicine or diploma in public health.

To give a thrust to the implementation of the public cadre in Odisha, restructuring and redesigning was done at the block, district, and state levels. At the state level, the Special Secretary was made in charge of public health supervising all the Directors of Public Health and Additional Directors. At the district level a special post was created called the Chief District Medical and Public Health officer (CDMO and PHO), who were the nodal persons at the district level supported by the District Public Health Officer (DPHO) and the Block Public Health Officer (BPHO) at the block level. Such demarcation at the block level was not reported from the states of Maharashtra, West Bengal and Gujarat.

The respondents substantiated the fact that all the state governments are very supportive towards implementation of the Public Health Cadre in their respective states.

**Good practice:**

Out of the four states, Odisha has defined a structure and protocols for the management of the Public Health Cadre below the block level.

“Health is a state subject, and we need to focus on a Public Health Cadre. We need to create and develop our own strategy for implementation of the plans.”- P3\_PH XVI\_RX2\_2

**Good practice:**

Well defined organizational structure in Gujarat. Deputy Programme Managers are responsible for every public health programme at the district level.

All the states reported deficits in having enough skilled human resources to manage and implement public health across all levels. The deficits were more in West Bengal and Odisha. In Gujarat, the respondents reported a high level of attrition perpetuating the problem further, particularly in urban areas. The State Health Mission provides the varying intensity of training support to manpower responsible for public health. However, there are limited opportunities available for contractual staffs in terms of remuneration and job progression. A respondent remarked:

“As public health is big, human resource is little deficient of about 5 – 10 per cent.”

The respondents strongly emphasized the need for personnel with training in public health, especially in leadership positions. The respondents clearly identified the requirement of having an optimal mix of medical and non-medical persons at the helm of affairs. However, a formal training in public health should be a pre-requisite for such positions in order to impart managerial skills to medical professionals and skills to understand health programmes for non- medical professionals.

The national and state level stakeholders lauded the states with a strong Public Health Cadre for effectively managing disasters such as cyclones and pandemics. This view was expressed by one informant:

“Yes, it is a game changer because the Public Health Officer monitors and supervises as per the guidelines given by national health programmes. If not supervised, the right outcomes [will] not [be] achieved.”

## **Financing Of Public Health Cadre**

All the stakeholders pointed out that health in India receives funding from the Central government, which provides 1.5 per cent of the GDP for it. But as stated by an official:

“The Central government’s share of the funds is only about one-third, two-thirds of the funds for health programmes come from the state budget itself, health is a state subject not a central one.”

If states wish to make a remarkable change in the health system, they have to increase their allocations. Approximately 80-85 per cent of the state budget goes into salaries,



pensions and maintaining human resources, leaving the rest 10-15 per cent for other activities. In fact, revisions of roles and responsibilities in the existing workforce to a certain extent would be enough to undertake the activities expected out of a Public Health Cadre. Fresh recruitments would be required for 10-15 per cent of the vacancies thus created, justifying the need for additional investment, albeit minor.

Respondents from Gujarat stated that the state budget is sufficient, but there is need to create a policy on infrastructure and recruiting human resources which will help revamp the system. On the other hand, West Bengal and Odisha stated that there are budgetary constraints and state governments are managing with existing resources. Monetary incentives are available for personnel working in difficult terrains. The contractual staffs are underpaid and that demotivates them. A respondent stated:

**Good practice:**

To overcome the financial constraints obligated by the finance management system, which posed a hindrance to maintaining continuity of fund flow, West Bengal introduced the credit system to manage the salaries and other expenses incurred by its Public Health Cadre

“The incentive is for attraction and it’s not performance based, further the remote location higher are the incentives”

There is no provision for performance-based incentives in Gujarat, Maharashtra and West Bengal. In Odisha, staff received one month salary for their support during the pandemic which was very encouraging. Few respondents also valued the appreciation letter they received from MD NHM as a mark of their contribution to state programmes. Expressing anguish over lack of incentives, one respondent mentioned:

“There are so many incentives for our account level and field workers but in the case of public health officers there is only a public health allowance which is a bare minimum.”

The state governments are innovating to optimise health finances, for example, the Government of Odisha is taking steps to improve financing through a Public Health Resource Fund (PHRF) that can be easily managed online with help from the DMF (District Medical Foundation). West Bengal introduced the credit system under NHM for better management of its Public Health Cadre. Under the system, credit can be taken from the bank as per the written directives from the state. Later, the banks are reimbursed the funds. This ensures every district has a smooth fund flow from the beginning of the financial year.

## Role Of A Public Health Cadre In Healthcare Delivery System

The healthcare delivery system has undergone enormous changes since it was instituted decades ago based on the reports of the Bhore committee, the Mudaliar committee and the Kartar Singh committee. Although, the basic structure has remained the same, failure to achieve programme targets despite having a political will and policy guidelines in place, has been attributed to weak managerial skills within the health sector. From being a strictly medical dominated system, it has now expanded to include non-medical professionals into its fold. However, stakeholders believe that the head of the Public Health Cadre should be from the medical background, akin to engineering or law departments where the head comes from a background in the respective fields. Notes an informant:

“In law and engineering they are from their respective subject streams, but not so in the medical sector.”

Some of the key national and state level stakeholders criticized the system pointing out that all the decisions are taken at the bureaucratic and political level. They said: “Just putting people in the Public Health Cadre will not improve the performance of public health”

Every state has a defined Health Directorate and a Public Health Cadre with different designations managed by the Director Public Health or Additional Director Public Health. The cadre is managed at the state and district levels although the penetration of the Public Health Cadre below the district level is very limited. It was only in Odisha that we observed stakeholders talking about creating a sub-district level Public Health Cadre. One of the informants from another state highlighted the requirement of technical staff at the block level to enable better decision making.

There are certain challenges which ought to be considered for improving and building a strong Public Health Cadre. Currently, maximum decision-making authority is in the hands of bureaucrats. The implementation of the Public Health Act in a true sense could provide more powers for better, smoother and efficient functioning.

Another point of concern was resistance from the doctor community. This included the fear of giving up their clinical practice, resistance of allopathic doctors towards AYUSH as well as nursing and other paramedical allied professionals. One of the recommendations for a better Public Health Cadre was increasing seats for postgraduation in the medical colleges and increasing the number of colleges, which eventually will lead to increase in good quality workforce.

Mixed responses were obtained regarding the competencies of the Public Health Cadre

of the states to handle the current pandemic. Two of the respondents stated the need for increasing the intersectoral and interdepartmental coordination of various departments so that they work along with the Public Health Cadre, creating better synergy and more efficient functioning.

## **PUBLIC HEALTH WORKFORCE**

An optimally trained workforce is extremely crucial for the successful implementation of a Public Health Cadre. All the states studied had a state specific clear cut job description and defined roles and responsibilities for their workforce. In the absence of written guidelines in many states, those responsible generally framed their own rules based on their experience or guidance from their seniors. State specific rules for recruitment were followed in most instances, although some respondents reported occasional deviations owing to political reasons.

### **Good practice:**

The state of Odisha has shown a strong commitment to capacitate the public health workforce at various levels (state, district and block levels). It did it by collaborating with institutes of national repute, sponsoring them for different short and long term academic courses and organizing international exposure visits.

The shortage of trained professionals was reported from all the states. This could be due to lack of permanent positions for institutionalizing the Public Health Cadre, absence of career progression pathways, disparity in remuneration, especially for those in contractual positions and lack of incentives. The recent pandemic underscored the importance of positions such as epidemiologists, entomologists, and lab technicians in the Public Health Cadre.

Career progression was seen as an essential feature to retain skilled professionals which cannot get compensated by incentives alone. Clear cut career progression, adequate remuneration and increments were defined only for permanent staff. Recognition and awarding deserving positions in the system, it was felt, were equally important to keep the motivation levels high. One of the officials also added that there were multiple positions and incremental steps for bureaucrats, whereas there have been instances where a medical officer is appointed and retires at the same level.

### **Good practice:**

District level personnel in-charge of public health hold academic qualifications in public health in Maharashtra.

Almost all the respondents opined that there is a need to have non-medical public health professionals in place. Having only doctors in the public health sector would be a challenge since there was already a dearth of doctors in the country. Moreover, they often lacked managerial skills that were important to discharge their duties effectively.

However, doctors needed mandatory public health training that could be at both pre-service and in-service levels. Some respondents highlighted the challenges in striking a balance between clinical specialists and public health specialists in terms of their promotion and remuneration. A respondent remarked:

“There should be segregation from the beginning, who will be from the medical side and who will be from the non-medical side. If you are entering in the PH [public health] stream, then you will retire in PH.”

*Adds another respondent:*

“It has now been made mandatory for all Public Health Cadre posts that appointees must be trained in public health and must hold either a diploma, PG diploma or a Masters in PH.”

However, a concern was raised that existing human resources trained in Preventive and Social Medicine in Medical Colleges were not being utilized effectively because of lack of interest and motivation. One suggestion provided by an informant was:

“. . . that postgraduates in management can start working at the block level, those with a medical degree at the district level and those with medical degree in Preventive and Social Medicine as overall in-charge as they have more comprehensive knowledge of public health in general.”

Mixed responses were obtained when the respondents were asked about including ASHAs as part of the Public Health Cadre. Most of the informants felt that ASHAs should be part of the cadre as they were the major driving force at the grassroots level. While some others expressed the view that ASHAs should be kept separate since they were volunteer workers and received incentives. One of the respondents noted:

“They are doing everything now. So ASHAs are an important part of the health department. They should basically be included in PH cadre.”

*However, another informant had this view:*

“ASHAs are typically not part of the Public Health Cadre. They serve as a bridge between the community and the health system. . . , but they are not workers. They're not on the pay roll, they are just on incentives.”

Unlike the other states, respondents from Odisha lauded the efforts being put in by the state to capacitate its workforce. The state had collaborated with various institutions to provide one-year courses in public health or diploma or allied courses. As expressed by one respondent:

“You might be aware of the good news that from this year onwards NHM Odisha would be training over 200 personnel each year for the next four years.”

## **Health Information System**

A health information system is a prerequisite for evidence-based planning and implementation of programmes. State governments use technology-based Health Management Information System (HMIS) for routine reporting. A recent introduction on 1<sup>st</sup> April 2021 was the IDSP-IHIP portal (Integrated Disease Surveillance Programme - Integrated Health Information Portal). But this is just in the initial phase of rolling out. A definite reporting schedule is now followed in which all the data gathered from different levels are compiled and analyzed. The data is verified, and feedback and recommendations framed.

However, there were certain glaring gaps in the MIS, as reported by the stakeholders. The onus of reporting health data was with ground level workers. Duplication of data was a major issue that occurred due to multiple reporting channels, portals, formats and data sources in the system. Secondly, a hierarchical level of reporting prevailed where senior technocrats with years of work experience had to report to junior bureaucrats, which was sometimes not too cordial. Thirdly, there were ill-defined roles and responsibilities for data reporting for the health workforce. Fourthly, though HMIS was used extensively for health-related data, it was being underutilized for public health purposes. The respondents also expressed the view that there was reluctance to share data, make it public, and make it visible.

The state officials of Gujarat, and West Bengal expressed the need for improving the quality of data. This, they felt, could be done by training public health managers to enhance their decision-making power. The upcoming National Digital Health Mission could also give an opportunity to redesign the reporting system. Revision of IT enabled dynamic web-based system and reporting system needed to be target driven. Here were some of the views of the respondents:

“It is not being managed properly and complete revamping must be done.”

“There should be some system of convergence so that all the data is available for planning and analysis”

“There should be strict regulation on data so that no unnecessary data is collected unless and until somebody very senior or at the top level decides it is needed. So, why should we collect specific data which is not required for decision making?”

## **SUMMARY OF FINDINGS FROM STATES**

Perspectives	GUJARAT	WEST BENGAL	ODISHA	MAHARASHTRA
<b>1. Leadership</b>				
Support of State Govt. in expansion of Public Health Cadre	Strongly agree but there is a need for framing a more well-defined structure and roles	Strongly agree that support from the State is needed	Strongly agree with support from the State	There is good support from the government, and it has defined entry level qualifications for professionals
Capability Of Current HR	Slight shortage of HR	Slight shortage of HR	Shortage of HR	Shortage of HR
Organizational Structure	Defined hierarchy structure is present	Well-defined structure is present, with segregations of roles and responsibility at all the levels	Defined hierarchy structure is present	Defined hierarchy structure is present
<b>2. Health Financing</b>				
State Support in Financing	Full support	Full support	Full support	Full support, but fund allocation needs to be improved
Incentivizing	Performance based incentives are not present	Performance based incentives are not present	Performance based incentives are present	Performance based incentives are not present
<b>3. Health Workforce</b>				
Job Description and Qualification	Defined TOR is present and followed	Defined TOR is present and not always possible to adhere to	Defined TOR is present, but some TORs need to be strictly followed	Defined TOR is present and strictly followed
ASHAs be part of PH Cadre	Should be part, but some differed stating that they work as volunteers	Should be part. but some differed stating that they work as volunteers	Should be part but some differed stating that they work as volunteers	Should be kept as a separate cadre, as they are overburdened
Career Progression	Promotion after every 7 years for regular employees, but no such provisions for contractual employees	Promotional avenue is not present for contractual employees	Promotional avenue for regular employees (permanent staff), but no such provisions for contractual employees	Promotional avenues are not defined at the district level leading to higher attrition rate, though there are provisions for promotions of regular employees (permanent staff)

<b>4. Health Information System</b>				
Mechanism for Reporting	Hierarchy is followed for reporting and monitoring. Systems like HMIS, TeCHO and other portals are used but need for compact and standardized format for reporting	Reporting and monitoring is done in a hierarchical manner. Systems like HMIS and other portals are used, but there is scope for improvement in the existing system	Hierarchy is followed for reporting and monitoring. Need for compact and standardized format for reporting	Hierarchy is followed for reporting and monitoring. Systems like HMIS and other portals are used, but there is need for revamping the reporting system
Collaboration Between Health & Public Health Department	Good collaboration	Good collaboration	Good collaboration	Good collaboration
<b>5. Health Service Delivery</b>				
Supervision & Administration	Done as per the hierarchy, but roles and responsibilities need to be clearer	Done as per the hierarchy and pyramid structure starting from the higher level is observed	Done as per the hierarchy and pyramid structure starting from the higher level is observed	Done as per the hierarchy but roles and responsibilities need to be clearer and defined
Overall status of Public Health	Will manage better with a Public Health Cadre in place	Will manage better with a Public Health Cadre in place	Will manage better with a Public Health Cadre in place	Will manage better with a Public Health Cadre in place
Challenges	Attrition of human resources in urban areas	Shortage of human resources	Shortage of workforce and skilled professionals	Shortage of human resources
	Lack of promotional avenues	Remuneration disparity as per seniority	Lack of connectivity (Road and Internet)	Lack of promotional avenues
	Special guidelines as per the needs of the district	Lack of promotional avenues	Lack of promotional avenues	Special guidelines as per the needs of the district
	Need for more training avenues	Improvement of infrastructure needs of the district	Need for more training avenues	Need for more training avenues
		Need for more training avenues		Low budget and deficit resources
		External influence, like leadership and governance along with lack of political will affect decision making and functioning capabilities		Lack of inter and intra departmental coordination

## SWOT ANALYSIS:

### Strengths

- 1) There is political commitment at the highest level. This finds mention in documents of the National Health Policy, NITI Aayog and the National Health Mission.

- 2) There is reasonable provision in the budget for establishing and maintaining a Public Health Cadre.
- 3) Every state has a defined structure for implementing public health programmes in the community and facility.

### Weaknesses

- 1) Lack of a policy document to guide states to create and manage a Public Health Cadre.
- 2) Plans for capacity building of human resources for managing a Public Health Cadre, including both pre-service and in-service training for medical and non-medical professionals need to be reviewed and implemented.
- 3) Lack of defined career progression pathways, promotional avenues and opportunities for professionals managing a Public Health Cadre.
- 4) Absence of a standardized Health Management Information System to yield reliable and accurate data to guide public health programmes.
- 5) Demarcation of directorates at the state level are well defined, but the same at the district levels and below are not too clear.

### Opportunities

- 1) Increasing the accountability of every personnel in the Public Health Cadre by defining their roles and responsibilities.
- 2) Providing a capsule training to the professionals before joining their respective positions in the Public Health Cadre would improve the overall performance.
- 3) Under the Department of Human Resources for Health in the ministry, there should be a nodal person to look after the Public Health Cadre.
- 4) The Covid pandemic has underscored the importance of having a trained Public Health Cadre at the sub-district level.
- 5) Strategies to retain experienced and contractual human resources in the system by bringing parity in the salary structure as that of permanent staff or compensating through incentives



## Threats

- 1) Differences in nomenclatures and lack of uniformity in organizational structures leads to confusion in terms of assessment of implementation of a Public Health Cadre.
- 2) Lack of synergy between administration (generally headed by bureaucrats) and implementers (technocrats) leads to delay in the implementation of activities and poses a hindrance in inculcating a sense of ownership among stakeholders.
- 3) Health being a state subject demands autonomy, but external influences and political interference sometimes deters the state from taking independent decisions.
- 4) High attrition rates due to contractual nature of most of the positions managing the Public Health Cadre at the district and block levels.

## DISCUSSION

An assessment of the Public Health Cadre in select states in India reflects their commitment to have a dedicated cadre in the form of a separate hierarchical structure and directorate. However, there are concerns around having adequate numbers of professionals formally trained in public health across different levels, and their career progression although budgetary provisions did not seem to be a major constraint.

A strong health systems management cadre is being recognized as a pillar to strengthen and manage UHC. UHC is prudent in order to achieve long-term development, poverty reduction, as well as to address social inequity[9]. Presence of well-defined public health structures in Sri Lanka, Bangladesh, Thailand, and Singapore has resulted in improved health indicators in the region. Countries in the developed world have made concerted efforts to invest in public health. For over 125 years,[10] this commitment to population health in the form of strengthened departments of public health with ring fenced budgets has helped protect its people from exposure to disease, environmental threats, and helped add years to life and life to years. From well-trained health professionals in independent and locally accountable public health teams within local authorities (as in the UK) to the robust engagement of community level workers (as in countries like Thailand), these institutional arrangements for public health delivery have had a significant effect on improving population health outcomes[11-13].

There are no apparent budgetary constraints in management of public health cadre in India although the contribution for health is only 1.8 per cent of GDP[14]. Countries with higher GDP contribution for health usually perform better at the country level. Public funding for health services in India has traditionally accorded priority to curative

services. Fiscal incentives for states to implement single focus centrally sponsored programmes in the past have deterred the growth of public health systems on the whole[15]. The amalgamation of medical and public health services and absence of division of roles and responsibilities has reduced career incentives for public health work.

Management of public health systems is largely data driven. In India, Health Management Information System (HMIS) is a Government to Government (G2G) web-based Monitoring Information System utilized to monitor health programmes, grade health facilities, identify aspirational districts, review State Programme Implementation Plan (PIPs), to list a few. Lack of uniformity in data collection protocols, multiple portals, lack of monitoring the quality of data have resulted in collection of lots of redundant data that are not effectively utilized for decision making. The Integration of HMIS with a national server led to increased efficiency of input patient records, health insurance claims, drug inventories in Vietnam[16]. While the process of integration is in progress in India, it faces a challenge in terms of not having a dedicated HMIS manager to support the system.

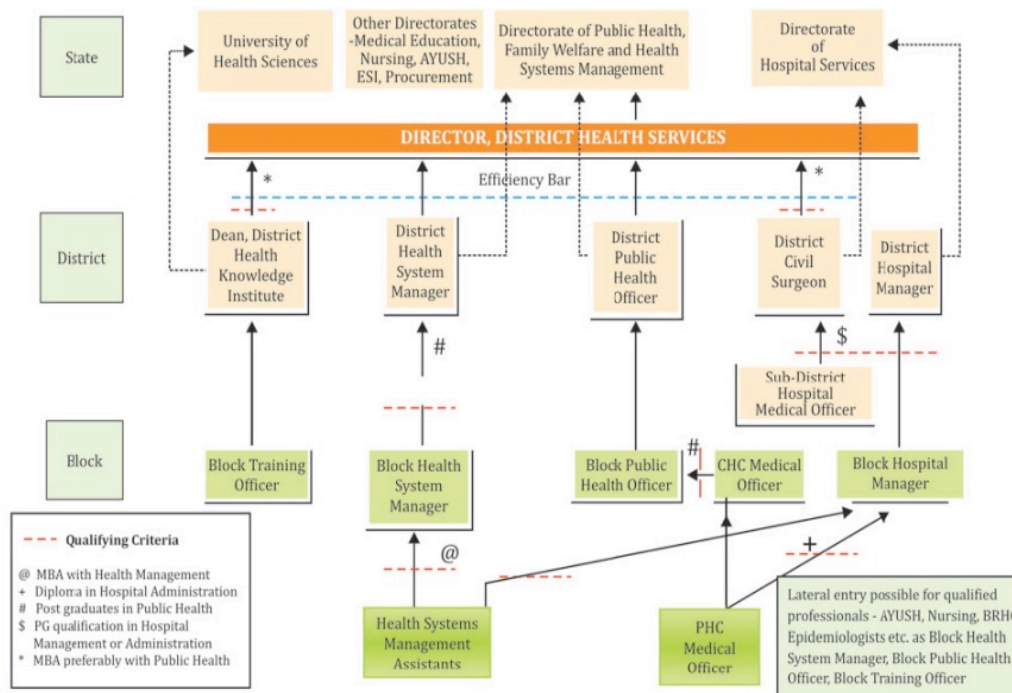
Despite a commitment and having an optimal infrastructure, lack of formally trained public health personnel remains a perpetual problem. Similar concerns are raised from other countries as well. For instance, a need to develop the capacity of health professionals to effectively manage DHS and provide comprehensive multidisciplinary team services has been reported from Thailand[13]. Shortage of medical staff to provide comprehensive health care in government health sectors is reported from Sri Lanka[17].

India has seen a renewed interest in a Public Health Cadre in the recent past. The special conference by the WHO-SEARO, High Level Expert Group on Universal Health Coverage, 12th Five Year Plan and National Health Policy of 2017 advocated for the establishment of a public health management cadre to improve the quality of health care. Expert committee meetings have been held on strengthening a Public Health Cadre focussing on review of the structure and functioning of the health directorates at the state level[7]. Excessive centralization of medical professionals, arbitrary structures of health directorates and the division with non-functional "section" teams led to reduction in provision for quality services in India. Inadequate and inappropriate eligibility criteria for key administrative posts, mismatch between Institutional structure and public health issues, governance issues, separation of clinical and administrative streams deters proper functioning of health systems. Emergence of new state level public health management institutions and parastatal bodies and leadership in nursing and paramedical cadre, AYUSH streams, and medical education are few major factors which suggest that India needs a robust Public Health Cadre. Such an entity can help in management of health service delivery for holistic healthcare development and management through the creation of a Public Health Cadre in India[6]. The development of a framework for interprofessional and inter-sector collaboration proposes a new

network of public health professionals, as a coordinated unique platform of bringing professionals from several departments to work closely with the Ministry of Health and Family Welfare. This aligns well with the requirement of a Public Health Cadre in the country.

The HLEG document advocates a structured hierarchical public health management system[15]. It spells out clearly that appropriate training of the new cadres will significantly enhance the management capacities and curb the practice of untrained personnel being assigned to manage health institutions. All the states are gradually creating separate directorates with a dedicated public health workforce. Provisions for deputing in-service candidates to public health courses have been initiated by some states such as Gujarat, Andhra Pradesh, Odisha and Madhya Pradesh. However, it has not been made mandatory to have formally trained graduates to handle management portfolios.



The three-tiered health system has contributed to the expansion of public health services in the country. However, inadequate attention to preventive services and weak management brought on by loading managerial functions onto medical officers, who have never received training in management, has diluted the essence of public health. While the onus of delivering health services will be with medical professionals within it, it is essential to attract management professionals to public health to plug the gaps. Keeping in mind the challenges of human resources in India, a roadmap for career and growth opportunities have been laid out[15]. It captures the trajectory for both medical and non-medical professionals within the health sector. It highlights the setting up of separate health systems management cadre and public health cadres that are well integrated with other departments. It clearly defines the requirements of a professional to join the Directorates of Health Sciences, Medical Education, Public Health or Hospital Services. Well defined career paths are recommended to motivate health workers and improve system efficiency.





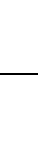
**Career progression pathway for public health professionals[15]**

The various levels in the cadre for both clinical, public health and management streams are outlined in the table below.

Health Systems Management Cadre					
Level	Designation	Career Pathway	Qualifying Criteria	Reporting to	Functions
Primary Health Centre	Health System Management Assistants		Bachelor's Degree in Management	Block Health Systems Manager	HR, IT, Finance Work in coordination with the Medical Officer (PHC)
Block (Block Programme Management Unit)	Block Health Systems Manager		Master in Business Administration (MBA) with specialization in Health Management plus work experience (for defined time period)	District Health Systems Manager	HR, IT, Finance, Community participation, Quality assurance, PPP functions. Work in coordination with Block Public Health Officer
District (District Programme Management Unit)	District Health Systems Manager		Master in Public Health plus work experience (for defined time period)	Director, District Health Services	HR, IT, Finance, Community participation, Quality assurance, PPP functions, Planning Procurement and Logistics management. Work in coordination with District Public Health Officer

	Director, District Health Services		Work experience (for defined time period) as District Public Health Officer/District Health Systems Officer	Director, Public Health, Family Welfare and Health Systems Management	Supervision of all services, Preventive and Promotive, National Health Programmes, Curative (District Hospital/Sub-district Hospital/CHC/PHC level), Trainings
State (Directorate of Public Health, Family Welfare and Health Systems Management)	Deputy Directors, Joint Directors, Directors		Work experience (for defined time period) as District Health Systems Manager/District Public Health Officer/Director, District Health Services		

**Table 2: Draft structure of Public Health Cadre as proposed by Expert Committee[15]**

Public Health Cadre					
Level	Designation	Career Pathway	Qualifying Criteria	Reporting To	Functions
Primary Health Centre (PHC)	Medical Officer		MBBS, Induction training	Block Public Health Officer	Preventive, Curative, Promotive. Work in coordination with the Health System Management Assistants
Community Health Centre (CHC)	Medical Officer			Block Public Health Officer	Preventive, Curative, Promotive. Work in coordination with the Block Health Systems Manager
Block	Block Public Health Officer		Master in Public Health, plus work experience (for defined time period) at primary health care level	District Public Health Officer	Preventive, Promotive, Supervision of curative services (at CHC/PHC level). Work in coordination with the Block Health Systems Manager

District	District Public Health Officer		Work experience (for defined time period)	Director, District Health Services	Supervision of all services, Preventive and Promotive, National Health Programmes, Curative (at CHC/PHC level), Work in coordination with the District Health Systems Manager
	Director, District Health Services		Work experience (for defined time period) as District Public Health Officer/District Health Systems Manager	Director, Public Health Family Welfare and Health Systems Management	Supervision of all services- Preventive and Promotive, National Health Programs, Curative (at District Hospital/Sub-district Hospital/CHC, PHC level), Trainings
State (Directorate of Public Health, Family Welfare and Health Systems Management)	Deputy Directors, Joint Directors, Directors		Work experience (for defined time period) as District Health Systems Manager/District Public Health Officer/Director, District Health Services		

The HLEG assessed the needs for health sector managerial cadres at the block, district and state levels to be over 1.96 lakh[15]. With the provision of appropriate career paths, these cadres would progress from block to district and then to state and national levels, resulting in better integration and implementation of programmes. It recommends availability of 20 regional centres for faculty development and continuing education. However, there are shortages in terms of numbers of educational institutions, as well as those of faculty and infrastructure. Moreover, the professional education should keep pace with the changing dynamics of public health and health policies. The responsibility of implementing public health functions would lie with the public health service cadre starting at the block level and going up to the state and national levels.

Our assessment shows that the states are gradually making an effort to have formally trained public health professionals at the district and state levels. However, the same has not trickled down to the sub-district levels. There is no documented policy or guideline to train all public health personnel at every state. Regular in-service trainings have played a role in sensitizing staff on management skills, which have translated into addressing major challenges during the pandemic. However, there are challenges faced while attempting to train the cadre. Firstly, there are not enough institutions that can offer health management courses which may be useful for career progression. Secondly, even those institutions that offer such courses have a limitation in terms of numbers for enrolling candidates for regular on campus courses. Thirdly, only a handful of candidates can be spared by the health system for academic purposes at any given point of time.

Fourthly, online courses, though may overcome this issue, may not always be considered equivalent to offline programmes; nevertheless, there are strict criteria that must be met with before offering such online degree courses by any accredited teaching Institution.

Despite these hurdles and challenges, the states have shown a promise to enhance their commitment for strengthening the Public Health Cadre. The pandemic has taught us lessons that underscore the need for a strong public health system with skilled and competent workforce to combat any challenges. Any change, big or small, requires persistent efforts and perseverance. Post pandemic, with the ever-burgeoning commitment across levels, we are bound to go very far.

## **Strengths And Limitations Of Our Study:**

### **Strengths Of The Study**

- 1) The study had representation of states from different categories based on the stages of implementation of the Public Health Cadre.
- 2) There was an adequate representation of stakeholders from different levels—national level, state level and district level, including development partners.
- 3) Prior approvals and permissions were obtained from the states.
- 4) Face to face interviews (wherever possible) gave better clarity and understanding.
- 5) The sampling of the districts included a good mix of good and poor performing districts, adding to better understanding of the system.
- 6) Refusal rate from the participants was minimal (less than 10 per cent).
- 7) Ethical practices and standards were followed throughout the process of data collection.

### **Limitations Of The Study**

- 1) Covid pandemic led to delays in data collection. It necessitated conducting some interviews through the online mode.
- 2) Interviews were not conducted at the block level as it was beyond the scope of the study. This might have added more value.
- 3) Perspectives of stakeholders at the ministry level could not be captured since we could not receive approvals owing to the pandemic.
- 4) Data could not be collected from district level officials of Maharashtra since we

could not get permission due to COVID.

- 5) Audio recording of the interviews, though mandated by ethical standards, could have led to partial sharing of sensitive facts by stakeholders.
- 6) Lack of clarity in terms of roles and responsibilities pertaining to a Public Health Cadre sometimes led to delay in reaching out to the right person handling the portfolio.
- 7) Reliability of the information shared by the interviewees could not be validated due to lack of documentation available on the implementation of particular Public Health Cadres.

## **RECOMMENDATIONS**

- 1) There is a need to have a guidance/ policy note on a standardized structure of the Public Health Cadre at the central, state, district and sub-district level with defined credentials and job responsibilities.
- 2) Developing a provision for in-service trainings on management of staff managing the Public Health Cadre at the district and sub district levels.
- 3) Having a well-defined career progression pathway for those who choose to join the public health workforce in the states. This would lead to greater motivation, and retention of public health professionals.

## **WAY FORWARD**

- 1) The report was submitted to the Thakur Foundation for its feedback on 31<sup>st</sup> January 2022.
- 2) After feedback and finalization from Thakur Foundation, the concerned states would be given respective feedback.
- 3) The finalized report thus generated would serve as a template to develop a policy paper for advocacy, writing scientific manuscripts for research audiences and would serve as guiding research for policy changes and interventions at programmatic level.



# ANNEXURES

## Annexure 1: Profiles Of The States Selected For The Study

DEMOGRAPHIC INDICATORS						
S.No.	Demographic Indicators	India	Gujarat	West Bengal	Odisha	Maharashtra
1	Population Size	137 cr	6.27 cr	10.14 cr	4.61 cr	12.57 cr
2	Sex Ratio	958 females per 1000 males	919 females per 1000 males	950 females per 1000 males	972 females per 1000 males	929 Females per 1000 males
3	Death Rate (per 1000 population)	6.4	5.9	5.6	7.3	7.5
4	Birth Rate (per 1000 population)	20.4	19.7	15	18.2	21.1
5	Capital	Delhi	Gandhinagar	Kolkata	Bhubaneswar	Mumbai
6	Sub Centres	160713	7274	10357	6688	10647
7	PHC	24855	1158	913	1233	1829
8	CHC	5685	300	348	374	278
HEALTH INDICATORS						
S.No.	Health Indicators	India	Gujarat	West Bengal	Odisha	Maharashtra
1	IMR (per 1000 live births)	32	28	22	40	23.2
2	MMR (per 100000 live births)	113	75	98	180	46
3	CMR (U5MR) (per 1000 live births)	41.9	37.6	25.4	48	28
4	Institutional Birth (%)	88.6	94.3	91.7	85.3	94.7
5	TFR	2.1	2.04	1.6	2	1.7

## Annexure 2: Topic Guides For Assessment Of Public Health Cadre In India

### 1. National and state level senior officials

#### **Leadership and governance**

- Is a Public Health Cadre a state and district priority?
- What is the level of willingness of the states to support the roll out of the Public Health Cadre programme?
- What is the current capacity of health departments across all state governments in India to have qualified personnel in health systems?
- What is the plan of readiness of the states to accommodate professionals in the Public Health Cadre?
- How many states have set up a dedicated Public Health Cadre?
- Is there any organizational structure available for a Public Health Cadre?

#### **Health financing**

- Is there a separate budget or line item available for the programme?
- What is the level of willingness of the districts to have alternate sources of funds, if required?

- What are the provisions for incentives or compensation for a specialized Public Health Cadre at every level? (Budget allocations for public health for the last five years for capital allocation, human resources, expenses and overheads or an alternative framework added to the framework study)

#### **Health workforce**

- What are the qualifications required for a specialized Public Health Cadre according to levels of health systems?
- What are the anticipated impediments/roadblocks to setting up dedicated Public Health Cadres?
- Are there adequate numbers of trained staff for public health (MBBS, MD in Community Medicine, Dip. in Public Health, Master in Public Health) available across facilities? (Includes filled and open positions in 10 districts).
- What proportion of health or medical professionals are qualified in public health or health management or epidemiology?
- Are non-medical public health professionals a part of the Public Health Cadre?
- Should ASHAs be included in the Public Health Cadre?
- Is there a predefined career progression pathway for those who are in the Public Health Cadre?

#### **Health information systems**

- Is there regular reporting of activities conducted under the Public Health Cadre separately?
- What is the current system of registration of vital events? (Birth and death registration).
- What is the level of coordination between public health and health departments to manage and report routine health data? (Public health dept. services will be correlated with IDSP programme)

#### **Health service delivery**

- What is the mechanism of supervision of activities under the Public Health Cadre?
- Who should control and administer the Public Health Cadre?
- Are states and districts equipped to handle public health emergencies?
- What are the challenges with addressing public health emergencies in the current set up?

## **2. District level stakeholders**

#### **Leadership and governance**

- Is a Public Health Cadre a state and district priority?
- What is the level of willingness of the states to support the roll out of the Public Health Cadre programme?
- What is the current capacity of health departments across all state governments in India to have qualified personnel in health systems?
- What is the plan of readiness of the states to accommodate professionals in the Public Health Cadre?
- How many states have a set up a dedicated Public Health Cadre?
- Is there any organizational structure available for a Public Health Cadre?

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- What is the current system of registration of vital events? (Birth and death registration).
- What is the level of coordination between public health and health departments to manage and report routine health data? (Public health dept. services will be correlated with IDSP programme).

#### **Health service delivery**

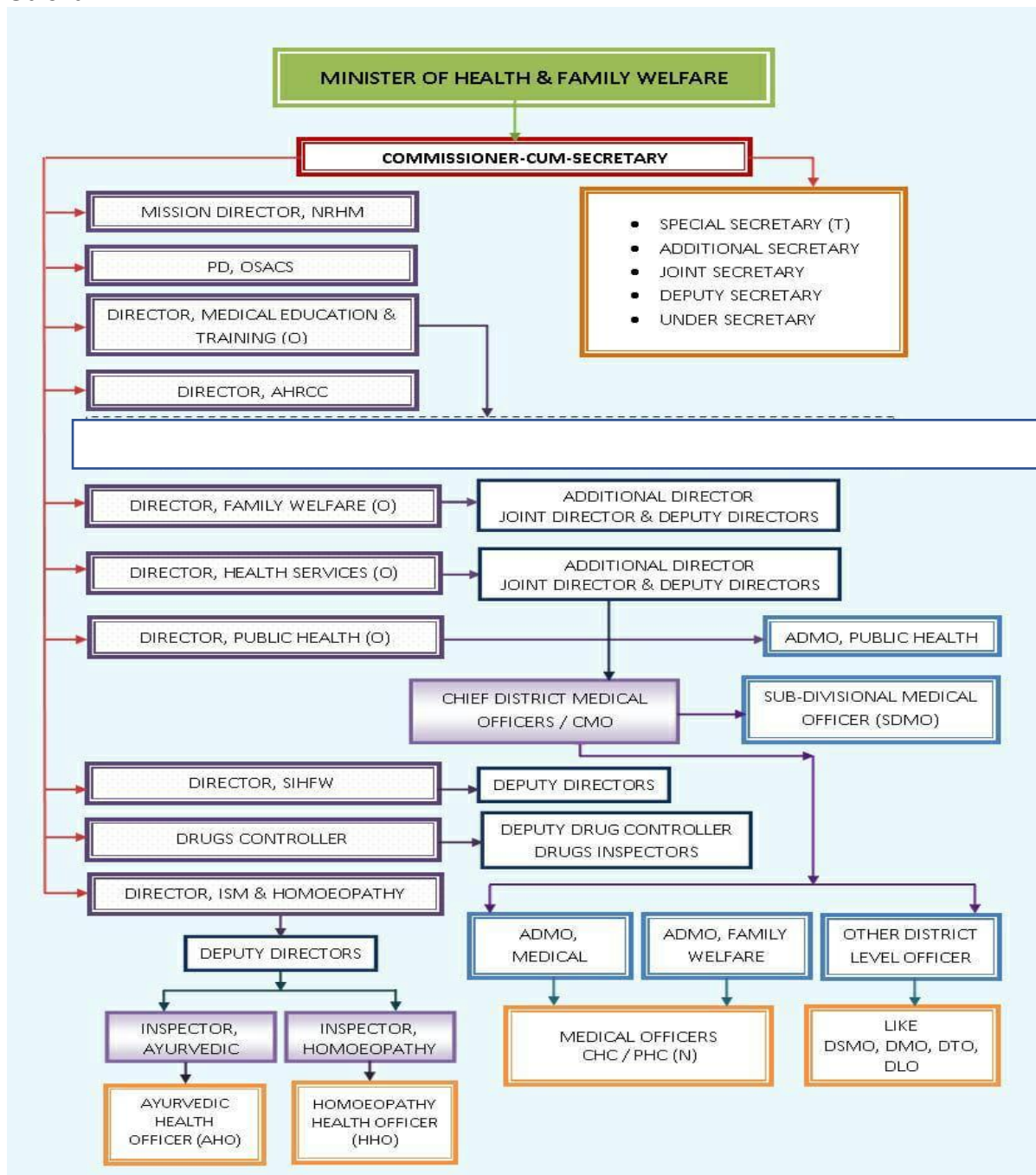
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- Who should control and administer the Public Health Cadre?
- Are states and districts equipped to handle public health emergencies?
- What are the challenges with addressing public health emergencies in the current set up?

### Annexure 3: Profiles Of Key Informants For The Study

S.NO.	Officials Interviewed	No. of officials	Date
NATIONAL LEVEL			
1	Experts with experience of contributing to the Public Health Cadre	5	20.07.2021 - 16.09.2021
STATE – GUJARAT			
1	State Officials (Special Secretary, officials from Directorate of Public Health and National Health Mission)	1	07.10.2021
2	District Level (Chief District Medical and Public Health Officer and District Programme Manager)	17	
3	Development Partner	1	07.10.2021
	Refusal	1	
STATE – ODISHA			
1	State Officials (Special Secretary, officials from Directorate of Public Health and National Health Mission)	5	26.07.2021 & 31.07.2021
2	District Level (Chief District Medical and Public Health Officer and District Programme Manager)	19	27.07.2021 to 31.07.2021
3	Development Partner	1	29.07.2021
	Refusal	1	
STATE – WEST BENGAL			
1	State Officials (Special Secretary, officials from Directorate of Public Health and National Health Mission)	2	16.11.2021
2	District Level (Chief District Medical and Public Health Officer and District Programme Manager)	20	15.11.2021 – 23.11.2021
	Refusal	0	
STATE – MAHARASHTRA			
1	Ex officials	3	04.01.2022 - 17.01.2022
3.	Development Partners	4	
	Refusal	2	

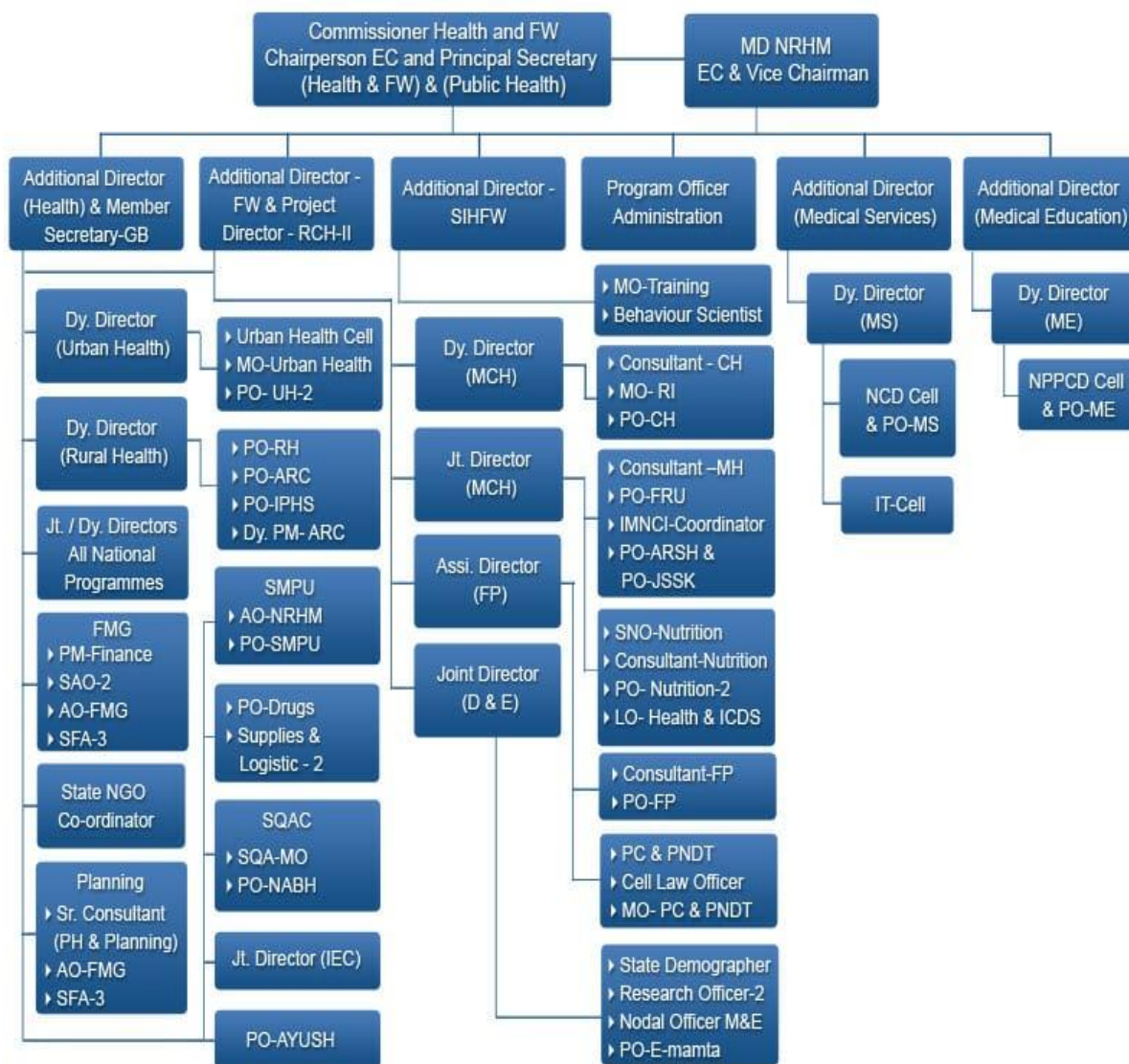
## Annexure 4: Organizational Structures In The Study States

### Odisha



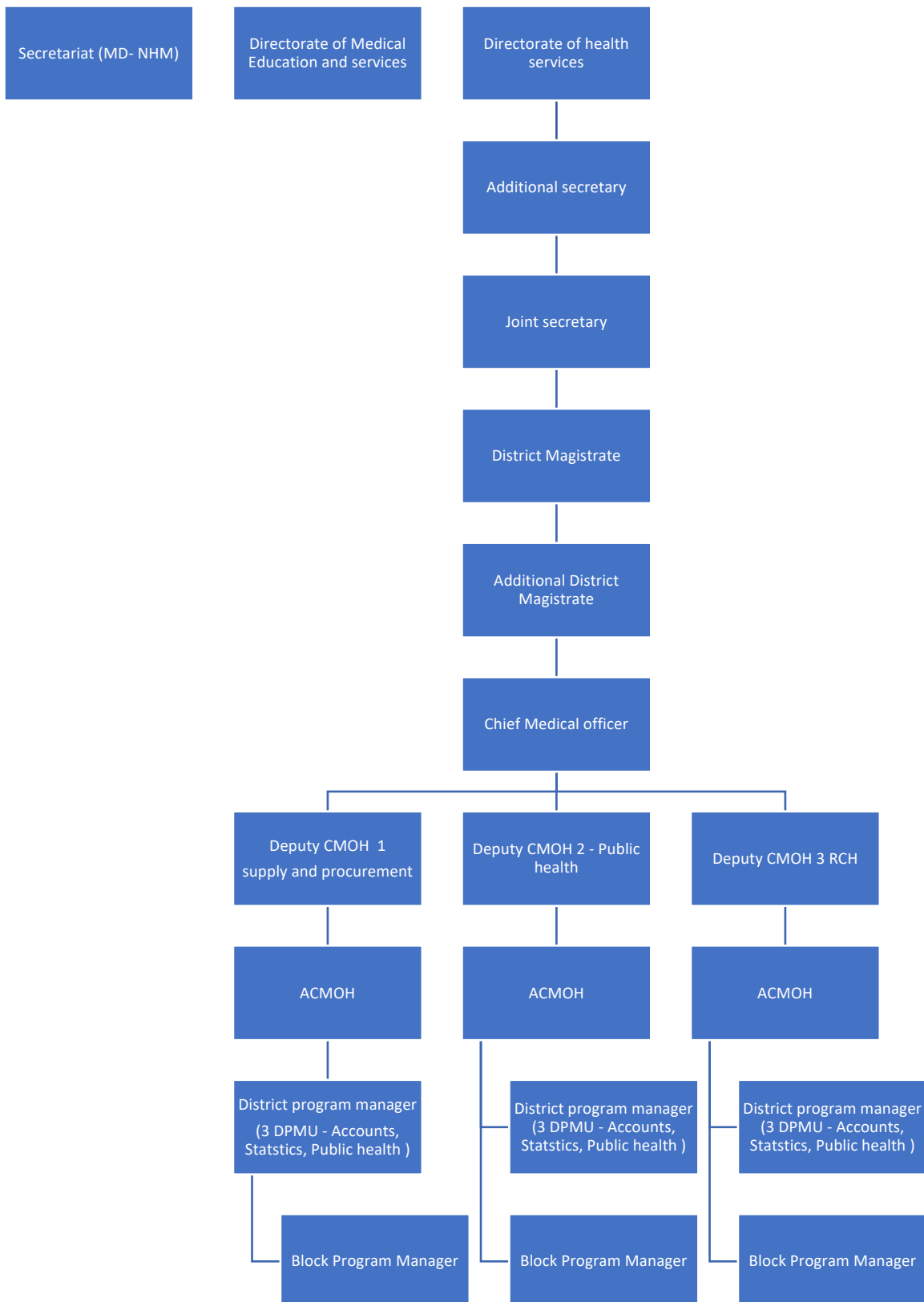
Source: <https://health.odisha.gov.in/Organogram.asp?GL=1>

## Gujarat

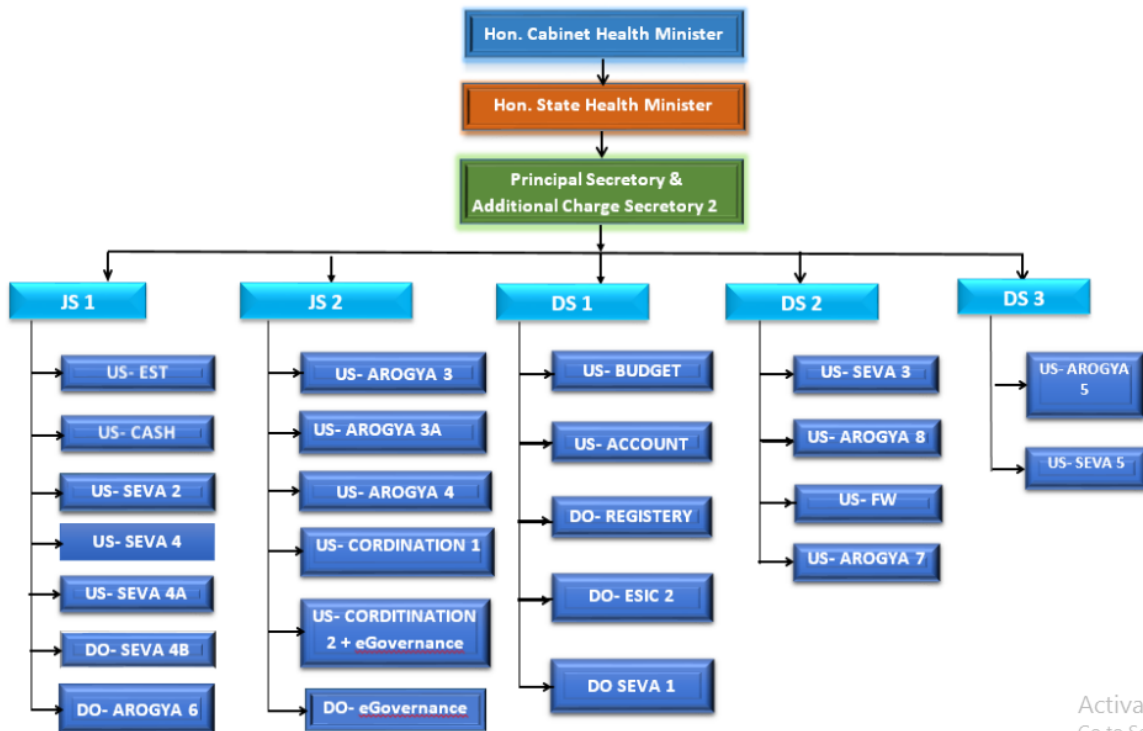


Source: <https://nhm.gujarat.gov.in/organogram1.htm>

## West Bengal

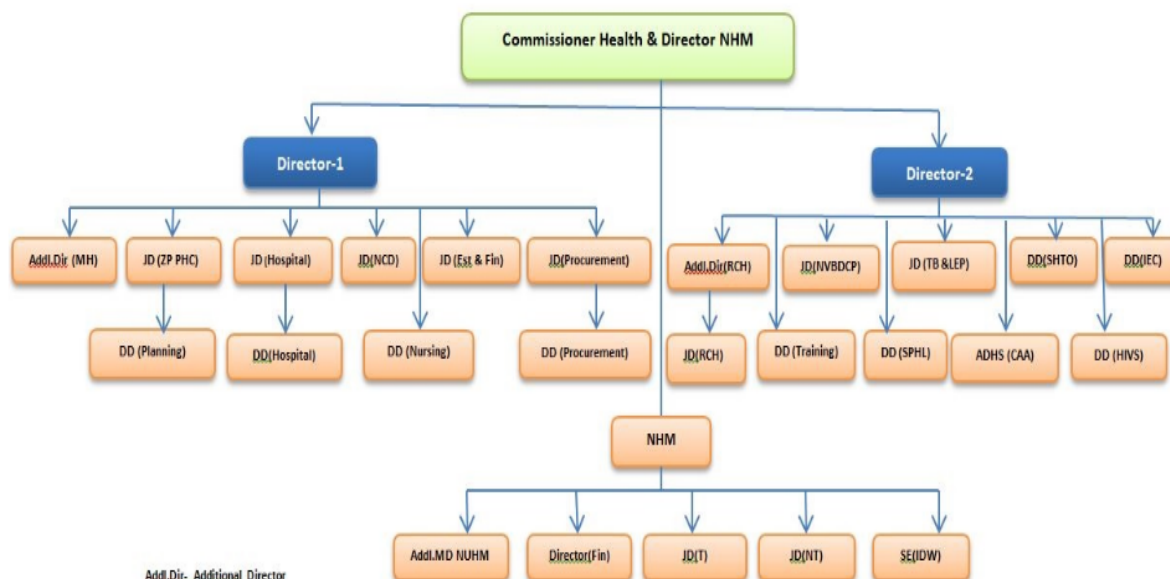


**Maharashtra**  
At Ministry Level:



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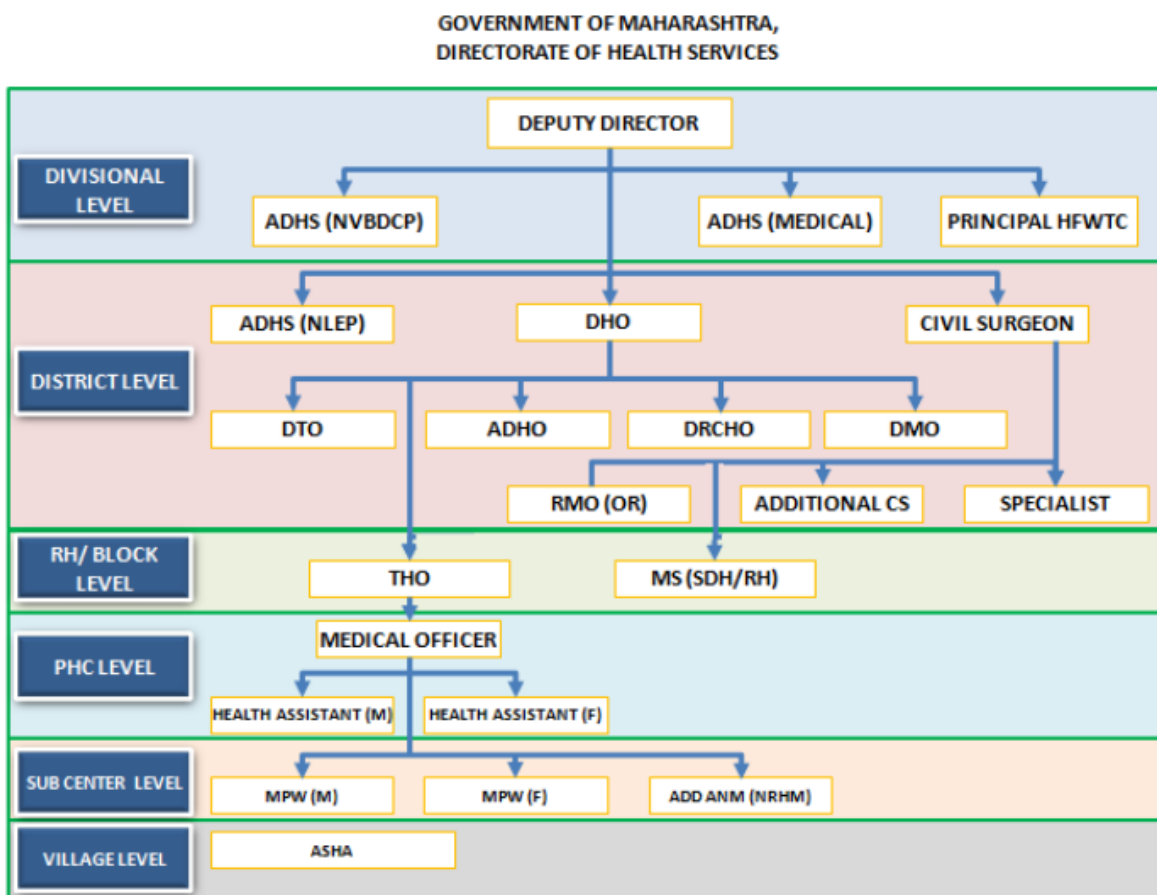
At State Level



Addl.Dir- Additional Director  
JD- Joint Director  
DD- Deputy Director  
Addl.MD- Additional Mission Director  
ADHS- Assistant Director of Health Service

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Activate Windows

At District Level



Source: <https://arogya.maharashtra.gov.in/1103/Mantralaya-Level>  
<https://arogya.maharashtra.gov.in/1104/State-level?format=print>



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- *The most underdeveloped districts in India are identified by the NITI Aayog and termed as Aspirational districts. Under NITI Aayog's direction, various ministries at the district level work to improve indicators in the areas of Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development, and Infrastructure through inter-sectoral collaboration; 112 such districts have been identified under the Aspirational Districts Programme, 2018.*
- *The percentage of children aged 12-23 months who were fully vaccinated improved from 31.4% in 2005-06 (NFHS-3) to 47.1% in 2015-16(NFHS-4) and 66.4% in 2019-20 (NFHS-5).*
- *Epidemiological transition level (ETL) based on the ratio of the number of DALYs in a population due to communicable, maternal, neonatal, and nutritional diseases to the number of DALYs due to non-communicable diseases and injuries together. A decreasing ratio indicates advancing epidemiological transition with an increasing relative burden from non-communicable diseases as compared with communicable, maternal, neonatal, and nutritional diseases.*
- *The Indian Public Health Standards (IPHS) guidelines prescribes one Primary Health Centre for every 30,000 population and 1 in 20,000 for hilly terrains.*
- *We interviewed the principal secretary, director of health services, state and district programme officers, state and district statistical officers, district malaria officer, and SDMHOs. The post of the JD for PH was vacant as the previous official had retired.*
- *They included the chief medical officer, district surveillance officer, district tuberculosis officer and district programme manager of Imphal East district and district surveillance officer and district tuberculosis officer of Imphal West district.*
- *We also spoke to a few public health specialists who worked as district nodal officers for various NHM programs and one of them was also the district surveillance officer for the IDSP.*
- *As per the IPHS guidelines, a block public health unit is envisaged at the CHC and shall include a public health specialist.*
- *The Nagaland Health Project (NHP) is a project supported by the World Bank that aims to improve management and delivery of health services and increase their utilization by communities in targeted locations in Nagaland without duplicating existing government programmes.*
- *Data provided by the directorate and as on 31 October, 2020.*
- *They included the CMO, deputy CMO, and district nodal officers such as the DIO, DSO and DTO of Kohima district.*
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**Chapter 4**  
**ASSESSING THE NEED AND**  
**CONSIDERATIONS FOR**  
**OPERATIONALIZING A**  
**SPECIALIZED PUBLIC**  
**HEALTH AND**  
**MANAGEMENT CADRE IN**  
**THREE STATES OF**  
**CENTRAL INDIA**

By Dr. Sulakshana Nandi

## INTRODUCTION

The scope of public health corresponds to the definition of health that refers to “physical, mental and social wellbeing” and not merely the absence of “disease and infirmity”. The key characteristics of public health include prevention of disease, promotion of better health, health protection and provision of healthcare and health education, focus on whole populations rather than individuals, concern for determinants of health and health equity, community participation and emphasis on the primary role of state in ensuring the above. Government health systems are meant to not only provide these comprehensive public health services, but also coordinate inter-sectoral convergence (with other departments and public systems and services) in order to ensure health for all individuals and communities.

In India, despite an emphasis on curative and clinical services within the government health system, the importance of preventive and promotive health functions has always been evident. There are programmes for preventive and promotive health such as immunisation and health screening programmes, health education through ASHAs, mechanisms for community outreach and participation such as Village Health, Sanitation and Nutrition Committees, Rogi Kalyan Samitis, and community-based monitoring, and hospital management and health management information systems. However, in most states, such as Chhattisgarh, there is no dedicated public health staff to effectively plan for, coordinate and carry out these functions and often the persons in charge are clinical professionals with no or little public health training or perspective. There have been attempts to bring in multi-disciplinary professionals for this role. The National Rural Health Mission introduced a cadre of health managers at Block and District levels. However in most states they play a limited role in public health functions and are instead often accorded an administrative role. Cadres such as the District Public Health Nurse (DPHM) are being phased out. In the current health system, there is limited capacity for epidemiological analysis at the district level and none below it.

The need for a public health cadre becomes clear from the positive experiences of states like Tamil Nadu, and Kerala, and more recently Odisha. The Covid-19 pandemic has also brought to the fore the criticality of public health functions of the health system, and this creates an opportunity to study this issue and provide any future direction to the state. Moreover, the formation of an Expert Committee on Public Health Management Cadre (PHMC) by the Government of India underscores its policy relevance.

This study aims to assess the need and considerations for operationalising a specialised Public Health Cadre in three states of central India, namely Chhattisgarh, Jharkhand and Madhya Pradesh. The study was done in two phases: In Phase I the study was undertaken in Chhattisgarh and then extended to Jharkhand and Madhya Pradesh in Phase II after a review of the findings and methods.

## **STUDY LOCATION**

The study was undertaken in three states—Chhattisgarh, Jharkhand and Madhya Pradesh. All three states have significant Scheduled Tribes (ST) population, are among the poorer states in the country and face severe gaps in health workforce availability. In Jharkhand and Chhattisgarh, the challenges in availability of human resources for health relate to the historical marginalisation of the area, lack of higher education institutions, geographical ‘remoteness’ and the fact that a part of the state is affected by internal armed conflict. Though some efforts have been made by states like Chhattisgarh to overcome the barriers in their health systems, strengthen health services delivery and improve availability of human resources, they continue to face challenges in ensuring quality and equitable public health services. These states provide an opportunity to assess the need and possibilities for developing a dedicated public health and management cadre.

## **OBJECTIVES**

- 1) To map out and understand the current structure of human resources for public health functions in the government health system in Chhattisgarh.
- 2) To identify the current gaps in the context of performing public health functions in the state.
- 3) To identify the challenges that the state may face in setting up a dedicated public health cadre and provide recommendations to overcome them.

## **METHODS**

### **Study Design**

The research was qualitative in nature and drew from anthropological and socio-medical health care research.

### **Data Collection**

Data was collected through in-depth interviews, group discussions and review of secondary literature. Secondary literature for review included government documents on development of the PHMC, other policy documents, and articles on public health cadres. Key informant interviews were held with public health experts, state, district and block officials in the health department and National Health Mission (NHM), other health workforce and medical college faculty. Checklists were developed for the interviews

(Annexure 1).

In Chhattisgarh a total of 21 in-depth individual interviews were held with state health officials, public health experts, Block Programme Manager (BPM), District Programme Manager (DPM), Block Extension and Training Officer (BETO), Block Medical Officer (BMO), Chief Medical and Health Officer (CMHO), medical college faculty and two group discussions were undertaken with health workers. Data was collected in Kondgaon (tribal district) and Raipur districts. The Principal Investigator (PI) has been working in Chhattisgarh for the last 20 years and has been witness to number of the processes and discussions that have been documented in this report. Her participant observation data has also been included in the report. The PI took help of networks and expertise of the Public Health Resource Network (PHRN), Chhattisgarh and State Health Resource Centre (SHRC), Chhattisgarh to identify and contact the respondents and access documents.

In Jharkhand a total of 19 individual interviews were held with state health officials, public health experts, BPM, DPM, Community Health Centre Medical Officer In-Charge (CHC MOIC), CMHO, CS, CHO state NHM team, state training team, ASHAs, public health fellows posted in government and medical college faculty. Data was collected in Khunti and Ramgarh districts. The PI took help of the network of PHRN Jharkhand in order to identify and contact the respondents and access documents.

In Madhya Pradesh a total of 15 individual interviews were held with state health officials, public health experts, BPM, DPM, BETO, BMO, CMHO, state nodal officials, DHOs and medical college faculty. A group discussion of public health professionals from an NGO was also undertaken. Data was collected in Vidisha district.

### Ethical Considerations

Ethical clearance was taken from the Institutional Ethics Committee of Public Health Resource Society. Participant information sheets and informed consent forms were prepared and translated into the local language, Hindi (Annexure 2). They were distributed and read out to the participants. Thereafter written or verbal consent was taken.

Informed consent was taken for photographs as well. No risks are perceived to the respondents of the study. Confidentiality has been maintained throughout data collection, analysis and reportwriting by removing all identifiers and using pseudonyms for all the respondents in this study.

Few qualitative interviews were recorded in a voice recorder after taking due consent. For the rest of the interviews detailed notes were taken. Participation was voluntary with the right of the respondents to withdraw at any stage.

The results of the study will be shared with all the stakeholders. Due acknowledgement

will be given to all persons (participants and others) involved in this research.

### Data Management And Analysis

For ensuring quality of data collected the interviews were undertaken by the PI. Detailed notes were kept of the group and individual interviews. Analysis of the qualitative data was done through description, classification and connection. Thematic analysis will be undertaken. For credibility and validity of data, triangulation was undertaken. The methods of data collection and the strategies of data analysis have been made explicit.

## **RESULTS AND DISUSSION**

National-level mandate towards designing and implementing a Public Health Management Cadre (PHMC)

The development of a Public Health Management Cadre (PHMC) came under discussion at the time of initiation of the National Rural Health Mission in 2005<sup>i</sup>. In 2012, a Task Force on Public Health Cadre developed an approach paper outlining the need, principles and proposed a model for an all-India Public Health Cadre, taking into account recommendations of the HLEG on UHC and existing models<sup>j</sup>. Subsequently, consultations and processes took place in various states. In 2018, the NITI Aayog held a consultation on developing a Public Health Cadre in India<sup>k</sup>.

Recently there has been a renewed push at the national level for states to develop their models of a Public Health Cadre. The Health Ministers of all States/UTs endorsed the creation of PHMC by March 2022 to achieve health for all, at the 13th Conference of Central Council of Health and Family Welfare (CCHFW) in October 2019<sup>l</sup>. Subsequently, an expert committee on Public Health Management Cadre was constituted in July 2020 with the following TORm:

- 1) To recommend core principles of PHMC.
- 2) To suggest model PHMC structure (with a related population norm) specifying state directorates, district and block structure and programme management units at the state, district and block levels.
- 3) Career progression for medical officers, specialists, nurses, CHOs, and allied health professionals.
- 4) To study financial implications for a few states on implementation of the PHMC.



- 5) To study best practices in States where a public health system is functional.
- 6) To map public health institutions and available public health seats in the country.

The Committee's draft report suggests that nine states have taken initiatives towards establishing a PHMC in their states and provides guidance on the dimensions within the TOR in order for states to finalise and implement their model of the PHMC. They propose the following essential principles for states to follow while developing their PHMCs:

- 4) The cadre must be integrated within the health department and within tertiary, secondary and primary levels.
- 5) It must be multi-disciplinary in nature and open to anyone who is interested and satisfying the qualification/course criteria.
- 6) Promotion opportunities and career pathways must be designed for the multi-disciplinary personnel.
- 7) The persons within the PHMC must either have a qualification in public health or undergo a course as decided/mandated by the State.
- 8) Key leadership positions (such as Director Health Services, CMHO etc.) should be held by persons from the public health management personnel on the basis of experience and merit. Personnel having public health qualifications and diverse experience of public health implementation should be given priority for the leadership positions at state, regional and district levels.
- 9) The workforce for the hospital services should be as per the Indian Public Health Standards (IPHS).
- 10) Once in-principle approval of the structure has been accorded, the functions, Terms of Reference (TOR) and the financial powers for various levels of functionaries can be drawn accordingly.

## **CHHATTISGARH**

### **Mapping Public Health Management Actors, Functions And Roles**

Key actors in public health and management functions in the existing system

Block Level and below

- 1) **Accredited Social Health Activists (ASHA):** ASHAs are community health workers (CHWs). Their key roles are in health education of communities, linking them with formal healthcare services, identification and treatment of simple illnesses, inter-sector work to address social determinants of health. An ASHA is expected to look after a population of around 1000. In Chhattisgarh, the network of these CHWs exists since 2002 and they are known as 'Mitanins'. There are around 71,000 Mitans covering almost all rural areas and urban-slum areas in the state. Each set of around 20 Mitans is trained, supervised and supported by a Mitans Trainer.
- 2) **Auxiliary Nurse cum Midwife (ANM):** Auxiliary Nurse cum Midwife (ANM) is the key frontline worker responsible for delivering prominent reproductive, maternal, newborn, child and adolescent health (RMNCHA) services at the community level. This includes ante-natal care, normal deliveries, child immunization, family planning counselling and IUCD insertion, adolescent counselling etc. They provide many of these services during outreach sessions in Anganwadi centres and also manage a sub-centre. They are also the biggest generators of reproductive and child health data. They are key actors in delivery of community level campaigns e.g. deworming, diarrhoea control, iron and folic acid (IFA) supplementation etc. In addition, they are often given duties related to various disease control programmes. They are expected to manage minor illnesses. Under the Health and Wellness Centres, they are expected to screen individuals for non-communicable diseases (NCDs). In Chhattisgarh, ANMs are now officially known as Rural Health Organiser (RHO-female). They were earlier called Multi-purpose Worker (MPH-Female). There are around 8000 ANMs in the state, around 6000 as regular appointments and around 2000 as contractual staff under NHM. Each of the 5200 sub-centres in the state have an ANM and the sub-centres in tribal areas have two ANMs each. They undergo a two-year diploma course to become ANMs.
- 3) **Multi-purpose worker (MPW-Male):** Each sub-centre is supposed to have one MPW. Around 4000 of the 5200 sub-centres in the state have one MPW each. Their role is centred around community-based activities for disease control programmes. They undergo a one year paramedical course to be eligible for appointment.
- 4) **Sector Supervisors:** The area allocated to each PHC constitutes a sector. There are around 800 sectors in the state. Each sector is supposed to have a supervisor (male) and a supervisor (female), but many of these posts have not been filled. Their role is to monitor the sub-centres coming under the area of the sector and the outreach work done by ANMs and MPWs.
- 5) **Community Health Officer (CHO):** CHO is a newly introduced cadre meant for the Health and Wellness Centres. These mid-level healthcare providers (MLHP) are

primarily from the nursing cadre. They are responsible for managing the facility as well as providing public health leadership at the level of the sub-centre and the villages under their purview<sup>n</sup>.

- 6) **Rural Medical Assistants (RMAs):** RMAs are graduates with a three-year medical diploma course (initially called Practitioner in Modern and Holistic Medicine) which was started in 2001 in the newly formed state. The course aimed to train medical personnel with the hope that they would go to the villages and towns to serve, thereby reducing the gap in workforce availability in underserved and remote areas. However, the course was suspended after 2004 due to various legal and political reasons. In 2018, the graduates were incorporated into the government health system as rural medical assistants (RMAs), later designated as assistant medical officers (AMOs), to provide health care mainly at primary health centres (PHCs)<sup>o</sup>. They usually play the role of Medical Officer of PHCs.
- 7) **Block Medical Officer (BMO):** Each block has a BMO. They are doctors with at least a MBBS degree. BMOs are nominated out of the available Medical Officers. The BMO is in-charge of the block level hospital i.e. the CHC. The BMO is also the overall block level in-charge of all public health and clinical functions, including the activities of all the PHCs and SHCs in the block. The BMO is also the drawing and disbursing officer at the block level and along with the BPM handles the financial decision making in the block.
- 8) **Block Programme Manager (BPM):** Each block has a BPM, who handles management functions at the block level and assists the Block Medical Officer (BMO). They are contractually appointed under the NHM. Most of them have a Masters degree in Social Work.
- 9) **Block Accountant cum Data Manager (BADM):** Each block has a BADM. The BADMs along with the BPM form the management cadre at the block level. They are also contractually appointed under the NHM. They have an undergraduate degree in commerce. They, along with the BPM, assist the BMO in procurement functions as well.
- 10) **Block Extension and Training Officer (BETO):** Each block is supposed to have a BETO. The BETO's role is to supervise the extension and health education activities in the block and to assist the BMO in managing the public health functions. They are also expected to manage the arrangements for training activities conducted by the BMO's office.
- 11) **Block level/PHC level staff of vertical programmes:** There are 4-5 regular or contractual staff to manage activities under vertical programmes at the block or PHC levels e.g. Malaria Technical Supervisor, Senior TB Supervisor, Non-Medical Assistant/supervisor for Leprosy etc.

## District Level actors

- 1) **Civil Surgeon (CS):** The CS is in-charge of the district hospital and is selected out of the senior doctors (usually specialists) working in the health department. The CS has the financial powers to manage the funds allocated for a district hospital.
- 2) **Hospital Consultant:** The CS is assisted by a Hospital Consultant appointed contractually by the NHM. A hospital consultant has a Masters degree in Hospital Management.
- 3) **Chief Medical and Health Officer (CMHO):** The CMHO is the overall administrative in-charge of all health activities in the district other than the district hospital. The CMHO is selected from among the senior doctors working in the health department.
- 4) **District Programme Officers (DPOs):** The CMHO is assisted by a number of DPOs, each of whom handle one or more vertical programmes. The DPOs are appointed as District Immunisation Officer or District RCH Officer, District Malaria Officer, District TB Officer, District Leprosy Officer, District NCD Programme Officer and so on. There is a position of District Health Officer (DHO) as second-in-command to CMHO and to assist the CMHO in public health functions. In Chhattisgarh, the usual practice is to have the same person play the role of DHO and District RCH/Immunisation Officer. DPO roles are assigned by CMHO to doctors working in the district. Apart from the vertical programmes, some doctors are given charge of certain health system functions e.g. District Surveillance Officer (DSO) for disease surveillance role, District Store Officer for procurement and supplies role.
- 5) **District Programme Manager (DPM):** Each district has a DPM, contractually appointed by the NHM to play the management role at the district level. The DPM assists the CMHO in various management duties, especially the activities funded by the NHM. The DPM along with CMHO have the financial powers at the district level. They form the main liaison of the health department with the general district administration. DPMs usually have a Masters degree in Business Management or Public Health.
- 6) **District Accounts Manager (DAM):** Each district has a DAM to handle the accounting and budget control for activities funded by the NHM. The DAMs are contractually appointed by the NHM and along with DPM also assist the CMHO in procurement work.
- 7) **District HR Manager (DHM):** Each district has a DHM to handle the training activities at the district level. The DHMs also assist the CMHO and DPM in HR recruitment work at the district level. They are contractually appointed by the

NHM.

- 8) **District level Consultants:** Each district has around 10 consultants appointed by the NHM to assist the DPOs in managing the various vertical programmes. They usually have a Masters degree in Public Health or Health Administration. The programmes covered by them include RMNCHA, National Vector Borne Disease Control Programme (NVBDCP), TB, Leprosy, NCD, Tobacco Control etc. NVBDCP has additional positions of entomologists.
- 9) **District Data Manager (DDM):** Each district has a DDM who manages the recording and reporting function. DDMs are contractually appointed by the NHM and have a diploma in computer applications.
- 10) **District Epidemiologists:** They are appointed contractually by the NHM under the Integrated Disease Surveillance Programme (IDSP). They are in-charge of analysing data and to assist DSO in overall disease surveillance in the district, including in outbreak investigations.
- 11) **District Data Officers – IDSP:** They are appointed contractually by the NHM under the Integrated Disease Surveillance Programme (IDSP). They are in-charge of supervising and compiling surveillance data and sending reports to the state.
- 12) **CMHO Store Pharmacist:** Each district has a CMHO store which is headed by a pharmacist. The pharmacists' role is to monitor the availability of medicines and consumables for facilities and health workers in the district (other than the district hospital) and to prepare annual requirement for the district. They also assist the CMHO and DPM in local procurement of drugs and consumables.
- 13) **District Biomedical Engineer:** They are contractually appointed by the NHM to assist the facilities in the district in managing their equipment, repairs and maintenance.
- 14) **District Public Health Nurse (DPHN):** The DPHN was the sole district level officer promoted from the nursing cadre who played a public health role. Otherwise, the role of nurses is mainly focused on inpatient care in district hospitals, CHCs or PHCs. But the state stopped selecting DPHNs and most of their positions remain vacant.

#### State Level actors

- 1) **Directorate of Health Services (DHS):** This directorate handles the key management aspects of the health system: a) recruitment, selection, promotion, transfer of regular appointed human resources; b) deciding the medicines and other supplies and equipment needed for the government health facilities and workers across the state and placing orders for their procurement; c) deciding the

infrastructure needs and supervising its development; d) quality assurance in health facilities; e) regulation of private sector health facilities and providers; and f) managing the state budget.

- 2) Chhattisgarh is one of the very few states in the country where this directorate is headed by an IAS officer instead of a serving doctor. The director is assisted by a number of Joint Directors (JD)/Deputy Directors (DD) who are selected by the director from amongst the serving doctors in the state. Key positions at this level include JD/DD (Establishment i.e. HR), DD (Store), DD (Infrastructure), DD (Training), DD (Nursing) etc. For finance, there is a Finance Controller deputed by the finance department.
- 3) **Mission Directorate (NHM):** This is an additional funding arm of NHM at the state level. It funds activities and staff needs which are not covered under regular set-up and the state budget. It plans for fund requirements under NHM for various programmes and functions, allocates the funds to districts and implementing agencies. It recruits and deploys a large number of staff, all on contract. It is headed by an IAS officer. It has a state programme management unit (SPMU) with a number of managers and consultants.
- 4) **Directorate of Health and Family Welfare (DHFV):** This directorate is meant to look after the RMNCHA related vertical programmes, including immunization, maternal health, child health and family planning. Chhattisgarh is one of the few states where this directorate is usually headed by an IAS officer. The usual practice has been that an IAS officer having a MBBS degree is given additional charge of DHFV alongside being head of another directorate in the department. DHFV is assisted by DD (Maternal Health), DD (Child Health/State Immunization Officer), DD (Family Planning). Each vertical programme has consultants with public health qualifications appointed contractually by NHM.
- 5) **Director (Epidemic Control):** This directorate is for managing disease control programmes and surveillance functions. The role is usually given to a serving doctor. But rather than being an independent directorate, the director is supposed to report to one of the IAS officers in the health department. The director does not have many administrative or financial powers. There are DD rank doctors to look after various vertical programmes—State Malaria/NVBDCP Officer, State TB Officer, State Leprosy Officer, State Programme Officer for NCD etc. Each of these state level programme officers are assisted by consultants. These consultants have Masters degree in Public Health or Health Administration and are appointed contractually by NHM. Another unit under this directorate is of the IDSP with a State Surveillance Officer assisted by epidemiologists and data managers.
- 6) **Directorate of Medical Education (DME):** This is a separate directorate which

looks after the government run medical colleges in the state. Its functions are similar to that of the DHS but limited to medical colleges and their hospitals. The DME position is occupied usually by a senior doctor working in the medical education department. Each medical college has its academic side looked after by a Dean and the hospital side is headed by a Medical Superintendent.

- 7) **Food and Drug Controller:** This office looks after regulation of private sector retail of medicines and consumables.
- 8) **Chhattisgarh Medical Services Corporation (CGMSC):** This is a public sector corporation set by the health department for handling its procurement and construction work. It is headed by an IAS Officer who is assisted by a number of managers with skills in procurement, pharmaceuticals, engineering etc. It has around 16 godowns to cover the 28 districts of the state. The CGMSC procures equipment, drugs and consumables according to the demand it receives from the DHS and the DME.
- 9) **State Nodal Agency (SNA):** This is a body that manages the publicly funded health insurance programmes in the state. It is headed by an IAS officer, usually also playing the role of DHS. It has a number of managers. It outsources many of its functions to a Third Party Administrator (TPA), also known as the Implementation Support Agency (ISA).
- 10) **Chhattisgarh Aids Control Society (CGSACS):** This body manages the programmes for HIV-AIDS, programmes on blood disorders and regulation of blood banks. It is headed by an IAS officer, usually also playing the role of DHS.
- 11) **State Institute of Health and Family Welfare (SIHFW):** It is the apex body to conduct and supervise most of the training activities in the health department. It is headed by a senior serving doctor.
- 12) **State Health Resource Centre (SHRC):** This is an autonomous society created through civil society collaboration to act as additional technical capacity for the health department. Its role is to act as a think tank and provide policy advice to the health department. It also conducts situational analyses, programme evaluations and operations research to provide feedback to the health department. Its role is also to promote best practices and to find innovative solutions for health system problems. In Chhattisgarh, it also plays a key role in training of health HR. SHRC, manages the Mitatin CHW programme (ASHA) and supports community-based initiatives like Village Health Nutrition and Sanitation Committees (VHSNCs) and Mahila Arogya Samitis. It provides support to specific new programmes like Sickle Cell Disease Management, Climate Change and Human Health. It also facilitates the roll-out of Health and Wellness Centres (HWCs).

13)**State Nursing Council:** It conducts registration of nurses, supervises quality of nursing education including regulation of private nursing schools and conducts examinations of nursing courses. It has a registrar appointed from among senior nurses in the state. It is chaired by the DHS or the DME.

## Public Health Management Functions And Roles

The roles within the department of health can be categorised into training/teaching, clinical care, management and public health functions. Table 1 and Table 2 present details of the management and public health roles, including the main 'doers' and supervisory and management structures. The extent to which the public health and management roles are being played, along with existing gaps are discussed below:

### Public Health Functions

#### 1. Prevention, intersectoral work and action on social determinants of health

The personnel involved in this work at the community level are the ANM, MPW, Mitanin (ASHA) and MTS and other field workers of vertical national programmes. There has been an emphasis on the significance of this work, especially after the implementation of the NHM. As a result, these tasks and roles are to a great extent being completed. There is collaboration at the village level between the ANM, Anganwadi worker, Mitanin and field workers of other departments. However, between the various members, it is the Mitanin who does bulk of the work on prevention and social determinants of health. The ANMs and MPW are only involved in vaccination and the MTS does indoor residual spraying (IRS) for malaria. The supervisory structure above the ANM/MPW consist of LHV/Male supervisor, the PHC Medical Officer and at the block level the BMO, BPM, BETO and BDAM (block data assistant manager). In Chhattisgarh there is a parallel structure of Mitanin Trainers and Block coordinators to provide support to Mitanins facilitated by SHRC Chhattisgarh. The various vertical national disease control programmes have their supervisory structure, such as Malaria Technical Supervisor, STLS (TB) and NMA (non-medical assistant leprosy). At the block level, these vertical programmes are not very well integrated and intersectoral collaboration is also weak.

Similarly, at the district level there are vertical consultants and district nodal officers for various programmes such as DIO/RMNCH consultant for immunization, DTO, DLO, DMO, district nodal officer NCD etc.). The district nodal officers are doctors, and some continue to do clinical work in the district hospital. The CMHO and DPM coordinate the nodal officers and consultants respectively, though often the consultants work more closely with the specific nodal officer.

There is a gap at the block level in fulfilling this function and may necessitate the involvement of a block level epidemiologist.



## 2. Health promotion

Health promotion includes counselling services, home visits and other activities to promote nutrition, gender equality, anti-tobacco behaviour etc. This role is played by the Mitanin, ANM and MPW. However, there is poor performance of this role, and it is mostly left to Mitanins to fulfill. The supervisory structures at the block and district levels are the same. However, in this case, there is very little interest in the issues of health promotion and hardly anyone looks at it or plans, reviews or monitors it. There is a gap at the block level in fulfilling this function and may necessitate the involvement of a block level epidemiologist.

## 3. Community engagement/ VHSNC/MAS/ community monitoring

This role is mainly played by the Mitanin and supervised by the Mitanin programme Block Coordinator, with the ANM playing certain administrative roles. At the block and district level the BPM, BDAM and DAM are involved. However, they lack interest in this issue except for playing the specific role of collating and reporting untied fund data.

## 4. Community based screening and follow up

This role is played by a number of actors—Mitanin, ANM, CHO, and MPW, with the Mitanin doing bulk of the community-based work. The management and supervision are done by the BPM and the BMO. However, on a routine basis it is very weak and becomes active when there is a campaign, a specific day or week is celebrated or there is an outbreak. At the district level it is verticalised as in point 1 and remains very weak on a routine basis.

## 5. Disease Surveillance

Disease surveillance at the community level is undertaken by the ANM and MPW. The Mitanin does a lot of this work, though the health system does not recognise it. The BMO and BETO have responsibility for the whole block and at the district level the District Epidemiologist, DDM-IDSP and CMHO are supposed to play the role. However, disease surveillance is very weak both at the block and district levels. There is a gap at the block level in fulfilling this function and may necessitate the involvement of a block level epidemiologist.

## 6. Research and data analysis

The BDAM collates the data and at the block level the management of this function is by the BPM and the BMO. However, neither research nor data analysis happens. At the district level too, data is simply collated from the block and sent to the state level. However, there is no analysis or research undertaken.

## 7. Grievance redressal

Grievance redressal systems are very weak, both for the health workforce and patients. The BPM and the BMO usually perform this function, with oversight from the SDM. At the district level the CMHO, DPM and Collector are responsible.

Function/Role	Doer	Manager at Block	Manager at District
Prevention, intersectoral work and action on social determinants of health	ANM, Mitanin, MPW MTS	PHC MO BPM LHV/Male supervisor BETO Verticals:Malaria Technical Supervisor/STLS (TB)/NMA (non-medical assistant leprosy) BDAM (block data assistant manager)	-Vertical: consultant/district nodal officer (DIO/RMNCH consultant, DTO, DLO, DMO, district nodal officer NCD etc.) - CMHO - DPM
Promotion— including counseling services, home visits	Mitanin, ANM, MPW	Same as above	No one
Community engagement/ VHSNC/MAS/ community monitoring	Mitanin, ANM	BC BPM BDAM	DAM only for untied fund reporting
Community based screening and follow up	Mitanin, ANM, CHO, MPW	BPM, BMO	Verticalised as in first row
Disease Surveillance	ANM, MPW, BMO/BETO (Mitanin)	BMO BETO BPM BDAM	District Epidemiologist, DDM-IDSP, CMHO
Research – data analysis	BDM	BPM BMO	No one
Grievance redressal	BPM, BMO	SDM	Collector/CMHO/DPM

**Table 1: Public Health Functions and key actors**

**Source: Developed by PI from the data collected**

## Management And Administrative Functions

### 1. Finances, Budgets, Accounting

The BDM is responsible for this function for the whole block. The BMO plays the managerial role at the block level and DAM, DPM and CMHO at the district level. It is done reasonably well mostly because it is a top-down system.

### 2. Drugs/consumables and store management

This is done by the storekeeper and pharmacists at the CHC. There is need for them to be trained. Moreover, there is lack of supervision by the BMO, who should give time but does not for this function. There is also the lack of technical information.

At the district level, the district hospital and the CMHO have separate storage and pharmacist. The DH has a district store officer who is a doctor with charge but there is lack of monitoring of lower facilities with regards to stock. The CGMSC supplies medicines from its godown. It has data about availability but does not analyse or act on it.

This analysis highlights the need for a CHC (hospital) manager and a supply-chain manager at the block level.

### 3. Management of facilities

An important function is the management of facilities which include the lab and other ancillary services, patient navigation, staff performance and so on. The BPM currently plays this function for the CHC, supervised by the BMO. However, the BPM is unable to focus on the running of the health facility as a lot of their time goes into reporting and financial matters. The BMO too is unable to take out adequate time for this role as they are engaged in clinical work (mostly due to lack of doctors) in addition to the administrative work. There is need to improve supervision of clinical work within the hospital.

The CMO and the DPM play this role at the district level and the CS with Hospital Consultant performs this function at the level of the District Hospital. The hospital consultant (non-medical cadre) has less power and is not able to do much.

There seems to be a need for a CHC (hospital) manager and a supply-chain manager at the block level for integrated working, and to supervise all non-clinical work within the facility.

### 4. Supervision of lower facilities

The function of supervising and monitoring lower facilities, including staff performance in PHCs is done by the BPM. There is need to increase this role for the BMO and the BPM. At the district level the CMO and the DPM play this role, but it is inadequate. There is need to increase this management role.

#### 5. Training to health staff

Trainings and skill and knowledge upgradation are organised by the BPM, BETO, BDM, and BC (Mitanin), supervised by the BPM. However, training need assessments are not being done. These trainings are highly vertical and top-down. At the district level there is a DTC (district training coordinator) from the NHM now called the district HR manager (DHM), DPM, CMHO, DNOs for verticals playing this function.

#### 6. Recruitments

Recruitments are mostly done at the district and state levels. At the district level the CMHO and DHM coordinate this function.

#### 7. Procurement

At the block level this is undertaken by the BDM and supervised by the BPM, and BMO.

#### 8. Equipment and infrastructure maintenance

The BDM and BPM undertake this function for the block, supervised by the BMO. The CMO and DPM play this role at the district level, with the CS being responsible for the District Hospital.

#### 9. Grievance redressal

At the block level, the BMO and BPM play this role along with SDM. At the district level it is the Collector, CMHO, and DPM.

#### 10. Coordination with other departments/local government

At the block level, the BMO and BPM play this role along with the SDM. At the district level it is the Collector, CMHO, and DPM.

#### 11. Reporting and data management

At the block level, the BDAM plays this role supervised by the BPM and BMO. At the district level it is the DDM-NHM supervised by the DPM and CMHO.

#### 12. Referral transport

Referral transport is outsourced with the BPM and BMO having some responsibility.

### 13. Dealing with Medico-Legal Cases

A doctor at the CHC does it along with the BMO. At the district it is a doctor with the CS.

### 14. Data entry

At the PHC level there is the PHC accounts and data assistant (PADA), at the block level it is BADA, both supervised by the BPM.

### 15. Equipment management

Biomedical engineers have been recruited to play this role and some functions are also outsourced.

Function/Role	Doer	Manager at Block	Manager at District
Finances – Budgets, Accounting	BDM	BMO	DAM, DPM, CMHO
Drugs/consumables Store management	Storekeeper, CHC pharmacist	BPM, BMO	CMHO store pharmacist, DH-separate store pharmacist Officer who is a doctor with charge. CGMSC
Referral transport	Outsourced	BPM, BMO	
Facility management, Lab and other ancillary services, Patient navigation, staff performance	BPM	BMO	CMO, DPM, For DH-CS with Hospital Consultant
Supervision of lower facilities, staff performance	BPM	BMO	CMO, DPM
Training to block level team – skill/knowledge upgradation	BPM, BETO, BDM, BC (Mitanin)	BMO	DTC (dist training coordinator, from NHM, now called district HR manager DHM), DPM, CMHO, DNOs for verticals
Recruitments			DHM
Procurement	BDM	BPM, BMO	
Equipment and infrastructure maintenance	BDM, BPM	BMO	CMO, DPM DH-CS
Grievance redressal	BMO, BPM	SDM	Collector, CMHO, DPM

Coordination with other depts/local govt	BMO, BPM	SDM	Collector, CMHO, DPM
Reporting and data management	BDM	BPM, BMO	DDM-NHM, DPM, CMHO
MLC	Doctor	BMO	Doctor-CS
Data entry	PADA – PHC accounts and data assistant	BADA, BPM	
Equipment management	Biomedical engineers + outsourced		

*Table 2: Management Functions and key actors*

*Source: Developed by PI from the data collected*

## **MAPPING TRAINING NEEDS AND CAPACITY FOR PUBLIC HEALTH AND MANAGEMENT**

Key skill areas in which various staff need to be trained are as follows:

### **Public Health Skills**

- 1) Preventive and Promotive Health, Social Determinants of Health, Inter-sector action, Community Participation.
- 2) Surveillance of diseases and outbreaks and their causes, epidemiology.

### **Management Skills**

- 1) Procurement
- 2) Inventory Management
- 3) Data analysis and planning
- 4) Hospital Management
- 5) Financial Management
- 6) Recruitment and Human Resources Management
- 7) Medico-legal management
- 8) Regulation of private sector

## Availability of Training Modules

For preventive and promotive components of public health and disease surveillance, training materials exist, mostly designed by the vertical programme divisions in the central ministry of health. These modules are fragmented, based on the needs of each vertical programme.

Overall, there is a paucity of training curricula and materials designed for management skills. There is a very detailed module available on inventory management for pharmacists. A training programme exists for CMHOs and BMOs that covers some components of HR management, financial management and medico-legal management.

## Institutional Capacity for Training in Chhattisgarh

- 1) **SIHFW:** It manages many kinds of training for health HR but is largely focused on clinical areas. An exception is its Induction training for Community Health Officers on HWCs which includes a component on management.
- 2) Vertical programmes arrange a significant amount of training annually in collaboration with SIHFW by arranging the resource persons and training materials.
- 3) **SHRC:** SHRC Chhattisgarh has designed and conducted the necessary training for ASHAs and their supervisors. It designed a training module on administrative training of BMOs.
- 4) **State Administration Academy:** This academy trains civil servant cadres recruited in different departments. In health, it conducts a training programme on management aspects for key administrative positions—CMHOs, BMOs and Civil Surgeons. The programme covers some components of HR management, financial management and medico-legal management.
- 5) **Government Medical Colleges and AIIMS:** Most of the training programmes are focused on clinical areas. The Community Medicine departments produce around 10-15 post-graduates (MDs) in Community Medicine. Many of them chose to teach in medical colleges and some join the government services as Medical Officers.
- 6) **Schools of Public Health (for MPH):** AIIMS, Raipur has a school of public health with intake of 6 students annually in its Masters course. There are a couple of private schools in the state. Availability of candidates for Masters of Public Health and their willingness to work in the health department is no longer an issue. There are enough number of students from Chhattisgarh who are completing MPH courses from outside the state and coming back home to look for jobs.
- 7) **District Training Centres:** Most of the districts do not have a full-fledged training

centre or dedicated officers to manage training. Many training programmes on public health aspects take place at the district level but they are usually on vertical programme lines.

- 8) **Block Training Centres:** There are no block level training centres in the health department. But the BMO's office arranges a number of trainings (through vertical programmes) for cadres like ANMs, MPWs, and sector supervisors.
- 9) **Civil Society Organisations:** The state has a unit of Public Health Resource Network (PHRN) that conducted a programme focused specifically on building PHMC capacity. The 18-day training programme known as the Fast Track Capacity Building Programme trained a large number of BMOs, CMHOs, DPMs, BPMs and District Programme Officers in the state. It was implemented around a decade ago. There are other NGOs, most notably Jan Swasthya Sahayog, Shaheed Hospital, Raigarh, Ambikapur Health Association who have the capacity to provide training on public health aspects.
- 10) **Private for-profit sector:** The state does not have much capacity in this sector for imparting public health training. Private hospitals are not involved in public health functions. There can be some scope to learn management aspects, but no such programmes have been conceptualized so far.

## **POLICY PROCESSES AT THE STATE LEVEL** **TOWARDS DEVELOPING A PHMC**

Policy processes in Chhattisgarh undertaken to develop PHMC

**Medical Manual, 2005:** Soon after Chhattisgarh was formed in 2000, a need was felt to develop Terms of References (TORs) for all cadres within the health department. This led to the drafting of the Medical Manual in 2005 which contained TORs of around 200 cadres that were there at that time. Public health roles had to be enumerated within this for BMOs, CMHOs and others (SG). This manual went to the cabinet but did not get passed.

**Note on Development of Public Health Cadre, 2015:** In 2014 the discussions around the medical manual and public health roles were revived (SG). A nodal officer was appointed from within the health department who was to be supported by the State Health Resource Centre (SHRC), Chhattisgarh, an agency providing technical assistance to the department. Consultations took place and a draft proposal developed. The proposal titled 'Note on Development of Public Health Cadre' enumerated the aims as follows:

- 1) Improving the Efficiency—clinicians to perform clinical work and preventing administrative load.
- 2) Increasing the promotion avenues for MBBS and other professionals entering the



public health systems.

- 3) Improving the efficiency and outcomes of public health systems.
- 4) Improving the delivery and access to public health services.
- 5) Integration of the NHM under the public health system.
- 6) The note contained the following proposals:
- 7) A proposal for a public health structure with separation of clinical and administrative structure for medical officers with career development options.
- 8) A proposal of reform in the structural organisation of the department of health and family welfare.
- 9) Proposal for staff nurses with separation of teaching faculty, clinical and public health professionals.
- 10) Proposal for improving the technical capacity of various department under health by appointing regular technical human resources at various levels.
- 11) Proposal for wider consultation for above mentioned strategies as a must for finalisation of re-structuring and reconstitution of the Public Health Cadre. To develop a common consensus to work up [improve] pay scales. Years of service for promotion to be fixed for all the new posts either proposed to be integrated from the NHM or newly created.
- 12) It proposed the following institutional arrangements at the state level:
- 13) Directorate of Public Health and Family Welfare (name revised)
- 14) Directorate of Disease Control (new)
- 15) Directorate of RMNCH+A:
- 16) Department of Hospital Services (new)
- 17) State Institute of Health and Family Welfare

In the proposal there was a special focus on separation of cadre (clinical and public health) and developing career pathways for nurses, Rural Medical Assistants (RMAs) and others.

### **Separation of cadre and career pathways**

The note proposed that a new MBBS recruit would have the opportunity to decide after

six years whether to choose clinical or administration roles. Those who chose clinical roles would be encouraged to gain further clinical qualification. Those who chose public health would be given training on management, public health and so on. They would go on to become Block Medical Officers (BMO), district nodal officers, CMHO, and state level Deputy Directors. Those joining the health department with clinical specialisation (MD) would have to join the clinical cadre and will not be given non-clinical/administrative work.

There was a debate on who should head the District Hospital and whether that person should be someone from management or from a clinical background. The options discussed were whether CS/hospital administrator should be senior most clinician in the facility or MBBS with health management degree or a non-doctor (MBA/CEO). The other debate was around supervision of lower facilities (CHC, PHC) and whether the Civil Surgeon who heads the district hospital should monitor other facilities of the district too instead of the CMHO who is currently doing it. Similarly, there could be a CHC in-charge who would have to manage lower facilities/clinical units such PHCs.

Previously, in 2012, there had been an attempt to add public health and community-based responsibilities for the Civil Surgeon outside the hospital through the Chief Minister's Urban Health Programme. The charge of implementation of the urban programme was given to the CS. However, this arrangement collapsed once the National Urban Health Mission's (NUHM) structure came into being and the CMHO took over.

Separate clinical and public health career pathways were developed also for nursing. The entry level was to be as ANMs and staff nurses (BSc Nursing and GNM training) at the community and primary levels. The Public Health Cadre for supervision was to be the Lady Health Volunteer (LHV) along with the Block Public Health Nurse (BPHN), District Public Health Nurse (DPHN) at the district level and Divisional Public Health Nurse at the divisional level. At the state level a Deputy Director (Nursing and Midwifery) was also proposed.

**Committee on developing clinical and public health cadre in Chhattisgarh, 2017:** In 2017, a committee on developing clinical and public health cadre in Chhattisgarh was formed as part of the EU Partnership Programme. At that time there was some political will and administrative openness to discuss the Public Health Cadre (SO). The committee discussed drafts of the proposal over multiple meetings. There was support from SHRC Chhattisgarh, PFHI, UNICEF and NHSRC in developing the draft. Consultations were held with different cadres within the health department and with their professional associations. Finally, a cabinet note was developed in 2018. Key guiding principles for the development of a Clinical Cadre, Public Health Cadre and General Duty Medical Officer Cadre in Chhattisgarh as adapted from the Ministry's Task Force recommendations were to be followed.

The plan was to be implemented in two phases:

Phase-I: There was to be no financial implications and only certain modifications in service rules. Nomenclature would need to be revised. And short course training would be done for experienced programme officers.

Phase-2: There would be limited financial implications in the creation of new posts which would be borne by the NHM and/ or topped up by the state.

The proposal was as follows:

- 1) One public expert and one Deputy Director would be dedicated for the Public Health Cadre and Clinical Cadre development under the supervision of Joint Director, Establishment. This cell was to be approved in a Cabinet note.
- 2) Candidates would be selected through direct recruitment or promotion based on the respective Chhattisgarh state's requirement and policies/ guidelines.
- 3) Complete cadre review of existing health systems would be done before planning for the Public Health Cadre, Clinical Cadre and General Duty Medical Officer Cadre in Chhattisgarh state.
- 4) There would be enough promotional avenues for Specialists/ Clinicians and Public Health Cadre. Further promotional avenues would be augmented for the officers at the senior level by giving them regular training.
- 5) Long term and short-term training programmes (both for pre-service and in-service) focusing on Public Health Cadre requirements, would be developed as per the eligibility criteria to be defined by the state.
- 6) PH courses could also be developed by the Chhattisgarh government to compliment the need of the Public Health Cadre.
- 7) All public health professional would be trained suitably within the next three years. Some of the institution like NIHF, PHFI, IIPH, School of Public Health associated with medical colleges would be identified for public health training of PH Cadre officials.
- 8) For promotions, seniority would be given due importance over qualification and there would be a right balance in promotions of seniors having required qualifications. Based upon general functions under public health, the job chart, roles and responsibilities of each category of staff in the PH Cadre would be developed.
- 9) There was also a need to manage administration related work under Medical Colleges and Hospitals in the state.

- 10) The faculties with skills or higher education in hospital administration from the department of Community Medicine would be posted/deputed for better management in the hospitals associated with medical colleges.
- 11) The experienced and qualified professionals from the Clinical Cadre managing hospitals at the CHCs and districts could be deputed to medical colleges and hospitals. They could be also from the PH Cadre depending on the qualifications and experience required for the post.
- 12) Hospital Administrator/ Manager under the head of institution (Medical Superintendent) would be required to address management issues such as human resource, recruitment, housekeeping, logistics, supply of drugs and equipment, kitchen services, billing, accounts and other non-clinical services in tertiary care institutions. The number of Hospital Administrators/ Managers would be as per need/ bed size/ work load in the hospitals.
- 13) As per MCI guidelines, the Medical Superintendent should possess a recognised postgraduate medical qualification from a recognised institution with 10 years of administrative experience. The qualification would be a Masters in Hospital Administration (MHA) or a postgraduate degree recognised as equivalent to MHA by the Medical Council of India.
- 14) For promotions, seniority would be given due importance over qualification and there would be the right balance in promotion of seniors having required qualifications. Based upon general functions under public health, the job chart, roles and responsibilities of each category of staff in the PH cadre would be developed.

Some of the concerns raised by public health experts and departmental officials at that time were as follows:

- 1) The note was focused on doctors, specifically on the need for those with MD Medicine to be recognised as a specialised Public Health Cadre. There was no discussion on the roles and career pathways for the non-MBBS personnel, such as nurses, RMAs, physiotherapists, BPMs, DPMs, ANMs etc.
- 2) There was no clarity on the career pathway of the Medical Officers who chose to remain in the Clinical Cadre.
- 3) The power and delegation of authority for many were not clear. For instance, the need to make BMO a Class 1 officer was not discussed; it was not clear whether the Civil surgeon will report to the Collector, CMHO or directly to the state level officials; who would be placed at the district level with CMHO and DHO to help in public health work.

- 4) While there was talk of a divisional level team, it was not made clear what role the Divisional JDs and their teams would play.
- 5) The note made no reference to the previous efforts of the state that involved a number of consultations with some experienced officers from the directorate and unions. Neither did it refer to the drafts developed at different stages (separately by SHRC Chhattisgarh, hospital administration department and PWC).

The cabinet note did not get presented in the cabinet. The state elections were to happen soon and the then ruling party did not want to take this decision at that time. It has been opined that they had received negative feedback from clinicians on this proposal and did not want to displease them just before elections. The elections led to a change in the party in government. Some discussions were held with the new Health Minister, however, soon afterwards Covid-19 struck and the process got stalled.

## **FAULT LINES IN THE DISCOURSE IN CHHATTISGARH**

The understanding and discourse around the PHMC in Chhattisgarh are ridden with faultlines. The most visible one is to do with the idea of superiority of the medical profession. The medical profession is very powerful and considers itself to be superior to all others. The doctors do not want to give up their power and resent having to report to anyone who is a non-doctor.

“Doctors think they are superior. They should be oriented to support [public health/management people]” (DPM).

As a result, a lot of the discourse on PHMC is doctor-centric, which finally defines it as training doctors to become public health professionals themselves or see them playing the leadership role in case of multidisciplinary teams.

“The public health cadre composition can be heterogenous, but leadership roles should be with the MD community medicine specialists. If the leadership post has to be given to any other doctor, then the person has to get some public health qualifications” (State official and Faculty MC).

Even within the medical profession there are hierarchies across various dimensions. For instance, within specialties, community medicine specialisation is placed at the lowest end. This pertains also to a general undermining of public health/community health within medical education and therefore the health department. One push towards

PHMC is to gain more relevance and power for this specialisation.

“MD community medicine should be designated as ‘Specialist’ cadre and then they should become the BMOs” (state official and Faculty MC).

Other clinical cadre such as physiotherapists, nurses, RMA etc. are much further down in the order. The medical profession, supported by the Indian Medical Association, makes concerted efforts to thwart the recognition of cadres such as CHOs, RMAs or allow career pathways for them, nurses and others within the structure of health governance.

“Those with some medical degree [eg. physiotherapy, dentistry] who have gone on to do public health are sometimes taunted that they are scared of clinical work therefore they have come to MPH. Issue will come of hierarchy which has to be dealt with. Both streams need to be clear of the role and importance of the cadre” (PH district coordinator).

Certain cadres that have been playing a public health role such as BETO, LHV, PHN etc. have always been undermined and many are slowly being phased out.

“The main problem is with outdated recruitment rules. We need to challenge MP 1989 rules. It already has number of Public Health Cadre posts like epidemiologist, research assistant, training officer, DHO etc. Even if government fills existing posts, the cadre will get automatically developed” (state official).

A situation unique to Chhattisgarh has been the ongoing conflict between doctors and IAS officers. In 2007 there were a series of enquiries related to purchases etc. in the health department resulting in criminal cases and jail for the present and retired Directors of Health Services (DHS)<sup>p</sup>. Since then, the post of DHS, Commissioner Health and MD NHM have been filled only by IAS officers or other non-health bureaucrats. This has led to a lot of resentment among government doctors and health officials and their unions. This conflict trickles down to the district and block levels with Collectors and SDMs.

The conflict between medical and non-clinical cadre was exposed and has played out within the NHM which brought in public health and management cadres at different levels. Initially there was a lot of resistance by the health department to accommodate NHM staff. While the conflict still remains, some maintain that NHM has been able to illustrate the relevance of a public health management cadre. Others opine that the issue got resolved only at the terms of the health department, i.e. using the NHM management cadre the way they want, with continued neglect of the public health

functions.

“NHM people were initially rejected. Now the doctors see their importance due to output. But we also have to do a lot of ‘babugiri’ [bureaucratic] work. Managers should be appointed instead, and the Public Health Cadre should do data analysis, planning etc. and see how things should be implemented at the field level” (DPM).

“There is need to reform the NHM. They have now become ‘bade babus’, and just sit in office and move files. They aren’t able to visualise, plan and design interventions”(state official and Faculty MC).

With the coming of the NHM the cadre such as the BETO that previously undertook public health functions, got marginalised. There is a lot of resentment among this cadre against NHM staff, whom they see as now in control of financial and all other powers. They also link it to increasing digitisation of data and computer literacy.

“When health department was born there was only BMO and BETO. The BETO used to supervise all the national programmes. Then everything shifted online, and the BPM came through the NHM and took over financial and other powers. I have come from the lower level [ANM to LHV to BETO] so I know everything and have taught the BPM whatever she knows. We make registers and they enter it online. But after the NHM came, we are getting extinct. Letters don’t carry my name anymore and I am not called for any trainings. In the CHC, I get some respect but in the district they have forgotten about us. BETO should get appropriate place and power” (BETO).

Another dimension influencing the relationship between the NHM and departmental staff is the difference between contractual and regular employment. Currently, all management staff (eg. BPM, DPM) and technical consultants under the NHM are contractual. While the contractual staff resent the lack of job and social security and believe that they are over-worked, bureaucrats are happy with this arrangement as they believe they can get more work out of contractual staff. Moreover, the government does not want to take the financial burden.

## **DIFFERING VIEWS ON RELEVANCE OF PHMC IN CHHATTISGARH**

There are different views on the purpose of a PHMC, depending on who is articulating

it. However, certain broad understandings emerge:

- 1) PHMC is needed to enhance capacity in the government health system to perform the necessary public health and management functions. Some functions are not being performed currently and there is need to bring in expertise or train existing staff to perform those functions. These mainly include functions related to management and epidemiology that need to be strengthened.

“The BMO can help coordinate the Clinical and Public Health Cadres. Unfortunately, currently everywhere an MO has been given the BMO’s prabhar (charge). Separate posts are needed and MOs need to be promoted to BMOs. Only then will more significance be accorded to this [public health and management] work” (BMO).

“The BMO has to be an all-rounder and do both clinical and public health work. The BPM and BETO are restricted to public health work” (BMO).

- 2) PHMC is needed so that a clinical person can focus on clinical care and not be diverted for managerial or administrative purposes. There is need to keep limited human resources and clinical capacities within the department focused on performing clinical functions.

“There is a shortage of doctors and I am a specialist, so I am forced to work on the clinical aspect. I have to fulfil my responsibility as a doctor. The systemic issues [shortage of doctors] need to change” (CMHO).

“I sometimes have to go to the field and go for meetings. Meanwhile, patients come and I am unable to see them. A lot of time goes into postmortems also” (BMO).

“Earlier too I understood the importance of public health, but Covid made me realise further. Clinicians are not able to do logistics and admin related work. They are not taught these skills such as drug procurement. Also, what is their role? Should they spend time in doing paperwork, try to arrange drugs or attend to patients? We don’t teach public health in medicine” (Faculty MC).

“During Covid-19 the CMHO’s work was focused on public health, as a result their clinical work got disturbed. If clinical had been separate it would have kept running” (state official).



“There should be a cadre of public health professionals. We are misusing specialist as CMHOs. If doctors want to come to management, they should be allowed to do so too” (DPM).

- 3) PHMC is needed to increase the power and significance of non-clinical functions and of the workforce playing those functions. The non-clinical work within the health department should be put at par with clinical work.

“There are a huge number of [national] programmes but they are not implemented well, and we are unable to follow-up on what’s going on or assess their impact (DPM). For instance, in the mental health programme the doctor treats the patient but does not identify or act on the determinants of mental health issues and there’s no follow-up. They don’t have the analytical skills to get to the root causes. The doctors can provide clinical care to patients and the public health persons can work on the causes of disease” (DPM).

“We have to remove the divide [between clinical and public health]. If even now [after the Covid pandemic experience] people don’t realise [the importance of PH] then nothing can be done. Only a public health approach can truly improve health” (Faculty MC).

- 4) Having a PHMC would result in better motivation among a range of cadres through career pathways, promotions and regularization.

“None of the NHM employees have promotion or job security. We got maternity leave only after striking work. Why should anyone work in public health? Won’t it be better to open a business? We remain in the NHM thinking it will get better in the future. We compare ourselves with our batchmates who are doing much better jobs. The government should regularize the NHM staff” (BPM).

## TOWARDS RECOMMENDATIONS FOR A PHMC FOR CHHATTISGARH

**Desirability:** All the above purposes are valid and relevant and need to be taken into consideration in an integrated fashion. Feasibility or what will it take?

**Deciding job descriptions and TORs:** One of the first tasks would be to define roles and responsibilities of each position/cadre, including the new ones. This will help in optimum

utilisation of the health workforce and also lead to clarity on everyone's role.

**Deciding career pathways of different types of HR:** The career pathways for all cadres within the health department need to be outlined. This includes clinical, management and public health cadre. This is important for continued education and trainings, growth (promotions) within the system, and gaining authority/power. They are also important for keeping the workforce motivated. Developing these TORs would also help in developing the state's health workforce posting, transfer and promotion policy that is long due.

**Identifying public health and management skills needed for each role and developing training capacities:** Training needs must be mapped after the above exercises. Skill gaps in staff carrying out those functions will have to be assessed and capacity for imparting the required training must be created or such opportunities identified. In public health training, integration is the key issue. The training modules fragmented across vertical programmes need to be integrated. Once the integrated modules are developed, the state has lot of capacity to implement the training. The need to build capacities in management functions has to be recognised. Then, training modules must be developed for different roles and cadres by involving institutions with sound understanding of government health systems. Training capacity needs to be created including through collaborations with NGOs and teaching institutions, including those from the management education domain. Induction training requires to be instituted for the key cadres and both the above areas of training need to be included in its design.

**Overcoming the challenge of IAS officers holding Technical Director posts:** As discussed earlier, in Chhattisgarh IAS officers have held technical director posts in the health department since 2007. This has led to both conflict and demotivation among the government doctors. There is need to start posting officials from within the health department to these posts and allow doctors their due. It would also be beneficial to have officials at the state level who have experience in working within the block and district health administrative setup as they would have a better understanding of the issues thereof.

**Overcoming the challenge of doctors' unwillingness to allow non-doctor cadres in positions of power (Nurses, RMAs/CHOs, DPMs etc.):** The superiority of the medical profession must be challenged through consultations with unions and bringing all unions onboard.

**Regularization of all contractual staff:** The working conditions of the workforce need to be improved and brought on par with each other. There is need for regularisation of all contractual staff currently within the health department. However, in addition to finances being a deterrent in taking this step, there is resistance by bureaucrats and health officials which needs to be countered.

**Addressing gender imbalance in positions of power:** Tables 1 and 2 show that while most of the public health and frontline work is being done by women, the supervisory and positions of authority are held by men. Even at the district and state levels, most positions of power that are doctor-based, such as Civil Surgeon and CMHOs at the district level; deputy directors and directors at state level, are held by men. However, within the NHM and in contractual positions, the proportion of women is better. Establishing a deputy director for Nursing could help in increasing the power and relevance of nurses, who are predominantly female. Further, ASHAs need to be adequately remunerated and recognised.

**Integrate and reduce verticalization:** The approach to designing roles and responsibilities and career pathways for different cadres should follow the principle of providing integrated services and systems. The current verticalisation should be reversed. Moreover, it is critical that PHMC should be seen as a set of functions integrated into the roles of different types of cadres. PMHC should not be designed to become another vertical programme/system.

**Financial Implications:** The financial implications of the above suggestions are indicated here:

- 1) Regularisation of contractual workforce will need around Rs. 200 crore annually. This will have a substantial impact on the health budget.
- 2) New recruitment/posts such as that of Block Epidemiologist, CHC Hospital Manager would require another Rs 8 crore annually.
- 3) New Directorates of Nursing and Public Health would require about Rs. 6 crore annually.
- 4) New posts related to promotions to create career pathways would need about Rs. 20 crore annually.
- 5) Training would not be a big expense, unless new or expansion of institutions for various courses is visualised.
- 6) Improving ASHA payments would require an additional Rs. 200 crore annually.

**Consensus Building:** To implement the above there needs to be a process of consensus building that takes on board health worker unions, IMA, public health experts and community voices. However, during this process, one has to be conscious of the power dynamics and hierarchies within these actors and address them.

**Generating political will:** The above steps would be attractive to the government and

the ruling political party if they think that services and their public image would improve substantially. This would require, among other things, a demand which emerges from health workers, communities, experts and political commentators. The regularisation of staff would be an attractive proposition for the ruling party. However, its high expenses could be a final determining factor.

**Improving systemic issues in HR:** The systemic issues of recruitment and retention of the health workforce has to be improved. There are enough examples within the state that provide guidance on this<sup>9</sup>.

## **JHARKHAND**

### **Mapping Public Health Management Actors, Functions And Roles**

Key actors in public health and management functions in the existing system

#### **ASHAs**

Jharkhand has one of the strongest ASHA (Sahiya) programmes in the country. The ASHAs perform a range of clinical and public health roles at the community level.

The programme also has a support system consisting of ASHA facilitators or Sahiya Sakhi. At the district level, it has the District Community Mobiliser (DCM). The 24 DCMs monitor programmes related to the ASHAs, family planning, Information, Education and Communication (IEC), 104 health helpline and so on at the district level. The programme had asked for a Block Community Mobiliser, but that post was never created. There are five posts of regional coordinators but currently only one post is filled. The state trainer team and the district trainer group impart trainings.

The number of block trainers of the ASHA programme are in the process of being rationalized as per the state ASHA team. They have been posted as part of Block Training Teams of different programmes, such as 180 went to the family planning programme, National Urban Health Mission and Rashtriya Bal Swasthya Kariakram (RBSK).

ASHAs too have gone onto different roles: 388 ASHAs have become Panchayati Raj Institution (PRI) members, 11 as Anganwadi Workers, five as Shiksha Mitras, and 21 have been enrolled in the ANM course. The Sahiya core funds provide a maximum of Rs. 50,000 to educational institutions for ASHAs enrolled in the ANM course.

#### **ANMs**

Respondents said that along with ASHAs, the ANMs also play public health roles.

However, according to some District Health Officials there isn't proper monitoring, or supportive supervision given to them and that their community level public health roles need to be strengthened further. The ANMs used to report to LHVs, supervisors, or BEEs, but now that these are dying cadres, they provide data to Block Accountant cum Data Assistants (BADAs) under NHM.

## **CHOs**

In Jharkhand CHOs (GNM and Grad A Nurse) have been trained and recruited for Health and Wellness Centres (HWCs). The CHO bridge course was started in 2017. CHO trainings have been done in RIMS. Around 1100 to 1300 have been trained and placed in HWCs. Through the introduction of CHO, the human resource at the lower levels of the health system is increasing and so is the ability to cater to more patients, according to a member of the State Nursing Team. However, recently many CHOs have left for Uttar Pradesh where they will get more salary. CHOs have a technical orientation to work on patients and don't have much public health orientation, said a District Health Official.

The HWC visited during the study had a CHO and a senior ANM. The CHO said that a lot of people come for treatment to the HWC. She also uses E-sanjeevani, or telemedicine through which a doctor is available for consultation. She reports to the MOIC and BPM. However, in that block the medicines for NCD had not been supplied to the HWCs and that was creating problems for the patients, said the CHO and ANM.

## **Community Health Assistants (CHAs):** A new public health management cadre

In Jharkhand, around 2013, a need was felt for a person at the periphery to implement and manage programmes; a public health management cadre that would be located between the ANM and the MO. As a result of these deliberations, the Community Health Assistant cadre was developed, at a grade above the ANMs. There was a consensus among the bureaucracy and the Minister about this cadre.

A BSc community health course was started in 2017. A respondent explained that some inspiration was taken from the three-year medical course that had been running in Chhattisgarh. However, the curriculum for the new course was different from the Rural Medical Assistants (RMA) course as it had more of public health and less of clinical care aspects, noted a member of the State Training Team.

While enrolments were done in 2016, classes did not start and there were no teachers. The course was affiliated to Ranchi University and accredited.

At the time of the first-year exam, Ranchi University asked for the curriculum. The curriculum was developed and then approved by the Senate (University Board chaired by the Governor) in 2018. The Preventive and Social Medicine department of the Rajendra Institute of Medical Sciences (RIMS), Ranchi was not very involved in the

curriculum. The course was designed to be of three and a half years, with six semesters and a six-month internship. Of the 500 units in the curriculum, 200 units were related to clinical aspects but it was not very medicalized. Other subjects related to the NHM, disease control programmes etc. The graduates were not supposed to prescribe medicines but could distribute them.

After the first batch, the enrolment was through NEET. In the meantime, the central government introduced HWCs and the CHO cadre. There were many overlaps between the CHO and the CHA. By the time the fourth CHA batch enrolled, the overlap with the CHOs became very clear. The state government said that they could convert the BSc course into a short certificate course. Discussions were held around absorbing the new CHAs into the government health system and a file was moved in 2018. However, the progress on a decision has been very slow. The first batch will graduate in March 2022 and the state plans to add 330 CHA posts in the NHM Programme Implementation Plan (PIP) 2022-23 for public health management for one year at the block level, according to a member of the State Training Team. The member added that there is also a plan to set up 3200 HWCs and CHAs could be absorbed in them too.

A district level official opined that the CHAs would be a better option as a Public Health Cadre, than the CHOs. He said that they should be posted at the block/district level. He further said that in his experience those who could not get into medicine enroll in the BSc community health course.

The future of the cadre is quite uncertain. There is some amount of conflict between the government, students and the Indian Medical Association (IMA). The government has clarified that they are a Public Health Cadre, which is acceptable to the IMA. But the students say they have come through NEET, so they are part of the medical cadre which is not acceptable to the IMA.

As the first batch graduates this year, the government will have to develop a concrete plan for the graduates. As a faculty member of the medical college said:

“Having a course is easy, but the government has to create jobs and roles for these competencies and a provision to induct them into the health system”.

### **District and Block NHM team**

The BPMs are responsible for programmes. They monitor and are responsible for monthly meetings of the block team. Their educational qualifications are usually MA, MSW, or Rural Development. Previously, even graduation and BBA were acceptable, but

now the government asks for a postgraduate degree in the social sector. The data manager is a graduate, often with a PGDCA or MCA. The Block Accounts Manager is usually a graduate. The computer operator has a PGDCA and graduation. There is a data cell for HMIS, but no analyses take place at the block or district level. The salaries are very low, therefore it is difficult to attract capable people. Currently Jharkhand government is paying nearly Rs. 40,000 for BPMs who are part of the Livelihood Mission, whereas BPMs from the NHM get between Rs. 20,000 to Rs. 30,000.

### **Nodal Officers and MOICs**

All health programmes have corresponding district nodal officers who are supposed to plan for, implement and monitor the programmes in the districts. There are block level nodal officers as per their specialisation—child health, RBSK, maternal health and family planning. However, often one doctor takes up multiple programmes or they refuse to take responsibility for programmes. In some districts there are programme-specific consultants from the NHM, such as for NCDs.

The mix and balance between the clinical and public health management roles of the MOIC depend on the availability of human resource at the CHC. One respondent said that MOICs have a double load due to the lack of doctors, that of seeing OPD patients and overseeing programmes in the block.

Another MOIC, who was posted in a CHC with four MBBS and four Ayush MOs, said that he doesn't usually see OPD patients. It is only when the OPD is crowded he has to see patients. Otherwise, he is busy with public health management and programme work.

A state official opined that MOICs don't end up working much in either of the roles. A district official said that number of the programme nodals or BMOs also do clinical work, and many have private hospitals. They, therefore, don't spend much time in public health work. He opined that there should be public health doctors or other public health management persons for such roles. He said that field workers will also be motivated that someone is with them. Moreover, public health specialists will have interest, skill, knowledge and will stay closer to the community. Clinicians create a distance with the community as they have more expertise in treating patients, said a District Health Official.

### **BEO**

There used to be Block Extension Officers (BEOs), but it is a dying cadre. They were general graduates, but now a new approach is needed with public health specialisation, a District Health Official pointed out.

## **Involvement of development agencies**

Development and UN agencies such as the WHO, UNICEF, IPE Global, JHPIEGO, CINI, and Tata Trust are also involved in field monitoring and compiling reports, etc. They play a role in public health tasks.

## **Mapping Training Capacity For Public Health And Management**

### **Institutional Capacity for Training in Jharkhand**

**Institute of Public Health:** The Jharkhand government has set up the Institute of Public Health that functions in association with the NHM. It is recognised as a training institute and has undertaken NHM trainings, CHO bridge courses etc. It has run the 1<sup>st</sup> responder certificate course, and courses in geriatric care and for ophthalmic assistants are proposed. The IPH has undertaken training needs assessment and has trained BPMU, PMU, doctors, lab technicians and ANMs. It develops a training calendar along with the NHM training cell. The IPH does have the scope to conduct public health trainings but is not adequately resourced.

**Government medical colleges:** The state had three medical colleges in 2016, after which new ones were opened in Palamu, Dumka and other regions. An AIIMS has also been set up, but the number of seats has never crossed 250 annually. A faculty member opines that there has been historically a lack of medical education facilities and the situation has not improved much in the last few years. For instance, the government has not created any new public health/PSM PG seats (or for any other specialisation) except in the RIMS. The number of medical seats is very low and negligible compared to the southern states.

The PSM department of RIMS teaches medical undergraduates and postgraduates. It has also undertaken training of health system personnel in areas such as nutrition, disease control and monitoring. The RIMS centre also does research and service delivery activities.

**State training Cell:** There is a training cell under the NHM at the state level. Within the NHM various units provide their needs to the training cell, which in turn sends details to the districts. The technical aspects are developed by the state with the use of modules from the Government of India (GoI).

A respondent from the state NHM team opined that the government should have facilities/institutes for trainings on public health. He said that the management trainings in private institutes where the government sometimes sends candidates, are very



expensive. There is the need to figure out new ways of training.

Respondents said that separate personnel are needed for providing training. Resource persons are already busy in their work and have less time to train. There is also the need to monitor trainings and undertake post-training follow ups. They opined that other than sahiya trainings, the quality of training is not up to the mark.

## **POLICY PROCESSES AT THE STATE LEVEL** **TOWARDS DEVELOPING A PHMC:** **PROGRESS TILL NOW AND WAY FORWARD**

**Exercise on absorbing the NHM into the Health Directorate (2016-17):** Five years back there was an exercise on how to absorb the NHM into the directorate, a member of the State NHM Team said. All the cadres of the health department and NHM were listed, and roles developed from the NHM to deputy director and district to state levels. The dying cadres were listed. Career progression for the remaining cadres was discussed. However, this process got stalled.

**Task Force Committee on Public Health Management Cadre (2019):** Jharkhand state constituted a Task Force Committee to work on a Public Health Management Cadre. The letter relating to this came from the Governor or the Chief Minister's office, said a member of the State NHM Team). The Director-in-Chief, Health Services, Jharkhand chaired the first orientation meeting of the task force on 10th December, 2019. This was followed by multiple formal and informal meetings, two of which were held on 16th January, 2020 and 20th February, 2020. The National Health Systems Resource Centre (NHSRC) provided technical support to the state to develop the TORs, and also in financial calculations.

Presentation by the Jharkhand Health Secretary on PHMC to the Ministry of Health and Family Welfare (MoHFW) lists the following guiding principles:

- 1) Minimal restructuring and disruption of existing health system.
- 2) Career progression for all public health professionals.
- 3) Positions will be designation neutral.
- 4) Optimal use of existing resources.
- 5) The existing staff (contractual and regular) would be given the opportunity to get regularised.

- 6) Chief District Health Officer (CDHO) should be the point of convergence.
- 7) Incentives/schemes for the existing workforce to take up public health courses.  
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- 8) Two-time bound promotions / dynamic assured career progression (ACP). Thereafter, promotions will be based on performance and the annual confidential report (ACR).

The presentation also outlines the main issues that need to be dealt with:

- Regularisation of HR, their pension and other liabilities shall be continuously funded by Gol as per 60:40 criteria.
  - I. Clause 1: For minimum of next 15 years.
  - II. Clause 2: Until the state Health Expenditure of GSDP reaches at-least 6 per cent for two continuous years.
  - III. Clause 3: whichever is earlier.
- Revisions in the IPHS may lead to changes in the structure and states may take multiple years to reach the IPHS, hence the state shall have flexibility to adopt or change the required Clinical Manpower at different levels.
- Clear reporting structures and non-overlapping TORs.
- Process of Regularisation: Fresh new selection (open pool) and open exam criteria with preference to people with similar work experience/weightage.
- The presentation by the state government provides the following update on progress<sup>r</sup>:
- Information on all posts under the NHM, all Directorates, Medical Colleges, Jharkhand Arogya Society, Jharkhand AIDS Control Society, GVI, AYUSH Directorate, and Jharkhand Health Infrastructure Development Corporation Limited have been collated and listed.
- Tentative Organograms developed and structure of the PHMC proposed and deliberated on.
- Creation of Additional Director of Tribal Health under Director of Public Health in Jharkhand.

- Discussion on need for a Directorate of Urban Health to look after and regulate the healthcare services in urban areas.
- It was discussed that there needs to be clarity in position of both regular and NHM staff which needs to be documented.
- There is need to decide the entry-level position for different category of health care providers.
- Financial implications of all regular and NHM posts are being analysed.

Few state NHM team members and other officials opined that the discussions in state were related to NHM regularisation and enabling salary parity.

“This brought relief to those in the NHM”, said a State Health Team member.

Respondents, some of whom are members of the Task Force Committee, said that the committee planned career progression even for the ASHAs (Sahiyas) and Sahiya Sathis till the level of District Community Mobiliser. A distinction was made between clinical (including Nursing) and Public Health Cadre, in which medical doctors would have the choice to become Civil Surgeons and leave clinical work. Two-three separate directorates have been proposed so that the NHM staff could have career progression from Sahiya Sathi to state level. NHM consultants were to be designated as programme officers, with promotions after five years and they could go up to the post of deputy director. A CHO could do MPH and work in the health administration. The organograms were developed in relation to service delivery structures as per population norms and IPHS, said a member of the State NHM Team. Implementation was to happen from the block level onwards under the 15<sup>th</sup> Finance Commission.

The components of the PHMC are presented as follows:

Health Professional Education	Clinical/Hospital/ Services/ Health	Medical Training Public	Administrative (Health System)	Activities
<ul style="list-style-type: none"> <li>• Medical &amp; Dental Education &amp; Research</li> <li>• Nursing Education &amp; Research</li> <li>• Paramedical Education &amp; Research</li> <li>• AYUSH Education &amp; Research</li> </ul>	<ul style="list-style-type: none"> <li>• Secondary / Tertiary Care</li> <li>• Comprehensive Healthcare</li> <li>• Urban Healthcare</li> <li>• Tribal Healthcare</li> <li>• Trainings &amp; Research (SIHFW/SHSRC)</li> </ul>	<ul style="list-style-type: none"> <li>• Primary</li> </ul>	<ul style="list-style-type: none"> <li>• Procurement, Infrastructure, Drug &amp; Diagnostics</li> <li>• Monitoring &amp; E-health</li> <li>• Regulations</li> <li>• Human Resource for Health</li> <li>• Medical Corporations</li> </ul>	

In the way forward, the presentation states:

- 1) Calculation and analysis of additional burden on state for implementation of a PHMC.
- 2) Approval of cabinet note and organograms from the task force.
- 3) Preparation of the PHMC task force report.

While a lot of progress was made within the committee, the process became slow due to frequent changes in leadership posts. The Covid-19 pandemic was also one reason for the delay. State officials felt if continuity had been there in leadership, a cabinet note would have been ready for presenting in the Cabinet.

Respondents also gave suggestions on strategies to accelerate the process of approving the PHMC in the state.

“This [PHMC] can only be done through the central government and they should do six monthly reviews to see progress in the states”(State NHM team 4).

“If Niti Aayog gives a push and has meetings with the bureaucracy then the state will do it”(State NHM team 1).

“Strategically, once Bihar passes the cabinet note on PHMC, the Jharkhand government can also be persuaded to do the same”(State Official).

### **Factors influencing prioritisation/progress of PHMC**

Perspectives, experiences, health systems challenges and implementation issues

#### **Views on importance of cadre:**

All respondents agreed on the need for better integration of public health and management into the health system and the need for a cadre to be able to do that.

“We should have [PH] cadre as health is not only about cure, it is holistic and about preventive health and health behavior too. It is also the need of the hour”. (Faculty Medical College)

“A clinical person is specialised in specific things, for instance a gynaecologist will see to the labour room. But a public health person can look at the whole system”. (District public health consultant)

Moreover, there were concerns that the public health functions were not being performed within the existing system, that there is very little data analysis, review, and monitoring.

“The review systems are not good. No one looks at data. Nodal programme managers are not capable or willing to do their job and so they are not able to motivate those at the block or lower levels. Evaluations are needed of the actual utilization of various services.”(District public health consultant)

“Doctors in facilities have more expertise in treating. The public health work is done by the ANMs and ASHAs, but there isn't proper monitoring or supportive supervision. Many programme nodal officers do clinical work and have private hospitals. Therefore, there should be a public health doctor or other public health management persons for such roles. Field workers will also be motivated that someone is with them. A public health specialist will have interest, skill, knowledge and will be closer to the community. With clinicians there is a distance with the community”. (District health administrator)

### **Faultlines between the biomedical and public health understanding of health**

The perspectives around the importance of public health have influenced the prioritisation of having such a cadre. The common understanding of health is that it is biomedical or treatment focused and this undermines the need for public health. The social determinants of health are also not recognised adequately within the health system.

“Non-public health people think of health only as biomedical/treatment. Therefore, public health always takes a back seat in the eyes of the administration and politicians. The thought that health can happen without a medical component is not there”. (Faculty Medical College)

“Currently everything is more curative than preventive and promotive, for instance even if you see how post-natal care is provided. There is not enough focus on those aspects”. (NHM State Team 1)

“Healthcare workers don’t understand the social determinants of health. Sahiya mobilises women for ANC but not all facilities are available in the sub-centres and so women are not willing to go. The ANM and other health workers scold the ASHA and tell her that she is not counseling the women and that’s why they don’t want to come”. (District NHM Team)

### **Conflict between public health, PSM and clinical disciplines**

Respondents also spoke of the historical conflict between medicine and non-clinical disciplines that leads to undermining public health. They also spoke of the fault lines within medicine when it comes to PSM specialisation.

A faculty of the PSM department opined that there may be opposition by PSM doctors themselves to public health, as they feel recognizing non-medical public health people/disciplines may reduce their power further.

“I have heard people saying that ‘apne subject ko bachana hai’”. (Faculty Medical College)

He further opined that one of the reasons PSM may not get respect within the medical discipline is that PSM has been unable to make a mark either in clinical work or in public health.

“If PSM people do good work they will get respect. Maybe inferiority complex makes us not want to excel”. (Faculty Medical College)

He suggested that more work needs to be done to improve the profile of PSM, through good teachers and significant and visible contributions to public health. Further, it needs to be realised that we need both PSM and non-medical public health and they should not be pitted against each other.

“Till there are viruses there will be need for public health”. (Faculty Medical College)

### **Experience of the NHM**

Respondents said that some public health understanding developed after the National

Rural Health Mission(NRHM) was introduced. Doctors and those in the health system recognised the need for non-clinical and public health and management expertise.

“Public health got some direction after the NHM, but it still had a medical focus. It got incorporated in existing perspectives but could not emerge as an individual science”. (Faculty Medical College)

“All programme cell heads are from the directorate, so they know they can’t work without the NHM”. (State NHM Team 3)

The quality and capacity of NHM staff also influenced how the health system accepted them.

“It depends on capacity of a person. In the NHM there are MBAs who have expertise in business but not in public health”. (District Health Officer)

Health administrators at block and district levels felt that as the NHM staff is contractual, they can’t be given final responsibility for anything and the ultimate accountability would always lie with the health administrators. Moreover, their precarious working conditions demotivate them.

“If DPMUs don’t do their work, government will take action on us, not on them”. (CMHO)

“The NHM was given for field work but they are contractual. They don’t have increment or career progression and no job satisfaction. Therefore, we can’t get work from them”. (CHC, MOIC)

However, the experience of the NHM also exposed the faultlines and power differentials between clinical and public health.

“Paramedics listen to BPM, but clinicians take orders only from the MOIC” (Block NHM Team).

According to respondents from the NHM, the way the NHM is currently located within the health system, undermines it and the people in it.

“ The NHM gives the message that health is a temporary issue. But health of a state or nation cannot be a ‘mission” (State NHM Team 1).

Respondents within the NHM were apprehensive, based on their own experience, about whether the health department would accept such a cadre.

“ A Public Health Cadre is great but where to place them in the system? There would be conflict. When the ASHAs came, the ANMs thought they will be replaced. It was the same with the Directorate”. (State NHM Team 4)

Nevertheless, respondents felt that the PHMC was important for mainstreaming the NHM.

“This cadre is important for the NHM as there’s no job security. Existing employees should be included in the cadre”. (State NHM Team 2)

### **Impact of the Covid-19 pandemic**

There was a feeling among respondents that the pandemic had illustrated to clinicians and bureaucrats the importance of public health.

“After Covid-19, the need for a Public Health Cadre was felt”. (Faculty Medical College)

A respondent went on to (perhaps sarcastically) suggest that there should be another pandemic in 2023-24 in order to emphasise the role of the PHMC.

### **Health system challenges**

Respondents listed existing health system challenges that need to be resolved before introducing a new cadre. They also spoke about how the existing challenges could undermine successful implementation of the PHMC and issues that needed to be considered before introducing a new cadre. Concerns related to recruitment and retention of HR, private practice of government doctors, behaviour towards patients and lack of dignity or respect while treating patients, political influence in postings and transfers and corruption and so on.

The recruitment and retention of the health workforce and their discipline, motivation and accountability were primary concerns.

Respondents spoke of the shortage of human resources, especially of doctors, which needs to be resolved. Budget is an issue, though the NHM funds sometimes remain



unutilised. People are also reluctant to go to remote areas. This leads to less coverage of services.

A CHC MOIC said, "The vacant seats of MOs should be filled. My hospital has four posts vacant out of seven. There are 2-3 permanent nurses and rest of the 20-25 nurses are contractual."

Even when doctors are posted to an area there is a problem with absenteeism.

"Absenteeism of clinical people is a huge problem. This is due to both the culture of the health system and lack of proper infrastructure like accommodation".(District NHM Team)

Doctors also use political influence to remain in urban areas, leaving the rural and remote areas underserved.

"There are 40 specialist doctors in Ranchi Sadar, among which 18 are gynaecologists". (District health administration)

One factor regarding challenges in recruitment and retention is the increasing number of contractual appointments. Contractual arrangements also affect the quality and coverage of services.

"When recruiting for contractual posts, most nurses either don't join or leave and go to Bihar where salaries are better". (District Health Team)

"Contractual staff have to pay out of pocket for travel and other work, so they are less enthusiastic to work. For example, they have to carry the vaccine carrier by an auto and pay for it themselves". (MOIC)

There are huge vacancies also in the NHM district/state team. This is because public health posts under the NHM don't seem very attractive due to their precarity and low salaries.

"Currently even non-medico [NHM] posts are vacant due to state policy on domicile, and due to the lack of pay hikes. People are not interested. So, the government gets lesser number of applications than for clinical posts". (NHM State Team 1)

The roles and responsibilities of the NHM and other cadre are not very clearly defined.

“In the NHM, TORs and career progression are important. But it is hard to find TORs of regular cadre, let alone of the NHM”. (NHM State Team 1)

The government has started an incentive programme to attract medicos to historically underserved areas in which they can quote their own salary. Respondents said that the government will need to make sure that public health people go to districts as well.

“Bidding process and incentives should be provided for public health as well”. (NHM State Team 1)

### **Implementation challenges**

One of the main implementation challenges is around assessing needs and determining requirement for human resources. There was need to think of what to do with current HR and plan policies keeping them in mind.

“There are not enough MOs in the government, new recruitments would have to be made”.

“Supervision, monitoring and evaluation roles are important. You can take existing staff but you need to keep them dedicated for this work”. (District Health Administrator)

“Depending on work experience we may need more personnel at the block and district levels. Though the current cadre is sufficient at the moment, it would need to be expanded with expansion of needs, services and new roles”. (NHM State Team 4)

The existing public health personnel within the health system, and specifically within the NHM, have to be accounted for in the plans.

“Within the NHM, many in the staff have not done MPH. But if they are to be considered for the cadre the government should provide facilities and resources for them to do short-term public health courses, just like a bridge course. The government could float a course and give staff members 2-3 years to finish it. It could make this a condition for posting people in the directorate”. (NHM State Team 3)

Most respondents were of the view that it would be important to have people from both clinical and public health backgrounds in the PHMC, that it must be some sort of a mixed cadre. The need for and importance of orienting MOs to public health and management as well as building capacities of public health professionals was emphasised.

“Successes in programmes like polio elimination has been due to the public health nature of the MOs” (Faculty Medical College).

“There is a need for a mixed cadre/team. There should be a coordination committee to work as a bridge between clinicians and public health personnel. Clinicians should also have knowledge about public health. Non doctors or public health managers should also be involved” (District Health Administrator).

“Some clinicians who are interested can be given training in public health specialisation so that they are motivated to work with communities and learn to coordinate with everyone, from ASHA to CS and also get financial training. Behavior problems also arise, so training in organisational behavior is also necessary. For non-medical public health people few institutions in Jharkhand should have a 6-month to oneyear course. Initially the course can be linked to the existing management. People are reluctant to go far (like Delhi) for long courses. We need more training infrastructure in the state”. (District Health Administrator)

“The CHOs can be the lowest rung in thePublic Health Cadre and someone with a specialisation in public health would need to lead them. The MOIC can guide them. MPH or public health specialised people should be recruited as the authority”. (Faculty Medical College)

While developing this mix of cadre was emphasised upon, there were concerns on whether it is going to be ever possible.

“Other medical and allied subjects should be brought into this, for instance MPH, Nursing etc. But this process is seen as too complicated, which is why the government has shelved it..

“Government should try to figure out strategies for the PHMC. The cadre should be different from existing categories of clinical, medical education etc. But for this we need strong administrative and political will, led by

strong public health expertise. But I can't see it happening soon" (Faculty Medical College).

Lack of clarity on who will finance such a cadre was a primary factor articulated for delayed decision making for setting up the PHMC.

"Even doctors in the committee agree on the PH cadre, but the question is who will pay—the state or the centre? Policy makers are not pushing this because of the possible financial burden. No one wants to take responsibility" (State NHM Team 2).

"The bureaucracy does not want it and the Directorate is reluctant to have such a cadre" (State NHM Team 1)

### **Towards Recommendations For A PHMC For Jharkhand**

There seems to be a broad consensus in Jharkhand regarding a PHMC. A lot of work has been done in designing the structures and roles and responsibilities, through consultations between the health department and the NHM. Political and bureaucratic will needs to develop for immediate implementation of the PHMC.

## **MADHYA PRADESH**

### **Mapping Public Health Management Actors, Functions And Roles**

Key actors in public health and management functions in the existing system and their functions and roles

#### **Community and block level**

At the community level there are ASHAs. At the block level there is a Block Community Mobiliser who manages the ASHA programme. Reporting goes from the ASHA to ANM to LHV/Supervisor to sector medical officer (during Saturday meetings). The post of LHV/supervisor has been abolished. Instead, a senior MPW is given the role of supervisor.

CHOs have been posted in Health and Wellness Centres and a big part of their work is to provide guidance on the preventive and promotive aspects of NCD.

“Posting of CHOs is a very good move. It brings healthcare nearer to people”. (State Nursing Faculty)

The sector supervisors come to the block every Monday to give reports and to hold discussions. The BEE and BPM are involved in compiling the reports.

The BEE used to be from a social science background and engaged in IEC and various public health activities. Their role started decreasing with the initiation of the NHM block team.

“Earlier we used to do all the family planning work. Once the NHM came they started doing our work. They brought with them a budget. We don’t have knowledge and nor do we interfere”. (BEE)

The post has now been abolished and no new recruitments are taking place.

BPMs are usually from the management background and don’t have public health training. Respondents from the health department opined that while they are useful in management and administration, they don’t have the requisite knowledge and skills for public health.

“BPMs can help in management, and they are good at computers. But they don’t know public health, like how to study the IMR etc”. (BMO)

The block NHM programme also includes a Block Accounts Manager.

A new cadre: Block Public Health Manager/Officer

The 15<sup>th</sup> Public Finance Commission has approved the post of Block Public Health Manager in Aug-Sept 2021 in Madhya Pradesh. It makes provisions for a Block Public Health Manager/Officer through the NHM, but this is not part of PIP. They will have to be qualified in health management/hospital management.

They are to be placed at the CHC/PHC level and will mainly look after the health facilities. The recruitment process is ongoing. However, district and block officials did not seem aware of this new initiative.

### **District level**

At the district level there are nodal officers for different programmes, as follows:

DHO1 – Maternal and reproductive health nodal

DHO2 – Financial, family planning, Ayushman Bharat

DHO3 – Disaster management, epidemic management

DIO- Immunization, child health, urban health (in some cases)

DTO- TB, Leprosy, HIV

DMO- Malaria

Earlier there were District Health Officers and Administrative Officers (AOs). The AOs were non-clinical personnel. The post of the AO was discontinued after 2006-07.

The NHM DPMU team includes the DPM, M&E officer, DAM, DCM, civil engineer, epidemiologist, data manager IDSP, routine immunization data manager, data operator, and Assistant Program Manager (urban).

At the state level doctors come on deputation to the NHM to play the role of nodals in the various programmes.

## **Mapping Training Capacity For Public Health And Management**

### **Institutional Capacity For Training In Madhya Pradesh**

The GoI had promoted public health management training in MP. Doctors have been sent for MPH training from 2010 to TISS, PHFI and IIHMR. In 2019 six doctors were sent. They have been posted in administrative roles, with four in state health directorate and two in district programme management.

“The idea is to post them where they can put to use their education”(State Training Cell).

A state institute in Gwalior has been set up with PHFI.

The SIHFW is supposed to do capacity building, but it does not seem to be doing that (Public health expert). There are regional centres where some trainings happen.

AIIMS Bhopal does programmatic trainings, which is led by the community medicine department. But it does not have a School of Public Health. Azim Premji University is planning to start a School of Public Health and a MPH programme in the state.

### **Policy Processes In Mp Undertaken To Develop Phmc**

A committee for developing the PHMC had been formed and it has submitted its

recommendations two years back. The government official in charge of developing it said that a proposal for PHMC has been made and submitted recently to the finance department.

The proposal is to divide the existing structure into clinical and public health, with 20 per cent to 30 per cent additional posts. This new structure has been designed from the block to the state level. The number of posts at the district level has been increased. No additional funds are required at this stage.

According to the official in-charge, inputs were taken from the department. Suggestions were also taken informally from the IMA. However, interviews revealed that very few government officials, including at the state level, are aware of this committee and fewer knew that a proposal had been developed and submitted. There has been no public discussion on it either, with public health experts or others. The official in-charge was not willing to share any further details of the proposal with the researchers.

The PSM students at the medical college had heard that the government is developing such a cadre and that a committee was formed, which had submitted a report. They had recently given a representation for PSM to also be included in the cadre. The official they met said that the file has been submitted and is in process. They believe that the process of establishing a PHMC is on, but it could be slow.

“We heard there is a PHMC being formed, and they are adding MPH, DPH etc. but not PSM. We went to the ACS, and he said the PHMC process is ongoing and the government is considering adding PSM”. (PSM student)

In their letter they have provided a rationale of why it is important to have a PHMC. They gave the example of Tamil Nadu and compared maternity indicators and the advantages of having a PHMC. They have also quoted the instance of UP where public health specialist is a new post.

## **Fault Lines In The Discourse In Mp**

The usual faultlines between clinical discipline and public health exists in Madhya Pradesh. Respondents from the NHM were quite desolate about the way their public health work does not get recognised by the health department.

“We conducted the Vishwas module, i.e. the VHSNC training which was on preventive and promotive health. We implemented it as a campaign and took the help of WCD, NRLM, TSC and others. But we got no appreciation from the health department. They don’t understand that we should build collectives or groups that will take the work forward”. (NHM State Team 3)

A respondent from the NHM opined that the hierarchy between the two disciplines has been responsible for undermining working conditions of non-clinical people (such as in the NHM).

“The health department has no understanding of public health. Health is seen as highly technical. Doctors and other healthcare workers discriminate against non-clinical people, saying that doctors have studied for 8 years or done some courses and therefore they don’t agree to better working conditions for non-technical people”(NHM State Team 2).

A faculty at the medical college opined that the system of medical education has a lot to do with the way clinicians consider public health and that also seeps into the health system.

“Public health is a state responsibility. But when we talk about the public health system, we only talk about services delivered by clinicians. Training given is also focused on treating patients. Service rules are also about treating patients. The hidden part of public health is not taught”(Faculty Medical College).

“There is not a lot of public health thinking in the government or the education sphere. Doctors gain perspectives through their experience in working at different levels of the health system”. (Public Health Expert)

Within medical education, community medicine too is not given much prominence. There are no special posts for postgraduates in community medicine within the health system. Respondents in community medicine complained that postgraduates in community medicine do not get job opportunities and that instead, the government is training clinicians in MPH/DPH for service upgradation. For instance, a year ago the government made a policy on administrative posts in which they included only those with MPH and DPH as eligible. The Indian Association of Preventive and Social Medicine (IAPSM) went to meet the government and demanded that MD in Community Medicine should also be added in the eligibility criteria.

Job opportunities for them are limited to the following:

- 1) Education sector
- 2) Private practice
- 3) Hospital management



4) WHO consultants

5) Join as MO in the public health system

“MD CM is not in the system with a specialist role. They have to join as MOs. They are not able to compete with those with the MPH qualification for other roles”(Faculty Medical College).

However, there was a view by other clinicians that community medicine graduates have been unable to contribute adequately and therefore they are undermined.

“They (MDCM) are also to blame as they should come up with research, papers etc. but they don’t do that” (State Nodal Officer).

Respondents spoke of the public health role of nurses, especially of DPHN and those in administrative and teaching posts. The DPHN does administrative work, manages staff nurses and biomedical management in hospitals.

Nursing staff spoke of the discrimination faced by them within the health system, medical education and of being burdened with admin and clinical work.

“Doctors say these are nurses. What will they do”? (Nursing Faculty).

“There are no posts for nursing faculty in the government nursing college. Since 2019 the BSc nursing course has been running and the MSc course started in 2020. While courses are getting upgraded, there is no expansion of HR. Staff Nurses are attached as faculty. On the other hand, there are numerous private nursing colleges that are of bad quality. They have non-attending students who don’t learn anything. This is the main reason for low level of nursing. These colleges need to be shut down” (Nursing Faculty).

Respondents suggested that there should be public health posts for nurses from block to state levels.

Interviews also revealed the conflict between bureaucracy and the health department. IAS officers had taken up leadership roles in the health department. Among administrators of the health department there was resentment regarding the power exerted by bureaucrats who are “non-technical” people and they feared that they may take up more health posts.

“Earlier medical people were state level DHS officers, then 3-4 of them went to jail and since then IAS officers have come in. They respect me so they behave well, but that’s not the case with everyone” (State Nodal Officer).

“I think even the posts of CMHO/CS will go to the IAS. That will not be good. But government wants that as they feel the IAS can bring discipline” (BMO).

Respondents spoke about doctors being excluded from expert committees on Covid-19 and in other decision-making which had an impact on programmes and their implementation.

“In the Covid technical committee there were all IAS officers. The technical staff [doctors] was disgruntled. Political people have less understanding and so the bureaucracy does what it wants. A new person who comes wants to do things their way and does not want to continue the work that is ongoing. Newly posted IAS officers should not be allowed to demolish existing structures and programmes” (NHM State Team 2).

“Policy makers [bureaucrats] sit in AC rooms. There are no technical people there. There must be doctors, nurses etc. in such posts. The bureaucrats are least bothered about my problems or the technical issues” (BMO).

However, respondents also said that Covid-19 made people aware of the importance of public health.

“After Covid, the administration has understood role of community medicine”(Faculty medical College).

“Covid taught us the importance of public health. Whatever the problems were in government’s response to the pandemic, infrastructure has got developed and nurses and ANMs have been recruited” (NHM State Team 2).

“Doctors don’t understand public health, but with Covid they are learning. If they agree to the PHMC then the government will take it up as doctors would also be the first ones to oppose it” (Public Health Professional GD).

Respondents spoke about the role of the NHM, including the problems being faced by it. Respondents said there is convergence between the health department and the NHM as all programme budgets are from the NHM. Both teams sitting together in one space has also improved the relations between the two.

“Having the new NHM building has brought all public health people under one roof. Now we can speak to each other regularly. Earlier we were in multiple buildings”(State NodalOfficer).

However, still some conflict exists between the health department and the NHM staff, to a great extent due to the way the NHM is positioned within the health department. The salaries of the NHM team has not increased much and are much lower than the development partners and the government staff.

“Earlier people used to say that the DPM will advise or do the work. But now people don’t listen to us as we have a lower salary”. (DPM)

Respondents spoke of how the objectives of the NHM and the resulting roles and responsibilities have changed.

“The NHM vision of decentralised planning has not been fulfilled, there is no scope for it” (Development Partner).

“The NHM recruitment was done on different terms which was subsequently changed and expanded. We don’t have any technical hands for support at the district level” (DPM).

There is a lot of frustration among the NHM cadre. Those who want to take up public health work are unable to do so.

“There is high attrition in the NHM. It is not a formal cadre; there is no promotion, career progression or social protection. I moved from the NHM as there is no upward movement” (Development Partner).

“Many of the NHM staff have left. Only those who have no option or are forced due to family ties etc., stay on” (DPM).

“I would have liked to do MSW type of work, but I am restricted to a desk job” (DPM).

## Perspectives On The Relevance Of The PHMC And Their Role In MP

### For management of hospital and overseeing programmes

Respondents discussed the need for a PHMC to undertake public awareness, IEC, data analysis and management roles. The need for a hospital manager (at each CHC) and a person to oversee the programmes in the block (BPM) to support the BMO was expressed, including suggestions for improving retention of HR at the block level.

“Each block should have a BPM and a hospital manager” (BMO).

“There should be separate hospital administrators like there is in the private sector. They should be at the level of the PHC and CHC. There can be personnel with a MPH or Hospital Administration qualification at the block and district levels. There are many unemployed youth in rural areas who may be motivated to join at the PHC level. There is need to make it easier for local people to join the government system” (Public Health Professional GD).

There were suggestions that BMOs should be full-time posts as they have to look at the hospital and the whole block. There was also the view that administration and budget should be with health department officials such as BMOs and not with any of the others.

“I want to sit in office for a few hours and then go for a field trip. I shouldn't have to worry if my hospital does not have a medicine, or if someone is on leave, or have to manage infrastructure. Doctors should only do clinical work and not have to take care of cleaning fans, replacing lights etc. We must have infrastructure and HR for these tasks” (BMO).

However, concerns were expressed regarding the public health skills, the knowledge of BPMs and the need for them to be trained. Respondents also spoke of the importance of strengthening processes and cadre below the block level.

“Sectoral approach is the best approach and that is how the burden on BMOs can reduce. But sector supervisors do not do much work, but their role is important. Senior ANMs can be trained to do this work, supported by the sector MO” (BMO).

There is a hospital manager post at the DH, but it is mostly vacant.

To have different people playing public health, administrative, and management roles

and clinical roles

Many respondents highlighted that the staff is overburdened and struggle to play a double role of administrator and clinician. There was the predominant view that physicians have the choice to choose the public health stream and should be given an opportunity to be included in the PHMC.

“Physicians do public health and administrative work. In the periphery they are overburdened so this is challenging. Doctors are posed as poor administrators, but they work hard despite resource limitations” (Faculty Medical College).

“MOs are very busy with admin work at the PHCs. Instead of doing clinical work they have to spend more time in compiling data reports, management of funds and budgets, campaigns, camp logistic management. Admin work compromises treatment. They have to start OPD late or close early or tell the other staff to see patients” (Public Health Professional GD).

While non-medical people could be part of the cadre, there was an opinion that the leadership should be with the clinical person who has chosen the public health and administrative role.

“Doctors can have two options, that of public health service or clinical service. The team members can be non-clinical, but led by a clinical person. This currently exists in the programmes through the nodal officers” (Faculty Medical College).

“Non-medical people can be part of the team but the leadership has to be with medical people” (State Nodal Officer).

### **To function as link workers**

Respondents also said that the PHMC can function as a link between the bureaucracy and health practitioners. Its staff also needs to serve as coordinators of community work and undertake policy planning, training, community meetings etc. But it is important for them to be integrated within the existing structure instead of being a vertical programme.

### **To support digitalisation**

Another felt need was that of personnel who could support data entry and analysis. Over the last few years online reporting has increased, which means more work for the programme officers. However, older staff is unable to keep up with digitalisation, therefore alternative support data operators are needed.

Respondents emphasised the need for data entry operators at all levels so that health workers can do clinical work. Those handling IT and management functions should be separate.

“There are many programmes and more online work. The current IT staff is not adequate. Moreover, there are none at the block level” (DPM).

The health staff was also critical of the extent of digitalisation in the health sector.

“CHO delivery karaegi ya format bharegi (Will the CHO attend to a delivery or fill data formats?)”.

“Doctors are not able to do work due to digitalisation. Land records or revenue department can benefit from digitalisation, but not health. If we keep talking about numbers, when will we work?” (DHO),

### **To provide feedback from the field to the district**

The importance of a cadre which could give honest feedback about programme implementation and gaps was felt by district level officials. They were not happy with the online review meetings. They said that earlier the NHM team would come to the districts for visits, but now they evaluate only as per data. As a result, they are unable to identify gaps in the same way they used to previously.

The team members shared their experience with a development partner who had posted block level staff to provide regular feedback to the district. They used to attend all VHNDs and the district team member would collate data and share it with the CMHO and the Collector who would in turn take action based on feedback. However, the programme had been closed down.

“Now the system is more programme based. It seems government wants numbers, not quality” (DHO).

“In the monthly block meeting the NGO supporting the family planning programme used to make presentations and give feedback to the BMO. The BMO started using the data to monitor performance and took

appropriate action to improve services where there were problems” (Public Health Professional GD).

## **Towards Recommendations For A PHMC For MP**

In MP the proposal for a PHMC has been developed and is awaiting financial approval. However, it is shrouded by secrecy and very few people, even within the health department, are aware of its contents.

The importance of a PHMC was clearly felt by most, but many cautioned that it should not emerge as a vertical initiative. Moreover, it was important for MOs and others to also get some public health training in doing their clinical work.

“A PHMC would bring in public health understanding and make the health system stronger. Currently there are no public health people in senior posts. But there should be more than just a cadre. Public health training should be part of all medical education and training. If some cadres are left out, it would create fissures and the PHMC would not be successful” (Public Health Expert).

However, there is need for a gradual transition and implementation of the cadre. Initially the leadership could be from the clinical side, and gradually the public health personnel could play this role.

“There is already a leadership of non-clinical people through the bureaucracy. The CMHO reports to the Collector. But there is conflict which may increase between clinical and non-clinical staff with a PHMC. Therefore, there needs to be a gradual transition” (Public Health Expert)

Respondents opined that the PHMC needs to have clear roles, responsibilities and power. One has to be careful that its staff is not delegated simply to tasks like writing emails, making ppts or acting as assistants. They also must be able to engage with civil society and the community to build accountability, both external and internal.

A possible structure of an integrated health system with PHMC, public health, management and hospital administration roles was presented by the faculty at the medical college.

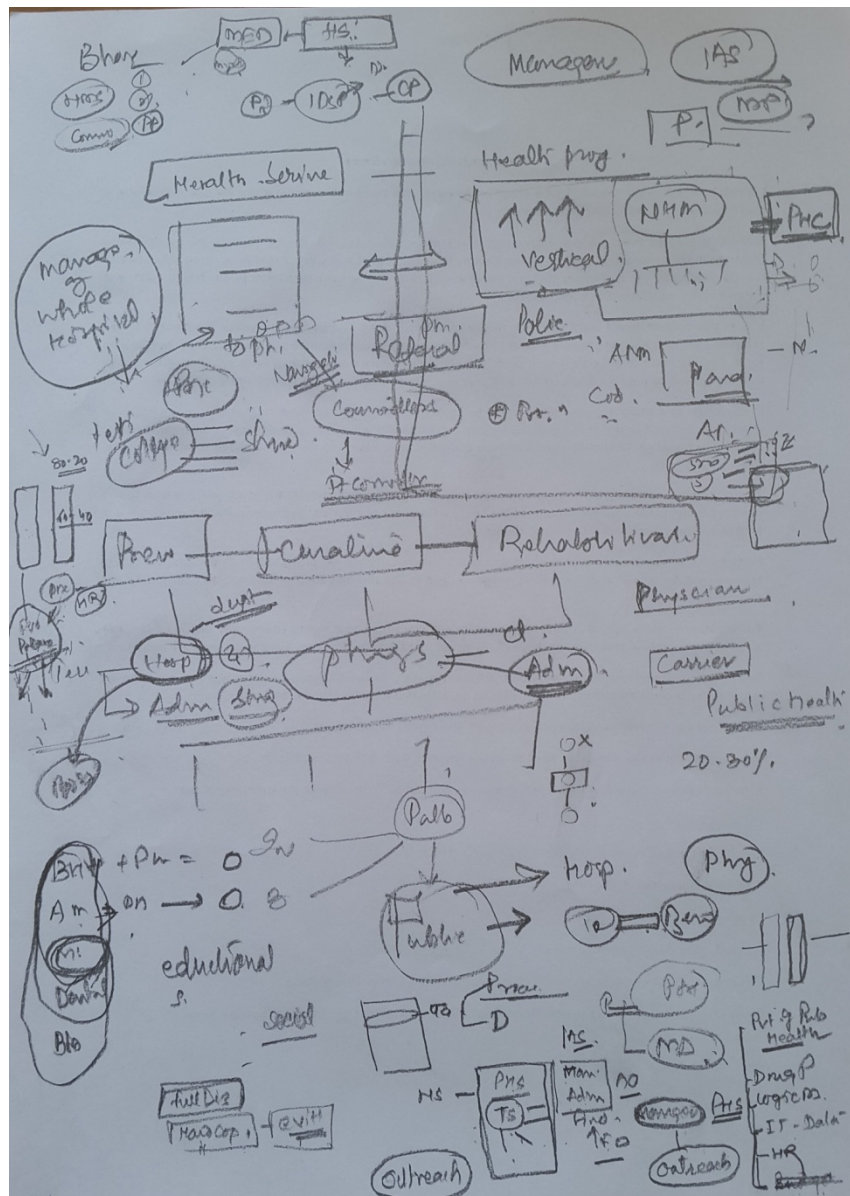


Figure 1: Visualisation of personnel and roles within the health system by a respondent

Respondents said that there is need to do advocacy at all levels to push for a PHMC. It should be made into an election promise. People should realise the need and push politicians to work on it.

Respondents, while highlighting the need and advantages of a PHMC, cautioned regarding the existing issues within the health systems. They reiterated that unless the systemic issues were resolved, a PHMC would face the same problems and not be successful. Some of the broader health systems issues highlighted by respondents, along with suggestions to improve them are as follows:

**Need for HR policy for career progression and promotions:** Respondents spoke about the stalemate in promotions. All administrative posts such as BMO and CMHO are not regular posts but 'in-charge' posts. Younger people are being posted to higher posts. There was frustration among the senior block and district officials regarding this.



“Jis pad mey bharti hue, usi pad mey retire ho jaoonga (I will retire at the same post that I was hired)” (BMO).

Respondents spoke about how most posting and transfers are through political influence. They said whoever gives more money will get preferred postings. There were suggestions that a HR policy needs to be developed by the government.

**Need for financing the public health system instead of outsourcing:** Respondents said that the state either doesn't have money or doesn't want to spend it on public health, therefore there is very little work on the public health system being strengthened. With the available budgets there is a lot of outsourcing that is being done for various services and activities, including the publicly funded health insurance. As a result, the private system is growing strong, and government one is weakening.

In one block where HR has been outsourced to a private agency, the respondent said that the agency collects Rs.11,000 from the government and gives the sweeper Rs. 6000 to Rs. 8000. The security guard had also not been paid for a long time.

A lot of the PPPs are driven from the national level and the states don't have much say in their performance and monitoring.

“In 108 [outsourced] emergency ambulance service, the BMO has no ownership, no voice and no role in monitoring. But still the BMO is supposed to respond to the complaints that come in” (BMO).

**Need to have robust policies in HR recruitment and retention and their implementation:** Respondents spoke about challenges in HR retention. Some of the reasons highlighted were the lack of a promotion policy, salaries paid, admin issues, treatment and behavior by higher authorities, and doctors' security.

Respondents also spoke of the lack of support staff in hospitals, which made them demotivated.

“We don't have posts of ward boy, sweeper, or ayah bai. They want the hospital to be mopped, but don't give HR for it” (BMO).

There was an overwhelming demand to improve availability of the health workforce at all levels, especially for allied health workers and support staff.

**Need for streamlining and reducing contractualization:** The MP government has said that contractual employees should be brought into the 90 per cent basic salary bracket paid to regular staff. Respondents said that while this has been done in

education and WCD, health was considered highly technical and therefore it was not implemented. There are problems in motivation as the salaries of contractual ANM, SN and pharmacists are nearly half of the regular staff.

“Each department has its own contractual arrangements and the state does not have uniform guidelines. There are around 4-5 lakh contractual workers. A state HR policy is needed for contractual work” (NHM State Team 1).

## **CONCLUSION**

The experiences of the three states provide many critical insights on planning for and implementing the Public Health and Management Cadre. It is clear that the idea of a PHMC was initiated by the central government at different points of time, with the NHSRC playing a role in supporting the states in subsequent processes. The study finds that it has been a long-drawn process, with a PHMC in discussion for many years. However, even today it is not clear whether the PHMC will be implemented in these states and different states at different stages of the process. The pathway for each state has been slightly different with various actors playing significant roles in each state.

The Covid-19 pandemic has helped in developing an interest and need for public health, though there are faultlines in the discourse that need to be navigated and which are very similar for all the states. There is conflict between clinical and non-clinical personnel (mainly associated with the NHM) and their power within the health system. The conflict is between bureaucracy and doctors, between clinical and public health/community health specialisations and within the health system hierarchy. Broader health systems issues, availability of funding and political and bureaucratic will are the other determinants. Finally, it is a process of negotiation between the various actors involved.

The study also reveals that while the emphasis on a public health cadre is important, it is also critical for the public health roles and understanding to be integrated within the health system at all levels, for more responsive and comprehensive healthcare.

# **ANNEXURES**

## **Interview Checklist For Block/District/State Level Official's Interview**

Personal and professional details

1. Name of respondent:
2. Age:
3. Sex (M/F):
4. Educational qualifications (including place of study)
  - a. MBBS
  - b. MD (specialization)
  - c. Diploma in Alternative Medicine
  - d. Nursing
  - e. Others, please related specify:
5. Total work experience:
6. Present Designation:  
Public Health functions
7. How effectively are public health functions performed within the health system?
8. Who mainly performs these functions?
9. What is the significance of these functions?
10. What are the problems/challenges that arise in performing these functions?  
Perspectives on a separate public health cadre
11. Views on having a separate public health cadre.
12. What should be the qualifications and compensation for a specialized public health cadre at your level?
13. What should be the pathways of training, recruitment, posting and promotion of a public health cadre?
14. How could equity considerations be incorporated into the process?
15. What roles are to be played by different stakeholders in the development and design of a public health cadre?
16. What are some of the challenges that could emerge?
17. What would be the budgetary implications of constituting a dedicated public health cadre in the state?

## **Interview Checklist For Doctor/Rma/Nurse/Anm/Dpm/Bpm/Non-Medics**

Personal and professional details

1. Name of respondent:
2. Age:
3. Sex (M/F):
4. Educational qualifications (including place of study)
  - f. MBBS
  - g. MD (specialization)
  - h. Diploma in Alternative Medicine
  - i. Nursing
  - j. Others, please related specify:
5. Total work experience:
6. Present Designation:  
Public Health functions
7. What are the public health functions that you perform? (prompt on preventive, promotive, curative, rehabilitative services)
8. What is the significance of these functions?
9. Do you think you are trained to perform all these functions well?
10. What are the problems that you face in performing these functions?  
Perspectives on a separate public health cadre
11. Views on having a separate public health cadre.
12. What should be the qualifications and compensation for a specialized public health cadre at your level?
13. What should be the pathways of training, recruitment, posting and promotion of a public health cadre?
14. How could equity considerations be incorporated into the process?
15. What roles are to be played by different stakeholders in the development and design of a public health cadre?
16. What are some of the challenges that could emerge?

## Participant Information Sheet

I, Sulakshana Nandi am undertaking a study on Assessing the need and considerations for operationalizing a specialized public health cadre in the state.

The study aims to map out and understand the current structure of human resources for public health functions in the government health system; identify the current gaps in the context of performing public health functions; identify the challenges that the states may face in setting up a dedicated public health cadre and provide recommendations to overcome them.

It is in this context that I want to speak to you about your work and the public health functions that you perform. I want to also get your suggestions on whether such a cadre is needed and if so, then how best to plan for it. I would also like to request your permission to audio record our interview. After completing the study, the findings will be published as a report or in peer reviewed journals and also shared with policy makers.

If you agree to participate, your identity will be kept anonymous and confidential, but the information you share may be used in the study and any further publications. I will refer to you by pseudonym or invented name, which you could choose now. Interview transcripts and observations will be coded to anonymize the data.

This research is not designed to help you personally, and your participation in the study will not lead to any personal benefits for you. We hope that the study will benefit our understanding of the public health cadre and lead to health systems strengthening in the future.

Participants will be treated with respect and dignity, anonymity will be protected, your contribution to the research will be valued and you will be acknowledged in the dissemination of findings, as appropriate and negotiated with you.

Participation in this survey is completely voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this study since your views are important.

The interview should take about two hours. If for any reason, you wish to stop the interview in the middle, we will stop the process then itself. There will be no negative impact if you choose to do so.

If you have any queries about this process, please feel free to ask questions.

You can also get in touch with me later about the research study at 9406090595.

In case you have any issues with me or the process, you can get in touch with the following person:

Dr. Rupa Prasad

Executive Director, Public Health Resource Society (PHRS)

K 65, First Floor, Hauz Khas, New Delhi- 110016

Phone no.: 01126868118

Email id: rupaprasad@phrnindia.org

This research has been approved by The Institutional Ethics Committee of PHRS.

If you wish to participate in the interview, then I will hand over/read the informed consent form.

## सहभागी सूचना पत्र

मैं सुलक्षणा नंदी एक शोध कर रही हूँ राज्य में एक विशेष पब्लिक हेल्थ (समुदायिक स्वास्थ्य) केंद्र बनाने की जरूरत और मुद्दों पर।

इस शोध का उद्देश्य है यह समझना कि मौजूद समुदायिक स्वास्थ्य के कार्य के लिए मानव संसाधन की संरचना को समझना; समुदायिक स्वास्थ्य कार्य को करने में मौजूदा कमियों को पहचानना; राज्य के लिए ऐसे केंद्र को बनाने में क्या चुनौतियाँ हैं और सुझाव देना कि उनको कैसे दूर कर सकते हैं।

इस परिपेक्ष में मैं आपसे आपके काम, खास तौर से समुदायिक स्वास्थ्य सम्बंधित कार्यों के बारे में चर्चा करना चाहती हूँ। मैं आपसे सुझाव भी लेना चाहती हूँ कि क्या ऐसे केंद्र की आवश्यकता है, और अगर है तो उसके लिए योजना कैसे बनाई जाए। मैं यह चर्चा रिकॉर्ड करना चाहती हूँ और उसके लिए आपका अनुमति चाहती हूँ। इस शोध के निष्कर्ष पर एक रिपोर्ट बनेगा जो कि किताब या आर्टिकल के रूप में छापेगा और रिपोर्ट सरकार को भी दिया जायेगा।

अगर आप इस शोध में शामिल होने के लिए राजी हैं, तो आपका परिचय गोपनीय रखा जायेगा, लेकिन जो जानकारी आप देंगे, वह रिपोर्ट में डाला जायेगा। मैं आपके पद या उपनाम से जानकारी डालूंगी। उपमान आप अभी चुन सकते हैं। इस चर्चा के सारे दस्तावीज़ में आपका असली नाम गोपनीय रखा जायेगा।

इस शोध में भाग लेने से आपको कोई निजी फायदा नहीं होगा। हम आशा करते हैं कि इस से पब्लिक हेल्थ केंद्र के बारे में हम सब की समझ बनेगी और उससे स्वास्थ्य तंत्र को मजबूत करने में फायदा होगा।

इस शोध के सभी प्रतिभागियों के साथ इज्जत और गरिमा पूर्वक व्यवहार किया जाएगा एवं उनका परिचय गोपनीय रखा जायेगा। इस शोध में आपकी सहभागिता के बारे में आपसे बात करके डाला जायेगा।

इस शोध में आपकी सहभागिता पूरी तरह से स्वच्छिक है। किसी भी प्रश्न का उत्तर देने से आप मना कर सकते हैं। लेकिन हम आशा करते हैं की आप इस शोध में भाग लेंगे क्योंकि आपके विचार बहुत महत्वपूर्ण हैं।

इस साक्षात्कार में करीब 2 घंटे लगेंगे। अगर किसी कारणवश आपको साक्षात्कार बंद करना रहेगा, आप रोक सकते हैं। इससे आपके ऊपर कोई विपरीत असर नहीं होगा।

अगर आपको इस प्रक्रिया के बारे में कुछ पूछना है तो पूछ सकते हैं।

बाद में भी आप इस शोध के बारे में पूछने के लिए मेरे से 9406090595 पे संपर्क कर सकते हैं।

अगर आपको मेरे से या इस प्रक्रिया से कोई समस्या हो तो आप निम्नलिखित व्यक्ति से संपर्क/शिकायत कर सकते हैं:

डॉ रूपा प्रसाद

एग्जीक्यूटिव डायरेक्टर, पब्लिक हेल्थ रिसोर्स सोसाइटी (PHRS)

के 65, पहली मंजिल, हौज़ खास, नई दिल्ली

फोन नंबर: 01126868118 ईमेल आई डी: rupaprasad@phrnindia.org

इस शोध की अनुमति PHRS के एथिक्स समिति द्वारा दिया गया है।

अगर आप भाग लेने के लिए राजी हैं तो मैं सूचित सहमती फॉर्म आपको दूँगी/पढ़ूँगी।

## Informed Consent For Health Professional Interview

I, Sulakshana Nandi am undertaking a study on Assessing the need and considerations for operationalizing a specialized public health cadre in the state.

The study aims to map out and understand the current structure of human resources for public health functions in the government health system; identify the current gaps in the context of performing public health functions; identify the challenges that the states may face in setting up a dedicated public health cadre and provide recommendations to overcome them.

It is in this context that I want to speak to you about your work and the public health functions that you perform. I want to also get your suggestions on whether such a cadre is needed and if so, then how best to plan for it. I would also like to request your permission to audio record our interview. After completing the study, the findings will be published as a report or in peer reviewed journals and also shared with policy makers.

If you agree to participate, your identity will be kept anonymous and confidential, but the information you share may be used in the study and any further publications. I will refer to you by pseudonym or invented name, which you could choose now. Interview transcripts and observations will be coded to anonymize the data.

This research is not designed to help you personally, and your participation in the study will not lead to any personal benefits for you. We hope that the study will benefit our understanding of the public health cadre and lead to health systems strengthening in the future.

Participants will be treated with respect and dignity, anonymity will be protected, your contribution to the research will be valued and you will be acknowledged in the dissemination of findings, as appropriate and negotiated with you.

Participation in this survey is completely voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this study since your views are important.

The interview should take about two hours. If you do not wish to answer some question during the course of the interview, you have the full right to do so. Similarly, for any reason, if you wish to stop the interview in the middle, we will stop the process then itself. There will be no negative impact if you choose to do so.

If you have any queries about this process, please feel free to ask questions. If you wish to participate in the interview, please give your permission/consent about the same.

I am ready to participate in this process.

Name and address of the respondent: \_\_\_\_\_

Signature/Thumb impression/Oral consent of respondent (Tick Mark): \_\_\_\_\_

In case of oral consent, signature of observer: \_\_\_\_\_

Signature of Interviewer: \_\_\_\_\_ Place: \_\_\_\_\_ Date: \_\_\_\_\_

## साक्षात्कार के लिए सूचित सहमती फॉर्म

मैं सुलक्षणा नंदी एक शोध कर रही हूँ राज्य में एक विशेष पब्लिक हेल्थ (समुदायिक स्वास्थ्य) केंद्र बनाने की जरूरत और मुद्दों पर।

इस शोध का उद्देश्य है यह समझना कि मौजूद समुदायिक स्वास्थ्य के कार्य के लिए मानव संसाधन की संरचना को समझना; समुदायिक स्वास्थ्य कार्य को करने में मौजूदा कमियों को पहचानना; राज्य के लिए ऐसे केंद्र को बनाने में क्या चुनौतियाँ हैं और सुझाव देना कि उनको कैसे दूर कर सकते हैं।

इस परिपेक्ष में मैं आपसे आपके काम, खास तौर से समुदायिक स्वास्थ्य सम्बंधित कार्यों के बारे में चर्चा करना चाहती हूँ। मैं आपसे सुझाव भी लेना चाहती हूँ कि क्या ऐसे केंद्र की आवश्यकता है, और अगर है तो उसके लिए योजना कैसे बनाई जाए। मैं यह चर्चा रिकॉर्ड करना चाहती हूँ और उसके लिए आपका अनुमति चाहती हूँ। इस शोध के निष्कर्ष पर एक रिपोर्ट बनेगा जो कि किताब या आर्टिकल के रूप में छापेगा और रिपोर्ट सरकार को भी दिया जायेगा।

अगर आप इस शोध में शामिल होने के लिए राजी हैं, तो आपका परिचय गोपनीय रखा जायेगा, लेकिन जो जानकारी आप देंगे, वह रिपोर्ट में डाला जायेगा। मैं आपके पद या उपनाम से जानकारी डालूंगी। उपमान आप अभी चुन सकते हैं। इस चर्चा के सारे दस्तावीज़ में आपका असली नाम गोपनीय रखा जायेगा।

इस शोध में भाग लेने से आपको कोई निजी फायदा नहीं होगा। हम आशा करते हैं कि इस से पब्लिक हेल्थ केंद्र के बारे में हम सब की समझ बनेगी और उससे स्वास्थ्य तंत्र को मजबूत करने में फायदा होगा।

इस शोध के सभी प्रतिभागियों के साथ इज्जत और गरिमा पूर्वक व्यवहार किया जाएगा एवं उनका परिचय गोपनीय रखा जायेगा। इस शोध में आपकी सहभागिता के बारे में आपसे बात करके डाला जायेगा।

इस शोध में आपकी सहभागिता पूरी तरह से स्वच्छिक है। किसी भी प्रश्न का उत्तर देने से आप मना कर सकते हैं। लेकिन हम आशा करते हैं की आप इस शोध में भाग लेंगे क्योंकि आपके विचार बहुत महत्वपूर्ण हैं।

इस साक्षात्कार में करीब 2 घंटें लगेंगे। अगर किसी कारणवश आपको साक्षात्कार बंद करना रहेगा, आप रोक सकते हैं। इससे आपके ऊपर कोई विपरीत असर नहीं होगा।

अगर आपको इस प्रक्रिया के बारे में कुछ पूछना है तो पूछ सकते हैं। अगर आप भाग लेने के लिए राजी हैं तो कृपया अपना अनुमति एवं सहमती दें।

मैं इस प्रक्रिया में भाग लेने के लिए तैयार हूँ.

नाम एवं पता .....

हस्ताक्षर/अंगूठे का निशान/मौखिक सहमती .....

मौखिक सहमती के स्थिति में प्रेक्षक का हस्ताक्षर .....

साक्षात्कार करने वाले का हस्ताक्षर ..... स्थान ..... दिनांक .....



## Notes For References

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**Chapter 5**  
**ASSESSING THE HUMAN  
RESOURCE FOR HEALTH  
CAPACITY IN UTTAR  
PRADESH: EXPLORING  
THE FEASIBILITY OF  
ESTABLISHING A PUBLIC  
HEALTH CADRE IN THE  
STATE**

**Pallavi Mishra**

**Surabhi Pandey**

## **ACKNOWLEDGEMENTS**

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## **EXECUTIVE SUMMARY**

In the wake of the COVID-19 pandemic, the critical role of human resource for health (HRH) and the challenges faced in rendering healthcare was widely highlighted and acknowledged. The role of HRH as a system is not only important as care providers but also for planning and implementation during normal times as well as in the event of any public health emergency such as the COVID-19 or the Ebola epidemics. The professionals that constitute this system are considered as the backbone of the health infrastructure. The COVID-19 pandemic clearly manifested the limitation of expertise within the public health system in many countries. The Indian public health system also suffers from disproportionate patient-doctor ratio, which has a significant impact on its health outcomes.<sup>a</sup> It lacks non-clinical human resource for policy planning, management services, and implementation of health policies at the grassroots level.<sup>b</sup>

The diversity in the composition of HRH signifies the strength and resilience of any health system. The architecture of India's public health system has three levels: (1) community-level preventive services to reduce exposure to disease by improving sanitation; (2) clinical preventive services provided to individuals such as vaccination through primary healthcare; and (3) tertiary or medical services to care for and treat individuals with diseases.<sup>c</sup> However, there is need for the creation of a public health cadre at both the central and state level. This cadre must be professionally trained personnel who can address the complexity of the healthcare delivery system which lacks "standardization, financial management, appropriate health functionaries and competencies including technical expertise, logistics management, and social determinants of health and leadership".<sup>d</sup> Running any flagship programme of the government of India or the state government requires an adequate mix of clinicians and trained public health cadre which could formulate strategies and oversee the implementation of the programme to improve its efficacy and effectiveness.

Uttar Pradesh (UP) is located in the northern part of India and shares its boundary with New Delhi, Rajasthan, Madhya Pradesh, Haryana, Himachal Pradesh, Uttarakhand, Chhattisgarh, Jharkhand and Bihar. It is also the most populated state of India. The state is divided into 18 divisions, and has 75 districts. UP is one of the BIMARU<sup>e</sup> states and a poor performer on all the health indicators.<sup>f</sup> The word BIMARU—an abbreviation for the states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh—has resemblance with the Hindi word *Bimar*, which means ailing or sick. As compared to other BIMARU states, UP is slightly better performing at the "population served per government hospital,

government hospital bed, per doctor, per primary health centre and per community". However its performance is below the national average.g In UP, 1.98 lakh of the population are served per government hospital, whereas at the national level it is 1.45 lakh. Similarly, "population served per government hospital bed in India is 2,257, while in UP it is 5,646".h There were 20,153 sub-centres in the state in 1990, which did not increase until 2005; similarly, the number of Primary Health Centres (PHCs) also did not increase significantly in the last few decades.i The shortage of health infrastructure also indicates the shortfall of human resource for health. In the health care system the shortage of specialists stand at 80.7 per cent, and currently 62.1 per cent community health centres are working without specialists.j

The sub-optimal functioning of the medical colleges in UP has led to the abysmal density of health workforce in the state. There were 3.2 doctors and three nurses available per 10,000 population, which means that for the population of 3,185 there was one doctor available in the state against the norm of one doctor per 1000 population.k As compared to Kerala, a doctor in UP has to serve three times the number of patients, while it is two times more when compared with Tamil Nadu.l Such issues need to be addressed by the people who have working experience of the health system. They need to be made part of the policymaking, planning and implementation of the HRH policies of the state.

In the current study we have explored the HRH capacity of the state in order to ascertain the number of existing vacancies and lack of capacity of health professionals, which need to be addressed to strengthen the public health system in the state. This formative study will help in exploring the possibilities of the creation of a public health cadre for better management and administration of the public health system in UP.

The overarching aim of this study is to assess the human resource for health (HRH) capacity in the Uttar Pradesh Government and explore the policy and organisational landscape in the state. The specific objective of this study is to explore the gaps in the existing health workforce, which is affecting public health governance. The study also aims to explore the possibilities and opportunities for multi-sectoral collaboration for the creation of a public health cadre to strengthen the public health system and achieve the goal of health for all in the state.

To the best of our knowledge, this will be the first study to map the HRH policy landscape in Uttar Pradesh in order to identify the need to introduce a public health cadre there. The findings will be used to prepare recommendations for the state government which is yet to take concrete decisions on introducing a public health cadre. The outcomes of the study will also be able to fill the existing gap in the literature on a public health cadre in the state.

## INTRODUCTION

The COVID-19 pandemic has affected countries all over the world, paralyzing health systems. There were massive losses in terms of lives lost and economies derailed. The preparedness to handle a pandemic was put to the test. To recover from the impact of the present epidemic, universal health coverage is more important than ever before. Many lessons must be learned from the epidemic, particularly for emerging economies like India where the public healthcare system is already inadequate to meet citizens' health requirements. India's health system has been struggling to keep pace with the need for treatment and cure. It is only during the pandemic that state governments started to hire epidemiologists—the health professionals who are specialized to deal with infectious diseases.

The Indian public health system is divided into three categories: community-level preventive services to reduce disease exposure by improving sanitation, etc.; clinical preventive services provided to individuals through primary health care, such as vaccination; and medical services to care for and treat individuals with diseases, particularly tertiary care needs. Health workers, who are regarded as the backbone of India's preventive and promotive services, are primarily responsible for delivering health services. However, the existing public health system has severe human resource issues in the delivery of health care. Despite attempts to identify, recruit, and maintain a workforce, the system is limited in its ability to optimise the public health workforce. The 11<sup>th</sup> five-year plan recognizes that good health is both a goal in and of itself, and that satisfying the health requirements of the population necessitates a comprehensive and long-term strategy that includes preventative, promotive, curative, palliative, and rehabilitative health.

According to a review of the letter from the Union Ministry of Health, more than a quarter of India's 736 districts have no district-level epidemiologists, and 11 states have no state-level epidemiologist.<sup>m</sup>

The lack of a clear demarcation between clinical work and public health abilities has been a stumbling block to the health system's efficient operation. Seniority and length of service are used as proxies for public health expertise. Public health is a specialized field that is best carried out by people with specialized public health skills. There is a need for specialized teams with skills in situational assessment, health resource planning, surveillance system management, logistics and supply-chain management. The teams must set up new laboratories for testing, estimate the need for additional hospital beds at the district and block levels, while keeping an eye on any changes in the situation.

While the current era has pushed these challenges to the forefront of public attention, similar functions are also essential in non-pandemic times. These tasks should be given to public health employees who have undergone particular training and possess the necessary expertise.

The Central Council of Health and Family Welfare had permitted the creation of Public Health Cadres across all states, in reference to the National Health Policy (NHP) 2017 policy document which states that, “the policy proposes creation of Public Health Management Cadre (PHMC) in all states based on public health or related disciplines, as an entry criterion. The policy also advocates an appropriate career structure and recruitment policy to attract young and talented multidisciplinary professionals.”<sup>n</sup> At its most basic level, establishing a public health cadre is identifying persons with certain expertise and talent and allocating public health responsibilities to them. It's a change from the norm, where it is expected that everyone working in the public health system can manage successfully and efficiently.

## **BACKGROUND**

Post-Independence, it took the government almost 35 years to formulate a robust policy on the health system. But there were other policy initiatives before that. One of the most exclusive health policies was formulated on the eve of Independence in 1946 by what is popularly known as the Bhore Committee. Followed by it and even before it were many health initiatives that recommended landmark changes in the healthcare system.

- **Colonial Period:** During the colonial period, modern medicine and healthcare were brought to India. This was at a time when pre-capitalist modes of production were gradually being phased out. Practitioners who were not professionally trained but heirs to a caste-based employment structure still offered health treatment in the privacy of people's homes. Structured healthcare delivery clearly established three features in the pre-colonial period, which correlates with the pre-capitalist period. For starters, healthcare was regarded as a social duty, necessitating major government and philanthropic action. Hospitals and dispensaries were largely state-owned or supported during this period. The private sector played a minimal role. Individual practitioners, on the other hand, made up a substantial part of the private health industry.
- The 1881 census shows 108,751 male medical practitioners, which is the earliest statistics accessible (female occupation data was not recorded). Physicians and surgeons (qualified doctors of modern medicine) accounted for 12,620 of the total, while unqualified practitioners accounted for 60,678. In addition, 582 skilled medical personnel were stationed in army hospitals. The proportion of private

practitioners, however, is not shown in the census data. The first statistics on private practitioners comes from 1938, when an estimated 40,000 doctors were said to be in practise. Only 9,225 (or 23 per cent) were employed by the government, with the rest working in private practise or institutions.<sup>9</sup>

- **Bhore Committee:** In 1943, the British Empire recognized the importance of public health and established the 'Health Survey and Development Committee,' chaired by Sir Joseph Bhore. The committee was given the duty of surveying the country's health conditions and organizations at the time, as well as making recommendations for future growth. In 1946, the committee submitted its report. Its main suggestions included the integration of preventative, promotive, and curative health care, as well as the construction of Primary Health Centers (PHCs) in rural regions. The Bhore Committee made some important recommendations:
  - 1) At all administrative levels, preventive, promotional, and curative services be integrated.
  - 2) PHCs be established in rural India to provide complete health care. A Secondary Health Centre (formerly called Community Health Centre or CHC) should function as a supervisory, coordinating, and referral institution for each PHC, which should serve a population of 40,000 people.
  - 3) The PHC should feature a 75-bed hospital for a population of 10,000 to 20,000 people in the long future (3 million plan).<sup>p</sup>
  - 4) The Bhore Committee also looked at medical education and research systems, and introduced a three-month mandatory Community Medicine training programme.
  - 5) The committee proposed that the country construct a National Health Service Programme.
  - 6) The committee's suggestions were gradually diluted and became unfocussed. For example, the current PHC is not even an apology for what the Bhore Committee proposed—a 75-bed primary health unit with six doctors, 20 nurses, six public nurses, and a host of other paramedical staff catering to a 10,000 to 20,000 population, as opposed to a six-bed PHC with one doctor, one nurse midwife, and one public health nurse catering to a 10,000 to 20,000 population.<sup>q</sup> Comparing the proposals to what has been achieved will just reflect the failure. The Bhore Committee approach was not decentralized but had a top-down approach. However, it provided a readymade model at the time of Independence and thus was adopted as a blueprint for both health policy



and the development of the country.

## Post-Independence Five-Year Plans:

- **Mudaliar Committee:** The Government of India appointed the "Health Survey and Planning Committee," The Mudaliar Committee (1961), before the end of the second five-year plan (1956-61), to review the progress made in the health sector following the submission of the Bhore committee report. The committee's main proposals were:
  - 1) To limit the population covered by PHCs to 40,000 people, while improving the quality of care given by these centres.
  - 2) Strengthening district hospitals with specialty services so that they could act as regional hubs.
  - 3) To make regional organizations in each state responsible for supervising two or three district medical and health officers, with a regional deputy or an assistant director in charge of each.
  - 4) Establishing an All-India Health Service on the model of the Indian Administrative Service.
- **Chaddah Committee:** The committee proposed that within the national malaria eradication programme, one basic health worker per 10,000 people be assigned to vigilance operations via monthly home visits. These professionals were envisioned as multipurpose health workers with extra responsibilities such as vital statistics collection and family planning. Three or four of the family planning health assistants were to provide support.
- **Mukherjee Committee:** It was established in 1965 and advised that family planning efforts be assigned to separate staff so that malaria activities may receive undivided attention from the personnel.
- **Jungalwalla Committee:** Constituted in 1967, it emphasized the convergence of health systems and the eradication of private practise by government physicians. It recommended "a service with a united strategy for all problems instead of a segmented approach for all various problems," according to the definition of integrated health services. Under a single administrator, sick care and numerous public health programmes should be managed. The committee made the following recommendations:
  1. A unified team
  2. Seniority that shall be shared by all.

3. Extra qualifications be recognized.
  4. Equal work, equal pay.
  5. For specialized employment, there be a higher rate of remuneration.
  6. Eradication of private practise.
- **Kartar Singh Committee:** In 1973, this committee was formed to establish the health worker standards for multipurpose workers. It proposed that one primary health centre be constructed for every 50,000 people to ensure adequate coverage. Every main health centre was to be divided into 16 sub-centres (SCs) catering to a population of 3,000 to 3,500 people each. Each sub-centre should be staffed by a team of two health workers, one male and one female. One health assistant should manage the work of three to four health workers. The PHC's medical director should be in control of all supervisors and health workers in the region.
  - The establishment of linkages between basic health centres and higher-level referral and service centres, such as taluka/tehsil, district, regional, and medical college hospitals, to create a Referral **Shrivastav Committee:** In 1975, the Shrivastav Committee on Medical Education and Support Manpower proposed:
    - 1) Service Complex.
    - 2) Forming a medical and health education council to develop and implement needed reforms in health and medical education along the lines of University Grants Commission.
    - 3) Organizing groups of paraprofessional and semi-professional health workers from within the community (e.g., schoolteachers, postmasters, gram sevaks, etc.) to provide basic health services.
    - 4) For every 5000 people, one male and female health worker (HW) should be provided.
    - 5) Health assistants should be stationed at SC rather than PHC for every two HWs.
  - **Health Report of the Bajaj Committee, 1986:** To address the problem of health manpower planning, production, and administration, an expert group was formed under the head of Dr. JS Bajaj, a member of the Planning Commission at the time. The following are some of the Bajaj Committee's key recommendations:

- 1) National health manpower planning should be developed on the basis of a realistic survey.
  - 2) The Educational Commission for Health Sciences should be modelled after the University Grants Commission.
  - 3) Teachers should be taught health education, science and technology, according to the national and medical education policy.
  - 4) By creating universities of health sciences in all states, a uniform quality of medical and health science education can be achieved.
  - 5) Both at the state and national levels, health manpower cells to be established.
  - 6) To increase health manpower, vocational courses in paramedical sciences be offered.
- **Krishnan Committee Health Report 1992:** Under the supervision of Dr. Krishnan, the committee examined the accomplishments and progress of past health committee reports, as well as making recommendations for improvements. The committee addressed urban health issues and created a health post for slum areas. One volunteer health worker (VHW) per 2,000 people was proposed by the committee, with an honorarium of Rs 100. Its report specifies which services the health post is required to deliver—outreach, preventive, family planning, curative, support (referral) services, and reporting and record keeping were among the services suggested.
  - **Efforts after 1990s:** Several committees gave recommendations to improve the existing health system and also gave a plus to an integrated approach towards health services. However, it was the Bajaj Committee 1996, that suggested trained and competent public health professionals for health tasks, but it still did not mention a separate cadre. The Planning Commission's High Level Expert Group (HLEG) report in 2010 on universal health coverage was the first to talk about a separate cadre, and the same was also proposed by the Steering Committee for Health in the 12<sup>th</sup> Plan. Only a few states have established a separate Public Health Cadre. Other states have financed their in-service doctors for public health courses throughout the last two decades. The non-specialist Indian Administrative Service (IAS) cadre, which has taken over much of the policy making and administrative work inside the central and state health ministries, has grown in importance over the decades, with the directorates losing their leadership position. Technical policy decisions have thus fallen into the hands of either external consultants or by blindly following international health prescriptions and patterns. Fundamentally, Post-Independence, a cohesive Directorate of Health Services was introduced to provide better technical management at the national

and state levels and for the chief medical officers at the district level, but this setup was weak in dealing with the health services from a population and systems perspective. Moreover, it did not establish a competent structure for public health administration and was unsuccessful in addressing the social determinants of health.

## **UNDERSTANDING THE NEED FOR THE CREATION OF A PUBLIC HEALTH CADRE IN INDIAN STATES**

The management backbone of public health largely lies with the states. It is the state's responsibility to plan and implement citizen-friendly health policies. But how can states do the needful to build capacity and necessary logistics to manage the public health domain? The reason for lack of potential in states is lack of disbursement of adequate funds or lack of allotment of adequate funds. Another issue that is rarely explored is whether state health departments have the human resources and abilities needed to establish and administer public health systems capable of providing universal health coverage in their jurisdictions. In India, a majority of states lack dedicated public health workers. A hospital-based medical cadre is present in every state. After being hired by the state's Public Service Commission, newcomers to this cadre start as Medical Officers (MO) at a PHC and work their way up to Chief Medical Officer (CMO) of a district, Chief Medical Superintendent of a hospital, and eventually Director of Health and Family Welfare. Doctors having at least an MBBS and often a postgraduate qualification (in the Directorate of Health) or generalist IAS officials (in the state Secretariat) are often in charge of formulating and implementing health policy on the ground.

Human resource recruiting for the state and at the district level has been assigned to states; yet, governments' responses to these human resource shortfalls vary. The system continues to be plagued by human resource vacancies and employee capacity. According to the Joint Monitoring Mission 2015, 42 per cent of vacancies at the state and district levels exist, while jobs at the Central Surveillance Unit (CSU) are typically filled by contract posts or on deputation with personnel who have numerous responsibilities. The reasons behind state governments' lack of emphasis on public health recruitment and formation of separate health cadre must be investigated and addressed.

The lack of a separate wing for dealing with public health, or a cadre of public health specialists to guide policymakers or efficiently manage public health crises, has long been cited by public health experts as a key flaw. Tamil Nadu and Karnataka set an example of creating a cadre after which several other states have initiated the same.<sup>5</sup> Kerala's health officials advocated developing a cadre of public health specialists within the system so that they could take ownership of it and contribute more to its

improvement.<sup>t</sup> The Kerala system was planned such that it needed to be administered more professionally, and it appeared that individuals in charge of it were required to have strong administrative abilities and a comprehensive understanding of public health issues. By building a dedicated cadre of public health management specialists within the system, the state health department had planned to infuse dynamism and expertise into the state health services. A lot of leading health professionals of the time welcomed and praised the state's efforts, and saw it as a long-term investment plan in the health sector.

The current study proposes to understand the human resource for health (HRH) capacity of Uttar Pradesh in order to find out existing vacancies, and lack of capacity of the health professionals, which need to be addressed to strengthen the public health system in the state. This formative study will help in exploring the possibilities of the creation of a public health cadre for better management and administration of the public health system in Uttar Pradesh.

**Aims and objectives of the study:** The overarching aim of this study is to assess the HRH capacity in the Uttar Pradesh government and explore the policy and organizational landscape in the state. The specific objective of this study is to explore the gaps in the existing health workforce which are affecting public health governance. The study also aims to explore the possibilities and opportunities for multi-sectoral collaboration for the creation of a public health cadre to strengthen the public health system and achieve the goal of health for all in the state.

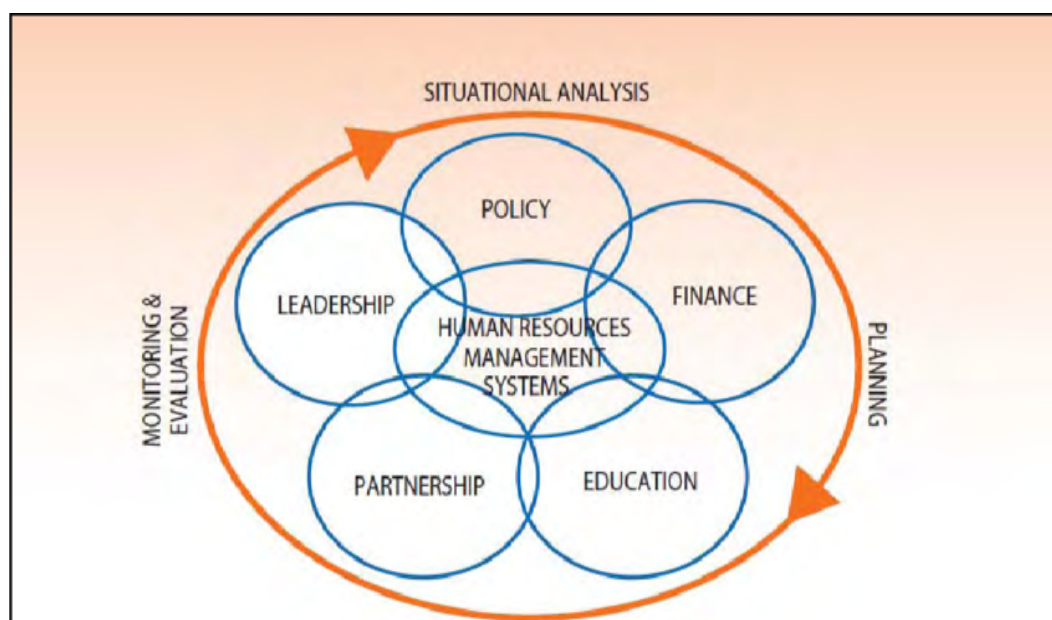
## RESEARCH QUESTION

- 1) What is the landscape of existing policies, organizational structures, processes and decision-making that is expected to govern HRH in the state? This question can be examined through the following:
  - a. Exploring the historical and socio-political context of the organizations mandated for HRH governance in the state.
  - b. Examining formal and informal institutional processes mechanisms involved in the governance of HRH in the state.

## STUDY FRAMEWORK

Data will be analyzed using the Human Resource for Health Action Framework of the World Health Organization (WHO) (Figure 1).<sup>u</sup> There will be a focus on the six important

domains of HRH for Action Framework: 1) Policy, 2) Finance, 3) Education, 4) Partnership, 5) Leadership and, 6) Human resource management system. This framework will be used to guide the inquiry at the preliminary level. The new themes emerging from the data will be listed and added to the framework when required.



*Figure 1: Human Resource for Health Action Framework of the World Health Organization*

*Source: WHO*

## **METHODS**

The current study is cross sectional, and exploratory in nature and entails qualitative research methods with an objective to explore the gaps in the existing health workforce, which is affecting public health governance. The study also aims to explore the possibilities and opportunities for multi-sectoral collaboration for the creation of a public health cadre to strengthen the public health system and achieve the goal of health for all in the state.

### **Selection Of Study Sites**

For this study we selected Uttar Pradesh. UP is historically known for poor economic conditions and poor performance on health indicators. As per the NITI Aayog's Sustainable Development Index of the 28 Indian States, UP is among the bottom nine states in terms of percentage of children under five years who are underweight and stunted, and percentage of pregnant women aged 15-49 years who are anaemic in India in the year 2020-21.<sup>v</sup> The rationale behind selecting this state was its poor performance

on almost all the health indicators. Additionally, the researcher was aware of the public health system in UP and was fluent in the Hindi and Bhojpuri languages spoken in the state. This helped in interacting with stakeholders.

## **Selection Of Districts**

Before the beginning of actual fieldwork, two-three preliminary visits were made by the lead researcher to the state capital for initial liaisoning and developing contacts with senior officials. Since this fellowship was awarded in an individual capacity, the researcher had limited institutional support. The initial visits were planned with the intention to meet the officials at the state level and also to get familiar with the health system in the state. There were six districts selected: Mirzapur, Varanasi (from the south-west), Deoria, Gorakhpur (from the east), and Lucknow, Barabanki from central UP. These districts were representative of each zone and had unique set of HRH-related challenges. Additionally, the researchers had contacts in these districts which facilitated data collection. District level officials were informed in advance by the senior officials about the research.

## **Study Participants**

Officials, who plan and implement policies, in the health system were the primary respondents of the study. They include senior officials at the directorates, officials in the Secretariat, officials from the National Health Mission, researchers at the technical support units, Chief Medical Officers (CMO), District Health Education and Information Officers, and District Project Managers (DPM). The organizations that were identified as key stakeholders of the reforms were:

- 1) Department of Medical Health and Family Welfare
- 2) National Health Mission (state and district)
- 3) Directorate of Medical Health
- 4) Directorate of Family Welfare
- 5) District health administration
- 6) District malaria office
- 7) Indian Health Action Trust (IHAT) (technical support unit to the government)
- 8) Public health researchers at the national level

## Data Collection : Methods, Tools And Techniques

Qualitative data was collected through desk review, key informant interviews, in-depth interviews and observations over a period of six months. This was done by interviewing a range of actors across the public sector at the state, district and sub-district levels.

- 1) **Desk review:** Policy and plan documents, published and unpublished articles and reports of meetings, gazette notifications, office orders, memos, reports, and studies were reviewed for relevant data.
- 2) **Key Informant Interviews (KIIs):** KIIs are the ones who are considered to have first-hand knowledge about the subject, and are likely to provide needed information, ideas, and insights on a particular topic of interest. We identified an initial set of key informants (KIIs) through the literature and document review followed by snowballing method, a method whereby individuals interviewed helped identify further informants who may in turn identify others. Participants included both inside and outside actors who had critical insights into the governance of HRH in the state. They also gave vital inputs with regard to creation of public health cadre in the state. A comprehensive list of potential KIIs was prepared considering their expertise, and association with the programme policy.
- 3) **In-depth interviews:** In-depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, programme, or situation. The respondents included the District Health Education Officer (DHEO), District Malaria Officer (DMO), District Programme Manager (DPM) and Malaria Inspectors.

Interview guides for KI interviews and in-depth interviews (Refer Annexure I) were prepared reflecting on the following areas of enquiry (Table 2.1).

## Fieldwork Process And The Role Of Researchers

The lead researcher conducted all the in-person interviews; however, she was accompanied by the other investigators for all the online interviews. A team of two researchers and one research assistant were involved in data analysis and report writing. Three were deployed to handle data collection. The field work included formal interviews as well as some informal interactions which were quite insightful.

The KIIs of the study were identified with the help of initial document reviews, initial interactions with the senior officers in the capital and some National Health Mission (NHM) employees who left the programme in the recent past. The key informants included senior bureaucrats at the secretariat level, senior NHM officials and researchers at the national level who have worked on HRH and public health-related



issues. Key informants were identified through snowball method. At the district level, the respondents included CMO of the district, DPM, Malaria Officers, DHEOs and Health Education Officers (HEOs).

The research conducted included a total of 18 interviews and one Focused Group Discussion (FGD) across districts (Table). All the interviews were in Hindi and English. As part of routine practice a field diary was maintained by the researcher, followed by a discussion and reflection among the researchers over the interviews conducted on a particular day. Interviews were digitally recorded with the consent of the interviewee, and transcribed at the earliest. Handwritten notes were also available at the end of the day to quickly reflect on the information shared by the respondent.

## **Data Analysis**

The qualitative data generated through in-depth interviews resulted in large amounts of hand written notes, typed interview transcripts and/or recorded conversations. After the field work was over, all the interviews from the three regions of the state were transcribed in English. The study relied on thematic analysis that entails four simple steps: reading transcripts to get acquainted with data, identifying possible themes by coding transcripts, comparing and contrasting codes to refine themes, and interpreting the findings.

A priori code list based on the WHO HRA framework was developed to help in segregating the data under various themes. For sorting the data and making the process of data analysis more systematic we used Atlas.ti, a qualitative data analysis software. All the a priori codes were saved in the software and a team of three researchers did an initial round of coding of a few transcripts. This helped in tracing some new emergent patterns/themes in the data which were further added as emergent codes to the existing code list. Based on this code list, all the remaining transcripts were coded and various output files of the coded transcripts were retrieved to analyze various themes. Though the analysis used a priori primary codes as per the code list, it also identified other free codes which emerged from the data, which were very thick and informative. This process resulted in the development of new themes which were grounded in the data. We followed the WHO's HRA conceptual framework for the initial interpretation of the data, but the data also helped in viewing the existing framework with different perspectives by adding some new themes grounded in the data.

The report writing process included descriptive and analytical explanation of data as there was a proper transition from descriptive to analytical report writing. As a result, the chapters of the report are theme based.

## Ethical Considerations

The study obtained ethical approval of an independent ethical committee at the Bapu Nature Care Hospital and Yogasharm, New Delhi. The study was granted exemption because:

- 1) The study involved 'negligible risk' to participants. The committee did not find any foreseeable risk of harm or discomfort to participants, more than inconvenience.
- 2) It relied on collections of data or records that contain only non-identifiable data about people, publicly accessible records, archives or publications.

## Approval And Consent From The Participants Of The Study

The information sheet with the details of the study and the lead investigator were shared with all the participants of the study. The information sheet was originally developed in English, but it was also translated in Hindi, a local language spoken widely in the state. We also obtained prior verbal consent from the participants to be part of the study. We also sought their permission to tape record their interviews. However, in the case of some of the participants who were not comfortable with getting their interviews recorded, we made a note of the information shared by them.

The interviews were digitally recorded and transcribed verbatim by professional transcribers and then translated from Hindi to English by a professional translator when needed. The qualitative researcher ensured the quality of the final transcripts (for interviews in Hindi and English) by listening to the audio files and constantly comparing these with the transcripts to rule out the possibility of any missing data by the transcriber.

## CURRENT HEALTHCARE SCENARIO IN UTTAR PRADESH

UP is located in the northern part of India and shares its boundary with New Delhi, Rajasthan, Madhya Pradesh, Haryana, Himachal Pradesh, Uttarakhand, Chhattisgarh, Jharkhand and Bihar. It is also the most populated state of India. The state is divided into 18 divisions and has 75 districts. UP is one of the BIMARU<sup>w</sup> states and one of the poor performing Indian states on all the health indicators.<sup>x</sup> The word BIMARU has resemblance with a Hindi word *Bimar*, which means ailing or sick. As compared to other BIMARU states, UP is slightly better performing at "population served per government hospital, government hospital bed per doctor, per primary health centre and per community". However, its performance is below the national average.<sup>y</sup> There were

20,153 sub-centres in the state in 1990, which did not increase until 2005; similarly, the number of PHCs also did not increase significantly in the last few decades.<sup>z</sup> According to the Rural Health Statistics 2019-20, the state has 20,778 sub-centres, 3473 PHCs, 723 CHCs and 168 District Hospitals. Despite such figures, the report signals a 45 per cent shortfall in PHCs (in reference to the population), which are the backbone of a health care system as the citizens have direct and first-hand contact with PHCs. The shortage of health infrastructure also points to the shortfall of human resources for health. In the health care system, the shortage of specialists stands at 80.7 per cent and currently 62.1 per cent community health centres are working without specialists.<sup>aa</sup> One of the major reasons for Uttar Pradesh's shortfalls and pitiable health status is the lack of trained personnel and specialists. There is a 35 per cent shortage of Auxillary Nurse Midwife (ANM) workers and 41 per cent shortage of specialists in the CHCs. Additionally, lack of laboratory technicians, pharmacists, radiographers etc. make the healthcare system inefficient and puts the burden of work on the existing officials.

Where states like Tamil Nadu are placing emphasis on healthcare and moving ahead towards a robust healthcare system, BIMARU states like Uttar Pradesh are lagging behind in all aspects of healthcare. Additionally, child malnutrition is a massive public health issue in the state. An annual health report by the Uttar Pradesh National Health Mission (UPNRHM) notes that there were 47.3 per cent children under three years of age who were malnourished. This is higher than the country's average of 40.4 per cent<sup>bb</sup>.

Usually, there is a direct correlation between health status and health infrastructure of a state, but a study shows that it is not true in the case of Uttar Pradesh.<sup>cc</sup> It highlights the inefficiency of medical human resources such as doctors, nurses, and medical personnel, among other things. It also identifies inconsistencies in the governance of public health institutions. It has been observed that either doctors are not present at hospitals or that they are attending to other matters while attending to the patient. A lack of association between health status and health infrastructure also indicates that there is a disconnect between governing authority, policy formulation and policy implementation.

Moreover, the grassroots workers like the Accredited Social Health Activists (ASHAs) and ANMs have to deal with issues such as inadequate and bad condition of residential flats, erratic electricity and drinking water supplies, and a lack of security at their health centres. They have a heavy workload, bad working conditions, limited incentives, and have to play conflicting roles. In such a circumstance, these issues pose a barrier to providing adequate health care services. The shortage of health infrastructure also indicates the shortfall of human resources for health. There are no effective public health facilities or a workforce in rural Uttar Pradesh, which constitutes a large chunk of the state. The PHCs and the sub-centres do not have enough workforce to carry out the tasks and deliver public services effectively.

A variety of complex and interwoven factors, including the quality of health workers and their preference of work, as well as the organisation of health systems and the larger social, political, and economic environment could influence health worker availability in an institution. Inappropriate pre-service training for rural and remote areas, a lack of opportunities for further training and career development, low salaries, poor working environment, limited access to equipment and drugs, insufficient family support, inadequate management, and unsupportive supervision are the factors most commonly reported.

To offset the shortage of specialists, in December 2020 the Uttar Pradesh government, amidst the pandemic, passed an order that post-graduate (PG) medical students must complete at least 10 years in the government sector or be liable to pay a substantial fine.<sup>dd</sup>

**Innovations**

1. Introduction of Medical and Health Services Rules 2020 addition to the Rules which came in 2004 and 1973. It's not a cadre.
1. In 2020, position of DG Training has been created. Earlier it was a non-cadre position but now from the cadre.

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e. Medical Officer Grade II (Level 2) posts available for direct recruitment Specialty-wise

Sl. No.	Specialist	Medical Officer Grade II - Level 2 (Direct Recruitment)
1	Gynaecologist	590
2	Anaesthetist	590
3	Paediatrician	600
4	Radiologist	75
5	Pathologist	75
6	General Surgeon	590
7	General Physician	590
8	Ophthalmologist	75
9	Orthopaedician	75
10	ENT Specialist	75
11	Dermatologist	75
12	Psychiatrist	75
13	Microbiologist	30
14	Forensic Specialist	75
15	Public Health Specialist	30
Total Medical Officer Grade II (Level 2) posts available for Direct Recruitment		3620

f. Specialty-wise distribution of the total number of Specialist posts available in the cadre (Level 2 to Level 7)

Sl. No.	Specialist (Distribution of total number of posts)	Total number of posts for that Specialty (Level 2 to Level 7)
1	Gynaecologist (1 per CHC and rest at District level Hospitals)	1167
2	Anaesthetist (1 per CHC and rest at District level Hospitals)	1428
3	Paediatrician (1 per CHC and rest at District level Hospitals)	1529
4	Radiologist (For District level hospitals and for tele-Radiology)	150
5	Pathologist (For District level Hospitals)	175
6	General Surgeon (1 per CHC and rest at District level Hospitals)	1427
7	General Physician (1 per CHC and rest at District level Hospitals)	1387
8	Ophthalmologist (For District level Hospitals)	175
9	Orthopaedician (For District level Hospitals)	244
10	ENT Specialist (For District level Hospitals)	175
11	Dermatologist (For District level Hospitals and for tele-Dermatology)	145

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Sl. No.	Specialist (Distribution of total number of posts)	Total number of posts for that Specialty (Level 2 to Level 7)
12	Psychiatrist (For District level Hospitals)	129
13	Microbiologist (For District level Hospitals)	75
14	Forensic Specialist (For District level Hospitals)	150
15	Public Health Specialist (1 per District at District Headquarter)	75
<b>Total</b>		<b>8431</b>

## Qualification of a Public Health Specialist

In 2021, when the posts were advertised through UP PSC against 3,620 vacancies the commission received only 4062 application and no application was received for PH specialists.

		Essential	Desirable
15	Public Health Specialist	MD (Social & Preventive Medicine) MD (Community Medicine) MD (Community Health Administration)	Diploma in Community Medicine Diploma in Public Health Master in Public Health Master in Public Health (Epidemiology) Master Degree in Applied Epidemiology

The Uttar Pradesh government took this decision to address the dearth of specialist doctors in state-run hospitals and medical centres. The doctors deployed were also given the following concessions:

- MBBS doctors employed in rural government hospitals for at least a year would get concessions in the National Eligibility cum Entrance Test (NEET) PG exam.
- Those with two years of experience in a rural government hospital will get a rebate of 20 points in the NEET exam.
- Those with three years of experience in a rural government hospital will get a rebate of 30 points in the NEET exam.

According to the Uttar Pradesh Principal Secretary for Health, over 15,000 doctor positions had been created in state-run hospitals across the state, with over 11,000 MBBS doctors currently occupying these positions.<sup>ee</sup> But it is hard to tell if the monitoring of such an important leap forward is happening or not because if we see the reports during second wave and the recent sudden viral fever or dengue breakout, it is evident that there is still a high need of health workforce or, putting it better, a dedicated healthcare for the state.

With the second wave hitting the country and further weakening the already vulnerable health system of the state, the ground reports of the virus reached the population rather late. After the ground realities surfaced, the UP government set up a few helplines to assist those in distress. The phone numbers were part of the state's integrated command centres which provided assistance to the relatives of COVID-19 patients.

Patients in government hospitals could also use them to file complaints if they weren't getting the drugs they required or if doctors told them they had to buy medicines from private vendors. But the helplines seldom responded.<sup>ff</sup> There were cases where people lost their family and relatives due to lack of basic administrative services. The fact is that the helpline and the administration couldn't work on its own, and there was a requirement of human resource to attend to the calls and assist the people or treat them in times of an emergency.

## FINDINGS

### Governance Structure Of The State

As shown in figure (1) the highest office in the state governing health is the Department of Health and Family Welfare, which is headed by the Principal Secretary. Further there are four divisions in the governance structure assigned different roles. There is the Directorate of Medical Education, which governs medical colleges and supervises medical education in the state. The Uttar Pradesh Ayush Mission is also a separate body governing the Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) system of health care in the state. There are two key directorates including Medical Health and Family Welfare which are responsible for the day-to-day governance of the health system in the state. These two directorates have several directors incharge of medical health, national programmes, stores, communicable diseases, CHC and PHC, paramedical and nursing services, training, administration, family welfare and maternal health. Apart from these bodies, there is the National Health Mission and the State Institute of Health and Family Welfare that help in running national programmes and providing training. There are some public-private partnerships such as the Technical Support Unit and the State Innovations in Family Planning Services Project Agency (backed by Government of India, USAID and Government of Uttar Pradesh) providing technical help to the state government in better governance of health.

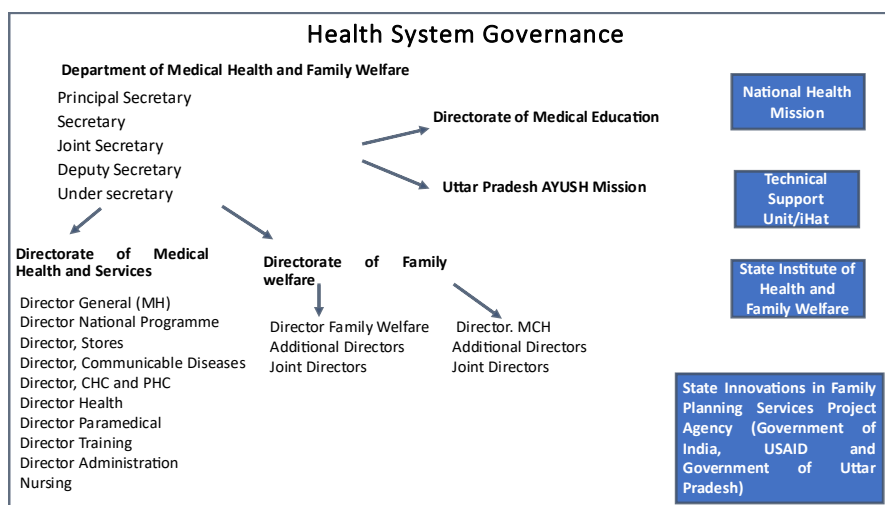


Figure 1: Governance Structure of the State

In this report we have presented the findings from different levels of governance which require immediate attention from policy makers to create a public health cadre in the state.

## Findings At The Secretariat Level

The lead researcher conducted interviews with senior officials at the secretariat to understand the governance of the health workforce in the state. The interviews at this level helped in exploring the challenges and opportunities in creating a public health cadre.

**Directors in directorates do not require additional training:** Senior officials at the secretariat shared that doctors with MBBS and MD degrees who have already studied for five to seven years do not require any further training to carry out the administrative role or the health management role. They were of the view that in the MBBS curriculum they study all the required topics for these tasks. They are given sufficient training in financial and public administration, but not enough in public health, although it is part of the MBBS curriculum. However, the officials interviewed were of the view that doctors are equipped enough to take decisions as they come to the directorate after serving in various posts starting with Medical Supervisor. Thus they have first hand knowledge about the functioning and the problems in the health system. The senior officials at the secretariat also shared that sometimes before promotion the medical officers are provided with administrative training. But this does not always happen and they mostly learn on the job. A senior officer pointed out that when medical officers serve as CMOs, they also learn from their juniors and subordinates. It was also revealed that now a Directorate of Training has been created and all training has been centralized.

**Promotions are based on seniority rules but in practice it is otherwise:** Senior officials shared that according to the rules it is seniority that decides the promotion of medical officers. However, they said that senior officials at the secretariat discuss with senior officials at the directorate before deciding on promotions of Medical Officers (MOs) to the position of CMO and above. The rule of seniority is supposed to be followed, but the practice is often otherwise. Officials who are politically well connected get promoted to the position of CMOs. There are 75 districts in Uttar Pradesh and every year more than 75 doctors become eligible for promotion, but mostly MOs who are politically influential get promoted as CMOs. However, senior officials also clarified that the secretariat does inquire about the work and track record of a medical officer before putting his or her name up for promotion. We also found that one of the unwritten norms followed by the health department in the matter of transfer and promotions was the personal relationship of the medical officers with seniors in the directorate as well as in the secretariat.

**All India Medical Services preferable over a state Public Health cadre:** The officers

at the secretariat noted that instead of creating a state public health cadre it would be better if an All India Public Health cadre is created. Since the secretariat is headed by an Indian Administrative Officer, they backed the idea of an all India public health cadre. Senior officers at the secretariat pointed out that the state lacks adequate number of public health schools. There are six government colleges in the state of which only two provide Masters in Public Health, the rest offer degrees in community, social and preventive medicine.

## Findings At TSU/IHAT Level

The Uttar Pradesh Technical Support Unit (UPTSU) was formed in 2013 to provide techno-managerial support to the Government of Uttar Pradesh (GoUP) pursuant to the Memorandum of Cooperation between the GoUP and the Bill & Melinda Gates Foundation. The University of Manitoba (UoM), Canada, leads the programme and has partnered with Indian Health Action Trust (IHAT) to support the government in strengthening its Reproductive, Maternal, Newborn and Child Health (RMNCH) and nutrition programmes. The TSU provides support in identification of problems, implementation, monitoring and evaluation and feedback loop to the government. The TSU is headed by an IAS officer.

**Over staffing at the planning level:** While interacting with the TSU staff we found that there are various bodies providing technical support and guidance to the government in health policy planning, thus they felt that there is overstaffing at the planning level. They also felt that there is a scarcity of human resource in the implementation of the policy. They noted that earlier NHM used to provide technical support and resources to the government, however now the NHM staff are more involved in the health programme implementation. They were of the view that the NHM staff should work with the district health administration and provide support to them rather than become a parallel body. They also shared that in the last few years NHM has been doing most of the work which comes under the purview of the Directorate of Family Welfare.

**Need for a Public Health Cadre in the state:** The TSU has been providing technical help to the government with regard to its health-related programmes. However, officials emphasized the need for the creation of a public health cadre. They were of the view that most people involved in public health administration do not have degrees or competencies and they are delivering their duty based on their experience. They also shared that often the medical officers lack vision for community health. They also noted that a person with training in public health will be better equipped for health management or administration. In 2021, the government created posts of specialists in the system including public health and community medicine specialists, but their roles, responsibilities and career trajectories have not been decided and should evolve with time.



**Role of NHM in public health:** The staff at TSU felt that the NHM has now changed the focus of public health. Earlier the focus was more on immunization and healthcare, but now it has become more comprehensive. They noted that the directorates rely on NHM for the implementation of programmes. The staff felt that after the setting up of the NHM, public health activities have improved. However, there is an urgent need for a public health cadre in the state, they felt.

## Findings At The NHM Level

The findings are drawn from the experience of senior officials at the National Health Mission (NHM) as well as the staff at the district level.

**The NHM plays a role in programme implementation and family welfare:** A senior IAS official at the NHM pointed out that the NHM is involved in implementing health programmes and also family welfare programmes. Thus the Mission Director (MD) is also the Director of Family Welfare. There is no demarcation of role of the MD, the NHM and Director Family Welfare. Senior officials also mentioned that the position of CMOs is quite powerful due to the resources at their disposal and there may be resistance at their end if an independent cadre is created to deal with public health. Like the officials at the secretariat, the NHM officials also felt that a non-medical professional should not be assigned the role of public health due to the issue of acceptability by the clinical cadre and lack of medical knowledge.

**Role of the DPM at the district level:** Detailing the role of the District Programme Manager (DPM), a senior official pointed out that as per the rules DPMs worked under CMOs of the district. However, the funds for programmes remain with the NHM, thus the DPMs play a significant role in health administration. The officials also revealed that there is rampant corruption in who is promoted as a CMO. They were of the view that instead of creating a public health cadre, it would be ideal if the existing system is made more efficient. This was in contrast with opinions at the district level. NHM employees equivocally emphasized on the need for the creation of a public health cadre. They reiterated the challenges they faced in carrying out public health activity at the district level.

**Challenges in carrying out public health work at the district level:** The NHM staff at the district level explained that the District Health Society (DHS) plays an important role in bringing different departments together. However, they felt there was limited interaction among departments during DHS meetings, which are meant to update the district administration about the health-related needs and challenges at the district level, and discuss the steps that need to be taken to address those issues. The staff at the district noted that the Integrated Disease Surveillance Programme (IDSP) was never a priority in the DHS and disease surveillance was never a key issue at meetings. They also mentioned that the vector borne disease consultants, and fluorosis consultants were

never assigned tasks of disease surveillance and they mostly remained unutilized by the system. They noted that there were very limited incentives and penalties in the NHM. This had an impact on staff motivation and accountability towards their role and responsibilities.

**Challenges in enforcement:** The staff at the district level pointed out that enforcement was a big issue in the health system and that any administration would fail in the absence of it. They were of the view that a doctor could not penalize another doctor for non performance, especially if their grades and levels were the same. They felt that doctors in administrative positions required administrative training. Also, since the nature of their jobs was contractual it was challenging for them to act without the power of enforcement. Additionally, many of those employed at the district level had non-clinical backgrounds and wanted their rank at the PHC level to be determined so that they could exercise authority and act as a check and balance.

## Findings At The District Level

**Transition from a medical to an administrative role:** Some of the MOs at the district level talked about their journey from a clinician to an administrator. Some of them shared that initially they found it difficult to perform the administrative role as they were trained as clinicians, but gradually they learnt about public health administration on the job. Many of them also pointed out that they did not want to leave their clinical practice but they had to as they were promoted and assigned administrative duties. Some of them received administrative and financial training and many of these training happened around health programmes. Many of them felt they needed consolidated training which addressed administrative, financial, public health and programme-related issues.

**Clinical versus public health duties:** Almost all the MOs were of the view that only a clinician can understand public health due to their experience in providing treatment to the community. They felt that due to their clinical experience they were better informed to take on public health-related challenges and that professionals with expertise in epidemiology, microbiology, social sciences, and economics could assist them in carrying out their public health duties. The MOs noted that these professionals should work under the supervision of a doctor and not independently. They said that treatment is the backbone of the healthcare system and it would collapse without that.

**Opposition to the non-clinical cadre:** Many MOs revealed that doctors' associations were against creating an independent public health cadre with non-clinicians. They said that the district administration officials already perform the supervisory role and they did not want another independent cadre to do the supervision of public health duties as they had enough staff in the existing system to do that. They were of the view that they already discuss public health in the DHS meetings.

**Understanding about public health:** Most of the MOs and other senior officials at the district level acknowledged the separate discipline of public health, but many were of the view that this work can be handled by an MBBS, MD or a specialist doctor. They also misunderstood the role played by the epidemiologists and microbiologists. They felt that the NHM staff was there to assist them with delivery of public health duties and that the General Manager, NHM should function under the directorate. Similarly, they opined that the TSU at the state was meant to support government departments but it started leading the government and did not consult the health department at the district level for suggestions and feedback. They pointed out that most directors joined the directorate towards the end of their tenure, and thus were reluctant to bring about any change or innovation in the system.

**Role of District Health Education Officer (DHEO):** One of the key findings of this study pertained to DHEOs and Health Education Officer (HEOs). We found that this cadre was dying in the state due to the non-utilization of their services by the health system and the general administration. These are gazetted positions recruited by the Public Service Commission of Uttar Pradesh. The minimum qualification is a Masters degree and those selected are provided training in health education and behaviour change communication (BCC). These officials are supposed to work closely with the community alongside the NHM. However, over the years their services were not utilized and they were assigned work other than health education and community interaction. In 1995, their role and responsibilities were drafted, however, they are yet to be finalized and implemented. They were supposed to take part in the implementation of all the government programmes and be the nodal person for information communication and BCC. In 2005 approximately 600 Block Health Education officers were recruited but after that no recruitment has taken place. Now they work either on deputation in other departments or with the Block Management Officer (BMO) at the block level and they are often imparted the training of a BMO. They were supposed to be supervising authority over the BMO as well as the second signatory with the MOs. However, they do not enjoy any power at the block as well as at the district levels.

## **RECOMMENDATIONS**

Policy makers lack fundamental information on the health workforce, making it difficult to plan and govern effectively. The following measures are suggested that can be taken into account while formulating a new policy:

- 1) Ensure an adequate number of educated healthcare providers and technical healthcare workers at all levels, particularly in public healthcare, by boosting HRH density to at least 23 health workers per 10,000 people, as recommended by the WHO. Number of community health workers can be doubled, i.e. rather than one per 1000 population, two per 1000 population can be proposed. Additionally, one

of the workers should be female, so that she can also be trained as an ANM later on. Their remuneration should be fixed with performance based incentives.

- 2) A new academic course on basic rural healthcare and a Masters degree in public health can be introduced in medical colleges.
- 3) When in a district or any public healthcare facility, a team is deployed, it should consist of all the essential staff, rather than one staff handling two positions. This weighs the personnel down with extra workload.
- 4) The necessity to improve existing health workers' abilities as well as recruit new employees necessitates the rapid expansion of HRH educational and skill development training institutes for faculty development and continuous education. Faculty development centres and faculty sharing across educational institutions should be established.
- 5) Revive the dying DHEO cadre and develop a rule book for them.
- 6) Creation of a directorate of public health, where clinical and non-clinical professionals could be promoted to higher decision making positions.
- 7) Introduce competency-based, health system connected curricula and continuous education to improve the quality of HRH education and training. Continuous medical education and skill enhancement systems should be implemented. These should be linked to promotions and the renewal of licenses to practise.
- 8) Provide necessary training, clinical decision assistance, and direct clinical care using online learning platforms and mobile technology
- 9) Policies should be introduced so that epidemiologists and public health officers are in charge of developing technical measures to combat epidemics. It is expected that the government will plan to develop our public health institutions, such as the National Centre for Disease Control (NCDC), All India Institute of Hygiene and Public Health (AIIPH), Indian Institutes of Public Health, and other similar schools and public health divisions within the ministry of health. The budget should include a provision of Rs. 2000 crore to improve public health institutions and divisions across the country. <sup>gg</sup>
- 10) According to various studies, Uttar Pradesh's health policies has prioritised government curative and clinical treatment over preventive and primary healthcare.<sup>hh</sup> This problem must be handled by persons who have worked in the healthcare system. They must be included in the development, planning, and implementation of HRH policies in the state.

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**Chapter 6**  
**PUBLIC HEALTH**  
**MANAGEMENT CADRE IN**  
**RAJASTHAN – AN**  
**EXPLORATORY STUDY**



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# **EXECUTIVE SUMMARY**

## **Overview**

Rajasthan has displayed its ongoing commitment to achieving Universal Health Coverage through the implementation of schemes for health insurance and free in-patient and out-patient services, drugs and diagnostics. The state's commitment to health will further be strengthened when the Right to Health bill under deliberation will be implemented. However, a strong commitment towards preventive and public health driven by a specialised public health workforce is lacking.

The establishment of dedicated public health cadres has been recommended by various health committees in India. Most recently, the National Health Policy (2017) advocated for the establishment of multidisciplinary public health management cadres to oversee public health functions at various levels of administration. At the Union level, the Ministry of Health and Family Welfare and Expert Committee on Public Health Management Cadre (PHMC) have published directive frameworks for individual states to build on.

Since PHMCs must be state-specific to cater to the local context, population and health needs, it is crucial to understand the existing public health administrative system. This report presents the findings from an exploratory study that looks at the organisational structures of the existing public health management system, the challenges in the current system including budgeting for human resources, status of permanent and contractual employees, experiences of contractual employees, and hurdles faced by current public health management functionaries such as administrative burden and mismatched accountability and authority. The findings are based on review of policy documents, secondary analysis of government data and key informant interviews.

## **Findings**

- In Rajasthan, there are separate state departments for Health & Family Welfare, Medical Education and AYUSH. As per the Expert Committee on PHMC, these departments should be integrated to form a new structure for public health administration.
- The existing core public health management system in Rajasthan is designed as per the erstwhile National Rural Health Mission (NRHM) and the current National Health Mission (NHM), with programme management units at the state, district and block levels. Vertical programmes under the NHM are predominantly managed through agencies with reporting structures going up to the Union-level. The state has also set up distinct agencies to manage the state's flagship health programmes such as the Mukhya Mantri Chiranjeevi Swasthya Bima Yojana.

Understanding of how the multiple health-related organisations in the state are interlinked is often limited, incomplete, and in some cases even flawed. The organisational structures of these entities and the roles and responsibilities assigned to their functionaries will have to be examined and disentangled for the creation of a PHMC.

- There is a divide between personnel from clinical and non-clinical backgrounds in leadership positions in the health department. Core leadership positions are assigned to personnel with clinical backgrounds through promotion mechanisms. The post of the Mission Director of the NHM is held by an officer from the Indian Administrative Service (IAS). This has been especially useful during situations like the COVID-19 pandemic where coordination is required not just across different health verticals, but with non-health departments as well. This demonstrates the urgent need for a public health management cadre that can perform this coordinating function across levels and sectors at all times, and not just during times of crisis.
- Since existing public health management functionaries are predominantly hired under the NHM, the Centrally Sponsored Scheme is also the primary source of funding for public health management. In Financial Year 2021-22, the budget approved by the Union government for Human Resources (HR) under NHM for Rajasthan comprised 12.34 per cent of the total budget (as per the Record of Proceedings). The amount approved for HR was Rs 12.15 crore lower than what was approved in the previous financial year (2020-21).
- For FY 2021-22, the HR budget for the state under NHM, combined with the approved budgets for 'Training & Capacity Building' and 'Programme Management' made up 21.67 per cent of the total approved budget. Despite the ongoing COVID-19 and the critical need for human resources for health, the proportion of the budget dedicated to HR-related expenditure under NHM was lower than the previous three years. To accommodate the creation of a public health management cadre, a far greater, sustained budgetary commitment towards HR development will be required.
- As per the publicly available data on the Rajasthan health department's employee database, almost one-third (33.05 per cent) of the 60,602 employees listed (as of September 2021) are in contractual roles. At the state headquarter level, 73.15 per cent of the registered employees are in contractual positions.
- Shortage of workers in the public health system remains a persistent challenge. With regard to the State Programme Management Unit, 7 per cent of Consultant posts and 14 per cent of Programme Officer posts are vacant (as of 2019-20).
- The Integrated Disease Surveillance Programme (IDSP) which is crucial in this age

of pandemics, had vacancies across critical posts. Out of the sanctioned positions, 23 per cent of epidemiologist positions, 27 per cent of microbiologist positions and 91 per cent of Lab Technician posts were vacant as of FY 2020-21.

- The vacancies in consultant posts at the Block Programme Management Units (BPMUs) are more pronounced than at the district level. Out of the 249 BPM posts across the state, 88 per cent are filled. The creation and sanctioning of posts at the block level has not kept up with the number of administrative units in the state. Although the state has 352 blocks across its districts, only 249 BPM posts have been sanctioned. The vacancies across Accounts posts at the Block, Community Health Centre and Primary Health Centres stand at 10 per cent. There is a lack of supervisors for Accredited Social Health Activists (ASHAs) at both the Primary Health Centre (PHC) and Block levels - 20 per cent of PHC ASHA Supervisor posts and 30 per cent of Block ASHA Supervisor posts are vacant.
- The state's own HR data shows a lack of women in supervisory and management posts at all levels. At the state headquarter level only 26.17 per cent of registered positions are reported to be held by females (as of September 2021). At the district level, not a single Chief Medical and Health Officer (CMHO), Deputy CMHO (Family Welfare) or Reproductive & Child Health Officer (RCHO) post is held by a female candidate. This signals both a lack of promotions and recruitment of females into public health leadership roles. A former senior health official also described the lack of representation of Scheduled Caste and Scheduled Tribe candidates in public health leadership positions and pointed to the dominant caste capture of positions at the state headquarter.
- The data on recruitment, vacancies and equity suggests that there are gaps across the entire HRH recruitment cycle – creation, financing and sanctioning of posts, as well as hiring and retention – which will need to be addressed to successfully create a PHMC.
- An examination of advertisements for key public health posts that were found to be vacant, such as Epidemiologists, Microbiologists, District ASHA Coordinator, Accounts, and PHC Supervisor, suggests that a higher level of pay coupled with a path for professional growth could help address some of these challenges.
- The contractual public health management employees interviewed expressed their concerns over low salaries, lack of career trajectory and job security that impact their ability to perform in their roles. They also shared that there are conflicts between functionaries belonging to clinical and non-clinical roles.
- There is a sharp contrast between the ideal, expected role of a public health management cadre and the reality of those in public health management positions today. This brings into focus the many roles and responsibilities that

public health managers straddle as quasi-bureaucrats within the system, and the administrative burdens they experience.

- A push for increasing digitisation of health and public health services means the system veers towards 'accounting-based accountability' which takes away from actual public health delivery and accountability challenges on the ground. DPMs and BPMs reported a lack of authority to hold the implementing functionaries they monitor accountable. To address these challenges through a new PHMC, roles, responsibilities and lines of accountability will have to be mapped and balanced in line with the expected outputs and outcomes.
- Across key informants there was consensus for the need of a multidisciplinary PHMC in Rajasthan. A current state nodal officer was of the opinion that Rajasthan would have to evolve its own model because the Tamil Nadu model was "*not desirable*" because it is "*not forward looking*" and is "*treatment focused*".
- Key informants identified evaluation of existing personnel and training and capacity building as critical for the transition to a PHMC from the existing system. Incidentally, Rajasthan already fares better than other states in the availability of public health education programmes. 17 per cent of all the Master of Public Health (MPH) programmes across the country are based in Rajasthan.
- Further examination of the existing system and consensus-building is required to settle on an objective for the state's PHMC and create a blue-print for its structure, roles, recruitment methods and career trajectories.

## **RECOMMENDATIONS**

- 1) As suggested by the Expert Committee, states need to understand the financial implications of setting up a public health cadre. In Financial Year (FY) 2020-21, Rajasthan budgeted 7.4 per cent of its state budget for health expenditure. There has been a steady increase over the years – the state allocated 4.9 per cent in FY 2012-13 which increased to 5.7 per cent in FY 2017-18. The funding for HR within the overall budget will have to be increased and sustained. This can be achieved through a detailed review and revision of existing posts, programmes and budgetary outlays.
- 2) To embark on the process of creating a public health management cadre, there is a need to settle on a vision for the cadre that will stand the test of time — changing population health needs, and changes in government regimes and policy priorities. The suggestions given by key informants broadly overlap with the 'essential' and 'desirable' principles for the creation of a public health management cadre described in the Expert Committee report. Hence the state

can use the Committee's framework as a starting point to build consensus on the motivations and objectives across different stakeholder groups and more deeply study the government's own data and functioning to understand how the system can evolve at an operational level.

- 3) Assuming the requisite political will, the hurdle surrounding the operationalisation of public health management cadres is essentially an administrative reform challenge. The Union government's Draft National Public Health Bill (2022) could be just the external impetus the state needs to begin the process of reform. The state can constitute a hybrid committee for this very goal. It can initiate dialogue and convene actors across groups such as the state executive, current health system functionaries, public health experts and civil society organisations to build a collective, inclusive vision for a public health management cadre that can become the backbone of the 'Rajasthan Model of Public Health'.

## **INTRODUCTION**

The ongoing COVID-19 pandemic has sharply brought into focus the need for Universal Health Coverage and revitalised discussions on the establishment of state public health cadres. With the onset of the pandemic health functionaries found themselves performing new roles, including but not limited to leading Rapid Response Teams, conducting contact tracing, setting up containment zones, analysing epidemiological data, and preparing and implementing pandemic control plans<sup>1</sup>. In the past, epidemics have led states to take strides towards the establishment of public health cadres<sup>a</sup>. Although public health cadres are not a novel idea for India, perhaps the pandemic will act as a clarion call to recognise dedicated public health management personnel as essential to achieving accessible and equitable health and wellbeing for all<sup>2</sup>.

## **CONCEPTUALISING A PUBLIC HEALTH CADRE**

The establishment of a public health cadre has been a recurring recommendation of expert committees<sup>b</sup>. Further, the need for a multi-disciplinary workforce to achieve the country's health goals was emphasised by the National Health Policy (NHP) 2017. It advocates for the creation of a Public Health Management Cadre (PHMC) in all states. The proposed cadre would have training in public health or other relevant disciplines as an entry criteria, along with an attractive career structure and hiring policy to recruit talented professionals into the public health system<sup>3</sup>. This goal of setting up PHMCs was cemented in the 13<sup>th</sup> Conference of the Central Council of Health and Family Welfare

(2019) where state health ministers resolved to establish public health cadres by 2022<sup>4</sup>. The announcement of the (yet to be publicly released) Draft National Public Health Bill (2022) presents the possibility of a Parliamentary impetus for the creation of state public health management cadres<sup>5</sup>.

The Report of the Expert Committee on Public Health Management Cadre (2021) provides principles and a framework for states to build on<sup>6</sup>. Developed through successive discussions with experts, as well as representatives from states that already have some structures of a public health cadre in place, the proposal recognises the need for flexibility and context-specificity. Recruitment by the Union government will impinge on human resources for health as a state domain and ignore state-specific needs. Further, adding yet another top-down, bureaucratic system may compound the existing challenges rather than opening up space for radical reform<sup>7</sup>. Additionally, the creation of PHMCs must take place within the existing landscape of both Union and state schemes for health. In particular, the National Health Mission (NHM) – not just because it includes a wide range of activities from addressing health issues ranging from reproductive and child health to palliative care, but also because the scheme itself led to the recruitment of public health consultants at the state, district and block levels—thus forming a base to build upon<sup>8</sup>. The formation of a PHMC would segregate and more effectively delineate responsibilities and coordination mechanisms for clinical and public health functions, with the ultimate goal of better service delivery and coordination at the state, district and block levels as measured through improved health outcomes.

Drawing on the Expert Committee's report, the Ministry of Health & Family Welfare's (MoHFW) latest Guidance for Implementation of the PHMC (2022) directs states to begin implementation of the PHMC (identification of cadre strength and recruitment to vacant posts) within six months to a year of the guidelines' issuance<sup>9</sup>.

## **STUDY CONTEXT - RAJASTHAN**

This study is focused on the state of Rajasthan. Set in north-west India, it is geographically the largest state in the country. The state is sub-divided into 7 divisions and 33 districts. For the purpose of health administration there are 34 districts as the district of Jaipur is split into Jaipur I and Jaipur II. As per the 2011 Census, the state has a population of 68 million<sup>10</sup>. The population density stands at 200 persons per square kilometre, lower than the national average of 382. As per the latest National Family Health Survey (2019-21; NFHS-5), three-fourths of all households are in rural areas. The survey found that 22 per cent of household heads belong to a Scheduled Caste (SC), 14 per cent to a Scheduled Tribe (ST) and 45 per cent to Other Backward Classes (OBC)<sup>11</sup>.

In 2001, due to high infant mortality and lag in demographic transition, Rajasthan was categorised as an Empowered Action Group (EAG) state along with Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Uttarakhand and Uttar Pradesh<sup>12</sup>. As an EAG state, Rajasthan receives special focus from the MoHFW. The state continues to have one of the highest Infant Mortality Rates (IMR) in the country. However, there have been improvements. According to the Sample Registration System (2017-19) data, the state's IMR has declined to 35 per 1,000 live births<sup>13</sup> and the Maternal Mortality Rate has declined to 141 per 1,00,000 live births<sup>14</sup>. Out of the 10 districts with poor maternal and child health indicators, 6 are classified under the tribal scheduled areas<sup>15</sup>. The needs of the tribal population are different from that of the general due to high illiteracy and remoteness of locations. Female literacy (an important factor for maternal and child health) in the state continues to be among the lowest in the country.

As per the NITI Aayog's Health Index, Rajasthan ranks 16 out of 19 large states in the country and its incremental performance on health outcomes continues to be weak<sup>16</sup>. The state is experiencing an increasing burden of Non-Communicable Diseases while high prevalence of Communicable Diseases continues. The top five causes of death in Rajasthan in 2016 were Chronic Obstructive Pulmonary Disease, ischaemic heart disease, lower respiratory diseases, diarrhoeal diseases, and tuberculosis<sup>17</sup>.

As per the Rural Health Statistics (2020-21), in terms of health infrastructure, Rajasthan has shown a significant increase in the number of Sub Centres, Primary Health Centres, and Community Health Centres since 2005<sup>18</sup>. Despite this increase in infrastructure, at a population level the state still needs to improve provision of hospital infrastructure. As per the National Health Profile (2021), the population per government hospital bed ratio for the state is 1,730 people per hospital bed<sup>19</sup>. This is lower than the prescribed World Health Organisation norm of 5 hospital beds per 1,000 people and lower than the national rate of 1,666 people per government hospital bed. This is compounded by significant shortfalls in health workers, especially in rural areas<sup>18</sup>.

Rajasthan has steadily been increasing its expenditure on health. For Financial Year 2022-23, the state allocated 7.4 per cent of its budget towards health<sup>20</sup>. However, as per the National Health Accounts (2017-18), the rate of Out of Pocket Expenditure on health in Rajasthan as a proportion of Total Health Expenditure was higher than the national average<sup>21</sup>.



The overview provided above demonstrates the public health situation in the state could benefit from both public health infrastructure and personnel investments not only to overcome infrastructure and services delivery lapses but also to focus on prevention and the social determinants of health to effectively address issues of social inequity and access across genders and caste groups. In this context, a public health management cadre would add dedicated, specialised personnel to address these challenges with the broader goal of better health access and outcomes for all.

## **METHODS**

This work is based upon an analysis of government documents, secondary analysis of government data, secondary literature review, news reports, and key informant interviews (n=14, see [Table 1](#) in Annexure). The government documents were collected through detailed review of Union and state government websites as well as through recommendations from key informants. The government data was similarly collected through detailed review of published documents, *suo moto* disclosure on department websites, and data requested under the Right to Information Act.

The respondents for the Key Informant Interviews were selected through snowball sampling. An effort was made to capture insights from current and former health officials at various levels of the system - state, district, block and below. The respondents were interviewed across 3 demographically different districts of Rajasthan and the state-level health department. The interviews were conducted in-person using a semi-structured interview guide after explaining the goals of the study and seeking verbal consent from the respondents. Keeping in mind the ongoing engagement of the respondents with the government, the interviews were not recorded and the respondents' identities have been anonymised. Detailed notes were taken during the interviews. These were then typed and analysed together to find common themes. A combination of *a priori* codes (as per the themes covered in the semi-structured interview guide) and inductive coding of the interview notes was used. The analysis of the government documents, secondary analysis of government data and the findings from the key informant interviews have been combined and presented in an expository format.

The key limitations of this study are the small sample size of the interviews and gaps in human resources data. The research was conducted during the COVID-19 pandemic. As a result, access to public health functionaries was limited. However, this is an exploratory

study and does not seek to be comprehensive, but rather to present a starting point to engage in further research and policy conversations. Given the policy expediency of a public health management cadre, it was decided to share the findings available and collect additional data in subsequent phases.

The following sections provide an overview of the existing public health workforce in Rajasthan and present a discussion on the challenges and considerations to be taken into account for the development of a state-specific public health management cadre.

## **UNDERSTANDING PUBLIC HEALTH ADMINISTRATION IN RAJASTHAN**

The Expert Committee report states that the primary objective of establishing a PHMC is to segregate clinical and public health functions for better service delivery.<sup>6</sup> It proposes the integration of health professional education, health services (public health and hospital) and public health administrative activities. Prior to this, it is imperative that the decision-makers within the system itself understand and disentangle the presence (and lack of) overlapping functions and reporting structures in order to plan the reorganisation, and also to fully grasp the implications of the changes they suggest.

### **State Department and Directorates**

In Rajasthan, the departments and directorates for core public health activities are separate, although linked through overlapping functions and coordination across functionaries (see [Table 2](#) in Annexure).

Describing how the Government of Rajasthan's overarching Medical, Health & Family Welfare administration, including NHM, the Directorate of Public Health, the Department of Medical Education (DoME)<sup>c</sup>, the State Health Assurance Agency, etc. work together, a former senior official in the Department of Health & Family Welfare (DoHFW) said "माँ तो ये ही है, बाकी सब बेटे बेटा है" (meaning DoHFW is the mother and the rest are her children). However, through interviews with various current and former health officials it became clear that the system's own understanding of how the multiple health-related organisations at the state level are interlinked is often incomplete, and in some cases even flawed. For example, a former senior official from the DoHFW was insistent that the DoHFW, DoME, and AYUSH<sup>d</sup> are under the purview of the same state-level executive (Additional Chief Secretary/Principal Secretary/Secretary), and was surprised to learn that they were not.

The key leadership roles across the public health verticals are occupied by officers from the Indian Administrative Services (IAS) (see [Table 1](#) below). At the Director level, the officers are usually from a clinical background, having started as Medical Officers in the system with an MBBS degree (see [Table 2](#) in text). The Project Director roles are sometimes given to Rajasthan Administrative Service (RAS) officers. Speaking about the role of IAS officers in the health department, a representative from a leading health non-profit organisation shared:

“Prior to the launch of the National Rural Health Mission in 2005, the state-level directorate was not dominated by IAS officers. The earlier directors were able to achieve things like the institutionalisation of the Maternal and Child Health Days. Now that IAS officers are recruited to key positions like the Mission Director of the National Health Mission which oversees most of the key public health activities, there is a focus on quick solutions rather than long term change. The IAS officers have short postings and want to show quick results” (KI\_4).

However, a former senior official in the health department (from a clinical background) felt that IAS officers actually helped to bridge the divide between personnel from clinical and non-clinical backgrounds. He said that this is especially useful during situations like the COVID-19 pandemic where coordination is required not just across different health verticals, but with non-health departments as well.

	Background	Post Title(s)
Executive - Apex	IAS	Secretary, Medical Health & Family Welfare Department
Executive - vertical heads	IAS	Mission Director, National Health Mission (usually also designated as a Special Secretary or Ex-Officio Joint Secretary)
	IAS	Managing Director, Rajasthan Medical Services Corporation Ltd (RMSCL)
	IAS	CEO, State Health Assurance Agency
Directors	Clinical Background	Director (Public Health)
	Clinical Background	Director (Family Welfare)
	Rajasthan Administrative Service (RAS)	Director (Non-Gazetted)
	Clinical Background	Director (Information, Education & Communication)
	Clinical Background	Director (Employee State Insurance)
	Clinical Background	Director (AIDS) & Project Director, Rajasthan State AIDS Control Society (R-SACS)
	Clinical Background	Director, State Institute for Health & Family Welfare (SIHFW)
	Clinical Background	Director, Mobile Surgical Unit

**Table 1 - Key leadership positions**

**Source: Based on key informant interviews**

A study of the Annual Reports published by the Department of Health & Family Welfare suggests how the public health functionaries and activities at the state-level are organised. The Annual Reports, titled *Pragati Prativedan*<sup>22</sup>, are published each year as two sub-reports:

- Family Welfare and National Health Mission
- Medical & Health Services

The organograms included in the Pragati Prativedan reports for each of the directorates (see [Chart 2](#) & [Chart 3](#) in Annexure) present the formal reporting structures under each Director. All the Directors as well as the Special/Joint Secretary and Mission Director of NHM ultimately report to the state-level executive officer - Secretary, Medical, Health & Family Welfare. Describing the role of the Director, a current official shared:

“In the public health system the role of the Director is to provide the society a healthy environment and good health status. If they are physically, mentally and socially fit - then they are healthy. In my deputy director position I have to coordinate with the food department, water and sanitation department, medical and health, medical staff, and oversee all health-related activities” (KI\_11).

Upon probing officials about how these separate units are integrated, they shared that it was decided by the type of function or activity that had to be carried out and at which level. One former senior official said that the job chart for a particular post (listing activities and responsibilities) is more important than whom they report to. He added

“interlinked तो सारे है... एक दूसरे के बिना तो कुछ नहीं चलेगा” (meaning all the Directorates are interlinked and they will be unable to work without each other) (KI\_12).

This interdependence is evident from an examination of the list of areas that each of the Directorates has addressed in its Pragati Prativedan report (see [Table 3](#) in Annexure). The Joint Secretary/Special Secretary & Mission Director of NHM and the Director, Reproductive & Child Health and Family Welfare (see [Chart 2](#) in Annexure) oversee public health activities under reproductive, maternal, new born, child and adolescent (RMNCHA) health, as well as the National Urban Health Mission (NUHM), telemedicine, quality assurance programmes, e-government initiatives, and special state health initiatives. The NHM State Programme Management Unit (SPMU), Project Directors and State Nodal Officers oversee the implementation and monitoring of these various

activities.

The Medical & Health Services directorate is headed by the Director, Public Health (see [Chart 3](#) in Annexure). State initiatives that are delivered through the medical centres and hospitals such as the free drugs and diagnostics schemes, and the Janta Clinic programme, are managed through this directorate. All the vertical programmes under NHM such as for communicable and non-communicable diseases, and the Integrated Diseases Surveillance Programme (IDSP), along with measures for food safety and security are under the Director, Public Health.

Although there is a separation of responsibilities and management structures at the state level, the implementation of these activities through the broader health system are jointly managed. For example, the screenings for various non-communicable diseases that are under the Director, Public Health, are conducted at the Health & Wellness Centres that are under the purview of the MD, NHM. Thus, there is a simultaneous separation and overlap of roles, responsibilities and authority. Adding to this complexity, there are further verticals that operate as agencies reporting directly to the Secretary at the state level or to the Union level of government.

## Agencies

The verticals reporting to the Secretary, Medical, Health & Family Welfare include agencies that are semi-independent from the overall structure of the Department of Health & Family Welfare, such as the State AIDS Control Society<sup>23</sup>, the Rajasthan Medical Services Corporation Limited (RMSCL)<sup>24</sup> and the Rajasthan State Health Assurance Agency. The creation of these agencies, termed 'agencification', reflects a New Public Management approach applied to health administration<sup>25</sup>. These agencies do not operate the same way as directorates under the department, but rather as independent legal entities. Yet because of the manner in which they operate, they are still dependent on the parent department. The vertical structures for programmes under NHM such as tuberculosis and leprosy are all established as separate agencies, thus explaining the separate yet overlapping functions and responsibilities.

Although these agencies have independent legal status, their governing boards are usually chaired by the Secretary, Medical, Health & Family Welfare. There is both fund and functional exchange between the directorates and the agencies. For example, the e-Upkaran platform overseen by the MD, NHM is built and maintained by RMSCL. Similarly, procurement of drugs for NHM services takes place through RMSCL (see [Chart 5](#) in Annexure), which is registered as a company that is wholly owned by the Government of Rajasthan. Similarly, the training body at the state-level, the State Institute for Health & Family Welfare (SIHFW), which houses the State Health Resource Centre (SHRC), works closely with the Directorate overseeing health and family welfare and fulfils many of the training needs for NHM employees in the state.

Other state-level agencies are constructed to be more tightly integrated with the Union government level agencies than with the directorates at the state level, like the Rajasthan State AIDS Control Society (see [Chart 4](#) in Annexure) which receives direction from the National AIDS Control Organisation. But this does not mean that there is complete separation - there is an 'AIDS Cell' housed within the Directorate which oversees implementation of HIV/AIDS related activities in conjunction with other ongoing health activities.

There are both benefits and drawbacks to agencification. Singh writes that creating an agency structure can aid in the faster flow of funds and decision-making<sup>25</sup>. With this in mind, the state government has created an independent structure for health assurance. Earlier the functionaries responsible for implementing state health insurance programmes such as the Bhamashah Swasthya Bima Yojana were seated within the Swasthya Bhawan campus, the building that houses the entire National Health Mission team as well as most other state-level public health management functionaries. Now, the State Health Assurance Agency managing the implementation of Rajasthan's Chiranjeevi programme, is not just an independent entity headed by an IAS officer (see [Table 1](#) above) but is also housed in an entirely separate building – thus cementing its agencification, with the hope that it will lead to more efficient fund flows and decision-making. However, while agencification may seem beneficial in the short-term, it not only takes away from a holistic approach to public health by adopting a narrowly defined focus for the agency at hand, but also erodes the space for implementation of other health functions that do not have a strictly defined vertical structure<sup>26</sup>.

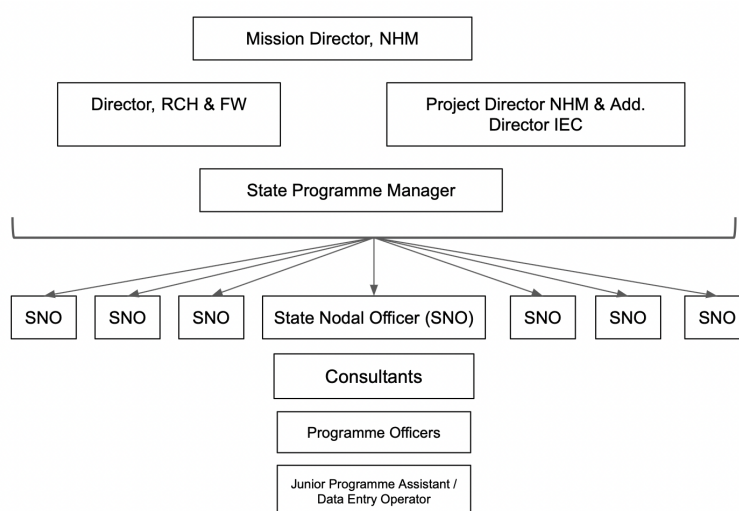
In line with the framework put forth by the Expert Committee, these agencies, their functionaries, roles and responsibilities, as well as both formal and informal coordination mechanisms will have to be examined to determine how they will be integrated with the objectives of a state public health management cadre. For the creation of a dedicated public health management cadre that can oversee the public health functions in the state with the social determinants of health in frame and from an ecological perspective, the artificial boundaries set up between health functions by the creation of agencies must be dissolved.

## **State Programme Management Unit**

The State Programme Management Units (SPMU) were introduced under the National Rural Health Mission to meet the programme support needs of reproductive and child health activities<sup>27</sup>. With the merging of the National Rural and Urban Health Missions under the umbrella of the NHM, the role of the SPMU has expanded. The SPMU is headed by the State Programme Manager (SPM) who reports directly to the MD, NHM. Rajasthan has a history of placing a permanent cadre employee with a clinical

background and the requisite public health and managerial skills to the post. The Assistant SPM (hired as a contractual consultant) supports the SPM in day-to-day work. The SPM assists the MD in monitoring and coordinating across Project Directors, State Nodal Officers, programme-specific consultants, the department’s e-governance initiatives, and any other innovative or special projects undertaken by the department.

A current nodal officer at the state-level, described it as a “hub and spoke model” (see [Chart 1](#) below) with the MD, Director (RCH & FW), NHM Project Director and SPM as the ‘hub’ and the programme-specific officers as ‘spokes’ who monitor the implementation of programmes down to district level and below. Each State Nodal Officer is supported by Consultants, Programme Officers, and Junior Programme Assistants or Data Entry Operators.



**Chart 1: State Nodal Officers**

*Source: Based on an interview with KI\_10*

## Health Administration at The District and Block Levels

The management of health and medical services at the district level is led by the Chief Medical & Health Officer (CMHO)<sup>e</sup>. The CMHO is appointed through promotion from the medical cadre, either from the post of Senior Medical Officer or from the post of Deputy CMHO (see [Table 2](#) below). The CMHO is supported by an Additional or Deputy CMHO (Family Welfare), Deputy CMHO (Health) and a Reproductive & Child Health Officer (RCHO). These posts are also filled through promotion from the medical cadre. As per a Government Order issued by the Directorate of Health and Medical Services in 2015<sup>28</sup>, candidates with a “graduate degree/diploma in Public Health from a Recognised University” should be preferred for the post of CMHO. Whether this order is being followed is unclear.

Level	Post	Form of recruitment	Eligible posts for placement through promotion or transfer	Experience & pay grade
	1	2	3	4
S T A T E	Director	100% by promotion	1. Additional Director 2. Principal Chief Medical Officer 3. Principal Specialist	3 years as Additional Director OR 5 years as Joint Director/ State Leprosy Officer/Senior Specialist OR 3 years service Principal Chief Medical Officer OR 3 years as Principal Specialist OR 3 years in the grade pay Rs. 8700/- or in the corresponding existing pay scale.
	Additional Director	100% by transfer	1. Principal Chief Medical Officer 2. Principal Specialist	6 years in the grade pay Rs. 7600/- or in the corresponding existing pay scale/ post mentioned in column 3
	Deputy Director & equivalent posts	100% by promotion	80% from Senior Medical Officer 20% from Deputy CMHO	6 years in the grade pay Rs.6600/- or in the corresponding existing pay scale/ post mentioned in column 3
D I S T R I C T	Chief Medical & Health Officer (CMHO) & equivalent posts	100% by promotion	80% from Senior Medical Officer 20% from Deputy CMHO	6 years in the grade pay Rs.6600/- or in the corresponding existing pay scale/ post mentioned in column 3
	Deputy CMHO (Health / Family Welfare)	100% by promotion	Medical Officer	1. 6 years in the grade pay Rs.5400/- or in the corresponding existing pay scale / post mentioned in column 3 2. Must have passed MD (Preventive & Social Medicine) / Diploma in Public Health & other equivalent qualification recognized by Govt. of Rajasthan

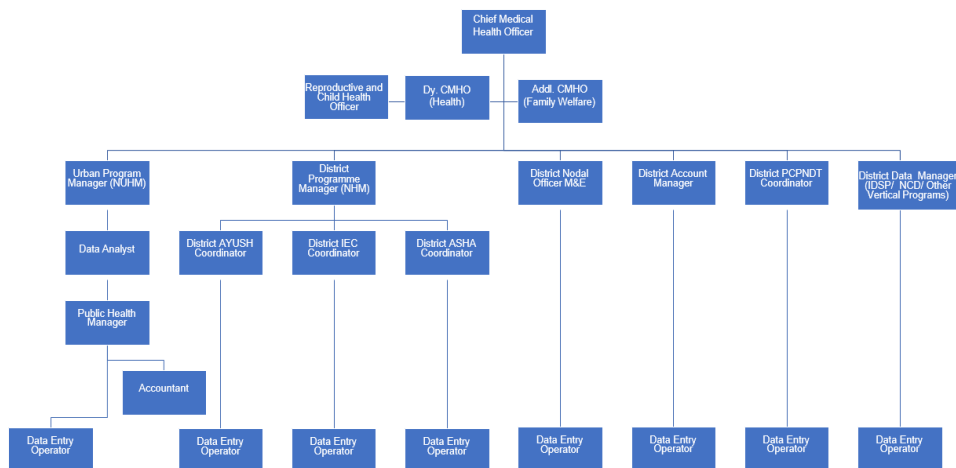
**Table 2 - Recruitment and promotion pathways for key state and district clinical cadre personnel**

**Source: Rajasthan Medical and Health Service (First Amendment) Rules, 2012**

The CMHO assisted by the Additional/Deputy CMHOs oversees the medical and public health management personnel (see [Chart 2](#) below). The hospitals are headed by Principal Medical Officers.

The NHM programme management structure extends down to the district level in the form of the District Programme Management Unit (DPMU). It is headed by the District Programme Manager (DPM), initially assisted by two key personnel: the District Monitoring & Evaluation Officer (DMO) and the District Accounts Manager (DAM). The DPMU was conceptualised as the “cornerstone for smooth and successful implementation” of NRHM<sup>29</sup>. Reflecting on his role, one DPM said:

“the post was created in 2005 to assist the CMHO, but now the role has transformed to oversee total implementation of programmes under NHM” (KI\_1).



**Chart 2 - Organisation of district public health administration**

**Source: Based on interviews with KI\_1 and KI\_2. Validated by KI\_10.**

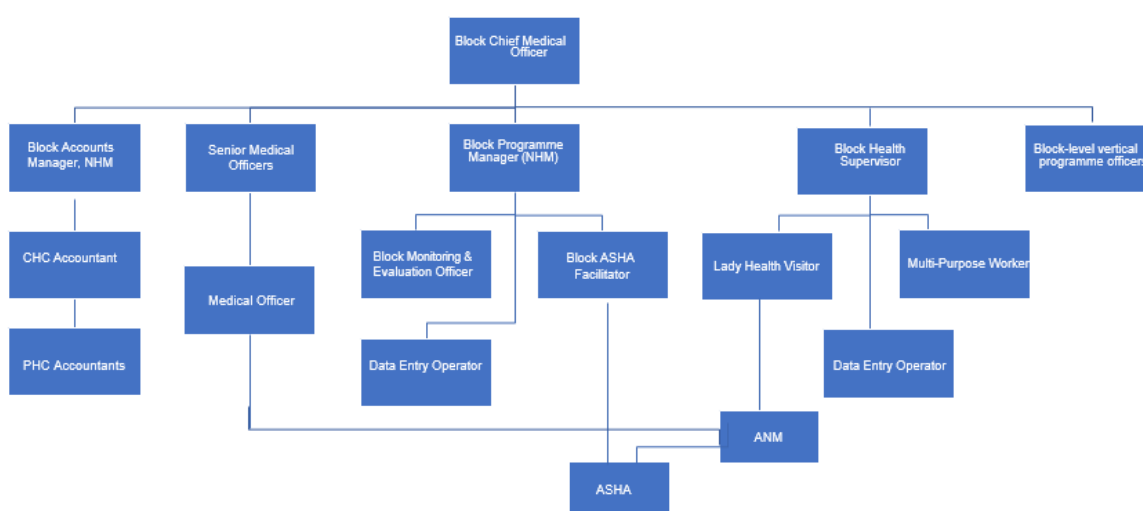


As shown in [Chart 2](#) above, the DPM reports to the CMHO and Additional/Deputy CMHO Family Welfare. The District AYUSH Coordinator, District IEC Coordinator and District ASHA Coordinator report directly to the DPM. With the formation of the NHM (in 2015) the DPM was also appointed the convener of the District Health Society<sup>30</sup>. The DPM oversees rural health activities, owing to its origin through the NRHM, and its urban counterpart, the Urban Programme Manager appointed under the National Urban Health Mission oversees urban public health activities.

The District Data Manager, under the IDSP, oversees the vertical programmes under the NHM. The District Data Manager is recruited contractually from a non-clinical background and reports to the Deputy CMHO (Health). Describing the management of vertical NHM programmes at the district level, a DDM shared,

“the Deputy CMHO (Health) oversees around 14 vertical health programmes such as for oral health, mental health, etc. There are supposed to be Programme Managers for each of these vertical programmes at the district level but many of these posts are vacant. There is also supposed to be an Epidemiologist (contractual) at this level to work alongside on the IDSP work, but these posts are vacant” (KI\_3).

Mirroring the DPMU structure, the Block Programme Management Unit (BPMU) is led by the Block Programme Manager (BPM) who reports to the Block Chief Medical Officer (BCMO) at the block level and the DPM at the district level (see [Chart 3](#) below). The BPM is assisted by the Block Monitoring & Evaluation Officer and the Block ASHA Facilitator.



**Chart 3 - Block public health administration**  
 Source: Interviews with KI\_1, KI\_2 and KI\_8.

## **CHALLENGES IN THE EXISTING PUBLIC HEALTH MANAGEMENT SYSTEM**

Recruitment for human resources for health is under the control of the state government. Matters such as type of recruitment, salary, increments, benefits, service rules, promotions and transfers are all decided by the state government<sup>31</sup>. Recruitments to permanent posts (also called regular or regularised posts) in the health department are conducted as per Service Rules set by the state (see [Table 4](#) in Annexure). These service rules are defined by the Rajasthan State Public Service Commission. The Public Service Commission's functions and powers are defined by the Constitution of India (Articles 315 to 323 in Part XIV)<sup>32</sup> and Rajasthan Public Service Commission Rules & Regulation, 1963, and the Rajasthan Public Service Commission (Regulations and Validation of Procedure Ordinance 1975 & Act 1976)<sup>33</sup>. One study estimating the "worth" of a permanent government job ties it to the "amenities" that the job provides<sup>34</sup>. Permanent posts are seen as prestigious and employees are entitled to benefits such as tenure, health insurance and access, paid leave, retirement benefits, provident fund, which make them coveted positions despite relatively lower base salaries.

Contractual posts under NHM can be proposed and sanctioned through the annual planning and budgeting process. The state submits proposed human resources for health (HRH) in its State Programme Implementation Plan (PIP) to the MoHFW at the Union level, after conducting a bottom-up planning exercise. These proposals are reviewed and through the Record of Proceedings (ROPs) the budget for the proposed HRH can be approved. Following the budgetary process at both the Union and state levels, and sanction of posts by the Government of Rajasthan the state Department of Health & Family Welfare can begin recruitment. The contractual employees are not entitled to the "amenities" provided for permanent positions, and their employment conditions are set through Terms of Reference (TORs) set by the state health departments or any other agency through which they may be recruited.

Additionally, contractual HRH hiring can also take place through public-private partnerships (PPPs), such as when the government contracts private/non-governmental organisations to run health facilities, and through support through donor organisations<sup>f</sup> that have partnered with the government for programme implementation or other support. The hiring practices at the health centres being operated in PPP mode have been reported to be inadequate<sup>35</sup>. Additionally, the role of non-governmental funding in HR for public health functions, particularly through international organisations, needs to be better understood to ensure a smooth transition once the donor funding comes to a halt. In other regions, the challenges of transitioning from donor funded programmes to state-funding have been well-established<sup>36</sup>.

Assuming the requisite political will, the hurdle surrounding the operationalisation of a

PHMC is essentially an administrative reform challenge. Path dependence of public institutions and resistance to change are well-documented, hence any health administration reform efforts must take into account the current predisposition of functionaries within the health system and its administrative structure as it exists today<sup>37</sup>. Based on prior research on health care reform, understanding the system more deeply can help move beyond path-dependency by identifying sites for both incremental and non-incremental change<sup>38</sup>.

A key initial step in embarking on the process of administrative reform is understanding the existing system and the experiences of functionaries within it<sup>39</sup>, so that underlying challenges can be addressed rather than compounded. This will help inform the type of organisational restructuring that is needed, fresh recruitments, training needs<sup>40</sup>, service rules, career progression guidelines, and budgetary requirements<sup>41</sup>.

The key themes discussed here are:

- [Budget for HR under NHM](#)
- [Status of employment of current public health management functionaries \(including Permanent vs contractual employment, vacancies, equity in recruitment and promotions, and experiences of contractual employees\)](#)
- [Conflicts and competition between HRH with clinical and non-clinical backgrounds](#)
- [Administrative burden](#)
- [Mismatch in accountability and authority](#)

## **Budget For HR Under NHM**

As suggested by the Expert Committee, states need to understand the financial implications of setting up a public health cadre. In Financial Year (FY) 2022-23, Rajasthan budgeted 7.4 per cent of its state budget for health expenditure<sup>20</sup>. There has been a steady increase over the years – the state allocated 4.9 per cent in FY 2012-13 which increased to 5.7 per cent in FY 2017-18<sup>42</sup>.

As per the Centrally Sponsored NHM scheme, the funds for the NHM are provided by the Union and State government in a 60:40 ratio. The state can propose allocations for hiring in their annual PIP, based on which GoI approves and sanction funds through the ROPs. As per the ROP for Rajasthan for FY 2021-22, funds approved under the budget head for Human Resources comprise the third-largest share (12.34 per cent) of the total approved budget, following the amounts approved for Procurements (24.84 per cent) and Infrastructure (16.64 per cent). The approved budget amounts are indicative of government priorities and the intention to spend but do not reflect the funds that are eventually released for use (by the Union and state government) and the actual

expenditure incurred.

Rajasthan's proposed amount for HR in FY 2021-22 was 47 per cent higher than the amount proposed by the state in the previous financial year. Despite the state's higher proposed amount, the amount actually approved by the Union government in FY 2021-22 was Rs 12.15 crore lower than what was approved in the previous financial year (see [Table 5](#) in Annexure).

However, the allocation of budget for NHM HR goes beyond just the "Human Resources - Service Delivery" budget head and includes budget items under the budget heads for "Training & Capacity Building" and "Programme Management". Together the three components comprised 21.67 per cent of the approved NHM budget for FY 2021-22. This is lower than the proportion of the total budget allocated for HR-related expenditure over the previous 3 years.

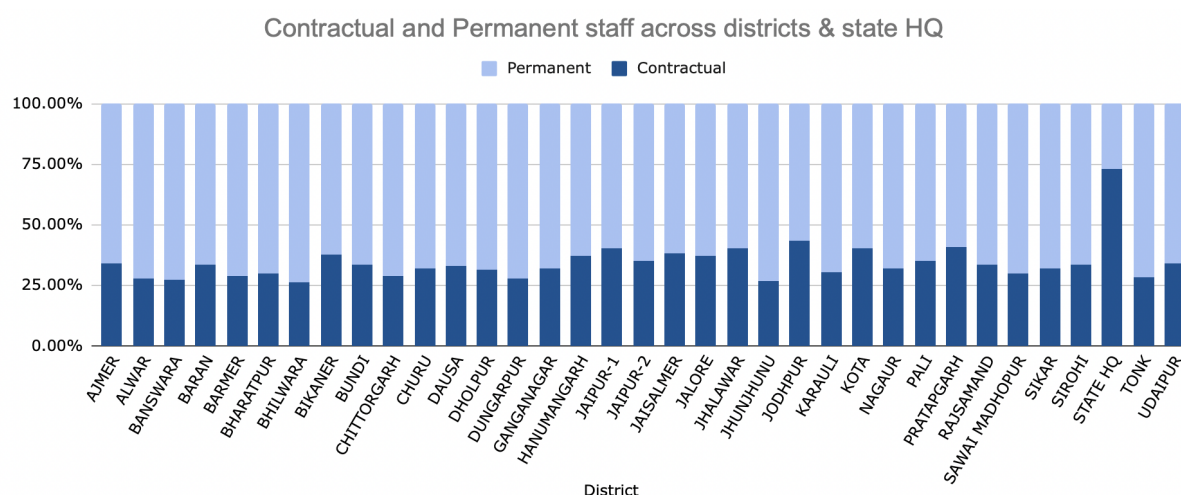
To address the existing shortfall in HRH and accommodate the creation of a public health management cadre, a far greater, sustained budgetary commitment towards HR will be required. The state government will also have to conduct a detailed exercise to discern the exact HRH expenditure of the state because even the budget heads associated with HR such as "Human Resources - Service Delivery", "Training & Capacity Building" and "Programme Management" contain allocations for other activities. And similarly, seemingly non-HR related budget heads contain HR-related budget allocations.

## **Status of Employment of Current Public Health Management Functionaries**

In this section, analysis of secondary government data is combined with findings from Key Informant Interviews, especially those in contractual, non-clinical public health management positions, to examine the current challenges that will have a bearing on the formation of a PHMC.

### **Permanent Vs Contractual Employment**

Analysis of the data publicly available on CHRIS, the health department's online public health human resource management portal<sup>43</sup>, revealed that 33.05 per cent of the 60,602 employees listed on the website (as of September 2021) are in contractual roles, and 66.95 per cent in permanent posts. In half the districts of the state (17 out of 34 health districts), contractual employees make up more than one-third of the registered workforce (see [Graph 1](#) below). However, at the state headquarter level, 73.15 per cent of the registered employees are in contractual roles (see [Table 6](#) in Annexure).



**Graph 1: Contractual & Permanent Staff across Districts & State HQ**

*Source: Author's analysis of data from CHRIS, retrieved 26 September 2021 from <http://chrisnrhm.org/>*

## Vacancies

Shortage of workers in the public health system in India has been a persistent challenge<sup>44</sup>. Karan et al estimate the density of health workers in Rajasthan (including doctors, health associates, nurses and midwives) to be just 20.4 per 10,000 population (up to January 2016)<sup>45</sup>. The shortage of health workers is a result of a combination of factors ranging from low capacity to produce health workers to insufficient incentives for recruitment<sup>44,46</sup>.

While discussions on HRH usually centre on clinically trained and paramedical functionaries, the vacancies (unfilled posts) in public health management roles, in particular the role of epidemiologists and statisticians, came into the spotlight due to the COVID-19 pandemic<sup>47</sup>. The following subsections look at challenges of vacancies in public health management posts at the state, district and block levels through an analysis of the Department of Health & Family Welfare's own publicly available data<sup>22</sup>.

### State-Level

As described in prior sections, leadership positions at the highest rungs of the state public health administration are occupied by IAS and medical officers through promotion (see [Table 2](#)). The public health management roles including the SPMU and nodal positions for activities under NHM and vertical health programmes are filled by contractual consultants. As per the sanctioned and vacant post data published in the Pragati Prativedan reports, the permanent cadre posts at the directorate level are predominantly filled as no new recruitment is required. The promotions are meant to be decided by a committee established by the DoHFW. However, there are vacancies for roles associated with accounts and roles needed for the implementation of the Pre-

Conception and Pre-Natal Diagnostic Techniques (PCPNDT) programme<sup>48</sup>. With regard to the SPMU, 7 per cent of Consultant posts and 14 per cent of Programme Officer posts are vacant (as of 2019-20)<sup>49</sup>.

### Vertical Programmes Under NHM

There are several vacancies in the posts sanctioned for the vertical programmes under NHM. For example, for the IDSP which is crucial in this age of pandemics, 23 per cent of epidemiologist positions, 27 per cent of microbiologist posts and 91 per cent of the Lab Technician posts were vacant as of FY 2020-21 (see [Table 7](#) in Annexure). Similarly, there are vacancies across posts for other vertical health programmes. For example, there are 100 per cent vacancies for posts such as Malaria Inspector, Public Health Supervisor and Occupational Therapist (see [Table 8](#) in Annexure).

### District And Block Level

At the district and block levels we focus on functionaries associated with the CMHO and BCMO offices, and the DPMU and BPMU. As shown in [Table 3](#) below, there are vacancies across district level posts such as CMHO (6 per cent), Additional/Deputy CMHO (Family Welfare) (24 per cent), Deputy CMHO (Health) (24 per cent) and RCHO (26 per cent). This is despite the fact that these posts are to be filled through promotion from the regular medical cadre.

The three initial posts created for the DPMUs - District Programme Manager, District Accounts Manager and District Nodal Officer (M&E) - are filled across all districts. But there are vacancies in the posts of District ASHA Coordinator (12 per cent), IEC Coordinator (6 per cent), PCPNDT Coordinator (3 per cent) and Data Entry Operators (6 per cent) (see [Table 4](#) below).

Name of Post	Sanction	Total Working	Vacant
CMHO	34	32	2
RCHO	34	25	9
Additional CMHO (Family Welfare)	20	15	5
Deputy CMHO (Family Welfare)	14	11	3
Deputy CMHO Health	37	28	9
BCMO	248	169	79

*Table 3 - Status of select district and block level posts (as of 7 April 2021)*

*Source: NHM, Department of Health & Family Welfare, Government of Rajasthan*

Status of contractual posts associated with the District Programme Management Units (2019)			
Name of Contractual Post	Sanctioned	Presently Working	Vacant
District Programme Manager	34	34	0
District Accounts Manager	34	34	0
District Nodal Officer (M&E)	34	34	0
District ASHA Coordinator	34	30	4
District IEC Coordinator	34	32	2
District PCPNDT Coordinator	34	33	1
Data Entry Operators at District HQ	68	64	4

*Table 4 - Status of consultant posts in DPMUs*

*Source: Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan, Family Welfare & NHM, 2019-20. Retrieved from <http://rajswashya.nic.in/Pragati%20Prativedan.htm>*

The vacancies in consultant posts at the BPMUs are more pronounced than at the district level. Out of the 249 BPM posts across the state, 88 per cent are filled (see [Table 5](#) below). The vacancies across Accounts posts at the Block, Community Health Centre and Primary Health Centres stand at 10 per cent. There is a lack of supervisors for ASHAs at both the PHC and Block levels - 20 per cent of PHC ASHA Supervisor posts and 30 per cent of Block ASHA Supervisor posts are vacant. This challenge could be resolved if ASHAs who are currently operating in a “voluntary” capacity are integrated into the public health cadre and offered a path for promotion through requisite performance review and training.

Status of contractual posts associated with the Block Programme Management Units (2019)			
Block Programme Managers	249	220	29
Accounts (Block/ CHC/ PHC)	1098	985	113
Data Entry Operators at Block HQ	249	240	9
Block ASHA Facilitators	249	174	75
PHC ASHA Supervisors	1528	1226	302

*Table 5 - Status of consultant posts in BPMUs*

*Source: Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan, Family Welfare & NHM, 2019-20. Retrieved from <http://rajswashya.nic.in/Pragati%20Prativedan.htm>*

Not just vacancies, the number of sanctioned posts is also not enough. For example, Rajasthan has 352 administrative blocks (as per the Local Government Directory)<sup>50</sup> but only 248 Block Chief Medical Officer posts and 249 Block Programme Manager posts have been sanctioned. Additionally, the sanctioning of block-level posts has not kept up with state delimitation exercises and the creation of new administrative units. This can be further understood by taking the example of a particular district. Jodhpur district of Rajasthan had 16 blocks (as of 2018), through delimitation exercises this increased to 21 blocks in 2019<sup>51</sup>. Yet only 10 block level posts were sanctioned for the district (see [Table 9](#) in Annexure), falling short of the initial need for 16 blocks with the gap widening even

further with the creation of 5 new blocks. This suggests that there are gaps across the entire HRH recruitment cycle - creation, financing and sanctioning of posts, as well as hiring and retention.

### Equity In Recruitment And Promotions

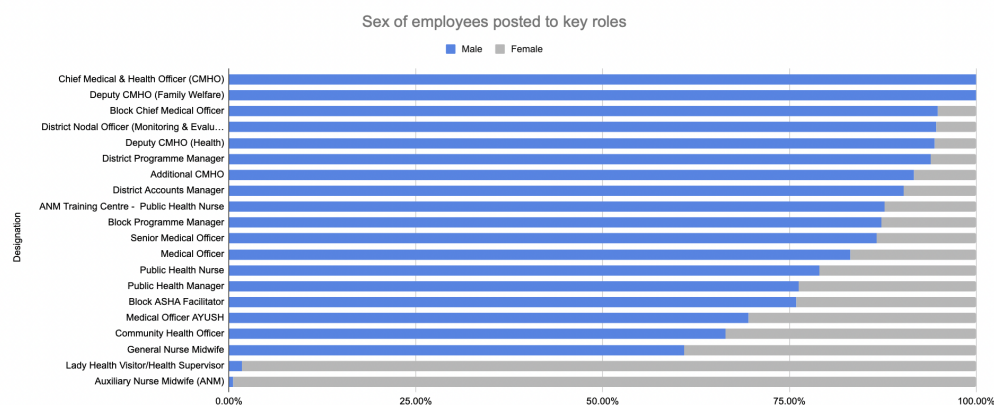
Adding to the recruitment-related challenges, there is also a lack of representation, including but not limited to those identified as female, Scheduled Castes and Scheduled Tribes. Commenting on the dominant caste capture of leadership positions and contractual posts in the health administration, a former senior health official said, *"All you have to do is look at the last names of the people in the posts"*. (KI\_13)<sup>g</sup> The latest announcement regarding new service rules for contractual employees suggests that reservations for SCs, STs, OBCs and Economically Weaker Sections will be made applicable in contractual appointments<sup>52</sup>. But past studies of representation in government posts in other states and sectors such as higher education have shown that such reserved posts continue to remain vacant.<sup>h</sup> Such proposals also do not address the issue of caste-biased promotions to leadership roles. Highlighting vested interests that prevent the creation of clear rules for promotions, a former senior NHM official said:

"Right now there is no clear guideline for who becomes the CMHO, so it is not necessary that they are equipped for the posts. Someone who just has 5 years of experience could become the CMHO or it could be someone who is nearing retirement. Since 2014 there have been discussions that cadre rules will be made for the posting of CMHO, but it suits the politicians that this is not made. There are many things that influence how and who is made the CMHO - whether it is kickbacks, caste norms, etc. There is no transparency in it." (KI\_14)

The state's own HR data shows a lack of women in supervisory and management posts at all levels. At the State Headquarter level, as per CHRIS data, females occupy only 26.17 per cent of registered positions (see [Table 10](#) in Annexure). At the district level, not a single CMHO or Deputy CMHO (Family Welfare) post (registered on the CHRIS portal) is occupied by a female candidate (see [Graph 2](#) below). The Additional CMHO and Deputy CMHO (Health) posts fare a little better with females occupying 8.33 per cent and 5.56 per cent of posts respectively (see [Table 11](#) in Annexure). These posts are appointed through promotions within the existing medical cadre, where candidates are first recruited for the role of Medical Officer (see [Table 2](#) in text). Since 16.88 per cent of all Medical Officers and 13.3 per cent of all Senior Medical Officers are female, the lack of females in the CMHO and Additional/Deputy CMHO roles implies that promotions for females are not even proportional to their representation in the initial hiring pool. The reasons for this require further inquiry.



The representation of women increases in caregiving roles, with posts such as ASHA, ANM and Lady Health Visitor being specifically for women. Despite this not a single RCHO registered on CHRIS (n=19) is female. ANMs also report to and support MOs at PHCs, out of which only 14.22 per cent are female. This adds to the challenge of an overall lack of supervisory support available at the block level owing to vacancies.



**Graph 2**

*Source: Author's analysis of CHRIS data. Accessed 26 September 2021.*

## Experiences Of Contractual Employees

Low salaries, lack of career trajectory and poor job security experienced by contractual employees under NHM were reported not just by contractual employees interviewed but also by key informants who themselves had permanent positions (see [Table 6](#) below). Giving an example of how these issues impact the ability of contractual employees to manage their work, a DPM narrated the predicament of the PHC Health Supervisor or ASHA Supervisor post. He said that they were hired with an entry salary of Rs 5,000 and with the 5 per cent increment they now earn about Rs 10,000 - 12,000 per month.

“This person was hired with compensation even lower than ASHA... so how can we expect them to play a supervisory role?” (KI\_1)

Theme	Illustrative examples from Key Informant Interviews
<b>Low salaries</b>	<ul style="list-style-type: none"> <li>- A Block Accounts Manager shared that he was recruited on a contract in 2007, and after 14 years in the post with increments he now receives a salary of Rs 16,000. (KI_9)</li> <li>- “Contractual positions in NHM are not good... what is the point of giving someone a Rs 10,000 salary? It is better to have a permanent cadre and not contractual.” (KI_11)</li> <li>- “There have been some increments in salary, but this has also reduced from 10 to 5 per cent.” (KI_3)</li> </ul>

<b>Lack of career trajectory</b>	<p>- "There is no benefit for seniority or more experience as a DPM." (KI_2)</p> <p>- "There is no scope for promotion, not even from block to district level". After 10 years of working as a Block Accounts Manager, he is now working at an even lower administrative wrung than where he was hired. He was hired to work at the block level, but now he is on deputation to the CHC level and even has an additional charge of PHC Accountant. (KI_9)</p>
<b>Insecurity</b>	<p>- CHOs shared feeling "insecure" in a contractual position and said that being in a regular post would give them "mental security". (KI_6 &amp; KI_7)</p> <p>- "Contractual positions are just created for budget management. The constant fear of being in a contractual position affects the services they can provide" (KI_11)</p>

*Table 6 - Themes and examples of contractual employee experience as per Key Informant Interviews*

As a result of the experiences described in [Table 6](#), new contractual recruits are constantly on the lookout for the opportunity for better positions, particularly a permanent government job. Two recently recruited Community Health Officers (CHOs) shared that they have been hired on a 5 year contract. After the training period, they will receive their posting and will have to deposit a 5 year bond (designed to prevent attrition). Both completed a Bachelor of Science degree in Nursing and had a few years of work experience during which they had prepared for and attempted various government recruitment exams. Although this is a contractual role, they were drawn to the position of CHO because being in a "sarkari naukri" (government job) is coveted, especially keeping in mind their marriage prospects. Despite the Rs 5 lakh bond that they will have to fill to start their work as CHOs, they are looking for better job prospects. They had their minds set on attempting the entrance exam for a nursing position at AIIMs because the salary was high enough for them to make up for the Rs 5 lakh bond required for the CHO post. However, they said that as men their chances were limited because the All India Institute of Medical Sciences (AIIMS) had reserved 80 per cent of the positions for female candidates.

Commenting on the experience of contractual employees, a clinical background officer in a permanent post said: "The public health management staff is just here with the "greed" of getting a permanent job ("लालच की उनको परमानेंट जॉब मिल जायेगा"). But from 2005 till now not even one person has become permanent." (KI\_11) The employees who continue to remain in the system have either been there too long and are resigned to their fate like KI\_2 who said "इस में मेरी ज़िन्दगी बीत गयी है, और अब मैं 58 साल का हो गया हूँ" (meaning my whole life has passed like this, now I am 58 years old), or they are riding on the 'promissory capital'<sup>53</sup> of the state. As seen through the informant interviews, contractual employees join the state in search of a "sarkari naukri" and the hope that one day they will become permanent employees. In her work on the promissory capital of the state, Marwah writes that the state keeps this dream of a permanent job alive through "potentiality" - the possibility of better wages and tenure. This can be seen in the repeated announcements made by politicians in power for the benefit of contractual

employees. During the course of the pandemic, the Government of Rajasthan announced a loyalty bonus for NHM contractual employees<sup>54</sup>. More recently, in December 2021, the Chief Minister announced a renewed commitment to revamp the terms of recruitment for contractual employees. The rules that were eventually framed by the Personnel Department and approved by the Cabinet further the 'promissory capital' of the state by including a clause that a screening committee can regularise a contractual worker to a post that has been regularised<sup>52</sup>. Commenting on the government's announcement on the change of service rules for contractual employees, KI\_12 said: "लोल्लिपोप दे रहे है कि परमानेंट कर देंगे...बस वोट जीतने के लिए" (they are giving a "lollipop", meaning that the government is only making this announcement that they can regularise contractual positions to pacify contractual workers in order to win their votes). These announcements were understood to be symbolic gestures, as demonstrated by this statement:

"In the Chief Minister's budget announcements they continuously make promises for the regularisation of contractual staff, but this has not happened yet. The NRHM cadre was recruited in 2005, since then we have been on contracts only." (KI\_3)

Linking the state's promises to contractual NHM employees with the need for a PHMC, a former MD NHM said: "The government keeps talking about making contractual people permanent, so why isn't a discussion about a public health management cadre happening in parallel? Making contractual people permanent does not work the same way for every sector - it's not the same as say education, or making contractual security guards permanent." (KI\_14)

These experiences of contractual employees expose the low incentives for trained public health specialists to join government positions. An examination of advertisements for key public health posts that were found to be vacant, such as Epidemiologists, Microbiologists, District ASHA Coordinator, Accounts, and PHC Supervisor (see [Table 12](#) in Annexure), suggests that a higher level of pay coupled with a path for professional growth could help address some of these challenges. A current medical cadre officer suggested that the introduction of a PHMC could help alleviate these challenges:

"The key reason for creating a public health management cadre is that if the salary is good there will be job satisfaction and mental health will be good... there will be better outcomes in health services" (KI\_11).

## Conflicts and Competition Between Clinical and Non-Clinical Personnel

The contractual public health management employees interviewed expressed that there are conflicts between functionaries belonging to clinical and non-clinical roles. One DPM said:

“the same way that there are well-documented conflicts between the ANM and ASHA, clinical and non-clinical roles, at the village and Gram Panchayat level, the same way there are conflicts between the clinical and non-clinical people posted in the public health management roles at the block and district level”. (KI\_1) The other DPM emphatically said, “Doctors want to assert their dominance”. (KI\_2)

Vice-versa, key informants with a medical background had strong opinions about the role of non-medical employees such as the CHOs. A former senior health department official was opposed to the idea that the creation of a PHMC could allow someone recruited as a CHO to one day reach the Director level. He said it would be akin to making a camel into an elephant or a cat into a lion (“ऊँट को हाथी बनाना या बिल्ली को शेर”). (KI\_12)

Amongst key informants with medical backgrounds as well, those with degrees in preventive and social medicine (PSM) felt maligned by doctors from other fields of medicine. A former senior official explained that the conflict stems from the perception of other doctors that those who specialise in PSM receive more promotions to the directorate levels. Similarly, other informants too shared that to safeguard their avenues for promotion doctors will oppose and resist the creation of a PHMC. (KI\_10)

These conflicts between clinical and non-clinical also play out in the manner in which health sector employees from different backgrounds negotiate with the state. The doctors employed in Rajasthan’s health system have a strong union, the Rajasthan In-Service Doctors Association. The union has regularly been putting forth its demands, including the creation of a separate, dedicated medical cadre for doctors<sup>55</sup>. Advocating for the need of medical service in Rajasthan, a current official from a medical background said:

“See the example of the Public Works Department - someone who starts as an engineer can rise up to become the Secretary of the department because they have their own cadre. We want the medical system to also have such a system. A regular cadre can provide job satisfaction to the medical fraternity.” (KI\_11)

The Rajasthan In-Service Doctors Union has also already drafted and submitted proposals to the state government in 2011 and 2017, which have been reportedly agreed upon by the Department<sup>56</sup>. A former senior health official shared that the proposal has reached the “maturity stage” and a current state health directorate official confirmed that the proposal for the creation of the Rajasthan Medical Service is under consideration and discussions are ongoing. However, this focus on a medical service as opposed to a public health one takes away the focus from health to sickness<sup>57</sup>, from preventative to curative, from population-based to individual-centred.

In contrast, the current public health contractual staff interviewed lamented that there is no strong union representation for them since their roles and backgrounds are so diverse -- thus their actions and demands lack bite. A current block official shared that to demand regularisation of his contractual post, he had gone on strike in 2017-18, but the demand was not met (KI\_9).

Due to vacancies even in the existing sanctioned public health consultant posts, NHM contractual employees have been unable to build strength in numbers to create a strong coalition. Broader state contractual employee unions such as the Rajasthan Samvida Karamchhari Mahasangh are dominated by contractual employees from departments such as education and panchayati raj. Within the health department, the community health workers such as ASHAs (classified as volunteers) and ANMs (both permanent and contractual employees), together form a sizable number and already have their own unions to put forth their demands and negotiate with the state.

## **Administrative Burden**

Describing his day-to-day work, a current DPM said “right now I have to do all the work - drafting letters, correcting spellings, sharing data... they have made me into a ‘बाबू’ (babu). When I initially joined as a consultant, my role was focused on planning and implementation. Now so much of the work has to be done through computer operators... we need supporting hands.” (KI\_2)

By using the term ‘babu’ (a pejorative term used for a clerk in the Indian bureaucracy), the DPM drew up a sharp contrast between the ideal, expected role of a public health management cadre and the reality of those in public health management positions today. This brings into focus the many roles and responsibilities that public health managers straddle as quasi-bureaucrats within the system, and the administrative burdens they experience.

Describing the density of work, another DPM said that the state can hold him responsible for 67 different programmes and the several activities under each of these. Exasperated, he said “How many activities can one person oversee?” He shared that there is “no clear SOP” for his role. And this issue gets compounded at lower levels (KI\_1). Confirming this,

a Lady Health Visitor/ Health Supervisor working at the block-level described how she reports to the BCMO, BPM and the Block Health Supervisor (BHS), and gets different data demands from different people. She added: “this leads to mental pressure because any reporting becomes an emergency matter...the formats and demands for data keep changing. There is no training for this and no real instructions are provided... we are just asked to give it.” (KI\_8)

This experience of exasperation because of data demands and paperwork is not limited to the public health sector. A study of the education bureaucracy in India termed this as the ‘post office paradox’, where bureaucrats perceive themselves as disempowered ‘cogs in the wheel’ moving from one top-down government order to the next<sup>58</sup>. Coupled with the push for increasing digitisation of health and public health services<sup>1</sup>, the system veers towards ‘accounting-based accountability’<sup>59</sup> which does nothing to help solve the actual public health delivery and accountability challenges on the ground. This was exemplified when a current medical cadre official shared, “Reporting is too much and it is a burden for the system - and in any case 30 per cent is false reporting just to achieve the targets.” (KI\_11)

## **Mismatch In Accountability And Authority**

The exasperation of public health managers currently in the system is underlined by a mismatch between what they are held accountable for and what they actually have the authority to accomplish. Describing his current predicament, a DPM said the current public health management functionaries are “जैसे बहू जिसकी सास ने रसोई की चाबी नहीं दी” (meaning they are like a daughter-in-law who is not given keys to the kitchen by her mother-in-law). (KI\_2) Another DPM added that even though the DPM is now viewed as responsible for NHM at the district level, they have no power to give orders to their subordinates. This inconsistency in accountability and authority manifests itself in different ways.

The lack of formal authority given to DPM coupled with the conflicts between medical and non-medical cadres impacts the manner in which every-day work within the health system is executed. The DPM said that because of this lack of direct authority, he has to do all his work in “*request mode*”, he has to tread carefully to ensure that his relationships don’t get ruined and as a result all the work takes longer and sometimes may not even get done. (KI\_1) This is experienced at the block level of public health administration as well:

“The DPMU has no independent decision-making and financial powers, it all rests with the CMHO. Similarly at the block level, the BPMU has no power and has to depend on the BCMO.” (KI\_2)

In the hierarchical bureaucratic system, performance reviews and the threat of bad performance reviews are one tool that higher level bureaucrats use to hold lower-level functionaries accountable. But in the case of the DPM, this tool for accountability is unavailable because even though the DPM oversees the day to day work, the authority to conduct performance reviews and the power that comes with it is held by the CMHO or the Deputy CMHO<sup>60</sup>. This undermines the DPM's ability to monitor and supervise work. Giving the example of the Anaemia Mukht Bharat programme, the DPM described that he is in-charge of monitoring the supply chain and the physical verification of distribution of Iron & Folic Acid tablets. He said the problem in monitoring the programme arises because the doses are distributed by the ANMs but the DPM does not have any authority to hold ANMs accountable. Yet the DPM is held responsible in case there are any implementation issues. He explained:

“Only the Deputy CMHO (Health) can take direct action to hold the ANM responsible for her activities under the programme.” (KI\_1) Another DPM added, “If a public health management cadre has to be made then there should be proper definition of the roles and responsibilities. And there should be an allocation of rational authority” (KI\_2).

The DPM provided another example which shows how this lack of authority intersects with challenges such as vacancies as well as debates around decentralisation and devolution of funds, functions and functionaries. He said that the First Referral Units (FRUs) are not fully functional and no specialists are available. The DPM is held responsible for this lack of performance of FRUs, but the recruitment for the specialists is under the purview of the Director, Public Health, at the state level.

This example brings together the various challenges discussed in Section 2 and demonstrates the need for systemic change in public administration for health – something that cannot solely be resolved through the creation of a PHMC. However, the process of creating a public health management cadre is also an opportunity to create a shift in the wider organisational culture of bureaucracy in the health sector.

## **CONSIDERATIONS FOR THE CREATION OF A PUBLIC HEALTH MANAGEMENT CADRE**

By launching successively broader health insurance schemes culminating in the Mukhyamantri Chiranjeevi Swasthya Bima Yojana (launched in May 2021), combined with schemes such as the Mukhyamantri Nishulk Dava Yojana (free drugs scheme), Mukhyamantri Nishulk Janch Yojana (free diagnostics scheme), and most recently the announcement to eradicate all user fees in government hospitals<sup>61</sup> from May 1, 2022, the Government of Rajasthan has displayed its commitment to achieving Universal

Health Coverage<sup>62</sup>. Missing in these announcements and initiatives is a strong commitment towards preventive and public health, driven by a specialised public health workforce.

In the Rajasthan government's current approach, the emphasis is on individual-focused, clinical-driven interactions – through health insurance, through hospital visits, through free drugs and diagnostics. Public health, too, is approached as a sub-discipline of medicine which leads to a focus on secondary and tertiary prevention of illness<sup>63</sup>. With the increase in “campaign” and “mission” model approaches to public health, whether the recent COVID-19 vaccinations, Mission Indradhanush for infant immunisation, or Swachh Bharat Mission for sanitation, the system is attuned to value quick-fixes and target-driven approaches rather than sustained, holistic approaches such as the creation of a public health management cadre that focuses on prevention and the social determinants of health.

To embark on the process of creating a public health management cadre, there is a need to settle on a vision for the cadre that will stand the test of time, changing population health needs, and changes in government regimes and policy priorities<sup>k</sup>. The suggestions given by key informants broadly overlap with the ‘essential’ and ‘desirable’ principles for the creation of a public health management cadre described in the Expert Committee report<sup>6</sup>.

Overall, the key informants expressed their support for the need and creation of a public health management cadre. One former official said: “इसके बिना तो खिचड़ी बैठेगी नहीं” (meaning the PHMC is a key ingredient for public health without which things won't work) (KI\_14). A former senior official also expressed support saying that the creation of a public health management cadre would be a “राम बाण” for those working in contractual NHM posts and doctors from a Preventive and Social Medicine background (meaning the cadre could be a one-shot solution to all the problems faced by contractual NHM functionaries and PSM doctors just like the arrow of Lord Ram that was reputed to never miss its target and destroyed all evil) (KI\_12). But speaking from the perspective of a policy maker, K\_14 said:

“The first question we have to consider is the motivation for creating a public health cadre. Are we creating it to quell the public health consultants and give them regular posts because we feel something needs to be done for them? This may not serve public health but it will serve human beings. So we have to decide - is the public health cadre for human beings or is it for the sake of public health? I think it is 50-50.”

The same officer went on to share his vision of the roles and key objectives of a potential public health cadre for Rajasthan:



“In my opinion, a PHMC is needed for 4 reasons: (i) to perform the role of educator for the public and create awareness about public health [...] to both create and assess needs. [...] (ii) Once people are aware and the health needs are created then you need to advertise and publicise existing schemes and health services. This role will not be in direct contact with the public but will be like the people playing the IEC role [...] so that people get to know what is available where, when the government launches a new scheme or service. [...] (iii) There are finance and accounting needs for every activity [...] these functions need to be completely separated from the medical and para-medical roles. (iv) Then we need IT, because there is data collected at each level. The data across all health schemes and levels needs to be entered, monitored, managed and integrated. [...] If these 4 layers are created, it will take care of the majority of the public health management needs.” (KI\_14)

Across key informants there was consensus that a PHMC in Rajasthan will have to be multidisciplinary. A current state nodal officer was of the opinion that Rajasthan would have to evolve its own model because the Tamil Nadu model was “not desirable” because it is “not forward looking” and is “treatment focused” (KI\_10).

The illustrative examples in [Table 7](#) below provide a glimpse of how current and former health functionaries view the benefits and challenges of a cadre based system, resistance that they foresee and conditions that they view as prerequisites to an evolution of the system. Although shown as an independent theme in the table below, ‘training’ was a pivotal theme connecting the ideas expressed by informants around roles, recruitment and career trajectories. In this regard, the Expert Committee report emphasises the need for states to assess their capacity to provide public health training. Rajasthan already fares relatively better than other states in the availability of public health education, and a plan to create in-service training mechanisms can be formulated with ease. As per the Committee’s own analysis, Rajasthan has the highest number of institutes offering a two-year Master’s in Public Health (MPH) degree (as per the Committee’s research till August 2020, and not including all private universities)<sup>6</sup>. According to data collected through another study on two-year MPH programmes<sup>64</sup>, 17 per cent of all the MPH programmes across the country are based in Rajasthan. In total, the state has 4 institutions offering MPH degrees (1 public and 3 private) (see [Table 13](#) in Annexure).

Theme	Illustrative examples from Key Informant Interviews
Structure	<p>- "People should be in the (public health) admin line from the very beginning so they can know the social environment as well. There should be two cadres - curative and preventive. And it is important for the preventive cadre to be in the administration from the beginning." (KI_11)</p> <p>- "District to district there are changes in the manpower needed and the requirements of the population. For example, in a district like Udaipur where there are 12 administrative blocks and a large tribal population, the administrative structure should be built to take these different needs into consideration." (KI_2)</p>
Roles	<p>- Should be "multidisciplinary" (KI_10)</p> <p>- "Technical expertise, such as mechanical engineers, are needed for programmes such as the 108 and 104 helplines and the Mobile Medical Units (MMUs)". (KI_2)</p>
Recruitment	<p>- "Recruitment will not be a challenge, expertise available within and outside the government such as through NGOs" (KI_10)</p> <p>- "The first condition must be that there has to be a procedure to select from the existing public health consultants. If everyone who is already posted will have to be included in the public health management cadre, then it will be a disservice to the cadre in the long term. So the quality of the human resources has to be examined." (KI_14)</p> <p>- The people who have already been in the contractual positions can get some advantage in the PHMC because of their work experience and learning on the job even if they do not have the public health qualifications - "<i>baar baar karke patthar ki diwar bhi seekh jaati hai</i>" (KI_14)</p>
Training	<p>- "The current DPMs cannot immediately become the district-level heads for public health as right now they come from an MBA or MSW background. They need specific public health training like an MPH. There is a lack of availability of in-service training for public health management. Even when I joined my [high level] position I only received a 3 day training from the Government of India." (KI_14)</p> <p>- "So in the public health cadre the people coming from different backgrounds whether it is MSW, finance, MTech etc will have to be trained in public health whether it is 5 days training upto 6 months training depending on the role." (KI_14)</p>
Career trajectory	<p>- "For the overall public health management role progress should be from the BPM to DPM and finally to the SPM role. And similarly for the community health management role, starting from the Block ASHA Facilitator to the District ASHA Coordinator, and finally to the State ASHA Coordinator role." (KI_1)</p>

**Table 7 - Key informants' considerations for PHMC**

While insights such as the ones shared above provide broad strokes for the direction the state needs to take, there is a need to build consensus on the motivations and objectives across different stakeholder groups and more deeply study the government's own data and functioning to understand how the system can evolve at an operational level. As with most government policy initiatives, one approach can be setting up an advisory committee to consider the development of a public health management cadre for Rajasthan<sup>1</sup>. There is the risk of the committee playing a merely symbolic role. Hence there is a need to emphasise the *composition* of the committee and outline the key questions the committee must explore. As per Krick, a hybrid government advisory committee is one that is set up by the government and includes state, societal and scholarly representatives<sup>65</sup>. Based on the findings of this report itself, the question of *which* state representatives, *which* societal representatives and *which* scholarly

representatives are included in the committee must be examined. Through the sections discussing the organisational structure of health administration in the state, we saw that the top-most levels are currently occupied by IAS officers and medical cadre officers, and that there is a lack of equity in representation in supervisory posts. Would they then be the best suited to take decisions regarding the creation of a PHMC that could hamper their own self-interests? Similarly, in the case of societal representatives, through the course of the COVID-19 pandemic we have seen an overrepresentation of private sector doctors in government health advisory committees. Another pitfall is the reliance on international NGOs and donor organisations to provide the civil society perspective. To make the discussion grounded in local needs, the inclusion of state-focused public health groups is necessary to provide a nuanced perspective. And again in the case of scholarly representatives, which fields of public health and the health systems perspectives and biases the scholars carry with them are an important consideration. *Who* is in the room and *whose voice* gets heard when such discussions take place matters. As we have seen with previous health committee reports, such as the ones referred to in this report, even if the recommendations are not accepted, the discussions and deliberations themselves form the blueprint for policy imagination for decades to come.

A hybrid advisory committee could help overcome the potential of falling into the policy isomorphism trap, in particular institutional isomorphism. In the case of PHMC, policy isomorphism<sup>66</sup> could look like:

- 1) *Coercive isomorphism* - the committee could feel pressured by the policy push for a PHMC from the Union level and/or from donor/aid organisations and adopt a generic model that may not be suited to the state's needs;
- 2) *Mimetic isomorphism* - in the face of uncertainty of how to create a PHMC, the state could emulate the model of a state with prior experience such as Tamil Nadu or Orissa;
- 3) *Normative isomorphism* - the PHMC design process could be dominated by public health management norms steered by public health experts and not take into account the ongoing push-and-pull over governance decision-making over funds, functions and functionaries through the process of decentralisation.

These three norms of isomorphism could also be at play simultaneously. Thus the composition of the committee and the questions that guide their discussions (see [Table 14](#) in Annexure) can play a role in steering the committee to develop the most suited objective and model for Rajasthan. Through its work, the committee should strive to account for the political culture of health in India<sup>26</sup> and the implicit and explicit sites and roles of power<sup>67</sup>. The proposed committee should include representatives across the levels of the health system, and representatives across departments such as Rural Development & Panchayati Raj, Women and Child Development<sup>m</sup>, so that challenges in

'convergence' for public health can be acknowledged and taken into account during the development of the public health management cadre. The Committee can build upon existing tools to develop a better understanding of who should be classified under the public health management cadre and how management<sup>68</sup> within the cadre can be envisioned. Upon completing their draft, the Committee's deliberations, including all data examined and used, should be made open and accessible to the public for review, comments and consultation<sup>69</sup>.

## **CONCLUSION**

The lexicon and commitment to Universal Health Coverage is already there at the highest levels of government in Rajasthan, and deliberations on a Right to Health bill are underway<sup>70,71</sup>. Yet the emphasis on a strong base for public health remains missing – leaving the focus on clinical interventions rather than prevention and the social determinants of health<sup>72</sup>. Without a dedicated and motivated professional public health management cadre, the promise of health and wellbeing for the people of Rajasthan is just like the “lollipop” promises the state makes to contractual employees who are hanging on due to the promissory capital of the state.

Dominated by the clinical cadre, the state's own Department of Medical, Health & Family Welfare does not have the intrinsic motivation for the creation of a strong PHMC. Further, the existing public health managers are unable to build a strong coalition to negotiate with the state due to the lack of a united union. In this scenario, the Union government's Draft National Public Health Bill could be just the external impetus the state needs. A state-level hybrid committee set up for this very goal can initiate dialogue and integration across actors from government executives, current health system actors, public health experts and civil society organisations to build a collective, inclusive vision for a public health management cadre that can become the backbone of the 'Rajasthan Model of Public Health'.

# ANNEXURE

No.	KI Code	Key Informants	Level	Type of employment	Gender	No. of interviews
1	KI_1	DPM, District 1	District	Contractual	Male	2
2	KI_2	DPM, District 2	District	Contractual	Male	1
3	KI_3	District Data Manager (IDSP), District 2	District	Contractual	Male	1
4	KI_4	Non-profit health provider 1	Grassroots	-	Male	1
5	KI_5	Non-profit health provider 2	Grassroots	-	Female	1
6	KI_6	CHO 1	Grassroots	Contractual	Male	1
7	KI_7	CHO 2	Grassroots	Contractual	Male	1
8	KI_8	Lady Health Visitor / Health Supervisor	Block	Permanent	Female	1
9	KI_9	Block Accounts Manager	Block	Contractual	Male	1
10	KI_10	State Nodal Officer, vertical programmes under SPMU	State	Contractual	Male	2
11	KI_11	Deputy Director rank, Medical Officer-in-Charge (MOIC), Urban PHC	State & Primary Health Centre	Permanent	Male	1
12	KI_12	Former Deputy Director, Health & Family Welfare	State	Permanent	Male	2
13	KI_13	Former Additional Director, National Health Mission (IAS)	State	Permanent	Male	1
14	KI_14	Former Mission Director, National Health Mission (IAS)	State	Permanent	Male	1
<b>Total</b>						<b>17</b>

*Table 1 - Key Informants*

	Health & Family Welfare	Medical Education	AYUSH	Early Childhood Care	Nutrition	Public Health Engineering
GoI entity	Ministry of Health & Family Welfare	Medical Council of India	Ministry of AYUSH	Ministry of Women & Child Development Food Corporation of India, Ministry of Consumer Affairs, Food and Public Distribution		Department of Drinking Water & Sanitation, Ministry of Jal Shakti
Government of Rajasthan (GoR) entity	Department of Health & Family Welfare	Department of Medical Education	AYUSH Department AYUSH Directorate, Department of Health & Family Welfare	Directorate of Integrated Child Development Services, Department of Women & Child Development Department of Health & Family Welfare	Food and Civil Supplies Department Director (Public Health) & Commissioner Food Security, Department of Health & Family Welfare	Public Health Engineering Department; Rural Development & Panchayati Raj
GoR Minister	Minister of Health & Medical Education		Minister of Ayurveda & Indian Medicine	Minister of Women & Child Welfare	Minister of Food, Civil Supplies and Consumer Affairs	Minister of PHED and Ground Water; Minister of Rural Development & Panchayati Raj
GoR Executive/ Admin	Secretary, Medical, Health & Family Welfare	Principal Secretary, Medical Education Department	Principal Secretary, AYUSH	Secretary, Women & Child Development Special Secretary, Medical, Health & Family Welfare	Principal Secretary, Food & Civil Supplies	Principal Secretary, Rural Development & Panchayati Raj

*Table 2 - Sample of entities engaged in public health activities (non-exhaustive)*

*Source: compiled from department websites*

Directorate	Key Activities
<b>Family Welfare and National Health Mission</b>	<ul style="list-style-type: none"> <li>- Family Welfare Services</li> <li>- National Health Mission (ASHAs and all related activities, usage of NHM untied fund, Pre-Service Education for nursing, state schemes such as Mukhyamantri Rajshri Yojana, Vitamin A programme, AYUSH -related activities, Village Health, Sanitation &amp; Nutrition Committees (VHSNCs), Sexually Transmitted Infections (STIs), IEC related to all health programmes)</li> <li>- Maternal Health Services (Janani Shishu Suraksha Karyakram (JSSK), Janani Suraksha Yojana (JSY), Kushal Mangal Karyakram (KMK), Prasuti Niyojan Divas (PND), LaQsya, First Referral Units (FRUs), Delivery Points, Maternal Mortality Rate reduction related work, Maternal Death review related work)</li> <li>- Child Health Services (Special Newborn Care Units (SNCUs), Family Participatory Care (FPC), NewBorn Stabilisation Units (NBSU), New Born Care Corner (NBCC), Malnutrition Treatment Centre (MTC), Home-based Newborn Care (HBNC), Treatment-cum-training centre (TTC), Intensified Diarrhoea Control Fortnight (IDCF), Child Death Review (CDR), Rashtriya Bal Swasthya Karyakram (RBSK) including Mobile Dental Van, Rashtriya Kishor Swasthya Karyakram (RKSK), National Iron Plus Initiative (NIPI), Weekly Iron Folic Supplement Programme (WIFS), National Deworming Day (NDD), Yashoda programme</li> <li>- Immunisation services (Universal Immunisation Programme, Pentavalent vaccination, Pulse Polio Mission)</li> <li>- Tele-medicine (through the e-Sanjivani portal) and teleradiology</li> <li>- Quality Assurance programmes such as Kayakalp</li> <li>- Health &amp; Wellness Centres (Under Ayushman Bharat)</li> <li>- PCPNDT implementation</li> <li>- National Urban Health Mission (NUHM) (Mahila Arogya Samitis (MAS), outreach camps, urban health and nutrition days, etc)</li> <li>- e-Governance initiatives such as Pregnancy, Child Tracking and Health Management System (PCTS), ASHA Soft for online payments to ASHAs, OJAS Software, e-Upkaran inventory management system for all health facilities in the state</li> <li>- Special initiatives such as Nirogi Rajasthan Abhiyaan, Digital Health Survey and the development of a mobile app for PCTS</li> </ul>
<b>Medical &amp; Health Services</b>	<ul style="list-style-type: none"> <li>- State schemes such as Mukhyamantri Nishulk Dava Yojana (MNDY) and free diagnostics scheme (MNJY), Janta Clinics, Chiranjeevi programme, Adarsh PHC programme,</li> <li>- National programmes (under NHM) including National Leprosy Eradication Programme (NLEP), National Programme for Control of Blindness &amp; Visual Impairment (NPCBVI), National AIDS Control Programme (NACP), National Caries Elimination Programme (NCEP), National Vector Borne Disease Control Programme (NVBDCP), National Iodine Deficiency Disorders Control Programme (NIDDCP), National Tobacco Control Programme (NTCP), National Programme for prevention &amp; Control of Cancer, Diabetes, Cardiovascular Diseases &amp; stroke (NPCDCS), National Mental Health Programme (NMHP), National Programme for Prevention and Control of Deafness (NPPCD), National Oral Health Programme (NOHP), National Programme for Prevention and Control of Fluorosis (NPPCF)</li> <li>- Integrated Disease Surveillance Programme (IDSP)</li> <li>- Food security and quality (FSSAI)</li> </ul>

**Table 3 - Key activities under Family Welfare and National Health Mission and Medical & Health Services**

**Directorates**

Source: Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan.

Retrieved from <http://rajswasthya.nic.in/Pragati%20Prativedan.htm>

<b>Government of Rajasthan Service Rules for Human Resources for Health (non-exhaustive)</b>
Rajasthan Medical and Health Service (First Amendment) Rules, 2012
Rajasthan Rural Medical and Health Subordinate Service Rules, 2008
Rajasthan Rural Medical and Health Subordinate Service Rules, 1965
Rajasthan Medical and Health Service Rules, 1963
Rajasthan Medical Officers and Nursing Staff Fees Rules, 2011
Rajasthan Ayurvedic, Unani, Homeopathy and Naturopathy Services (Amendment) Rules, 2013

**Table 4 - Service Rules**

	Year	2018-19	2019-20	2020-21	2021-22
<b>Human Resources (Service Delivery)</b>	Proposed	41,179.06	37,483.25	55,942.76	82,360.98
	Approved	35,742.26	35,428.47	49,083.26	47,867.96
	% approved	86.80	94.52	87.74	58.12
	% of total approved budget	16.79	12.14	14.08	12.34
<b>Training &amp; Capacity Building</b>	Proposed	4,724.62	8,023.98	13,866.86	10,889.54
	Approved	4,360.60	7,694.46	10,753.96	9,525.70
	% approved	92.30	95.89	77.55	87.48
	% of total approved budget	2.05	2.64	3.08	2.46
<b>Programme Management</b>	Proposed	24,989.23	24,044.27	30,131.75	25,654.12
	Approved	22,089.84	22,221.88	22,640.57	26,642.73
	% approved	88.40	92.42	75.14	103.85
	% of total approved budget	10.38	7.61	6.49	6.87
<b>Total NHM Budget (as per ROP)</b>	Proposed	236,562.51	354,713.00	396,752.82	476,037.76
	Approved	212,871.33	291,872.54	348,726.44	387,865.60
	% approved	89.99	82.28	87.90	81.48

**Table 5 - Key HR related components in NHM budget for Rajasthan**

Source: Author's analysis based on Rajasthan NHM RoPs for 2019-19, 2019-20, 2020-21 and 2021-22. Accessed from <http://nrhmrajasthan.nic.in/pip.htm>

Workstation Type	Contractual	Permanent
State HQ	73.15%	26.85%
CMHO	78.63%	21.37%
BCMO	82.24%	17.76%

**Table 6 - Recruitment type as per Workstation Type**

Source: Author's analysis of CHRIS data (accessed 26 September 2021). Available at:

<http://chrisnrhm.org/Employee.aspx>

Note: Here the Workstation Type (State HQ, CMHO and BCMO) is taken as a proxy for the reporting level for the registered employees.

Status of IDSP consultants (2020-21)				
Post	Sanctioned	In-Position	Vacant	% vacant
Epidemiologist	35	27	8	22.86%
Microbiologist	15	11	4	26.67%
Entomologist	1	1	0	0.00%
Lab Technician	11	1	10	90.91%

**Table 7 - Key Consultants for the Integrated Disease Surveillance Programme**

Source: Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan, Medical & Health Services, 2020-21. Retrieved from <http://rajswashya.nic.in/Pragati%20Prativaden.htm>

Status of Vertical NHM programme posts (non-exhaustive) (2020-21)				
Post	Sanctioned	In-Position	Vacant	% vacant
TB Health Visitor	32	17	15	46.88%
Malaria Inspector	33	0	33	100.00%
Public Health Supervisor	11	0	11	100.00%
Occupational Therapist	15	0	15	100.00%
Dental Technician	190	79	111	58.42%

*Table 8 - Status of select vertical NHM programme posts*

*Source: Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan, Medical & Health Services, 2020-21. Retrieved from <http://rajswasthya.nic.in/Pragati%20Prativaden.htm>*

Contractual Designation	No. of blocks (as of December 2022)	No. of Sanctioned posts	No. of posts filled (as of August 2021)
BLOCK ASHA/HEALTH FACILITATOR	21	10	5
BLOCK NODAL OFFICER (M&E)	21	10	8
BLOCK PROGRAMME MANAGER	21	10	7

*Table 9 - Status of BPMU posts in Jodhpur District*

*Source: Establishment Cell, CMHO's Office, Jodhpur district*



District	Female	Male
STATE HQ	26.17%	73.83%
SAWAI MADHOPUR	31.76%	68.24%
KARALI	32.19%	67.81%
JAISALMER	32.93%	67.07%
DAUSA	35.03%	64.97%
PALI	36.03%	63.97%
JAIPUR-1	36.98%	63.02%
JHALAWAR	37.32%	62.68%
BARAN	37.67%	62.33%
TONK	38.19%	61.81%
JALORE	40.56%	59.44%
BUNDI	41.22%	58.78%
KOTA	42.06%	57.94%
BHILWARA	42.46%	57.54%
ALWAR	43.12%	56.88%
BHARATPUR	43.13%	56.87%
DHOLPUR	43.66%	56.34%
SIROHI	44.99%	55.01%
PRATAPGARH	45.12%	54.88%
JAIPUR-2	45.17%	54.83%
AJMER	45.81%	54.19%
CHITTORGARH	46.18%	53.82%
SIKAR	46.93%	53.07%
RAJSAMAND	46.93%	53.07%
BIKANER	49.13%	50.87%
NAGOUR	49.19%	50.81%
BARMER	49.67%	50.33%
HANUMANGARH	49.90%	50.10%
CHURU	50.11%	49.89%
GANGANAGAR	50.17%	49.83%
JODHPUR	52.05%	47.95%
UDAIPUR	53.97%	46.03%
JHUNJHUNU	54.61%	45.39%
BANSWARA	56.77%	43.23%
DUNGARPUR	60.54%	39.46%
<b>Grand Total</b>	<b>45.40%</b>	<b>54.60%</b>

*Table 10 - District wise Male and Female employees registered on the CHRIS portal*  
*Source: Author's analysis of CHRIS data (accessed 26 September 2021). Available at:*

<http://chrisnrhm.org/Employee.aspx>

Designation	Female		Male	
	Number	%	Number	%
Chief Medical & Health Officer (CMHO)	0	0.00%	25	100.00%
Additional CMHO	1	8.33%	11	91.67%
Deputy CMHO (Health)	1	5.56%	17	94.44%
Deputy CMHO (Family Welfare)	0	0.00%	2	100.00%
District Nodal Officer (Monitoring & Evaluation)	2	5.41%	35	94.59%
District Programme Manager	2	6.06%	31	93.94%
District Accounts Manager	3	9.68%	28	90.32%
Block Chief Medical Officer	7	5.19%	128	94.81%
Block Programme Manager	26	12.75%	178	87.25%
Block ASHA Facilitator	41	24.12%	129	75.88%
Lady Health Visitor/Health Supervisor	1676	98.24%	30	1.76%
Auxiliary Nurse Midwife (ANM)	16532	99.43%	94	0.57%
ANM Training Centre - Public Health Nurse	6	12.24%	43	87.76%
Community Health Officer	586	33.56%	1160	66.44%
General Nurse Midwife	1297	39.09%	2021	60.91%
Public Health Manager	51	23.83%	163	76.17%
Public Health Nurse	4	21.05%	15	78.95%
Medical Officer	996	16.88%	4904	83.12%
Medical Officer AYUSH	325	30.52%	740	69.48%
Senior Medical Officer	56	13.30%	365	86.70%

**Table 11 - Female and Male candidates in key posts registered on the CHRIS portal**

Source: Author's analysis of CHRIS data (accessed 26 September 2021). Available at:

<http://chrisnrhm.org/Employee.aspx>

Post	Salary	Year	Source
Epidemiologist	Rs 25,000 - Rs 40,000	2010	Advertisement No. IDSP/2010/344, Directorate Medical Health and Family Welfare <a href="http://rajswasthya.nic.in/344%20Dt.%2023.06.10.pdf">http://rajswasthya.nic.in/344%20Dt.%2023.06.10.pdf</a>
Microbiologist	Rs 25,000 - Rs 40,000 (medical background) Rs 15,000 - Rs 25,000 (other background)	2010	
District ASHA Coordinator	INR 15,000 p.m.	2009	<u>Offer Letter:</u> <a href="http://rajswasthya.nic.in/4279%20Dt.%2029.09.09.pdf">http://rajswasthya.nic.in/4279%20Dt.%2029.09.09.pdf</a>
PHC ASHA Supervisors	Honourarium INR 5,000 p.m.	2009	<u>Engagement Letter:</u> <a href="http://rajswasthya.nic.in/Engagement%20PHC%20ASHA%20Supervisor.pdf">http://rajswasthya.nic.in/Engagement%20PHC%20ASHA%20Supervisor.pdf</a>
Accountant	INR 8,000 p.m.	2010	Advertisement No. F-20(Appointed)/NRHM/HRD/2010/280 <a href="http://rajswasthya.nic.in/280%20DT.%2006.09.10.pdf">http://rajswasthya.nic.in/280%20DT.%2006.09.10.pdf</a>

**Table 12 - Salaries of select Consultant posts as per recruitment advertisement**

S.no	Name of the Institutions/Universities and their location	Type of Institution	Number of MPH programmes offered
1	All India Institute of Medical Sciences, Jodhpur, Rajasthan	Public (Union government)	1
2	Indian Institute of Health Management Research, Jaipur, Rajasthan	Private	1
3	Jodhpur School of Public Health, Jodhpur, Jaipur Rajasthan	Private	8
4	Mahatma Jyoti Rao Phoole University, Jaipur, Rajasthan	Private	1

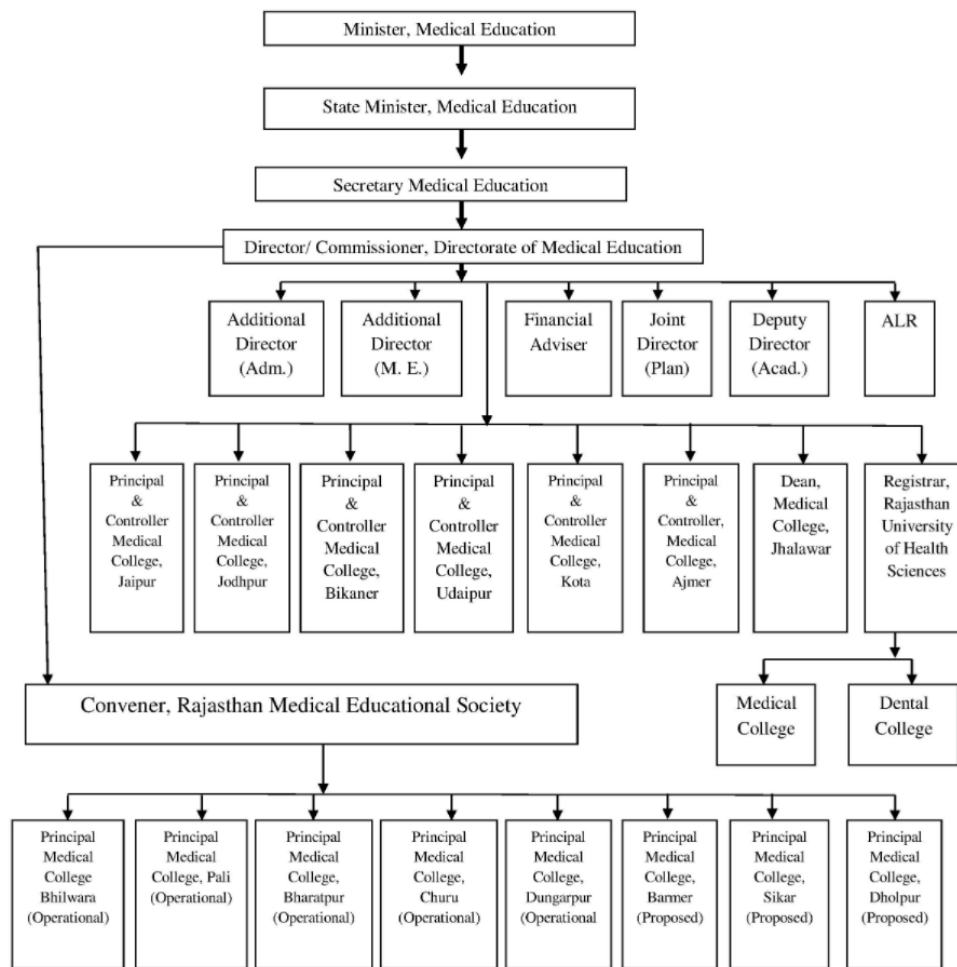
**Table 13 - 2 year MPH programmes in Rajasthan**

**Source:** Author's analysis of data from Ilangovan, K., Muthappan, S., Govindarajan, K., Vairamani, V., Venkatasamy, V., & Ponnaiah, M. (2022). *Transdisciplinarity of India's master's level public health programmes: evidence from admission criteria of the programmes offered since 1995. Human resources for health, 20(1), 1-11.*

<b>Potential Questions for Rajasthan's Committee on the Development of a Public Health Management Cadre</b>
How can the departments/directorates at the state level be re-organised as per the recommendations of the Expert Committee on PHMC? Additionally, who will occupy the Director roles post re-organisation?
How can functionaries working under the health related legally separate agencies at the state level and below be integrated into the PHMC?
Are the State, District and Block programme management units to be maintained as separate sub-structures or merged with new structures that will evolve for the PHMC?
What new roles are needed at the State, District and Block levels? Do needs vary as per demographic and disease-burden variations across districts (such as ST or SC dominant districts, desert regions, etc)?
Should the CMHO (with public health training) head the management at the district level or should a new role of District Public Health Officer be created with equivalent administrative and financial powers? And similarly at the block level.
Which existing permanent posts can be rationalised?
Across all health budget line items, which are the ones associated with human resources for public health management? What is the gross budget allocation and expenditure for public health management?
What are the potential financial implications of the establishment of a public health management cadre?
How will the creation of a PHMC impact and interplay with schemes such as Chiranjeevi and upcoming eradication of user fees (OPD and IPD) in government hospitals?
Should Community Health Workers be included in the PHMC? What should be their career trajectory?
How will the members of the PHMC work across departments on activities such as sanitation and drinking water supply? How will reporting and monitoring work across departments?
How will clear SOPs be defined not just for core public health activities but also for activities to be accomplished through convergence with other departments?
How can roles and responsibilities and reporting structures be designed so as to allocate authority, accountability and the requisite discretion?
How can a culture of public health and commitment to service be inculcated from the very beginning? How can the PHMC equivalent of 'mission driven bureaucrats' be recruited for the roles?

**Table 14 - Potential questions for the hybrid committee for a Rajasthan Public Health Management Cadre**

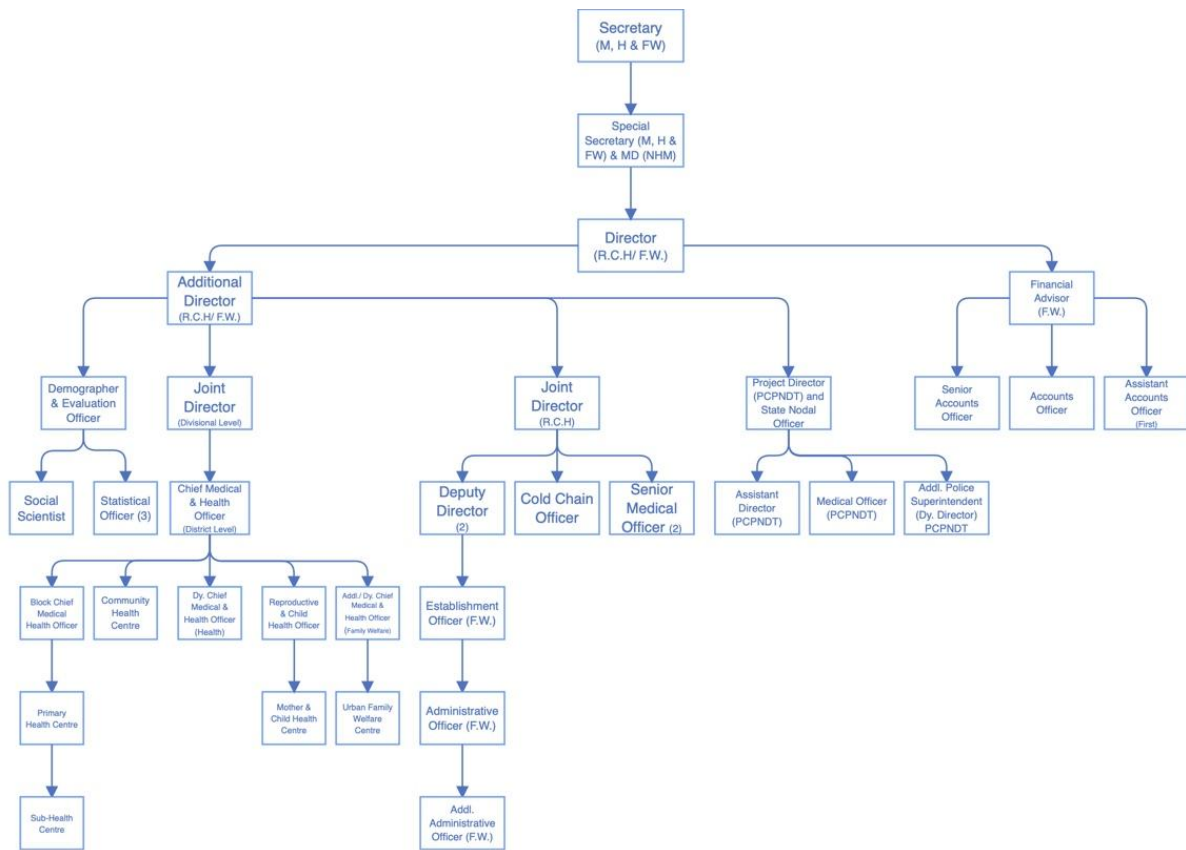
## 2. Charts



**Chart 1 - Organisational structure of Department of Medical Education, Government of Rajasthan**

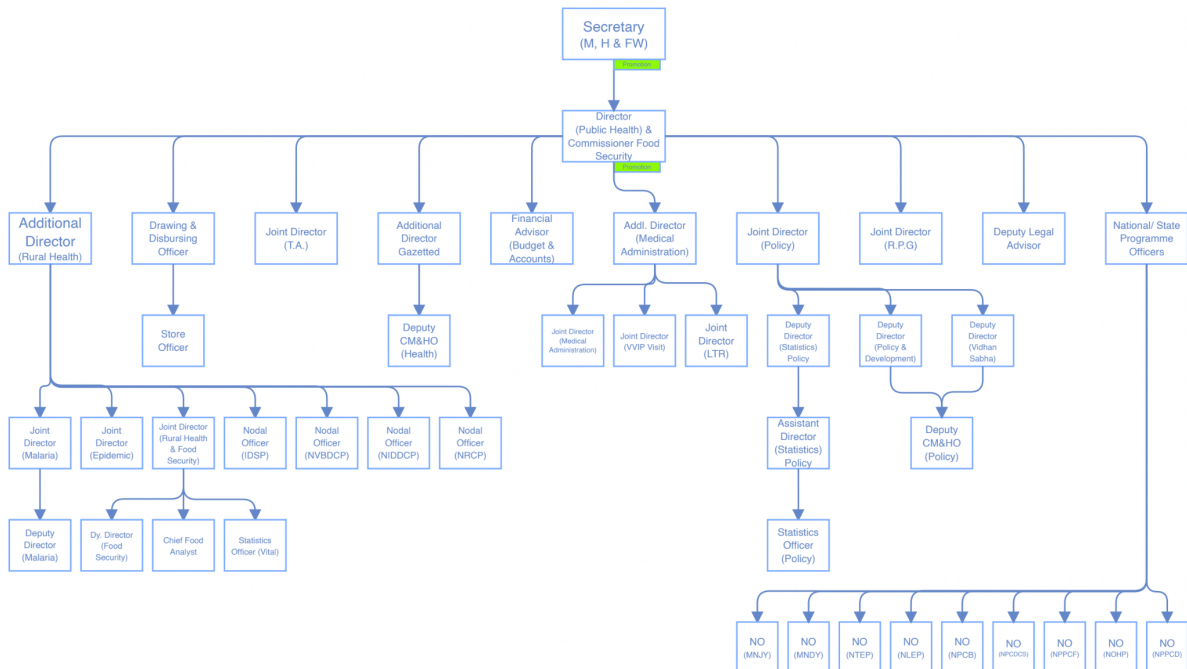
**Source: Medical Education Department website. Accessed from:**

**<https://education.rajasthan.gov.in/content/raj/education/medical-education-department/en/organization.html>**



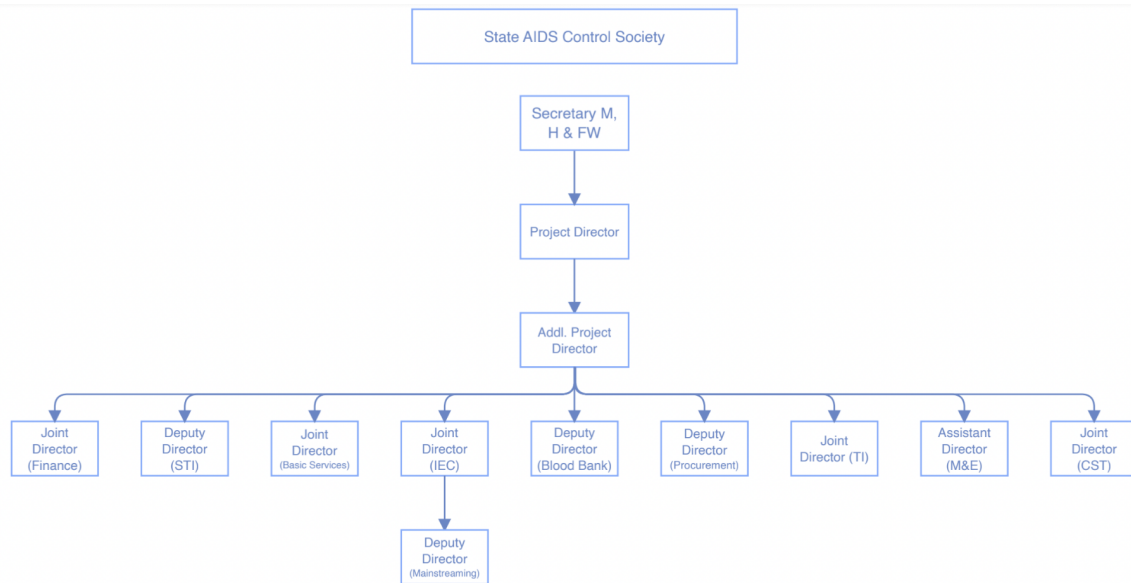
**Chart 2 - Organogram of directorate for Family Welfare and National Health Mission**

**Source: Based on organogram featured in Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan. Retrieved from <http://rajswasthya.nic.in/Pragati%20Prativaden.htm>**



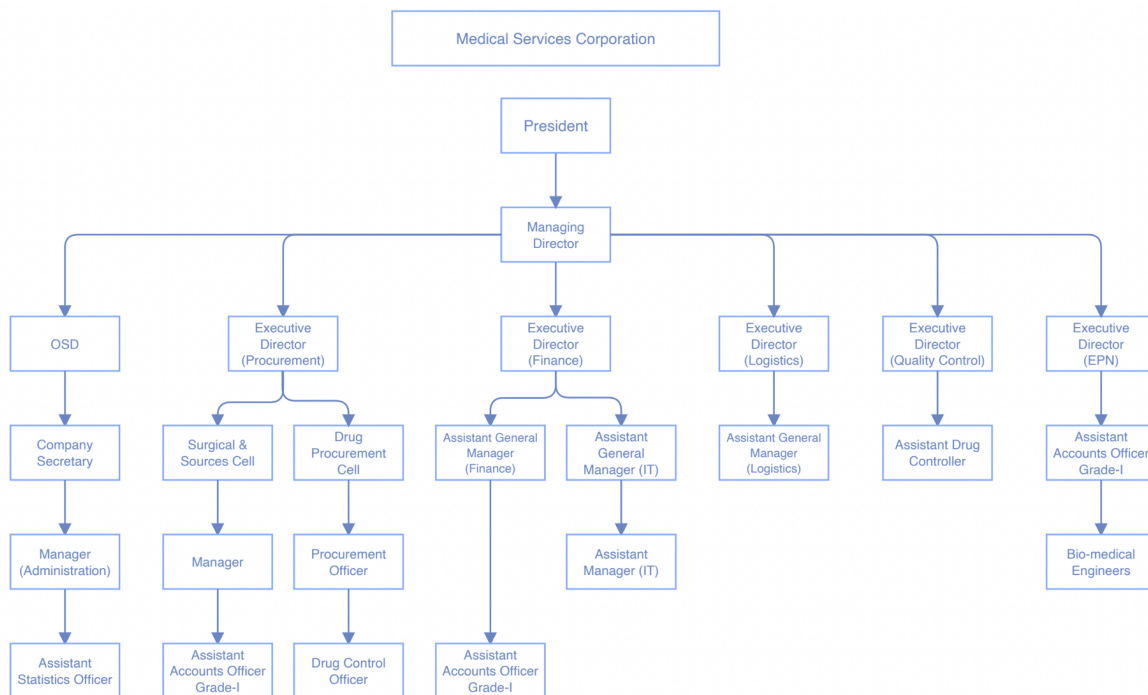
**Chart 3 - Organogram for directorate of Public Health (Medical & Health Services)**

**Source: Based on organogram featured in Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan. Retrieved from <http://rajswasthya.nic.in/Pragati%20Prativaden.htm>**



**Chart 4 - Rajasthan State AIDS Control Organisation**

**Source:** Based on organogram featured in Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan. Retrieved from <http://rajswasthya.nic.in/Pragati%20Prativaden.htm>



**Chart 5 - Rajasthan Medical Services Corporation Limited (RMSCL)**

**Source:** Based on organogram featured in Department of Medical, Health & Family Welfare, Government of Rajasthan. (2021). Pragati Prativedan. Retrieved from <http://rajswasthya.nic.in/Pragati%20Prativaden.htm>

### 3. Image

9. Creation of a public health cadre (by states which do not have it already) (incentive upto 10% of MFP)			
9.1 Policy criteria			
9.1.1 Stated policy and road map (including career path on creation of a public health cadre)	<ul style="list-style-type: none"> <li>• In Rajasthan, Public Health Cadre is already in place. At State level there is team of Director-PH, RCH, HA, RSACS, IEC headed by Principal Secretary-Medical &amp; Health. With Each position there are additional director and joint directors.</li> <li>• At district-CMO looks after CHCs, PHCs and SC with Dy. CMO and RCHO under him.</li> <li>• PMO takes care of district hospital with Health Manager.</li> </ul>		State report (copy of policy); website posting by November , 2012

**Image 1 - Screenshot from Rajasthan NRHM website**

**Source: NRHM website (archived), Government of Rajasthan. Retrieved from <http://nrhmrajasthan.nic.in/Conditionalites%20and%20incentives.htm>**

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<https://preventepidemics.org/stories/four-years-later-how-ebola-created-a-public-health-cadre-in-sierra-leone/>

<sup>b</sup> For example: Bhore Committee (1946), Mudaliar Committee (1962), Mukherjee Committee (1966), National Knowledge Commission (2005), the High-Level Expert Group on Universal Health Coverage (2012), etc.

<sup>c</sup>The Department of Medical Education is an entirely separate department and structure (see Chart 1 in Annexure).

<sup>d</sup>AYUSH Department, Government of Rajasthan implements its core activities through the State AYUSH Society and the National AYUSH Mission. The AYUSH activities are also supported by the state's NHM State Programme Management Unit, and AYUSH Medical Officers also work across health centres at various levels.

<sup>e</sup>In 2012, as a response to the NRHM conditionalities framework requiring a public health cadre in the state, the Rajasthan government projected the CMHO, Deputy CMHO and RCHO as constituting the state's public health cadre at the district level. See Image 1 in Annexure.

<sup>f</sup>See for example: Advertisement for contractual roles under NRHM, State Health Society, National Rural Health Mission, Government of Rajasthan. Accessed from: <http://nrhmrajasthan.nic.in/NRHM%20adv%20dt%2020091205.pdf>

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<sup>k</sup>Commenting on the nature of government policy priorities, one DPM complained: “the government keeps launching new programmes but is not doing anything to strengthen older programmes.” He gave the example of the Adarsh PHC programme. He said, “HWCs came... then what happened to Adarsh PHCs? We did many innovations under that... but the government changed, and so the priority changed.” (KI\_1)

<sup>l</sup>The Expert Committee Report on PHMC suggested that states set up a Task Force to work on PHMC and submit its report/recommendations within 3 months.

<sup>m</sup> See list of all departments included in the National Health Mission - National Health Mission, Health & Family Welfare Directorate, Government of Rajasthan. (2015). F2(38)/NRHM/SPM/2015/377. Retrieved from <http://rajswashya.nic.in/377%20Dt.%2029.05.2015%20SPM%20Revised%20Website.pdf>

**Chapter 7**  
**THE DESIRABILITY OF A  
PUBLIC HEALTH CADRE IN  
THE SOUTHERN STATES  
OF INDIA**

**Mohan Rao**  
**Sobin George**

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Mohan Rao and Sobin George

## INTRODUCTION AND METHODOLOGY

One major consequence of the Covid-19 pandemic in India is the widespread realization that public health in India has suffered from long-standing neglect and that the pandemic might provide an opportunity to do something about it (Kumar *et al* 2020, Chetterje 2020, Baru 2020, Sundararaman 2020, Bhatia and Abraham 2020, Dikid *et al* 2020). The Covid-19 pandemic exposed the weakness of the Indian health delivery system that fell short of health personnel and physical infrastructure, especially doctors, nursing staff, hospital beds, medical supplies and equipment.<sup>a</sup> Even a state like Kerala, with relatively better health responsiveness, faced considerable challenges in managing the Covid-19 pandemic. It also showed that the pandemic significantly stressed the already overburdened healthcare workforce both in public and private sectors. For instance, reports showed that public and private hospitals in several states could not recruit additional health workers to meet the growing requirement of Covid care due to problems like the unavailability of adequate staff, low pay, short-term contracts and poor safety facilities available.<sup>b</sup> There is also evidence to show that lockdowns and reassignment of health infrastructure as part of Covid-19 responses adversely affected several national health programmes involved in controlling and eliminating infectious disease (Glaziou 2020) and non-communicable diseases.<sup>c</sup>

It is a well-known fact that healthcare delivery in India is constrained by factors such as lack of trained human resource, adequate physical infrastructure, corruption, poor health management systems, absenteeism of staff and apathy on the part of service providers (Acharya 2010, Hazarika 2013, Jayswal 2015, Motkuri *et al* 2017, Saikia 2018, George 2019). It is estimated that India has only 4.8 practicing doctors per 10,000 population against the standard ratio of 7 per 10,000 (Potnuru 2017). The rural health data provided by Government of India indicates a shortfall of 19,644 doctors in rural and 1,812 in urban India, as of December 2018. The state-wise data is given in Table 1. Further, data from rural health statistics shows a shortage of 7,092 pharmacists (in PHCs and CHCs), 13,194 nursing staff (in PHCs and CHCs), 18,347 specialists (in CHCs), 10,112 female health workers (PHCs and SCs) and 99,572 male health workers (in SCs), as of December 2017. The shortfall of doctors in tribal areas stands at 627 and specialist doctors at 3,369 as of 2017 (Saalim 2020). Studies have also linked the problems associated with healthcare delivery to poor health outcomes, especially in rural India with a special focus on women, children and marginalized groups (Borooah 2010, Borooah *et al* 2012).

States/UTs	No. of Doctors Sanctioned - Rural	No. of Doctors – In Position - Rural	No. of Doctors - Shortage – Rural	%	No. of Doctors - Sanctioned - Urban	No. of Doctors In Position - Urban	No. of Doctors-Shortage - Urban	%
All India	105986	86342	19644	18.5	17776	15964	1812	10.2
Andhra Pradesh	5104	4375	729	14.3	863	777	86	10.0
Arunachal Pradesh	149	541	-392	Excess	0	11	-11	Excess
Assam	1717	4200	-2483	Excess	61	100	-39	Excess
Bihar	4937	2507	2430	49.2	698	366	332	47.6
Chhattisgarh	3231	1755	1476	45.7	105	88	17	16.2
Goa	529	447	82	15.5	4	5	-1	Excess
Gujarat	4871	3642	1229	25.2	825	608	217	26.3
Haryana	2330	2192	138	5.9	166	125	41	24.7
Himachal Pradesh	1785	1451	334	18.7	15	15	0	0.0
Jammu & Kashmir	3415	2356	1059	31.0	120	239	-119	Excess
Jharkhand	1682	1399	283	16.8	46	50	-4	Excess
Karnataka	6260	5033	1227	19.6	640	644	-4	Excess
Kerala	3538	3415	123	3.5	524	514	10	1.9
Madhya Pradesh	7306	3834	3472	47.5	1234	660	574	46.5
Maharashtra	9367	7835	1532	16.4	2556	2480	76	3.0
Manipur	418	593	-175	Excess	0	4	-4	
Meghalaya	257	590	-333	Excess	9	25	-16	Excess
Mizoram	156	282	-126	Excess	3	8	-5	Excess
Nagaland	145	371	-226	Excess	4	6	-2	Excess
Odisha	4995	3956	1039	20.8	150	148	2	1.3
Punjab	3057	2327	730	23.9	621	483	138	22.2
Rajasthan	7899	5725	2174	27.5	799	691	108	13.5
Sikkim	69	137	-68	Excess	3	3	0	0.0
Tamil Nadu	8790	7832	958	10.9	2558	2218	340	13.3
Telangana	1919	1423	496	25.8	831	668	163	19.6
Tripura	60	737	-677	Excess	0	68	-68	
Uttar Pradesh	12248	8938	3310	27.0	656	565	91	13.9
Uttarakhand	762	466	296	38.8	76	60	16	21.1
West Bengal	5602	4879	723	12.9	2921	2701	220	7.5
A & N Island	3	33	-30	Excess	0	0	0	
Chandigarh	994	1085	-91	-9.2	54	145	-91	Excess

Dadra & Nagar Haveli	109	108	1	0.9	2	2	0	0.0
Daman & Diu	59	65	-6	Excess	0	1	-1	
Delhi	1948	1513	435	22.3	933	1224	-291	Excess
Lakshadweep	28	73	-45	Excess	0	0	0	
Puducherry	247	227	20	8.1	299	262	37	12.4

*Table 1 State/UT-wise Details of availability and shortage of Government Doctors in Rural and Urban areas of the country as on 1st December 2018*

*Source: Rural health statistics, Govt. of India*

Just the data on government doctors not only indicates wide inter-state differentials in the availability of doctors, especially in rural areas, but also severe shortages in several states. Available evidence thus shows that even as public health budgets need to be vastly increased, there is also a simultaneous need for strengthening the health delivery system to ensure equitable access and improvement in health outcomes. Several committees appointed by the union government (of India) have reiterated the need for improving the healthcare delivery system across the Indian states and the need for a dedicated Public Health Cadre. For instance, the Bhore Committee appointed in 1943, recommended the integration of prevention and curative service of all the administrative levels, development of Primary Health Centres in two stages and a three-month training in preventive and social medicine in medical education. The Committee also recommended short-term and long-term goals. The short-term goals included the provision of personal and impersonal health services; creation of a health committee with five to seven people for an active participation in local health programmes; provision of dental health services at secondary health centres and provision of accommodation facilities for the staff. The long-term goals included increasing of hospital accommodation to two beds for 1000 populations, creation of medical colleges and training centres for nurses (Govt. of India, 1943). The suggestion for an all-India health services came from the Mudaliar Committee [Health Survey and Planning Committee, chaired by Dr. A. L. Mudaliar], which was appointed in 1959, to assess the status of the healthcare and the progress achieved after implementing the suggestions of the Bhore Committee. The Mudaliar Committee recommended the consolidation of the progress made during the first two Five Year Plans; creation of an 'All India Health Service' similar to the 'Indian Administrative Service'; strengthening of the existing Primary Health Centers in order to serve a population of 40,000 rather than creating new ones; strengthening of district hospitals so as to act as good referral centres; creation of a regional administrative level in between the state and district levels with two or three district medical and health officers and the integration of medical and health services as recommended by the Bhore Committee (Govt. of India, 1962).

Although not specifically recommending a Public Health Cadre, several committees



appointed by the government to examine the performance of various aspects of the health service system in independent India acknowledged the issues concerning the improvement of medical and nursing education, training of healthcare service personnel (Shetty Committee, 1954), improvement of the national disease control programme, especially the Malaria control programme (Chadha Committee, 1954) and the training need for surveillance systems, data management, leadership and communication skills in health services (Kartar Singh Committee, 1973). The 11th Five Year Plan envisioned a Public Health Cadre for managing the National Rural Health Mission (NRHM). The Planning Commission's High Level Expert Group (HLEG) further put forward the idea of Central and State Level Public Health Service Cadres - in central level and a specialized Health Systems Management Cadre and at the State level as part of providing greater attention to public health. The urgency of a dedicated Public Health Cadre that included epidemiologists, entomologists, public health nurses, health inspectors and male Multi-Purpose Workers (MPW) at the state level was also pointed out in the 12th Five Year Plan document. The national health policy 2017 also advocated the establishing of a public health management cadre to improve the quality of health services. The state governments of Odisha, Karnataka, Maharashtra, West Bengal and Kerala also have taken up steps to initiate consultations towards the implementation of a Public Health Cadre. Tamil Nadu is the only state that has established a state-level cadre which includes separate clinical and non-clinical cadres. Recently, the Ministry of Health and Family Welfare, Government of India has come up with detailed guidelines titled as "Public Health Management Cadre: Guidelines for implementation, 2022.d The guidelines, among others, have suggested the implementation of four cadres that include a specialist cadre, a public health cadre, a health management cadre and a teaching cadre.

While there has been a considerable progress observed in the proposal of the implementation of the Public Health Cadre, several issues related to its epistemic base, structure, organisations, rationale for the divisions among clinical and non-clinical cadres, qualification and training of personnel, impediments in establishing the cadre, recruitment and promotions, levels of devolution and integration and coordination of related departments, to list a major few, continue to remain obscure. The present study aims to understand the need for establishing the cadre, impediments in establishing a Public Health Cadre, possible conflicts between clinical and non-clinical cadres and finally what should be the nature and composition of the cadre, from a public health perspective.

## **Specific Objectives**

The project has two interconnected objectives:

- 1) To study the desirability of developing a Public Health Cadre in the Southern states.

- 2) To understand the factors that act as barriers to the implementation of a Public Health Cadre in the Southern states of India.
- 3) To reflect on the possible structure and composition of a Public Health Cadre by drawing on various stakeholders' views in the health sector.

## Methodology

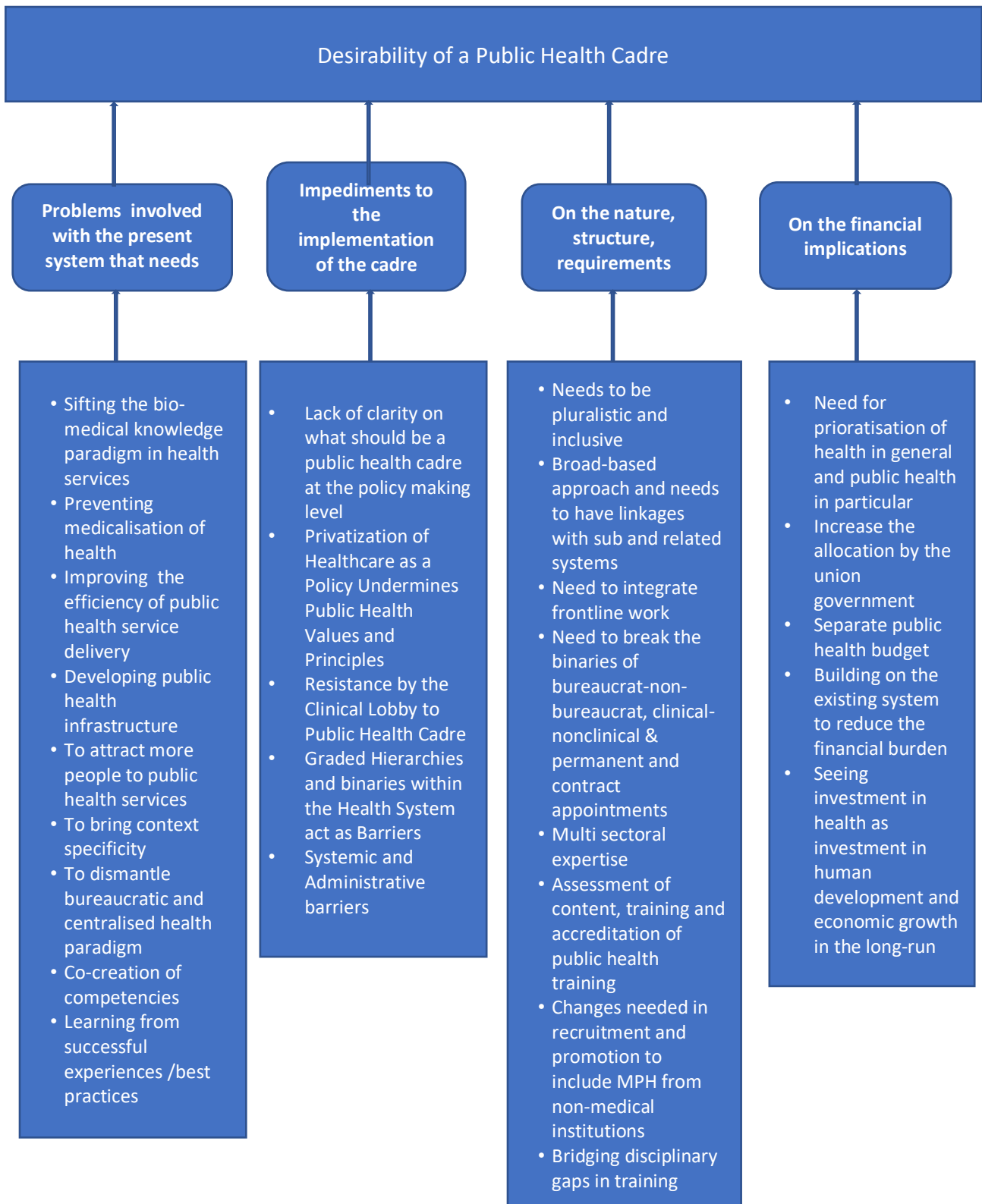
The study adopted a mixed method for eliciting data from primary and secondary sources. Since the major focus of the study is on understanding the desirability of a Public Health Cadre and its associated questions of barriers and enablers, the study attempted to gather views of important stakeholders from all the five Southern states. The study collected data through qualitative in-depth interviews with policy makers, academics, civil society representatives, activists and officials of the health delivery system. We adopted a snowball method to identify the respondents for the interviews. A total of 49 in-depth interviews were conducted based on the criterion of data saturation. We used a semi-structured interview guide (see annexure 1) to lead the discussion. Discussions were held around issues of the need for a Public Health Cadre, initiatives taken by each state to implement the cadre, possible impediments to the establishment of the cadre, structure, role and functions of the cadre, training capacity for the cadre, experiences of states like Tamil Nadu, West Bengal, Odisha and Chhattisgarh and finally, the financial implications of the cadre. Our study respondents consisted of retired bureaucrats who occupied key positions in the Ministry of Health at the union and state levels, policy makers, public health consultants who work/worked closely with the state governments, eminent academics and researchers in public health, activists and civil society representatives, medical practitioners and personnel from the healthcare delivery system. Other details of the respondents are given in Table 2.

Respondent code	Expertise	State	Gender
P1	Policy maker/retired bureaucrat from health service	Karnataka	Male
P2	Policy maker/retired bureaucrat from health service	Special expert	Male
P3	Policy maker/retired bureaucrat from health service	Special expert	Male
P4	Public health consultant	Karnataka	Male
P5	Policy maker	Karnataka	Male
P6	Academic	Karnataka	Female
P7	Academic	Special expert	Male
P8	Academic	Telangana	Male
P9	Academic	Special expert	Male
P10	Academic	Special expert	Male
P11	Policy maker/Bureaucrat	Kerala	Female
P12	Policy maker	Special expert	Male
P13	Academic	Telangana	Male

P14	Policy maker/retired bureaucrat from health service	Special expert	Male
P15	Medical practitioner	Telangana	Male
P16	Policy consultant	Special expert	Male
P17	Medical practitioner/professor	Special expert	Male
P18	Academic	Andhra Pradesh	Female
P19	Academic	Special expert	Female
P20	Academic	Karnataka	Female
P21	Academic	Andhra Pradesh	Male
P22	Medical practitioner/civil society representative	Karnataka	Female
P23	Policy maker/retired bureaucrat from health service	Kerala	Male
P24	Medical practitioner	Karnataka	Male
P25	Policy maker	Tamil Nadu	Male
P26	Academic	Tamil Nadu	Male
P27	Academic	Telangana	Female
P28	Academic	Karnataka	Female
P29	Policy consultant	Kerala	Male
P30	Medical practitioner	Karnataka	Male
P31	Policy consultant	Tamil Nadu	Male
P32	Practitioner	Tamil Nadu	Male
P33	Academic	Telangana	Female
P34	Academic	Special expert	Male
P35	Academic	Andhra Pradesh	Male
P36	Medical practitioner/civil society representative	Kerala	Male
P37	Medical practitioner/civil society representative	Karnataka	Male
P38	Policy maker/retired bureaucrat from health service	Karnataka	Male
P39	Policy maker/retired bureaucrat from health service	Special expert	Male
P40	Policy maker/retired bureaucrat from health service	Andhra Pradesh	Male
P41	Academic	Tamil Nadu	Male
P42	Academic	Andhra Pradesh	Male
P43	Academic	Kerala	Male
P44	Policy consultant	Kerala	Male
P45	Academic	Tamil Nadu	Female
P46	Policy consultant	Special expert	Male
P47	Medical Practitioner	Kerala	Male
P48	Policy maker/retired bureaucrat from health service	Special expert	Male
P49	Academic	Andhra Pradesh	Female

*Table 2: Details of respondents of the study*

All interviews were recorded and the verbatim transcribed to English. We used Atlas-ti 7 software for organizing and processing the data. Both deductive and inductive codes were identified from the data by selected and careful reading of the transcript. We identified 27 codes, which were categorized under four major themes linked to the desirability of a Public Health Cadre (see figure 1).



We have extracted secondary data on the availability of health infrastructure in the Southern states from the database of rural health statistics, key health outcome indicators of the Southern states from NFHS data set and allocation and utilization of

funds for health in the Southern states from the expenditure data of the Reserve Bank of India. We have also reviewed reports of the various committees appointed by both the union and state governments on the possible implementation of a Public Health Cadre. We have also filed RTIs with the Southern states to find out their initiatives, including committee reports toward actualizing a Public Health Cadre in their states.

## **Ethical Considerations**

The primary study was approved by the institutional ethics committee of the Institute for Social and Economic Change, Bengaluru. Consent was obtained from all respondents before interviewing them and for the recording of interviews. Data has been anonymized for preserving the privacy of respondents. We have presented the data as spoken by the respondents without any editing, except for a few clarifications which are given in parentheses.

## **Limitations**

Although we had planned on field work and data collection through face-to-face interviews, the pandemic compelled us to resort to collecting data through online interviews. This was challenging and uncomfortable at first, but soon we became quite comfortable with online interviews. We could not gather the views of stakeholders, who overtly oppose the establishment of a Public Health Cadre. However, we could gather a few dissenting views on the structure and composition of the cadre. The report is heavily dependent on the experiential dimensions and perspectives of stakeholders who had/have worked with the health service system in various capacities. Their views may be influenced by their disciplinary orientations, positions held and the context through which they looked at the issues. We must also admit to the enormous problems that we faced in recruiting respondents for the study. Given our background, obtaining respondents with a public health orientation and training was not a problem. The problem was in recruiting the respondents from within the health system with several of them excusing themselves on the ground that it might affect their careers.

## **THE HEALTH LANDSCAPE OF THE SOUTHERN STATES**

This section provides an overview of the health landscape of the Southern states with regard to the organization of health services, health infrastructure, utilization of funds for medical and public health and for related sub-sectors such as family welfare, drinking water, nutrition, water supply and sanitation, housing, social security and civil supplies and status related to key indicators of access to health services across the Southern states. We have relied on official secondary sources of data for eliciting this information. Organograms of health services have been obtained from the websites of the Ministry of Health and Family Welfare of the respective state. Data on access to health services are extracted from the unit level data of National Family Health Survey (NFHS) 5 (2015-16); data on health infrastructure—both physical and human resources—from rural health statistics for various years and the data on the utilization of budget expenditure (revenue) for various states from the data set of the Reserve Bank of India.

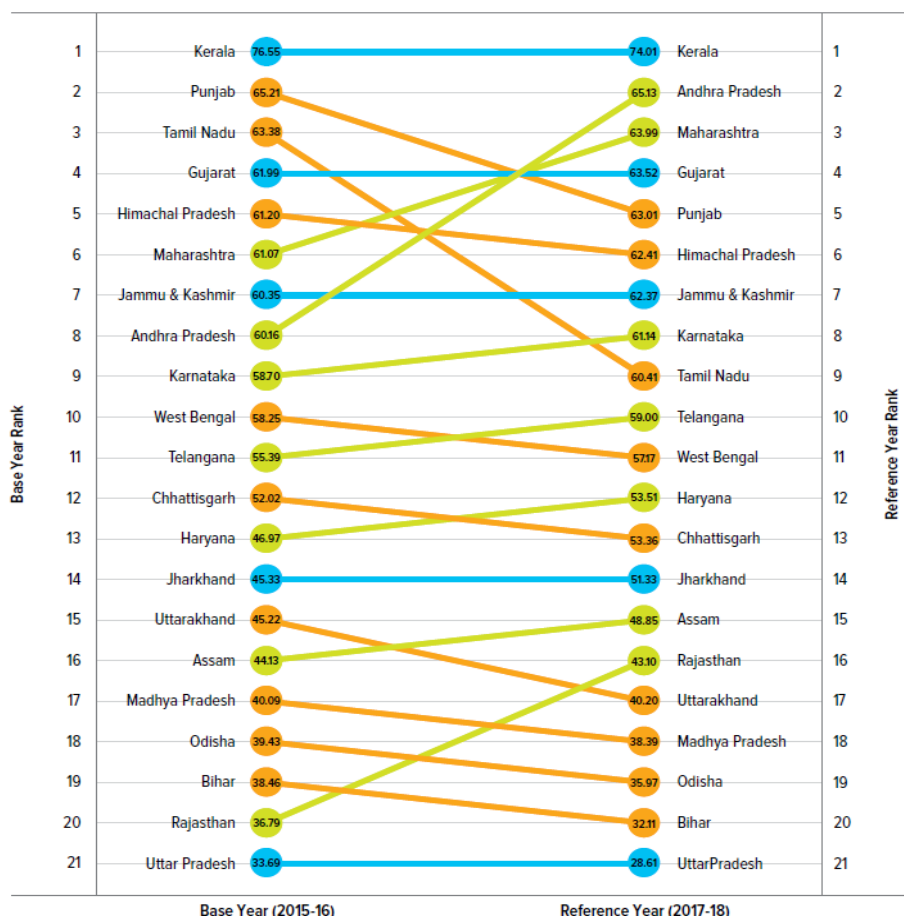
### **Organisation Of The Health Service System In The Southern States**

The recent health index released by the Niti Aayog, is perhaps a first comprehensive approach that considered the indicators of the health service delivery system in assessing the health status. It is a composite index consisting of indicators of the service delivery and infrastructure facilities of the states [governance and information, key inputs and processes], along with key health indicators.<sup>e</sup> The health indicators include NMR, under-5 mortality rate, total fertility rate, proportion of low birth weight of newborn, sex ratio at birth, immunization coverage, institutional deliveries, TB notification rate, successful TB treatment and proportion of people living with HIV. The indicators of health delivery system, which are categorized in the index as governance and information, include data integrity measures for institutional deliveries, ANC registration, average occupancy of an officer combined for the posts of Principal Secretary, Mission Director (NHM) and Director (Health Services) at the state level for last three years and the average occupancy of the full-time officers at the district level.

Another domain of the index—termed as key input and process—includes the infrastructure facilities under the health service system, including the proportion of vacant positions, proportion of total health staff, facilities such as referral units, 24/7 functional PHCs, number of cardiac units, birth registration, performance of Completeness of Integrated Disease Surveillance Programme (IDSP), CHCs with a grading of four points or above, proportion of public health facilities with accreditation certificates by a standard quality assurance programme and the average number of days for transfer of Central NHM fund from the State Treasury to implementation agency.

While the health index may not be a very robust one, it indicates the strength of public

healthcare delivery system prevalent in the states. As per the Health Index report of the Indian states published by the Niti Aayog and the Ministry of Health and Family Welfare, Government of India, the South Indian states are performing relatively better than other states, which also reflect a relatively better organization of their health services. Among the Indian states, Kerala ranks first, followed by Andhra Pradesh and Maharashtra. All South Indian states figure among the top 10 performing states (see figure 2). Except Tamil Nadu, all South Indian states have either retained or improved their ranking as compared to the previous years as per the Health Index ranking by Niti Aayog.



**Figure 2: Performance of select states as per the Health Index report, 2019**

**Source: Reproduced from the Health Index Report, Niti Aayog (2019: 25)**

We have further examined the design of the health service system in the Southern states (see figures A1-A5 in Annexure 2). It should be highlighted that only the state of Tamil Nadu has a separate Public Health Cadre. The health services in the state have three separate directorates, namely, the Directorate of Medical Services, Medical Education and Public Health each with a separate budget and staff. Studies have already highlighted the advantageous of a separate public health directorate, budget and staff in Tamil Nadu with regard to workforce training, planning for averting disease outbreaks and management of NCDs, intersectoral coordination and monitoring and evaluation,

reducing the dominance of specialists over public health personnel and, above all, improvements in health outcomes (see Das Gupta *et al*/2010).

The public health functions have been in-built into the general health services of the other South Indian states with almost a similar structure of health services from the state to the block level. However, there are differences in aspects like intersectoral coordination, involvement of local self-governments, preparedness for possible disease outbreaks and disease surveillance programmes.

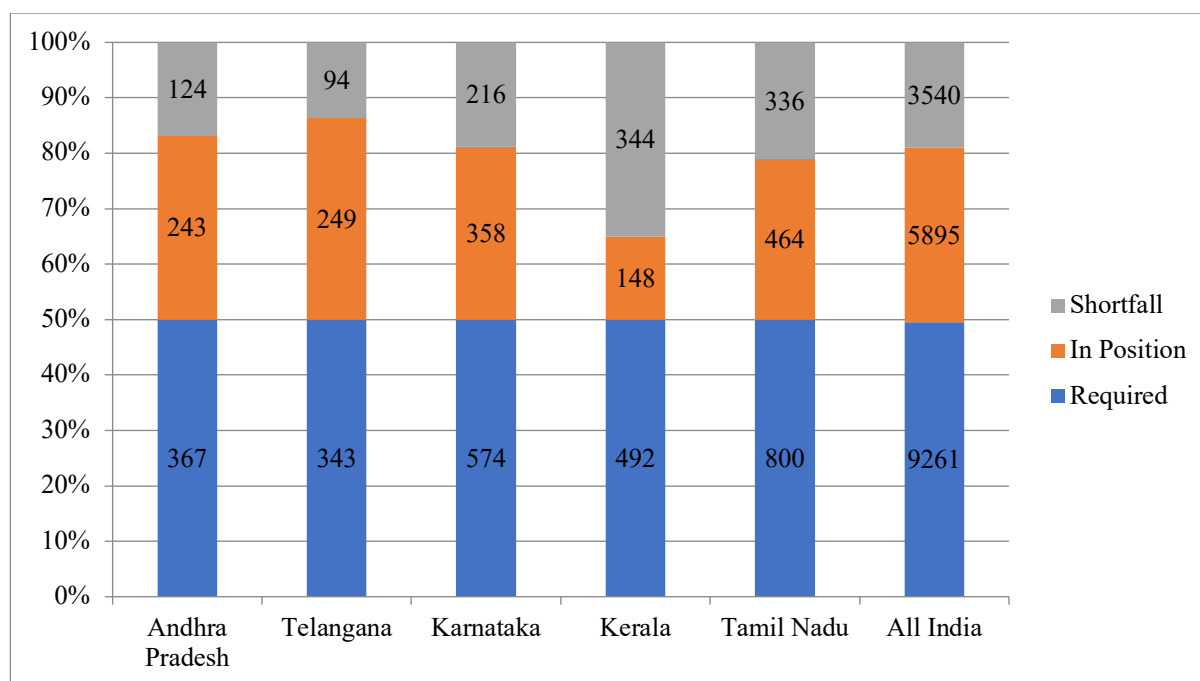
While the performance of South Indian states is relatively better when it comes to health status, they are also suffering from an inadequate health infrastructure, significantly affecting the access of marginalized sections of the population to health services. We have examined the data related to health infrastructure in the Southern states between 2005 and 2020. As per the data given by the rural health statistics (2020), there are required, or more than required, number of sub-centres in all the South Indian states while the shortage at the all-India level stands at nearly 24 per cent of the required (see Table 3). In the rural areas, there is a discernible shortage of Primary Health Centres (PHCs), in Telangana (12.4 per cent) and a marginal shortage in Andhra Pradesh (see Table 3). While Tamil Nadu and Kerala have adequate number of Community Health Centres (CHCs) in the rural areas Telangana (53 per cent), Andhra Pradesh (52 per cent) and Karnataka (42.6 per cent) have reported significant shortfall in CHCs. All the South Indian states have reported a shortfall in PHCs in the urban areas (see figure 3). It should be highlighted that the shortfall in PHCs in urban areas was more than the all-India average (38.2 per cent), in Kerala (69.9 per cent) and Tamil Nadu (42 per cent).

State	Sub-Centres			PHCs			CHCs		
	Required	In-position	Shortfall (%)	Required	In-position	Shortfall (%)	Required	In-position	Shortfall (%)
Andhra Pradesh	7152	7437	Excess	1179	1142	3.1 (37)	294	141	52 (153)
Telangana	4450	4744	Excess	726	636	12.4 (90)	181	85	53 (96)
Karnataka	8024	9188	Excess	1318	2176	Nil	329	189	42.6 (140)
Kerala	2191	5410	Excess	363	784	Nil	90	211	Excess
Tamil Nadu	7321	8713	Excess	1216	1420	Nil	304	385	Excess
All India	191461	155404	24.1 (46140)	31337	24918	29.5 (9231)	7820	5183	38.4 (3002)

*Table 3: Shortfall in Health Facilities as Per Mid-Year Population (as on 1st July 2020) in India in Rural Areas*

*Source: Rural Health Statistics, 2019-20*



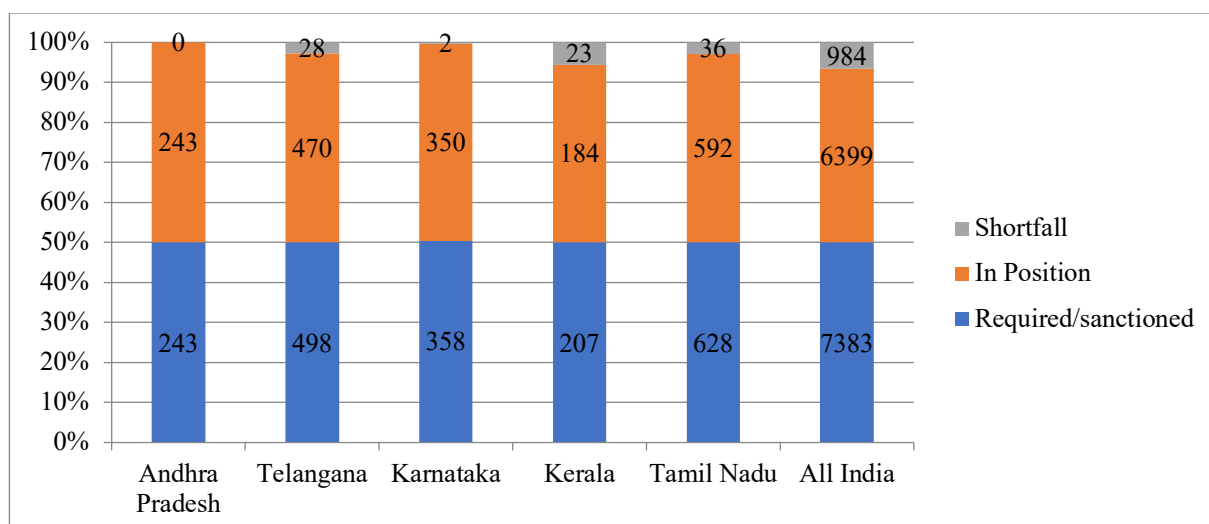


**Figure 3: Shortfall in Primary Health Centres as per mid-year population (as on 1st July 2020) in India in Urban Areas** Source: Rural Health Statistics, 2019-20

Further, all the South Indian states have reported a shortfall in doctors and specialists in rural and urban areas. However, it should be highlighted that all the South Indian states, except Karnataka, have reduced the shortfall of doctors in the rural areas between 2005 and 2020 while it has shown an increase at the all-India level (see Table 4). Among South India states the shortfall of doctors in PHCs in the rural areas was the highest in Kerala (16.9 per cent), followed by Karnataka (10.8 per cent), Tamil Nadu (9 per cent), Andhra Pradesh and Telangana. The shortfall of doctors in urban PHCs was less than the national average (13.3 per cent) in all the South Indian states. Andhra Pradesh and Karnataka have reported adequate number of doctors in urban PHCs. Among the South Indian states, the shortfall was closer to the national average in Kerala (11.1 per cent) (See figure 4).

States	2005			2020		
	Required/s anctioned	In position	Shortfall/ vacant (%)	Required/s anctioned	In position	Shortfall/ vacant (%)
Andhra Pradesh	2497	2137	14.4 (360)	1861	1798	3.4 (63)
Telangana				1254	1213	3.3 (41)
Karnataka	2237	2041	8.8 (196)	2323	2071	10.8 (252)
Kerala	1345	949	29.4 (396)	1237	1028	16.9 (209)
Tamil Nadu	3806	2257	40.7 (1549)	2976	2708	9 (268)
All India	24476	20308	17.5 (4282)	35890	28516	24.1 (8638)

**Table 4: Doctors at Primary Health Centres in Rural Areas** | Source: Rural Health Statistics, 2019-20



**Figure 4: Doctors at Primary Health Centres in Urban Areas**

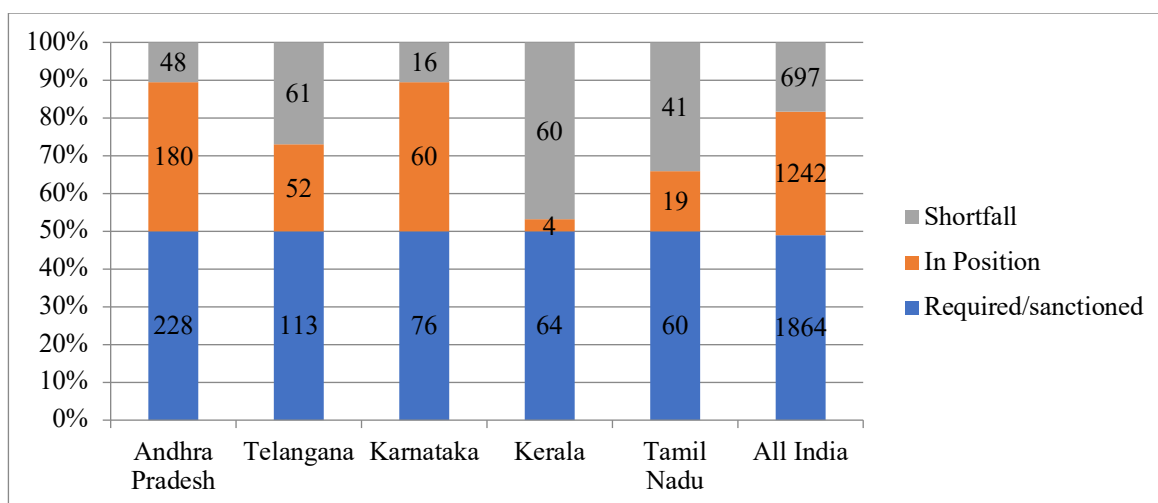
*Source: Rural Health Statistics, 2019-20*

The shortage of specialists including surgeons, obstetricians and gynecologists, physicians and paediatricians in CHCs across rural areas not only stands high in all the South Indian states but also has increased in the states of Karnataka, Kerala and Tamil Nadu between 2005 and 2020 (see Table 5). Among the South Indian states, the shortage of specialists in the CHCs of rural areas was the highest in Tamil Nadu (85.2 per cent) followed by Kerala (79.5 per cent), Karnataka (66.7 per cent), Telangana (58.7 per cent) and Andhra Pradesh (44.1 per cent). In urban areas the shortage of specialist was acute in Kerala (93.8 per cent). Tamil Nadu (68.3 per cent) and Telangana (54 per cent) also have reported significant shortfall in the number of specialists in the urban CHCs.

States	2005			2020		
	Required/sanctioned	In position	Shortfall/vacant (%)	Required/sanctioned	In position	Shortfall/vacant (%)
Andhra Pradesh	656	224	65.9 (432)	564	315	44.1 (249)
Telangana				625	258	58.7 (367)
Karnataka	1016	691	32 (325)	756	252	66.7 (504)
Kerala	424	82	80.7 (342)	844	173	79.5 (671)
Tamil Nadu	140	48	65.7 (92)	1540	228	85.2 (1312)
All India	13384	3550	73.5 (9834)	20732	4957	76.1 (15775)

**Table 5: Total specialists (Surgeons, OB&GY, Physicians & Paediatricians) at CHCs in Rural Areas**

*Source: Rural Health Statistics, 2019-20*



**Figure 5: Total Specialists at CHCs in Urban Areas**

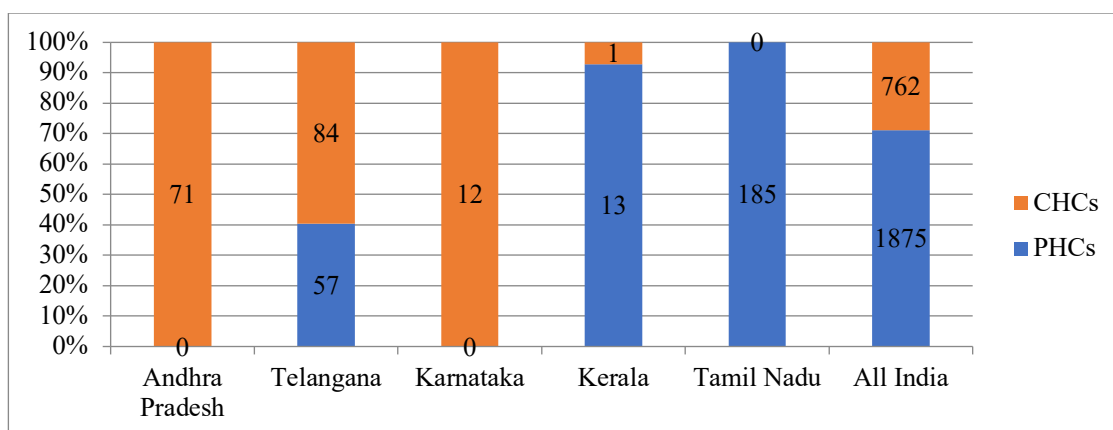
*Source: Rural Health Statistics, 2019-20*

Similarly, all the Southern states excepting Karnataka have reported a shortfall in nursing staff in PHCs and CHCs in rural areas as of 2020 (see Table 6). It should be highlighted that while all the South Indian states reduced the shortfall of nursing staff between 2005 and 2020, Kerala has reported an increase, possibly due to the international migration of nurses. All the Southern states also reported the shortfall of nursing staff in the PHCs and CHCs of urban areas as well (see figure 6)

States	2005			2020		
	Required/sanctioned	In position	Shortfall/vacant (%)	Required/sanctioned	In position	Shortfall/vacant (%)
Andhra Pradesh	2718	2053	24.5 (665)	3421	3088	9.7 (333)
Telangana				2412	2076	13.9 (336)
Karnataka	3459	3100	10.4 (359)	4574	4741	Excess
Kerala	2811	2578	8.3 (233)	2261	1760	22.2 (501)
Tamil Nadu	1625	167	89.7 (1458)	8245	7072	14.2 (1173)
All India	46658	28930	38 (17728)	81684	71847	12 (9837)

**Table 6: Nursing staff at PHCs and CHCs in Rural Areas**

*Source: Rural Health Statistics, 2019-20*



**Figure 6: Shortfall/vacancy of nursing staff (staff nurse) at PHCs and CHCs in Urban Areas as of 31 March 2020**

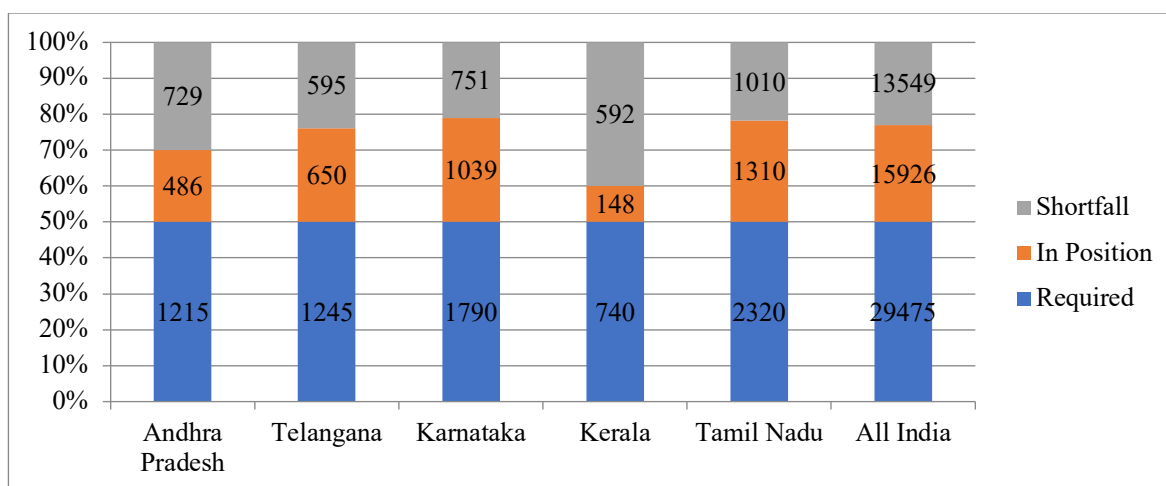
*Source: Rural Health Statistics, 2019-20*

Perhaps, what is more important to note is the significant shortfall in the frontline health workers in the rural and urban areas of the states. It is important to note that while there was a decline in the shortage of frontline health workers at the all-India level between 2005 and 2020, all South Indian states except Kerala reported an increase (see Table 7). Among the South Indian states, the highest shortfall was in Karnataka (24.7 per cent), followed by Tamil Nadu (12.7 per cent). The shortfall of frontline workers in the urban areas of these states was also notable (see figure 7). While the national average of shortfall of frontline workers in urban areas stood up at 46 per cent, it was as high as 80 per cent in Kerala and 60 per cent in Andhra Pradesh.

State	2005			2020		
	Required	In position	Shortfall (%)	Required/s anctioned	In position	Shortfall/va cant (%)
Andhra Pradesh	14092	13740	2.5 (352)	17126	15742	8.1 (1384)
Telangana				8996	7943	11.7 (1053)
Karnataka	9824	8544	13 (1280)	17748	13371	24.7 (4377)
Kerala	6005	5565	7.3 (440)	6194	5917	4.5 (277)
Tamil Nadu	10062	10112	Excess (50)	12012	10489	12.7 (1523)
All India	169262	133194	21.3 (36068)	239096	212593	14.1 (33618)

**Table 7: Health workers [female] / ANMs at Sub Centres and PHCs in Rural Areas**

*Source: Rural Health Statistics, 2019-20*



**Figure 7: Health workers [female] / ANMs at PHCs in Urban Areas**

*Source: Rural Health Statistics, 2019-20*

## Expenditure By The Southern States On Health And Related Sectors

We have examined the revenue expenditure incurred by the Southern states on social sectors for the period from 2010-11 to 2018-19 to understand the trend in spending on health and related sub-sectors. We have specifically examined the spending on medical and public health, family welfare, nutrition, water supply and sanitation, civil supplies and housing. The data for the state of Andhra Pradesh is presented in Table 8. The revenue expenditure incurred by the state on medical and public health shows a marginal decline over the period from 2010-11 to 2018-19 at nearly 4 per cent of the total revenue expenditure of the state. The expenditure shows a considerable decrease for nutrition (by nearly 17 per cent) during this period. Further, the share of important sub-sectors such as family welfare, water and sanitation, nutrition and civil supplies is marginal in the total spending by the state.

Item	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR
Medical and Public Health	4.4	4.6	4.6	4.4	3.2	3.7	3.7	3.7	4.1	-0.9
Family Welfare	0.9	0.9	0.9	0.9	1.0	1.4	1.2	1.4	1.6	6.5
Water Supply and Sanitation	0.6	0.4	0.4	0.6	1.3	1.2	0.8	2.6	1.2	8.0
Housing	1.0	0.6	0.6	0.6	0.7	1.4	0.9	1.3	2.7	11.6
Social Security and Welfare	4.2	4.4	4.4	4.0	5.3	10.3	5.9	8.3	15.8	14.6
Nutrition	3.3	3.4	3.4	3.7	2.4	2.9	2.8	2.8	0.7	-16.7
Civil Supplies	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.4	0.4	7.4

**Table 8: Utilization of funds for selected expenditure categorized under the head of social services by Andhra Pradesh**

*(Revenue) as % of the total expenditure Source: RBI*

In respect of Telangana, the revenue expenditure on medical and public health constitutes 3.7 per cent of the total expenditure of the state as of 2018-19 with a marginal increase of nearly 1 per cent between 2014-15 and 2018-19 (see Table 9). Among the sub-sectors, the share of civil supplies (0.1 per cent), is observed the lowest, with a decline of 28.5 per cent during this period. Similarly, spending on water and sanitation amounts to 0.3 per cent of the total expenditure of the state for 2018-19, with a substantial decline during this period (by nearly 31 per cent). The spending on other sub-sectors such as family welfare and housing is also marginal as a proportion to the total expenditure of the state.

Item	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR
Medical and Public Health	3.6	4.1	5.2	4.0	3.7	0.9
Family Welfare	1.3	0.8	1.2	1.6	1.3	0.0
Water Supply and Sanitation	1.5	1.2	1.9	1.1	0.3	-31.2
Housing	0.7	0.8	0.9	0.6	0.9	4.6
Social Security and Welfare	5.0	7.3	6.8	6.9	7.7	8.6
Nutrition	2.4	2.2	3.9	3.4	3.0	4.5
Civil Supplies	0.2	0.1	0.1	0.1	0.1	-28.5

**Table 9: Utilization of funds for selected expenditure categorized under the head of social services by Telangana (Revenue) as % of the total expenditure**

*Source: RBI*

The revenue expenditure on medical and public health constitutes around 4.6 per cent of the total expenditure in respect of Karnataka with a compound annual growth rate of 2.2 per cent (see Table 10). Among the sub-sectors, the share of family welfare is the lowest, followed by nutrition, housing, water and sanitation in the total expenditure. While the expenditure on water and sanitation shows an increase by nearly 20 per cent for the period 2010-11 to 2018-19 in the state, the spending on family welfare shows a decline by nearly 2.5 per cent.

Item	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR
Medical and Public Health	3.8	4.0	4.1	4.0	6.6	3.7	4.2	4.5	4.6	2.2
Family Welfare	0.6	0.6	0.6	0.6	1.7	0.5	0.5	0.4	0.5	-2.4
Water Supply and Sanitation	0.3	0.3	0.4	0.6	5.5	2.3	2.8	3.3	1.9	20.5
Housing	1.6	1.6	2.0	1.6	8.2	3.1	2.9	2.9	1.8	1.6
Social Security and Welfare	5.7	5.6	5.0	4.5	7.6	4.6	4.7	4.3	8.9	4.9
Nutrition	1.1	1.0	1.0	1.0	1.6	1.1	1.1	1.0	1.1	0.4

**Table 10: Utilization of funds for selected expenditure categorized under the head of social services by Karnataka (Revenue) as % of the total expenditure**

*Source: RBI*

Among the Southern states, the spending on medical and public health is found the highest in respect of Kerala, at nearly 6 per cent as of 2018-19 (see Table 11). However, it should be highlighted that the state's revenue expenditure on the important sub-sectors such as family welfare, water and sanitation and housing show a decline between 2011 and 2019. The respective share of these sub-sectors in the total revenue expenditure of the state is also found to be marginal.

Item	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR
Medical and Public Health	5.0	5.4	5.2	5.2	5.1	5.2	5.3	5.6	5.7	1.3
Family Welfare	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.5	-2.1
Water Supply and Sanitation	1.1	0.8	1.0	1.0	0.9	1.2	0.9	0.7	0.4	-12.2
Housing	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	-20.1
Social Security and Welfare	3.1	3.3	3.8	3.6	4.2	5.5	5.7	6.1	3.3	0.9

*Table 11: Utilization of funds for selected expenditure categorized under the head of social services by Kerala (Revenue) as % of the total expenditure*

*Source: RBI*

The revenue expenditure of Tamil Nadu on medical and public health constitutes nearly 4.5 per cent as of 2018-19 (see Table 12). It should be highlighted that despite a separate budget for public health in the state, the expenditure on the sector shows a decline by 0.5 per cent for the period 2011 to 2019. The expenditure on water supply and sanitation is found to be the lowest among the sub-sectors (0.5 per cent of total spending), followed by family welfare (1.5 per cent) and nutrition (1.9 per cent). It should also be highlighted that the expenditure by the state on sub-sectors such as nutrition (by 4.3 per cent), civil supplies (by 3.2 per cent), social security and welfare (by 2.2 per cent) and water supply and sanitation (by 1.3 per cent) shows a decline over the period from 2011 to 2019.

Item	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR
Medical and Public Health	4.7	4.2	4.3	4.1	4.1	4.2	4.0	4.8	4.5	-0.5
Family Welfare	0.9	0.8	0.9	0.9	1.2	1.3	1.2	1.2	1.5	5.3
Water Supply and Sanitation	0.6	0.2	0.2	0.6	0.4	0.4	0.8	0.9	0.5	-1.3
Housing	0.8	0.7	0.7	0.3	1.3	1.3	1.4	1.5	2.0	9.9
Social Security and Welfare	4.9	7.8	8.6	8.1	6.8	6.7	5.3	4.5	4.1	-2.2
Nutrition	2.8	2.6	2.4	2.4	2.4	2.1	2.1	2.0	1.9	-4.3
Civil Supplies	5.5	6.0	5.1	4.5	4.0	3.8	3.6	3.7	4.1	-3.2

*Table 12: Utilization of funds for selected expenditure categorized under the head of social services by Tamil Nadu (Revenue) as % of the total expenditure*

*Source: RBI*

## **Performance Of Southern States With Respect To Key Health Access Indicators**

Further, we have examined a few health access indicators of the Southern states to understand whether the health service system functions are accessible and whether there exist any differences in access across wealth index, social groups, religious groups and educational status across the states and as compared to the all-India average. Data on key access indicators such as antenatal check-ups and vaccinations for BCG, DPT, Polio and Measles have been extracted from the NFHS round 4. The results are presented in annexure 3 (see Tables A1 to A5). It is not surprising to note that the performance of the Southern states is better than the all-India average in respect of all these indicators. For instance, while the share of women belonging to the poorest income group who have not received the entire ANC check-up constitutes nearly 30 per cent at the all-India level (rural), it is negligible in Andhra Pradesh, Karnataka and Kerala and much lower than the national average in the states of Tamil Nadu and Telangana (see Table A1). Southern states also perform relatively better in terms of vaccination. Among the Southern states, Kerala has reported highest ANC check-up and vaccination. It should be highlighted that among the Southern states, the share of children who haven't received BCG, DPT and Polio vaccination is found highest in Karnataka. Further, their share was more among the poorest groups. For instance, the data shows that as much as 20 per cent and 16 per cent of the children from urban and rural Karnataka respectively, have not received DPT vaccination (see Table A3). The share of children belonging to the poorest income group, who haven't received all vaccinations for Measles constitutes nearly 30 per cent in rural Karnataka and 22 per cent in urban Karnataka. It should also be highlighted that the share of children who have not received full Measles vaccination in Tamil Nadu is more than the states of Kerala and Karnataka, especially in the rural areas (see Table A5).

In line with the all-India trend, there exist notable differentials in access to these services across social groups, with a higher share of Scheduled Tribes (STs) and Scheduled Castes (SCs) among those who have not received full services of ANC and vaccination in the Southern states as well. To sum up, although the Southern states perform comparatively better in terms of access to health services there are notable differentials in access across income and social groups and across rural and urban areas. The poorest among the income groups and STs and SCs among the social groups have a lower access to health services than their rich/richer counterparts and middle/forward caste groups in both rural and urban areas. These differentials across socio, economic, cultural and regional markers apart, the Southern states are ranked relatively better than the rest of



India, which raises critical questions with respect to the issues of equity and inclusiveness related to the health service system of these states.

## **ON THE DESIRABILITY OF A PUBLIC HEALTH CADRE IN THE SOUTHERN STATES**

This section draws on in-depth interviews conducted with forty-nine key informants, including policy makers and bureaucrats who worked with the health service system in different capacities, policy consultants, academics, activists and representatives of civil society organizations, medical practitioners and officials of the respective healthcare delivery system from the Southern states. We have synthesized their views on the desirability of a Public Health Cadre, impediments to establishing the cadre, structure, roles and composition of the cadre, training requirements and financial implications.

### **The Need For A Public Health Cadre**

The views which emerged from various stakeholders who participated in the interviews resonated the following issues: dominance of biomedical paradigm at the epistemic level of the present health services, the need for improving the efficiency of public health delivery system through training and developing adequate infrastructure facilities, and learning from other states and countries that have established dedicated cadres for the delivery of health services.

### **Moving Beyond The Existing Biomedical Knowledge Paradigm In Health Services**

There is a general acceptance among the respondents that the present health service system in India is grounded on a biomedical approach to health, which is more curative in nature. As highlighted by the respondents, there is profound confusion with respect to what constitutes 'health'. This often leads to viewing medicine as being equivalent to health. This could partly be due to medical education and partly related to doctors who have to defend their turf and encourage this view. However, many of the respondents viewed this as a distortion of the healthcare system that has been converted into a medical system rather than a healthcare system, which is based on a "purely biomedical construct with mercenary overtones to it". It has also emerged that key fields like community medicine have not found a deserved place in public health training and practice because of the dominance of a curative approach to health and practitioners of the same in the health services. This has also led to the sidelining of those who are from non-curative and non-medical fields of health from a leadership role in health services. One of the respondents explained it as follows:

"You know, every field must have a practice, it must have its own, unique research, it should have its teaching and production of a tribe of people, and it must lead in a certain direction. So, but I don't think, you know, community medicine as a field has found legitimacy in public health practice. Like if you are a community medicine doctor, I don't think it translates to a leadership role within the existing public health system. So, I, I do not know, I am sure, one of the, maybe one of the barriers or tensions has been the classical tension between public health and medicine itself, where the goals of medicine and the lobbies of medicine, you know, the, the...favour a certain, favour more individual, individual and interventional focus and don't necessarily think much about intervening at the level of social determinants of health (P36)."

What emerged strongly from the interviews is that the present structure and organisation of the health service system with a curative approach are unable to address the health needs of a country at a community and population level. The present system places an overemphasis on a hospital-based approach, which is disconnected from the preventive and promotional approach to health. According to , a dedicated Public Health Cadre, as is being experimented with in states like Tamil Nadu, might be able to organise the interventions in a systematic way with the involvement and participation of actors at the grassroots level and mobilization of the community in achieving the goal without being prescriptive "as clinicians in the healthcare delivery system often do." They noted:

"...the health, health needs of a country cannot be met by a curative model, we can't just have hospitals all over the place and expect the health to improve. I think the social determinants of health are very important. And, for that, you need specific training, you need people who are aware of how the different social determinants interact and how they play a role in affecting, not just health but also access to healthcare. And, that a dedicated Public Health Cadre, I think, seen in Tamil Nadu, there is some effort at least to have people who, you know, aware of social issues who come from, you know, who are, takes more representatives, I think, that kind of shows up in the, you know, health outcomes of the state (P28)"

"If you have a Public Health Cadre, who will have people who will look into intervention in a more systematic, organized manner and they will understand what needs to be done at grassroots level, how to mobilize the people around achieving many public health goals. Clinicians unfortunately have a tendency of being prescriptive, I tell you, you do this and this, and then we are done. But public health involves mobilizing the

community, talking to them, understanding them and taking them along in achieving various public health, health goals (P34). “

It was further pointed out by a few respondents that a curative focus of the system over-prioritizes tertiary care in the present health service system, which could lead to undesirable “medicalisation of health”, especially in procedures like childbirth, which could be performed at the PHC level. As one of the respondents noted, if a public health perspective were to be inbuilt into the healthcare delivery system, what is needed is the strengthening of frontline health services at the community level rather than investing more on tertiary and advanced care for functions which could be performed or conditions which could be prevented at a lower [community] level. He noted:

“Abnormal amount of money and focus is being given to tertiary healthcare, other than the basic, I mean, give us a clean delivery for God's sake. Why do people have to go to Cloud Nine [name of the corporate hospital] and all these places? And why do you have to pay two lakh for a C-section which is simply unreasonable to do. And, to invest into robotic surgery, will you do it in some experimental and research centre, but where you need is the simple PHCs and the students that are being raised for it are simply not set or designed to run primary and secondary healthcare service that we have (P4).”

Hence, a view emerged from this group of respondents that “public health is not a clinical work alone”. For them, the Public Health Cadre with its focus on social determinants at the centre should consist of medical and non-medical personnel with public health training. In their view, the division of clinical and non-clinical is a “false dichotomy” and what is needed is the bringing together of clinical and public health functions, which could form the epistemic base of the Public Health Cadre. As one of the respondents explained:

“What do we need to do? I think is restore to the entire healthcare system a way to actually think about promoting people's health and this is why I like Antonovsky's paradigm of salutogenesis<sup>f</sup> which is promotion of health rather than pathogenesis which is you know dissecting people as the objects mechanically and addressing the effective course. Now, if you embrace salutogenesis, an obvious corollary to that here is that when you are promoting anybody's health, you have to factor in the necessity of considering that individual as a constituent member of a family, that family constituent a member of a community, and that community, a constituent member of society, at large. So, I personally think that good clinical care and public health are two sides of the same coin. The

distinction between the two is a false dichotomy. I think we need to, you know, fundamentally redefine all of these, take away this notion that a doctor must be prescriptive and go on to saying that a healthcare professional is the one who has the ability to create a partnership for better health. Then, we are redefining what a healthcare professional is. (P15). “

Respondents also explained how the entire emphasis on social determinants of health is missing in the epistemic base of the health service system with associated services such as housing, sanitation, drinking water and, above all, nutrition sidelined. At present, as respondents observed, the decision making in the health delivery system is less informed of these issues; however, more influenced by issues such as political, regional, administrative and clinical priorities. They view that a Public Health Cadre with social determinants of health as its epistemic base that encompasses all related sectors of health could be of more relevance in countries like India. Further, they noted that preventive measures at the population level are the only way that would be successful. Some of the respondents noted:

“Till now we are only looking at sickness and prevention of sickness, if you really want to make health as an agenda, then you have to have a Public Health Cadre, which involves all sectors, especially who are looking at determinants of health. Without addressing education, without addressing sanitation, nutrition, we are not going to change the health status of the people, so if you don't do that, then we never have healthy population goals, we will be circling around these infectious disease, NCDs one by one, and you will never get the focus right. (P4).”

“Right now, the decision making that's happening is not necessarily public health informed, it's more maybe politically informed, maybe regional informed, maybe clinically informed. So, a classic example would be the decision making with respect to the first wave and probably half of the second wave of Covid-19 where we had, cardiologists deciding public health, what should be done as far as public health and Covid-19 were concerned. So, I would think that having a public health leadership would be better informed the decisions that are taken with respect to public health in the state (P24).”

“The advantage is that many problems in medicine, medical problems, are not susceptible to, or not amenable to one-to-one treatment. So, for preventive measures, largely speaking, you need population control

measures or population interim measures, and for that you need a Public Health Cadre (P26).”

Health, as emphasized by the respondents, is multi-dimensional at the population level and what is often missed out in the clinical model of organisation of health services are the core values of public health. It was highlighted that when a health system is dominated by the clinical view and by clinical practitioners, values such as equity and inclusiveness are sidelined. This is mainly because of the kind of training that the clinicians get during their medical education. Since social science is not part of medical education, they tend to lose sight of issues such as equity and forms of class, gender and caste-based discrimination, which are being practiced covertly and overtly. It is possible that such strong structures of power (read caste, gender, ethnicity, ageism, disability and other markers of marginalities) and their complex embeddings at the ground level act as barriers to accessing health services. Hence, as a few respondents have pointed out, it is important to improve the competence of medical professionals and help them be sensitive and responsive to such issues. They further observed that those who come to public health need to improve their understanding of epidemiology, society and the complex interactions between the health system and the structures of power that lead to differential health access and outcomes. They noted:

“.... clinicians somehow don't understand equity, because for him, all patients are the same. But, when you talk of equity from a public health perspective, and the fact that the tribals or the Dalits are systematically... kind of... marginalized, because the system does not reach out... is not conscious of the fact that they are doing it systematically. We... when we were doing a study on health financing, like the enrolment camps and RSBY was set up in the... always in the main village, and always... and you sometimes usually in a temple compound... And, which means you all automatically excluded a Dalit from entering and getting registered, enrolled. So, these are the kind of things which the health system does not think of. And this is where I think a public health person who is exposed to these values and all, will be much more conscious than this thing. So, that is my... very, this thing... of a Public Health Cadre, having a Public Health Cadre, yeah... to begin with, we can... yeah (P42).”

“The competence of public health professionals needs to improve. Second, the perception of public health among medical fraternity is very poor and if you ask, a good proportion of them will be actually—they do not have any idea of what public health is and the importance of public health for—many of them. At least I have got contacts of 60-70 medical institutions in India, and I found that even

epidemiology, most of them do not know the importance or the rationale, the scientific base of it (P10).”

A few respondents also highlighted the bureaucratic and centralised governance paradigm that is inherent in the epistemic base of health services, which makes the delivery of public health functions merely as a mechanical implementation of programmes without adequately being responsive to the context specific issues. They further noted that the dominant perspective of management of health services with the domination of bureaucracy, to a considerable extent, was a reason for the lack of development of a systematic knowledge that is informed from public health values and principles in the present health services. This often leads to the disconnection of the ground level issues in the decision-making processes. Bureaucrats and administrators often rely on already available solutions that are compatible with the governance and administrative frameworks. This becomes a routine way of functioning. As explained by the respondents, these practices get reproduced with the dominance of bureaucratic control over health services, from the state to the block level. The respondents noted:

“Currently, most of the states have people with clinical backgrounds who suddenly get pushed into public health positions, they have no orientation and they cannot manage the programmes well. Unfortunately, most of them, right up to the Director of Health Services in the Ministry of Health, most of them feel, they think there is nothing to learn about public health, it is common sense. And, without, you know, looking at the basics of public health they manage public health programmes and take decisions based on their whims, whims and fancies. And, it is public health, for the masses which suffers. So, without those skills, there are people who have public health training, unfortunately, most of them are not put into positions to manage public health programmes, so, it is the, it is a, you know, hotchpotch without systematic manner (P34).”

“Over time, the IAS has used up quite a bit of the power of policy making and control of health institutions at the district, block levels. And I also do believe that there are many clinicians, when they reach senior positions, especially specialists, style themselves as bureaucrats. And they in fact become the...they support and force to accommodate and behave very much like the civil servants. So, that...this whole area of public health understanding...I think Covid kind of exemplified it with people like, you know, ...[name] and .....[name] speaking public health and had no clue whatsoever of, you know, the science of it, or even the practice of it, you know. (P19).”

To sum up, what has emerged prominently from the views of respondents is the need for a paradigm shift in health from pathogenesis to promotion of health, with clinical and public health considered together. Besides, viewing health as a governance and management solution largely practiced through bureaucratically controlled centralized management in health service delivery is another area which needs a paradigm shift. It was stated that policy-level decisions taken in such systems are often disconnected from the ground reality. Further, it was reiterated by most of the respondents that the public health perspectives and values such as context specificity, equity, inclusiveness and non-discriminatory services have to be the epistemic base of the dedicated Public Health Cadre. Another view, which is already known and reiterated by most of the respondents, is the system approach wherein related sub-systems of public health need to be integrated into the public health services.

### To Improve The Efficiency Of Public Health Service Delivery

It is argued by scholars that the Public Health Cadre will create an environment that allows medical students or non-medical students from related streams to make public health a career of their choice and that it will help overcome the problems of physical shortage of manpower in health institutions at the periphery, besides making the referral system and feedback very smooth (Chandra Mohan Singh Rawat, 2014). Most of our respondents agreed with the view that a dedicated Public Health Cadre could substantially improve services in many ways. They consider the establishment of a dedicated cadre can help address the human resource shortage in health delivery, especially the public health delivery in most of the Indian states faced with a serious infrastructure shortage in terms of personnel and facilities. As pointed out by the respondents, several vacant positions at the district level remain frozen with recruitments not taking place. This is part of the health sector reform policies which suggested privatisation in a major way. One of the respondents explained it vividly:

“There is a freeze on general recruitments also, other than the reclaim/ required staff, nurses and MBBS doctors or specialists and so on. No special recruitments are being done. For example, even the existing older public health positions at the district levels were being stopped, like Health Inspector, Health Educator, Public Health Nurse and so on. Some of these, we see a freeze in the previously existing or older time positions (P33).”

The main advantage of a cadre, therefore, is the deployment of skilled human resources at all levels of the health service delivery system. The most important aspect, which may/should be addressed with the Public Health Cadre is the deployment of personnel with matching public health competencies in all functions at all levels, including clinical services, monitoring and surveillance, reporting, promotional activities, community

mobilisation, data collection and programme management. This is important in the context of the emerging public health challenges such as the emergence and resurgence of infectious diseases, management of NCDs and management of priority national disease control programmes. A respondent further elaborated on how a Public Health Cadre could strengthen human resources:

“We will be having skilled people at the state level, at the regional level, at the district level, taluk level and at the PHC level. We will have skilled people to run disastrous situations, such as disastrous, emergency situations. We will have little better people to administer community health at the CHC level, PHC level, even the levels before below that, districts, supposing all the district programme officer, the district or with the public health background, supposing all the DHOs appointed are with the public health skills, all the state programmes officers are with skills, then probably we will administer national health programmes in style. We don't land them in situations like Covid, what we had in the earlier phase of Covid (P 37).”

The deployment of clinically trained personnel without proper public health training, which is the practice now, is viewed as a “waste of resources” since they are not sufficiently equipped to deal with the public health challenges. Rather, it leads to the underutilization of their skills for which they were trained. Besides, the clinical practitioners who join public health services do not have many avenues for promotion and hence they tend to look for other opportunities for upward mobility. This adversely affects the planning and delivery of public health services. It is thus opined by many of the respondents that it is important to have personnel who are trained in public health to run health programmes. A prominent policy maker, who worked at the union health ministry stated:

“In positions like the national programmes, national disease control programmes, which are administered at Government of India level, state level and district level, you have clinical specialists being posted to manage these programmes, that way it is waste of their resource, because they are paediatrician or surgeon, or having a specialization in some other discipline. His talent is getting wasted by running the malaria or TB programme. Secondly, they don't have the aptitude also for that type of work. They feel that unnecessarily this is thrust upon them. In both ways, we are losing...public health not just a clinical work, mostly preventive and promotional type of work, no dedicated professionals available, and wherever available, they subsume the entire health cadre, and many of the time you will not get people with required qualifications, and they



don't have good promotional opportunities. So, they normally find job elsewhere as epidemiologist, etc. They join research institutions etc. Government somehow doesn't get the best of the public health professionals always. So, it's better to have a trained or people with public health qualifications. They can have Master of Public Health (MPH) or doctorate of public health. Such people are posted to run these programmes, they can manage this better. Because they know how to manage a public health programme, what are the issues involved in the epidemiology, in tackling the epidemic etc. (P1)."

The respondents agreed that the core competence required for delivering public health functions is generally overlooked, resulting in the deployment of personnel without sufficient competence at appropriate levels of the health service system. For instance, a surgeon, who may be extremely competent in the field of surgery, may not understand the challenges involved in immunization programmes to be implemented at the population level. Hence, the healthcare delivery system falls in the routine management of the programme template, which gets scaled up to a higher level and the real context-specific issues get sidelined in the process. As pointed out by some of the respondents, during the British times, the Director General (DG) of Health would have started at the field level and slowly made his way to the top. Such a person would have vast field experience with a sense of public health and epidemiology. Today, however, a bureaucrat at the top has no such feel for public health. They are vulnerable to technocratic advice and are dependent on the technocratic advice of consultants not just from agencies like WHO and World Bank, but even commercial firms like KPMG and PricewaterhouseCoopers (PWC). A respondent stressed why it is important to develop core competence in public health, when we visualise a cadre:

"You are, being a surgeon you know just fresh from his theatre, he has got fed up from his stress of surgery, you bring him as district medical officer, the guy has never seen immunization, he has never seen the field and does not understand epidemiology, does not understand ethics so there is no talk of competence or leadership that is available at the appropriate level. And I believe that one of the things missing in India today is physician leaders, the physicians because their lack of what should I say lack of grounded knowledge are not able to assume control, so everything gets scaled up to the Secretary or up to the Minister who again have no idea of, you know, of what is the need (P12)."

Another respondent explained how health services become a routine managerial bureaucratic function without inculcating its core values and competencies. This mismatch between specialisations and required competencies in health delivery is

prevailing from the policy making at the top level through to programme implementation at the bottom:

“One reason is the policymakers to what extent, policymakers are in the administrative cadre of the health departments, they are all IAS officers and they haven’t imbibed the spirit of public health to that extent. They were, whatever was given they were administrative, they were just... It’s not idealistic, the need based, this is the requirement, this is the emphasis, these are the priorities which need technical inputs from the medical staff who is into that. So, that is one thing, to what level an administrator or an IAS officer is convinced about the need provided by, say for example, a district medical officer, I need this much of insecticide bad/batch or I need that insecticide...on what basis, he will ask. And this poor fellow who was an ENT surgeon suddenly given Malaria programme in-charge what is the slight possibility of rate of malaria and these are just to learn the basics of a or something and there are certain things, what are the incidents, what are the monetary indicator. So, they often fail to the very probing matter of fact, questions of administrators, they fumble and mumble, and they cannot give convincing need analysis...And often they give, to avoid blame they give such a rosy picture which is not a significant indicator. I have seen it in malaria control, I have seen it in TB control and how this is (P23).”

Respondents also highlighted other important problems inherent in the present system. These included lack of clear definition of job responsibility for each category of officers and appointments based merely on seniority, the systemic problem of non-amalgamation of services under rural and urban local bodies in the present health service delivery, and the lack of clarity on how various bodies/departments in urban/rural continuums work together in health services. According to them, a dedicated cadre could effectively address these issues. They explained:

“Before developing the administrative service or Public Health Cadre, they used to look after the hospital as well as the public health programme and the administrative services. But there was no specific direction or job responsibility for each category of the medical officers. Depending upon the seniority, jobs will be assigned (P8).”

“One of the major problems that we found was the compromised manner in which our 3-tier, you know, government system under the Panchayati Raj Act has come...And we’re not seeing the, you know, amalgamation of rural and urban. And this is a, you know, when it comes to a geographical kind of division of duties, this comes as a problem. Because in a district,

the district headquarters quite often is a town. And a block headquarter can be also a town. So, these are not under the, very interestingly, not under the district panchayat. So, district administration or the district, you know, government within the federal system of India, the 3rd tier, the topmost government of the 3rd tier of rural administration is not having any control on the urban areas within their geography. So, one thing probably required, if at all we want to look at this decentralised health system, or so to speak even education system or any other department, any development sector so to speak, one of the things would be to actually see a, you know, comprehensive, you know, district system. Maybe a new amendment to, you know, define those, you know, very clear linkages (P48)."

"When the national urban health mission was formed, currently we call it the health mission amalgamating both rural and urban health missions. But the problem that a CMHO is facing is that, you know, the urban health systems...whether the urban cadre are not actually liable to report to the district CMHO. So, unless and until a clear definition of how the various development sector departments are going to see, work in a unified manner within a district geography, including both urban and rural, with clear definition of, you know, how the urban officials are accountable to the rural and vice versa. So, we, we are nearly going to miss this part, I think (P48)."

Further, the respondents felt that in the absence of a Public Health Cadre, there is less scope for the continuity of services for bureaucratic personnel in the health system. A cadre will help develop a career trajectory for the personnel, since there will be less room for appointing bureaucrats from other services to the public health services, as it is happening at present. Therefore, with the development of a cadre, core competencies in the decision-making processes also get co-created. A person who occupies a senior position in the cadre comes through upward career trajectories of the cadre with multi-faceted experiences and exposure to public health functions and gets an opportunity to grow with the job. To quote a few respondents' views on this:

"...[now] you have some kind of an episodic appointment of people and there is the lack of continuity of people. People in certain positions, they move on to different departments. So, one is about the lack of continuity and episodic postings, and second is possibility of having a, an accountable and autonomous collection of bureaucracy—collection of a system which is accountable and autonomous (P31)."

“So, the positive feature is that...mostly what happens is that people come into the quote-unquote public health merely as an administrator on the basis of seniority, that's what happens in most states—you become a Deputy Director, Additional Director, etc. But here you are placed in the cadre from the day one on the basis of your postgraduate qualification or degree and therefore from the one you are dedicated into that public health space and therefore you are dealing with the technical, with the managerial, with the financial, with media and all facets of public health management that go into disease control, outbreaks, programmes, etc. And therefore, you essentially grow with that job, you get a first-hand view of what actually happens in the entire public health hierarchy and machinery and that surely has a bearing on your professionalization, learning, etc. (P7).”

### Successful Experience Of A Public Health Cadre From Other States/Countries

Another view which emerged regarding the need of establishing a cadre related to the successful experiences observed from the Indian states of Tamil Nadu and West Bengal as well as the best practices prevailing in other countries. The experience of Tamil Nadu cadre was referred to by most of the respondents in terms of linking the relatively better performance of the state in the health status, especially to a better access to services and better health outcomes. As a respondent noted, perhaps the most important outcome of the cadre is the increased use of public facilities by people, as compared to other states where people tend to rely more on private facilities than public ones. One of the respondents noted:

“Tamil Nadu has done wonderfully well when it comes to you know having this implementation of health programmes. And even today, I see a lot of people using the public health system in Tamil Nadu as opposed to private healthcare. And part of it probably is the fact that one form or the other, Tamil Nadu has been very successful in terms of implementing this Public Health Cadre without institutionalizing it at least (P18).”

The experience of the West Bengal Health Service Cadre was also often invoked by the respondents to support the view of a need for developing a Public Health Cadre in other Indian states. The respondents observed that a separate cadre in West Bengal distinguishes and defines the job responsibilities of different tiers and personnel in terms of their duties and obligations. This, as noted by the respondents, has helped the health administrators better manage the day-to-day functions of the health delivery system in WB.

“Just want to share one thing, before developing the Public Health Cadre in West Bengal, there was state WBSPSRC, State Programme for SPSRC... there is... that was like research, development...like this way...I have forgotten the entire terminology. Anyway, after the...where the...When the WBSPSRC was formed, then there was a necessity to develop a cadre which can look after the WBSSC and before the development of the WBPHS, there was WBHS, that means West Bengal Health Service cadre and all the doctors included in this cadre, they used to look after the entire administrative both the clinics also. so that [not clear]...after developing the...[not clear] as a separate cadre, it helped a lot for the administrators, health administrators to look into the day-to-day service, the managerial activities in details and today we are also getting benefit from this...in West Bengal different job responsibility of different tier it is clearly mentioned. For the BMEs, the job of the BMHS—what they will look after, the job of the medical officer, what they will look after and job of the superintendent, job of the assistant chief medical officer, job of the... all category of the officers and their responsibility, duty, rights, obligations—all are mentioned separately (P8).”

References were also made to the experiences of countries which have dedicated cadres with a better health responsiveness and health outcomes. The respondents noted that the performance of countries like Bangladesh and Sri Lanka in terms of their health outcomes is better than India mainly due to the structure and organization of their public health services with a dedicated focus. The same is the case with countries like England with a dedicated health services like the NHS. For a big country like India, the only way forward to address the diverse health needs and requirements of people is a dedicated Public Health Cadre. One of the respondents noted:

“You know, other countries like Sri Lanka who were able to do this and later on even Bangladesh, to some extent and if you look at their health profiles, they are so much more better than we are in spite of, you know, the other advantages that we've had. So, and I think in a country like India with all its, with its size, its diversity, its disparity, its kind of amazing geography, you need to have a dedicated public health, you know, cadre to take care of basic preventive healthcare needs, because, I mean, the kind of issues we have are far, you know, complicated than, maybe, a lot of other countries in the West, who also had it, you know, even today if you look at NHS and other Western countries, there is a very strong priority given to, you know, a Public Health Cadre (P27).”

In short, there was widespread support towards the idea of the creation of a health

cadre for a range of reasons, from administrative efficiency to health outcomes. The experiences of Tamil Nadu, and other countries like Sri Lanka, were also cited as reasons to create a Public Health Cadre. Such a cadre would have a better understanding of health, going beyond medical care, as observed by the respondents.

## Impediments To The Implementation Of A Public Health Cadre

This section examines the views of the respondents on the barriers to the implementation of a Public Health Cadre in India in general, and in the Southern states in particular. We start by discussing the efforts made towards the implementation of a Public Health Cadre so far in the Southern states and their present status. We then analyze the 'impediments' pointed out by the respondents related to the historical reasons, lack of clarity on the cadre, apathy towards social medicine, resistance by the medical lobby, other systemic and administrative barriers, privatization of health services and political reasons.

## Efforts Towards Establishing A Public Health Cadre In The Southern States

Tamil Nadu is the first state that has made significant progress in the establishment of a separate Public Health Cadre in India. This has been achieved through concerted efforts starting from 1980 with the launching of a multipurpose health worker scheme by the state (Parthsarathy and Sinha 2016). The political will of the government, irrespective of the party affiliation of the ruling regime, has played a significant role in keeping these schemes alive over a period of time (Bennett and Muraleedharan, 2000, Balabanova *et al*, 2013). Tamil Nadu created a separate Directorate of Public Health with a dedicated public health workforce and the same practice of deputing in-service candidates to public health courses as part of developing a Public Health Cadre (Das Gupta *et al*/2010). To facilitate the cadre, Tamil Nadu earmarked a separate budget for public health, which was more than that for secondary or tertiary medical care and medical education. The state has also enacted a Public Health Act, which aims at providing legal and administrative structures under which the public health system functions. It assigns responsibilities and powers to different levels of government and agencies. Tamil Nadu has developed a training system as well (Das Gupta *et al*/2010). Their training is oriented more towards administrative and managerial roles rather than a clinical role, with a specific orientation to population-wise perspective. Doctors, after their medical degree, undergo a three-month training programme in public health and the trainees are prohibited from private medical practice. In addition, Tamil Nadu is the only state with a district level public health management cadre; a majority of states disbanded their health management cadre after Independence, but Tamil Nadu continued to retain it. The major advantage of a district level cadre is that it provides for managerial continuity at district and higher levels of primary healthcare. The state is able to act quickly because its officials are familiar with health issues besides having the requisite experience. Managers in other states are transferred from one department to another and it takes time for them to grasp their roles (Muraleedharan *et al*, 2011). A few respondents noted that the Tamil Nadu experience of establishing a separate clinical and Public Health Cadre is a pioneering experience worthy of being replicated even as states like Madhya Pradesh, Odisha and Chhattisgarh are trying to do so:

“...[the] state of Tamil Nadu for that matter, we’ve seen it right from the time of our Independence, we have seen that there’s a Public Health Cadre existed in one form or the other, although may not be very institutionalised like the way we wanted to see or giving it some sort of a name and nomenclature. But it existed and look at the progress of a state like Tamil Nadu with respect to health indicators. If I want to draw corollary, if Kerala has done very well with respect to education and decentralization and you know, local self-government sort of institutions and also driving help, Tamil Nadu has done wonderfully well when it comes to you know having this implementation of programmes (P18).”

However, some of the respondents, although appreciative of the progress made by Tamil Nadu, have pointed out that the division between the clinical and non-clinical cadres in Tamil Nadu could separate the core functions, which is against the values and principles of public health. For them, what is desired is an integration of services since these are already interconnected and any separation would lead to segmentation of role and functions. One of the respondents commented:

“I think there has to be more, it should not be a clean split like that, it should not be like, you can go clinical or public health. It has to be more broader and more inter-connected with both management leadership tasks—there can be a clinical, clinical role you can, you can certainly enhance your clinical skills. See, one of the things is public health is also a, it involves a deep generalism, it is not a field which requires narrow specialism (P36).”

Subscribing to the same view, another respondent noted that a Public Health Cadre needs to be multi-disciplinary and with the present division between clinical and non-clinical services, the state is “not going to perform very well in the future”. Besides, there is also a provision for appointment of consultants on a short-term contract basis to the cadre, which could affect the development of leadership from within the cadre. Further, as noted by the respondent, the interchangeability that the cadre has, between teaching and management position, could further weaken the delivery of both the functions due to lack of competence. He explained these further:

“...that is the big limitation of the Tamil Nadu cadre—MBBS. If you have the rest of them are all consultants, they can come and go, they have more role in the cadre. So, a cadre which is not multi-disciplinary... so, the Tamil Nadu cadre is not going to perform very well in the future. Even some of their innovations, like their interchangeability between the teaching position of PMFS and the teaching position, the district



management position—it was a great innovation—how to have teachers of public health, who have actually hands-on experience of implementing public health like research. But it's actually going weak—the people who are sent to teach, the people whom they feel are not very good at management (P41).”

Kerala, another South Indian state, too has a well-developed public health system, with nearly 200 hospitals and more than 1000 Primary Health Centres, with doctors and a full range of treatment and prevention services. However, there is a view that despite a better organisation of health services, access of public health facilities for marginalized sections of society like the tribal communities is limited in Kerala due to issues like limited provision of primary care, shortage of doctors, and essential commodities such as drugs (Nair, 2004). This, in turn, has led to the rural poor shifting to private hospitals for healthcare (*Ibid*). Although there have been discussions on the establishment of a cadre, especially in the context of emergence and resurgence of infectious diseases like leptospirosis, swine flu, H1N1, chikungunya, Nipah virus, dengue and lately the Covid 19 pandemic in the state, no major steps have been taken to realise the same. A respondent noted:

“Kerala, when I joined this [health service], it was...altogether it was one cadre. That was second half of 1990s. So, doctors, whoever is the senior, they can work/opt for the administrative cadre, and there was no separate Public Health Cadre at that time, and even now, we don't have a Public Health Cadre now. So, afterwards, as you said, in many committees, or government always say that it requires a public health cadre, especially in the context of communicable disease, outbreaks and epidemics. Everybody speaks about the role of a Public Health Cadre and for planning, implementing, and for executing the...these surveillance activities and similar other activities. And, in the context of NCD also, this need was once again reiterated. But the effort was not being materialized. So, around 10 years back, the whole cadre was reorganized, that point of time, there was some discussion for furnishing a Public Health Cadre (P 29).”

The organisation of the health service system with a dominance of medical practitioners was another impediment in the way of implementing the cadre. The medical practitioners demanded a specialty cadre, an administrative cadre and a general cadre. As a result, three different cadres in health services emerged for the medical professionals, wherein those with specialty degrees opted for a specialist cadre and others chose an administrative or a clinical cadre. The entire idea of a unified Public Health Cadre got sabotaged in this power struggle. A respondent reflected how this

happened:

“Some of the doctors opined that there should be a specialty cadre, a general cadre and an administrative cadre. Because they thought the Public Health Cadre duties and responsibilities will be done by the administrative cadre. So, this is searching for administrative cadre, general cadre, as well as specialty cadre. .... So, what happened is that this time when these three streams came into force, those doctors who are having specialty degree opted for specialty cadres, other than public health—not all the clinical doctors like medicine, paediatrics, like that. So, there was a well-formed specialty cadre and at the same time other doctors who were not having any degrees, they choose administrative cadre or general cadre. Many of the doctors that time, very senior with 25 or 30 years of service, so they didn't want to move from one place to the other, so what they choose general cadre. So, general cadre means they can stay either as a MO in PHC or CHC. The highest position will get this Executive Surgeon/ Secretary Post levels of civil servant—civil servant grade 2 and civil servant grade 1 are likely to abolish the degree upon cadre on civil surgeons. There are now only two levels in the general cadre—that is Assistant Surgeon and Civil Surgeon. So, their maximum foundation is to be civil surgeon and we can stay at the local CHC. So, they were performing actually the public health duties at the primary care level, though they were not included in the administrative cadre or public health cadre. When this venture for five or six years, so at that time the H1N1, then swine flu viruses then all more diseases came in then the government was speaking/ thinking in terms of Public Health Cadre (P11).”

Another respondent from Kerala recollected that the attempts to form a cadre in Kerala were sabotaged by the medical and health professionals because of the conflicts and competition among the medical fraternity itself. He explained it further:

“There were actually attempts in Kerala to build a Public Health Cadre but it actually got attacked—attacked by the medical and health professionals by themselves, basically, because there will always be competition among different disciplines on if cardiology is bigger or public health professional is bigger, you know, something like that or you know, who is going to influence the policy maker. And in fact, somebody working without any qualification, academic qualification, the person needs to be considered as a public health expert. These sorts of definition and the quarrels among the professionals led the...made the policy makers confused (P10).”

It should be highlighted that the promise of a Public Health Cadre was even in the election manifesto of the present ruling regime in Kerala. A few steps such as the Kerala Health Policy and a Kerala Public Health Bill, 2021 (Government of Kerala, 2021) are important to mention. It aims to “consolidate and to unify the existing laws relating to public health in the state of Kerala and to provide for the enhancement of administration of Public Health in the state of Kerala and for matters connected therewith or incidental thereto”.<sup>8</sup> Although, this Bill does not explicitly speak about a Public Health Cadre, it proposes measures to define the public health authorities, their duties and powers at different levels. The Bill also includes other important sub-sectors of public health such as the use of water for humans; disposal of water; sanitary conveniences; public health issues related to fairs, festivals and public and community gatherings and environmental health other than the core areas of reproductive, maternal and neo-natal health; prevention, notification, control and treatment of communicable diseases; vector control; control of non-communicable diseases and healthcare programmes for the aged and destitute, among others.

Further, a committee was appointed to examine the implementation of a cadre and an institution named the Public Health Protection Agency was formed. However, there were no substantial developments after that even though funds were earmarked by the Planning Board for the creation of a cadre due to the apathy of the then member responsible for health in the Planning Board. The respondent added:

“We have this state health system resource centre, and in fact, around seven years back we started a training programme. Not just started, but that time we got some fund through the Planning Board, and, but then the Planning Board, our health member was not that interested too. At that time, something called Public Health Protection Agency was put forward and we were trying to develop the Public Health Cadre using the fund of Public Health Protection Agency. Without developing a Public Health Cadre, how can the public health be protected? Now we have a Kerala health policy, and the government’s announcements...even this recent Left-run front, when this...before coming into power, their, this manifesto, it was saying about the implementation of Public Health Cadre, and now very recently after this government came into power, a committee is constituted for developing the...and implementing the Public Health Cadre. So, it was always part and parcel of the whole development service system, but never materialized (P29).”

The state of Karnataka has followed the Public Health Act enacted during the colonial period, when the state was partly under the Madras Presidency and partly under the Mysore princely state. The state did not have an act similar to what Tamil Nadu has (Krishnan 2005). Babu *et al* (2014) notes that although the Karnataka public health

department, which was formed under the Mysore Public Health Act, was “one of the best in the country”, there was a gradual decline in the services due to “lack of credibility and quality of services”. The lack of training capacity in the state for public health functions further added to the decline of the department (*Ibid.* 5). The state set up a committee chaired by Dr. P. N. Halagi, “to provide implementable recommendations on the health workforce to match the aspirations of government for efficient delivery of healthcare services and to recommend the strategic approach for creation of an efficient public health system through a Public Health Cadre” (Babu *et al* 2014: 5). The committee submitted its report titled, “Report of Committee for Creation of Public Health Cadre and the Re-organisation of Department of Health and Family Welfare Services' ' in 2014. The report recommended a three-level health cadre—at the block (taluk), district and state. It recommended expenditure needed for the cadre, organograms at all three levels,

policy for recruitment and promotion of the entire staff and the requirement of training, among others. Details of the recommendation of the Halagi Committee report are presented in Box 1.

**Box 1: Halagi Committee Recommendations**

**Recommendation-1:** *Three levels of health cadre. The committee recommends that there shall be three levels in Public Health Cadre namely, taluk level officers (block level), district level officers and state level officers. The entry level for Public Health Cadre shall be at the level of taluk health officer. Cadre-wise common feeder seniority list shall be published and updated every year, which shall be the basis for all service matters. All the promotions will have to be based on cadre-wise feeder list and required postgraduate qualifications.*

**Recommendation-2:** *Entry level for the long-term management of Public Health Cadre, general duty medical officers (GDMOs) shall be given an option after completing three years of rural service to pursue postgraduation in public health or clinical services or hospital administration. However, to address the immediate shortfall of public health trained workforce, the state government can prioritize and offer postgraduate (PG) training by preparing comprehensive list of officers who have undergone training in both clinical and public health cadre. Proposed Deputy Director (HR) should update the list regularly and Deputy Director (HR) shall report directly to proposed position of DGHS.*

**Recommendation-3:** *At the first level of the Public Health Cadre the post of Taluka Health Officer shall be filled by a Medical Officer who has completed a minimum of 6 years of rural service, with Public Health Specialization. In case of non-availability of such a candidate, an MBBS qualified Medical Officer, based on seniority and 6 years of rural service, shall be sent to complete a recognised postgraduate diploma or Masters' course in Public Health and be posted as Taluka Health Officer. There would not be one-person holding charge of both Taluka Health Officer and Administrative Medical Officer, at one time, in a taluka/block.*

**Recommendation-4:** *Second level of Public Health Cadre-District level. The Committee recommends that the second level of public health cadre be at district level as a unit comprising of District Health Officer (DHO) and all the district level program officers.*

**Recommendation-5:** *Third level of Public Health Cadre. State level programme officers of the public health directorate to provide coordination, data integration and technical supervision across the department. In addition, there should be a position for coordination, to be occupied by an officer with technical qualification with management training. The health sector is a fast-growing sector with exponential increase in content and scope of services being rendered. It needs better technical and management coordination and convergence across several technical functions.*

**Recommendation-6:** *Director of Public Health. The post of Director of Public Health shall be selected with guided criteria of: a) A senior Public Health Specialist, with minimum 20 years of service in the department as per seniority cum merit; b) Must have completed a postgraduate course in public health as per recommendations given earlier in this report; c) Should have shown exemplary achievement in upholding the principles of public health; and d) Should have shown good leadership skills in earlier positions held.*

**Recommendation-7: General overarching recommendations**

- *Create a state level 'technical core group' with representatives from varied health fields who work in health system/policy think tanks.*
- *Director General Health Services should come from a medical and public health services background, and he/she should be supported by Deputy Directors and Joint Directors.*
- *Drug logistics society is recommended for drug planning, procurement, replacement and disposal of sub-standard drugs.*
- *The position of training officer to be shifted under the administrative control of Director, SIHFW.*
- *One Additional Deputy Director post is created for medical and health planning.*
- *In SIHFW, Future Faculty Programmes need to be conducted through Public Private Partnership. Special Needs positions need to be created in the cadres of Deputy Director, Additional Director in Human Resources, Social Legislation, Disaster Management, PPP, Procurements and Nutrition.*
- *Additional Directors for RCH and Malaria to be renamed under Immunization and Communicable Diseases. Another position of Planning and Medical Services to be created.*
- *Re-designate the posts of Additional Directors from Primary Health and KHSDRP into Regional Additional Director.*
- *Senior most RMO in the district hospital to be designated as the DCHS (District Coordinator of Hospital Services).*
- *Staff who are repatriated after working at Medical Colleges should be relocated against the vacancies of H&FW departments without any dichotomy.*
- *There should not be (strongly condemned) the posting of AYUSH doctors against the sanctioned posts of Medical Officers (MBBS).*
- *Ten district hospitals which are under the management of Director Medical Education should be handed over to the H&FW dept.*
- *Revive and restructure the wings of the control units for plague, cholera, leprosy, nonfunctional TB units, Vaccine Institutes and filaria control unit, and relocate its resources by disbanding these units.*
- *Disease units which were set up for localized endemics like Handigodu disease. KFD (Kyananur forest disease) were recommended to be continued.*

*Source: Babu et al (2014:6-8)*

However, the recommendations of the committee have not materialised mainly due to opposition from the clinical lobby. <sup>h</sup> One of the respondents noted it vividly:

“...because I worked quite a lot on this with .....[name], then he took it up, much more honest, this thing... See, one major thing is, like, actually, in Karnataka, we have a draft...this thing, policy, which says how to shift to a public health cadre in Karnataka. But the main opposition is coming from the clinicians (P 42).”

Another respondent noted that there was a deliberate attempt to not implement the Halagi Committee recommendations and as highlighted by him, the file of the draft Government Order (GO) and the committee report were “reported to be lost seventeen times” since a powerful lobby of clinicians who are close to the ruling class, opposed the setting up of a cadre. It should be highlighted, as reported by the same respondent, that the Halagi Committee report and the draft GO were adapted by the Government of Odisha to improve the public health delivery system in the state. He explained:

“...I feel terribly sad when it comes to Karnataka...even for doctors, there are forces, there are power points which don't want Public Health Cadre in Karnataka...and this file which has to be issued as a government order has been lost 17 times, 17 reports were there and 17 times it has been lost. Thankfully we have saved digital copy of even the memos and things that all part of that file, each time that is lost, I will ask my office to take another print out, put that number and again restart. The report was taken by the Odisha government and implemented almost the same that we have done all these, they improvised for it further by doing even short-term training, even the draft GO we wanted to do in Karnataka was used by Odisha which I feel happy (P4).”

Unlike Tamil Nadu, Kerala and Karnataka, no major steps have been taken to implement the Public Health Cadre in the states of Andhra Pradesh and Telangana. One of the respondents noted:

“I will mostly talk about Telangana and Andhra Pradesh because they have a similar structure. Presently they don't have any Public Health Cadre and the present way is people who at district level and state level who get promoted through years of working in PHCs and CHCs and so on, and after a certain amount of promotion become or look at Public Health Programme. In Andhra Pradesh, Telangana, the public health programme—the departments are split into two, so, there is a certain amount of bureaucracy (P 33).”

## Impediments

The cases of Kerala and Karnataka show that there is a strong opposition from various quarters for the establishment of a Public Health Cadre. Before we delineate these impediments in detail, it is important to understand how historically the Public Health Cadre services have been dismantled in India. It could be traced back to the dismantling of the Indian Medical Services (IMS) in independent India. While most of the central services such as the Indian Administrative Services (IAS) and the Indian Foreign Services (IFS) were retained in the independent India, the IMS was dismantled. There was no exact epidemiologically or administratively valid reason available for the dismantling of the IMS; However, there were political reasons. One of the respondents linked this to the distance that the IMS had kept from the freedom movement and the close association of the IMS with colonial powers. His view was that since the IMS did not align with the freedom movement, political parties did not show interest in the continuation of the IMS in independent India. He explained this further as follows:

“It’s a very interesting thing...this has both historical and contemporary reasons. The historical reason being that under the colonial rule the medical colleges always seeing something apart, the doctors join the IMS, they are dancing with the ruling class of the country. And which is why they were viewed by suspicion by almost all the political parties, as being quislings, so to speak, so they were kept apart as a class (P2).”

Jeffery (1979), however, had a different reading on this. The IMS, in his view, was closely aligned with the army and did not have a role in the health of native populations. By 1919, when the Minto Morley reforms were put in place, with health being handed over to the provinces, the IMS stopped being an attractive destination for British doctors. Further, over this period, job opportunities for doctors increased in the UK so that an India posting was not even desirable.

Subsequent to the dismantling of IMS, the re-organisation of medical education played a role in the dismantling of public health from health services. This was mainly due to the separation of medical education from universities and other spheres of knowledge production, which led to the distancing of medicine from the social determinants of health. The distance that the medical profession kept from the rest was reflected in medical education as well. This, in turn, led to the delinking of medicine from other disciplines. For instance, as noted by a respondent, all medical colleges in independent India were removed from the University system and kept as standalone medical institutes without any meaningful interactions with other important disciplines in public health such as sociology, psychology, behavioral sciences, health economics, ethics etc. Hence, a public health approach lost its essence in medical education. He explained this as follows:



“...in independent India over the last 30-40 years, for e.g. my own career, I have seen my medical college, Maulana Azad Medical College, removed from the university system and moved entirely into a standalone medical university, which means basically it’s a training workshop, it lacks the definition of the university. So, doctor will join medical school, have no knowledge of sociology, psychology, behavioural sciences, health economics, ethics. neuro-engineering, maths and statistics which are what they will, or they have to use. So, this standalone training workshop, training model of doctors, they are just mechanics, and paid performers, has led to a severe detriment, because you are not integrated to wider scheme of knowledge or enquiry. And, therefore, we are even more paranoid about anybody else coming into this. And you know last 20-30 years that has become more and more amplified. The doctors somehow think that they deliver in every tower of, knowing everything about everything. Which is obviously not the case (P1).”

An overemphasis on the vertical health programmes in the planning processes of the country was cited as another reason for sidelining the public health functions in the Indian health service system. Although the Bhore Committee suggested a Public Health Cadre, it was systematically dismantled with the shift of focus to developing health programmes instead of a system-based approach and strengthening the health system. One of the respondents explained this further, as follows:

“...these [health programmes] were not created as a general healthcare system. Because the global healthcare of the Bhore Committee was systematically dismantled. After that all became programme after programme after programme. And it was very clear to the health services that these are the programmes. That they could terminate at some point, but there will be no long-term systematic service made available, so that made even the healthcare providers, invent programme after programme—leprosy control, tuberculosis control, blindness control, guinea worm control, mental health programme, the actual cadre at the end, the ASHA workers all the same, they never change. But the name of the programme keeps changing (P1).”

### Lack Of Clarity On What Should Constitute A Public Health Cadre At The Policy Making Level

As already highlighted by experts, the public health policies adopted by the union government from time to time in India have marginalized the public health services in several ways. As Das Gupta *et al*/argued (2010), this has been happening since 1950 with

a systematic “deemphasizing” of public health services in the policy documents. Das Gupta *et al* (2010: 48) further highlighted that the marginalization of public health happened with the amalgamation of medical and public health services that led to the cessation of career advancement for the public health personnel; separation of public health engineering from health services; prioritisation of single focused programmes (like the malaria control programme); and amalgamation of all male grassroots staff. Our respondents also agreed with this view, elaborating it further as impediments created at the policy level by keeping the structures of the health service system obscure “without clearly demarcating the structures of a clinical cadre, a public health cadre and a hospital cadre”. There is also no clarity in the policies about the *complementarity* of various positions, allocation of financial resources, human resource requirements etc. A respondent explained the lack of clarity on PHCs at the policy level as follows:

“The impediments are basically at the level of policy makers, at the decision makers itself, that is one, because unless we have a clear-cut demarcated structure of clinical cadre, public health cadre, hospital cadre, we cannot generate the kind of positions which are required at different levels, whether it is district below or the block level or district level or above district level or regional level or state level. So, these positions which are very much needed, which are complementary to each other’s effort are not there, right? That is one and this lack of clarity of policymakers, I think is resisting the decision of having a Public Health Cadre because in some point in time, see, since health is a state subject, state government would not want to increase the [strength] having more people in the department. They are more probably concerned at having technical people, rather having somebody who would purely take care of public health requirement in the absence of clear-cut departments. I think this is not coming out well, that is one. At policy level, there is a huge challenge because, policy would mean allocation of funds, allocation of resources adequately as per the bifurcated clinical cadre or public and hospital administration cadre (P9).”

As observed by a few respondents, one of the reasons for lack of clarity at the policy level is related to the concern of the non-evidence-based policy making. Part of the problem, as noted by them, lies in the perception that policy makers “know-all” and it is not important that policy makers need to be from medical/public health background, since all problems have managerial solutions, which they are good at. As commented by one of the respondents, the real essence of public health is not adequately comprehended at the policy level due to the lack of evidence seeking and consultations.

“Policy makers are usually the 'know-all' type, they don't require anybody because most often the policy makers are not coming from public health or medical background. They know what is to be done, they don't have to be advised. Therefore, advocacy in regard to the cadre is not strong enough to reach out to the policy makers I am finally I will say the politicians (P10).”

As noted by another respondent, while elaborating on it further, public health as a discipline and a value is less understood at the policy level, even by bureaucrats who lead the Department of Health and Family Welfare.

“I think that even today I would admit to you that if you ask the elites who are in charge of making policy for our country or executing policy for our country, very few of them really truly have a profound understanding of really what public health means or what kinds of capability, capacity or competence, a good health professional brings and how that can contribute to a better policy implementation or better crafting of policy (P15).”

One of the reasons for this lack of clarity at the policy level, as pointed out by the respondents, is the lack of think-tanks and resource organizations on public health-related issues in the states of India, which could have formed a knowledge base by assessing, monitoring and evaluating the health needs and programmes. Another issue is related to the need for bridging the knowledge divide among/between various stakeholders, who produce public health-related knowledge from various standpoints. For instance, as one of the respondents pointed out, there is a huge divide existing in the domain of knowledge production or people in academia engaged in research and implementers. There is no institutional space for bringing this diverse set of knowledge together and hence these lie in the “extra institutional space” without being utilized and converted into policy formulations. The respondents elaborated on these further:

“[There is a] lack of think-tanks and resource organisations dedicated. So, in Chhattisgarh, while some of these initiatives has happened or in Kerala, some of these are happening in Tamil Nadu...because you know, they are backed by their health sector reform programme, but not necessarily a very progressive programme, but, of course, you know, given all its, despite all its problems, they had a unit which was you know, thinking about the kind of changes that the health sector is requiring and they were putting together, you know, very clear recommendations to the government...You only had this, ICMR at the national level and at the state level, we don't have any of those institutions which look at these issues.

So, State Health Resource Centre or the State Health System Resource Centre are in some of the states started to fill this gap, you know, based on the Chhattisgarh model, it was recommended as part of the NRHM. But, you know, none of the states, except a few, are really having a unit which is dedicated to these kinds of issues (P48).”

“One of the challenges I see in the field of public health is that there is a huge divide within the knowledge producers or people in academia doing research and implementers. And, I’ve, I’ve not really seen institutional mechanisms for, for solving this. I mean, there are several great examples of public health leaders in India who have contributed significantly, both to the academic endeavour and to implementation. But, but my observation, and perhaps my knowledge is limited, has been that largely, this has been in the extra institutional space. So, a cadre like this does have appeal (P36)”

Respondents were also of the view that public health has not been adequately prioritized by the ruling class and political parties. Since policy making in countries like India is a political process, it is important that such issues are prioritized by the parties of the ruling regime. However, as noted by a few respondents, ‘public health is not a priority issue in political circles.’ According to them, it is the views of doctors (read clinicians), who are opposed to the Public Health Cadre that appeals to the political circles. One of the respondents explained:

“In a country of democracy, the decisions are...or whatever thing are to be...get implemented, those things decided in the political level would get implemented. So, the opinion makers, the politicians, or those who are in the government and all, for them this [Public Health Cadre] is not a big thing. Or maybe the opinions which they gather from the doctors are not very much in for establishing a Public Health Cadre. That may be one reason, I think (P29).”

Besides, a lower prioritization of public health issues within the health services with limited resources also act as a barrier at the policy making level for the implementation of a dedicated cadre. According to a respondent, what is needed is a political vision and will to implement the cadre with more allocation of resources. He noted:

“So, it is not about the limited resources for the government, but I think the limited resources that they want to actually allot to the healthcare sector. So, that is also...So, the first thing is both the central and the state governments, irrespective of different kind of political parties and

power, they all are in agreement that they want to actually you know conduct the healthcare service delivery within the limited kind of resources. They do not want to actually increase the budget and all. So, there is some kind of political vision for all these parties are lacking (P13)”

### Privatization of healthcare as a policy undermines public health values and principles

Another impediment is related to the structure and organization of the present system, which gives more prominence to curative approach than preventive and promotive approach and does not imagine a public health system. Health services have never been imagined as a public good in India and the private sector always played a major role in healthcare delivery even before the 1990s, which witnessed a widespread privatization of health services, with the introduction of health sector reform policies. Hence, it could be argued that India, politically, did not imagine creating a public health system, but a financially motivated private health system. As a result, the significance of preventive and promotive health lost focus in the discourses of health and the idea of creating a public health system with a Public Health Cadre to run it did not come centre-stage. One of the key informants, who worked closely with the health system stated:

“I think both medical education and the provisioning of health services have been overwhelmingly privatized. There is no attempt for the last 50 years to have a valid public health system, which will provide the entire range of care. OK. So, the system of care has been built in where? This is I think [name of an expert], who was the secretary to Bhore Committee, who actually drafted it, physically. So, 1952, when he gives the lecture, I think about the British Medical Association, he points out that, you know, instead of primary healthcare, we have confused with primary level of healthcare, which is a complete deviation from the intent of the programme, primary care is not primary level of healthcare. And, independent India we have consciously or deliberately confused to, so primary level of healthcare is, and therefore who decide, what is primary level, so we confused the primary, secondary and tertiary models, with primary level, secondary level care and tertiary level care. Healthcare is healthcare, preventive care is different from promotive care, and treatment is treatment, and you cannot confuse these to a logical construct. I hope to derive sense, so but we come to this, this idea of the differences in the way by public health has not evolved. For e.g., you see the place like Delhi, I grew up in Delhi, so from my childhood, almost till now, there are only two public hospitals in the whole of South Delhi, there is no other public health hospital, OK. For, whether you have a bruise on your knee from falling of a cycle when you are a child, or you need a head surgery or gamma knife surgery, when you are older, it's the same two

hospitals, the populations have expanded, there are municipal hospitals scattered over south Delhi, they all old little bit, nobody goes to them, but you have five star hospitals in every locality, these occupy two kilometres of the main road, you know, so there is an urge, so that the moment people move (P2).”

Some respondents were of the view that privatisation of healthcare services as part of reform projects led to the neglect of the need to strengthen public health services. The apathy that was created towards the implementation of the Public Health Cadre should be viewed as part of this general neglect. To quote a respondent:

“In my mind, that is just one of the manifestations of the general neglect of healthcare. It’s not specifically public health alone is neglected. All of healthcare is neglected in most states, is largely left to the private sector. And, when healthcare is left to the private sector, public health will not be high up on the priority list of private sector healthcare. Because it doesn’t pay, or give returns directly, like clinical care does (P26).”

The role that international financial institutions like the World Bank and the IMF (which fund some of the health sector reform programmes and their nominees in private consulting organizations) play in the health policy decisions as pointed out by a few respondents are the impediments to the implementation of the cadre. These organisations view public institutions as “inefficient” and strongly advocate private-public participation or privatisation of the health sector. As pointed out by the respondents, the bureaucrats depend heavily on these consulting firms to assess programmes and make recommendations. With a knowledge base that favours privatisation, such agencies do not support the idea of a Public Health Cadre that will strengthen public health. One of the respondents elaborated on this viewpoint:

“BCG is this international consultancy company, I don't know often the name, it's a US... BCG is the name, not the vaccine, which is a huge consultancy in Rajasthan and north-east because it is very easy for a bureaucrat to just pay crores and crores to them, have an open online tender, and this improves your health system in Rajasthan or where...Then they employ ground-level workers, then they involve...employ all these MPH guys who go from PHC to PHC, CHC to CHC and get all the data, the questionnaire and all. So, why would they like to lose the meat, because the bulk of the money will go to BCG, and these are the guys who are paid say 100 per form and all that and the consultancy firms have been around now for the last 15 years, and I don't see Indian health system going anywhere positive (P17). “

Further, the respondents were of the view that there is no transparency in the decision-making processes with no proper consultative approach with all the stakeholders in the sector. Hence, there is little scope for representing diverse views in the decision-making process. The decision making, on the other hand, is over-represented by the private sector players and the consultancy firms which cannot be held accountable for what they suggest. This non-consultative decision making dominated by private players, according to a few respondents, has played a significant role in the weakening of the public health system. A respondent elaborated on how key decisions are made in the health sector:

“So, I think that there is a group of people who benefit hugely from privatized kind of healthcare model, both internationally as well as nationally as well as at the state level. And, the, the people who benefit, the, they are the ones who are, kind of, taken over all the spaces in terms the decision-making spaces, most of the decisions are behind closed doors, it’s not transparent, it’s not consultative, definitely it’s not diverse or representative and the, the, it’s, the private sector that is the large corporate sector, the multinationals—they I think are over-represented on most of the decision making and I think, you know, along with the strengthening the private sector, there is also active breakdown of the public systems. you have like, people, like...[name], some cardiologist and...[name], sitting and making, you know, the decisions for the entire country, like what is the locus standi, like what is their experience, who have they consulted? I think those are all important things and people are not held accountable (P28).”

### Resistance By The Clinical Lobby To A Public Health Cadre

There is a common agreement emerging from the respondents that one of the significant barriers to the establishment of a dedicated Public Health Cadre is the opposition from the powerful clinical lobby. The clinical lobby is against a Public Health Cadre for the fear of not getting significant positions in the cadre, if non-clinicians are included. One of the respondents explained it:

“Well, I think at the highest level there are, I mean the doctors themselves have been campaigning against it [PHC], through their associations and so on, I believe. I think somehow, they are against it because they will lose a number of positions, the heads with the particular cadre, also called the director of health services, or DG health services, which are promotional opportunities for the doctors, who are in the health services. So currently, the state as go as if I am clinician, I have been a gynaecologist somewhere,

now I want to become the director, by seniority I will become the director, I will also get more power, and currently the department is led by people who are in such powerful positions, and they don't want to let their positions go, and feed into their fear there is a systematic campaign within the clinicians who say that public health people are scheming something, once they come you will be out of the power, you will no longer become DHO, can never become director (P1)."

As noted by the respondents, the clinical lobby being close to the powers that be, has effectively resisted the steps taken by the government for the establishment of a cadre. For instance, as already discussed, the Halagi Committee developed modalities for a cadre in Karnataka and the report was submitted to the Government. However, it has not materialized as yet. One of the key informants, who worked very closely with the committee and the subsequent committees for implementing their recommendations, explained how the proposal was sabotaged by the strong medical lobby in the state:

"There is some history in Karnataka, whenever people misuse their positions of power that will have long lasting effect on the health people as such. Karnataka is the case study for that. There were people who would go to Calcutta, do the diploma in public health and come back, even without seniority, if they are six years in the department, go do your DPH in Calcutta, come back, then you will become DHO, District Health Officer, then you end up becoming JD and you become director. You know when people started superseding seniors it was fine still to an extent, but they went to an extent of troubling everybody else and then that's when they went to the Chief Minister, and they got the Public Health Cadre scrapped (P4). "

He further explained that the proposal for inclusion of a non-medical professional in the cadre, although a major recommendation of the Halagi Committee, was not accepted by the government, which he attributed to the prevailing "strong mental blocks", primarily due to the popular imagination that tends to equate healthcare to modern allopathic medicine. Hence, public health professionals are looked down upon in the system and they often work as contract employees without being sufficiently absorbed into the health system. He explained:

"The entry of non-medical professionals is something still which is not accepted as a matter of policy by governments. There are some mental blocks. Because they come with an MPH which is good qualification, master qualification, so they are people best qualified to handle these positions but get them into Public Health Cadre seems to be



some reluctance, as a part of the governments at policy making level. I think that still has not overcome. That is the main reason. There are public health professionals working in government but most of them are in contractual jobs, not as the members of the health services (P6)."

The present system hence protects the interests of the medical/clinical lobby. Also, as noted by one of the key informants, there is a "systematic" campaign going on among the clinicians in the health services that once a Public Health Cadre is established, they will be out of power, with their avenues of promotion to powerful positions such as DHO or Director getting blocked. A respondent highlighted the subtle campaign that is spreading among clinical practitioners about the Public Health Cadre:

"The clinicians say that, at the end of this thing, Director of Health Services will always then become a public health person. So, there's no opportunity for the gynaecologist or the orthopaedic surgeon etc. to become a Director of Health Services, so it is discrimination (P42)."

However, in a state like Karnataka, the committee that was set up to implement the cadre [the Halagi Committee] clearly noted in its recommendations that there would not be any reduction in the positions of clinicians and in fact their number would be more than non-clinicians. Although the clinicians were aware of this, they systematically evoked confusion and apprehensions among the clinicians that they would be out of positions of power. He further noted:

"The Halagi Committee report gives equal number of, not equal, more number of positions to the clinical cadre and public health cadre has a relatively less, because there are varied functions that have been segregated. The Halagi Committee report said that nobody will supercede the seniority, everybody will come from the seniority list, but person who gets the position only because they have the seniority and public health qualification and experience. We have addressed all these, but people don't want to focus on that, because their logic of misinformation is completely around fear, around the phobia that you know this people will snatch away your power."

A respondent from Kerala also shared the same concern that the clinical lobby, which is highly influential among policy makers, "does not want" a Public Health Cadre in the state. It is because doctors who are at present in the health services may need to shift from clinical to administrative services, which they think would reduce their promotional avenues.

“The major impediment is the doctors itself in the system, what I feel, because many of them, they don't want to change their position. So, if we are going to implement the Public Health Cadre system some of the doctors who are occupying the higher administrative cadre post in the system, they will have to go to either to general cadre or the specialty cadre. So, they don't want to change their position and the government has to take some decisions because they have to be protected. So, when the Public Health Cadre comes, there will be two directors—one, the medical director and the second is the public health director. So that type of change is also not good for some people who are waiting for promotion to a particular position (P11).”

Another respondent from Kerala recollected the boycott of medical faculty when the then Finance Minister of India, Dr. Manmohan Singh, laid the foundation stone for the Achutha Menon Centre for Health Science Studies at the Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum. As recollected by the respondent, a prominent person from the medical fraternity in Kerala publicly commented that “public health is a waste”. He noted:

“They may not have taken a formal stand against this...against that. But informally they are against public health. Because, in fact, when Achutha Menon Centre [for public health] in Sree Chitra [hospital, Trivandrum], the foundation stone was laid by then Finance Minister, Manmohan Singh who later became Prime Minister, and all the medical faculty in Sree Chitra boycotted the function. They said public health is a waste, and we don't want to waste money on public health, and institution like Achutha Menon Centre. So, in fact, he is a very famous person in India, in the medical fraternity, and he was the director at that time. And, all faculty [members] in Sree Chitra boycotted, saying that it is a waste. So, you can imagine the attitude of medical fraternity towards public health (P43).”

Such views of the clinicians become dominant in the policy and political spheres due to their close contacts with major politicians “as their clinicians” [read private]. A respondent, while sharing his experience, noted that such persons have an easy access to bureaucrats and politicians and get things done in their favour, while public health personnel need to struggle to meet the bureaucrats even to discuss ‘urgent issues’ like ‘release of grants’. He elaborated his experience:

“The public health people do not go with the politicians or even administrators because they don't know any clinical work. Now, this, if, if a politician, MLA or, or a Secretary is sick, he has to or she has to reach a

clinician...Therefore, we [public health personnel] here, have no power to, to you know bring out changes through lobbying or even through discussion and all. I will give you one example which I have faced couple of times. Since, Pondicherry was very far off from Delhi, you know, and at one time, the grants that we were getting for this National Teaching Training Centres, the acronym is NTTC was suddenly stopped. And the person the Director, the Additional Director General of Health Services was a psychiatrist, he knew us well, he knew we worked there etc., I went to the ministry to find out why, they said look your own persons are not aware, that was one thing. Second was, therefore, you go and meet the Joint Secretary, so I said okay, I'll go and meet the Joint Secretary. So, I took an appointment to meet her. Her secretary said that you come back at 5:30, she will be free, she will be...I agreed to that. So, I went there at 5:30 and sat there and perhaps due to her tight schedule was very busy. There in walked in an AIIMS professor, professor of paediatrics or something. He said, hello, what are you doing here? I am sitting on a bench there and waiting, he walked in, discussed and all that, and came back. So, I have, you know, it has been etched in my mind and it is true also. I have to get an appointment for everything, and it was not very easy, very difficult, whereas it was easy for them. So, I have seen this...that is there. So, this is one important, therefore, to summarise their lobbying capacity was obvious (P39)."

### **Graded hierarchies and binaries within the health system act as barriers**

Several respondents have pointed out the existing hierarchies among and between bureaucrats and the clinical and public health practitioners in India which, according to them, often act as barriers to the establishment of a Public Health Cadre. The present organisation of health services in the Indian states has a clear division of core and periphery, wherein the bureaucrats and clinicians are the core and the public health personnel and non-medical personnel are the periphery. There are also conflicting binaries based on power hierarchies in the system such as bureaucrats and non-bureaucrats, specialists and general practitioners, Allopathic and AYUSH doctors, clinical and non-clinical and permanent and contract staff. As noted by the respondents, those who occupy higher positions of power and hierarchies endeavour to keep these divisions alive to ascertain their current positions and the promotional avenues and oppose a Public Health Cadre, since it might flatten these hierarchies and binaries with defined structures and functions at all levels. Views from the respondents reflected the barriers created to a Public Health Cadre due to power hierarchies and binaries between bureaucrats and technocrats [mainly clinicians] of the health delivery system:

“So, the basic impediment I feel could be that nobody wants to lose his supremacy. You see, at the moment when the bureaucrats running the show everywhere, I have nothing against the Indian Administrative Services, they have run the country for 75 years fair enough. But you know, nobody probably wants that any other cadre should come up and build up...in fact during Covid pandemic it [a view] came that the doctors should be restricted to doing their clinical practice and their medicines and the theory that they propound many places and they tell is that you know there is a shortage of doctors, you already have less doctors, why give doctors administrative positions in an era where we doctors are today looking at specialization and super-specialization, they feel may be an orthopaedic surgeon is best doing orthopaedic even up to the age of 60, before he retires, why should he move, put in an administrative position? (P17).”

“IAS will be...definitely they will not like this. Because their power will be gone, at least in the health sector (P43).”

“It could be that, you know, right now, most of the decision making at the state level, at least and even of course, the national level, the bureaucrats are, are very powerful too. And they really don’t want people with technical knowledge getting upper hand. That is what I feel. I’ve always felt that (P44).”

Respondents also have reflected on the power hierarchies among medical practitioners. As highlighted by them, those who reach the top management positions of the health service system are from a hierarchically configured group of specialists, who may not have any knowledge of public health, since they are not trained in that field, and are often disconnected from ground realities. As observed by a few respondents, teaching specialists occupy the top-most positions in the medical/clinical hierarchy, followed by specialists in teaching hospitals, cardiologists, and neurologists/neurosurgeons and so on. One of the respondents elaborated on the hierarchy based on specializations that determines the job hierarchy of the health service system for clinicians.

“The simple political economy issue, that is, there is a hierarchy of power even among the physicians. So, at the top are the teaching specialist, the specialist of the teaching hospitals, super specialist actually, so you are cardiologist, you are neurologist, neurosurgeons, they are the top in the requirement. Why? Because they are the people needed by you and me and we are the one who take decisions. So, they...We are the aced fellows who have never seen the work of an ANM, the

pulmonologist sitting in AIIMS who has never handled anything on public health will lecture to the country about to how to handle Covid. I mean that was the, that's the way the power dynamics work. So, at the top of the hierarchy are these guys and even within the teaching hospitals you will find hierarchy again; they are on the top, so they ask community medicine, gynaecology and lowest is the mental health. Most of the secretaries have no idea what public health is and to them health is what these specialists in the medical college say (P12)."

Further, as highlighted by the respondents, streams like community health and social medicine occupy the lowest positions in the hierarchy right from the stage of medical education and are the reasons for a lower prioritization of the Public Health Cadre in health service delivery. One of the respondents noted how these streams were looked down upon in the medical fraternity:

"...public health is, you know, when we studied medicine, we go through...it used to be in the third year previously and perhaps it's some...when I was there, there was a pre-medical one year. So, this is...five-and-a-half-year course plus one year internship, so six and a half years medicine. Now, it is reduced. So, where exactly it comes into course I forget, but something called...it was called community health and the textbook was Park & Park. And, in the recent past I have heard people say that Park & Park is very good book, I don't know. But when we were medical students, this was a rite of passage, something that you had to get through. (Both laugh) It was called social and preventive medicine. That was the name of the subject. And, the vast majority of students hated the subject. It used to be called, in Tamil, kuchi kuchi subject, which means insect insect subject. Yeah, yes. How to control mosquitoes? It was of very little interest to medical doctors then. And, you know, those who followed social and preventive medicine as on a postgraduate basis, at that time, it may have changed now, but at that time they were seen as the losers in the batch. The ones who could not make it to being the real...what medicine really takes, that was the cowboys treating patients one-on-one (P26)."

Other public health courses [read MPH], which are not part of the mainstream medical education, are not considered as a qualifying degree by the medical fraternity and these courses are not recognized by the Medical Council of India (MCI) either. Respondents noted that there is a general apathy towards MPH courses since these training programmes accommodate candidates not only from all systems of medicines, but also related fields like nursing, dentistry, nutrition, social work, sociology, management etc.

Hence, the clinical lobby opposes the entry of MPH holders, who complete their training from a non-medical institution. They often end up as contract staff in the system. A respondent explained it further:

“When it comes to getting non-medical people involved then even a medically trained Public Health specialist will also gang up. They also do not want the non-medical people to come in. They will fight for their place, within the hierarchy opposite to their people who are medically qualified and not trained in public health. When it comes to other people trained in public health, but who are not medically qualified, these people also try to shut the door on there. Many people, with different non-medical specializations such as nutrition, programme management, evaluation etc. work in the system. Such people are usually invited only on contractual appointments or certain assigned tasks as a part of some government projects, not as the part of regular stream (P3).”

Another respondent reflected on how his MPH degree from a medical institution helped him find a position in the Tamil Nadu Public Health Cadre. He also explained what it meant to possess a public health degree from a non-medical institution, since powerful bodies like IMA do not recognize it:

“I think when I did my MPH, maybe I took a very different route, but that was also becoming a problem, like...I was able to join Tamil Nadu Public Health Service because I studied only in...I studied in Sree Chitra [a medical institution based in Trivandrum, Kerala]. If I had studied in Tata Institute of Social Science, I would not be able to join the Tamil Nadu Public Health Cadre because it is not recognised by the Medical Council of India (P32).”

There are further binaries among clinicians based on their system of medical practice. For instance, allopathic medical practitioners oppose the entry of medical practitioners from the AYUSH stream in the Public Health Cadre. In many states, most of the AYUSH doctors are working in contractual positions, which further adds one more layer to this binary as permanent [read core] and contract workers [read periphery]. One of the respondents explained these layered binaries:

“Formally, they are not included in PHC because there are no positions of AYUSH. They sent one batch of AYUSH, 10 doctors because there are two types of AYUSH doctors—one is standalone which is appointed by the Directorate of AYUSH and there are whole-operated AYUSH in which NHM

have contractual positions of AYUSH doctors at PHCs and CHCs. But, still the clinic, they have not been included in the Public Health Cadre (P21)."

### Systemic And Administrative Barriers

Experts also have pointed to the systemic and administrative barriers that are part of the public healthcare delivery system, which could interfere with the structure and functioning of the Public Health Cadre. As several studies have already pointed out, healthcare delivery in India is constrained by lack of sufficient infrastructure and diagnostic facilities, non-availability of qualified medical personnel, corruption, poor health management system, absenteeism of staff and apathy of service providers (Acharya 2010, Hazarika 2013, Jayswal 2015, Motkuri et al. 2017, Saikia 2018, George 2019). Hence, it is possible that a Public Health Cadre can also face these systemic and administrative challenges if these were not addressed. One of the key informants, who served in the health service system, noted:

"You have built a hospital somewhere, like it happened in Delhi, Janakpuri area, they build us super specialty hospitals, the building is unused for 10 years because they don't have the rules for recruiting specialists. So how do you build a cadre, you have to plan a service (P2)."

It was also noted by a few respondents who worked in the public health system that the existing public health services in India are weighed down by issues of nepotism, favouritism and caste-based discrimination. A respondent explained how he was denied promotion in the health service:

"He [referring to a person who got promotion prior to the respondent] belonged to the community of health minister, which is a major [dominant] community in Karnataka. Because of that he overtook me even though I was senior to him. There is one doctor called [name of the person], who is senior to me in experience, in DPH he is junior; he belongs to [name of a dominant caste in Karnataka]. He started pressurizing the Chief Minister who is also from the same caste. [name of the chief minister] should have not done that and only 11 months they dragged my director post. I was kept in-charge only for 11 months, although I am qualified. This fellow was pressurizing the Chief Minister to make him the director, and only five days remaining, he was promoted. What an injustice in government! (P37)."

Rural health services are a vital part of the health service delivery system. India in general, including the Southern states, faces a significant shortage of healthcare

infrastructure (see Tables 1 & 3-9). A lower incentivization of the rural services, as noted by a few respondents, can in the long-run act as a barrier to the successful implementation of a Public Health Cadre. Specifically, lower wages/honorariums and the precarious nature of work in the frontline services could weaken the essential public health functions such as immunization, nutrition, maternal and child care, surveillance and other frontline interventions of the national disease control/elimination programmes. According to them, it is important that rural and frontline health services are more attractive with better salaries and facilities. A respondent, citing examples from Karnataka, explained how the unattractive and less incentivized frontline service would be an impediment, as follows:

“Karnataka has almost 60 or 70 medical colleges. Mysore itself has got five medical colleges. Why should be that a district Chamarajnagar, within Mysore, within couple of hours of Mysore, two hours I think, 60 or 70 minutes by train not have a doctor when you have five medical colleges producing 1000 doctors a year. I mean it’s not explicable, unless you created a system where doctors are simply unwilling to work 20 hours drive away from here, also from there fly off to London to work that. So there has to be some, this idea of the government that healthcare, budgets can be kept at the low one per cent or 1.3 per cent of the GDP is something cheap, we are a third world country, we cannot afford, we have to live in permanent hostility, we have to take the lowest possible salary structure for auxiliary health workers. Simply, it doesn't make sense, so to view healthcare as always in a crisis mode is what a problem is (P2).”

Another respondent shed light on the precarious nature of work in the frontline health service delivery that could potentially affect the public health services:

“One I think is their vision actually is more towards outsourcing and contractual kind of jobs and with limited resources...Covid time they hired a lot of paramedical staff and immediately they dispensed with them as well. As and when you need them, you actually hire them and then also you know remove them because increase in terms of the incentives and other things will be peanuts. So, you actually like Anganwadi workers and other kind of staff, you keep increasing from you know you say 5000 to 5600-6000, that is the model through which the state government think that they can manage healthcare delivery (P13).”

Respondents also highlighted administrative issues pertaining to postings, promotions, transfers and other service rules in the existing system that act as impediments to the realisation of a Public Health Cadre. One of the common comments made by the



respondents relates to the appointment of bureaucrats to the health department from other departments and their frequent transfers. As noted by the respondents, a bureaucrat, who is appointed from another department, takes considerable time to understand what is public health and the rationale behind the demand for a Public Health Cadre. By the time the person develops an understanding of public health, she/he will be transferred to another department and a new person comes in. This cycle goes on. The respondent explained further:

“So, what happens is, you know, they are all in a sudden they are coming from an education department as Secretary Education to become Secretary Health. So, you know, all the critical decision that they are taking in the first and second year, where their understanding of health may be very limited. By the time they are they develop their full understanding on how this department and how this entire functional is going to you know, actually run, by that time they will be transferred to some other department. So, this issue of posting and transfer and also the bureaucratic driven administration is also causing a major issue for development of the critical, crucial, you know, kind of decisions in the health (P48).”

To sum up, our respondents have highlighted the impediments to the creation of a Public Health Cadre. This ranged from not really understanding what public health is, to the vested interests of clinicians, consultants, international funding institutions and the private sector in healthcare. It was also highlighted that the corporate sector in medical care is increasingly setting the agenda for public health.

## **ON THE NATURE, STRUCTURE AND COMPOSITION OF THE CADRE**

This section examines the views expressed by the respondents on the possible structure, functions, composition and the training requirements for the implementation of a Public Health Cadre. The major themes emerging from the interviews include the nature of the cadre, primarily related to whether central or state cadre, clinical and non-clinical cadres, functions and coverage of the cadre, qualifications required for recruitment to the cadre, training requirements of the cadre and the debate on the additional financial implication for the cadre.

### **Nature And Structure Of The Cadre**

The views expressed by most of the respondents reflected the complexity of bringing together the present organization of the health service system under a common cadre

with the presence of centrally sponsored schemes [like the disease control programme and medical education] (directly under the Ministry of Health and Family Welfare, Government of India) and the state delivery system. This has opened up a discussion on whether there should be a unified Public Health Cadre, amalgamating these two services or separate central and state level cadres. A general agreement among the key informants was that there is need for differentiating and clarifying the roles under central and state governments to begin with before bringing these functions under a Public Health Cadre eventually. A few respondents, however, have underscored the need for separating the functions under the union and state governments. For instance, as suggested by a respondent, functions like medical education and training and the related institutions like the medical council, nursing council and medical commission and other macro level policy making bodies could come/remain under the union government, whereas the implementation of programmes, recruitment and management of the cadre at the state level could be functions of the state level cadre. A respondent elaborated this further:

“There will always be a tension between states and the centre unless some of the roles are clearly specified. For example, you have medical council, nursing council and now the medical commission, which sets the standards of medical education, training and under these headings we can look at what public health qualification and what skills are required for various health professionals. That is clearly the role at the central level. Then, implementation, promotions who goes where, etc is decided at the state level. So, when we look at Public Health Cadre, we need to clearly specify what will be role of agencies at central level, and what will be role of the state government. And what will be recruitment procedures that will essentially be done at the state level but some guidelines from central level with flexibility to the states to go ahead and do it (P34).”

Respondents also highlighted the need for differentiating the nature of duties under the proposed Public Health Cadre. These include the management of centrally sponsored disease control programmes, management and control of research institutions for public health and hospital and frontline management—all are at present dominated by clinicians. One of the respondents explained the possible nature of functions which could be brought under the Public Health Cadre:

“...One of course the large disease control programme, we have that TB, HIV, Malaria, many other national programmes, the centrally sponsored schemes, central [government] gives money to the states. And also, the state has their own public health programmes sometimes you know, so they I think should be manned by public health professionals, because

they know, what is preventive health, what is promotional health, and how can track the epidemic, what type of data can be created, all these is the work of public health professionals. So, they are the best. Second is the institutions, research institutions, which are under the control of government. of India and the state government. I think they should be manned by public health professionals. No point in posting a clinician as the director of an institute which deals with epidemiology, or dealing with tracking the epidemics, or mathematical modelling, things like that, these are the domain of public health professionals. So, it's better that most of the research institutions, not the clinical ones, but they are dealing with public health, like family welfare should be under a public health professional. Some of these positions also will go to them, in the government of India level, we have the NICD, National Institute of Communicable Diseases. That should be essentially a public health professional. Third is hospital administration, for e.g. you find a superintendent of a hospital, 90 per cent of what he does is non-clinical because he has to run the hospital, he has to manage the hospital services, recruitments, HR planning, and then buildings, all these, buying of equipment, these all are absolutely non-medical type of work, so for which, I think you need a generalist, not somebody from state health service or state administrative service, but somebody with public health background. I think they will be best fit for a hospital superintendent for a district hospital or a state hospital, I think these are again the positions which should be manned by public health professionals. But I don't think you should take them down to the level of a sub-centre or a primary health centre, where the requirement is more for clinical work, I think that's where essentially, you require nurses, you require doctors, you required ANMs and that type of people. So, I think this is how we have to first of all divide between the medical, clinical and non-clinical work. What done in the government and give the non-clinical work to public health professionals (P1)."

Another view that emerged was that there is need to demarcate and separate the clinical and non-clinical functions of the cadre as is being practiced in the state of Tamil Nadu. As per this structure, all non-clinical functions come under the Public Health Cadre. Following the success story of Tamil Nadu, which has a separate medical and non-medical cadre, a few respondents argued that this model is the best to begin with. According to them, separation of medical and non-medical cadres could reduce the conflicts between the two in terms of recruitment, duties and avenues of promotion, which are the major issues of concern for clinical practitioners. An expert suggested:

“If you really looked at the experience of Tamil Nadu, what suggested having a special cadre is very helpful, with people dedicated not only to deliver on the public health functions of disease prevention, early detection, control, which traditionally associated with the word public health, in a limited manner, no doubt, but also looking at health system's organization and management, that district and sub district level, that seemed to work, so that particular example have been cited over and over again as something that it could be followed by others states. It has been attempted in a half-hearted manner in other places like Maharashtra and West Bengal with some requirements of people having some degree level of public health training for certain provisions, but no regular cadre was actually started. Wherever attempts were made by health secretaries and others who felt it could actually be a good idea that was time need because there was total resistance from the medical established, medical cadres who felt that others will be taking away their provisions, power, and privileges. So that was the major challenge (P3)”

Another respondent elaborated on the advantage of establishing separate cadres similar to Tamil Nadu for increasing the promotional avenues of both clinical and non-clinical staff. As viewed by the respondent, such a situation would help make the system work with *complementarity* without competition for positions between clinicians and non-clinicians and other similar binaries elaborated elsewhere in the report. To quote the respondent:

“I think the structure can be similar to what is available in Tamil Nadu. There has to be a Public Health Cadre, and, you know, curative cadre...curative medicine care like medical health care, you know. Tamil Nadu has that, you know. So, if you want to be in that stream, you want to treat people and you have all become a doctor etc, that is... there's no problem. And, they can be given, you know, parallel promotion or equivalent promotion, no problem. But the public health should be given...there should be a public health director at the top level, state level, and at the district level, you know, directors, so that the public health system should work parallelly. And then a curative health system can also work parallelly. They don't need to be, you know, competing each other. They can be complementary (P43).”

However, it should be highlighted that not all respondents, especially those from the academic community, have supported the Tamil Nadu model of a Public Health Cadre. As noted by them, appointing clinicians in the Public Health Cadre may not work in the long-term, since they always aspire to be in clinical work and can also resort to private

practice while being in the Public Health Cadre. Hence, the cadre could face higher levels of attrition and absenteeism of staff, which are already a major problem in the present public health delivery system. Another issue related to the appointment of clinicians in the cadre was their biomedical orientation [curative approach], which is against the public health values and principles. The respondents elaborated on these issues further:

"It all depends on how the cadre is going to be imagined and designed. I think that's very important because if it is the way, you know the way it's been put together let's say in Tamil Nadu and so at the moment which is essentially assigning some doctors to public health functions and then calling it a cadre that doesn't really, I don't think that's the best way to go about it because there's always the aspiration to get into clinical work. And not only for their own professional development and interest, their own interest as well, but also you know it facilitates other things like setting up private practice and so on and so forth. So, I think the way that the Public Health Cadre eventually will get implemented is very important. And then of course there are generic problems with the health systems which they are, if they are not addressed, I don't see why having, just having a Public Health Cadre in and of itself is going to... to help address those problems (P6)."

"I think, the doctors are least qualified to design public health system and I think that's the mistake we are making, because the doctors will only focus on the curative model and even that curative model is not, it doesn't come from a place of, you know, looking at inclusion or comprehensive care. Again, it's a, it's a very economic kind of a model, so definitely, I think, the planning for anything should start from the community (P28)."

As suggested by a few respondents, what is needed is a fundamental reorganization with a broad-based approach to design a structure for the Public Health Cadre. As noted by them, a Public Health Cadre needs to be disassociated from the existing health department, since it requires the convergence of sub-sectors, which is not possible, given the existing system. Respondents also referred to the recommendations of the committees appointed to study the implementation of a Public Health Cadre to substantiate their views that the cadre needed to be structurally different from the existing central and state level structures. To quote a respondent:

"...the time I was in the ministry, for the first time we thought public health should be thrown open to non-medical professionals also and that should be getting priority. I followed up on that with the Planning Commission, I

think in the 12th Plan, they formed a Working Group on Health, chaired by the [name of the person], from the Public Health Foundation of India. They recommended that each state and government of India also should constitute a separate cadre for public health. That should not be merged with central and state service people, which all are basically meant for clinical work (P 49)."

According to them, the proposed cadre, hence, should be disconnected from the existing healthcare system and should be more broad-based, starting from the Mandal level (block level) to the state level with the involvement of all the related sectors of public health. Further, the cadre, apart from the medical staff, should include personnel from all the related streams and sub-sectors that include social workers, social scientists, AYUSH practitioners, veterinary doctors, local administrative officers, and community health workers. In short, the structure of a Public Health Cadre is to be conceived as a multi-sectoral and multi-departmental body at the block, district and the state level. One of the respondents explained it further:

"I think, the model is, should we actually drastically deviate from what is existing in present case for Public Health Cadre. Given a chance, I would say, you know, dealing Public Health Cadre from the government, whatever health, healthcare department currently, established from, from a district level to state level to the mandal level; a public health unit which comprises of a veterinary doctor or social worker, and a social scientists and AYUSH and any other doctor or, you know, committee healthcare workers, who are trained in making, working with communities. I think it has to be disassociated from health department where, because I see the role of Public Health Cadre when you frame it in the larger developmental context, it should be around which all the sectors converge. So, for me, I think public health centre, veterinaries should be there, a skill-building person should be, I think you should actually disassociate it from the healthcare system. And, then try come up with some sort of a, multi-sectoral, multi-departmental body at mandal level, state, district level to state level, sort of a thing (P35)."

Similarly, as suggested by another respondent, a Public Health Cadre needs to possess a multi-disciplinary and multi-dimensional framework and structure:

"People from different walks of life who all play a role in determining the health of the population. So, I would see nurses, I would see social scientist, I would see a, so many people, I mean, even a village administrative officer. You know, there are so many guys who actually play

a role in determining what the health of the people is. So, I would definitely say that a Public Health Cadre must be multi-disciplinary and multi-dimensional (P24).”

Respondents also reflected on the need for clearly defining and demarcating the sub-sectors and departments, in both rural and urban areas which should be part of the cadre structure. A respondent has referred to the confusion created in view of the amalgamation of the rural and urban health service under the National Health Mission, without clearly defining and demarcating the roles and jurisdiction of departments involved:

“When the National Urban Health Mission was formed, currently we call it the health mission amalgamating both rural and urban health missions. But the problem that a CMHO is facing is that, you know, the urban health systems...whether the urban cadre are not actually liable to report to the district CMHO. So, the problem is that they are going for grant-in-aid to the urban department. So, unless and until a clear definition of how the various development sector departments are going to see, work in a unified manner within a district geography, including both urban and rural, with clear definition of, you know, how the urban officials are accountable to the rural and vice versa (P48).”

Respondents further illustrated the successful outcomes of the multi-sectoral and departmental framework of the health delivery system in managing the context-specific issues operational at the ground level. For instance, the successful experience of the state of West Bengal (WB) was pointed out by one of the respondents involved in the policy making processes. According to him, the strategy of ‘Panchayat-based selection’ of health service personnel, including doctors and ANMs in WB has helped to ensure the presence of health service personnel with a better understanding of the local contexts at the grassroots level. He explained:

“In West Bengal, how they have started the panchayat, the doctors, you know, those kinds of initiative and panchayat-based selection of local people. So, that is also something important about this cadre, I think. Because unless and until you select people from a specific locality, if you put someone far away, 200 kilometres far from that area to come and stay in that area, quite often that’s going to be difficult. So, the West Bengal model of, you know, the panchayat, council and gram sabha selecting the ANM, you know, kind of, prospective ANMs of their area and putting them into training and taking them back into their own locality and placing them in the, you know, specific health centre that they are having (P48).”

Another respondent explained how integration of functions starting from the sub-centre level is vital to the success of a public health cadre, especially when it comes to dealing with issues at the community and population levels. She cautioned that a Public Health Cadre, “parachuted” to the system might be disconnected from ground realities:

“A Public Health Cadre, if parachuted from somewhere directly, I feel would not know some of the community level health issues or even some of the clinical issues or what are the problems and health issues faced and so on. The understanding that just having a certain public health degree would place you in a public health post or you know, public health is only related to a bit of technical work was way too naïve for some of us to think, because you know, I dealt with a lot of administrative aspects dealing with different departments, a lot of financial aspects, right from accounting, banking and so on, which me and many others who joined like me do not get for. In states like AP and Telangana people who were actually looking at PH came from lot of groundwork, where they work for many years in both PHCs and CHCs and so on. And they did have the clinical understanding also which some of us, I mean, you know, I feel that if Public Health Cadre if parachuted directly to the district level or state level might not understand very well. So, the disadvantages could be that they are bit disconnected from what is actually happening at the sub-centre, PHC or let's say community (P33)”

Further, it was pointed out that the cadre should be more pluralistic and inclusive, especially at the grassroots level, since as, studies have already showed (George 2019), access could be affected by caste and other identity-based discrimination. As pointed out by a few respondents, the healthcare delivery system needs to be sensitive to the grassroots level issues of identity-based discrimination in the healthcare delivery system and it is important to ensure that personnel from local areas and discriminated social groups are included in the cadre for a discrimination-free delivery of services. A respondent elaborated on this further:

“Ideally speaking, you know, going by Alma-Ata Declaration and subsequent discussions there should be more diverse and pluralistic kind of personnel should be involved in this Public Health Cadre kind of a thing. Of course, there will be you know a lot of resistance. The moment you talk about it, the entire medical fraternity will be against it. ...The only way forward, whether you go through the Antia model- N. H. Antia<sup>1</sup> which you know was a successful experiment at the ground level trying to recruit more from the local communities and also include diverse caste groups,



Dalits and Adivasis and other caste groups, identify some of them so that access would be much more (P13)."

## On The Composition Of The Cadre

The possible composition of the cadre in a multi-dimensional and multi-sectoral framework and structure is elaborated further by the respondents. It has emerged very prominently, especially from the policy actors and academics, that the cadre should come out of all the existing binaries such as doctors v/s non-doctors and modern v/s other systems of medicine and that what it needs is a system-based team at all levels beginning from the block to the state. The team should cover all the social determinants of health. Further, there should be clarity on all functions such as implementation, monitoring, evaluation and follow-up. A respondent explained this in the context of Karnataka:

"When I say, who, I don't want to be restricted to labelling, doctors v/s non-doctors, modern v/s other systems of medicine, but I want a team approach, starting from taluk level in Karnataka state, or block in another places. This team will basically comprise of people who are looking at determinants of health, if I want to look at the simplistic model, for determinants of health, even though its named after the western guys, and if I say nutrition, there has to be somebody represent nutrition. If I say education, there has to be somebody representing education, and this cannot be at the state level, it has to be there eventually, but then I should be addressing the chronic problem of stunting anaemia in women by looking at the local issues and identifying from a nutrition point of view, physical activity, we said this is a major determinants of NCDs, but who is in charge of physical activity, this is multi-sectoral, walking lines, where police is involved, so we need to have this team based approach which is the right team who are the right players, I don't want to be prescriptive, we need to begin by saying that let's start from village panchayat as the minimum unit, and then say can we look at the determinants of health at a village level, and if these determinants are represented by few people here, what kind of public health orientation can be given to them, so that is a public health approach, from that approach, who are the key players, who will become part of a cadre, who will actually monitor, who will actually follow up, will actually implement (P4)."

Respondents have also added to the list of expertise that could be included in the cadre such as non-medical personnel who have experience in working with the National Health Mission, management graduates, entomologists, information technology professionals,

statisticians, social workers, sociologists and political scientists, along with medical personnel who include clinicians from all systems of medicine, dentists, epidemiologists and nurses. They also have stressed how to provide the required training/bridge course on public health. Further, according to them, it is also important to expand the practice base of public health by including streams like criminology, system management and programme evaluation, to list a major few. To quote a few of the respondents:

“It is not just people who have MD in preventive social medicine or, or qualification in public health, such as, such as masters’ in public health. Public Health Cadre is much broader than public health, formal public health. You have a large number of people especially under National Health Mission who are qualified in, in handling public health programme but they are not medical doctors. So, you have to have dental surgeons, and even non-medical people to MBA in health management, hospital management and health IT, IT management, then you have people who are, you know, hardcore expertise in many public health areas, such as entomologist, such as statistician, such as social workers and sociologists; they need to be a part of this cadre (P34).”

“I think just like, well, it could be, so, so, public health, I mean, there need to be statisticians who can be part of this, there can be bio-statisticians, there should be epidemiologist, not necessarily who have a medical degree, physicians definitely, also people with a background in behavioural and social health sciences, you know, sociology, political science, people with the background in health policy and management, people with a broader background, background in management including people with, you know, MBA degrees or whatever (P36).”

“It need not be only be doctors, of course, there are other issues of hierarchies and things like that, which will come into play, etc. But imagine if you are, if you have 20 years’ experience as a nurse in a district hospital you have an enormous understanding of the system and then if you are then able to get this kind of a one-year bridge course in state Institute of Health and Family Welfare which then allows you to change track into public health management to be posted as a district hospital administrator (P5).”

“The healthcare sciences of which traditionally demarcate all of these other categories of people, they would be people who have social sciences background, pure biology background, or even some extend disciplines like a criminology, management, can they come in

public health in anyway, in a meaningful way as programme managers, or system managers...But at least many others would have ability to come in, provided they have an opportunity, particularly for programme management, programme evaluation and other areas (P3)."

While most of the respondents envisaged the structure of the cadre up to the block level and personnel up to nursing staff, a few others, especially academics stressed the importance of including the frontline health workers. In this they included ANMs, ASHAS, midwives, multipurpose health workers and Anganwadi workers since they are delivering vital public health functions it is important to recognize their contribution. Also, as highlighted by the respondents, the frontline workers are mostly appointed on contract-basis or on incentives/honorariums basis without any job or social security. As they argued, it is important to strengthen the frontline health service delivery with better working and service conditions for the workers. Studies have already highlighted that frontline workers of national health programmes such as the National Tuberculosis Elimination Programme, who are appointed on contract basis were given the additional responsibility of Covid management, which significantly increased their workload without additional allowances (George *et al* 2022). Respondents have explained the significance of including frontline workers in the Public Health Cadre:

"...at the bottom is a cadre which says grassroots level frontline public health workers, which is really or, you know, your ASHAS and your ANMs and, you know, other, you know people who maybe, even midwives, I would put, you know, why don't we have non-medicos also in public health. Absolutely, I agree with you on that because I think there is, there is a role for the medicos. Yes, but I think, there is a greater role for training cadre which has certain, you know, other skills like, we have totally because of institutional deliveries [taking the name of the interviewer], done away with the dai's and the midwives. And I, somewhere we need to, you know, recognise the tremendous contribution that this particular, you know, cadre had all these years. Why don't we tap into some of all these, whether it's AYUSH or, yeah, even AYUSH for that matter. Anyway, half your healthcare, 90 per cent in rural areas, is taken care off by RMPs and we all know that (P27)."

"You know we already have a Public Health Cadre. They are the ASHA workers, the ANMs, the Anganwadi workers etc. [But] we don't consider them to be the legitimate members of what we are imagining as Public Health Cadre. They have more I mean there are usually C&R rules right cadre and what does it stand for cadre and something rules. Anyway, that allows for some kind of career path for people, here, there is an army of

workers out there who are serving, exclusively serving public health functions whose efforts are neither recognized nor are they rewarded for it, there is no career path, there is no sort of progression, they join as an Anganwadi worker, they retire as an Anganwadi worker on practically the same salary. If we are asking who should be the backbone of a Public Health Cadre it is them. They need to be the people who always don't end up taking the blame and brunt of all the, you know the sort of negative press that the health system gets. If we can start building from the lowest level, the Frontline worker and actually treat them as legitimate members of a cadre. When we are thinking about a cadre it's not only from the programme manager and above, the district level and above, whatever, other PHC and above (P15)."

## **Those Opposed To The Inclusion Of Non-Medical Personnel In The Cadre**

While there is a general agreement on the broad-based structure and inclusion of personnel from clinical, non-clinical and all related sectors in the cadre, a few respondents from the group of medical practitioners were sceptical of the inclusion of non-medical personnel in the cadre. It is important to discuss their views as well. There were divergent views on who all from the broader medical fraternity could be part of the cadre. One group opined that any stream, which is under the broader category of medical fraternity, or which can be termed as having a medical background, including AYUSH, dentistry and nursing, could be part of the cadre. They stated:

"Well, so, I think you have a point, it should be open to everybody. But then you know, when you make a cadre you will have to have certain specification, while there is no harm in saying it should be restricted to medicine, or AYUSH or may be nursing, I have no problems with that, but, somehow if you say social scientists then where will you draw the line of who will enter because I mean don't get me wrong Sir, but you know social scientists somehow is very difficult to define you know when you look for a job profile. I mean what do you want from a social scientist? In a way, you will then end up getting anybody and everybody into it. So, for its cadre, I think it should be restricted to may be, yes, Allopathy, AYUSH... all that is okay, and then may be nursing, yes, definitely, they have a huge role to play and if you feel may be veterinary also, I have no issues in that, but I don't think at the starting we are going only with social scientists, may be, may be, a non-starter also (P17)."

“The way the system in India has built up, I will definitely give primacy to the medical cadre, so, also to nursing and to the public health scientists that we are talking about, people do their community medicine and public health. I mean, they need, they need to lead the system actually, they are fair and square (P22).”

“I would suggest, and I will go in favour of the people with the medical background, with more focus on public health to be included in the Public Health Cadre (P37).”

Another set of respondents from this group argued that the cadre should be restricted only to allopathic clinical practitioners [excluding AYUSH doctors, dentists and nurses]. According to them public health largely falls in the knowledge domain of medicine and if the cadre is opened to non-medical professionals, the complexity involved in managing the cadre would increase. They also doubted whether courses like Master of Public Health [MPH] would equip non-allopathic trained medical doctors, even if they are from related streams of dentistry or nursing, to perform the functions of public health such as disease surveillance. To quote their views:

“With or without public health degree because there is option for each medical officer whether they have wish to shift from health sector, from clinical post to public health administrator post. And there are certain years of pursuing services. That is not an issue. But this public health and administrative cadre should strictly be restricted within the medical fraternity (P8).”

“[We] should not open too many fronts at one time since it will increase the complexity of the management of the cadre. It will make it difficult for us to bring in people of different specialty into this. If you bring in a dental specialist some would like to step in the Western medical concept that would say that they are needed but for public health on the dental side, but you can't make up dental health in that side. So, the question that can an MPH with nursing become a surveillance officer? The answer should be yes but, in the present set up without a basic grounding in basic medicine, which actually the nurses get, will be difficult to build it upon and even the political atmosphere, I think we should choose, choose one better public health official carefully and not open too many fronts at one time (P12).”

## Regarding Qualifications And Training Capacity

There is a general view that streams like community health/medicine, social and preventive medicine, Master of Public Health and other advanced training and research in public health (read PhD) could constitute the basic qualification required for the Public Health Cadre personnel. However, there were apprehensions raised by several respondents over the content of the course, eligibility criteria for admission, training capacities, quality of training and accreditation of these courses, especially MPH courses, which are offered by several universities. Respondents noted that there is no clarity on what contributes to the public health training qualifications in India. Although there are a good number of institutions that offer a Master's degree in public health<sup>j</sup>, there are no steps taken to standardize the syllabus so that it could be suggested as a basic training framework for the cadre. This is despite the directive of the Ministry of Health and Family Welfare on the eligibility criteria, curriculum and the subsequent ratification by the University Grants Commission (UGC). One of the respondents noted:

“There is a Ministry of Health and Family Welfare document which clearly states that the MPH should be opened up to all streams. AYUSH, social scientists etc. And, the UGC has actually ratified the Ministry of Health and Family Welfare's document. The Ministry of Health and Family Welfare has in fact gone one step further, to say that there should be a common curriculum and that indicative curriculum has been circulated (P19).”

A recent study by the Centre for Budget and Policy Studies, which examined the public health training capacity in the Indian states, also commented on the underrepresentation/partial representation of themes related to the social determinants of health and the need for review and standardization of public health courses. To quote from the CBPS report:

“Overall, the courses [public health] appeared comprehensive and transdisciplinary in nature in terms of the subject choices offered in the core and the elective modules. However, perspectives related to structural barriers, intersectionality, and social norms that play a key role in determining health status and access to healthcare seem to have been only partially covered (CBPS 2022:7).”

One of the reasons for the non-standardization of eligibility criteria and curriculum, as highlighted by the respondents, is the existing differing views on the content of public health courses offered by universities and medical institutions. For instance, as noted by a respondent, the view of the medical colleges is that “community medicine MD gives everything that is required in public health” and the public health courses offered by

universities are viewed as a “shallow degree”. Therefore, they are not recognised by medical fraternities such as the Indian Association of Preventive and Social Medicine and the Indian Medical Association. Those opposed to this view argue that the courses offered by medical institutions such as MD in Community Health or Preventive Medicine have a curative orientation and are not “not suited to provide the primary and the secondary care that we need”. The respondents explained it further:

“There is absolutely no recognition of what constitutes public health training qualifications in this country in a uniform manner. Universities have not attempted it; medical colleges have not attempted it. Universities still have not really paid much attention to MPH in terms of their curriculum being standardized or competence being defined. Medical colleges right from the beginning and even till this day have been holding on the view that community medicine MD gives everything that is required in public health. [for them] all these MPH is something that is divisionally and it should not be taken as something that is going to be good for the health system, and it's on. In fact, even now the many of the leaders in the community medicine area, particularly the Indian Association of Preventive and Social Medicine considers that community medicine is a better option. So, from their point of view MPH is relatively a shallow degree disconnected with the health system and not medically oriented, hence their soul does not fit into the bill. But universities still have not really paid much attention to MPH in terms of their curriculum being standardized or competence being defined (P3).”

“We felt, I mean, I felt in my understanding that everything was seen only from a medical perspective and so, maybe that was one thing that was, that would help if you had a Public Health Cadre or any cadre who had, who have some amount of social training, community medicine training. Somewhere, the issue also comes from our training that the PSM, Preventive Social Medicine that we study itself is very boring, is one, but also it is inadequate in, the subject is inadequate to deal with the issues also. So, sometimes I don't know if it is because of our training or that that of PSM being so bad that a medical doctor generally should have those basic understanding of social issues which some of them lack it. So, yeah, that was at the onset I can tell, these both things are some things (P33).”

“There are no set guidelines on what public health is and what are the core disciplines and then who should, what should be the core competency of the people also, who are part of such academic institutes, who can teach public health. So, that is one part of it and I certainly, I saw that the

guidelines the public health curriculum or whatever, as you rightly have framed it, its heavily biomedically, you know, loaded and social sciences is clubbed with social sciences and health communication, if I remember (P35).”

It is important to take a critical look at the qualifications required for the public health functions in states like Tamil Nadu and elsewhere, along with this differing view on the public health courses and their contents. As already discussed elsewhere in the chapter, states like TN do not recognize MPH degrees offered by non-medical institutions for positions in the Public Health Cadre. Respondents, in this context, highlighted that it is important to change the recruitment and promotion rules to recognize the MPH degrees from non-medical institutions once there is a consensus arrived at on the content of course and its standardization. One of the respondents explained how the present recruitment rules do not allow MPH holders from non-medical institutions:

“Medical Council of India should be ready to accept MPH as a qualification for the promotion, for the recruitment of doctors because why I am saying so is that community medicine alone cannot, you can say fill the gap of public health people as such, so we need to really look into the recruitment rules of the country that whether we accept the MPH, two years MPH programme. I think then there is a need to have changes in the recruitment rules of centre and state governments so that, so that not only for the recruitment but also promotional purposes the same qualifications can be used...Unfortunately, since last 30 / 40 / 50 years the RRs have not been changed and since the RRs have not been changed even any doctor if they do MPH programme, that do not get considered for any promotional purpose (P9).”

Lack of a sufficient public health training capacity was another issue highlighted by the respondents. As noted by them, most of the states in India do not have proper public health training capacity due to the lack of a serious engagement on the part of universities in evolving the content and training for public health. Although there are several public health training institutions in the private sector, no serious auditing of them has been carried out. According to them, although there are several institutions that offer courses in public health “there is a shortage of public health expertise for a cadre”. Further it emerged from their views that there exist problems in the content and orientation of the public health courses offered by both medical and non-medical institutions with the former being more medical oriented and the latter being non-uniform regarding the eligibility criteria for admission [clinical Vs non-clinical, allopathic Vs AYUSH, clinical Vs paramedical etc.], content and quality of training. They noted:



“There is not enough public health people trained in this. You know, if you want to suddenly introduce a cadre of public health, there should be enough people. For example, I would say at least one or two for each district. We have more than 700 districts in the country, and there should be more than...more people at the state level and national level. Various national programmes etc. should be managed by them. And all these things, we need people. And also qualified people. Unfortunately, what happens now is all these public health graduates who are coming out of various schools, more than 105 schools or so, now. And majority, vast majority of them are not really trained in public health. That is the whole issue. So, they are not capable of, you know, addressing public health problems of the country. Because they are not trained. They are trained by, I would say, quacks, not so qualified people (P43).”

The inadequacy of public health experts is an issue. Within this system, you cannot just bring the experts from outside. And, even outside also, public health is not being considered as a important discipline. Within the world, within the world, this medical domain, so they would have such feeling that, though they think that this is an important discipline and that can contribute much in the public health or the country or that particular state in particular, the importance given for this discipline is not there (P29).

“It [MPH] becomes more and more clinical learning. It is something which is kind of a, you know, I, I, I haven’t figured it out, but there is a missing piece which is about growing and building systems and strengthening systems, focusing on culture of, at an organizational level (P36).”

The respondents also emphasised the need for developing training modules to bridge the disciplinary gaps of the candidates and cover the requirements of the various functions of the cadre. For instance, candidates from non-clinical backgrounds might need basic training in epidemiology, and those who are from medical streams need training in behavioural science, social sciences, data and management. Similarly, as noted by them, public health courses need to cover social determinants of health and specific areas such as epidemiology, sanitation, drinking water, governance, health culture, health inequality, social barriers to health, public health management, health economics, statistics, monitoring and evaluation and frontline service delivery, to list a major few.<sup>k</sup>

As reported by the CBPS study (2022) there are 105 institutions in India that provide 117 Masters programmes in public health. There are also institutions that offer diploma/certificate courses in public health. However, there is no authentic data available on the number of institutions and courses they offer. The CBPS study also noted that majority of the Masters programmes in public health are run by private

institutions (57 per cent). Also, as per this report there are 29 institutions in the Southern part of India, of which 19 are in the private sector (*Ibid.*: 20). It is also pointed out by the respondents that all the South Indian states have institutions that offer MPH courses in private and public sectors. However, as they see it, the training that these institutions provide is “vertical and disease specific in nature”. One respondent commented on the design of the MPH courses in Andhra Pradesh and Telangana:

“The training capabilities, I mean, for example, both Andhra Pradesh and Telangana have state level public health training institutes. So, having those institutes actually did not make much difference. They are still very much vertical, I mean the trainings that they provide are very much vertical in nature, very disease-specific at times and so on. There would need to be, yeah, specific training which goes beyond what is being taught presently in these training institutes run by the state governments (P33)”

A respondent who conducts the monitoring of public health training programmes observed that the number of training programmes and the quality of training are “not good enough” in the state of Karnataka:

“I was in the State Institute of Health and Family Welfare, I was monitoring the training on reproductive and maternal health, for ASHA workers, for doctors, and, you know, the entire you know cadre delivering maternal healthcare services and the training itself is very bad. It was not good enough. So, I think both, in terms of the quantity of, in numbers also is important to improve, but also in terms of the quality of training (P28).”

Similarly, as noted by a respondent, although Tamil Nadu implemented the Public Health Cadre, the state has not developed adequate training capacities:

“... actually the states, they don’t have the capacity to train, like...the state-owned public health training school institutes are very rare, even in Tamil Nadu, they don’t have the public health training (P32).”

A respondent while commenting on the public health training capacity in Kerala noted that although there are sufficient number of institutions both in the public and private sector in the state, their facilities and capacities are to be further developed:

“I think we have [Kerala has] adequate training facilities. Now we have, you know, Achutha Menon Centre. Central University [of Kerala] has a very strong department of public health. And there are other schools of public

health. Amrita Institute has a public health institute, and there is Global Institute of Public Health in Anantapuri, Trivandrum. There are some public health training institutions, and there's Mahatma Gandhi Institution, there is... so, there are, I think we can develop all these centres, and in...Trivandrum Medical college, also, they are trying to convert this current epidemiology training centre into an MPH programme. So, these facilities can be developed and definitely they can be trained (P43)."

What has emerged very prominently from the respondents' views is the need for assessing and accrediting the public health training institutions and courses in India. This view has emerged in the context of a dearth of information on the kind of institutions that offer public health courses, course curriculum and the training capacity of the faculty members in these institutes. However, there seems a general agreement that accreditation of public health courses may not come under the purview of the Medical Council of India. To quote a few respondents:

"You see, as per when I last did a count there was said to be 128 institutions offering degree in public health, MPH programme. Now I don't think anybody has ever done an assessment of all these institutions, we would have no idea what is the curriculum, we have no idea what is their faculty, so do you think there's got to be some sort of an accreditation system and in which case who should be doing that? It can't be the Medical Council of India (P14)."

"The accreditation system of public health courses is still not in there which has been a mandate for long and we know that...that...that the public...sorry, that the MPH... particularly the MPH curriculum is extremely uneven across the country, they are/there all kinds of institutions, all kinds of courses, and so on and so forth. So, without that accreditation process I think this confusion, or this criticism will remain (P7)."

To sum up, several views have emerged on various issues related to the Public Health Cadre with a special reference to its nature, structure, composition, functions, coverage, training and resources for the cadre. Most of the key informants argued that the cadre should be at the state level; while a few noted that it is desirable to have a cadre at the central level as well. There was a general agreement that it should be composed of both medical and non-medical personnel. Besides, the cadre should recruit staff trained in public health. There were also views that the cadre should have several sub-functions, which are part of the social determinants, including nutrition, drinking water, and sanitation. It was felt that decentralized bodies should be part of the cadre, since most of the functions at the local level such as nutrition, preventive and promotive care, water

and sanitation come under the local self-governments. While a few respondents argued that these functions should be part of the cadre, others argued that it would lead to complexities and that what is more desirable is inter-sectoral coordination than integration. A general consensus that emerged is that although there are several institutions offering public health courses, there is lack of information regarding their knowledge base, training capacities, types of courses, course curriculum and capacity of trainers. As emphasized by a few respondents, there is need for an assessment and accreditation of public health institutions and courses by a competent authority; however not by the MCI.

## **On The Financial Implications Of A Public Health Cadre**

Considering that health is a relatively low prioritized area when it comes to budgetary allocation, there is a general apprehension whether a Public Health Cadre would require additional resources. As strongly observed by the respondents, the budgetary allocation for health in general and public health in particular, needs to be significantly enhanced both by the union and state governments. Further, as noted by them, the cadre would not be a financial burden on the state governments if the union government increases allocation for it. One of the respondents noted:

“The states are increasing their spending on health, whereas the central government, you know, contribution seems to be stagnated or is decreasing over a period of time. I think, it's also in this context states don't want to take this additional burden, in this, not burden but additional financial decision. And it, if the central government was, you know, providing funds or giving finances as it was required, I mean, as much as required, I think this problem wouldn't also arise, because everybody feels there is a need of Public Health Cadre at the state level, but they don't want to take that financial responsibility for that (P33).”

The respondents also have pointed out that the proposed cadre could be built on the existing health service system without bearing a significant additional financial burden. As noted by them, there are already public health functions and functionaries in place, which could be assimilated into the cadre. They explained this view further:

“I don't know if there are going to be any large. But there are already public health functions and functionaries in place. So, I am assuming, what I feel is that those functionaries, those functions, if they could be taken on by people dedicated to essentially doing public health work rather than having people who are abiding by time and waiting to see if they can get into a clinical role somewhere more

attractive. If those roles could be done by people who belong to Public Health Cadre, I mean the funds for that would be already in place. So, it is not clear to me if it's going to cost more to do this (P6)."

"It will not be much because many of the doctors, the scale of pay will not change that much if you implement Public Health Cadre because already there are occupying positions in the administrative cadre, specialty cadre and there will not be much financial burden on the government (P11)."

"They are only going to replace the bureaucrat, that's it. The bureaucrat is also paid and you know, if the Health Secretary is a doctor, I mean how does it matter, the IAS goes and does his job, he becomes a DC or whatever he wants and the districts and something, instead of him being the superimposed boss. I don't think there are financial implication which the country can't take and then the benefits of these are huge with a person with the background of medicine or a technocrat is in a better position to handle (P17)."

As pointed out by one of the respondents, what is required is not additional resources, but a separate public health budget, as implemented in Tamil Nadu. He explained it further:

If you look at the World Bank report on Tamil Nadu public health report...like, we need a separate budget, but, doesn't mean, like, we have to entirely create a new one. Like, we already... because there are people working with the state health system. Some of them, we are going to train them in public health and create as a Public Health Cadre. It's not going to have a huge impact on the budget (P41).

The respondents have also justified the financial implications of the establishment of a Public Health Cadre for long-term human development outcomes, which cannot be easily quantified. The returns on investment in human development, according to them, would be much higher than what is usually estimated, using the common cost-benefit and hence, any investment in health needs to be looked at from a broader perspective. To quote their views:

If you were to look at the money involved in public health approach versus any other approach, which people want to think, this is the best value for money for few prices put together, you will have millions of returns on investments. If that's the economic language is which people have to do,

but nobody, nobody even wants to model it. We wanted to model this and show how much money are we saving by doing public health approach (P4).

Well, I mean, if you look at it macroeconomically, I think, that return on the investment that you have, in terms of better health status should outweigh any extra financial implications that are there are in short-term in the beginning is what I think, theoretically. That definitely I have to think that given the kind of public expenditure we see on so many things that are happening around us, I don't think that the creation of cadre like this would put a huge debt in the government's finances something like that to its detriment. I would definitely think that on a cost-benefit ratio, the benefit would far outweigh the cost in the long-term (P24).

## **DISCUSSION AND CONCLUSIONS**

In this section we are not discussing all our findings, but merely some salient ones, since much of the rich data speak for themselves. Indeed, while conducting the interviews, we did not realise what a treasure trove of data we had obtained. An obvious question that arises is that when so many colonial cadres—from IAS to IPS to IRS, and indeed, even the Indian Forest Service were retained, why was IMS abandoned? One of our respondents argued that it was because the IMS was too closely associated with the colonial regime. This is not particularly convincing, as who would argue that the administrative service (ICS) was not?

In a more likely explanation, Jeffrey points out that the IMS stopped attracting doctors from Britain, when health was mooted as a provincial subject in 1919. He also points out that even earlier, with improved employment prospects in the UK, the IMS was not attracting too many eager takers (Jeffery 1988). Indeed, after the slaughter witnessed in the First World War—an incredible number of poor Indians paid for this with their lives—the IMS could simply find no replacements for those IMS officers killed in the war (Singh 2021).

One attractive public health quality about the IMS—despite its completely dubious beginnings, when one could buy into it—was that the person at the top was invariably a medical man but rose from the bottom. They thus had experience at the community level and knew what to do about it. As Shiela Zurbrigg's monumental work tells us, several of them had an understanding of health that extended beyond the medical, for example, drawing attention to malarial deaths due to hunger (Zurbrigg 2019). But the fact remains that the IMS was primarily meant to service the army and British civilians.

While, over the years, important policy making committees have drawn attention to the creation of something like an Indian Medical Service. It has, however, has simply not taken off. More recently, the High-Level Expert Group made a strong plea for a Public

Health Cadre, which found echo in the National Health Policy of 2017.

But what seems to have been the proverbial last straw was the Covid 19 pandemic. The failures of the existing system—the centralization and the dominance of clueless doctors during the pandemic—have led to renewed calls for some radical reorganization of health systems, with the creation of a health cadre. The Government has responded with instructions to the states to implement, not one but four cadres (GoI 2022). This policy guideline is said to be in the form of recommendations for the states to adopt, as per their own needs. The cadre was to include “professionals from diverse backgrounds like sociology, economics, anthropology, hospital management, communications etc.”. Consequently, the Public Health Management Cadre (PHMC) was to comprise four cadres “firstly”. These include a Specialist Cadre to be deployed at CHCs, District Hospitals and tertiary centres; a Public Health Cadre at PHCs, CHCs, Block/District and State levels and Directorates, performing public health and clinical functions; a Health Management Cadre and a Teaching Cadre.

The fascinating findings of our study must be hedged with a caveat. Due to our sampling method, our respondents largely see the need for the creation of a Public Health Cadre in the states of India, albeit with some reservations. These reservations stem from the pre-existing contradictions and conflicts within the healthcare system. One is between medical and non-medical staff. While welcoming the creation of a cadre, many of our respondents, especially those with a bio-medical background, want this cadre to be restricted to those with a bio-medical background. This is indeed what the government guidelines suggest. They were reluctant to include physicians from the AYUSH streams in this cadre, even though they had already been deployed in some states within the healthcare systems. There was hesitation about including nurses, though some reluctantly agreed that nurses might be included in the cadre. But in general, there was a reluctance to include non-medical persons in the cadre.

The arguments for this were always made in terms of pragmatism. The narrative was that we have had such enormous problems in the creation of such a cadre in some states. If you begin by wanting to include social scientists and so on, the scheme will never get off the ground. So, the best thing to do would be to have a modest beginning, initially restricting the cadre to bio-medically trained physicians and then later perhaps widen it to include others, when it is propitious to do so.

One problem foreseen was the resistance to this cadre from clinicians. Although no clinician we interviewed rejected the idea of a cadre, there were nevertheless reservations. Many of them expressed the view that there would be a “turf war” between bureaucrats and the Public Health Cadre, with the former not ceding the ground that they held. It was also suggested that clinicians would fear the loss of prestige and status, not to mention rental incomes if the top levels of the health system were reserved for the Public Health Cadre.

It was pointed out that a dysfunctional public health system would serve the interests of the private health sector. For example, it was pointed out that as the public health system was substantially strengthened in Tamil Nadu, there was a significant shift of patients back to the public sector. This was particularly the case with institutional births, severely skewing the market for Caesarean Sections in the private sector (Pandian *et al* 2013). One important feature of health planning in recent years has been the involvement of the corporate sector. In Karnataka, for instance, irrespective of the political regime, a prominent cardiologist—who did not respond to our request for an interview—sits on all important public health decision making bodies, calling for public health institutions to be handed over to the private sector in healthcare, in the name of efficiency. Some of our respondents also pointed out that multi-national consultancy firms are increasingly guiding policies of privatization. Such firms would also be against the creation of a Public Health Cadre that might undermine their influence in the system, and their incomes as well. Some others pointed out that there is a global nexus between consultants, funders and some policy makers, with some policy makers effortlessly finding post-retirement employment, for example, in the Bill and Melinda Gates Foundation. The example of a former Health Secretary who had shaped vaccination policies, finding post-retirement sinecure in the BMGF was cited.

Many respondents pointed out that politicians could *see* medicine, but not public health. A minister suffering a myocardial infarction would inevitably head towards a private sector super-specialty institution seeking treatment. He would then witness the marvels of high-tech medical care, and if the treating cardiologist pushed for a public-private partnership, would be more than willing to consider it. At the same time, improved maternal health and a decline in maternal mortality would not be visible to him, with no one to take credit for it.

Above all, it was pointed out that there is an ideological commitment to the private sector among both policy makers and the elites. This has been shaped by leading international financial institutions like the World Bank and the IMF for more than four decades. That their influence across the globe in undermining public health systems cannot be over-emphasized. Issues related to lack of access to healthcare for the poor are addressed by private insurance mechanisms, providing a public subsidy to the private sector. Many studies have established that this is economically wasteful, does not cut down Out-of-Pocket Expenditure (OOPE) or bring down catastrophic medical expenditure and leads to a further erosion of public services. It also brings with it profound moral hazard problems of unnecessary investigations and surgery (Dasgupta *et al*, Reddy and Mary 2021, Prasad 2018, Karan and Selvaraj 2013).

One other such health reform initiative has been Public-Private Partnerships (PPPs). Again, these have been shown to be profoundly inequitable and unsustainable (Bisht and Virani 2016). One of our respondents, an academic-cum-policy maker, who researched this topic, points out that health in India is a matter of FDI and hedge fund



investments (Baru 2018). Such investments from venture and private equity firms have now moved from corporate hospitals in Grade A cities to those in Grade B cities (Chanda 2007). Not only is there a fierce competition with standalone nursing homes, but they seek to attract *paying patients* from the public sector too.

It is thus clear that there is a network of actors and institutions with commercial interests opposed to the strengthening of the public healthcare system. This comes along with the ideological commitment to health as a private good, an individual matter, best left to the choice of individuals, the focus is on the provision of curative care that patients buy from the market.

As mentioned by several respondents, medical education in India—now mainly dominated by private medical colleges—reinforces this view, while cultivating a disdain for preventive and social medicine. Those graduates who pursue this discipline, are considered “losers”. More significantly, at the time when medical graduates pay enormous amounts as capitation fee and tuition fee to these private medical colleges, there is the urgent need to capitalise on these investments. Such doctors are more unlikely to be attracted to working in the public sector.

Perhaps, the most important finding of our study relates to what our respondents have referred to as the ‘misunderstanding of what health is’. The conflation of health and medicine leads to the neglecting of the social and environmental causes of illness and disease. This has a long history, going back to the germ theory of disease in the nineteenth century in Europe, the Flexner Report and the rise of the medical industrial complex in the twentieth century in the USA. This faith in the magic bullet approach to medical technology, or a germ-centred health history, is not confined to medical professionals alone. The positivist health history sees health improvements as a consequence of advancements in medical technology, or what Kinsley Davis, the influential demographer called “death control technologies” (Davis 1951). So, although all such health programmes—from malaria to family planning—have failed, they continue to exert an enormous appeal on our health planners. This was described a long time back as the urge to eliminate society from diseases, where disease occurrence is primarily ascribed to individual proclivities and failures (Raynaud 1975). This is also the zeitgeist of international funders who are reluctant to fund water supply and sanitation, but very keen to fund vaccine development projects. Indeed, new diseases are being created in order to sell vaccines: the HPV vaccines come to mind.

As Rees *et al*/have shown, for reasons unknown, the incidence of cervical cancer in India has been declining. Identification and treatment of this cancer can be done by strengthening healthcare services to offer OB&GY facilities at CHCs that offer Pap smear facilities (Rees *et al*/2020). Instead, what funders wanted was a poorly tested vaccine that killed children in Andhra Pradesh and Gujarat (Mattheij *et al*/2012). This view of health and interventions is of course supported by most institutions for health, including above

all, the WHO, which has given up the Alma-Ata vision. Indeed, public health scholars have accused the WHO itself of being overrun by commercial interests (Birn 2017). What this does do to medical students is divorce them from the social determinants of health. The marginalization of many communities in India—Dalits, Adivasis, Muslims, the informal sector workers, transgender communities, and their health situation, including lack of access to healthcare is little known or cared for across the mainstream medical landscape.

Social marginalization, along with economic marginalization, has both profound and long-term consequences. Adivasis have the lowest life expectancy in India. The differences between Adivasis and Savarna Hindus are almost four years for women and five years for men. The gap between Dalits and Savarna Hindus is more than three years for both men and women. Life expectancy among Muslims is about one year lower than that of Savarna Hindus (Vyas *et al* 2022). Issues of equity and health justice are not a concern for any medical institution. These are labelled “political”, outside the ambit of medical concerns. These, however, should be central to public health concerns.

A few respondents, primarily from Tamil Nadu, have drawn attention to the caste composition of medical graduates while observing that the reservation policy, with seats offered in medical education based on examination marks, has given Tamil Nadu a more diverse doctor population. This is one reason, they observe, that TN has had fewer problems in the posting of doctors to remote and isolated PHCs among Dalits and Adivasis. However, the NEET system, upheld by the Supreme Court, restored the status quo with upper caste students and those in a position to afford private coaching centres at enormous costs having an advantage in this system.

A unique ethnographic study, the only one of its kind, finds that reservations have meant that high quality medical education has become accessible for disadvantaged students (Madiwala 2021). But, lacking financial and cultural capital, the challenge of facilitating their assimilation into historically upper-caste metropolitan sub-culture of education continues to persist. One extremely important finding is that once they obtain admission, the students in the reserved category do as well as those so-called meritorious students. Armed with good degrees, a lack of fluency in English and a discomfort with the “suit and tie culture” made them hesitate to go into metropolitan private practice where they would confront “modernized forms of untouchability” (p. 234). But most of them did indeed want to set up their own nursing homes, when they could afford to do so, acutely aware of the difficulties in competing with corporate hospitals.

We have also explored questions about training facilities, the quality of training in public health institutions and the financial implications of introducing a Public Health Cadre. The consensus that “it will cost too much to create this cadre” is a fallacious argument and that the Southern states have enough training capacities. The financial problem only

arose, it was stated, if you wanted your public health workers trained at private institutions that charge an enormous amount as fees.

There were a lot of healthy arguments about course content, need for faculty and so on, but disagreement regarding a uniform course and accreditation. There was, however, consensus that the National Medical Commission, representing primarily the interests of clinicians, should not be tasked with accreditation of public health institutions. There was concern that there were number of public health institutions with no adequate faculty and training facilities that offer some sort of MPH programmes and degrees. It is not clear who recognizes these degrees, but only graduates from those institutions like Sree Chitra, that are recognized by the NMC, can find employment in Tamil Nadu and AP. MPH graduates from JNU's Centre of Social Medicine and Community Health, where the centre decided not to seek MCI approval, but are recognized by the UGC, will not find such employment. The question that was raised was if there was a mushrooming of private institutions offering dubious public health degrees, what was to be done about it? But how was this different from many private medical colleges and dental colleges also offering dubious degrees?

In short, this was not a question that concerned public health education alone, but all medical education in India. And indeed, the medical system in the country remains bruised, dysfunctional, and torn apart post the Covid pandemic that devastated more lives than the Spanish influenza of 1918. The Covid pandemic is said to have brought down India's average life expectancy by two years, a really worrisome fallout.

To conclude this discussion on a personal note, our research was seriously constrained by the Covid pandemic as field work was not possible and both of us missed that. We have done our best and believe that there is a huge amount all of us, public health workers and policy makers and students can benefit from this modest report. As the former Health Secretary, Sujatha Rao stated, in a different context, "the concern for public health is like an infectious disease and I am infected".

This is small hope that this Report will spread such an infection.

# **ANNEXURES**

## **Interview Guide For Key Informants**

### **Personal details**

1. Name of the person
2. Gender: male/female
3. Age
4. Designation
5. Academic qualification
6. Department
7. State:
8. Native state:
9. Year experience in same department?
10. Year of retirement:
11. Total years of experience in different health departments?
12. Work experience in different states?

### **Public Health Cadre**

1. Does the state have a cadre? If yes, when? If No, why? Do you think your state should have one?
2. How do you think a cadre will help improve the health delivery system? What do you think are the advantages of a cadre? What do you think are the disadvantages of a cadre?
3. Were there any initiatives taken in the past for instituting a Public Health Cadre? If yes, when was this? What is the present status of the proposal?
4. Was there any committee appointed for studying this proposal? Was there any study conducted on its feasibility? If yes, what were the suggestions/recommendations of the committee/studies?
5. What are the possible conflicts that can arise among various departments if a Public Health Cadre is formed? Rather, which are the departments and functions that are to be integrated/coordinated for the cadre?
6. Do you think a centralized cadre system can conflict with the present decentralization of the public health delivery system, especially in the local context, specific interventions undertaken by the local self-governments? If yes, why? If no, why?
7. In your view how can a Public Health Cadre help in meeting emergencies such as the present one?

### **Cadre System**

1. What should be the structure and composition of the cadre? What kinds of specializations are required in the cadre? Why?
2. What should be the functions of different sub-systems/sub-structures of the cadre?
3. Whether the national and state health programmes should be merged and kept under the cadre? What are the possible advantages and limitations of bringing the centre and state programmes under one structure?
4. What are the additional administrative structures required for the cadre?
5. Which are the departments to be integrated in the cadre and how can it be done?
6. Who should be the head of the department? Why?
7. Does it come under central or state department? Why?
8. Who should be the authority of the Cadre System?
9. How should the recruitment of the cadre be done?
10. What should be the training? Who should conduct the training? Where? Who are the trainers?

11. Should nurses be integrated in the cadre? Why?
12. Should AYUSH be integrated in the cadre? Why?
13. Should ANM and Multi-Purpose Workers be included? Why?

## **Financial Implications**

1. What should be the approximate budgetary outlay for the implementation of the cadre (in terms of % to budget)
2. Which are the areas where budgetary allocations are made other than usual salary and revenue expenditure?
3. Whether the cadre should make provisions for public health research grant for employees?
4. What is the available best model of salary structure for employees of the cadre (like ARS, ISS, IES, etc.)

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- The issue of opposition from the clinical lobby to a public health cadre is discussed in detail in the next section.
- Noshir Hormasji Antia was an Indian plastic surgeon and social worker, known for his pioneering contributions to the treatment and rehabilitation of people afflicted with leprosy. He was also a public health worker involved in health policy
- A study conducted by the Centre for Budget and Policy Studies found that there are 105 institutions offering 117 master's programmes in Public Health in India in 2021, For details, See CBPS (2022), *Public Health Education in India: A Study of Master of Public Health Programmes in the Country*
- Please see the discussion on the composition of the cadre for more details
- Rao, Sujatha (2022), *Comments made to introduce herself at the conference on Federalism and Public Health*, Bangalore International Centre, 21<sup>st</sup> and 22<sup>nd</sup> April 2022



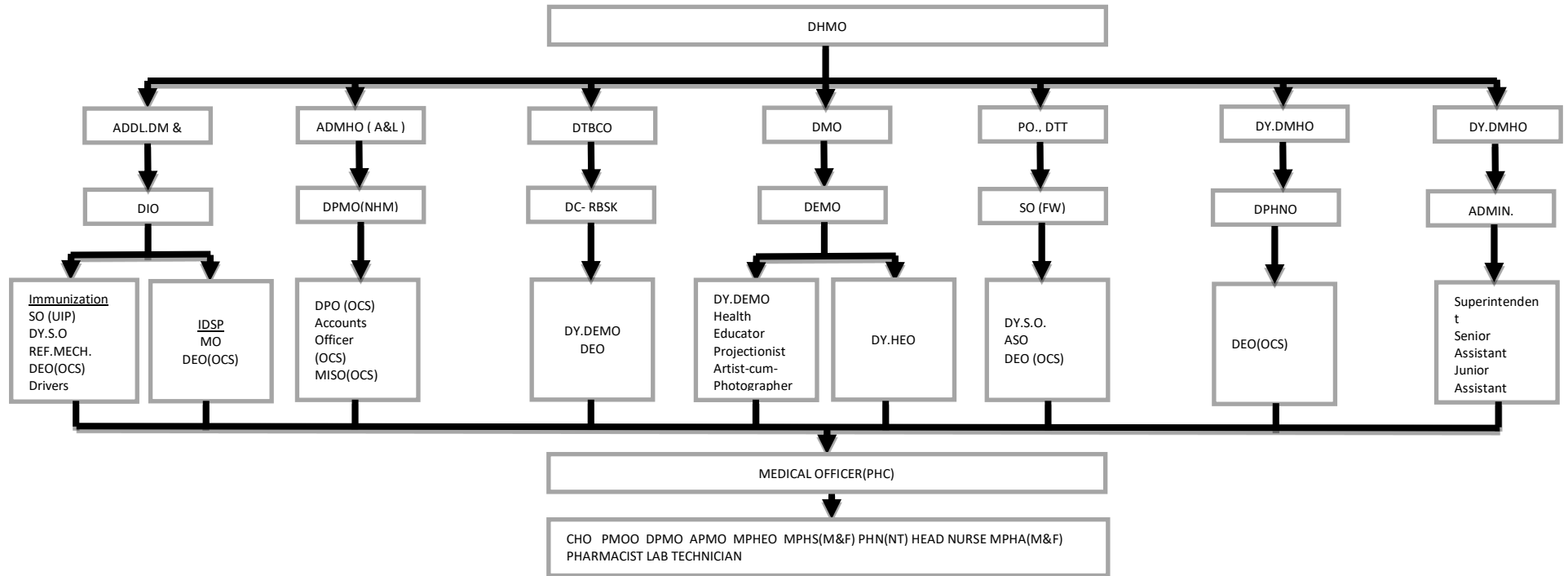
## Notes For References

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- <sup>a</sup> Please see, <https://www.dw.com/en/coronavirus-indias-public-health-system-on-the-verge-of-collapse/a-54978362>, accessed on 7 November 2019. Also see, <https://developingeconomics.org/2020/04/13/covid-19-a-bigger-challenge-to-the-indian-healthcare-system/>, accessed on 7 November 2019
- <sup>b</sup> Please see, <https://scroll.in/article/969107/indias-health-centres-are-facing-staff-crunch-even-as-coronavirus-cases-continue-to-rise>
- <sup>c</sup> Please see, <https://www.who.int/news/item/01-06-2020-covid-19-significantly-impacts-health-services-for-noncommunicable-diseases> for details
- <sup>d</sup> For details, see Booklet for public health management cadre: guidelines for implementation, available at [https://nhm.gov.in/New\\_Update-2022-23/NHM-Guidelines/PHMC-BOOKLET-2022.pdf](https://nhm.gov.in/New_Update-2022-23/NHM-Guidelines/PHMC-BOOKLET-2022.pdf) accessed on 14 April 2022
- <sup>e</sup> For details, on the report on health index, see Niti Aayog (2019) *Healthy States, Progressive India: Report on the Ranks of States and Union territories, June 2019*, available at [http://social.niti.gov.in/uploads/sample/health\\_index\\_report.pdf](http://social.niti.gov.in/uploads/sample/health_index_report.pdf)
- <sup>f</sup> A 'salutogenic' approach is one that focuses on factors that support health and wellbeing, beyond a more traditional, 'pathogenic' focus on risk and problems. For details, see Mittelmark MB, Bauer GF. *The Meanings of Salutogenesis*. 2016 Sep 3. In: Mittelmark MB, Sagy S, Eriksson M, et al., editors. *The Handbook of Salutogenesis* [Internet]. Cham (CH): Springer; 2017. Chapter 2. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK435854/> doi: 10.1007/978-3-319-04600-6\_2
- <sup>g</sup> For details, see *The Kerala Public Health Bill, 2021*, available at [https://prsindia.org/files/bills\\_acts/bills\\_states/kerala/2021/Bill%20no.%2077%20of%202021\\_Kerala.pdf](https://prsindia.org/files/bills_acts/bills_states/kerala/2021/Bill%20no.%2077%20of%202021_Kerala.pdf), accessed on 16 February 2022
- <sup>h</sup> The issue of opposition from the clinical lobby to a public health cadre is discussed in detail in the next section.
- <sup>i</sup> Noshir Hormasji Antia was an Indian plastic surgeon and social worker, known for his pioneering contributions to the treatment and rehabilitation of people afflicted with leprosy. He was also a public health worker involved in health policy
- <sup>j</sup> A study conducted by the Centre for Budget and Policy Studies found that there are 105 institutions offering 117 master's programmes in Public Health in India in 2021, For details, See CBPS (2022), *Public Health Education in India: A Study of Master of Public Health Programmes in the Country*
- <sup>k</sup> Please see the discussion on the composition of the cadre for more details
- <sup>l</sup> Rao, Sujatha (2022), *Comments made to introduce herself at the conference on Federalism and Public Health, Bangalore International Centre, 21<sup>st</sup> and 22<sup>nd</sup> April 2022*

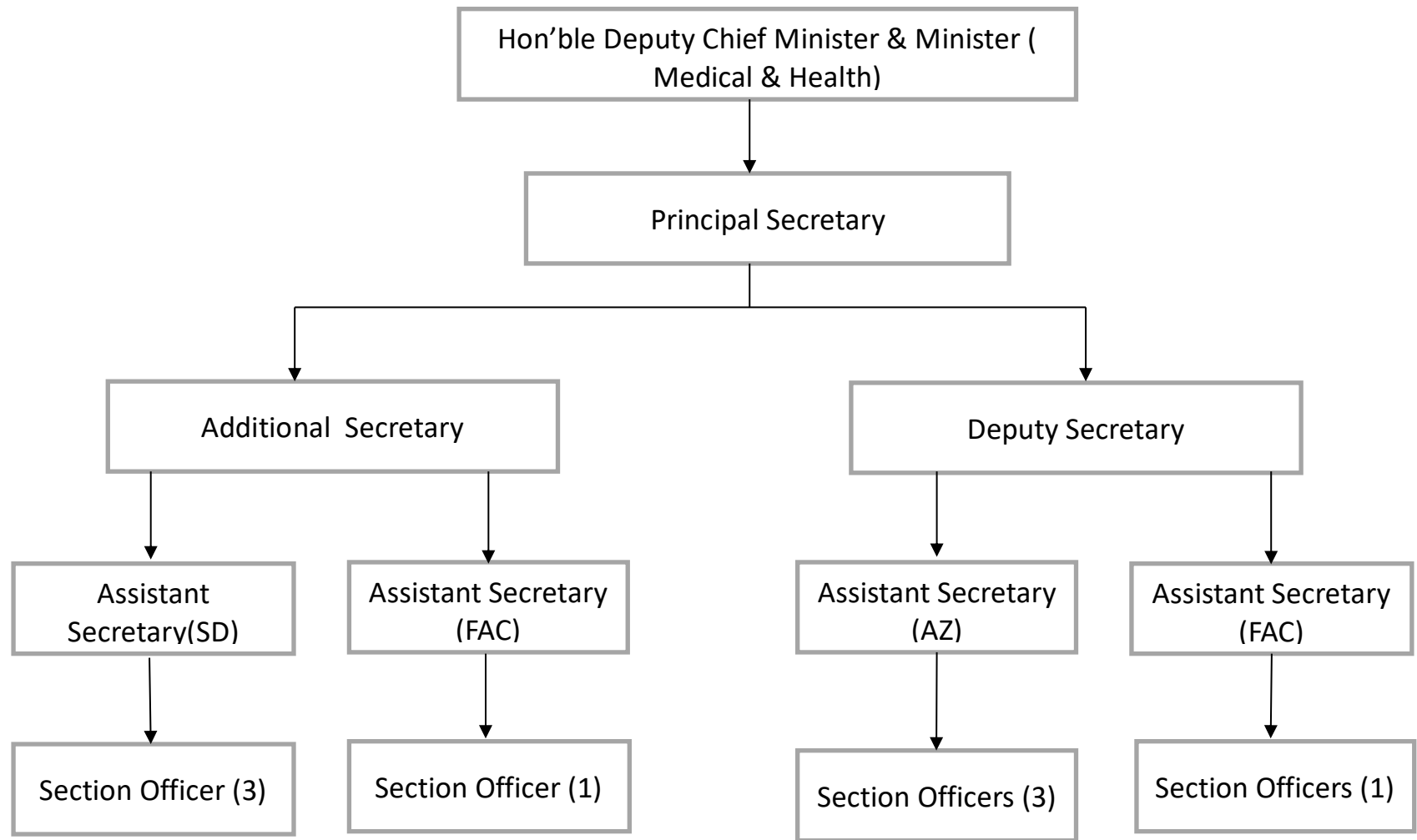
# ANNEXURE 2: ORGANOGRAMS OF HEATH SERVICE SYSTEM

Figure A1: Organogram of health services, Andhra Pradesh



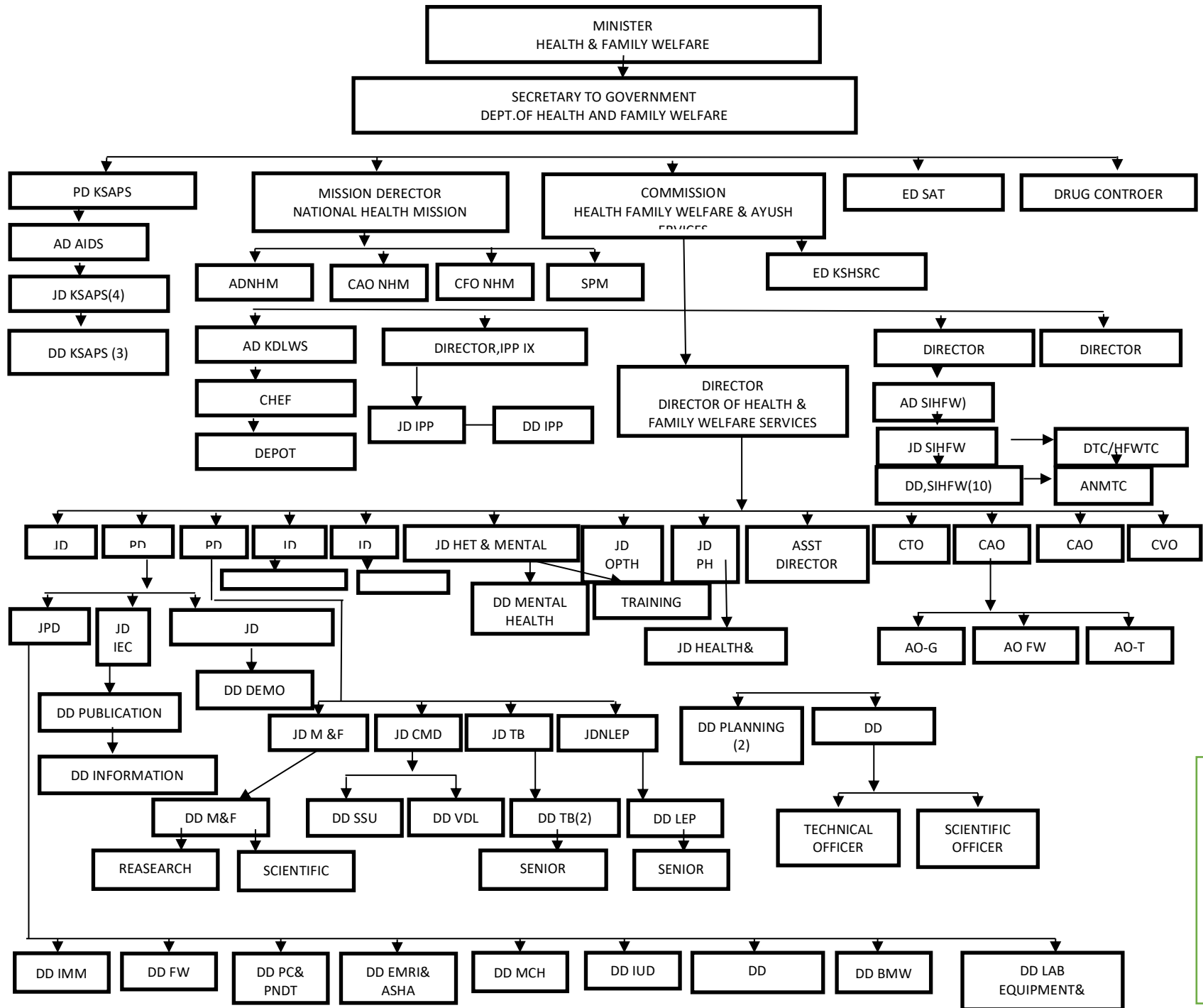
Source: Department of Health, Medical and Family Welfare Govt. of Andhra Pradesh

Figure A2: Organogram of health services, Telangana

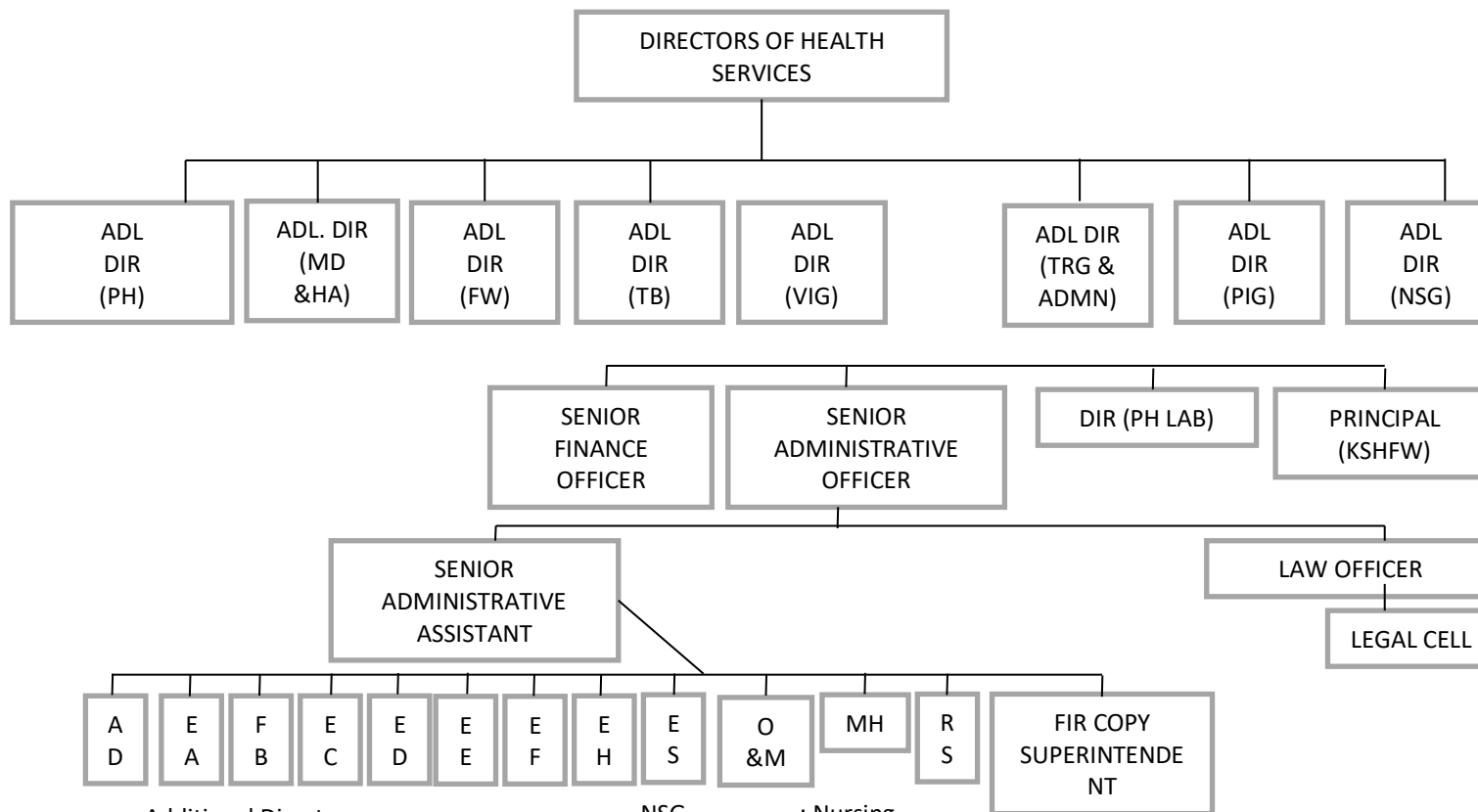


*Source: Department of Health, Medical and Family Welfare, Govt. of Telangana*

**Figure A3:** *Organisation chart of Directorate of Health and Family Welfare Service of Karnataka*



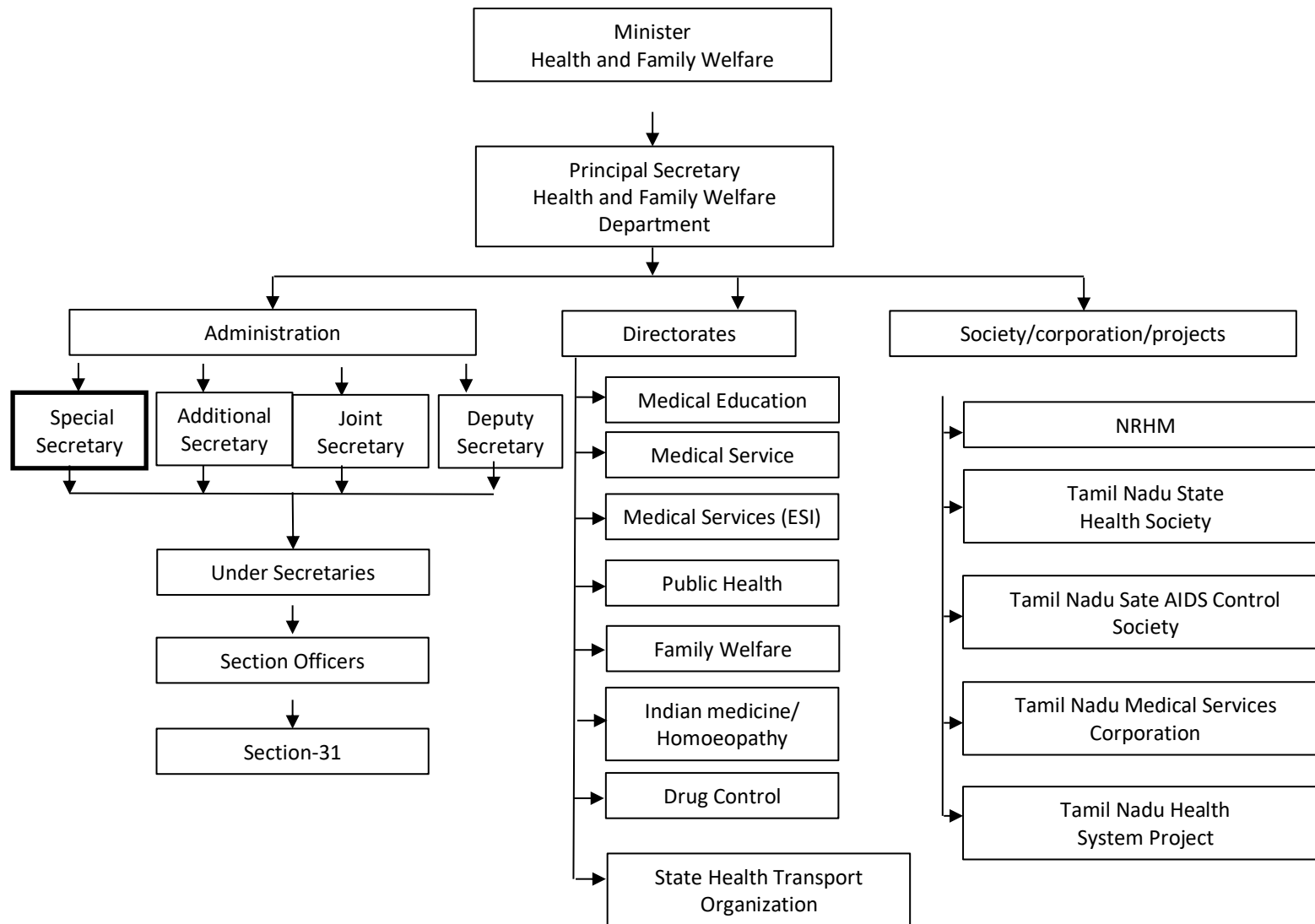
Source:  
Directorate  
of Health,  
Medical and  
Family  
Welfare, Govt.  
of Karnataka



ADL DIR : Additional Director  
 PH : Public Health  
 MDL&HA : Medical and Hospital Administration  
 FW : Family Welfare  
 TB : Tuberculosis  
 VIG : Vigilance

NSG : Nursing  
 PH LAB : Public Health Lab  
 KSHFW : Kerala State Health and Family Welfare  
 FC SUPDT : Fair Copy Superintendent  
 TRG & ADMN : Training  
 PLG : Planning

**Figure A4: Organogram of health services, Kerala**  
**Source: Directorate of Health Services, Govt. of Kerala**



*Figure A5: Organogram of health services, Tamil Nadu*

*Source: National Health Mission, Department of Health & Family Welfare Govt. of Tamil Nadu, India*

### Annexure 3

**Table A 1: Antenatal care check-up by background characteristics in Southern states**

	Andhra Pradesh			Karnataka			Kerala			Tamil Nadu			Telangana			India		
	Not received	Received	Don't know	Not received	Received	Don't know	Not received	Received	Don't know	Not received	Received	Don't know	Not received	Received	Don't know	Not received	Received	Don't know
<b>Wealth index</b>																		
<b>Urban</b>																		
Poorest	0.0	100.0	0.0	0.0	84.8	0.0										28.6	71.2	0.3
Poorer	0.0	100.0	0.0	0.0	88.2	1.2	0.0	100.0	0.0	3.0	91.8	1.2	3.0	97.0	0.0	19.0	80.2	0.8
Middle	0.9	99.1	0.0	0.0	89.2	0.8	2.0	86.3	11.8	1.9	91.3	0.7	1.9	98.1	0.0	13.3	85.7	1.0
Richer	1.2	97.9	0.8	0.0	91.1	1.0	1.7	89.8	8.5	2.5	91.1	1.3	2.5	97.5	0.0	8.7	90.0	1.3
Richest	0.0	100.0	0.0	0.0	89.3	0.7	0.4	91.5	8.1	2.1	92.1	1.0	2.1	97.0	0.8	4.9	93.9	1.2
<b>Rural</b>																		
poorest	1.0	99.0	0.0	0.0	85.1	1.1	0.0	100.0	0.0	9.0	91.1	0.6	9.0	89.6	1.4	34.0	65.3	0.6
poorer	2.5	97.5	0.0	0.0	88.5	1.6	0.0	89.1	10.9	4.5	89.4	1.0	4.5	95.2	0.3	19.9	79.2	0.9
middle	1.0	99.0	0.0	0.0	92.4	0.6	0.0	95.1	4.9	2.8	89.2	0.9	2.8	97.2	0.0	12.6	86.3	1.1
richer	0.3	99.7	0.0	0.0	92.7	1.2	0.4	94.8	4.9	1.2	91.1	1.0	1.2	98.8	0.0	8.3	90.5	1.2
richest	0.0	100.0	0.0	0.0	94.4	2.2	0.9	93.6	5.5	0.0	93.5	0.4	0.0	100.0	0.0	5.4	93.5	1.0
<b>Religion</b>																		
<b>Urban</b>																		
Hindu	0.8	98.8	0.4	0.0	90.4	0.5	1.0	90.8	8.1	2.4	91.5	1.3	2.4	97.1	0.4	9.2	89.8	1.0
Muslim	0.0	100.0	0.0	0.0	89.4	1.7	1.1	89.4	9.5	2.0	90.6	0.0	2.0	98.0	0.0	11.5	86.7	1.7
Christian	0.0	100.0	0.0	0.0	85.4	0.0	0.0	95.7	4.3	0.0	93.9	0.0	0.0	100.0	0.0	13.1	86.1	0.8
Sikh				0.0	100.0	0.0					100.0	0.0				3.4	96.5	0.1
Buddhist/neo-buddhist																6.1	92.1	1.9
Jain				0.0	50.0	0.0										4.8	94.5	0.7

Jewish											100.0	0.0				0.0	100.0	0.0
Parsi/zoroastrian				0.0	0.0	0.0										100.0	0.0	0.0
No religion										0.0			0.0	100.0	0.0	26.3	73.7	0.0
other				0.0	50.0	0.0										16.7	80.6	2.6
<b>Rural</b>																		
Hindu	1.0	99.0	0.0	0.0	91.0	1.2	0.5	93.9	5.6	3.7	90.2	0.9	3.7	96.1	0.3	19.2	80.0	0.8
Muslim	0.9	99.1	0.0	0.0	89.3	1.0	0.0	96.2	3.8	2.3	85.7	1.8	2.3	97.7	0.0	21.8	77.4	0.8
Christian	2.4	97.6	0.0	0.0	79.2	2.1	0.9	92.5	6.6	3.3	91.9	0.0	3.3	96.7	0.0	28.6	69.7	1.8
Sikh										0.0			0.0	100.0	0.0	3.9	96.0	0.0
Buddhist/nepo-Buddhist				0.0	100.0	0.0										19.2	78.7	2.2
Jain				0.0	100.0	0.0					100.0	0.0				10.4	89.6	0.0
Jewish																		
Parsi/zoroastrian																0.0	100.0	0.0
No religion							0.0	100.0	0.0							34.0	65.0	1.0
other				0.0	100.0	0.0				0.0			0.0	100.0	0.0	31.3	67.5	1.2
<b>Education</b>																		
<b>Urban</b>																		
No education	0.0	100.0	0.0	0.0	85.2	1.4				3.1	89.4	1.9	3.1	96.9	0.0	21.8	77.3	0.9
Primary	1.4	98.6	0.0	0.0	85.4	0.7	0.0	60.0	40.0	4.3	90.0	0.7	4.3	95.7	0.0	12.9	86.2	0.9
Secondary	0.6	98.8	0.6	0.0	90.2	0.7	1.2	89.5	9.3	2.3	91.5	1.2	2.3	97.1	0.6	8.1	90.7	1.3
Higher	0.7	99.3	0.0	0.0	93.1	1.1	0.6	92.9	6.5	1.2	92.3	0.7	1.2	98.8	0.0	4.6	94.3	1.1
<b>Rural</b>																		
No education	2.6	97.4	0.0	0.0	83.0	2.7	0.0	85.7	14.3	7.5	87.0	0.0	7.5	92.2	0.3	33.5	65.7	0.8
Primary	1.2	98.8	0.0	0.0	89.0	0.9	0.0	90.9	9.1	2.7	88.6	0.7	2.7	96.6	0.7	20.4	78.7	0.8
Secondary	0.6	99.4	0.0	0.0	93.4	0.8	0.1	95.0	4.8	1.9	90.6	0.9	1.9	97.9	0.2	12.3	86.7	1.0
Higher	0.0	100.0	0.0	0.0	93.5	0.4	1.0	93.3	5.7	1.0	90.5	1.3	1.0	99.0	0.0	6.5	92.3	1.1
<b>Caste</b>																		
<b>Urban</b>																		



Schedule caste	0.0	100.0	0.0	0.0	88.3	0.6	2.1	87.5	10.4	1.1	92.5	0.5	1.1	98.9	0.0	11.5	87.7	0.8
Schedule tribe	0.0	100.0	0.0	0.0	89.3	1.6	0.0	100.0	0.0	0.0	95.8	0.0	0.0	100.0	0.0	12.9	85.3	1.7
O.B.C	1.1	98.7	0.3	0.0	88.8	0.5	1.1	91.3	7.6	1.9	91.2	1.2	1.9	98.1	0.0	10.1	88.8	1.1
None of them	0.0	99.4	0.6	0.0	95.0	1.0	0.6	90.9	8.5	4.7	97.9	0.0	4.7	93.8	1.6	7.0	92.1	0.9
Don't know	0.0	100.0	0.0	0.0	82.6	4.3	0.0	33.3	66.7	0.0	0.0	0.0	0.0	100.0	0.0	21.7	74.4	3.9
<b>Rural</b>																		
Schedule caste	1.1	98.9	0.0	0.0	88.6	1.3	0.0	98.0	2.0	3.7	88.8	1.4	3.7	95.6	0.7	20.9	78.4	0.7
Schedule tribe	2.3	97.7	0.0	0.0	90.6	0.2	0.0	90.3	9.7	10.3	90.8	1.1	10.3	89.1	0.6	24.8	73.8	1.4
O.B.C	1.1	98.9	0.0	0.0	91.8	0.7	0.6	94.4	5.0	2.2	90.9	0.6	2.2	97.8	0.0	20.4	78.9	0.7
None of them	0.0	100.0	0.0	0.0	90.2	2.5	0.5	93.4	6.1	1.3	95.1	0.0	1.3	98.7	0.0	13.8	85.2	1.0
Don't know	20.0	80.0	0.0	0.0	91.4	2.9	0.0	100.0	0.0	0.0			0.0	100.0	0.0	29.4	68.3	2.3

Source: NFHS 4

**Table A 2: Children fully immunized in BCG by background characteristics in Southern states**

	Andhra Pradesh			Karnataka			Kerala			Tamil Nadu			Telangana			India		
	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Don't know	Vaccination not reported	Vaccination reported	Do n't know
<b>Wealth Index</b>																		
<b>Urban</b>																		
Poorest	0.0	100.0	0.0	11.1	88.9	0.0				4.7	95.3	0.0	0.0	100.0	0	16.4	83.2	0.4
Poorer	3.0	97.0	0.0	4.9	95.1	0.0	0.0	100.0	0.0	4.2	95.8	0.0	3.2	96.8	0	13.0	86.7	0.3
Middle	6.7	92.3	1.0	5.7	94.3	0.0	0.0	100.0	0.0	6.7	93.3	0.0	6.1	93.9	0	10.8	89.1	0.1
Richer	2.9	97.1	0.0	7.3	92.6	0.1	2.4	97.6	0.0	4.5	95.4	0.1	3.8	96.2	0	8.2	91.7	0.1
Richest	2.4	97.6	0.0	8.5	91.4	0.2	1.7	98.3	0.0	4.2	95.6	0.2	3.0	97.0	0	5.2	94.7	0.1
<b>Rural</b>																		
Poorest	6.3	93.7	0.0	9.8	90.2	0.0	0.0	100.0	0.0	10.6	89.4	0.0	7.4	91.9	0.74 0741	16.8	82.9	0.4
Poorer	6.4	93.6	0.0	7.6	92.0	0.4	2.2	97.8	0.0	7.3	92.3	0.4	5.4	94.6	0	12.6	87.1	0.3
Middle	5.1	94.9	0.0	6.1	93.9	0.0	1.6	98.4	0.0	6.7	93.3	0.0	3.4	96.6	0	9.2	90.6	0.1
Richer	4.3	95.7	0.0	7.6	92.3	0.1	1.6	98.4	0.0	4.2	95.8	0.0	4.0	96.0	0	6.9	92.9	0.2
Richest	4.1	95.9	0.0	7.3	92.7	0.0	1.1	98.7	0.2	3.8	96.2	0.0	12.0	88.0	0	5.2	94.6	0.1
<b>Religion</b>																		
<b>Urban</b>																		
Hindu	1.9	97.9	0.2	6.6	93.3	0.1	0.5	99.5	0.0	4.7	95.2	0.1	2.5	97.5	0	6.2	93.7	0.1
Muslim	8.5	91.5	0.0	8.3	91.5	0.2	3.0	97.0	0.0	6.2	93.8	0.0	6.9	93.1	0	11.6	88.2	0.2
Christian	7.4	92.6	0.0	8.7	91.3	0.0	2.9	97.1	0.0	4.6	95.4	0.0	10.5	89.5	0	19.1	80.8	0.1
Sikh				0.0	100.0	0.0				0.0	100.0	0.0				2.2	97.7	0.1
Buddhist/ neo- buddhist																7.9	91.6	0.4
Jain				50.0	50.0	0.0										6.3	93.7	0.0
Jewish										0.0	100.0	0.0				0.0	100.0	0.0

Parsi/zoroastrian				0.0	100.0	0.0										0.0	100.0	0.0
No religion													0.0	100.0	0	5.3	94.7	0.0
Other				0.0	100.0	0.0										9.0	89.6	1.5
<b>Rural</b>																		
Hindu	4.8	95.2	0.0	7.2	92.6	0.2	1.1	98.9	0.0	6.1	93.8	0.1	4.6	95.3	0.09 4697	9.7	90.1	0.2
Muslim	7.4	92.6	0.0	6.8	93.2	0.0	2.9	96.8	0.3	5.5	94.5	0.0	12.2	87.8	0	16.6	83.1	0.4
Christian	8.2	91.8	0.0	4.2	95.8	0.0	0.4	99.6	0.0	6.6	93.4	0.0	6.7	93.3	0	24.4	74.9	0.7
Sikh													0.0	100.0	0	1.9	98.1	0.0
Buddhist/ neo- buddhist				20.0	80.0	0.0										18.3	80.6	1.1
Jain				33.3	66.7	0.0				0.0	100.0	0.0				10.4	89.6	0.0
Jewish																		
Parsi/zoroastrian																0.0	100.0	0.0
No religion							0.0	100.0	0.0							22.4	77.6	0.0
Other				25.0	75.0	0.0							0.0	100.0	0	13.4	86.1	0.6
<b>Education</b>																		
<b>Urban</b>																		
No education	3.2	96.8	0.0	8.9	91.1	0.0				6.8	93.2	0.0	9.8	90.2	0	15.6	84.0	0.4
Primary	1.5	97.0	1.5	3.5	95.8	0.7	0.0	100.0	0.0	5.8	94.2	0.0	2.3	97.7	0	10.3	89.5	0.1
Secondary	4.0	96.0	0.0	7.7	92.3	0.0	2.2	97.8	0.0	4.9	95.0	0.1	3.3	96.7	0	7.6	92.3	0.1
Higher	2.8	97.2	0.0	6.1	93.6	0.3	1.3	98.7	0.0	4.3	95.5	0.2	3.1	96.9	0	4.2	95.7	0.1
<b>Rural</b>																		
No education	6.1	93.9	0.0	10.4	89.3	0.3	0.0	100.0	0.0	7.3	92.7	0.0	6.2	93.5	0.30 8642	17.2	82.3	0.4
Primary	2.4	97.6	0.0	7.6	92.2	0.2	0.0	100.0	0.0	8.4	91.6	0.0	4.9	95.1	0	12.8	86.9	0.3
Secondary	6.2	93.8	0.0	5.9	94.0	0.1	1.8	98.1	0.1	5.6	94.3	0.1	3.3	96.7	0	8.6	91.3	0.2

Higher	1.6	98.4	0.0	8.8	91.2	0.0	1.0	99.0	0.0	6.4	93.6	0.0	10.4	89.6	0	5.6	94.4	0.0
<b>Caste</b>																		
<b>Urban</b>																		
Schedule caste	6.0	92.8	1.2	7.1	92.9	0.0	0.0	100.0	0.0	3.7	96.3	0.0	2.3	97.7	0	7.8	92.0	0.1
Schedule tribe	0.0	100.0	0.0	10.8	89.2	0.0	0.0	100.0	0.0	4.2	95.8	0.0	0.0	100.0	0	14.8	84.9	0.3
O.B.C	2.7	97.3	0.0	6.4	93.6	0.0	1.7	98.3	0.0	5.3	94.6	0.1	3.3	96.7	0	7.6	92.3	0.1
None of them	3.9	96.1	0.0	5.6	94.4	0.0	1.8	98.2	0.0	2.1	95.7	2.1	7.1	92.9	0	6.7	93.2	0.1
Don't know	0.0	100.0	0.0	13.6	86.4	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0	15.1	84.0	0.9
<b>Rural</b>																		
Schedule caste	5.9	94.1	0.0	7.7	91.9	0.4	2.0	98.0	0.0	6.7	93.2	0.1	6.8	92.8	0.37 7358	9.8	90.0	0.2
Schedule tribe	4.8	95.2	0.0	12.4	87.6	0.0	1.6	98.4	0.0	5.8	94.2	0.0	8.2	91.8	0	17.3	82.1	0.5
O.B.C	4.4	95.6	0.0	5.4	94.6	0.0	1.8	98.2	0.0	5.8	94.1	0.1	3.9	96.1	0	10.1	89.7	0.1
None of them	7.1	92.9	0.0	5.1	94.6	0.3	0.8	98.9	0.3	2.7	97.3	0.0	1.3	98.7	0	10.2	89.6	0.2
Don't know	0.0	100.0	0.0	17.1	82.9	0.0	0.0	100.0	0.0				0.0	100.0	0	19.2	80.2	0.6

Source: NFHS 4

**Table A3: Children fully immunized in DPT by background characteristics**

	Andhra Pradesh			Karnataka			Kerala			Tamil Nadu			Telangana			India		
	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know
<b>Wealth Index</b>																		
<b>Urban</b>																		
Poorest	0.0	100.0	0.0	20.0	80.0	0.0				14.0	86.0	0.0	0.0	100.0	0.0	23.4	76.1	0.6
Poorer	12.1	87.9	0.0	11.7	88.3	0.0	25.0	75.0	0.0	10.1	89.9	0.0	12.9	87.1	0.0	20.1	79.0	0.8
Middle	7.7	91.3	1.0	12.7	86.7	0.5	6.1	93.9	0.0	10.3	89.0	0.7	8.1	91.9	0.0	16.4	83.0	0.6
Richer	7.1	92.9	0.0	12.8	87.0	0.3	5.1	94.2	0.7	9.9	89.9	0.2	5.6	94.4	0.0	12.9	86.7	0.4
Richest	6.9	93.1	0.0	13.2	86.8	0.0	5.3	94.2	0.4	9.6	90.1	0.4	8.0	90.3	1.7	9.6	90.1	0.3
<b>Rural</b>																		
Poorest	11.6	88.4	0.0	16.0	83.8	0.3	8.3	83.3	8.3	17.9	81.5	0.7	11.9	87.4	0.7	22.8	76.5	0.8
Poorer	11.3	88.7	0.0	14.3	85.1	0.5	6.7	93.3	0.0	12.9	86.7	0.4	9.9	89.8	0.3	18.2	81.0	0.8
Middle	10.0	89.9	0.1	11.8	87.7	0.4	5.3	94.2	0.4	11.2	88.8	0.1	6.8	92.9	0.3	14.2	85.3	0.5
Richer	6.2	93.5	0.3	14.6	84.4	0.9	5.1	94.7	0.2	7.9	91.6	0.4	5.5	94.5	0.0	11.5	88.0	0.5
Richest	7.2	92.8	0.0	15.2	84.3	0.6	5.5	94.0	0.4	5.7	93.9	0.4	12.0	88.0	0.0	9.4	90.3	0.4
<b>Religion</b>																		
<b>Urban</b>																		
Hindu	6.2	93.6	0.2	11.9	87.8	0.2	4.2	95.5	0.3	10.1	89.6	0.3	4.8	94.3	0.9	11.0	88.6	0.4
Muslim	12.0	88.0	0.0	15.0	84.8	0.2	6.3	92.8	0.8	10.1	89.5	0.4	14.5	85.5	0.0	18.2	81.3	0.5
Christian	7.4	92.6	0.0	13.0	87.0	0.0	7.1	92.9	0.0	7.7	91.3	1.0	10.5	89.5	0.0	22.4	77.2	0.4
Sikh				0.0	100.0	0.0				0.0	100.0	0.0				6.0	93.8	0.2
Buddhist/neo-buddhist																11.3	87.2	1.5
Jain				0.0	100.0	0.0										9.2	90.8	0.0
Jewish										0.0	100.0	0.0				0.0	100.0	0.0
Parsi/zoroastrian				100.0	0.0	0.0										100.0	0.0	0.0

No religion													0.0	100.0	0.0	21.1	73.7	5.3	
Other				50.0	50.0	0.0										14.3	84.0	1.7	
<b>Rural</b>																			
Hindu	9.2	90.7	0.1	13.5	86.0	0.5	3.9	95.5	0.5	10.6	89.1	0.3	7.9	91.9	0.3	15.2	84.3	0.5	
Muslim	8.3	91.7	0.0	14.3	85.2	0.5	8.2	91.5	0.3	12.7	87.3	0.0	17.1	82.9	0.0	22.6	76.6	0.9	
Christian	11.5	87.7	0.8	16.7	81.3	2.1	5.8	94.2	0.0	8.2	91.8	0.0	10.0	90.0	0.0	28.2	70.7	1.1	
Sikh														0.0	100.0	0.0	5.7	94.2	0.1
Buddhist/ neo- buddhist				20.0	80.0	0.0										22.0	75.9	2.1	
Jain				33.3	66.7	0.0				0.0	100.0	0.0				12.5	87.5	0.0	
Jewish																			
Parsi/zor oastrian																0.0	100.0	0.0	
No religion							0.0	100.0	0.0							33.7	65.3	1.0	
Other				50.0	50.0	0.0								0.0	100.0	0.0	18.4	80.4	1.1
<b>Education</b>																			
<b>Urban</b>																			
No education	4.2	95.8	0.0	13.3	86.7	0.0				10.7	89.3	0.0	13.1	86.9	0.0	22.5	76.8	0.7	
Primary	7.6	90.9	1.5	13.2	86.8	0.0	0.0	100.0	0.0	8.7	91.3	0.0	9.1	88.6	2.3	16.4	83.0	0.5	
Secondary	8.0	92.0	0.0	13.0	86.7	0.3	5.2	94.2	0.6	9.9	89.7	0.4	6.5	92.9	0.6	12.2	87.4	0.4	
Higher	7.8	92.2	0.0	12.5	87.2	0.3	5.8	93.9	0.3	10.1	89.5	0.4	6.1	93.3	0.6	8.6	91.1	0.3	
<b>Rural</b>																			
No education	10.7	89.3	0.0	15.3	84.1	0.6	0.0	100.0	0.0	9.1	90.9	0.0	9.9	89.8	0.3	23.3	75.8	0.9	
Primary	7.7	92.3	0.0	12.8	87.0	0.2	14.3	85.7	0.0	14.7	84.9	0.4	6.3	92.3	1.4	18.1	81.2	0.8	
Secondary	9.2	90.6	0.2	12.8	86.6	0.6	6.2	93.5	0.4	10.6	89.1	0.3	7.0	93.0	0.0	13.4	86.1	0.5	
Higher	9.3	90.7	0.0	18.1	81.5	0.4	3.8	95.8	0.4	8.9	90.8	0.3	12.5	87.5	0.0	10.8	88.7	0.4	
<b>Caste</b>																			

<b>Urban</b>																		
Schedule caste	7.2	91.6	1.2	13.1	86.3	0.6	6.3	93.8	0.0	10.3	88.9	0.8	4.6	95.4	0.0	13.2	86.3	0.5
Schedule tribe	16.7	83.3	0.0	17.5	82.5	0.0	0.0	100.0	0.0	4.2	95.8	0.0	4.3	95.7	0.0	18.8	80.5	0.7
O.B.C	4.9	95.1	0.0	12.3	87.5	0.2	3.7	95.7	0.6	10.1	89.7	0.2	6.4	92.8	0.8	13.1	86.5	0.4
None of them	12.4	87.6	0.0	10.6	89.4	0.0	7.9	91.5	0.6	6.4	93.6	0.0	11.0	88.2	0.8	11.2	88.4	0.4
Don't know	0.0	100.0	0.0	13.6	86.4	0.0	0.0	100.0	0.0	0.0	100.0	0.0	25.0	75.0	0.0	23.5	75.9	0.6
<b>Rural</b>																		
Schedule caste	9.9	89.8	0.3	13.8	85.4	0.8	6.1	93.2	0.7	12.2	87.7	0.2	10.2	88.7	1.1	15.4	84.1	0.5
Schedule tribe	11.2	88.8	0.0	19.0	80.8	0.2	6.6	93.4	0.0	16.3	82.6	1.2	11.6	88.4	0.0	22.7	76.2	1.0
O.B.C	8.4	91.5	0.1	11.1	88.3	0.5	5.2	94.5	0.3	9.4	90.3	0.3	6.9	93.1	0.0	15.6	83.9	0.4
None of them	10.7	89.3	0.0	14.1	85.3	0.6	5.8	93.9	0.3	8.1	91.9	0.0	3.9	96.1	0.0	15.2	84.3	0.6
Don't know	0.0	100.0	0.0	20.0	77.1	2.9	0.0	87.5	12.5				9.1	90.9	0.0	24.8	73.6	1.6

Source: NFHS 4

**Table A4: Children received 3 doses of polio vaccine by background characteristics in Southern states**

	Andhra Pradesh			Karnataka			Kerala			Tamil Nadu			Telangana			India		
	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know
<b>Wealth Index</b>																		
<b>Urban</b>																		
Poorest	0.0	100.0	0.0	13.3	86.7	0.0				7.0	93.0	0.0	20.0	80.0	0.0	19.7	80.1	0.2
Poorer	21.2	78.8	0.0	7.4	92.6	0.0	0.0	100.0	0.0	7.7	92.3	0.0	6.5	93.5	0.0	16.9	82.9	0.2
Middle	11.5	87.5	1.0	11.4	88.6	0.0	6.1	93.9	0.0	9.6	90.4	0.0	8.1	91.9	0.0	14.7	85.1	0.2
Richer	8.3	91.7	0.0	10.6	89.4	0.0	5.1	94.9	0.0	7.0	92.9	0.1	8.5	91.5	0.0	12.2	87.7	0.1
Richest	8.5	91.5	0.0	12.7	87.3	0.0	5.1	94.9	0.0	7.7	92.0	0.2	8.9	91.1	0.0	9.9	90.0	0.1
<b>Rural</b>																		
Poorest	11.6	88.4	0.0	16.2	83.8	0.0	0.0	100.0	0.0	15.2	84.8	0.0	11.1	88.1	0.7	20.8	78.9	0.3
Poorer	14.2	85.5	0.3	13.8	85.8	0.4	2.2	97.8	0.0	10.8	89.1	0.1	15.0	85.0	0.0	16.7	83.1	0.3
Middle	10.7	89.3	0.0	9.6	90.4	0.0	4.9	95.1	0.0	8.7	91.3	0.0	9.5	90.5	0.0	13.1	86.7	0.2
Richer	8.3	91.7	0.0	12.5	87.3	0.1	4.2	95.6	0.2	6.5	93.4	0.1	8.7	91.3	0.0	11.3	88.5	0.2
Richest	9.3	90.7	0.0	15.2	84.8	0.0	5.5	94.3	0.2	6.9	93.1	0.0	20.0	80.0	0.0	9.6	90.3	0.1
<b>Religion</b>																		
<b>Urban</b>																		
Hindu	8.1	91.7	0.2	10.6	89.4	0.0	3.9	96.1	0.0	7.7	92.2	0.0	6.3	93.7	0.0	10.8	89.1	0.1
Muslim	15.4	84.6	0.0	12.3	87.7	0.0	6.1	93.9	0.0	8.9	90.7	0.4	14.5	85.5	0.0	15.7	84.1	0.2
Christian	11.1	88.9	0.0	10.9	89.1	0.0	7.1	92.9	0.0	7.7	91.8	0.5	15.8	84.2	0.0	20.7	79.2	0.1
Sikh				0.0	100.0	0.0				0.0	100.0	0.0				5.4	94.6	0.0
Buddhist/neo-buddhist																10.3	89.7	0.0
Jain				0.0	100.0	0.0										12.0	88.0	0.0
Jewish										0.0	100.0	0.0				0.0	100.0	0.0
Parsi/zoroastrian				100.0	0.0	0.0										100.0	0.0	0.0



No religion													0.0	100.0	0.0	15.8	78.9	5.3
Other				0.0	100.0	0.0										14.1	85.4	0.5
<b>Rural</b>																		
Hindu	10.7	89.3	0.1	12.1	87.8	0.1	3.1	96.7	0.1	8.6	91.3	0.1	11.4	88.5	0.1	14.4	85.3	0.2
Muslim	9.3	90.7	0.0	12.5	87.5	0.0	7.9	91.8	0.3	5.5	94.5	0.0	12.2	87.8	0.0	20.2	79.5	0.3
Christian	14.8	85.2	0.0	18.8	81.3	0.0	4.9	95.1	0.0	11.5	88.5	0.0	13.3	86.7	0.0	24.5	75.3	0.2
Sikh													33.3	66.7	0.0	5.5	94.5	0.0
Buddhist/ neo- buddhist				40.0	60.0	0.0										19.8	80.0	0.3
Jain				33.3	66.7	0.0				0.0	100.0	0.0				12.5	87.5	0.0
Jewish																		
Parsi/zor oastrian																0.0	100.0	0.0
No religion							0.0	100.0	0.0							29.6	69.4	1.0
Other				50.0	50.0	0.0							0.0	100.0	0.0	16.9	82.6	0.5
<b>Education</b>																		
<b>Urban</b>																		
No education	8.4	91.6	0.0	12.8	87.2	0.0				13.6	86.4	0.0	13.1	86.9	0.0	19.1	80.7	0.2
Primary	7.6	90.9	1.5	11.1	88.9	0.0	0.0	100.0	0.0	5.8	94.2	0.0	4.5	95.5	0.0	14.7	85.2	0.2
Secondary	10.5	89.5	0.0	11.3	88.7	0.0	5.0	95.0	0.0	7.2	92.7	0.1	9.5	90.5	0.0	11.6	88.3	0.1
Higher	9.2	90.8	0.0	9.7	90.3	0.0	5.5	94.5	0.0	8.7	91.2	0.1	6.1	93.9	0.0	9.2	90.8	0.1
<b>Rural</b>																		
No education	10.1	89.9	0.0	16.1	83.7	0.3	0.0	100.0	0.0	9.1	90.9	0.0	12.7	87.0	0.3	20.8	78.9	0.3
Primary	10.5	89.1	0.4	13.0	86.8	0.2	4.8	95.2	0.0	12.3	87.7	0.0	10.5	89.5	0.0	16.8	83.0	0.3
Secondary	11.5	88.5	0.0	10.6	89.3	0.1	5.3	94.6	0.1	8.4	91.5	0.1	10.2	89.8	0.0	12.9	86.9	0.2
Higher	10.1	89.9	0.0	15.0	85.0	0.0	3.8	96.0	0.2	7.9	92.1	0.0	16.7	83.3	0.0	11.1	88.8	0.1
<b>Caste</b>																		

<b>Urban</b>																		
Schedule caste	12.0	86.7	1.2	12.6	87.4	0.0	6.3	93.8	0.0	6.8	93.1	0.2	8.0	92.0	0.0	12.3	87.6	0.1
Schedule tribe	16.7	83.3	0.0	16.7	83.3	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	17.6	82.2	0.1
O.B.C	7.0	93.0	0.0	10.0	90.0	0.0	4.1	95.9	0.0	8.4	91.5	0.1	6.6	93.4	0.0	12.0	87.9	0.1
None of them	13.7	86.3	0.0	9.6	90.4	0.0	7.3	92.7	0.0	4.3	95.7	0.0	15.7	84.3	0.0	11.1	88.8	0.1
Don't know	0.0	100.0	0.0	13.6	86.4	0.0	0.0	100.0	0.0	0.0	100.0	0.0	25.0	75.0	0.0	18.3	81.1	0.6
<b>Rural</b>																		
Schedule caste	15.0	85.0	0.0	13.4	86.3	0.3	2.7	97.3	0.0	9.2	90.8	0.0	14.0	85.7	0.4	14.2	85.6	0.2
Schedule tribe	9.6	89.6	0.8	17.0	83.0	0.0	3.3	96.7	0.0	9.3	90.7	0.0	10.2	89.8	0.0	20.8	78.9	0.3
O.B.C	9.0	91.0	0.0	10.5	89.5	0.0	5.3	94.5	0.2	8.3	91.7	0.1	11.4	88.6	0.0	14.7	85.1	0.2
None of them	12.3	87.7	0.0	10.2	89.5	0.3	5.0	94.7	0.3	13.5	86.5	0.0	6.6	93.4	0.0	14.0	85.7	0.2
Don't know	0.0	100.0	0.0	20.0	80.0	0.0	0.0	100.0	0.0				0.0	100.0	0.0	20.5	77.9	1.6

Source: NFHS 4

**Table A5: Children received Measles vaccine by background characteristics in Southern states**

	Andhra Pradesh			Karnataka			Kerala			Tamil Nadu			Telangana			India		
	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know	Vaccination not reported	Vaccination reported	Do n't know
<b>Wealth Index</b>																		
<b>Urban</b>																		
Poorest	0.0	100.0	0.0	22.2	75.6	2.2				18.6	81.4	0.0	0.0	100.0	0.0	42.6	56.7	0.7
Poorer	39.4	60.6	0.0	26.4	73.0	0.6	25.0	75.0	0.0	20.2	78.6	1.2	25.8	71.0	3.2	39.3	59.6	1.0
Middle	24.0	73.1	2.9	27.1	72.1	0.8	16.3	83.7	0.0	28.2	71.3	0.5	20.2	79.8	0.0	34.9	64.2	0.9
Richer	25.0	74.6	0.4	24.9	74.7	0.4	20.9	78.4	0.7	24.1	75.4	0.5	24.8	73.5	1.7	30.4	69.0	0.6
Richest	21.5	77.3	1.2	25.6	74.3	0.2	21.8	77.6	0.6	22.2	77.6	0.2	23.6	75.5	0.8	25.8	73.8	0.4
<b>Rural</b>																		
Poorest	33.7	64.2	2.1	29.7	70.0	0.3	8.3	91.7	0.0	33.8	64.9	1.3	25.9	72.6	1.5	41.7	57.3	1.0
Poorer	32.5	66.4	1.2	31.9	67.4	0.7	20.0	75.6	4.4	28.9	70.1	0.9	28.4	70.9	0.6	37.5	61.5	1.0
Middle	27.9	71.8	0.3	29.6	69.9	0.6	21.4	77.8	0.8	27.0	72.8	0.2	26.3	71.8	1.8	32.5	66.8	0.7
Richer	29.0	70.7	0.3	29.4	70.2	0.4	18.5	80.0	1.5	22.0	77.3	0.7	26.9	72.7	0.4	29.4	69.9	0.7
Richest	27.8	72.2	0.0	21.9	77.5	0.6	20.8	78.1	1.1	19.9	79.3	0.8	36.0	64.0	0.0	27.0	72.4	0.6
<b>Religion</b>																		
<b>Urban</b>																		
Hindu	22.2	76.7	1.0	24.5	75.0	0.5	18.7	81.3	0.0	24.4	75.2	0.4	19.7	79.6	0.7	28.0	71.5	0.5
Muslim	31.6	66.7	1.7	28.8	70.6	0.5	23.7	75.5	0.8	21.3	77.9	0.8	33.8	63.4	2.8	37.1	62.1	0.8
Christian	25.9	74.1	0.0	15.2	84.8	0.0	21.4	75.7	2.9	24.0	75.0	1.0	31.6	68.4	0.0	40.6	58.4	1.0
Sikh				0.0	100.0	0.0				0.0	100.0	0.0				22.0	77.9	0.1
Buddhist/neo-buddhist																24.4	73.2	2.4
Jain				0.0	100.0	0.0										23.9	76.1	0.0
Jewish										0.0	100.0	0.0				0.0	100.0	0.0
Parsi/zoroastrian				0.0	100.0	0.0										0.0	100.0	0.0

No religion													0.0	100.0	0.0	26.3	68.4	5.3
Other				50.0	50.0	0.0										33.3	63.1	3.6
<b>Rural</b>																		
Hindu	29.1	70.3	0.5	29.6	70.0	0.5	17.0	81.5	1.5	25.8	73.5	0.6	26.9	72.0	1.1	33.8	65.5	0.7
Muslim	30.6	69.4	0.0	30.7	68.2	1.0	23.5	75.0	1.5	27.3	72.7	0.0	31.7	68.3	0.0	41.6	57.3	1.1
Christian	32.8	65.6	1.6	37.5	60.4	2.1	23.0	76.5	0.4	23.8	76.2	0.0	40.0	60.0	0.0	47.2	51.0	1.8
Sikh													0.0	100.0	0.0	24.4	75.3	0.3
Buddhist/ neo- buddhist				60.0	40.0	0.0										35.9	61.9	2.2
Jain				33.3	66.7	0.0				0.0	100.0	0.0				37.5	62.5	0.0
Jewish																		
Parsi/zor oastrian																100.0	0.0	0.0
No religion							50.0	50.0	0.0							46.9	50.0	3.1
Other				75.0	25.0	0.0							100.0	0.0	0.0	38.2	60.3	1.5
<b>Education</b>																		
<b>Urban</b>																		
No education	26.3	73.7	0.0	26.6	72.4	1.0				17.5	82.5	0.0	31.1	67.2	1.6	41.1	58.0	0.9
Primary	21.2	74.2	4.5	25.0	75.0	0.0	0.0	100.0	0.0	17.4	81.9	0.7	15.9	79.5	4.5	33.5	65.5	0.9
Secondary	26.6	72.4	0.9	26.5	73.0	0.5	20.2	79.2	0.6	24.1	75.4	0.4	23.4	75.4	1.2	29.9	69.5	0.6
Higher	18.4	80.9	0.7	22.2	77.5	0.3	23.0	76.4	0.6	25.9	73.6	0.5	22.7	77.3	0.0	24.7	75.0	0.3
<b>Rural</b>																		
No education	30.4	68.3	1.3	28.0	71.6	0.4	0.0	100.0	0.0	22.8	75.9	1.3	21.3	77.5	1.2	41.1	57.7	1.2
Primary	25.0	74.6	0.4	29.5	69.4	1.1	33.3	61.9	4.8	27.4	71.6	1.1	27.3	70.6	2.1	36.8	62.2	1.0
Secondary	30.6	69.1	0.4	29.5	70.0	0.4	19.5	79.4	1.2	25.6	73.8	0.6	28.5	70.8	0.7	32.5	66.8	0.7
Higher	28.7	71.3	0.0	39.2	59.6	1.2	20.0	78.6	1.4	26.7	73.0	0.3	41.7	57.3	1.0	30.3	69.1	0.5
<b>Caste</b>																		

<b>Urban</b>																		
Schedule caste	26.5	69.9	3.6	27.4	71.4	1.1	14.6	85.4	0.0	25.5	73.8	0.7	25.3	74.7	0.0	31.7	67.7	0.6
Schedule tribe	38.9	61.1	0.0	30.8	69.2	0.0	33.3	66.7	0.0	25.0	75.0	0.0	26.1	73.9	0.0	36.4	62.4	1.2
O.B.C	20.8	78.6	0.5	24.7	75.0	0.3	20.7	78.7	0.6	23.7	75.9	0.4	21.3	77.0	1.7	30.5	69.0	0.5
None of them	29.4	69.3	1.3	26.3	73.2	0.5	22.0	77.4	0.6	21.3	78.7	0.0	27.6	71.7	0.8	28.4	71.1	0.5
Don't know	0.0	100.0	0.0	22.7	77.3	0.0	0.0	100.0	0.0	0.0	100.0	0.0	50.0	50.0	0.0	41.6	57.0	1.5
<b>Rural</b>																		
Schedule caste	26.8	72.0	1.1	29.7	69.8	0.5	21.1	77.6	1.4	29.0	70.4	0.6	28.3	70.6	1.1	34.8	64.5	0.7
Schedule tribe	33.6	66.4	0.0	37.8	61.1	1.1	21.3	77.0	1.6	31.4	67.4	1.2	25.9	72.1	2.0	41.0	57.6	1.4
O.B.C	30.2	69.2	0.6	26.9	72.7	0.4	20.3	78.0	1.7	23.5	75.9	0.6	26.5	72.6	1.0	34.6	64.7	0.7
None of them	29.0	71.0	0.0	31.1	68.6	0.3	18.5	80.7	0.8	27.0	73.0	0.0	28.9	71.1	0.0	33.1	66.3	0.6
Don't know	25.0	75.0	0.0	34.3	57.1	8.6	25.0	75.0	0.0				45.5	54.5	0.0	42.3	55.1	2.6

Source: NFHS 4

