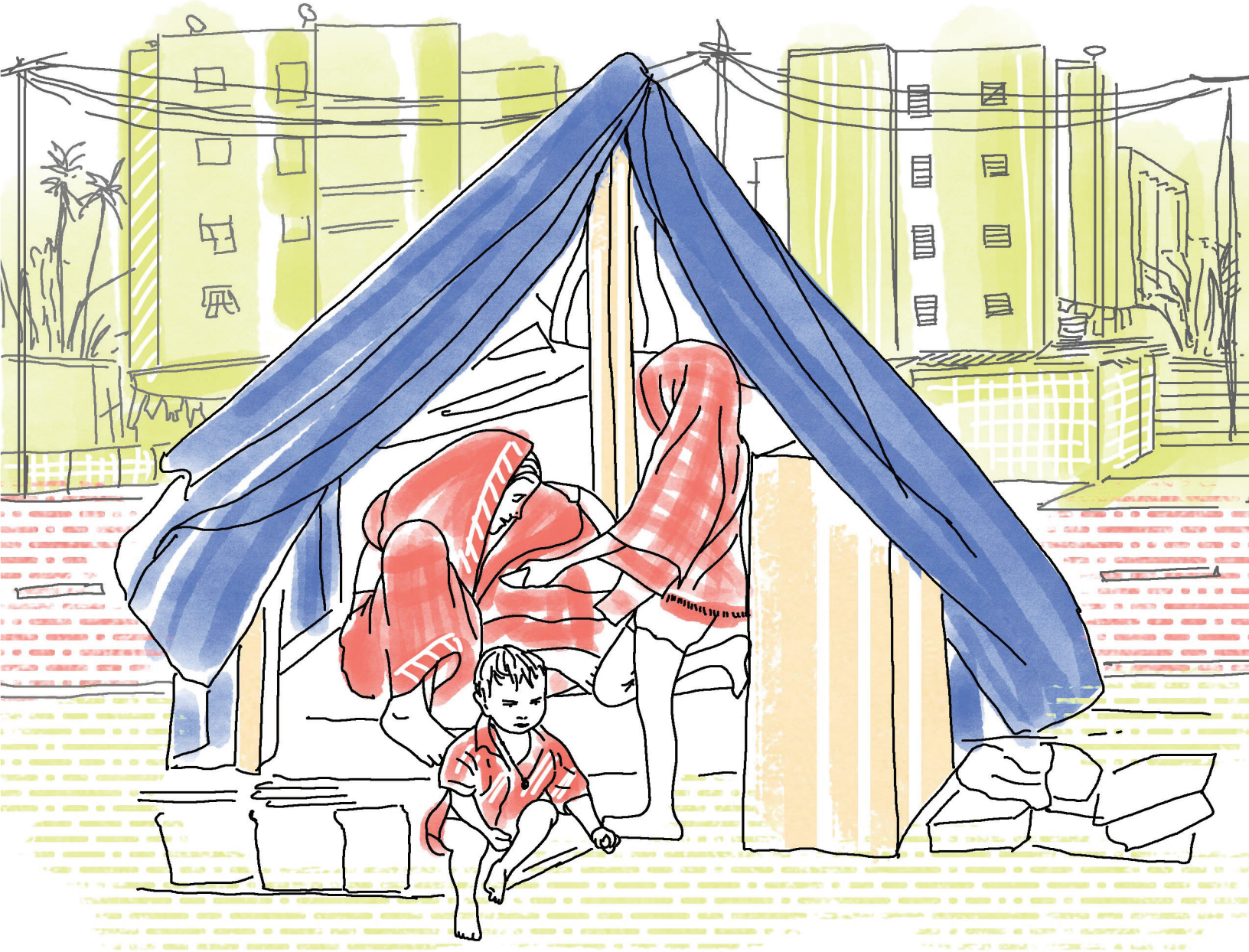
Azim Premji University

Health Care Equity in Urban India



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Contents

Abbreviations

ANC	Ante Natal Care
ANM	Auxiliary Nurse Midwife
APU	Azim Premji University
ARI	Acute Respiratory Infection
ARS	Arogya Raksha Samiti
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy
BBMP	Bruhat Bengaluru Mahanagara Palike
BCC	Behaviour Change Communication
BMC	Brian Mumbai Municipal Corporation
BMI	Body Mass Index
BMTC	Bengaluru Metropolitan Transport Corporation
BPL	Below Poverty Line
BWSSB	Bengaluru Water Supply and Sewerage Board
BWWF	Beedi Workers' Welfare Fund
CBO	Community Based Organisation
CD	Communicable Disease
CFAR	The Centre for Advocacy and Research
CGHS	Central Government Health Scheme
CHE	Catastrophic Health Expenditure
CHO	Corporation Health Officer
CHW	Community Health Worker
CRPF	Central Reserve Police Force
CSDH	Commission on Social Determinants of Health
CSR	Corporate Social Responsibility
DoHFW	Department of Health and Family Welfare
DOTS	Direct Observation Treatment Short - course
DWCD	Department of Women and Child Development
EPF	Employees' Provident Fund
ESI	Employees' State Insurance
ESIS	Employees' State Insurance Scheme
FGD	Focus Group Discussion
FHC	Family Health Centre
FRU	First Referral Unit
FYP	Five Year Plan

GDP	Gross Domestic Product
GOI	Government of India
GP	Gram Panchayat
HD	Health Department
HH	Household
HIG	High Income Group
HWC	Health and Wellness Centre
ICDS	Integrated Child Development Services
IEC	Information Education and Communication
IFPRI	The International Food Policy Research Institute
IPHS	Indian Public Health Standards
IPP	India Population Project
IS	Iswar Sankalpa
JHI	Junior Health Inspector
JPHN	Junior Public Health Nurse
KMC	Kolkata Municipal Corporation
KSRTC	Karnataka State Road Transport Corporation
LGBT	Lesbian, Gay, Bi-sexual and Transgender
LHV	Lady Health Visitor
LMICs	Low and Middle - Income Countries
MAS	Mahila Arogya Samiti
MHC	Mental Health Centre
MHO	Municipal Health Officer
MLoE	Ministry of Labour and Employment
MMU	Mobile Medical Unit
MO	Medical Officer
MoHFW	Ministry of Health and Family Welfare
NCD	Non-Communicable Disease
NFHS	National Family Health Survey
NGO	Non-Governmental Organisation
NHM	National Health Mission
NHP	National Health Policy
NHSRC	National Health Systems Resource Centre
NIMHANS	National Institute of Mental Health and Neurosciences
NMEP	National Malaria Eradication Programme
NPP	National Population Policy
NRHM	National Rural Health Mission
NSS	National Sample Survey
NUHM	National Urban Health Mission

OOP	Out - of - Pocket
OPD	Out - Patient Department
PFHI	Publicly Funded Health Insurance
PHC	Primary Health Centre
PHRN	Public Health Resource Network
PMJAY	Pradhan Mantri Jan Arogya Yojana
PMSSY	Pradhan Mantri Swastya Suraksha Yojana
PNC	Post Natal Care
PPP	Public Private Partnership
PSU	Public Sector Undertaking
RBSK	Rashtriya Bal Swasthya Karyakram
RCH	Reproductive and Child Health
RMC	Raipur Municipal Corporation
RSBY	Rashtriya Swasthya Bima Yojana
RTI	Reproductive Tract Infection
SEWA	Self Employed Women's Association
SHC	Sub-Health Centre
SMC	Surat Municipal Corporation
SNEHA	Society for Nutrition, Education and Health Action
SOCHARA	Society for Community Health Awareness Research and Action
SPARC	Society for Promotion of Area Resource Centres
SRS	Sample Registration System
SSK	Swasthya Suvidha Kendra
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
SWAN	Stranded Worker's Action Network
TB	Tuberculosis
TBHV	Tuberculosis Health Visitor
TMC	Thiruvananthapuram Municipal Corporation
TRG	Technical Resource Group
UCHC	Urban Community Health Centre
UFWC	Urban Family Welfare Centre
UHC	Urban Health Centre
UHCRC	Urban Health and Climate Resilience Centre
UHCRCE	Urban Health and Climate Resilience Centre of Excellence
UHRC	Urban Health Resource Centre
ULB	Urban Local Bodies
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children's Emergency Fund

UPHC	Urban Primary Health Centre
UTI	Urinary Tract Infection
VHAA	Voluntary Health Association of Assam
VHND	Village Health and Nutrition Day
WHO	World Health Organisation

List of Tables

List of Figures

Executive Summary

India is witnessing rapid (and often unplanned) urbanisation, with urban population doubling from about 18% in 1960 to 34% in 2019. In just ten years between 2001 and 2011 there was a net increase of almost 100 million people in urban areas (Census of India 2011). A critical concern is the health inequity faced by the rising population of urban poor, who now comprise almost 30% of all poor in the country. This health inequity is largely due to the intersection of three factors:

- The category of 'urban poor' is heterogeneous and dynamic, and comprises multiple vulnerabilities that are contextual, layered and determined by a number of factors relating to their living conditions, social position (gender, caste, class, religion) and nature of livelihood
- Access to health care is hampered by poor availability of public health facilities and resulting high out-of-pocket expenditure for private care, as a result of which health outcomes of the urban poor are significantly worse than the relatively well-off; and
- The 'urban health system' is fragmented, fragile and poorly governed, with blurred lines of responsibility and accountability between multiple government agencies.

This report adopts an equity orientation to urban health in India, focusing mainly on understanding and addressing the health vulnerabilities of poor and marginal groups in urban areas. It contributes to our understanding of:

- the nuances of health vulnerability of the urban poor
- their challenges in accessing health care and
- possible actions towards addressing urban health inequity

It is based on primary data collected from interviews with practitioners and civil society organisations working on issues of urban equity and social justice; in-depth examination of health systems in four urban centres of different sizes and scale; secondary data from available literature as well as the Census of India and national health surveys; and the understanding and experience of the Public Health team at the Azim Premji University. Our findings are described briefly below.

Health Vulnerability

The categorisation ‘urban poor’ does not capture the heterogeneity of vulnerable groups in urban areas adequately. There are several vulnerable groups in urban areas with distinct health vulnerabilities. Many of these groups are ‘invisible’ and systematically excluded from mainstream urban society. While a majority of vulnerable households live in recognised and unrecognised slums, vulnerable groups such as the homeless can be found beyond the slums.

The experience of health vulnerability is also dynamic, influenced by urban development activities, seasons of the year and specific policy interventions. More recently, migrant households have been impacted, due to measures implemented to contain the COVID-19 pandemic. This is further complicated by the constant movement of the poor within the city and between their home villages and the city, based on changing circumstances, creating further challenges in consistent engagement and follow-up.

Various factors intersect to contribute to health vulnerability in urban areas: poor living conditions, including inadequate and insecure housing, and poor access to water, sanitation and nutrition; social factors such as gender, caste, religion and associated social exclusion; and occupational challenges, such as intermittent or hazardous work conditions. These factors combine to create specific facets of vulnerability experienced by different groups. Typical solutions such as relocation and housing projects for slums dwellers were reported to often create new challenges, such as access to health care and livelihood.

Data that can unpack health disparities in urban areas at a sufficient level of granularity is scarce. Available data shows a clear disparity in urban health status when disaggregated by wealth status. Life expectancy among the lowest wealth quintile is reported to be lower by 9.1 years and 6.2 years among men and women respectively, as compared to the richest quintile. Even for non-communicable diseases such as high blood pressure and diabetes - which are generally perceived as problems mainly affecting the well-off - the difference in prevalence of these conditions between 15–54 year-old men in the lowest and highest wealth quintiles is negligible. For some health conditions, the disease burden is higher among the urban poor even when compared to the rural poor, such as underweight,

obesity and tuberculosis among children. The exposure to risk factors such as alcohol, *khaini* and smoking are much higher among the urban poor as compared to the urban rich and the rural poor. Mental ill-health is also more prevalent in urban areas, especially in lower socio-economic groups and women.

Urban Health Governance

Urban health systems have developed in a haphazard way since Independence, as specific policy attention to urban health has only been very recent in the form of the National Urban Health Mission (NUHM-2013). This initiative was a milestone in systematising urban health care provisions and recognising the special needs of vulnerable communities. Yet its operationalisation across urban geographies has been inconsistent.

The complexity of defining the word 'urban' is itself a barrier to understanding the 'urban health system'. While the Census of India uses certain parameters including population size and density, other definitions co-exist, including that of the NUHM. In addition, previously rural areas have now been designated as urban. The 74th Constitutional amendment (1992) was meant to delineate the structure of urban governance, including in health care, by specifying the roles and responsibilities of Urban Local Bodies (ULBs). However, the issue of overlap between the jurisdiction of ULBs and state government institutions has not been addressed, further complicating the organisation and planning of urban health facilities.

The multiplicity of health care providers in urban areas – the State, municipalities and private entities – is a major challenge to accessibility, quality and accountability. Unlike in rural areas, which have been the focus so far of policy concern, the urban health system has developed in an organic manner, subsuming various entities that provide health care without any particular cohesive logic. In many places there are old, well established hospitals that continue to be the hub of service delivery. Elsewhere, health centres have been established in keeping with NUHM norms, but not necessarily where they are needed the most. This begs the question: is there such a thing as an urban 'health system'?

Our examination of health systems in four urban centres – Bengaluru (Tier I), Raipur (Tier II), Thiruvananthapuram (Tier II) and Davanagere(Tier III) – shows that there is little uniformity in urban health systems, and that the 'system' takes many shapes and forms. The range and access to private medical care at all levels is poorly understood. Although

public health facilities are used quite extensively, access to private care is also convenient and available in a range of possibilities. The major governance challenges facing urban health care have to do with overlapping jurisdictions between administrative entities, lack of coordination between different service providers and poor accountability to the community it serves.

Availability, Access and Cost of Care

Availability of urban public health services - via urban Primary Health Centres (UPHCs) - falls far short of the government's own norms by about 40% across the country. In addition, the available facilities are poorly distributed, and often located far away from slums and other areas that house the most vulnerable.

This compels even the poor to access services in the private sector, so that it is the dominant provider of both out-patient and in-patient services in urban areas. High expenses due to hospitalisation - a reality for most urban poor who have no access to state-run or private insurance programmes - is a major cause for people to fall further into poverty. Our evidence from Bengaluru shows that 30% of even the poorest quintile seek delivery care from private sources. Since there is a 10-fold difference in cost between public and private facilities, this adds to their financial burden significantly. Such inequities in access to and cost of services result in the poor delaying or entirely forgoing health services, particularly those with chronic conditions requiring long-term care.

Quality of care is a source of concern both in the public and private sectors. Lack of sufficient health personnel in government facilities, including doctors, nurses, and other paramedics, as well as poor infrastructure and lack of essentials such as drugs and consumables are a direct result of abysmally low budget allocations to urban health. Private care suffers from a diverse and unregulated set of providers, many of whom are under or unqualified.

The low level of funding for urban health and nutrition is a key cause of poor availability and quality of care. Funding for urban primary health is shrinking across the country; and it is estimated that a three-fold increase is required to provide full coverage of basic primary services. ULB funds cannot compensate for this shortfall, since most ULBs are underfunded and have competing priorities.

Lessons Learned and Way Forward

Four broad areas of interventions emerge from our analysis:

i. **Strengthening community connect:** Successful health interventions tend to prioritise helping the community to help themselves. This could be done in several ways:
   a. by building up Urban Local Governance (ULB) at the community level by empowering and resourcing Ward Committees to work towards more responsive health care in their communities;
   b. by building sustained community engagement through a network of community volunteers, peer leaders and women's collectives, who know local concerns intimately and have the trust of the communities they serve, and
   c. recruiting many more and strengthening the capacity of frontline workers such as ASHAs, ANMs and AWWs, and empowering them to proactively address the needs of the communities they serve.

ii. **Expanding the evidence-base for health interventions:** Having a grounded and in-depth understanding of who the vulnerable communities are, where they live and what specific health needs they experience has been found to be essential to prioritising interventions.
   This can be done by:
   a. comprehensively assessing vulnerability on different aspects of inequality such as living conditions, social exclusion, income and the like and relate them to adverse health outcomes;
   b. building a comprehensive and dynamic health database, including GIS mapping, to better understand the scale and scope of health problems; and
   c. filling a critical knowledge gap by promoting research around urban health, particularly the social determinants of health vulnerability, governance challenges of ULBs and regulation and accountability of both private and public health care.

iii. **Streamlining health provision to address health equity:** Urban health systems are under-resourced and struggling to cope; this hits the poor particularly hard. Some effective interventions include:
   a. fulfilling NUHM norms for human resources at the PHCs – doctors, nurses and other paramedics – and improving PHC infrastructure. This would allow for

integrated care from screening and diagnostics to treatment and follow-up at one spot; and also reduce unnecessary referrals;

b. strengthening the secondary/referral level with better infrastructure and quality of care;

c. reducing health care costs by ensuring free medicines and treatment, and through improving nutrition using approaches such as community kitchens.

iv. **Promoting equity through policy:** Bringing together the multiple actors engaged in health care delivery in urban spaces – public and private – under a broad policy umbrella is essential to create a universal health system, thus enhancing health care access for all urban residents. This would reduce the fragmentation of urban health systems as well as leverage available health resources towards a common goal: addressing the evolving urban health needs. This should be coupled with stronger regulation and oversight of private health providers to address concerns around cost and quality of care in the private sector.

Urban health is at a crossroads: with the current pace of urbanisation, the numbers of urban poor will only grow, presenting a major challenge to urban health systems. Without urgent systematic action, and with the long-term devastation caused by the pandemic to the economic, social and health outcomes of the poor, it is very likely that health inequalities will multiply alarmingly in the coming years. We hope that this report will serve as an inspiration as well as a resource to prioritise urban health action.

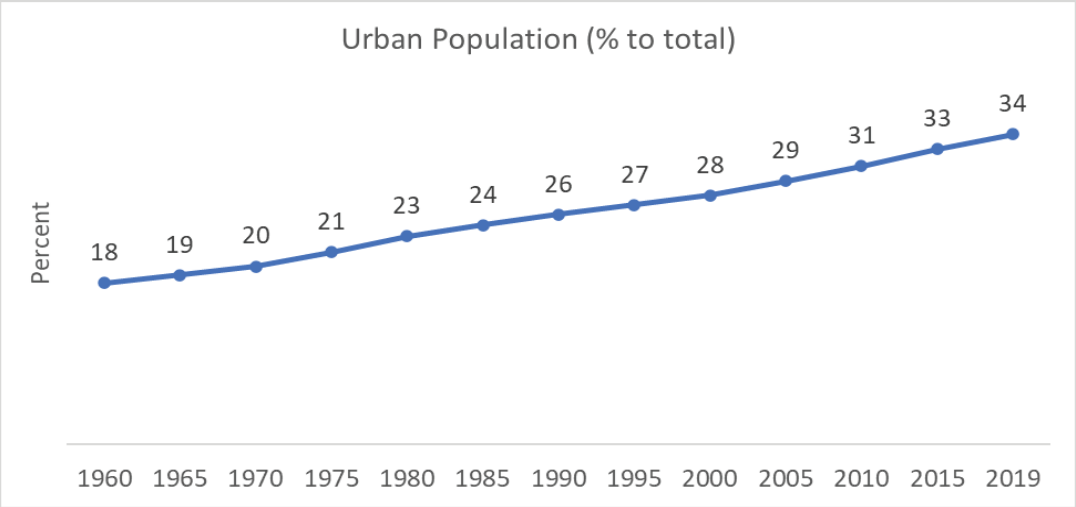
1. Background

We are at a clear turning point at which we are moving towards an increasingly urbanized world. We need to appreciate the positive and negative impact on health due to urbanisation and take appropriate actions to address them. There is a pressing need for action now to ensure that growing cities are healthy cities. (WHO 2010)

The World Health Organisation (WHO) succinctly draws attention to *why* urban health matters in a rapidly urbanising world with its concomitant opportunities as well as challenges. While urbanisation and its impact on health has been discussed sporadically since the 80s, global momentum on advocacy, research and programmes focussing specifically on the health of the urban poor in Low- and Middle-Income Countries (LMICs) began more recently, in the late 2000s (Shawar and Crane 2017). There are many possible reasons for the low political priority for an urban health agenda in LMICs. These include a development agenda that is largely rural oriented, limited data specifically disaggregated to assess the magnitude and severity of urban health challenges, and lack of evidence on how best to address these challenges apart from a limited shared understanding of the problem itself (Shawar and Crane 2017:1161-1162). India is no exception and is only now slowly catching up with global trends in recognising the problem of urban health and the need to prioritise it.

India's urbanisation, though rapid, has a different pace and characteristics across different cities and towns, in different states. Figure 1.1 based on the compilation of Census of India (2011) data shows how the share of the urban population to the total has virtually doubled from about 18% in 1960 to 34% in 2019. Just between 2001 and 2011 there was a total population net increase of almost 100 million people in urban areas. The urban population in India is expected to increase to more than 550 million by 2030 (PwC and Save the Children 2015).

Figure 1.1 Proportion of urban population to total population: India



Source: https://datatopics.worldbank.org/world-development-indicators/ accessed on April 12, 2021

States like Tamil Nadu, Kerala, Maharashtra and Gujarat are the most urbanised, with close to 50% of their populations now living in cities and towns. The number of urban centres with a population of over 1 lakh has increased from about 150 in 1971 to more than 500 in 2011 with several large metropolitan centres emerging (such as Bengaluru and Pune) or expanding (such as Mumbai and Delhi). The share of urban population in small towns also shows an increase, with 68% of India's urban population in fact living not in metros but in towns with a population of less than 100,000. This further justifies the need to also focus on smaller towns and cities in understanding the health issues and concerns.

While the proportion of people residing in urban India is increasing, what is of greater concern is the rise in the proportion of urban poor: 'the share of the urban poor in the total number of poor is growing and is now close to 27%' (PwC and Save the Children 2015). The 2011 Census of India shows that there are '13.7 million slum households in India that live amidst inadequate basic amenities, poor health outcomes, insecurity as well as unstable incomes' (*ibid*:10). The slum population does vary across cities from >40% in Mumbai to about 30% in Kolkata and Chennai and 10% in Bengaluru.

Urbanisation is associated with better social and economic opportunities, however, equitable provision of services including health in urban areas have not kept pace. Urban areas have a heightened risk of several social and environmental factors including housing, transportation, levels of pollution (air, water, noise), sanitary conditions, work conditions, social capital and cohesion, that pose specific health challenges. The WHO

(2010) talks about how urban areas are facing a triple health burden including growing prevalence of non-communicable diseases, the persistent threat of infectious disease outbreaks as well as an increased risk of violence and injuries. However, the health burden is unequally distributed.

Urban poor bear a disproportionate burden of health risks and poor outcomes

> *In every corner of the world, certain city dwellers suffer disproportionately from poor health, and these inequities can be traced back to differences in their social and living conditions… Understanding urban health begins with knowing which city dwellers are affected by which health issues, and why (WHO-UN-HABITAT 2010).*

There is growing evidence on the disproportionate burden of disease and ill-health among the urban poor compared to non-poor households in urban areas (UHRC 2017; Gupta et al. 2009; Malhotra 2021; Technical Resource Group (TRG) 2014; PwC and Save the Children 2015). In fact, select studies indicate that the health status of the urban poor including the slum dwellers can be compared with the rural poor on select health indicators (TRG 2014). Rural-urban comparisons have assumed an 'urban advantage' (better medical care access and outcomes including other socio-economic opportunities in urban areas compared to the rural), but this masks health inequalities in urban areas. The health vulnerability of the urban poor is illustrated by their higher probability of dying: men from the poorest urban households had a 2.3 times greater risk of mortality compared to those from the richest households; and the probability was 3.7 times for women. This disparity was worse in the working age group for men, and early reproductive age group for women, indicating potential challenges in access to maternal health services, among other things (Asaria et al. 2019; NFHS-4 (2015-16) and SRS (2011-2015)).

The urban poor are highly susceptible to communicable diseases due to the degraded nature of their living and working environment (Malhotra 2011; Karn et al. 2003) though there is also increasing evidence of rising burden of non-communicable diseases (Bhojani et al. 2013; PHRN 2012; Lumagbas et al. 2018).

Such evidence highlights the importance of disaggregated data for urban areas to understand and address the health inequalities among different sections of the urban population (WHO 2016). Further, the category of 'urban poor' itself does not adequately

capture the extent of health inequalities. Urban poverty requires nuanced and sophisticated analysis decoding the heterogeneity – spatial and temporal - within the category of 'urban poor'. Recognising this, the Technical Resource Group for the National Urban Health Mission in its report (2014) shifts the focus from 'poverty' to vulnerability. It has offered a comprehensive picture of how to approach health vulnerability in urban areas that lies at the intersections of social, occupational and residential factors. It thus draws attention to a range of vulnerable groups in urban areas. Such a conceptualisation reinforces the need to examine health vulnerability necessarily in relation to its social determinants including the 'physical and socio-economic environment, lack of social networks, social and economic isolation, monetisation of basic needs, and the exclusionary attitude of the state towards the poor' (TRG 2014: 14). The COVID-19 pandemic has accentuated the already existing vulnerability of several marginalised groups including those in the informal sector, migrant workers, daily wagers, homeless among others due to loss of livelihoods and housing; lack of access to food, health care[1] and fragmented social safety nets and social networks (Adhikari et al. 2020; Ghosh et al. 2020; Prasad et al. 2020).

Access to health care: Missing links in the 'urban health system'

Health system preparedness is key to ensure inclusive and healthy cities/towns. How are urban health systems equipped to provide equitable access to affordable and quality health care? There are several critical gaps in the urban health system that need urgent attention. First, what is the architecture of the 'urban health system'? In rural India, there is a population-based and geographically demarcated health system consisting of a network of sub-health centres, primary health centres, along with community health centres or district hospitals as the referral units. This neat health system architecture is missing in urban areas. An array of health care providers/institutions does exist and function in urban areas, but without an articulated and cohesive policy framework that can be referred to as 'urban health system'. Second, who is responsible for providing health care in urban areas?

1 While we are conscious that health care and health care are used interchangeably in literature, for the purposes of this report we use health care where we are referring to it as a noun (eg. health care system) and health care when we are referring to it as an adjective (eg. health care professionals)

Urban health care provision is unusually complex because health services are provided by various governmental departments and institutions (state health department, industrial hospitals (ESIS), urban local bodies, central government health schemes) and different cities and towns have different combinations of such architecture (Mullen et al. 2016). Such fragmented responsibility has an important bearing on provision of equitable, accountable and responsive public health care often leading even the poor to access care in the private sector. Third and more importantly, in addition to multiple government agencies, there is a complex and vast network of private providers (unqualified, qualified, single doctor clinics to corporate hospitals) providing a wide range of services ranging from diagnostics to speciality services. Private health care is unregulated and often of varied quality (Chaudhuri and Datta 2020; Duggal 2009; Sheikh et al. 2013). With a diverse and unregulated private sector, access to affordable health care has been a critical concern for the poor and vulnerable groups. Evidence is mounting on the high out-of-pocket expenses borne by these groups, often leading to discontinuation of care specifically for chronic diseases (Balarajan et al. 2011; Bhojani et al. 2012; Bhojani et al. 2013; Sharma et al. 2020).

Policy attention to urban health concerns is very recent

In India, the policy focus on urban health concerns was missing for a long time till the need for improving primary urban health care infrastructure figured in the 10th and 11th five-year plans and crystallised in the National Health Policy 2002. Policy was not particularly concerned with issues such as access, equity and quality in urban health care, as the health policy trajectory shows (we have discussed this in detail in section 3 in this report). The National Health Policy 2002 distinctly acknowledged the meagre and highly unorganised nature of public health services in urban areas though it did not specifically refer to the special needs of the urban poor and marginalised. It is only in 2013 that the National Urban Health Mission (NUHM) explicitly problematised urban health in seeking to strengthen health services for the urban poor. It seeks to offer a norms-based 'architecture' of urban health system through the community, primary and referral levels. Following the NUHM, the National Health Policy 2017 reiterates the priority to address the 'primary health care needs of the urban population with a special focus on poor populations living in listed and unlisted slums, other vulnerable populations such as homeless, rag-pickers, street children, rickshaw pullers, construction workers, sex workers and temporary migrants' (National Health Policy 2017: 10). However, not much is known about how NUHM has been implemented in different states and whether it has enhanced access to quality health care among the poor and vulnerable groups.

In addition to the NUHM, the 74th Constitutional Amendment Act of 1992 pertaining to urban governance bears specific significance for health care provision in urban areas. This amendment paved the path for the constitution of urban local bodies (ULB) based on the population criterion for urban local governance. In India, the Municipal Corporations, Municipal Councils and *nagar* panchayats are the key institutional forms of ULBs in urban governance. The 12th Schedule that was inserted defines the powers, authority, and responsibilities of ULBs. Of the 18 items listed in the 12th schedule, 'public health sanitation, conservancy and solid waste management' (no.7) directly addresses the issue of public health in general and health services in particular. The Constitutional impetus for decentralised governance thus has a direct bearing on the organisation of health services in urban areas. These developments, while offering important opportunities, also draw attention to the complex nature of health governance in urban areas with little or no coordination among institutions. The WHO (2010) reminds us that 'good urban health governance helps ensure that opportunities and advantages are more evenly distributed, and that access to health care is fair and affordable'. It is increasingly being recognised that one needs to rethink 'urban health systems' (Elsey, H et al. 2019) taking into account the complexity of health and governance challenges in urban areas in a rapidly urbanising context.

Hence it becomes imperative to examine the complexity of governance challenges in urban areas to explore concrete action areas to address health inequities. There are important lessons to be learned based on the evidence on existing interventions by different actors/organisations and this extends to insights from the response to the COVID-19 pandemic too. The report draws on these urban health interventions to lay out a road map for addressing urban health inequities.

About the report

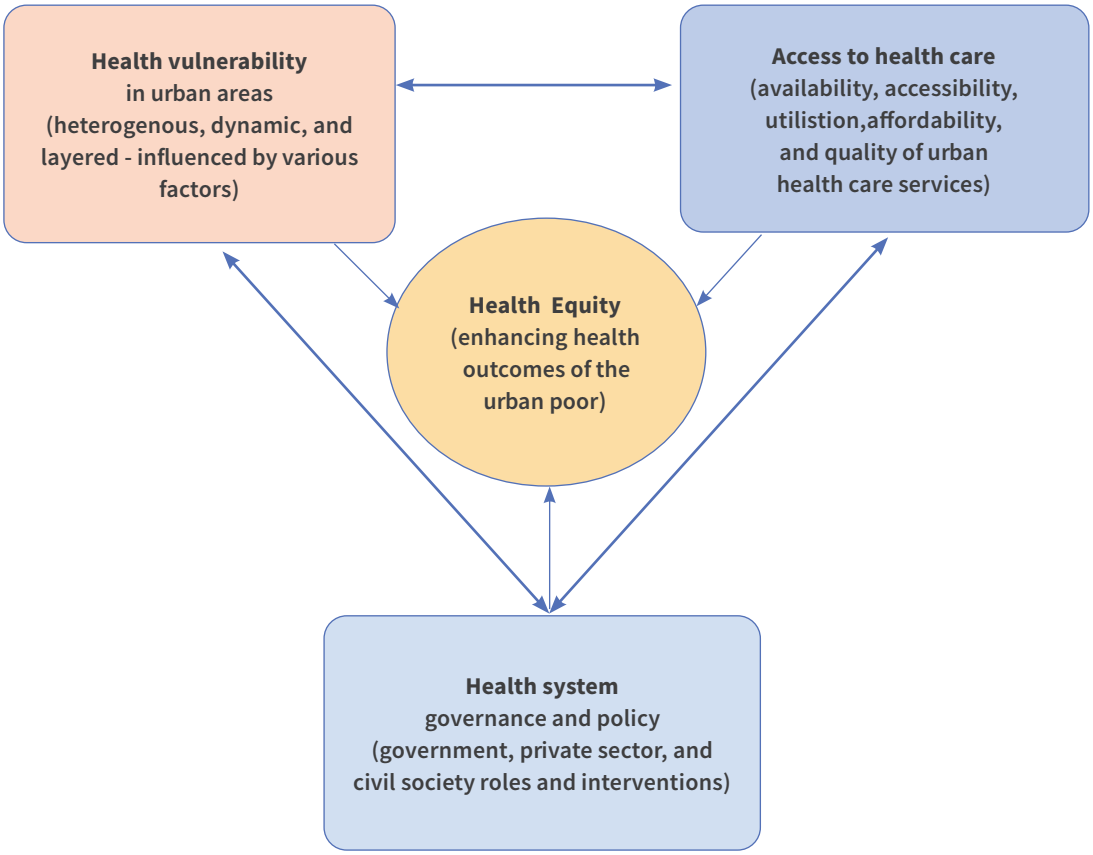
Putting equity at the centre of approaching urban health, the report dwells on three important questions: Who are the urban poor and what determines their health vulnerabilities? How is urban health care organised and how does it impact equitable access to quality health care? What actions are needed and by whom to address health vulnerabilities of the poor and marginal groups in urban areas and promote health equity? Our examination of the evidence shows that urban health inequity lies at the intersection of three major dimensions: multiple and layered vulnerability of urban populations; challenges in access to affordable and quality health care; and a messy and poorly governed health system as illustrated in Figure 1.2.

Literature on urban health, specifically on understanding of the urban health systems in India, is relatively scarce. Barring a few, (Mullen et al. 2016; TRG 2014) most studies highlight either the health challenges faced by the urban poor or a few offer city specific suggestions for provision of health services, but rarely combine these two. This report seeks to fill this gap by expanding our understanding of:

i. the nuances of the health vulnerabilities of poor and marginal groups
ii. access to health care by mapping health care provision across four different types of urban centres and illustrating the specificities of health governance in urban areas; and
iii. possible actions towards addressing urban health inequity.

The focus of the report is illustrated in Figure 1.2.

Figure 1.2. Addressing health inequities in urban areas



The rest of the report is organised into four sections. **Section 2** discusses how we understand health vulnerability of the urban poor. It unpacks the different vulnerable groups and asks if the category of 'urban poor' captures the vulnerability of a range of groups and communities adequately. It examines different factors that determine health vulnerabilities of these groups to demonstrate how vulnerability is indeed dynamic, contextual, and layered. It then illustrates how such vulnerability is reflected in their disproportionate burden of health risks and outcomes. **Section 3** examines health care governance in urban areas. It traces the policy trajectory of urban health care as well as the constitutional amendments to strengthen urban governance via urban local bodies and discusses its implications on accountability in health services provision. It draws on illustrations of health care provision in four cities/towns. These include a) Bengaluru, the capital city of Karnataka in south India b) Raipur, the capital of Chhattisgarh state in central India, c) Thiruvanthapuram, the capital city of Kerala in the south and d) Davanagere town, the district headquarters in Davanagere district in Karnataka India, representing different tiers of urban spaces (tiers I, II, III respectively). **Section 4** highlights

key concerns and challenges around accessibility, affordability, cost, and quality health services and the last and **Section 5** collates our lessons and suggests possible actions in intervening in urban health inequity at different levels including community, health system and policy.

The report is based on data drawn from a) detailed interactions with practitioners and civil society organisations working on urban health (consultations, key informant interviews and vignettes) b) inputs from health officials in select cities c) analysis of select databases including NFHS and Census of India d) compilation and analysis of data on the government websites and e) secondary literature on urban health. Details of the methodological process of writing this report are discussed in Appendix 1.

This report is intended to benefit actors and organisations interested in or working on urban health and interrelated issues in urban areas. This includes the Government, Corporate Social Responsibility (CSR) organisations, community-based organisations, donor agencies, national and international NGOs, academicians, and students of health systems.

2. Health Vulnerability in Urban Areas

Summary

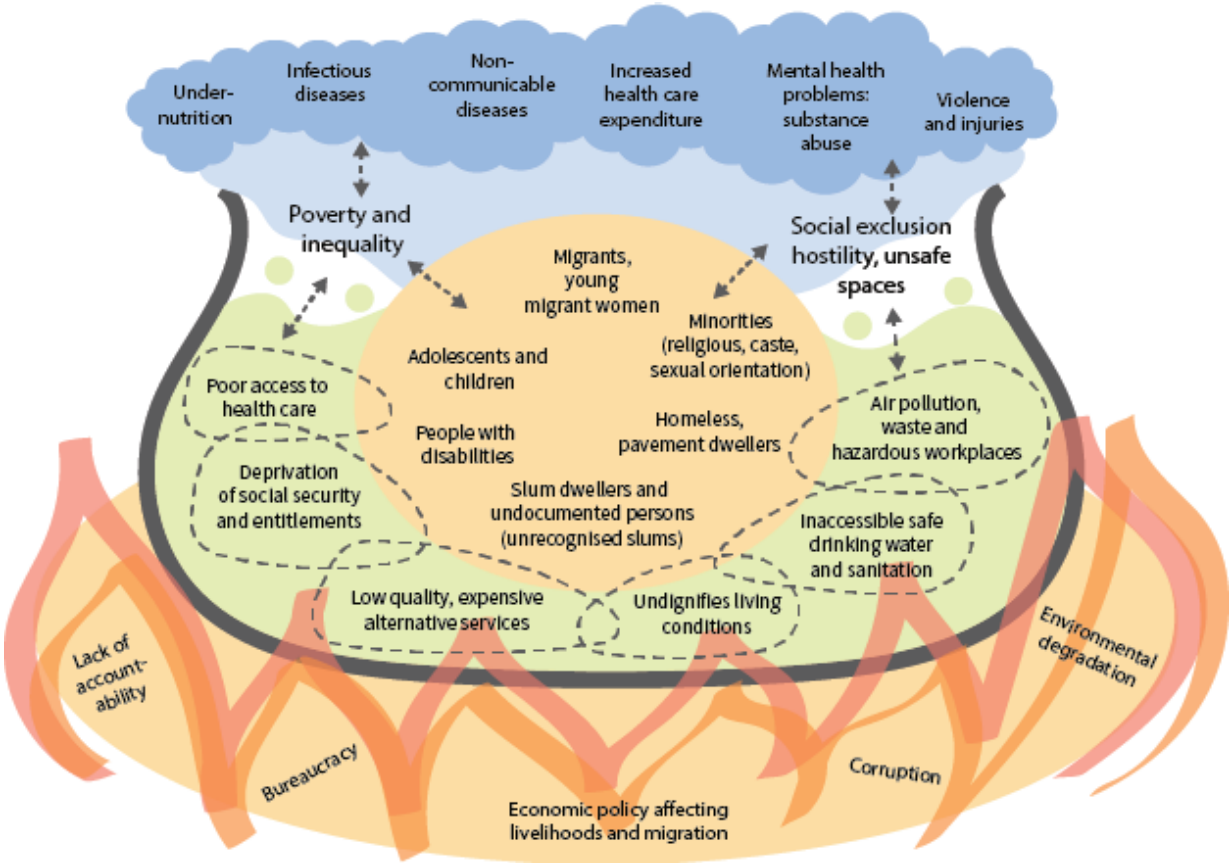
- The category of 'urban poor' does not capture the heterogeneity of vulnerable groups in urban areas. There are different groups with distinct vulnerabilities, including those who remain invisible to the state rendering them deeply vulnerable.
- The experience of vulnerability is dynamic, layered and intersectional. It lies broadly along three dimensions: living conditions, social categories and occupational context.
- An important element of vulnerability is poor living conditions, due to inadequate and insecure housing, and persistent problems with poor access to water, sanitation and hygiene (WASH). In addition, the location of urban poor settlements exposes residents to air pollution, road traffic accidents and the impacts of climate change.
- Another element is the social dimension of vulnerability: this includes the social exclusion relating to gender, religion, caste, class, migration and age.
- The third element contributing to vulnerability is the nature of the occupations available to the urban poor. The COVID-19 pandemic has starkly revealed, for example, the vulnerability of those who migrate to urban centres in search of employment and livelihood.
- These vulnerabilities are reflected in their disproportionate burden of ill-health: risk factors and diseases are often worse among the urban poor, even when compared with rural poor for some indicators such as child undernutrition, obesity and tuberculosis. Contrary to what may commonly be expected, the prevalence of non-communicable diseases such as diabetes and hypertension are comparable across wealth quintiles in urban areas.
- A nuanced understanding of urban vulnerability is necessary in order to address the critical health disparities and health inequity experienced by the urban poor.

"We are not all in the same boat…we are in the same storm. Some have yachts, some canoes and some are drowning" - a meme on Facebook, in the context of the COVID-19 pandemic

The COVID-19 pandemic indeed has further exposed social inequalities in health, urging the need for an equity lens in the public health response (Prasad et al. 2020). While health inequalities are not peculiar to the pandemic, and have long existed, it has served as a stark reminder about the nature, extent and determinants of health inequalities in urban India. The WHO Commission on Social Determinants of Health (CSDH) has emphasised the impact of the conditions that people are born into, live in, and work in, on the health of individuals and communities. The CSDH also highlights the role played by class, gender and racial inequities (CSDH 2008).

In this section of the report, we examine the health vulnerability of the urban poor; and discuss how vulnerability is contextual, dynamic, layered and linked to a number of factors operating at different levels, resulting in a disproportionate burden of diseases and health concerns among vulnerable groups (Figure 2.1).

Figure 2.1: Complex interactions precipitating urban health vulnerability



In the first part, we ask 'who are the urban poor' unpacking the heterogeneous and dynamic nature of vulnerable groups in the urban context. We then unravel the intersectional nature of health vulnerability; ending with evidence on the burden and distribution of various health concerns. We draw on the existing literature, consultations we held with civil society organisations from different parts of India and health care workers from Bengaluru in South India as well as interviews and written vignettes shared by NGOs working on urban health.

2.1 Who are the urban poor? Heterogeneity and dynamic vulnerability amoung the urban poor

"The urban poor are far from being homogenous and comprise several sub-groups that differ socially, economically, and geographically" and "have distinct characteristics and needs" (TRG 2014).

Various efforts have been made to identify vulnerable groups in urban areas and describe their vulnerability, most recently in the context of the COVID-19 pandemic (for example, by Ghosh and colleagues (2020). A broad blanket category of "urban poor" masks the heterogeneity and dynamic nature of vulnerability in the urban population. Three broad dimensions have been identified that contribute to urban vulnerability: residential, social and occupational (TRG 2014). It is important to acknowledge that these dimensions do not exist in isolation, and can often impact the same groups cumulatively (WHO 2016). Additionally, vulnerable groups and the nature of their vulnerability are not static but are deeply influenced by changes in policy and other environments.

The groups that have been recognised as vulnerable include homeless persons, beggars, street children, commercial sex workers, construction workers, elderly poor, disabled persons, persons with mental illness, LGBT community, seasonal and cyclical migrants (PHRN 2012; TRG 2014). Our urban health consultations and organisational vignettes further identified adolescents, waste pickers, young migrant women, pavements dwellers, homeless with mental health conditions as vulnerable groups highlighting the heterogeneity among the urban poor. Some of these groups are invisible, and some even actively persecuted, due to various factors such as lack of official documents, not living in a recognised slum, marginalised occupations, and those with pre-existing health conditions such as disabilities (TRG 2014).

"Slums" and their residents have often been used to identify urban poverty and the vulnerable. While a significant number of the urban poor live in slums, and slums are indeed a "formal expression of exclusion in urban areas" (WHO 2016), not all vulnerable groups are found in slums. This is clear even by looking at the earlier listed vulnerable groups, such as pavement dwellers (Nolan 2015). In addition, slums themselves are not homogenous. For example, one international analysis indicated that one in ten slum households were relatively affluent (Harpham 2009). In addition, the definition of slums varies internationally and within national institutions in India[2], which has implications for identifying the urban poor and vulnerable. The official recognition or notification of a slum is important and necessary in India in order to improve the chances for civic services such as water and sanitation. Several urban poor settlements, despite having been around for years, have not been officially recognised or notified (Pinto 2012; Nolan 2015). However, even for legal slums, the proportion of slums benefiting from such schemes is abysmally low at 32% (TRG 2014).

Recognising the urban poor is also important from the perspective of accessing government benefits. For example, as slums expand, there are "pockets in urban areas which are uncovered" by official surveys in Mumbai, leading to underestimates in calculations for take-home rations and provisions as part of schemes such as the Integrated Child Development Services (Interview, SNEHA). This exclusion is further demonstrated through a survey of urban poor settlements in Bengaluru where a high proportion of households had voter cards (70%), as compared to ration (35.9%) and caste identity cards (23.8%), despite 63.2% of the surveyed households being of scheduled castes and tribes (Pinto 2012).

Another recent survey from various urban poor and vulnerable settlements in Bengaluru showed that among respondents, 3.9% had only an Aadhar Card and 0.96% had only a ration card (CFAR 2019). Such insights reveal the blind spots in identifying the vulnerable who may benefit most from such schemes.

2 While the definition in the Census is based on legality, the one in the National Family Health Survey is based on the enumerator's observation. The United Nations Program on Human Settlements (UN-HABITAT) defined slums as "a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services". These include the lack of any of the following: "access to improved water; access to improved sanitation; durability of housing; sufficient living area; and security of tenure" (WHO 2016)). The shelter characteristics in the UN definition would also apply to those urban poor residents living outside slums, for instance, the homeless and street children (TRG 2014). Hence estimates of slum populations vary, and it was found that the UN definition always provided the highest estimates for proportion of urban poor among the alternatives, and was also most predictive of poor health outcomes (Nolan 2015).

"Many of the worst-off in these groups are in effect part of an 'invisible population' that is systematically excluded from mainstream urban society" (WHO 2016).

Besides formal and informal settlements, there are also several homeless individuals and households, and the numbers have been growing (increased from 1.87 lakh to 2.56 lakh between 2001 and 2011) (Iswar Sankalpa 2021). They are a "highly heterogeneous group of persons ranging from recent migrant workers to people suffering from a variety of disabilities (including mental illness)" (Ekjut 2016).

Homeless persons with mental illness were found to lack identification, unable to give past history of illness and also did not have a support structure, making them especially vulnerable (Iswar Sankalpa 2021). With no access to something as basic as a stove, homeless persons were largely dependent on buying cooked food, and a third of them reportedly subsisted on rice, starch and potato, indicating a deficient diet (Ekjut 2016).

"Think of vulnerability as a process rather than a state or static characteristic" (TRG 2014).

The dynamic nature of health vulnerability in urban areas is related to:

i. urbanisation as a process, which is characterised by migration of persons into urban areas
ii. geographic expansion of urban areas, and
iii. changes in economic policies.

People migrate to urban areas not just due to the "urban pull" - related to better opportunities for those skilled or educated - but also the increasingly nonviable livelihoods in rural areas in agriculture and wage labour, leading to a "rural push" and an "urbanisation of poverty" (TRG 2014; PwC and Save the Children 2015). This could narrow the gap in health indicators between urban and rural areas (WHO 2016), requiring increased attention to ensuring equitable access to health care in urban areas. Also, most of this growth in urban population in India is expected to occur in smaller cities (TRG 2014; PwC and Save the Children 2015), and the concerns could manifest differently in various settings. Cities, unfortunately, have not been able to systematically improve infrastructure to accommodate needs of the migrant populations, leading to concentrated disadvantage[3].

3 This was especially noted for cities that "grew too quickly" (WHO 2016). Such a situation was found to be characterised by growing informalisation, increasing pressure on resources leading also to inflation, furthering inequalities, compounded by violence and crime (TRG 2014). Rapidly growing cities also meant reduced returns for labour alongside increasing cost of living [cited in (Yenneti et al. 2016)]. The vulnerability of peri-urban areas in the process of urbanisation was also noticed, especially in the situation of increasing informal settlements in those areas (WHO 2016).

One aspect of the dynamic nature of the urban poor population is in terms of their settlements which "(are) constantly changing from time to time, even from month to month", as these households "keep shifting" even within the city and/or "lot of back-and-forth movement" between rural and urban areas (APU Urban Health Consultations). This movement is related to external pressures, such as forced evictions (at least 11 slum evictions across India during 2013 (PwC and Save the Children 2015) as well as precarious work conditions as many work in construction sites or other informal work.
The experience of SWAN (Box 2.1) shows how the challenges faced by migrant population differed based on the specific nature of their health problems during the COVID-19 lockdown in 2020. We also see how the challenges pushed them into greater health vulnerability as the pandemic progressed. Box 2.1.

Box 2.1: Locked out from accessing health care, SWAN, 2021; Appendix 4a

Locked out from accessing health care

SWAN recounts how the vulnerability of different sections of migrants got accentuated with varying health care needs during the COVID-19 lockdown in 2020 in India.

The vulnerabilities changed over time too—desperate calls of hunger in the initial days were soon followed with urgent requirements for cash to pay for essentials such as cooking gas and medicines. …. As the lockdown extended, SWAN began to see an increased appeal for prescription medicines taken by elderly who were suffering from diabetes, thyroid problems and heart conditions as well as others suffering from chronic stomach and liver conditions. One of the most affected seemed to be those suffering from chronic kidney ailments.... The help sought was for rations, medicines and for medical check-ups that were due.

The stress and anxiety of worrying about food, and dwindling cash had begun to take its toll on the mental health of the workers. Callers broke down on the phone, incoherent. They had very little food to eat, had lost their jobs, were out of whatever money they had and worried about their families with them or back in their hometowns. SWAN received a call from a young mother in Hyderabad with a one-year-old child. Her husband who was being treated for depression had run out of medication and she had no idea where she could get the medicines.

Some groups become additionally vulnerable due to loss of their livelihood. For instance, sex workers who initially faced difficulty in accessing food, were eventually asked by landlords to "vacate their houses", being left with "nowhere to go" (Interview, Iswar Sankalpa). Such challenges were also noted during other watershed moments in policy

such as demonetisation and introduction of GST, for instance, when waste pickers, who are in a "very cash-oriented trade", were severely affected (APU Urban Health Consultation I). Thus, vulnerability is far from static.

2.2 A toxic cocktail: intersectional nature of vulnerability

It is well recognised that health vulnerability is necessarily intersectional and layered (CSDH 2008; Kovats et al. 2003; Nutters 2012; TRG 2014). We illustrate this intersectional nature of vulnerability under three broad dimensions including living conditions, social and occupational vulnerability and how these intersect with health risks reiterating that these dimensions do not operate in isolation.

2.2.1 Living conditions

> *"The civic services in the slums are very poor, particularly sanitation, drinking water and waste disposals in most places are not adequate or mostly absent adding to the burden of sickness and disease, especially recurrent infections amongst children." (Interview, SOCHARA)*

Living conditions are an important factor determining health vulnerability. Lack of basic services and amenities exposes the urban poor to many health risks. One of the main problems identified is lack of access to water, sanitation and hygiene (WASH) in many urban poor settlements, and this has persisted over several years. A study in Mumbai conducted in four poor settlements including slums, pavement dwellers and squatters had indicated that sanitation, water and housing were the top three priority concerns for the households in these settlements (Karn et al. 2003).

Emerging data from the National Family Health Survey (NFHS) – 5 indicates that urban areas are almost fully covered in terms of access to improved drinking water sources (IIPS 2020). However, disaggregated data from 2015 revealed that access to an improved drinking water source is high across wealth quintiles (Table 2.1). Challenges of adequate, reliable supply, and quality of water continue for vulnerable populations. For example, one study from Ahmedabad demonstrated that the disparities between local, affluent households as compared to migrant, poor households could result from opportunistic and extortionist behaviour from political and private players; with water of uncertain quality leading to higher incidence of waterborne diseases in poor households (Saravanan et al. 2016).

Table 2.1: Access to improved drinking water source*and sanitation in urban and rural India, by wealth

	Access to improved drinking water sources*		Access to improved sanitation*	
Wealth quintile	Urban (%) (SA+)	Rural (%) (SA+)	Urban (%)	Rural (%)
Lowest	92 (92.3)	88.2 (88.3)	21.7	8.0
Second	92.2 (93.6)	89.5 (90.3)	47.1	30.3
Third	90.4 (93.7)	89 (91.8)	71.7	56.0
Fourth	90.1 (95.6)	87.9 (93.7)	90.5	86.5
Highest	90.2 (96.7)	90.2 (95.2)	97.6	97.8
Overall	90.4 (95.5)	88.8 (90.1)	85.2	42.7

*Based on the definition provided by Croft et al. (2018); +bottled water was included as a source of improved drinking water; SA, sensitivity analysis

Source: NFHS-4

Access to sanitation also continues to be a challenge. A few years ago, access to toilets cost an individual in Mumbai over INR 300 each month. High costs were also reported for using bathing facilities in the slums of Ahmedabad (TRG 2014). Data from 2015 showed major disparities in access to improved sanitation in urban areas, despite the overall coverage being high at 85.2% (Table 2.1). Waste water often stagnates in urban poor settlements, indicating a larger failure to meet the growing demands on these resources and services in urbanising areas (WHO 2016).

In addition, location of urban poor settlements makes the population more vulnerable to air pollution, physical inactivity, road traffic incidents and also to the impacts of climate change (WHO 2016). The monsoon season is identified as especially challenging for health conditions in many such settlements and worse in flood prone areas, as illustrated in Box 2.2.

Box 2.2: Insights of compounded urban health vulnerability from a hilly and forested part of Guwahati city by VHA-Assam, Appendix 4c

Insights on compounded urban health vulnerability from a hilly and forested part of Guwahati city - VHA-Assam

Jyotinagar comprises of hilly tracts and some forest land, populated mainly by migrant labourers, petty traders and BPL groups. While a majority of the households living by the roadside are well off, households on the hilly tracts are mostly from marginal income groups engaged as petty traders, wage labourers, rickshaw/cart pullers and hawkers. Despite its proximity to Guwahati city, basic amenities are lacking.

Many of the project areas under Panikhaity GP are located in the foothills/forest fringe amid paddy fields, with a heterogeneous population of migrant and permanent settlers belonging to indigenous groups like the Bodos, Garos, Karbis, Nepalis, Assamese and Bengali, from mixed religions. Most of the households do not have access to safe drinking water (which they purchase from private parties), safe and hygienic toilets, electricity, proper housing and so on. Food and nutrition are compromised since the brick kilns make the soil unfit for cultivation of fruits and vegetables and they cannot afford to purchase them either.

Cases of malaria are seen due to heavy rainfall and resulting waterlogging and submersion for many months of the year. In Jyotinagar, unregulated earth cutting and deforestation of the hilly tracts along with construction of houses on the hill sides, lead to flash floods and landslides particularly during the rainy season. Though there are no specific slum areas, most people live in congested, sub-standard housing conditions, with poor hygiene and sanitation, leading to diseases such as respiratory infections, TB, diarrhoea and now, COVID-19.

Governmental housing projects were more acceptable to those living in newer settlements and at imminent risk of eviction, despite poor environmental conditions (Jain and Bazaz 2020; Karn et al. 2003). These new governmental housing projects provide safer physical structures, but poorer access to essential services, especially "health and education", due to their geographic location, leading to informalisation of services and increasing costs (Jain and Bazaz 2020). However, many people are still dependent on temporary shelters in deplorable conditions. SAHAYOG shares the plight of those living in select slums of Lucknow (also see Appendix 4e)

> *"In some of the slum areas people live under temporary shelters they have constructed with bamboo and polythene on disputed land; hence they are constantly in danger of displacement by the municipal corporation and landowners."*

In other cases, pavements dwellers' constant quest for a habitat renders them deeply vulnerable. SPARC – who have been working with this group in Mumbai since the 1980s – has more details, as seen below (Box 2.3).

Box 2.3: Pavement dwellers and their quest for a secure habitat in Mumbai, SPARC, Appendix 4b

Pavement dwellers and their quest for a secure habitat in Mumbai

Pavement dwellers remain one of the most marginalised city residents, with extremely precarious residency tenure and face constant evictions for having 'encroached' public spaces and hampering regular road traffic. The temporary nature of their 'stay', and the absence of a 'clear address', ensures they will never get formal access to government subsidies, water or sanitation services. Often informally acquired necessities like water, costs several times more than that paid by city residents for the same quantity. Large portions of income are spent on water, sanitation, food and rebuilding shacks, that are constantly demolished by city authorities, leaving little by way of financial resources to ensure their health needs. The risky nature of their habitat, especially for young children, places a double burden on women to supervise children at all times and arrange for supervision during times when they have to go for work (often low paid domestic work).

The health risks of living along a pavement and inhaling smoke from vehicle emissions as well as dust all day is humongous, but not studied deeply. The danger of being injured by moving traffic is substantial, especially among young children. When SPARC started work with the pavement dwellers in the late 1980s, tuberculosis and malnourishment in children were prominent issues.

2.2.2 Social vulnerability

"One of the worst places in the world to be a mother is in an urban slum."
(WHO 2016)

Social positions relating to gender, religion, caste, class, migration and age and their intersections explain health risks among the urban poor and vulnerable groups. Young "newly married migrant" women are reported to be "especially vulnerable", finding it intimidating to be in a place without any social network, constant back and forth movement between the village and the city with no linkages with social and health services (Interview, SNEHA). Women in general are perceived to face domestic violence in urban poor settlements across large cities of India (APU Urban Health Consultations I and II). In addition, girls and women endure discrimination - especially reported from Muslim communities in Kolkata - in the form of restricted mobility and not being allowed to participate in vocational training activities outside their locality (Interview, Iswar Sankalpa).

Another manifestation of the vulnerability of women is illustrated in a study from Mumbai where they shoulder the economic burden as well as a major share of domestic responsibilities, exacerbated with alcoholism among many male spouses (Ajgaonkar et al. 2020; TRG 2014). As these women struggle to cope with looking after their families while earning a livelihood, they are left with little choice but turn to "junk food" as a quick, easy and cheap way of feeding their children. These foods were also reported to be ubiquitous in some urban poor settlements in Mumbai (Ajgaonkar et al. 2020). Over 8% of women respondents from a survey in urban poor settlements in Bengaluru reported reduced food intake during pregnancy due to financial constraints and unsupportive spouses (Pinto 2012).

The burden faced by women to feed their families got further compounded during the lockdown for the COVID-19 pandemic. SWAN reported several incidents, for example, in Mumbai, an expecting mother with two children had food she could stretch for just four days. In addition, women with abusive husbands, and single mothers who had to take on the burden of feeding elderly and children were found to be even more vulnerable. See more in Appendix 4a.

Besides women, several other groups experience socially mediated health vulnerability. Migrants in general are reported to be vulnerable because of temporary stays in cities, further compounded by virtue of their religion, caste, age, and hazardous nature of their occupation. For sex workers for example, “stigma is the main challenge”, which also influences their access to care. Those living with HIV/AIDS also face such stigma (Interview, CFAR).

Adolescents are identified as vulnerable in various ways as illustrated in the Box 2.4.

Box 2 4: Vulnerability among adolescents as recounted by many organisations. See Appendix 4.d, e and f

Vulnerability among adolescents as recounted by many organisations

Domestic abuse and addiction to whitener/thinner/correction fluid and petrol sniffing among adolescents are high in the slums of KG Halli in Bengaluru. School dropout rates are also high in these slums and many young boys are rag pickers who spend their daily earnings on their addiction. (Sarvagna Health Care Institute, Bengaluru)

Girls and women who live in a shared space lack separate toilets, washrooms and safe spaces. At their workplace (where they work as domestic help), they are not allowed to use the toilets in the buildings that they work in. This increases the risk of UTI and other health problems. Poor economic conditions and social crises push men and boys in these communities towards substance abuse, also leading to domestic violence against women and girls. The situation worsened during the pandemic as the level of aggression increased due to lack of livelihood in these families. (SAHAYOG, Lucknow)

Adolescents experience multiple health problems. RBSK data revealed that 10.8% students from secondary schools experienced clinical anaemia, dental problems, respiratory issues, and skin and vision problems. 0.7% were referred to higher centres for treatment. Similarly, ICDS data revealed that 36% girls had low BMI, while 11% were obese
(UHCRCE, Surat)

Other social factors such as gender, class, religion, migration and age intersect in multiple ways to produce layered vulnerabilities among the poor in urban areas.

2.2.3 Occupational vulnerability

"Many urban poor do whatever they get on a daily basis, which is so uncertain and low paid. Some will sell balloons today, tomorrow something else." (Interview, Iswar Sankalpa).

The heterogeneity of the urban poor is also evident in occupations. Among those living in urban poor settlements, "some are self-employed, some are employed, mostly women as house helps especially in slums near middle-class and upper-class areas…there are also workers who work in the local industries and offices, mostly males" (Interview, SOCHARA). Most men are wage labourers, carpenters, auto-rickshaw drivers, petty shop owners, construction workers, among others (APU Urban Health Consultation I). Sanitation workers, both female and male, are another important vulnerable group found in all cities and towns. In Guwahati, common occupations also included rickshaw/cart pullers and hawkers (Appendix 4c). The main challenges faced by the urban poor are insecure livelihood, unemployment, and hazardous occupations. The uncertainties around their livelihoods and unemployment are linked to mental health issues, especially among young people, who are expected to earn for their families (Interview, Iswar Sankalpa). Hazardous and exploitative work conditions are also reported to be more common in urban poor settlements (TRG 2014; Mishra, Joseph and Lobo 2019). Just like the challenges faced by migrant workers (Box 2.1), domestic help, too, face various challenges at the workplace, as illustrated in Box 2.4.

Thus, the various factors related to living conditions, social characteristics and occupation, individually and collectively affect health vulnerability in urban areas. These intersecting factors contribute not just to exposure to hazards and development of diseases, but also influence access to health care. The latter has been discussed in the subsequent section.

2.3 Tipped scales: disparities in health status and disease burden

The vulnerability of the urban poor and their exposure to various hazards in the urban context contributes to the risk of several diseases. The full extent of urban health inequalities is unknown (TRG 2014), since large-scale surveys do not (and possibly cannot) cover all the nuances of vulnerability and associated health outcomes; nor do they cover those who are homeless or institutionalised. Another challenge - that emerged from our consultations and interviews - is that the dynamic nature of health vulnerability cannot be

captured adequately by cross-sectional data. Despite these limitations, such secondary data can provide valuable insights into the health status of the general urban population and some of the vulnerable groups.

Life expectancy, an important indicator of human development, is 9.1 years lower among males and 6.2 years lower among females in the poorest versus the richest wealth quintile in urban areas. In addition, 15-20 and 20-25 year-olds have a higher risk of dying of 4.2 times and 5.5 times respectively (Asaria et al 2019). This could be due to poor access to maternal health services, as well as the relatively higher rate of "underage pregnancy" with its associated "reproductive health risks" among poorer and migrant households in the urban population (Interview, MAMTA).

Non-communicable diseases (NCDs) are of relatively greater concern in urban areas as compared to communicable diseases (Menon et al 2019). Recent data show that the prevalence of overweight and obesity among adults aged 15 – 49 is higher in urban areas, particularly among women. In most urban areas, the prevalence has increased over the five-year period between 2015 and 2020, especially among men (IIPS, 2020; IIPS and ICF, 2017). The prevalence of high blood sugar among women and men aged above 15 years is also uniformly higher in urban areas across all states (IIPS, 2020; IIPS and ICF, 2017). Obesity among men aged 15-54 years was substantially higher among the higher wealth quintiles, but it was also prevalent in the lowest wealth quintile, and higher among the urban poor as compared to the rural poor (7.6% vs 4.9%), as seen in Table 2.2 below. This also indicates the obesogenic environment in urban areas, which may be a combination of high consumption of processed foods and inadequate scope for physical activity.

Table 2.2: Risk factors for NCDs among men aged 15 to 54 years by wealth quintiles and residence

	Overweight or obese		At least one high BP reading during survey, or currently taking BP medication		Self-reported diabetes	
Wealth quintile	Urban(%)	Rural (%)	Urban (%)	Rural (%)	Urban (%)	Rural (%)
Lowest	7.6	4.9	25.0	21.8	5.4	8.2
Second	12.2	9.7	25.3	22.9	4.3	6.8
Third	17.4	16.9	26.7	27.1	6.0	8.1
Fourth	26.8	23.4	31.9	30.8	6.7	7.3
Highest	34.9	30.6	32.1	34.9	6.4	9.1
Overall	27.5	14.8	30.5	26.2	6.2	7.7

Source: NFHS-4

Table 2.2 illustrates how the **prevalence of high blood pressure, and self-reported diabetes are comparable across wealth categories, and only marginally lower among the urban poor as compared to the affluent in India.** The growing burden of NCDs among the poor has been well documented (Bhojani et al. 2013a; Gowda et al. 2015) and is specially worrying because they tend to seek health care less often (WHO 2016). Frontline health workers from Bengaluru reported regularly encountering individuals with diabetes, cataract, hypertension, kidney problems, thyroid problems, and asthma during their work. Waste pickers were reported to have more cardiac problems (APU Urban Health Consultation I). **A higher proportion of urban poor men consumed alcohol and khaini (chewable tobacco) as compared to rural poor,** as seen in Table 2.3.

Table 2.3: Proportion of men who reported consuming alcohol, consuming khaini, or having recently smoked, by region and wealth quintile

	Alcohol consumption		Khaini consumption		Smoked in the 24 hours prior to survey	
Wealth quintile	Urban (%)	Rural (%)	Urban (%)	Rural (%)	Urban (%)	Rural (%)
Lowest	40.0	35.5	30.2	28.0	13.6	8.7
Second	33.5	30.0	19.5	17.1	13.6	10.1
Third	32.9	29.3	11.6	11.2	14.8	11.7
Fourth	30.1	26.3	7.7	7.1	16.7	11.6
Highest	25.7	24.3	3.9	4.6	14.6	10.1
Overall	29.1	29.8	7.9	15.1	15.2	10.4

Source: NFHS-4

Even as the prevalence of obesity and NCDs among the urban poor grows, undernutrition persists, especially among children, contributing to a double burden of malnutrition in the population (IIPS and ICF 2017; WHO 2016). Alarmingly, the prevalence of stunting among children aged under five years in urban areas has increased between 2015 and 2020 in most states of India, though the overall prevalence in urban areas continues to be better than in rural areas (See Table 2.4). Indicators such as wasting and underweight also have similar trends (IIPS 2020; IIPS and ICF 2017).

Table 2.4: States where prevalence of stunting among children aged under 5 years worsened between 2015 and 2020

States*	Stunting (NFHS-5 urban)	Stunting (NFHS-4 urban)	Trend in stunting in urban areas (NFHS-5 – NFHS-4)	NFHS-5 (rural)	Difference (NFHS-5 Urban - Rural)
Assam	29.8	22.3	7.5	36	-6.2
Goa	24.3	18.3	6	28.2	-3.9
Gujarat	32.4	31.7	0.7	43	-10.6
Himachal Pradesh	27	21.4	5.6	31.3	-4.3
Jammu and Kashmir	30.1	23	7.1	25.9	4.2
Kerala	20.1	19.8	0.3	26.4	-6.3
Maharashtra	34.9	29.3	5.6	35.5	-0.6
Telangana	28.1	21.0	7.1	35.7	-7.6
West Bengal	32.1	28.5	3.6	34.4	-2.3

*Values for some states were unavailable for NFHS-5 during the preparation of the report
Source: NFHS-5

Disaggregated analysis of anthropometric data of children under the age of five years shows little difference between urban and rural areas, when compared by wealth quintile. In fact, the indicators are slightly poorer in urban areas for almost all wealth quintiles (See Table 2.5). However, the overall urban averages are much better than the rural averages. These findings highlight that the urban averages hide the gross inequality within urban areas. Worsening child undernutrition in urban areas may partially be explained by increasing migration of rural poor into urban areas, alongside their inadequate access to essential services. NGOs working in urban slums noted the high levels of child malnutrition, a data point that is always underreported in official data (Interview, SOCHARA; APU Urban Health Consultation II).

Table 2.5: Anthropometric indicators for children under the age of 5 years, by wealth quintile

Wealth quintile	Stunting		Wasting		Underweight	
	Urban (%)	Rural (%)	Urban (%)	Rural (%)	Urban (%)	Rural (%)
Lowest	49.9	51.5	23.9	24.2	48.8	48.6
Second	44.5	43.3	23.2	21.5	42.1	40.1
Third	38.2	35.9	20.4	20.1	35.0	32.6
Fourth	30.1	28.4	20.1	18.6	28.6	26.2
Highest	22.4	21.8	18.3	16.9	20.8	18.8
Overall	31.0	41.2	20.0	21.4	29.1	38.3

Source: NFHS-4

The impact of early childhood malnutrition extends into the primary school years. Multiple studies have found that nutritional deficiency was significantly higher among school children belonging to lower socio-economic status (Chajhlana et al. 2017); whose families, in addition, lacked access to government social safety nets such as a ration card (Rao Seshadri et al. 2020). The co-burden of being both underweight and short was twice as high among the poorest women as compared to the urban average (Sethi et al. 2020).

Poor nutrition, along with poor sanitation and hygiene in urban areas could perhaps explain why the Infant Mortality Rate (IMR) has worsened in urban areas in some states over the past few years (IIPS, 2020; IIPS and ICF, 2017; Manisha 2020). In Andhra Pradesh and Bihar, for example, the IMR increased by almost 30% between 2015-16 and 2019-20, while in Tripura it has almost doubled during the same period.

Poor waste management in urban poor settlements was linked with risk for dengue, gastrointestinal infections, leptospirosis and skin conditions (APU Urban Health Consultation IV; TRG 2014; WHO 2016). Tuberculosis and HIV-AIDS were also reported as more characteristic of urban poor populations and related to poverty and social exclusion (WHO, 2016). Malaria and tuberculosis were also reported as concerns among the urban poor of Kolkata (Interview, Iswar Sankalpa). As of 2015-16, the poorest households in urban areas were four times more likely to report a member with tuberculosis as compared to the richest households (See Table 2.6).

Table 2.6: Households with any member reported to be suffering from tuberculosis in urban and rural India, by wealth

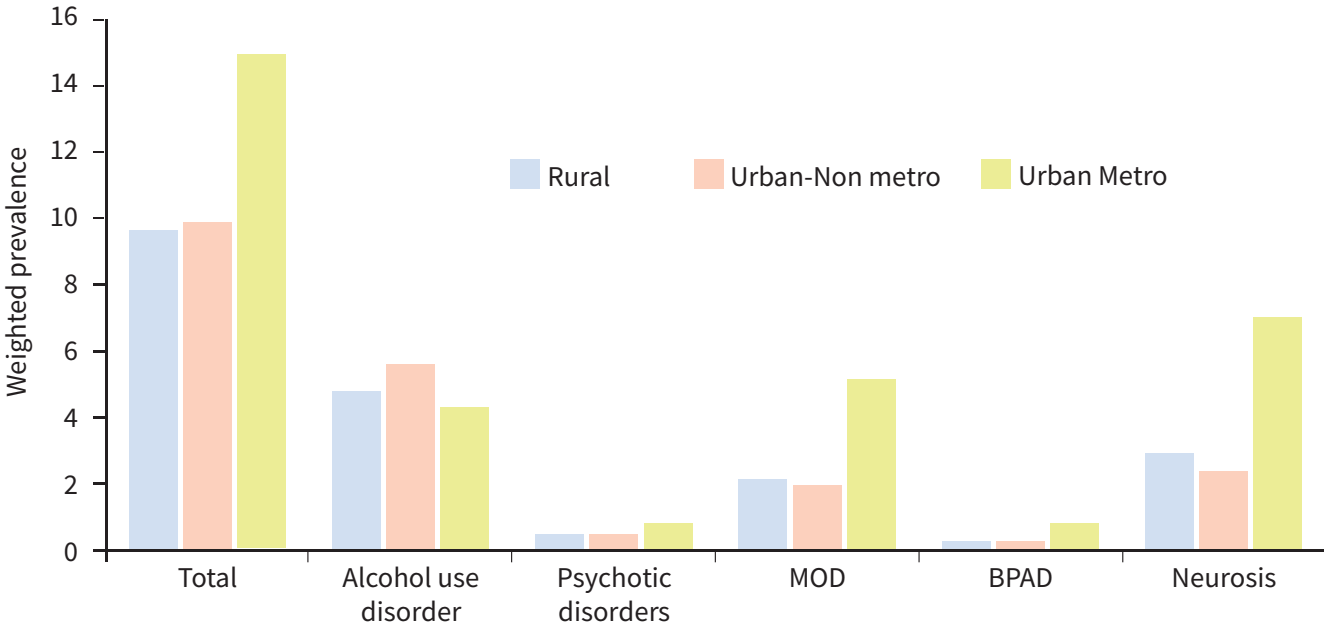
Wealth quintile	Urban (%)	Rural (%)
Lowest	2.4	2.3
Second	1.9	1.6
Third	1.5	1.2
Fourth	1.1	0.9
Highest	0.7	0.6
Overall	1.1	1.6

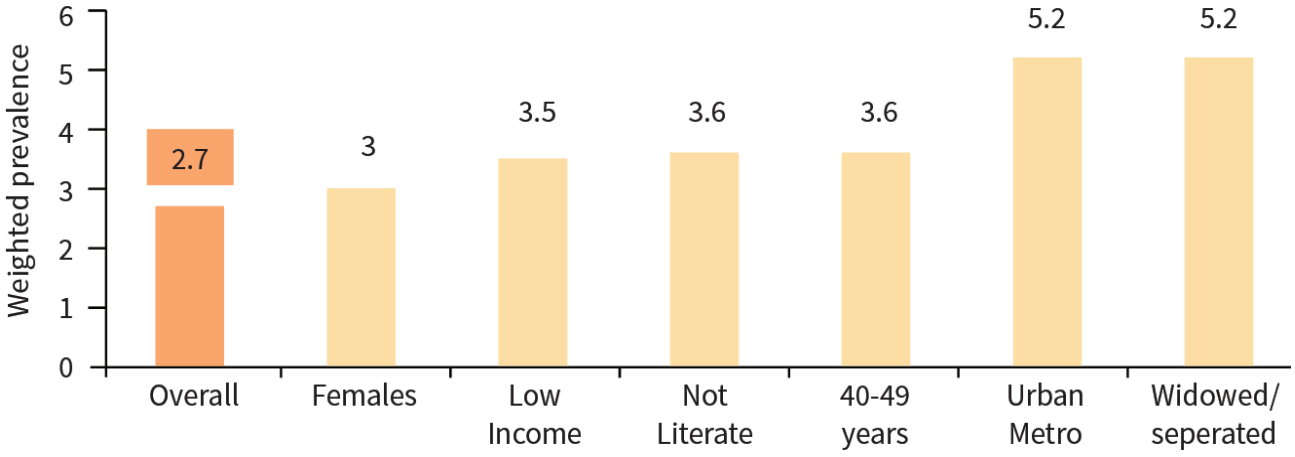
Source: NFHS-4

Social exclusion and poverty add to the challenges of violence, injuries and road traffic accidents in urban areas (WHO 2016). Over 44% of urban women in Karnataka have experienced spousal violence. This phenomenon is higher in urban areas than rural areas in most states (IIPS 2020; IIPS and ICF 2017). Violence against women was twice as much in slums than outside them (WHO 2016). Sanitation workers regularly experienced various forms of injuries - through sharp objects, accidents and falls - as part of their occupation, besides challenges in accessing health care (Rangamani et al. 2015).

Several dimensions of social exclusion and inequality, including insecure livelihoods, gender discrimination, domestic violence and insecure living conditions, are possible predisposing factors to mental illness among the vulnerable groups in urban areas (Interview, Ishwar Sanaklpa). The high prevalence of mental and physical health problems among the homeless across cities in India further exacerbates their vulnerability (TRG 2014). The National Mental Health Survey (2016) indicated that urban metros had a higher prevalence of mental health challenges, especially for major depressive disorders and neurosis, and that depressive disorders were more prevalent among the poor (See Figure 2.2). Adolescents in urban metros (13.5%) were found to have more than twice as high a prevalence for mental disorders as compared to non-metro (4.3%) and rural areas (6.9%) (Gururaj G et al. 2016).

Figure 2.2: a) Prevalence of mental health disorders; b) Prevalence of major depressive disorders (highest prevalence category); MDD – Major Depressive Disorder, BPAD – Bipolar Affective Disorder.





Source: Gururaj G et al. 2016

Substance abuse is another factor that impacts mental health. Children in urban slums were especially vulnerable to substance abuse - including rampant glue sniffing – (APU Urban Health Consultation II) even at a very young age (See Box 2.4). They may also be exposed to hazardous working conditions, besides other risks, including abuse and exploitation (TRG 2014). Such factors may have contributed to boys having especially poor health outcomes in these highly segregated areas (WHO 2016).

The various hazardous occupations that the urban poor depend on also have their specific challenges. For instance, those working in informal waste management units and also sanitation workers reported musculoskeletal disorders, respiratory conditions and liver disorders, which were further aggravated by high prevalence of smoking and alcohol consumption among them (TRG 2014).

Conclusion

As this section shows, urban poor are a heterogeneous category with diverse vulnerable groups with distinct vulnerabilities which worsened during the COVID-19 pandemic. The health vulnerability of these different groups lies at the intersections of the poor living conditions, social locations, social exclusion and precarity in livelihoods rendering vulnerability to be contextual, dynamic and layered. The vulnerable groups in urban areas bear a disproportionate burden of health and diseases including non-communicable diseases (including mental health) apart from malaria, tuberculosis and other such diseases. These disparities in exposure to risk factors and experience of diseases within urban areas are often hidden, by assuming certain default advantages for those living in urban areas. A nuanced understanding of health vulnerability of urban poor is important to address health inequity. As WHO (2016) rightly states *"The very fact that the distribution of healthy environments is inequitable clearly indicates that healthier living environments are indeed attainable."*

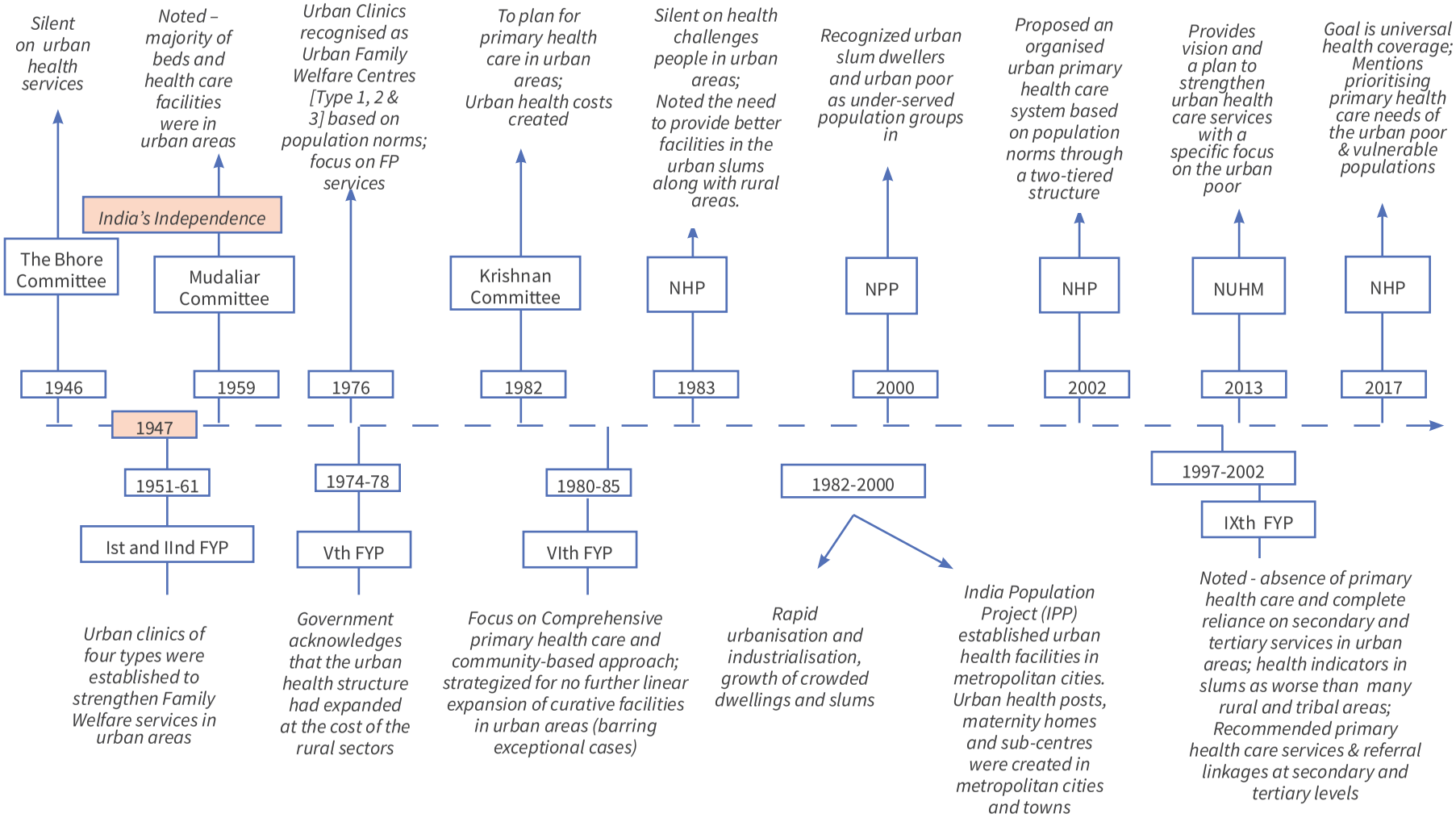
3. Urban Health Governance

Summary

- The complexity of defining the 'Urban' is itself a barrier to the efficient delivery of health services in urban areas.
- Policy directed specifically at urban health is relatively recent, which has resulted in a haphazard and somewhat organic development of urban health systems.
- Urban governance was jumpstarted with the 74th Amendment (1992) but has not been as uniformly successful as was envisaged.
- The NUHM has attempted to systematise health services in urban areas but with mixed results.
- The multiplicity of health providers in urban areas – the State, Municipalities and private entities – are a major challenge to accessibility, quality and accountability.
- The major governance challenges facing urban health care have to do with overlapping jurisdictions between administrative entities, lack of coordination between different service providers and poor accountability to the community it serves.

There are multiple challenges to providing urban health care, embedded in heterogeneity, fluidity, and diversity of urban spaces themselves. In this section, we examine the governance issues associated with urban health care, starting with the question of what constitutes 'the Urban'. We then trace the evolution of policies that have shaped the response to urban health needs; and finally unpack the challenges facing urban health governance. The discussion is based on both secondary data sourced from public documents, documents shared by the concerned officials as well as inputs from interviews and vignettes shared by civil society organisations. We also draw on an in-depth analysis of health service provision in four urban locations in India: Davanagere,

Figure 3.1: Timeline of policy milestones on urban health in India



Source: Authors' compilation from NHP (2017); NUHM (2013); Kumar et. Al. (2016)

Karnataka, which is a Tier III district headquarters town; Raipur, Chhattisgarh, a Tier II state capital; Thiruvananthapuram, a Tier II capital city of Kerala; and Bengaluru, the fourth largest metro city in India and capital of Karnataka. These city reports provide a grounded understanding of urban health care services, eight years after the rolling out of the National Urban Health Mission (NUHM), and reveal the challenges facing public health services in the context of a constantly expanding urban population.

3.1 What do we mean by 'Urban'?

Defining the 'urban' is the key to deciphering the governance of the urban health system and its architecture. The demarcation of urban areas is based on multiple criteria: administrative (unit of administration), ecological (population size/density), economic and social (urban characteristics (UNFPA 2020).

The Census of India includes the following parameters to define 'urban':

- A statute-based demarcation (all administrative units that have been defined by any statute as urban area, namely, municipal corporation, cantonment board, notified town area committee and so on).
- Specific criteria-based demarcation that include a population of 5000 persons, 75% and above male population engaged in non-agricultural work, and a density of at least 400 persons per sq.km. (Office of the Registrar General India 2018).
- Other classifications that are followed primarily by agencies that take into account economic activities and financial affairs.

Urban areas are divided into six categories based on the total population of the area (Indian Economic Service, n.d.). The Reserve Bank of India has modified such population-based norms for the banking sector and has classified urban areas into Tier 1 (population of 1 lakh and above) to Tier 6 (less than 5000). Of these, units are categorised as semi-urban centres (10,000 – 1 lakh population), urban centres (1 lakh to 10 lakh) and metropolitan centres (10 lakhs and above) (Indian Economic Service n.d.).

The 74th Constitutional Amendment has provided a Constitutional status to define Urban Local Bodies (ULBs). Understanding their Constitutionally mandated role, given their diversity and location within the overall governance of the state, adds another layer of complexity in urban governance. It is estimated that there are about 3700 ULBs across the country, including 100 Corporations, 1500 Municipal Councils, 2100 Nagar Panchayats, and 56 Cantonment Boards (Chaube 2003:12). Yet several states such as Assam, Meghalaya,

Tripura, and Mizoram have been excluded from the purview of the 74th Amendment. Consequently, no areas have been declared as urban in Arunachal Pradesh; and in Mizoram and Meghalaya, there are no Municipal Bodies (Chaube 2003:12).

NUHM has taken the population criteria into account and has included any geography with a population of 50,000 or more into the category of an urban area. This includes megacities (metropolitan cities), million-plus cities, smaller cities (population 1 lakh to 10 lakhs) and cities (population 50 thousand to 1 lakh).

Table 3.1 Classification of urban areas under NUHM

Category	Criteria	No.
Mega Cities	**More than 1 crore population**	**7[i] * 3[ii] ******
Million-plus Cities	**10 lakh and above**	**40[i] 53[ii]**
Class 1 Urban Agglomeration/Towns	**Cities with 1 lakh – 10 lakh population**	**552[i] 468[ii]**
Cities with 50 thousand - 1 lakh	**Population**	**604[i]**
Municipal Corporations	**74th Const. Amendment**	**101[iii]**
Municipalities (Municipal Councils)***	**74th Const. Amendment**	**1430[iii]**
Notified Area Committees****	**74th Const. Amendment**	**56[iii]**
Town (Nagar) Panchayats****	**74th Const. Amendment**	**2000[iii]**

[i] NUHM (MoHFW – GoI 2013:12); [ii] Indian Economic Service – Arthapedia; [iii] (Chaube 2003)

Legend:
** Greater Mumbai, Kolkata, Delhi, Chennai, Bengaluru, Hyderabad, Ahmedabad (cities with more than 4 million population are also known as metro cities)*
*** Greater Mumbai, Delhi and Kolkata*
****In Karnataka, municipal councils are of two categories: city councils and town councils, elsewhere they are municipal councils or municipalities.*
*****Nagar Panchayats are known as notified area committees in Bihar and Jharkhand, notified area authorities in West Bengal, town area committees in Jammu and Kashmir, town committees in Nagaland, notified area councils in Orissa, and town panchayats in Tamil Nadu (Chaube, 2003).*

Source: NUHM, MoHFW – GoI 2013:12

However, this neat categorisation, is not reflected in the reality on the ground. Urban spaces are dynamic; with the continual expansion of urbanisation, they absorb the surrounding rural areas.

This results in:

i. an expansion of the urban area itself, as in the case of erstwhile Bangalore Municipal Corporation (BMC). It became Bruhat Bengaluru Mahanagara Palike (BBMP) in 2007, absorbing several areas of the surrounding Bengaluru rural district,

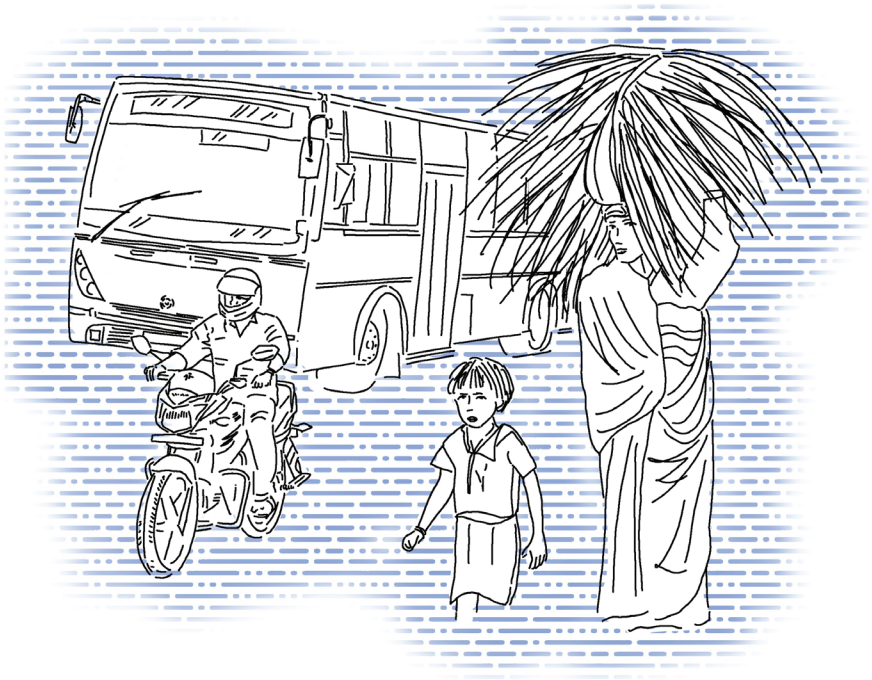
and 100 wards of the erstwhile BMC expanded to a total of 198 wards. In 2020, there was a proposal to reorganise the Bengaluru urban district into 225 wards.

ii. the blurring of boundaries between the urban and erstwhile rural areas, with serious impact on governance This co-existence of urban and rural is reflected in the governance structures of Davanagere : the block has a Zilla Panchayat, a Taluka Panchayat, as well as a Municipal Corporation, all of which have overlapping jurisdiction over various services, including health.

The complexity of defining the 'urban' manifests itself particularly in the challenge of organising health care services in urban areas.

> The complexity of the urban is among the first features that preclude equitable and efficient service delivery. Authority is vested in state governments and municipal authorities (which are themselves sub-divided). Funding arrangements - including central, state, municipal, ad hoc and private funding - are deliberately tenuous and complex. These are often linked, feebly, with various urban renewal and development projects and fragments or remnants of donor-driven project components (MFC 2016:1).

Such complexities are compounded by the heterogeneity and diversity of urban populations and socio-economic characteristics. The gaps in the organisation of urban health services and streamlining health systems governance are critical to obtaining better health outcomes for urban populations.



3.2 Evolution of urban health policy in India

Historically, as institutionalised in the Madras Public Health Act (1939), the responsibility of the Municipal Health Officer (MHO) was to manage epidemic diseases in urban areas by, for example, imposing quarantines, disposing of bodies, cleaning sewers, collecting waste and generally taking whatever steps were necessary to prevent the spread of epidemic diseases (Ganesan et al 2017). The first Committee to sketch out a possible health 'system' for an independent India was formed in the backdrop of a sharply segregated health scenario, where health facilities were relatively modern and well-developed in cities and barracks and meant largely to provide curative care and basic public health to the urban elite and military personnel (Chaplin 2011). The Bhore Committee (1946) provided the blueprint for India's health services in the post-independence period; yet the planning and organisation of health services predominantly had a rural focus. Primary health care and systematic organising of health services received little attention in urban areas. As Figure 3.1 shows, the policy attention received by urban health care has been episodic and piecemeal.

3.2.1 Policy milestones and key turning points

The initial imagination around urban health systems was subsumed under a general approach to health care for the country as a whole. Only with the National Population Policy (NPP 2000) were specific urban concerns acknowledged, particularly in terms of the diverse and complicated types of vulnerability, with the recognition of the existence of urban slums. Additionally, the earliest health care interventions in urban areas were largely focused on curative care. It was only with the NHP 2002 that there was an explicit acknowledgement that health care in urban areas is meagre and highly disorganised, and that there was a need for a primary health care network.

The NUHM (2013), reinforced by the National Health Policy (NHP 2017), did two things:

i. they developed a more elaborate understanding of different types of urban vulnerabilities and vulnerable groups, and the fact that health services should be tailored to the needs of such groups; and
ii. they highlighted the need for systematic attention on primary health care delivery and referral support to urban poor and the vulnerable. Indeed, they are now the overarching policies that direct the provision of health services in urban areas. In addition, the Ayushman Bharat Programme, popularised as PMJAY (Pradhan Mantri Jan Arogya Yojana) has played a major role in health in recent

times, without a clear indication of how it is integrated with NUHM. While these are implemented through the coordinated action of Ministries of Health and Family Welfare (MoHFW) in the centre and the states, the significance of the role of ULBs is important to note.

3.3 Urban health governance and its complexities

The 74th Constitutional Amendment (1992) paved the way for ULBs based on the population criterion. In India, Municipal Corporations, Municipal Councils and Nagar Panchayats are the key institutional forms of ULBs. The 12th Schedule of the 74th Amendment (1992) defines the powers, authority and responsibilities of ULBs. Of the 18 items listed in the 12th Schedule, 'public health sanitation, conservancy and solid waste management' (no.7) directly addresses the issue of public health in general and health services in particular. ULBs are also guided by their own policy framework and are governed by specific municipal legislations enacted in different states.

Economic liberalisation was underway in India around the same period, and this created space for market-driven, private sector-led expansion in health care. Over time, this has led to:

- severe reduction in finances of ULBs, resulting in weakened governance and institutional capacity
- a separation between curative and public health functions, thus reducing the purview of the municipal health office and
- an erosion of the power and prestige of the Municipal Health Officer and the scope of their activities (Ganesan et al 2017).

The level of the functioning of ULBs is fraught with challenges and is not uniform across states (Chaube 2003:13). Strapped for cash, ULBs continue to look to the state Health Departments to shoulder the bulk of the responsibility. This is complicated by the fact that 'Health' is also a state subject listed in the 7th Schedule of the Constitution. In addition, urban areas are also locations where health care services are provided to some select sections of citizens in varied scale. These include ESI services, health care for *beedi* workers, railway employees, armed forces, central government employees through Central Government Health Services (CGHS), public sector employees through state run autonomous institutes or private hospitals.

However, there are exceptions, as seen in Dharavi during the pandemic, and there are times when ULBs are the only ones who can take charge of a situation.

Box: 3.1 Mission Dharavi: How Dharavi beat the pandemic*

With a population of over 1,000,000 and a population density of over 277,000 per square km., Dharavi is the largest slum in Asia and one of the most densely populated places in the world. Clearly, not a place where people could practice physical distancing! So, when the first case of COVID-19 was reported in Dharavi on April 1, 2020, there was fear that it would spread through the area like wildfire.

This is where the Brihanmumbai Municipal Corporation (BMC) stepped in. Making Dharavi a priority, the BMC focused its resources towards containment, that is, ensuring that cases and deaths were contained as effectively as possible. The first fever clinic was set up in three days after detection of the first case. 2,450 health workers were deployed in the area and given basic pandemic control training to essentially 'chase the virus'. Rigorous tracking, tracing, testing and treatment protocols were established and adhered to. They were all provided with Personal Protective Equipment (PPE) and tasked with door-to-door visits. Public toilets and other common gathering places were sanitised large quarantine centres were established. Apart from strict lockdown measures, trust building efforts were stepped up so that residents would accept the precautionary measures put in place and cooperate. Local resources such as NGOs, community groups and others were harnessed to help in all aspects of the BMC's campaign. Community ownership of the campaign and perseverance were the hallmark of their efforts.

The efforts paid rich dividends – the rate of infection went down drastically from 12% in April to 4.3% in May and 1.2% in June. It has been widely applauded as a best practice, and BMC is now presenting it as a model to be replicated in other urban settings as well.

Source: * The title is drawn from the Azim Premji Foundation's documentation of the Dharavi COVID-19 experience (2020), details contained in this Box are excerpted from Kumar et al. 2020

In short, the policy terrain for urban health care is complex and varies from one urban setting to another. There is a need for a consistent policy framework that guides urban health infrastructure, organisation of health services, and effective implementation of the existing services.

3.4 NUHM and its vision of Urban Health Care

The NUHM sets the tone of the mission by explicitly stating its aim 'to address the health concerns of the urban poor through facilitating equitable access to available health facilities by rationalising and strengthening of the existing capacity of health delivery for improving the health status of the urban poor' (NUHM 2013:5). The goal is to be achieved through eight strategies that focus on strengthening the health system and forging partnerships (See Table 3.2).

Table 3.2 Core strategies of NUHM to provide health care to the vulnerable communities

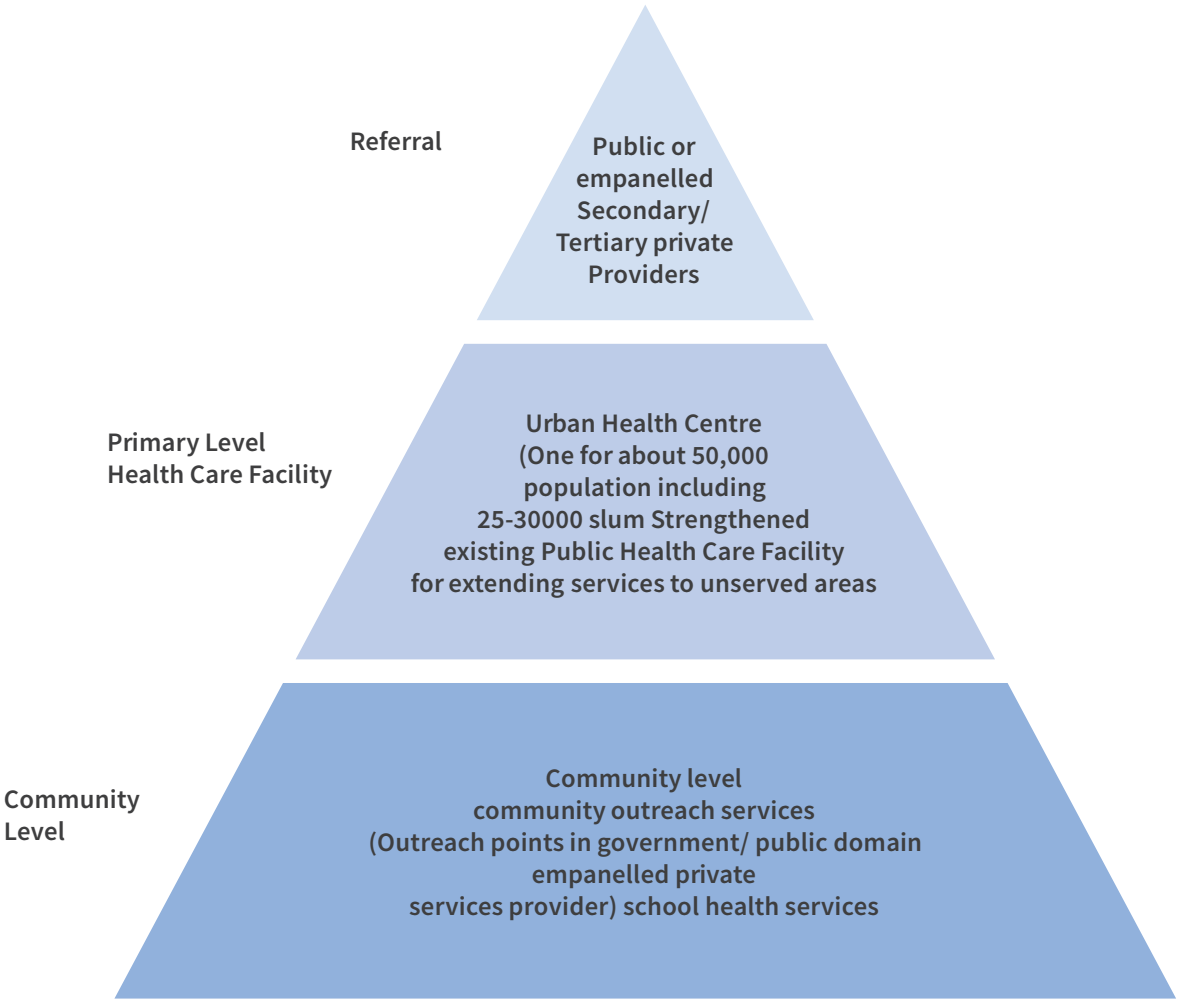
Key Strategy	Pathways
Improving the efficiency of public health system	Rationalisation, revamping and strengthening of the existing urban primary health structures (UFWCs, Urban RCH Centres, Dispensaries and maternity hospitals) Strengthening human resources
Access to improved health care at household level through community-based groups	Formation of Mahila Arogya Samitis (MAS) and roping in other such groups in the communities Appointing ASHAs in slum areas
Strengthening public health through innovative preventive and promotive action	Community action in partnership with urban local bodies for improved water and environmental sanitation, nutrition and other aspects impacting health
Increased access to health care through creation of revolving fund	Encouraging savings by women through MAS
IT enabled services (ITES) and e- governance for improving access improved surveillance and monitoring	Improved surveillance and monitoring, provision of computers and connected software to all the UPHCs and UCHCs for tracking health care issues of urban poor
Capacity building of stakeholders	Building managerial, technical and public health competencies among ULBs/ Medical and Paramedical staff/ Private Providers/ Community level structures and functionaries of other related departments
Prioritising the most vulnerable amongst the poor	Improving the reach of health care services to these vulnerable groups among the urban poor, such as destitute, beggars, street children, construction workers, coolies, rickshaw pullers, sex workers, street vendors and other such migrant workers
Ensuring quality health care services	a) defining Indian Public Health Standards suitably modified for urban areas wherever required; b) defining parameters for empanelment/regulation/accreditation of nongovernment providers; c) developing capacity of public and private providers for providing quality health care; d) encouraging the acceptance and enforcement of local public health acts; d) ensuring citizen charters in facilities; e) encouraging development of standard treatment protocols.

Source: NUHM Framework for Implementation (2013): 37-42.

Different States have adapted the NUHM framework with local innovations. For example, in Karnataka, evening clinics (5.00 – 8.00 p.m.), medical mobile units, health kiosks (a unit headed by a junior health assistant in selected slums/locations), ensuring the availability of free diagnostics and free drugs through measures such as *jan aushadhi* have been proposed within the NUHM framework (State Health and Family Welfare Society 2020).

Proposed model: NUHM envisions a three-Tier model as a prototype to strengthen health services and accessibility, particularly to the urban poor. This is the first ever attempt to provide an implementation framework for urban health care services, based on direct provisioning of services at three levels: community level, primary level and at referral facilities. (See Figure 3.2).

Figure 3.2 NUHM proposed model for organising urban health services



Source: NUHM Framework for Implementation (2013):7

Community Level Care: Community level care includes health care services, human resources to provide such services and institutional arrangements to strengthen both of these. The key components include the following:

- **Accredited Social Health Activists (ASHA),** a woman resident of the slum, - preferably in the age group of 25 to 45 years, will cover a population from 1000 – 2500, that is, between 200 – 500 households - is envisaged to be the link between community and health care facilities.
- **Auxiliary Nurse Midwife (ANM)**, primarily responsible for outreach services in a demarcated geography with the support of ASHAs. 4-5 ANMs will be posted in each UPHC, depending upon the population.
- **Mahila Arogya Samiti (MAS)**, a formally constituted community group of 10-12 women covering around 50- 100 households (HHs) with an elected Chairperson and a Treasurer, supported by an ASHA. This group will focus on preventive and promotive health care, facilitating access to identified facilities and management of a revolving fund.
- **Revolving Fund**, to be kept with the ANM at the UPHC (in the PHC account), which will be replenished periodically, to support the ASHA workers, to reduce health care expenditure of the community members.

In reality, cities vary hugely in how they imagine and deliver community level care. For example, Raipur's community level arrangements are the closest to those envisaged under NUHM (Table 3.3). In places like Davanagere and Bengaluru, where rural and urban boundaries are either blurred or overlapping, many elements of the NRHM, such as VHNDs, continue to be implemented.

The multiplicity of providers, not reflected or acknowledged by the NUHM model, is immediately evident even at the community level. City Corporations, for example, provide services ranging from basic public health measures such as water supply and sanitation to curative care through mobile medical units, depending on the location. Some cities have special programmes such as AYUSH, ESI and Beedi Worker's Unions, which also provide community-based services. Charitable institutions – such as the Baptist Hospital or St. John's Hospital in Bengaluru – also play an important role, particularly during crises, such as the COVID-19 pandemic. Unfortunately, data on such private sector interventions are not documented.

Table 3.3 Provision of community level health services

	DoHFW	AYUSH	ESI/Special Categories	City Corporation
 Davanagere	ASHAs ANMs MAS VHND – Immunisation National Programmes Outreach Clinics – Health Camps IEC - outreach	Yoga	Mobile Clinics – Medical Check-up and medicines	Sanitation Drainage Drinking Water Fogging
 Raipur	Mitanins ANMs MAS SSK	NA	NA	Sanitation Drainage Drinking Water Fogging
 Thiruvanathapuram	ASHAs JPHN	NA	NA	Sanitation Drainage Food safety Fogging Health Circle offices Community health programs Mobile Medical Unit-1
 Bengaluru	ASHAs ANMs MAS Sub-centres National Programmes Community Outreach Health Camps	NA	NA	MAS Health Outposts MMU India Transit clinics Through BWSSB: Sanitation Drainage Drinking water

Source: Collation from data available on Government websites and interactions with health officials in Davanagere , Raipur, Thiruvanthapuram

Primary Level Care: Urban PHCs are meant to meet the health care needs of around 50,000-60,000 persons, preferably within a slum or near a slum in a half kilometre radius. In special circumstances, there is some flexibility to alter the population coverage norm for a UPHC. Health services provided include out-patient consultation, basic laboratory diagnosis and drug/contraceptive dispensing, apart from distribution of health education material and counselling for all communicable and non-communicable diseases.

The human resources envisaged for UPHCs include two doctors (one regular and one on a part time basis), three staff nurses, one pharmacist, one lab technician, and one LHV and four to five ANMs. In addition, apart from clerical and support staff, one Programme Manager for supporting community mobilisation, behaviour change communication, capacity building efforts and strengthening referrals are included.

Box 3.2 Snapshot of a typical UPHC: Davanagere

This PHC caters to neighbouring localities of beedi workers and Muslim communities.

- Population covered: 53,857
- Total No. of Households: 9818
- ASHAs appointed: 10
- Junior Health Assistants (ANMs): 06
- MAS formed: 21 (on average 15 women in each MAS)
- VHND: Third Saturday of every month
- Services Available: Except surgery and delivery, all other health care services at the primary level (including diagnosis and care for NCDs) and national programmes
- Timings: 9.00 a.m to 4.00 p.m. and 5.00 p.m. to 8.00 pm.
- No institutional deliveries take place at the PHC – all are referred to the Women and Child Hospital, a tertiary level Government institution

Services Available

- General health examination
- Antenatal Care
- Identification & management of high-risk pregnancies
- Advice & counselling on institutional deliveries
- Postnatal care
- Immunisation services
- Management of newborns & childhood diseases (ARI, Diarrhea etc.)
- Counselling & services for birth spacing
- Counselling for Adolescent Health, Menstrual Hygiene, RTI/STI & Iron Supplementation
- Counselling and services for diabetes, hypertension, malnutrition, anemia, cataract etc.
- Oral/dental health examination
- Laboratory Services: Routine blood examination, urine examination, blood slides for Malaria and sputum collection for TB test
- Referral and follow up services

With primary level services too, we see substantial variations between urban settings. Providers include a mix of state, municipal, special category and private players; and the mix is different for each setting. For example, in Raipur and Thiruvananthapuram (unlike in Davanagere), the City Corporation plays a significant role in service delivery, with dispensaries, mobile medical units and even palliative care centres. Similarly, private primary care in Bengaluru offers a diverse set of options, which is not the case in the other settings. At this level and above, the difference in number and range of health care options between a metro (Bengaluru) and the other cities becomes very noticeable.

Table 3.4 Provision of primary level services

	DoHFW	AYUSH	ESI/Special Categories	City Corporation	Private
 Davanagere	UPHCs – 9 Evening Clinics	AYUSH and Nature Cure Hospitals	Dispensaries – Direct services or reimbursements BW Hospital (Harihara – 24 kms)	NA	Clinics Dispensaries
 Raipur	UPHCs – 16	AYUSH clinics- 10 (for Ayurvedic and homoepathic health services Unani dispensary- 1	Dispensaries – 1 Direct services or reimbursements	City dispensaries- 4 Ayurvedic dispensaries- 9 RMC dispensary run by Lion's Club- 1 Mobile medical units- 10	Clinics Dispensaries
 Thiruvanathapuram	UPHCs – 12 PHCs- 12 FHCs- 3 Vazhikatti	AYUSH clinics- 12 (Ayurvedic and Unani dispensary) Homeopathy dispensaries-13	Dispensaries	Palliative Care centres- 10 Ananthapuri Medical Stores- 2 Medical camps	Wellness centres Ayush Dispensaries
 Bengaluru	UPHCs – 117	AYUSH dispensaries -13	ESI: Provided through other institutions 112 Dispensaries CGHS: Wellness Centres	UPHCs – 95 Health Kiosks – 29 ARS UFWC	Clinics Day Care Facility (Medical/surgical) Dental Clinics Diagnostic Centre Clinical/Medical Diagnostic laboratory

Source: Collation of data available on Government websites, NFHS-4 (for data on health facilities in Bengaluru) and interactions with health officials in Davanagere , Raipur, and Thiruvanthapuram.

Referral Units and Linkages: PHCs refer difficult cases to the Urban Community Health Centres (UCHCs), which is like a satellite hospital for every four to five UPHCs, catering to a population of 2,50,000. It is a 30-50 bedded facility and is meant to provide inpatient services. UCHCs are set up in cities with a population of above five lakhs, wherever required. For metro cities, the UCHCs are established with 100 beds for every five lakh population.

Secondary and tertiary hospitals play a critical role in urban settings. Our analysis shows that:

- many such secondary and tertiary hospitals have a long history, such as the Women and Children's Hospital in Davanagere (established in 1937) or the Victoria Hospital in Bengaluru. Familiarity with these institutions leads to patients going there directly and by-passing the primary level of care
- perhaps due to better transport/connectivity, or due to their geographic proximity (especially in Tier II cities), patients are referred to the secondary/tertiary hospitals for even simple procedures such as normal deliveries. An interesting reality is that referral services, except in Bengaluru, are provided mainly by the state's Department of Health and Family Welfare (DoHFW). The City Corporation largely takes responsibility for basic public health services (water/sanitation) and some amount of community outreach and primary care.

Table 3.5 Provision of secondary / referral level health services

	NUHM	AYUSH	ESI/Special Categories	City Corpo-ration	Private
 Davanagere	Secondary: District Hospital Tertiary: Women and Children's Hospital	NA	NA	NA	Secondary: Nursing Homes Hospitals Blood Banks Tertiary: Medical Colleges Dental Colleges Specialty Care Hospitals
 Raipur	Secondary: District Hospital Civil Hospital Mother and Child hospital UCHC – 3 Tertiary: Dr. Bhimrao Ambedkar Memorial Hospital, Medical College hospital, DKSPGI & Research centre	Secondary: Panchakarma center at District Hospital Tertiary: Ayurveda College hospital – 190 bedded	NA	NA	Secondary: Maternity Homes Hospitals Blood Banks Tertiary: Medical Colleges Dental Colleges Specialty Care Hospitals
 Thiruvanathapuram	Secondary: UCHC – 2 District Hospital General Hospital Taluk Hospital Central Prison Hospital W&C hospital MHC TB hospital Dialysis units-2 PMR Centres- 2 Institution with Palliative care program- 1 Blood banks Tertiary: Government Medical College	Secondary: Govt. Ayurvedic Maternity hospital-1 Govt. Homeopathy hospital- 1 Tertiary: Ayurveda College Hospital	ESI: Exclusive diagnostic centres Ties-up super-speciality hospitals CGHS: Diagnostic centres and hospitals	NA	Secondary: Nursing homes, Blood banks General hospital Maternity and fertility centres Eye hospital and research institutes Tertiary: Medical Colleges Dental Colleges Regional cancer centre Super-specialty & multi-specialty hospitals
 Bengaluru	Secondary: UCHC - 5 District Hospital Tertiary: Medical College Hospitals – 4 Autonomous Hospitals – NIMHANS, SJICSR, KMIO, SGITO and others	Secondary: 7 hospitals Tertiary: 11 Medical college affiliated hospitals	ESI: 10 ESI Hospitals Tertiary: Through both ESI and CGHS empanelled hospitals	Referral Hospitals /UCHC – 6 Maternity Homes General Hospital	Secondary: Nursing Homes, Hospitals Blood Banks Nursing home Maternity home General Hospital Tertiary: Medical Colleges Dental Colleges Specialty Hospital Multi-specialty hospitals

Source: Collation of data available on Government websites, NFHS-4 (for the city of Bengaluru) and interactions with health officials in Davanagere , Raipur, Thiruvanthapuram

3.5 Who is responsible for health care in urban India?

There is a multiplicity of urban health care providers, both within the government and outside, and at various levels. Government health care providers are located within different departments within the same Ministry or located within diverse Ministries. These include, among others, the DoHFW, where NUHM, AYUSH and medical education are located. The ESI Corporation and Beedi Workers' Fund are located within the Ministry of Labour and Employment. The Ministry of Chemicals and Fertilisers is responsible for drug manufacturing and pricing which directly and indirectly determine access to health care, especially for the poor. In addition, ULBs, especially Municipal Corporations in Tier – 1 cities play a vital role in providing health care at the community and primary levels. There is also a wide range of for-profit, corporate, philanthropic and charitable institutions, which together outnumber public health institutions, and cater to a major portion of health care needs in urban spaces. Their stake in providing health care has increased immensely through the government's own outsourcing and in-sourcing of health care services through Public Private Partnerships and health insurance schemes including the Ayushman Bharat scheme.

When it comes to the other determinants of health, such as food, nutrition, water and sanitation, among others, the role of various government ministries appears to be quite large. These include Department of Women and Child Development, Department of Social Welfare, Food, Civil Supplies and Consumer Affairs, and the Public Works Department.

Table 3.6 Health care providers and authorities in urban locations

	Community level	Primary level	Secondary health care	Tertiary care
State Health Department - NUHM	✓	✓	✓ ∞	✓ ∞
State Health Department – Medical Education				✓
State Health Department – AYUSH		✓	✓	
Municipal Corporations		✓		
State ESI Corporation		✓		∞
MoLE & BWWF*	✓	✓		
CGHS	∞	✓		

	Community level	Primary level	Secondary health care	Tertiary care
Philanthropic Organisations	✓	✓		✓
Private-for-profit organisations		✓	✓	✓

*Ministry of Labour & Employment (MoLE) & Beedi Workers' Welfare Fund
∞ Provided also through partnership with private sector through insurance or Ayushman Bharat programme

Four key health care providers are briefly described below:

- ***State Department of Health and Family Welfare:*** The state's DoHFW is the apex body that organises and oversees health care institutions within the state. It is headed by the Health Secretary. Programme implementation is the responsibility of the Commissioner or Director General of Health Services (or equivalent designation) in various states. The Commissioner is the administrative head and the Director is the technical head. NHM is headed by a Mission Director (NHM). There are also other programmes that are subsumed under the department and are managed through registered societies (such as the State AIDS Prevention Society) or Trusts (such as the Suvarna Arogya Suraksha Trust in Karnataka) and are headed by Directors for each entity. The NUHM is implemented in urban areas by the DoHFW, under which they operate a range of different community, primary, secondary and tertiary services. For example, DoHFW, Chhattisgarh implements the highly acclaimed Mitanin community outreach programme in Raipur. DoHFW, Kerala operates the Aardram Mission, providing primary level care in Thiruvananthapuram.

- ***Urban Local Bodies:*** There are about 3500 ULBs in India, engaged in public health activities such as sanitation, fogging, maintaining sewerage and drainage work in urban spaces. Of the four urban locations studied for this report, the Thiruvananthapuram Municipal Corporation (TMC) and Bruhat Bengaluru Mahanagara Palike (BBMP) have a deeper engagement in health care, with a focus on UPHCs and some community level services. They also have a well-organised DoHFW. Notably, ULBs in megacities have a well-organised public health cadre in place to undertake public health tasks. In BBMP, for example, Chief Health Officer (Public Health) heads the administration of public health, assisted by a Health Officer in each of the eight

zones. There are 29 medical officers (including Assistant Health Officers in each zone) who are responsible for the execution of public health activities. (BBMP – Health Department n.d.)

Box 3.3 Health governance in TMC and BBMP

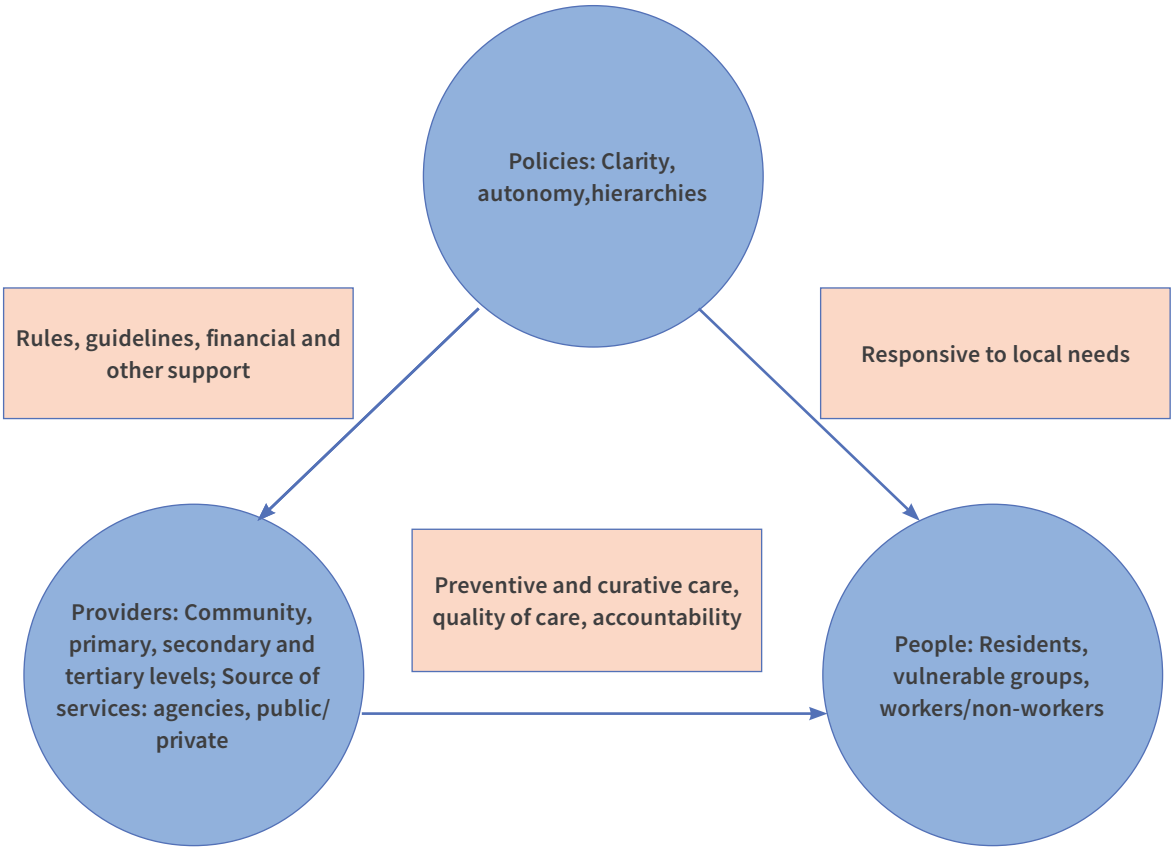
TMC	BBMP
• Corporation Health Officer (CHO) is the head of the TMC's Health Department • The Department is responsible for conservancy service, sanitation facilities, solid waste management and other public health sanitation and hygiene duties. • The CHO is assisted by a veterinary surgeon, Health Supervisors, 23 Health Inspectors and 71 Junior Health Inspectors (JHI). • There are 25 health circle offices in the Corporation jurisdiction, which is formed not based on the number of wards, but the number of the commercial establishments, population density, and social institutions. • Each health circle office comprises of Health Inspector, Junior Health Inspector, and Junior Public Health Nurse. Health Circle Offices are responsible for primordial preventive activities, viz., sanitation, water, and food hygiene etc.	• In the case of Bengaluru, health is one of the 18 departments in the BBMP administration. • The administration of health-related services is organised under the administration of a Special Commissioner (Solid Waste Management). However, currently, a Special Commissioner (health and IT) is in place. • Health administration in each zone is headed by the Joint Commissioner (Health). • In each zone, Chief Health Officer (Clinical) heads the clinical services of the zone. There is also a Chief Health Officer (Public Health) at the apex level who oversees the public health work through the Zonal Health Officers

Source: * Interaction with city health official, Thiruvanthapuram Municipal Corporation and BBMP website accessed on November 19, 2020

- ***Employees State Insurance (ESI) Corporation:*** Workers or employees employed for wages or working in a factory or establishment are covered under the ESI scheme. Started initially in the industrial towns of Kanpur and Delhi in 1952, it entitles workers categorised as 'employees' and 'insured persons' as defined by the ESI Act 1948 to avail health services (Govt. of India 1948). Administered by the Ministry of Labour and Employment, the ESI Scheme aims to protect workers drawing lower compensation (low wages and salaries) against the economic impact of sickness, maternity, disablement and death due to employment injury and to provide medical care to insured persons and their families (Employees' State Insurance Corporation, n.d.-b). Over the years, the Act has been amended to expand its scope. Currently, the ESI Scheme is implemented at over 843 centres in 33 States and Union Territories. The Act now applies to over 7.83 lakhs factories and establishments across the country, benefiting about 2.13 crores insured persons/ family units. The total number of beneficiaries are deemed to be over 8.28 crores in the entire country (Employees' State Insurance Corporation n.d.- c). However, evidence on actual utilisation of these services and the impact on health outcomes is thin.
- ***Private health care providers:*** There is a range of private health care providers, with skewed distribution across urban geographies. There is a huge diversity among private health providers in terms of ownership (private for profit, private not-for profit), systems of medicine (allopathy, AYUSH) as well as quality of care. NUHM notes that there is a need for uniform standards and treatment protocols, control and quality assurance mechanisms, regulatory and enforcement systems, as these are important for urban health governance (NUHM – Framework for Implementation 2013:16). In smaller towns such as Davanagere or Raipur, the private health care providers are too big to be brought under any regulation. In large cities such as Bengaluru and Thiruvananthapuram, they are so many that the government agencies themselves do not have a count. This lack of accountability of the private sector in health is a real policy challenge. An analysis of mapping of health services in the four cities indicates that the range and access to private medical care at all levels (primary, secondary and tertiary) is poorly understood because the data on such care is patchy or not available.

3.6 Urban health care governance challenges

Figure 3.3 Framework for understanding urban health governance



Source: Adapted from Bigdelli et al. 2020

There are three broad categories into which urban health governance issues fall:

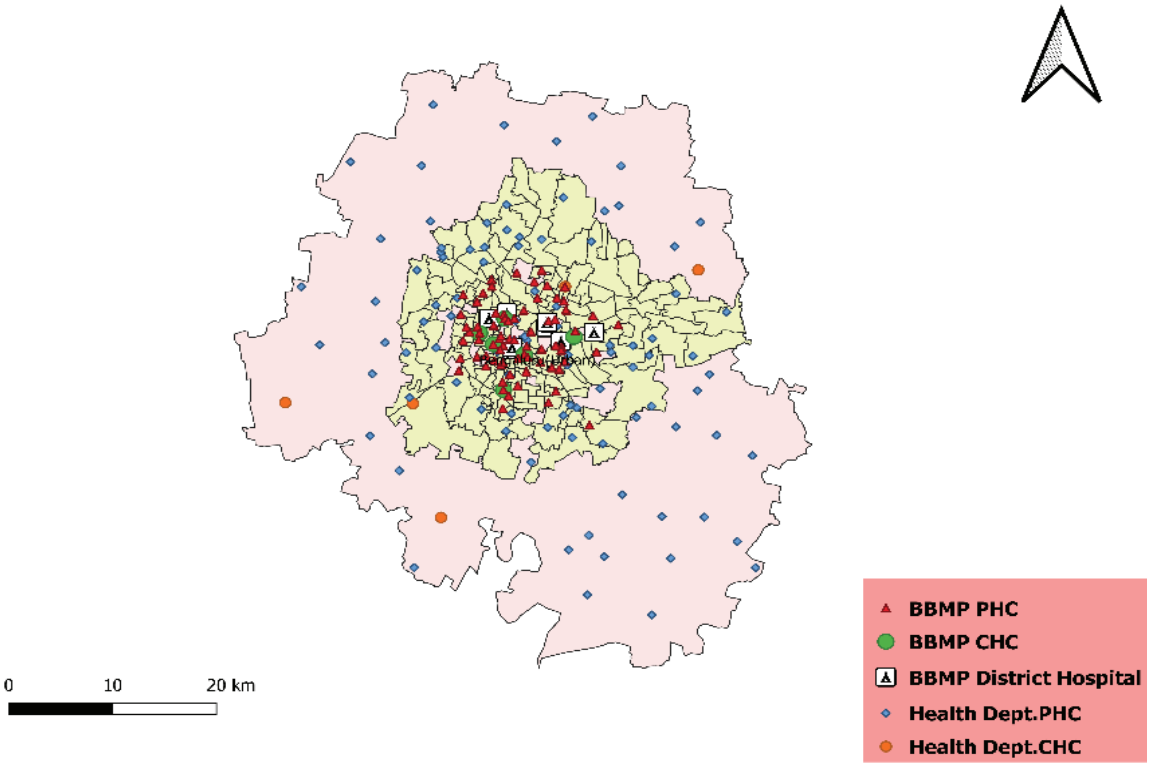
i. the policy framework that determines the design and architecture of the health system
ii. service provision, including the range and quality of services provided; and
iii. the 'clients', a heterogeneous and dynamic group of people, and their ability to access the services they need.

Our analysis shows that urban health governance encounters challenges on all three fronts. The NUHM is aimed at plugging some of these loopholes, yet the result has fallen short of people's expectations.

3.6.1 Policy challenges

Multiplicity of agencies, parallel authorities, and uncoordinated action: There are multiple agencies providing services in urban areas, with minimal coordination. Generally, it is assumed that primary health care is the responsibility of the ULB and secondary and tertiary care is that of the state government. As our analysis of health systems in four cities shows, there are significant overlaps in the jurisdiction of the DoHFW and the city/town municipal corporations (See Appendix 3). This leads to a very complex service delivery landscape often reducing access to services for the most vulnerable populations.

Figure 3.4 Overlapping jurisdiction over health facilities: Bengaluru Urban



Source: NFHS-4 (2015-16)

In Bengaluru, there is a three-Tier urban health system comprising health posts, family welfare centres, maternity homes, tertiary and super-specialty hospitals. However, these institutions are under diverse administrative jurisdictions (Figure 3.4). In the central area under BBMP jurisdiction, we find a mix of PHCs operated by the BBMP as well as the state DoHFW. All the institutions classified as 'District Hospitals' in the NFHS database are in reality referral hospitals for the entire Bengaluru urban district, yet are clustered just within the core BBMP area. This close geographic proximity within the BBMP area of different levels of facilities nullifies attempts at setting up a referral chain, since the public

just goes to the facility closest to them, even if it happens to be a District Hospital. For those on the periphery, reaching a higher referral facility means a long trip on Bengaluru's congested roads, making it safer to simply access a private facility located close by.

Another consequence of a dysfunctional referral mechanism is that it overloads tertiary care providers. Davanagere is a case in point, where even normal deliveries get referred to a tertiary level hospital (See Box 3.2). Similarly, in KG Halli, a slum in Bengaluru, delivery cases are routinely referred to established secondary/tertiary hospitals such as Vani Vilas Hospital or Bowring and Lady Curzon Hospital (APU Urban Health Consultation IV). Such 'multiplicity of agencies and lack of coordination between them hampers the quality of services' (NHSRC n.d.).

Box 3.4 Multiplicity of agencies in Thiruvanathapuram

Out of the 100 TMC wards, NUHM operates only in 44 wards. The remaining 56 wards are under TMC. Among the 44 NUHM operating wards, there are no sub-centres. However, JPHNs are appointed for each population of 10,000. They conduct house visits in the morning, and from 2 pm they report to the assigned PHC/UPHC. There are sub-centres in some of the PHCs located in areas which were previously Panchayats, but now merged into Thiruvananthapuram Corporation. It is difficult to ascertain the number of sub-centres functioning in the Corporation jurisdiction area. Also, ASHA workers are not available as per NUHM norms. Unlike in rural Kerala, not all 100 wards of the Corporation have ASHAs actively working in them.

Source: Interaction with health official, Thiruvananthapuram Municipal Corporation

ULBs and their differential engagement with public health care: Though the 74th Amendment places the health care system under local governance, our study indicates that their role is non-existent in smaller towns and cities (Davanagere and Raipur) or is solely autonomous (as in the case of TMC and BBMP). Key reasons are - the weak capacity of ULBs in planning and implementing public health care and lack of comprehensive strategy to ensure equitable access to health care (NUHM – Framework for Implementation 2013 pp.26-30). Municipal Council legislations are very general, and broadly mandate them to act on public health, which is largely interpreted to mean sanitation, drainage and to some extent water supply, and has not moved into the scope of providing health care. There are some efforts undertaken as health kiosks in Bengaluru, but they are sporadic and uncoordinated.

Lack of convergence and inter-departmental coordination between different wings of the government providing health care is a notable barrier to access and utilisation of health services. (NHSRC n.d.) Implementation of vertical programmes without integration into the existing health system results in duplication of organisational machinery and has resource management and sustainability challenges. Integrated planning and implementation of health programmes is a major governance challenge.

3.6.2 Service challenges

Disorganised and non-rationalised health services: The organisation of health services in urban areas is neither rational nor cohesive. For example, urban Family Welfare Centres with a large focus on RCH services still continue to be key primary health care institutions in cities. Most of these Centres were constituted under the IPP VIII project (NHSRC n.d.) and face enormous budgetary and human resource challenges.

The weak referral system in urban areas compounds the health vulnerability of people. SAHAYOG recounts the experiences of women and girls in the slums in Lucknow in availing the existing health services:

> *"Women and girls who work as daily wage labourers are only concerned for their primary need to food and livelihood rather than their health concerns that are overlooked. These workers are not able to access free health services offered by the government as it clashes with their working hours. Their option is to seek private health care with loss of pay for that day" (SAHAYOG, Lucknow, See Appendix 4e).*

Health facilities unable to provide required services: NUHM touted UPHCs as the new focus for primary level services. However, in smaller towns and cities, UPHCs are still under the DoHFW; and in larger cities such as Bengaluru, UPHCs are neither uniformly distributed, nor are their jurisdictions clearly defined. A health official from Davanagere shared,

> *"In all the 9 UPHCs we have almost all the health services. However, they are not equipped to conduct deliveries. The deliveries are conducted in Women and Children's Hospital, Bhashanagar. Three UPHCs are in rented buildings. If we get support from Corporation (for building), they can be run in own buildings. (Interview, District level Health Official, Davanagere).*

Shortage of qualified staff: From community to referral level, there are staff shortages which severely impact the capability of the system to provide services. In Davanagere , for

example, 'since NUHM focuses only on the vulnerable populations, we have appointed ASHAs only in slum areas, though we need more of them' (Interview, District level Health Official, Davanagere).

Box 3.5 The experience in K.G. Halli, Bengaluru, Sarvagna Health Care Institute , Appendix 4d

Though public health care is a free service, PHCs do not always have access to medicine and laboratory services. Also, public care centres do not stock all types of medicines to manage NCDs. Hence people get only free consultation service and end up spending on medicine and laboratory services.

Working hours of the public sector is not suitable for the people in that area. Late evening clinics will help people access care in public centres.

Most of the private practitioners practice allopathy, irrespective of their training. Many unqualified individuals who have had some experience working in the clinic/hospitals have started their own practice as qualitied practitioners. People are not aware who is qualified and who is not. Even if they know they feel the untrained people give time to listen to them and their cost of consultation is less, so they prefer to consult them rather than qualified doctors

3.6.3 People and access challenges

Weak referral linkages between primary, secondary and tertiary care: Currently, secondary level care is provided by district hospitals and their equivalents in districts and smaller towns, and a few secondary care institutions in towns and cities. Tertiary care is provided by hospitals in Medical Colleges or autonomous institutions. However, the referral linkages between the different levels of care are poorly defined in urban areas. Secondary level institutions are scarce, resulting in overburdening of tertiary care. Primary and secondary institutions need to be strengthened, so that the burden on tertiary institutions decreases (XIIth Plan 2012). This will also help patients who require advanced care or continuity of care but are unable to get the services they need.

Poor community governance mechanisms: Although the NUHM provides for community mechanisms such as the MAS, and there are community-based frontline workers (ASHAs, AWWs and ANMs), the scope for the community to participate in decisions concerning their own health care is limited. Historically, communities have been seen as the 'problem' rather than part of the solution (Loewenson et al, 2021). However, evidence is emerging that shows how community engagement has been critical to an effective response to the COVID-19 pandemic; and in its absence, the system continues to implement top-down initiatives that do not reflect local contexts.

Conclusion

The imagination around a specific 'urban' health system is relatively recent. Unlike in rural areas, the development of the urban health system lacks even the appearance of being systematic or planned. This begs the question: is there such a thing as an urban health 'system'? The tales of the four cities we examined show that the 'system' takes many shapes and forms. There are several reasons for this:

i. ULBs - despite the legal framework provided by the 74th Amendment and the programmatic framework provided by the NUHM - are not able to muster the funds or the political will to take ownership of health care provision in their jurisdiction
ii. overlapping jurisdictions, either as a result of the blurred boundaries between urban and rural or because of a rapidly changing urban landscape, further complicate the issue of 'who is responsible?', the DoHFW, or the Municipal Corporation and
iii. finally, the multiplicity of providers – state and non-state – is an on-going problem, and severely impacts quality and continuity of care.

Urban health governance needs to address these issues urgently if the vision of NUHM is to be realised. Meanwhile, services continue to be fragmented, with a lot of critical issues falling between the cracks and those who bear the brunt of this are the most vulnerable.

4. Availability, Access, Cost and Quality of Urban Health Services

Summary

- Availability of urban public health services falls far short of government's own norms, and is poorly distributed, away from areas that house the most vulnerable
- This compels even the poor to access services in the private sector, so that it is now the dominant provider of both out-patient and in-patient services in urban areas
- Poor public provision and reliance on private sources of care are driving the poorest into further debt and poverty, as well as delaying utilisation of health services, particularly for those with chronic conditions
- Quality of care is a source of concern both in the public and private sectors
- Unless these issues of availability, access, cost and quality are urgently addressed, we will fail to achieve health equity and health justice for vulnerable and marginalised residents of urban India.

"Many actually live in close proximity to urban amenities, including modern health facilities, but are still deprived of even the most rudimentary services due to inequity and social exclusion" (WHO 2016).

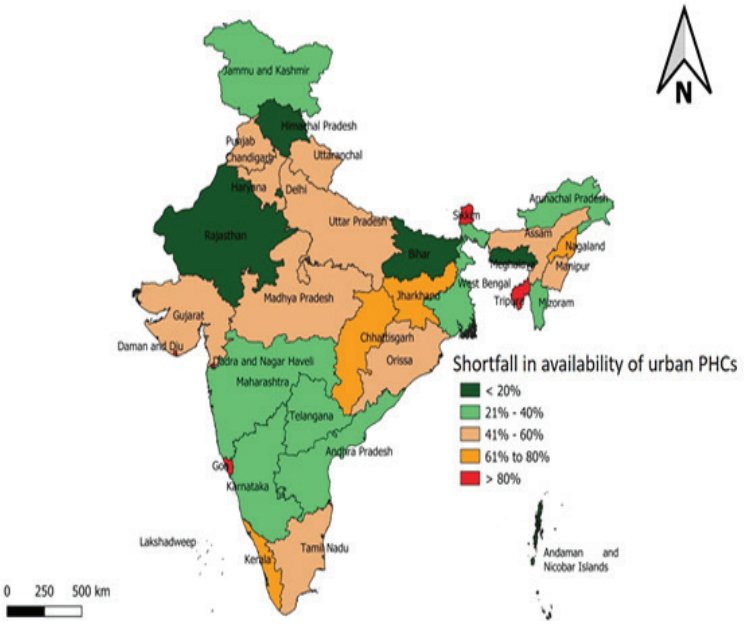
The four priorities of health service delivery are availability, access, cost and quality. In this section, we will examine what the data tell us about these dimensions in the context of urban health. We look at the implications of these four aspects of health services on the ability of the poor and most vulnerable to satisfy their health needs. Using secondary data from national surveys and studies, as well as primary data from our own research, this section fleshes out the key concerns that need to be addressed in the interests of health equity and health justice.

4.1 Availability of public health services falls short of the government's own norms

Availability of primary health care in urban India is very uneven across the country. According to NHM norms, an urban PHC caters to a population of approximately 50,000 and an urban CHC caters to about 2,50,000. As on March 31, 2019, the NHM website reports that there were 5,190 UPHCs functional in the country, of which 1,734 had been upgraded to Health and Wellness Centres (HWCs). There were 350 functional U-CHCs, each acting as a referral facility for 4-5 PHCs (Rural Health Statistics; MoHFW n.d.).

MoHFW data show that there are serious shortfalls in availability of UPHCs, based on the government's own norms, with the national average at almost 40% (2020). A few states and Union Territories – Andaman and Nicobar Islands, Bihar, Chandigarh, Delhi, Himachal Pradesh and Meghalaya – have met or exceeded the population norm; but in other states the shortfalls ranged from 7% in Rajasthan to 100% in Lakshadweep. Notable in this latter group are Kerala (70% shortfall)) and Punjab (59% shortfall). Not only this, the distribution of services is also skewed: an older study in Ahmedabad city showed that health services in urban wards are located at a distance from slums; some wards did not have any PHCs leading to least access by the poorest (Ramani et al 2006). Figure 4.1 provides insights into the shortfall of the availability of PHCs in urban areas.

Figure 4.1 State-wise shortfall in Primary Health Centres in urban areas of India 2020



Source: Rural Health Statistics 2019-20, Ministry of Health and Family Welfare, Govt. of India

4.2 Challenges to access drive even the poorest to the private sector

Perhaps due to poor availability of the public health care network, recent National Sample Survey data (71st Round, 2014-15) show that about two-thirds of all health services – out-patient and in-patient - in both rural and urban India were provided by the private sector (Rout et al.2019). This became further skewed by 2017-18, with the NSS 75th Round showing that almost 75% of treated ailments were treated at private hospitals/private doctors and clinics in urban areas as compared to around 60% in rural areas.

With respect to hospitalisation, there is a greater utilisation of government/public hospitals in both rural and urban areas. Even so, 2/3rd of all hospitalisations are in private facilities in urban areas. Reliance on private hospitals is about 10 percentage points higher in urban as compared to rural areas.

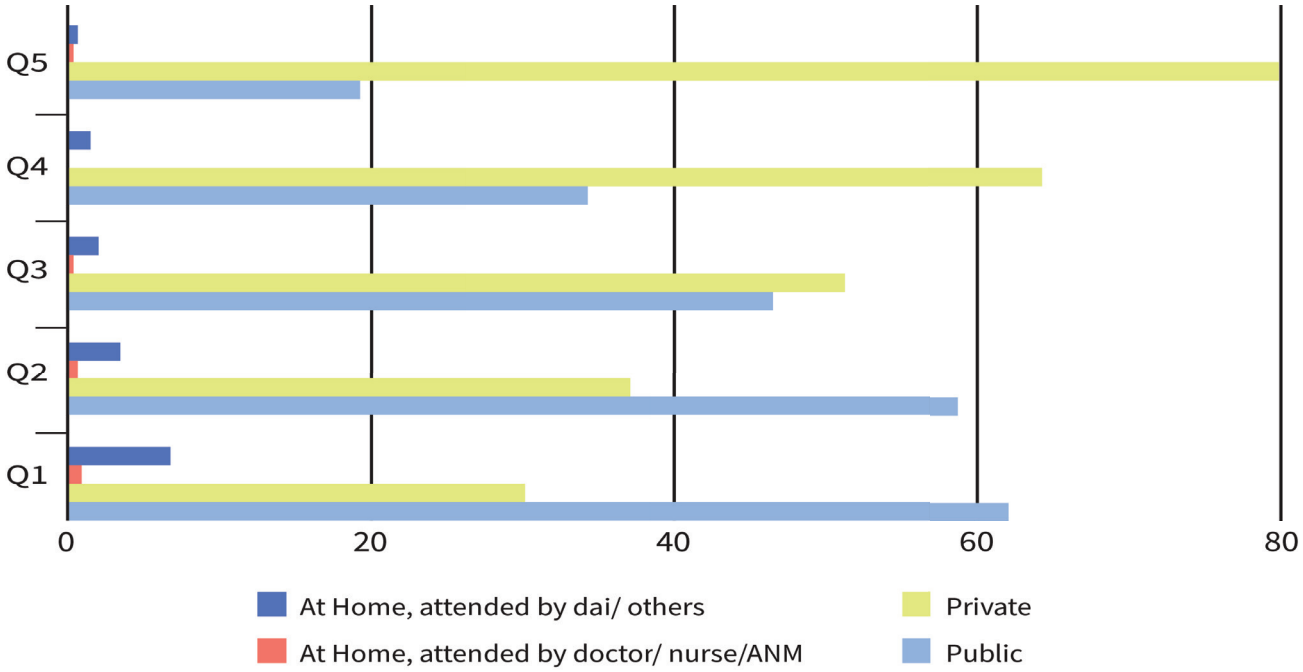
Table 4.1 Utilisation of public v/s private services for treated ailments

	Percentage of treated ailments		% Share of hospitalisation Cases	
Health care service provider	Rural	Urban	Rural	Urban
Government/Public hospital	32.5	26.2	45.7	35.3
Private hospital	20.8	27.3	51.9	61.4
Charitable/Trust/ NGO-run hospital	0.9	1.3	2.4	3.3
Private doctor/Private Clinic	41.4	44.3	0	0
Informal health care provider	4.3	0.9	0	0
All	100	100	100	100

Source: NSS 75th Round 2017-18

As figure 4.2 below shows, utilisation of essential services such as maternal deliveries differ sharply by wealth quintile in urban areas, with a clear gradient towards private care between the poorest and richest quintiles. Our qualitative data from Bengaluru showed that *anganwadi* and maternal care services were utilised by wage labourers, construction workers and migrants. However, 30% of even the poorest opt for private care. This constitutes a significant financial burden since the data shows a ten-fold difference in the cost of delivery care between public and private hospitals in urban settings (INR3,106 vs INR29, 105).

Figure 4.2 Break-up of place of birth by wealth quintile: urban



Source: NSS 75th Round 2017-18

Interestingly, public facilities (HSC, PHC or government hospitals) were the major provider of choice for child immunisation services in both rural (95%) and urban (86%) areas. However, in a study across slums in four cities in India, for all other conditions it was found that 49% respondents used private health care, 36% used public health care and 9% over the counter medicines at the pharmacy, with the poorest section using public health care disproportionately more (57%). Vignettes from organisations also indicate that people visit unlicensed practitioners for a variety of reasons (See Appendix 4c and d). When it came to hospitalisation, over 65% respondents reported getting admitted in public facilities.

Box 4.1 Challenges to access, VHA-Assam (see appendix 4c)

The project area in Jyotinagar is served by an Urban Health Centre located in Chandmari but rarely frequented due to distance and poor accessibility. There are two other Government facilities - one is the State Dispensary and the other is an Urban PHC within a radius of 4-5 km. Both the facilities conduct essential diagnostic tests. Major referral centres (Medical College Hospital, Civil Hospital) are approximately 15-20 km away. Residents of Panikhaity have poor access to the existing Primary Health Centre due to lack of public transportation. Hence, they depend on the sub-health centre (See Appendix 4c).

Similarly, another study from an urban poor area in Bengaluru found that private health care providers managed over 80% of patients with NCDs. Care was accessed at various levels: clinic/health centre (42.9%), referral hospital (38.9%) and super-specialty hospital (18.2%). Those who were better off used private health care more (Bhojani et al. 2013). The trend in health care utilisation in a three year period also revealed that the use of government health facilities decreased by 8.7% with a shift towards private health care (Gowda et al. 2015).

Barriers to utilisation are common, especially for the poor. A study conducted with the urban homeless population in Ranchi and Dhanbad highlighted that 71% of the respondents had experienced illness in last 30 days but 89 % of them did not seek any treatment. Those who sought treatment preferred private facilities, over-the-counter medication or local faith healers. The factors that influenced homeless persons from utilising public services were illiteracy, difficulty in speaking the local language, unfamiliarity with the local area and lack of carers to assist during hospitalisation. This was besides structural barriers such as cost of care, fear of job loss, delays in hospitals and a lack of proof of identity and address, among others (Ekjut 2016).

Box 4.2 Sarvagna Health Care Institute, Bengaluru recounts the situation vis-à-vis availability and access to NCD services in KG Halli, a low-income neighbourhood in Bengaluru (Appendix 4d)

Continuity of care for NCDs is a major challenge, leading to early complications like kidney failure, heart attack, loss of eye sight. A cross sectional survey was conducted to understand self- reported illness and health seeking behaviour. The residents as well as health care providers in KG Halli have identified unaffordable health care expenses as one of the major issues in the area. The study also showed that diabetes was the second most commonly reported chronic condition in KG Halli and the out-of-pocket spending on out-patient care for chronic condition was 69.6%. 66.3% was spent on medicines.

Per capita income is low, yet health care is a major out-of-pocket expense.

The challenges with health care utilisation were found to be more for non-communicable diseases such as diabetes, a chronic condition requiring long-term care. While those with epilepsy and related neurological problems, who need regular medicines, have an option

to get their cost of medicines reimbursed after availing a Niramaya card, this is not true of other conditions. Out of pocket expenditure for diabetes was reported as especially high (APU Urban Health Consultations). Studies from across India revealed almost 80% non-adherence among urban poor patients, with over 40% not having visited a primary care facility during the previous year [cited in (Bhojani et al.2013)]. In another study, respondents revealed they were either not taking medications or doing so irregularly. Cost of care was the main factor, which was also related to dependence on support from earning members, prioritising basic needs and other financial commitments in the household. Nuclear families also made elder care challenging (Bhojani et al.2013). The reluctance to use public health care services was driven by lack of respect awarded to the patient, inadequate stock of drugs, long wait times (WHO 2016) fragmented nature of services for managing chronic conditions, poor communication of management plans (Bhojani et al. 2013) and distance (TRG 2014).

Access to care worsened during the COVID-19 crisis. Our primary data revealed that people with non-communicable diseases could not follow up for their conditions adequately (APU Urban Health Consultations). Elderly persons with chronic mental health conditions needing counselling and treatment were unable to access care, with the "dilemma of dying of COVID-19 or suffering due to discontinued treatment for mental ill-health" (Interview, Iswar Sankalpa). Our data also showed that health workers recognised that some doctors were insensitive to patient needs, and that hospital working hours clashing with the work hours of the potential beneficiaries, reducing utilisation.

4.3 Rising costs of care make services unaffordable

The 75th NSS data shows that on average, 34 out of 1000 men and women were hospitalised in the previous 365 days. Average total expenditures on non-hospitalised treatment were the same for men and women at INR710. Expenditures on hospitalisation varied widely depending on source of services. On average, expenditure in private hospitals is eight times higher than in public hospitals in urban areas (and five times higher in rural areas). The difference was highest in Tamil Nadu (96 and 54 times respectively), Delhi (29 and 12 times) and Madhya Pradesh (15 and nine). Large and unexpected expenditure due to hospitalisation is a significant cause of people falling into poverty, particularly in urban areas and the difference in expenditures between private and public health services makes a powerful case for expansion of access to public services. The findings of a survey among marginalised communities in four cities of Karnataka revealed that over 96% of the study participants did not have a state health

insurance card, and among garment workers 80.5% did not have access to health services at all (CFAR 2019). At the same time, government facilities as a source of care declined significantly for all the conditions examined by the study. The study concluded that increased use of fee-for-service, private sector facilities has contributed to urban poverty.

The high reliance on private services places a disproportionate burden on the poor; and this is more acute for the urban poor since their reliance on private services is significantly higher.

Table 4.2 Average medical expenditure during hospitalisation: All India

Component of medical expenditure	Average medical expenses (INR) during hospital stay per case of hospitalisation			
	Public hospitals		Private hospitals	
	Rural	Urban	Rural	Urban
Package	427	867	6631	15380
Doctor's/Surgeon's fee	172	197	5340	6284
Medicines	2220	2100	6818	7035
Diagnostic tests	800	770	2802	3403
Bed charges	118	152	3377	4176
Others	553	752	2379	2544
Total	4290	4837	27347	38822

Source: NSS 75th Round 2017-18

The difference between public and private services in terms of cost components is revealing. In public hospitals, about 45% of the costs incurred go towards medicines. The cost of doctor's fees, bed charges and even diagnostic tests comprise a smaller proportion. In the private hospitals, doctor's fees compete with medicines for costs of care; and 'package components' – which implies the fees taken for fixed costs – are the highest. It is important to note that average medical expenditure in both public and private hospitals was significantly higher in urban areas than in rural areas.

Existing literature supports these findings. For example, a study from an urban poor settlement in Bengaluru found that the experience of out-of-pocket expenditure for out-patient services was equally common for those accessing governmental or private health care (overall almost 70% of all households in the settlement during the year). However, costs were higher for those seeking private health care (INR 415, v/s INR 280 for government health care). The costs from seeking governmental health care were for travel

and daily expenses, informal payments and medicines and diagnostic tests (Sharma et al. 2020) – indicating that it is not free. Importantly, 16% of the households in the slum spent over 10% of household income on out-patient care. Spending for care of chronic diseases worsened poverty, with some households borrowing money or selling assets (Bhojani et al. 2012).

Another study, across slums in four cities in India, found that the average annual health care expenditure ranged from over INR 3000 to over INR 8500 in different states, with the mean being around INR 6600. The cost of hospitalisation was over INR 27,000 on average. Out-of-pocket expenses (OOP) increased with wealth status. The OOP expenditure for institutional delivery was over INR 2200 in public, and over 19,000 in private health care facilities on average. The prevalence of catastrophic health care expenditure was estimated at 10.3%, and disproportionately higher among those accessing private health care, for patients with NCDs as well as higher in some states (Telangana and West Bengal, than others Rajasthan and Odisha). It was also slightly higher among males, non-Hindus, the elderly, those without insurance and those who were poorer (Sharma et al. 2020). Hospitalisation rates were lower among men, higher among elderly, among Hindus, the poor and those insured. But those insured suffered similar rates of catastrophic health expenditure as compared to the non-insured. Insurance schemes were rarely used (less than 1% of surveyed households). Even those who had insurance reported a lack of knowledge about these schemes(TRG 2014). Location of private health care providers was reported to be higher in areas with households covered by private insurance rather than governmental insurance, which has bearings on access to care even with "universal health coverage".

The NFHS-4 data (2015-16) indicates that coverage through either government or private insurance schemes leaves much to be desired (Table 4.3).

Table 4.3 Proportion of men (15-54 years old) covered by any health insurance in urban and rural India, by wealth

Wealth quintile	Urban (%)	Rural (%)
Lowest	16.2	17.7
Second	16.9	24.8
Third	22.0	28.3
Fourth	22.6	26.7
Highest	23.5	22.0
Overall	22.4	24.2

Source: NFHS-4

There is an almost 50% differential in insurance coverage between the lowest and highest quintile in urban areas. While this may not appear so stark, the data on reimbursements reveals quite a different picture.

Table 4.4. Reimbursement of hospital expenditures by wealth quintile: All India urban-rural

	% of Hospitalisation cases involving reimbursement: All India					
	Rural			Urban		
Quintile class	Public hospital	Private hospital	All (including NGO-run)	Public hospital	Private hospital	All (including NGO-run)
1st	1.5	1.6	1.6	1	2.1	1.5
2nd	1	1.3	1.1	1.8	4.6	3.4
3rd	1.9	2.2	1.9	2.2	7.8	5.5
4th	1.5	2.9	2.2	3	9.9	7.8
5th	2.8	4.6	4	6.5	25.7	21.8
All	1.8	3	2.5	2.5	12.1	8.6

Source: NSS 75th Round 2017-18

The proportion of households that get reimbursed for hospital expenditures is low in both urban and rural India. Urban India does better overall, with more than three times the proportion of hospitalisations being reimbursed as compared to rural areas. Yet, the inter-quintile difference within urban areas is more stark than in rural areas: there is a six-fold difference in reimbursements of the wealthiest compared to the poorest in urban areas in public hospitals, and a 12-fold difference in private hospitals.

The data also shows that, among those reimbursed in urban areas, the highest wealth quintile is reimbursed 26.9% of total expenses, while the poorest are reimbursed a meagre 4% (NSS 2017-18)[4].

4.4 Poor quality of care is a major concern in both public and private facilities

Despite the publication of Quality of Care standards for urban primary health care facilities[5], quality of care continues to be an issue in the urban health system. For example, our field data shows that all services and medicines are not available at the local primary health centre. This creates challenges, as the tertiary care centres are far away, creating apprehension, and medicines are expensive.

Evidence from large urban public hospitals shows that non-availability and frequent rotation of doctors with a lack of coordination between them, leads to differing professional opinions and increased time and costs(Bhojani et al.2013). These factors have led to an increase in unregulated private health care services(WHO 2016). NCD care especially has continued to remain a challenge globally, even in settings where communicable diseases have been well addressed (WHO 2016). In some situations, inadequate screening led to increased complications for NCDs (TRG 2014).

The issue of dignity and comfort has been discussed in the context of leprosy services. Some stigmatised groups were only able to access care due to support from local NGOs(TRG 2014). The dependence on private care providers increases expenses and delays the utilisation of care until the condition is serious. The challenges in accessing health care are further compounded for persons with disability, especially those without support(TRG, 2014).

Besides health services, allied services too were found to be deficient. For instance, one survey from Bengaluru reported that seven slums, which were established over 30 years, never had an ICDS centre(Pinto 2012), which was also the experience of a fisher-folk community in Chennai(TRG 2014).

4 Note: (i) the estimates of medical expenditure given in this document include expenses reimbursed later, but not expenses that the household did not have to bear even initially (ii) estimates of amount of reimbursement include only the reimbursement that was made later, with the initial payment having been made by the household.

5 https://nhm.gov.in/images/pdf/NUHM/Quality_Standards_for_Urban_Primary_Health_Centre.pdf.

In other cases, insights from slums in Mumbai tell us that even where there are ICDS centres, they are far from functional. These centres do not have a stable structure – they are either in somebody's home, in a rented building or even under a tree. They are open for hardly an hour to distribute rations (APU Urban Health Consultation II). These services are, in any case, unavailable to groups such as the homeless. The "tertiarisation" of care, with reduced focus on primary health care was recognised as a contributor to increased health vulnerabilities and lack of awareness about health and entitlements(TRG 2014).

This is further aggravated in urban areas by the availability of a wide variety of private health care providers. At the primary level, private health care is dominated by OAEs (Own Account Enterprises, which denote single owner/family owned for profit enterprises, employing only few irregular employees) (Kumar 2015) and unqualified providers. Most countries have mixed health systems, where the private sector operates side-by-side with a centrally planned government system, often for the same services. Our analysis of three rounds of NSSO data (until 2010-11), showed the steep growth in the share of urban private health care facilities, particularly of OAEs, 82% of all established corporate private facilities and almost 40% of all OAEs were operating in urban areas (Hooda 2017).

Official accounts of the number of private enterprises operating in Indian cities fall far short of reality. A study in Pune amidst an urban cluster of a population of 200,000, found that official data on private providers was only 39% complete; and that private providers far outstripped public provision - doctor to population ratios were 2.8 and 0.03 per 1000 population in private and public sectors respectively - and bed strength was 40-fold higher in the private sector (Furtado and Kar 2014).

There is little documentation of the quality of care in these settings. Private providers are heterogeneous ranging from formally trained western medicine or Indian medicine providers to informal, unqualified providers (Sheikh and George 2010). Rao and Peters (2015) point out that 20% of urban health care providers are unqualified, casting serious doubt on the quality of care. The private practitioners compete with an under-resourced, weak and compromised public sector (Nandakumar et al. 2004). These combined features are referred to as the 'Mixed Health Systems Syndrome' (Nishtar 2010).

Box 4.3 Voluntary Health Association of Assam has documented the impact of poor quality of care on health-seeking behaviour among poor residents of the Guwahati peri-urban area (Appendix 4c)

….In fact, all basic health care services such as ANC/PNC/Immunisation, Family Planning, DoTs, detection and treatment of vector-borne diseases are available. However, health system challenges include non-availability of doctors and break in services (the latter more so during the lockdown period last year), poor testing facilities, geographic inaccessibility, poor quality of care and out of pocket expenses. People therefore mostly frequent the 'round the corner' kind of drug stores which are run by lay persons. It is also doubtful whether such drug stores have proper licences.

A study in two states (Madhya Pradesh and Delhi) revealed significant gaps in policy and regulation of the private sector. On costs of care, there were no established price schedules or reference prices defined for treatments and procedures (Sheikh et al. 2013). On the regulation of quality of care and provider conduct, there are huge gaps in the design of regulatory architecture like the absence of standard treatment guidelines; lack of practice of evidence-based medicine and health care users' surveys. The government was not bringing its power - as a high volume purchaser through the various publicly funded health insurance (PFHI) schemes - to bear, by enforcing performance-based incentives. Self-regulation measures like accreditation are in their infancy and largely inadequate, and other mechanisms like benchmarking, peer review, performance indicators, public disclosure, triple loop learning are non-existent. Other measures such as making accreditation a pre-condition for empanelment for PFHI schemes, is largely absent (TRG 2014).

Even where policies exist, there are lacunae in implementation. Implementation is hampered by inadequate financing and staff capacities, lack of separation between the regulatory activities and the developmental activities of the public sector (resulting in the former getting less autonomy and attention), and frequent conflicts with professional bodies (Sheikh et al. 2013). The urban health scenario is further complicated by the presence of multiple agencies like Urban Local Bodies responsible for the health of the urban populations. Most of the ULBs have scarce funds and there are not enough incentives to implement regulations for better public health (Das Gupta et al. 2009).

One disturbing fact is that 99% of all private health providers in India are unincorporated, small scale enterprises (employing fewer than 10 employees), and predominantly in urban areas (Chaudhuri and Datta 2020). In an era when there is a decided shift towards ensuring universal health coverage through an insurance-based system and away from a state-based social security system, this raises significant concerns with regard to quality

of care as well as regulatory mechanisms governing private providers. There is an under-utilisation of the public health services and supplier-induced over-medicalisation in the private sector in addition to absence of the accountability mechanisms both in private and public facilities (HLEG 2011).

4.5 Urban malnutrition and its disastrous consequences

One of the stark reminders from the COVID-19 crisis has been the persisting vulnerability to hunger among poor and marginalised populations. Decades of implementation of food security programmes in the country – such as the Public Distribution System, Integrated Child Development Services and the Mid-Day Meal Scheme - have yet not been able to ensure a secure source of basic food staples, let alone a nutritious diet. Our interviews with frontline workers and with CBOs working amongst urban vulnerable groups indicated that an important component of their intervention entails providing access to food, something that continues to be a daily source of anxiety to many.

With growing urbanisation, particularly distress urbanisation (contrasted with developmental urbanisation), food insecurity is increasingly becoming urbanised (Madhavpeddi 2017). The international food policy research institute has also reported that poor urban dwellers not only face food insecurity, but also challenges in accessing other determinants of nutrition outcomes such as clean water and sanitation. The same report indicates that coverage of food security programmes is also skewed towards rural areas: 75% of poor rural households are covered by the Public Distribution System, as compared to 50% of poor urban households.

The most vulnerable, of course, are children. Recent report from NITI Aayog shows that the disparity in coverage of the ICDS between rural and urban areas is astonishingly large. As of September 2019, of the 9.31 lakh *anganwadis* linked to the government's centralised Rapid Reporting System, only 1.09 lakh are in urban areas (The Hindu 2020). Not surprisingly, of 7.95 crore beneficiaries across the country, only 55 lakhs were registered in urban areas. A separate examination of access to/utilisation of ICDS services by pregnant and lactating women and children under six years of age (based on data from NFHS-4), showed that utilisation was significantly lower in urban as compared to rural areas (Rajpal et al. 2020). Only 38.8% of pregnant women availed of any ICDS service (supplementary food, health check-up, health and nutrition education) as compared to 60.5% of their

counterparts in rural areas. Only 40.2% of children under six years of age availed of any ICDS service (supplementary nutrition, health check-up, immunisation, childcare services) in urban areas as compared to 59.6% of children in rural areas. Indicators of nutritional outcomes and risk factors for poor nutrition among urban children <5 years of age present a very uneven picture. A comparison of NFHS-4 (2015-16) and NFHS-5 (2019-20) data for selected states shows that there has been improvement in a few risk factors for child undernutrition such as immunisation, but on many other fronts there has either been stagnation or decline.

Table 4.5 Nutritional outcomes and risk factors for children under 5-years-of-age in urban settings (selected states)

State	Children 12-23 months fully vaccinated*		Prevalence of diarrhoea in 2 weeks preceding survey		Children <6 months exclusively breastfed		Children <5 years of age stunted		Children <5 years of age wasted		Children <5 years of age underweight	
	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4	NFHS-5	NFHS-4
AP	69.3	60.4	6.2	5.7	61.4	67.0	23.1	28.3	17.6	15.5	25.1	28.4
BH	66.7	59.7	12.6	8.0	55.8	46.8	36.8	39.8	21.6	21.3	35.8	37.5
GJ	77.0	50.4	5.7	7.7	70.3	48.7	32.4	31.7	22.4	23.4	33.3	32.0
KN	80.0	89.2	4.6	4.8	56.7	47.0	32.2	32.6	18.5	21.8	29.4	31.5
KE	77.6	82.2	4.2	2.7	50.3	55.0	20.1	19.8	16.0	16.0	19.4	15.5
MH	71.7	55.8	6.6	6.8	66.9	51.3	34.9	29.3	23.0	24.9	33.3	30.7

Source: NFHS-4 and NFHS-5 State Fact Sheets; *based on vaccination card or mother's recall; AP, Andhra Pradesh; BH, Bihar; GJ, Gujarat, KN, Karnataka; KE, Kerala, MH, Maharashtra; red shading indicates relatively worsening of the indicator in NFHS5 data as compared to NFHS4

As Table 4.5 shows, while immunisation rates have mostly improved in the selected states between the two rounds of the NFHS, other risk factors such as prevalence of diarrhoea and exclusive breastfeeding for the first six months have declined in half the states. Indicators of malnutrition – stunting, wasting and underweight – have also declined in half the states included in the table. This casts a doubt on whether India will be able to achieve the SDG goals for reducing nutritional deficiency among children.

The impact of food insecurity is far-reaching. This became particularly evident during the pandemic. The Stranded Worker's Action Network (SWAN) provided a range of emergency assistance to migrants who had been displaced from their urban residence by the lockdowns and resultant loss of livelihoods. SWAN described the situation they encountered as follows:

Box 4.4 Distress calls for food during the pandemic

The calls that SWAN received provide an indication of the extent to which hunger and deprivation had pervaded the workers during the lockdown. Extreme hunger was evident with workers having skipped meals, surviving on biscuits, and in some cases for days only on water. The long term impacts of hunger and deprivation on vulnerable groups is perhaps unfathomable… The situation of families with children was particularly worrying. In the case of toddlers, families were struggling to find suitable food, as milk supplies were disrupted. The children were too young to eat food being provided for adults or were falling sick eating in feeding centres. Sometimes, they had to leave the feeding centres hungry as the queues were long and by the time it was their turn the food had run out. Many of the calls SWAN received were SOS calls for help with medical needs of children such as those suffering from diarrhoea and pneumonia—diseases that are the leading causes of death among children in India (Appendix 4a).

4.6 Dwindling financing for urban health and nutrition programmes

One reason for the poor availability and quality of care in the public sector, and for the shift towards private sources of care, is the low level of funding for urban health. The health sector overall is seriously underfunded, with just about 1.2% of GDP allocated for publicly funded health services (NHP 2017) and the NHP 2017 setting a goal of a mere 2.5% of GDP by 2025. Within this already restricted envelope, the allocation for urban health is even more meagre. Despite Census data showing that over 30% of the population lives in urban areas – this includes metros, cities, towns and district headquarters among others – central funding for the NUHM has remained at around 3.5% of the funding allocated to NRHM (INR 868 crores as compared to INR 25,495 crores)[6].

At the state level too, allocations (NUHM central + state funds) to urban PHCs and CHCs have been declining steadily. Funding for urban CHCs (aggregated across all states) has declined by almost 70% from INR 5,800 lakhs to INR 1,700 lakh; and by about 50% for urban PHCs from INR 15,900 lakh to INR 8,500 lakh between 2016-17 and 2018-19, that is, just two years. This reflects the shrinking funding for urban primary care at the state-level, with very few exceptions (such as Uttar Pradesh).

6 Demand No. 42 & 43, Ministry of Health and Family Welfare, Union Budget 2020-21, PRS.

Wu et al. (2019) estimated that, for cities with a population of one million, India spends USD 30.4 (current prices) per capita, per annum, for a package of essential services that includes age-related services (including maternal and new born care, child-related services, school-going child interventions, adolescent health interventions, and reproductive and contraceptive interventions), interventions to address communicable and non-communicable disease and injuries, and health systems costs (calculated at 40% of total service delivery cost). They estimate that an additional USD 74.6 per capita, per annum would be required to achieve 100% coverage of these services for all urban residents.

In India, allocations to the flagship national programme to combat child undernutrition – the Integrated Child Development Services – have more or less stagnated since 2011-12, rising very slowly from year to year, if at all. Expenditures for the most part fell short of allocations – this shortfall is included and accounted for in the next year's allocations, so the rise may also not reflect a true increase. The figures shown in Table 4.6 below refer to ICDS and include both rural and urban geographies; but urban allocations are likely to have followed a similar pattern.

Table 4.6 Financing of ICDS 2011-12 to 2019-20 (selected years) (in INR Crore)

Year	Allocations	Expenditure
2011-2012	14048.4	14272.21
2012-2013	15850	15701.5
2013-2014	16312	16267.49
2014-2015	16561.6	16581.82
2015-2016	15483.77	15438.93
2016-2017	14560.6	14430.32
2017-2018	15245.19	15155.34
2018-2019	17879.17	16811.71
2019-2020	17704.5	14269.46

Source: Ministry of Women and Child Development, Govt. of India. (ON2312)

A study of municipal taxes in India conducted by the Asian Development Bank in 2013 indicates that their contribution to infrastructure and services in all sectors is limited at best. Their total revenue adds up to a mere 0.53% of GDP and expenditures across all sectors to 1.03% of GDP. There are also large inter-state differences, having to do with state-level policies on what powers are delegated to municipalities. Particularly in smaller municipalities, the challenge to revenue generation is significant. In addition, they

found inefficiencies due to poor management and accountability, with no enforceable performance standards. Hence the expectation that municipal funds can compensate for shortfalls in central/state funding is unrealistic.

Conclusion

Options for accessible and affordable health care in urban India are limited. The public health care system has failed to live up to both its own norms and to the reasonable expectations of urban communities. While private sector health care is proliferating, it is not affordable and is of uneven quality. The evidence indicates that the impact of the gaps in public health care – availability, access, affordability, quality – is most severe on the poorest and most vulnerable. This does not even account for the determinants of health, such as decent housing, access to clean water and sanitation, as well as any action to address the growing threat of climate change. Given the increase in distress migration to urban settings across the country, this burden is only likely to grow. However, as pointed out by the WHO, cities not only pose challenges for the poor, they also represent a tremendous opportunity: for a better life today, and for a better tomorrow. Good health is a prerequisite for urban dwellers to make the most of this opportunity, and policies and programmes need to recognise and support the aspirations of the millions who inhabit our cities in search of something as basic as ‘A Good Life’.

5. Towards Health Equity in Urban India: Lessons and Actions

Persistent urban health inequalities are a stark reminder of the need to reinstate equity at the centre of public health planning and response. Our analysis has focused on the equity issue: we began by unpacking the complex and layered nature of the category that is termed 'urban poor'; and the range of health vulnerabilities that they experience in Section 2. We then examined the design of the urban 'health system' in its multiple *avatars* by looking at four quite different urban areas, which gave us important insights on the architecture, or the lack of it, of an urban health system and associated governance challenges (Section 3). We finally looked at specific issues around accessibility, affordability and quality of health care, and their impact on health outcomes in Section 4.

What we have learned is that there is currently a fragmented urban 'health system' in place that functions sub-optimally. An important objective of this report is to suggest constructive ways for the urban health system to break out of 'business as usual' and move forward. In this section, we draw on conversations and inputs from a wide range of actors, as well as our own understanding and experience to answer the question: What can we do about it?

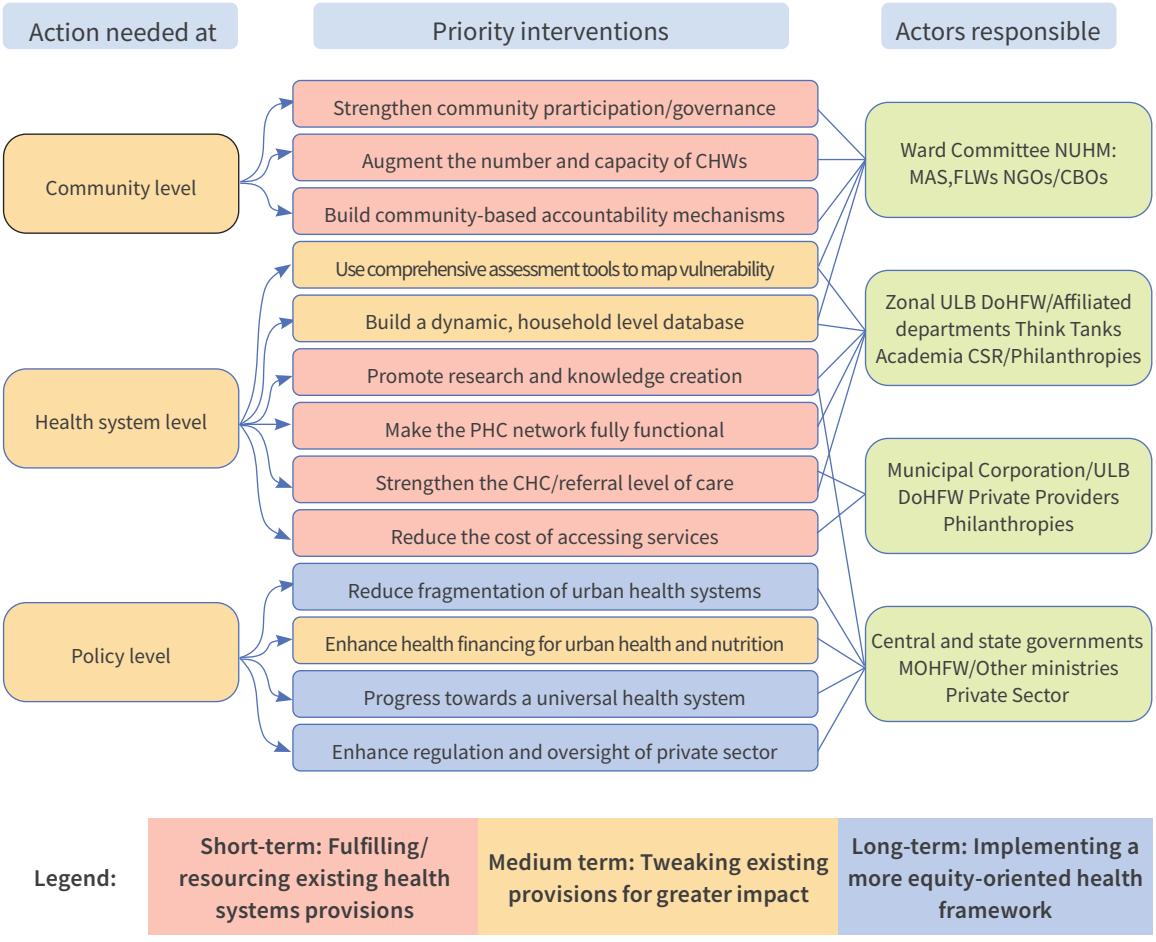
The priority interventions we have identified are classified in three ways:

i. Recognising that not all actions can be addressed immediately, three phases of implementation are envisaged: some actions can be implemented in the short-term; mainly fulfilling existing health systems provisions, that can be done quickly; some actions can be in the medium term - interventions that do currently exist, but need to be tweaked to work better; and some actions need the longer term - the structural and policy changes required to conceptualise, design and implement an equity-oriented urban health framework.
ii. We categorise the identified actions by levels of accountability: starting with actions that can be done at the community level, we zoom gradually out to actions that can be taken at the systems level and finally at the macro-policy level.

iii. The complexity of urban health systems is partly reflected in the plethora of actors involved. We have therefore identified the agencies/authorities who are responsible for driving each action, acting sometimes individually and sometimes through multi-sectoral platforms.

Figure 5.1 illustrates the approach taken, which is further unpacked through this section.

Figure 5.1 Urban health equity: An intervention framework



5.1 Strengthening community connect

Successful urban health interventions, particularly among those that we examined closely, have an important common feature: they focus on helping the community help themselves. The idea of building community ownership and empowerment, through peer-to-peer interaction, leadership development and so on are not new. They have been extensively used in, for example, the National AIDS Control Program. Their relevance to the urban health context is now emerging and opens up interesting possibilities.

How can this be done?

5.1.1. Strengthening community participation/governance

The 74th Amendment envisages the devolution of power. The strengthening of Ward Committees is already being mooted by the BBMP in the wake of the COVID-19 pandemic. Each Ward is to set up a Decentralized Triage and Emergency Response (DETER) Committee to manage the pandemic at the local level. Similarly, in Kerala they are devolving funds, functions and functionaries to the Ward level. This has been widely documented for their excellent health outcomes and their relatively successful response to numerous crises, including the floods of 2019 as well as the current pandemic.

In addition to this, NGOs could support community participation by building and nurturing teams of (i) community volunteers, (ii) peer leaders who are themselves from the vulnerable groups, and (iii) women's collectives who regularly engage with the communities. Their role would be to consistently identify and address the health and related needs of the specific community they work with, and facilitate appropriate institutional linkages. For example, a persistent problem in accessing services, particularly for groups such as migrants, is the difficulty in producing documentation that is often required as a pre-requisite. Community volunteers have proved invaluable in helping the poor to access ration cards, work permits and other such basic documents that can otherwise block their entry into the system. The Azim Premji Foundation's COVID-19 response work in the lower income neighbourhoods of Bengaluru found that an engaged community, with its volunteers, networks and collectives, has been a huge asset and this is reinforced by experiences shared by other organisations such as SPARC, Hasiru Dala and SEWA Bharat.

5.1.2. Augmenting the number and capacity of community health workers in urban areas

Community health workers are the link between the community and the health system and their role can be prioritised. Several urgent actions are needed here, including:

i. Recruiting Urban ASHAs/ANMs and AWWs as per the norm and filling up all current vacancies. This can be done by the ULB, coordinating with DoHFW
ii. Providing FLWs adequate training and mentoring support to build a capable, empowered and responsive frontline workforce. Importantly, their training should include sensitisation to - a) the social determinants of health in the urban context, including the range of vulnerable groups, the nature of their vulnerability, and its

health impacts, and b) the specifics of the local disease burden, which our evidence shows is skewed towards non-communicable diseases, requiring continuity of care, follow ups, and well-designed health communication on disease management and risk factors.

Box. 5.1 Urban Mitanin Program

Urban Mitanin Program of the Government of Chhattisgarh highlights what kind of CHW program is appropriate and how it could work in urban areas. This includes:

a. relatively smaller number of households per Mitanin (200 households or less depending of the geography of the slums);

b. training modules that emphasise social determinants of health, home visits, and community-based care and counselling for common health problems;

c. regular support from the MAS (one MAS per one slum); and

d. availability of an ANM in sub-centre like facilities called Swasth Suvidha Kendras (SSK).

Source: Garg et al. 2016

5.1.3. Building community-based accountability mechanisms

Mechanisms such as the MAS bring community members into the governance process through their participation in regular monitoring of services. This empowers communities to take ownership for holding the health system accountable to their needs. So far, this provision of the NUHM has been implemented only scantily in most places. However, evidence from both Chhattisgarh and Odisha (NHM and NHSRC n.d.) indicates that strengthening the functioning of the MAS is possible and can pay rich dividends.

Box 5.2 Government of Odisha's experience

Government of Odisha's experience with MAS offers some lessons. The government has 'invested in setting up mechanisms for the constitution, capacity building, handholding and monitoring of MAS, to enable high levels of community engagement yielding positive dividends'. It has introduced a system of scoring and grading of MAS on ten indicators; and this 'institutionalizing of grading system has facilitated regular monitoring and feedback mechanism for MAS' on a range of services.

Source: Mishra, S.K. (n.d)

5.2 Expanding the evidence base of the health system

We found that a grounded understanding of the dynamic and complex nature of health vulnerabilities experienced by the urban poor is essential for several reasons:

i. To **identify** who they are, particularly those who tend to remain invisible, such as residents in unrecognised slums, temporary settlements, pavement dwellers and
ii. To **prioritise** those at highest risk, such as persons with disabilities, co-morbidities, pregnant women, children and the homeless with mental health conditions. Creating this graded approach to vulnerability proved to be very helpful during the COVID-19 response (as noted by many civil society organisations) and
iii. To **respond** suitably, based on a granular knowledge of who the vulnerable groups are, and the nature of their vulnerability.

How can this be done?

5.2.1. Using comprehensive vulnerability assessment tools

The Urban HEART (Urban Health Equity Assessment and Response Tool) integrates measures of health inequality such as the social determinants of health (living conditions, income, social exclusions among others) and their impact on different health conditions including communicable and non-communicable diseases. SNEHA, an organisation in Mumbai, in its work on women and child health, draws attention to how such comprehensive assessments of vulnerability should not cover only demographic, socio-economic and living conditions; but also include existing and potential community level resources including social networks, presence of community influencers (such as women leaders, religious leaders), and specific health related practices that help in informing suitable actions. NUHM has created the provision for mapping vulnerabilities to identify specific health needs of vulnerable groups, and this opportunity must be capitalised to make the mapping exercise more nuanced so that it recognises the dynamic, layered and intersectional nature of health vulnerabilities as the basis for appropriate responses.

5.2.2. Building a dynamic database

This can be done at the Ward level - through the efforts of FLWs supported by NGOs working in the area - to:

i. Map the different kinds of facilities/services/providers including distance, locations, timings available in a given area. The 'Urban Health Atlas' based on a geo-spatial analysis is one such possibility; and

ii. Build a comprehensive and dynamic health database, that provides household and individual level details on health and nutritional status, including co-morbidities. Having invested in such a database as part of their intervention plan, organisations such as Hasiru Dala (in Bengaluru) found it much easier to provide targeted humanitarian aid during the COVID-19 pandemic, to the poorest and most in need.

5.2.3. Promoting research and knowledge creation

What is the disease burden of specific vulnerable groups like pavements dwellers and others? How secure is their access to food, and what are their specific nutritional challenges? What kinds of mechanisms work well on the ground to bring together the various actors engaged in public health provision: health, nutrition, water, sanitation and so on? When and how do certain urban local bodies perform better than others? What do we know about quality of care at different levels and its implications on vulnerable groups? What kind of regulation of the private sector is feasible? Grounded research into these and related issues would provide the kind of granular understanding of vulnerable communities and their health challenges that is essential for designing effective interventions.

5.3 Streamlining sectoral priorities towards health equity

It is well-recognised that the public health sector overall, both rural and urban, is struggling to provide adequate and quality health services. This impacts the poor the most. The priority for the allocation of the limited resources currently available for urban health should therefore be towards easing the stress on poor households, by ensuring the three pillars of a functional health system: availability, accessibility and affordability. By design, the NUHM is meant to promote all three; yet there are huge gaps in the implementation of the design. These gaps need to be urgently addressed.

How can this be done?

5.3.1. Building the PHC network

This can be done by:

Increasing the availability of human resources for health according to NUHM population norms, since – as in the case of ASHAs, ANMs and AWWs – in most places they are well below the prescribed norm. In our detailed look at four urban

settings reflecting diverse economic, social and health contexts, we found that the situation on the ground does not reflect the provisions and guidelines of the NUHM.

iii. Equipping PHCs with necessary human and financial resources to provide integrated health care (screening, diagnosis, treatment, medicines and follow up) with adequate referral linkages to secondary/referral health facilities.

iv. Expanding the range of health resources at the community level – as this has been done in Raipur – with the establishment of Swasth Suvidha Kendra (SSK). Linking the community and the PHC, these SSKs serve as the first point of contact for the community with the health system. They provide immediate care, practically at the doorstep, for simple ailments, and are also the first link in the referral chain, sending more complicated cases to the PHC for a doctor's expertise.

5.3.2. Strengthening secondary/referral level of care

Since patients are currently being referred directly from PHCs to tertiary or specialty care centres, the number of functional CHCs/referral hospitals can be increased. The price in terms of time, distance to be travelled and treatment costs are too high for most urban poor, and rather than forgo a day's wages, they forgo treatment instead. Clear referral protocols need to be in place for the system to work efficiently. This means that the lower levels of the referral chain (the PHCs) need to be fully functional as well. A situation where women are referred from a non-functional PHC to a tertiary hospital for a normal delivery should be unacceptable.

5.3.3. Reducing the cost of accessing services

This can be done in multiple ways:

i. By providing cashless service at all government facilities under the various government sponsored insurance schemes (RSBY/PM-JAY), since having to pay upfront can be a major deterrent to access

ii. Scaling-up initiatives such as:
    a. Neighbourhood Mohalla clinics, as has been done by the Government of Delhi and as is now being proposed in Bengaluru. These clinics provide free health check-ups for a range of ailments including NCDs and medicines are given free.

Such initiatives hold promise to address the burden of out-of-pocket expenses, as well as the risk of undiagnosed or even discontinuation of care for chronic conditions among vulnerable communities in urban areas; and

b. With the scale of vulnerability to hunger among the urban poor being starkly exposed during the pandemic, this is the time to expand initiatives such as the Amma Canteens in Tamil Nadu, Indira Canteens in Karnataka, or Janata Aahaar in Delhi. Clean food, provided cheap, eases the foremost anxiety faced by poorest urban families: Where is our next meal going to come from?

Box 5.3 Community Kitchens: A lifeline for the urban poor

When the J Jayalalithaa government launched their Amma Canteens (Amma Unavagam), critics dismissed them as a political ploy and a drain on the state's finances. Providing idlis and sambar at INR 1 per plate, Pongal for INR 5 at breakfast time, followed by various rice dishes priced between INR 3-5 at lunch, and ending with chapatis with dal at INR 3 in the evening, these canteens soon became the food source of choice for the millions of urban daily wagers, migrants and others. The food was clean, and it filled the stomach at an affordable price. The initiative was soon adopted by other states. During the pandemic, they were the hub of food distribution to the poor in many states like Kerala and Delhi.

Community kitchens are an idea whose time has come. Can the current models be improved upon? Certainly. Although the food is carbohydrate heavy, and light on vegetables and proteins, this can be corrected. But that can only happen if the government recognises the scale and enormity of hunger that exists, particularly in urban India, where traditional networks and sources of supplementary food do not exist. Given the high levels of malnutrition among poor urban children, and the growing epidemic of obesity accompanied by diabetes and hypertension among urban adults, not only will providing cheap nutritious food have a significant impact on disease burden, but it also makes economic sense.

5.4 Enabling equity through policy

While the NUHM framework is inclusive - and has several provisions specifically intended to address the health needs of vulnerable urban communities - it is focused on actions that need to be taken by the public health system, through its own human and financial resources. What we find is that there are multiple actors concerned with providing health care in urban areas. The current policy framework, while talking broadly about 'inter-sectoral coordination', does not provide a mechanism for them to come together to

address specific issues proactively. The policy needs to recognise that urban health care is not the exclusive domain of the public sector. That ship sailed when the private sector was encouraged to enter the health care space. So, there is a need for the public health sector to strongly steward the development of the urban health system. At the same time, what is needed is an enabling framework that allows for partnering with the other actors towards a common goal: a unified health system that addresses the health care needs of all urban residents.

How can this be done?

5.4.1. Addressing the fragmentation of the urban health system

The current overlapping of jurisdictions is counter-productive. The issue has its origins in the overlapping roles and responsibilities of state and municipal bodies. The result is that access to health care suffers, and urban residents end up paying a steep price in the ubiquitous private sector or forgoing treatment altogether. Based on the context and local conditions, either the ULB or the state can lead in this matter. The NUHM guidelines clearly allow for this flexibility. After mentioning that the state could constitute a city-level Urban Health Committee headed by the District Magistrate (or equivalent), the document adds that: *For the seven mega cities, namely Delhi, Mumbai, Kolkata, Chennai, Bengaluru, Hyderabad and Ahmedabad, the NUHM may be implemented through the respective ULBs. For the remaining cities, health department would be the primary implementation agency for NUHM. However, for cities/towns where capacity exists with the ULBs, the states may decide to hand over the management of the NUHM to them.* (NUHM Implementation Guidelines, p.46).

Regardless of the leadership of the implementation arrangement, the important outcome is a ***unified urban health system***, with clear lines of responsibility and accountability. There are good examples of promoting coordinated and responsive health care by constituting coordination platforms between the various state and non-state agencies and the ULBs for inter-sectoral actions and shared responsibility. These need to be documented and shared, and over time, scaled up across other urban geographies.

Box 5.4 Urban mental health program: Iswar Sankalpa with Kolkata Municipal Corporation

The programme has been envisaged as a clinical-community model with work across the wide spectrum: stress-distress-disorder-disability. It aims to bridge the gap between clinical care and social determinants of health. By training doctors and health workers at the Kolkata Municipal Corporation as well as community volunteers in mental health, it aims to address the gaps in availability and accessibility of mental health in low resource settings. The programme is rooted in a community based rehabilitation model of care, addressing mental health concerns holistically. For example- clients are helped in attaining employment opportunities and entitlements.

Source: more details at https://isankalpa.org/wp-content/uploads/2021/03/UMHP-Process-Document.pdf

5.4.2. Enhancing health financing

Not only does overall health financing need to increase from the current dismal level of 1.0 - 1.2% of GDP, but the allocation of these limited resources also needs to change. Despite the increasing urbanisation across the country, urban health services are persistently short-changed. This is one of the reasons why even the poor prefer private, expensive and often poor quality health care. Urban health deserves a proportionate allocation of the state's health budget – particularly in states where 30-40% of the state is urban. Health financing therefore needs to fulfil the requirements of an urban health system functioning at an optimum level.

In the spirit of the 74th Amendment, ULBs also (like state and central governments) need to allocate more resources towards health care. For instance, the recent BBMP budget of INR 9,286.8 crores allocates a mere INR 336.6 crores for public health, that is, 3.6%. Given the critical role played by the public health system in the pandemic response, this provides food for thought. Surely a larger share is warranted and could have been justified.

5.4.3. Progressing towards a Universal Health System

The facts are clear: health care in urban areas involves a plurality of providers including Government, private for-profit and not-for-profit, NGOs, and charity/missionary clinics/ hospitals. This plurality should be leveraged to build a unified health system that brings together these different sources of health care through various cost-sharing mechanisms (including through central or state subsidies/state-sponsored insurance schemes), This would go a long way towards expanding coverage and the range of available health

services, as well as controlling costs, transforming the system in multiple important ways:

i. It would strengthen the health system across the board since all urban residents would have access to all the different health care options, thus removing the 'stigma' of the means of testing
ii. It would increase health system efficiency, allowing for a 'nested' system of referral between hospitals, promoting quality and continuity of care
iii. It would contribute to bridging both physical and social distance between community members (who often do not access services due to fear of reprimand, ill-treatment, lack of information, care and support)
iv. It would considerably lighten the burden of crippling out-of-pocket expenses that push so many people into poverty every year.

Of course, this will also require a strong policy statement and rigorous implementation to ensure that all partners are working towards greater health equity and justice. The Azim Premji Foundation's integrated COVID-19 response in the city of Bengaluru offers a possibility of such coordinated effort, leveraging resources across levels and actors.

Box 5.5 Azim Premji Foundation's Integrated COVID-19 response in Bengaluru

The Azim Premji Foundation responded to the COVID-19 pandemic with an integrated response to the health care crisis. It worked in 85 wards covering eight slum clusters in Bengaluru, Karnataka. The integrated response focussed on 1) community level efforts such as awareness, screening, testing, contact tracing, local quarantining 2) supporting intermediate centres and processes for non-critical care and 3) and supporting responses for critical care at the tertiary level. The response was operationalised in close partnership with 21 NGOs, six public spirited hospitals, the Health and Family Welfare department of the Government of Karnataka, and the Bruhat Bengaluru Mahanagara Palike (BBMP) and 1550 community level volunteers

Source: More details at https://azimpremjifoundation.org/Covid-19

5.4.4. Enhancing regulation and oversight of the private sector

The expansion of the private sector in urban areas over the last few decades is a visible reality. The regulation and oversight of services provided and their quality and cost is a matter of great concern. The government needs to take a stronger stand in terms of implementing measures such as the Clinical Establishments Act (or equivalent, in different states) to monitor the services being provided in private hospitals. This is not impossible.

During the current pandemic, public authorities have capped the prices of services like diagnostics and treatment (and even costs of vaccines in the initial stages). Another good example is the lead taken by the BBMP (Bengaluru) during the COVID-19 pandemic in commandeering 50% of all private beds for COVID-19 patients, or of fixing the costs of COVID-19 tests in private testing centres. Even prior to COVID-19, the state of West Bengal provided a prototype of an autonomous body for regulating the private sector. So, it is possible; but it needs to be done consistently and in the face of stiff opposition from the private entities. Strong political will and sustained pressure from civil society and consumer groups will need to be nurtured to really make this happen.

Conclusion

This report is a call for action for all of us: researchers (to build the evidence-base on critical aspects of urban health which is currently scant), funding agencies (to inject much-needed resources towards key urban health concerns), NGOs/CBOs (to identify and reach out to vulnerable communities in grounded and practical ways), the communities themselves (to take collective ownership of their health outcomes and constructively hold the system accountable), and most importantly the government (to provide the resources and support necessary to, at the very least implement the road map set out by the National Urban Health Mission).

Urban health is at a crossroads. With the current pace of urbanisation, the numbers of urban poor will only grow, presenting a major challenge to urban health systems. The list of actions outlined above is not exhaustive. It is, rather, an attempt to bring together the immediate steps needed to improve the health conditions of the urban poor and reduce major disparities. Without urgent action, and with the long-term devastation caused by the pandemic to the economic, social and health outcomes of the urban poor, it is quite likely that health inequalities will multiply alarmingly. Urban health challenges will continue to grow in the coming decades. It is hence imperative to prioritise addressing urban health in a proactive manner.

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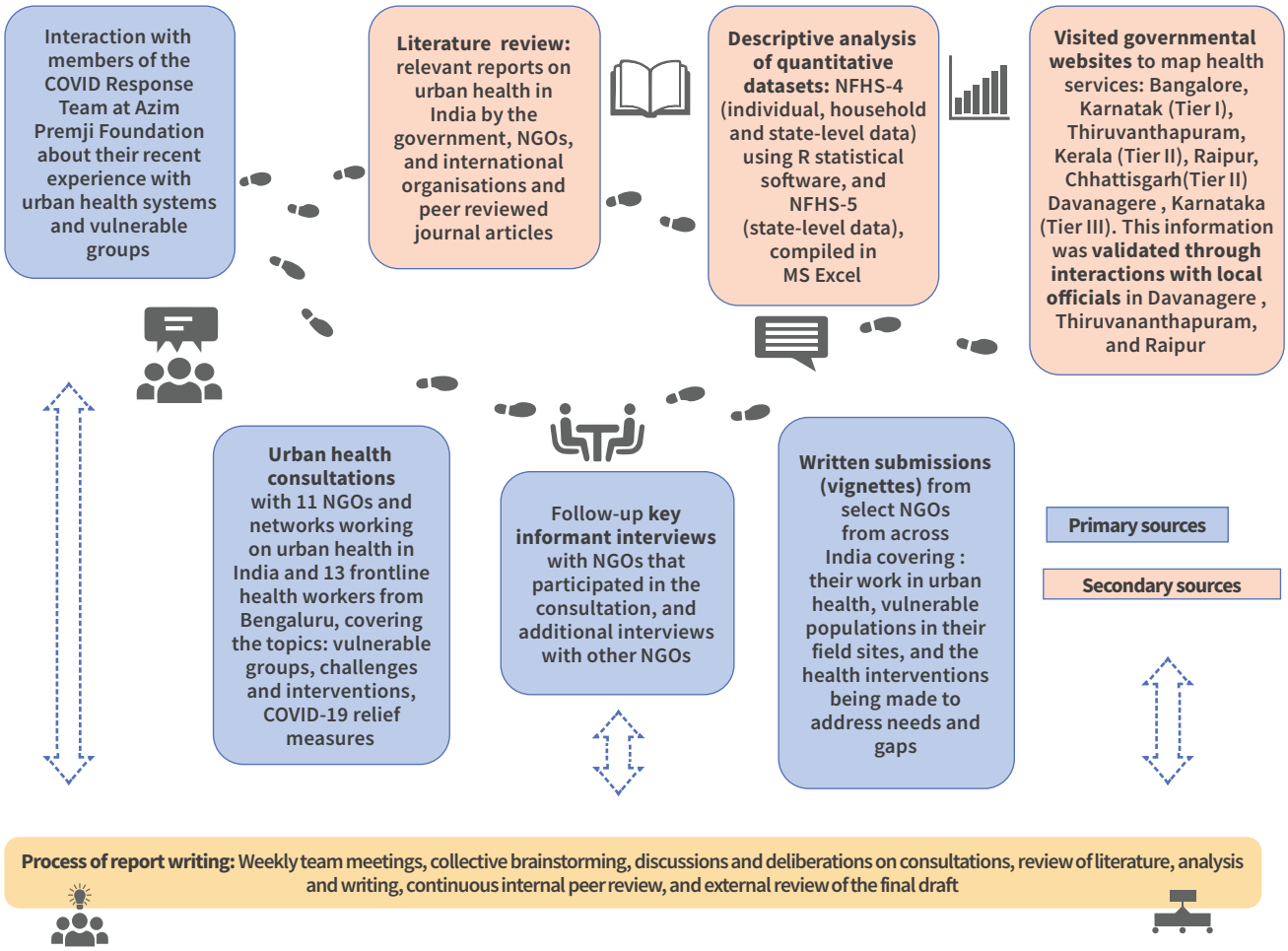
Appendices

Appendix 1: Process of writing the report

The report is compiled by the Public Health Team at the Azim Premji University. The team members are drawn from diverse disciplines (Sociology, Anthropology, Epidemiology, Law and Public Health) and backgrounds (academic and practitioner) and have had several years of engagement with health systems, policies and practices. The report draws on our collective experience and prior work, existing literature on urban health, inputs from civil society organisations working on urban health across India, as well as health officials in the four cities. The report also draws on analysis of select databases including NFHS (National Family and Health Surveys) and Census of India. The process that informed our discussion and analysis is captured in the following figure:

Snapshot of the methodology



Our work began with interactions with members of the COVID response team at the Azim Premji Foundation, to understand their experience of specific concerns, challenges and ways of addressing the same as part of their integrated health care response in Bengaluru, Karnataka. We then held two consultations between November-December 2020 with NGOs working on urban health. These organisations include Society for Promotion of Area Resource Centres (SPARC), Society for Nutrition, Education and Health Action (SNEHA), Sarvagna Health Care Institute, MAMTA – Health Institute for Mother and Child, Public Health Resource Network (PHRN), Dalit Bahujan Resource Centre (DBRC), Hasiru Dala, Swasti Health Resource Centre, Centre for Advocacy Research (CFAR) as well as networks including Stranded Workers' Action Network (SWAN) and the Hosur-Sarjapur Road Layout (HSR) support group that specifically emerged as a response to address concerns of food, nutrition and health care during the pandemic. We realised that organisations working exclusively on urban health are few and far between. For many organisations that work with vulnerable groups in urban areas, their engagement with health is peripheral. Our consultations focused on organisations' experiences of working with issues of health and inequities in urban areas, their engagement with the urban health care system and insights from responding to the issues of the urban poor especially in the context of the COVID-19 pandemic. We held two more consultations with frontline health workers (ASHAs, ANMs and AWWs) from different zones in Bengaluru facilitated by partner organisations of the Azim Premji Foundation in its COVID-19 response including Sama Foundation and the Association for People with Disability in seeking to understand their experiences with urban health systems and the communities they work in. The consultations were followed by key informant interviews for detailed insights on organisations' work on urban health. These interviews were held with select organisations who participated in the consultations as well as others including Iswar Sankalpa in Kolkata and Society for Community Awareness Research and Action (SOCHARA), Bhopal. Additionally, we reached out to other organisations to share written vignettes specifically outlining the vulnerable groups they work with, the nature of vulnerability, specific health system issues and how the organisation intervened. Our inputs from civil society organisations through consultations, key informant interviews and vignettes thus covered a wide range of geographies and vulnerable groups in Mumbai, Bengaluru, Delhi, Bhopal, Ranchi, Surat, Lucknow, Guntur, Guwahati and Kolkata. These inputs have been extremely valuable in providing a grounded understanding of urban health concerns as well as possibilities for action.

We visited relevant websites to map health service provisions in select cities/towns. We chose Bengaluru (Tier I), Thiruvanthapuram (Tier II), Raipur (Tier II) and Davanagere (Tier III), as specific illustrations of understanding health service provisions in urban areas. The website information has been supplemented by interacting with relevant officials (and visits to the facilities in Davanagere) in Raipur, Thiruvanthapuram and Davanagere to validate the information. Our presentation of the urban health care system organises the services at different levels and by types of providers to unpack how urban health care systems differ in their structure and organisation across different urban centres, adding to the complexity of 'urban' health.

We also read various reports and papers by Government, NGOs, international organisations and researchers, collating relevant insights about urban health. The quantitative data presented in the report is drawn from literature as well as based on our analysis of individual-level data from NFHS-4 (downloaded from the Demographic and Health Survey, or DHS, website), and state-level data of NFHS-5 (downloaded from the National Family Health Survey, India website). The analysis of individual-level data from NFHS-4 was conducted in R statistical software version 4.0.2 (on RStudio Version 1.3.1056) (R Core Team, 2020). The tables were edited in MS Word (Microsoft Corporation, 2019) based on the outputs provided by R.

For the team at the University, writing up this report has indeed been a journey of shared learning in not only appreciating the complexity of urban health concerns but also realising the need and potential for actions that address the health vulnerability of urban poor and vulnerable groups. We hope that this report can serve as an inspiration as well as a resource for a larger community of researchers, practitioners and others to prioritise urban health actions.

Appendix 2: Policy Timelines on Urban Health

Policy Milestones in relation to urban health

Year – Policy and Process	Focus
1948 The Bhore Committee	Silent on urban health services and infrastructure
1951-61 Ist and IInd Five Year Plans (FYP)	Three-fourths of medical resources allocated to urban areas focus largely on curative services (Kumar et al. 2016) Urban clinics of four types were established to strengthen the delivery of Family Welfare Services in urban areas (FYP I)
1959 Mudaliar Committee	Mudaliar Committee noted that most of the beds and various facilities were in the urban areas
1974-78 Vth FYP	Government acknowledges that urban health infrastructure had expanded at the cost of the rural sectors
1976 Ministry of Health and Family Welfare (MOHFW)	Urban clinics were recognised as Urban Family Welfare Centres of three types (Type 1, 2 & 3) based on population norms, focusing on family planning services.
1980-1985 VIth FYP	Focus on comprehensive primary health care and community-based approach to meet the health care needs of populations; strategised for no further linear expansion of curative facilities in urban areas (barring exceptional cases).
1982 Krishnan Committee	Recognition of specific health needs of urban populations Appointment of the Krishnan Committee to work out an implementation programme for provision of primary health care in urban areas. Key recommendation: Establishment of a health post run by a Doctor, a Public Health Nurse, four Auxiliary Nurse Midwives, four Multipurpose Workers and 25 Community Health Workers for a population of 50,000. Subsequently, urban health posts were created to provide services for antenatal, natal and postnatal care of mothers, immunisation of children, treatment of minor ailments, and counselling and services for family planning.
1983 National Health Policy (NHP)	The policy did not explicitly mention the health challenges faced by people residing in urban areas. It noted the need to provide better facilities in the urban slums along with rural areas. The NHP set different targets to be achieved for rural and urban areas.
Mid 1980s – 2000 NUHM Document	Rapid urbanisation and industrialisation, growth of crowded dwellings and slums.
1982-2000 India Population Projects	India Population Project (IPP) established urban health facilities in metropolitan cities. Urban health posts, maternity homes and subcentres were created in metropolitan cities and towns. IPP (I-VIII) focussed on strengthening maternal health, child health and population control programme with the aid of World Bank. The IPP VIII focus was largely on urban slums.

1997-2002 IX FYP	Noted the concern for urban health care (absence of primary health care and complete reliance on secondary and tertiary services even for minor ailments). Emphasised primary health care services for better health indicators Recognised that, especially in slums, the health indicators were worse as compared to many rural and tribal areas of India and recommended providing referral linkages at secondary and tertiary levels.
2000 National Population Policy (NPP)	The National Population Policy (2000) recognised urban slum dwellers and urban poor as underserved population groups in health care.
2002 NHP	NHP-2002 acknowledged that the presence of public health services in urban areas is meagre and highly unorganised. NHP-2002 proposed an organised urban primary health care system based on population norms through a two-tiered structure: PHC covering a population of one lakh providing OPD facility and essential drugs; and a second Tier at the level of the government general hospital through a referral from the PHC. The NHP-2002 however, makes no specific reference to the special needs of the poor and marginalised sections of urban societies.
2013 National Urban Health Mission (NUHM)	The first historical focus on strengthening the health services of the urban areas with a focus on urban poor. Builds on the experiences of implementing the National Rural Health Mission (NRHM). NUHM covers cities with a population more than 50,000 and all district headquarters, while towns under 50,000 population are covered under NRHM. However, although most of the Community Health Centres, Sub-district Hospitals and District Hospitals are in urban areas, they continued to be funded through NRHM. NUHM is instrumental in channelling much needed resources towards urban health.
2017 NHP	The NHP-2017's goal is universal health coverage – 'universal access to good quality health care services without anyone having to face financial hardship'. Mentions prioritising primary health care needs of the urban poor, living in listed and unlisted slums, other vulnerable populations such as homeless, rag-pickers, street children, rickshaw pullers, construction workers, sex workers and temporary migrants. Policy thrust – 'to organise primary health care delivery and referral support for urban poor' (NHP 3.3, p.7).

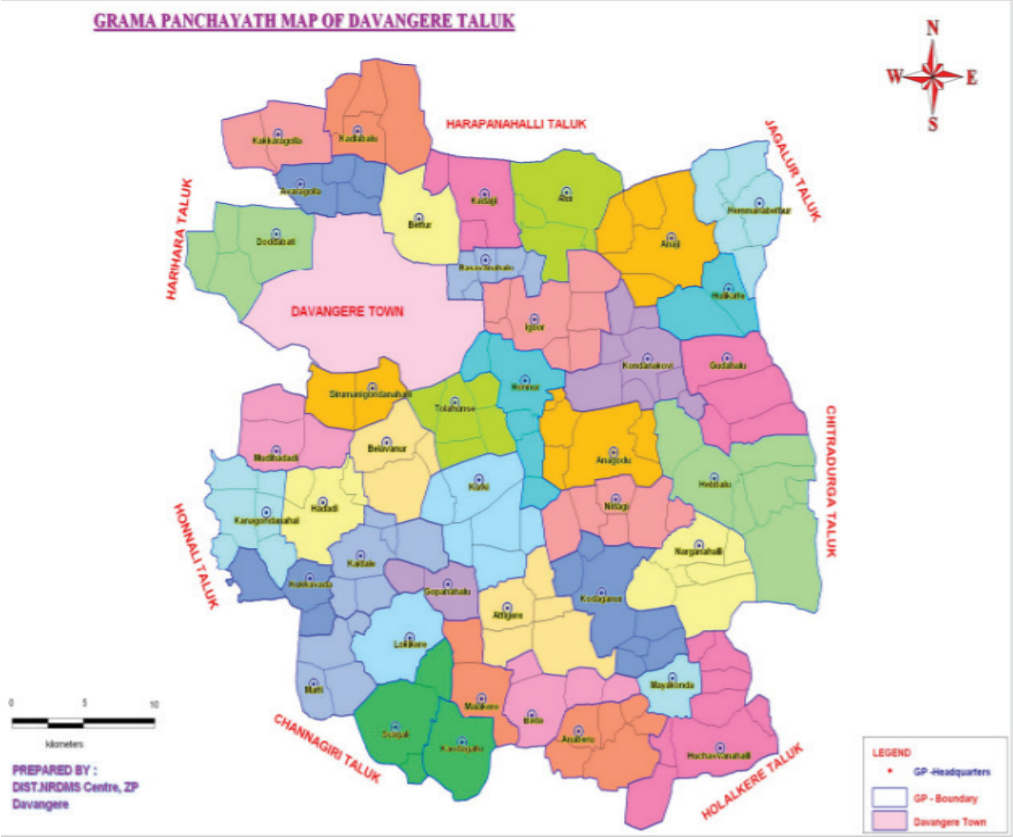
Source: Author's compilation from NHP 2017; NUHM 2013; Kumar et al. (2016), Urban Health in India: Policies, Practices and Current Challenges, Journal of Health Management 18(3), 489-98.

Appendix 3: A Tale of Four Cities

I. Davanagere Town, Davanagere district, Karnataka (Tier III)
II. Raipur, state capital, Chhattisgarh (Tier II)
III. Thiruvanthapuram, state capital, Kerala (Tier II)
IV. Bengaluru, state capital, Karnataka (Tier I)

I.Davanagere : The Town and its Health Landscape

Figure I : Map of Davanagere Taluk and Town



Davanagere district, one of Karnataka's 31 districts, is located in central Karnataka. It consists of 5 blocks (talukas), namely, Davanagere , Harihar, Honnali, Channagiri and Jagaluru. Davanagere block encompasses the Davanagere town and a few villages around. Of the total population of Davanagere district (15,22,159), about 40 percent of the population (6,02,523) resides in Davanagere block and would potentially be accessing the health care services of Davanagere urban area (Government. of Karnataka, n.d.).[7]

7 Government of Karnatka, Davanagere District, https://davanagere.nic.in/en/history/ (Accessed 17 Feb 2021). However, the India Census 2011 includes Harappanahalli block also into Davanagere district and indicates 19,45,497 as the population of the district (Ref. https://www.census2011.co.in/district.php, accesssed 17 feb 2021).

As is typical of most districts or block headquarters, there is a great overlap between rural and urban in Davanagere district as well. Davanagere block comprises the district headquarters, as well as 172 villages; and Davanagere town forms a small but very significant urban centre within this taluka. Besides, located in the central part of Karnataka, the town forms a key transit point connecting the southern to the northern parts of the country through national highways and railways.

Table I : Select Demographic Information

Davanagere City	Total
City Population	434,971
Literates	329,003
Children (0-6)	47,456
Average Literacy (%)	84.90%
Sex Ratio	979
Child Sex Ratio	954
SC	12.44%
ST	6.17%
Slum population	59,990*

* It is estimated that there are 12,183 slums in the city, with a population of 59,990. This approximates to 13.79 percent of the total population of Davanagere city. Source: https://www.census2011.co.in/census/city/442-davanagere.html, accessed on 22 March 2021.

Urban Governance in Davanagere : The co-existence of urban and rural is reflected in the governance structures of Davanagere : the block has a Zilla Panchayat, a Taluka Panchayat, as well as a Municipal Corporation, all of which have overlapping jurisdiction over various services (including health). Davanagere City has a Municipal Corporation, administering 45 wards; and it covers a population of about 440,000, or about 95,000 households. The Municipal Corporation supplies basic amenities like water and sewerage. It is also authorised to build roads within Municipal Corporation limits and impose taxes on properties coming under its jurisdiction.

Health Infrastructure and Service Delivery: Davanagere block includes the Davanagere town. Most of the facilities listed below (except PHCs) are largely located in the urban area of Davanagere block.

Table II : Health Facilities in Davanagere Block

	No.	Beds
Allopathy Hospitals	31	1262
Indian Systems of Medicine	3	26
Primary Health Centres	30, of which 9 are UPHCs in the Davanagere City Municipal Corporation area	172
Community Health Centres	-	-
Private Hospitals including nursing homes and clinics	77	NA
Medical Shops	433	-
Blood Banks	6	-

Source: Health and Family Welfare Department, Davanagere , dt.31.03.2017, pp.87-88 (Government of Karnataka, 2017).

Public health services are delivered through a tiered structure as shown in the table below.

Table III : Health Service Delivery in Davanagere Town

	Public Health Care Services					Private
Level of Care	NUHM	AYUSH	ESI	Beedi Workers	City Corporation	
Community level	ASHAs (75) ANMs MAS VHND – Immunisation (Thursdays) National Programmes Outreach Clinics – health camps IEC – outreach	Yoga		Mobile Clinics – Medical Check-up and medicines	Sanitation, Drainage, Drinking Water, Fogging	
Primary Care	UPHCs – 9 Evening Clinics	AYUSH and Nature Cure Hospitals	Dispensaries – Direct services or reimbursements	BW Hospital (Harihara - 24 kms)		Clinics, Dispensaries

	Public Health Care Services					Private
Level of Care	NUHM	AYUSH	ESI	Beedi Workers	City Corporation	
Secondary Care	District Hospital					Nursing Homes, Hospitals, Blood Banks
Tertiary Care	Women and Children's Hospital					Medical Colleges, Dental Colleges, Specialty Care, Hospitals

Community level services: ASHAs and ANMs are the primary health care providers at the community level. There are totally 75 ASHAs, with an estimated shortfall of 97, calculated as per the population norm for 4.3 lakh population. There are 47 subcentres under the nine UPHCs, each headed by a junior health assistant (ANM). Davanagere does not have malaria link volunteers that are appointed in some districts of Karnataka.

Primary level services: There are nine UPHCs functioning under NUHM. All function under the jurisdiction of the Health and Family Welfare Department, headed by a District Health Officer (DHO). One special feature of these UPHCs is the availability of services in the evening from 5 PM - 8 PM, apart from their regular working hours of 9 AM to 4 PM; and there are also outreach services organised in surrounding areas. A PHC sees about 3000 patients a month (Source: District level Health Official).

The PHCs treat communicable and non-communicable diseases, undertake periodic NCD surveys, conduct yoga classes once a week, and conduct special health camps once a month in areas of the town where services cannot be provided regularly. All the NUHM programmes are managed by the City Programme Manager under NUHM, monitored by the RCH officer. As there are no delivery and OT services, women are referred to the Women and Children Hospital or to the district hospital.

Data on human resources for health shows a shortfall of about 12 percent in the filling of sanctioned posts at PHCs (all categories, excluding ASHAs). Of these, at the time of writing this report, less than 20 percent were regular staff, 68 percent were contractual staff, and the remaining were outsourced.

AYUSH Services: There are 2 AYUSH hospitals in Davanagere town. They are under the joint administration of Zilla Panchayat, Davanagere and State AYUSH Department, Bangalore. The district AYUSH Officer is located in the Zilla Panchayat premises. The health services available here include yoga and nature cure, acupuncture, physiotherapy, *abhyanga*, clay therapy, water therapy and so on.

Secondary level services: Chigateri District Hospital, Davanagere is a 1030-bedded hospital and serves as the key referral hospital for the district. The hospital provides (1) specialty services – General Medicine, Emergency and Casualty Departments 24×7, out-patient care; (2) in-patient Care; and (3) allied services such as laboratory, eco cardiogram, C. T. Scan, X-ray, dialysis, RTPCR, vaccination, HIV-ART services, and blood banks. Of the 602 sanctioned posts of various categories, 348 are vacant. Senior nurses (30) and junior nurses (105) in the group C category form the biggest proportion of vacancies (District Superintendent 2021).

Tertiary level services: Women and Children's Hospital is a 100-bedded hospital managed under the direct supervision of Director, Health Services, Bangalore. The hospital was started in 1937 and is located in an 80-acre campus, and serves as the central health care facility for gynaecological and obstetrics services for the women of the entire district. All services here are free of cost. Mainly, the hospital provides obstetrics and gynaecology services, as well as paediatric and childcare, ultra-sound, foetal monitoring, 24x7 surgery and delivery, 24x7 neonatal services with ICU for infants up to one year of age, and EMOC, SBA, MTP and MINILAP Training Centre. There are about 350-400 deliveries conducted per month, 150-180 C-section deliveries and 80-90 tubectomy procedures (Consultation with the doctor at WCH).

Health services for special categories: *Beedi Workers:* There are about 8000 beedi workers in Davanagere Town, most of them are women from the Muslim community. The Beedi Workers' Hospital is in Harihara, a block that is about 14 kilometres away from Davanagere Town. Outreach mobile clinic services are conducted in all the talukas of Davanagere district by this hospital, once a week, on Wednesdays from 11.00 AM to 1.30 PM, accompanied by a doctor, a pharmacist, a nurse, and MTS staff. "They provide only medicines, tablets and ointments for any health complaints by beedi workers, most of whom are women", says Karibasappa, General Secretary, Neralu Beedi Workers' Union, Davanagere .

ESI Services: It is estimated that there are about 35,000 informal workers in the town of Davanagere spread across diverse sectors such as load carrying, puffed-rice production, lime-stone factories, brick-kilns, hotel and eateries staff, and others. Two ESI dispensaries/ clinics and one State ESI Hospital cater to the health needs of eligible workers. Those workers and respective employers contributing to EPF are eligible to access OPD services for primary ailments at the dispensaries/clinics. Medicines, BP check-ups and so on are provided here. The State ESI Hospital is located at Nituvalli in Davanagere town. General health care services are available here. For services not available here, referral slips are provided and workers can claim reimbursements for services obtained through private health care providers.

Private Health Care: Davanagere Town has two private medical colleges,—Jayadeva Jagadguru Murugarajendra (J.J.M.) Medical College run by the Bapuji Trust and the medical college is attached to Bapuji Hospital; and the Shamanur Shivashankarappa Institute of Medical Sciences (S.S. I. M. S.) that has its own affiliate HI-TECH super specialty hospital. Both these provide MBBS, M.D. and M.S. medical education. The district also has two dental colleges: Bapuji Dental College and College of Dental Services, Davanagere .

II. Raipur: The City and its Health Landscape

Figure II : Map of Raipur City

Raipur district is located almost in the centre of the state of Chhattisgarh, which has a geographical area of 2891.98 square kilometres. The district has two Municipal corporations—Raipur and Birgaon.

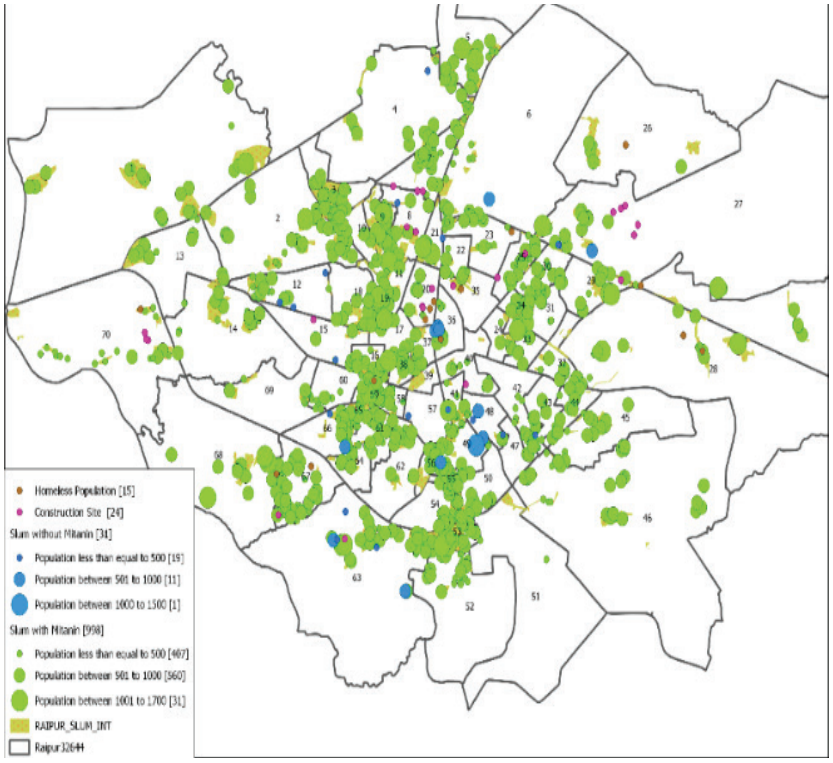
Raipur city is the capital of Chhattisgarh, a state carved out of Madhya Pradesh in 2000. It is home to more than 200 steel mills and six steel plants. Raipur city is administered by the Raipur Municipal Corporation (RMC), and has a population of 1,010,433.
Raipur city is classified as a Tier II city (CPC 2008).

Slum population: 244 notified slums are listed in Raipur Municipal Corporation portal, with a total population of 134,299. Of these, 4,053 are listed as SC and 800 as ST.

Table IV : Selected Demographic Information

Raipur City	Total
City + Out growths	1,027 ,264
City Population	1,010,433
Literates	757,910
Children (0-6)	128,665
Average Literacy (%)	85.95 %
Sex Ratio	948
Child Sex Ratio	933
SC population	17.82%
ST population	11.72%
Slum population	406,571

Figure III : Slum Location (2016-17)



Source: Government of India https://www.census2011.co.in/census/city/280-raipur.html accessed on 22 Feb 2021

Urban Governance in Raipur: The city of Raipur comes under the ambit of the Raipur Municipal Corporation (RMC), divided into 10 zones and 70 wards. RMC has a Municipal Commissioner who is a civil servant. The RMC is governed by the Mayor and elected Councillors for each ward (through elections that are held every five years).

There are 297,621 households within the RMC limits (Raipur Municipal Corporation, n.d.-b). RMC takes care of basic amenities like water supply, sewerage facility and so on for its population. Along with providing these facilities, it is also responsible for civic duties such as taxation, construction of roads and public toilets.

Health Infrastructure and Service Delivery: There are 73 dispensaries/primary hospitals and 41 public hospitals under the corporation limits (Raipur Municipal Corporation, n.d.- c).

Table V : Health Facilities in Raipur Municipal Corporation

Class	Facility	No. of facility
Public	No. of UCHC	3
	No. of UPHC	16
	No. of SSK	103
	No. of Mitanin	1025
	No. of Mahila Arogya Samiti	965
Private	No. of Pvt. Hospital	321
	No. of Pvt. Diagnostic Center	199
	No. of Pvt. Clinic	804

(Source: Consultation with NHM Official)

Public health services are delivered through a tiered structure as shown in the table below.

Table VI : Health Service Delivery in Raipur City

	Public Health Care Services				Private
Level of Care	NUHM	AYUSH	ESI (Employees' State Insurance Corporation, 2017d)	City Corporation	
Community level	Mitanins, ANMs, MAS, SSK			Sanitation, Drainage, Drinking Water, Fogging	
Primary Level Health Care	UPHCs – 16	AYUSH clinics – 10 (for Ayurvedic and homoepathic health services Unani dispensary- 1	Dispensaries – 1 Direct services or reimbursement	City dispensaries –4 Ayurvedic dispensaries – 9 RMC dispensary run by lion's club – 1 Mobile medical units – 10	Clinics, Dispensaries

	Public Health Care Services				Private
Level of Care	NUHM	AYUSH	ESI (Employees' State Insurance Corporation, 2017d)	City Corporation	
Secondary health care	District Hospital Civil Hospital Mother and Child hospital U-CHC – 3 CHC	Panchakarma center at Distrcit Allopathy hospital			Maternity Homes, Hospitals Blood Banks
Tertiary Care	Dr. Bhimrao Ambedkar Memorial Hospital, Medical College hospital, DKSPGI & Research centre	Ayurveda College hospital – 190 bedded			Medical Colleges, Dental Colleges Specialty Care Hospitals

(Source for NUHM details: Mapping of health care facility, Health Official, NUHM, Raipur-CG, 2019-20).
(Source for AYUSH, Muncipal Corporation data: Nandi et.al, 2013).

Community level services: Services at the community level come from two sources:

State Health and Family Welfare Department: Mitanins, MAS and Swasthya Suvidha Kendras (SSKs) headed by ANMs are at the core of community level health care services.

Urban Mitanins each serve one Mohalla (area of a town/village), with between 80-250 households. There are currently 1025 Urban Mitanins in Raipur, with 56 Mitanin trainers whose work is coordinated by eight Area Coordinators. The State Health Resource Centre, Chhattisgarh (SHRC) provides training and technical support to the Mitanin Programme.

Mahila Arogya Samiti (MAS) functions as a support group for the Mitanins as well as ANMs at the SSKs. They focus on determinants of health including water and sanitation, functioning of nutrition programmes and violence against women.

Swasthya Suvidha Kendras (SSKs) are equivalent to a subcentre, headed by one ANM for a slum population of 5000. They provide immunisation, ANC and contraceptive services.

The ANM conducts home visits to pregnant and lactating women and gets the help from Mitanin during the immunisation and home visits. SSKs have ANMs, Mitanins and MAS working together.

There are currently 103 functional SSKs, although they face challenges of space constraints and poor infrastructure[8].

Raipur Municipal Corporation: The Health and Sanitation Unit in the RMC is headed by a Health Officer, supported by an Assistant Health Officer. In addition, each of the city's ten zones has a Zonal Health Officer and Sanitation Inspector. The Health and Sanitation Unit provides the following:

i. Operating four city dispensaries
ii. Coordinating sanitation services
iii. Registration of deaths and births
iv. Responding to disease outbreaks
v. Monitoring food establishments below INR 12 Lakh
vi. Running veterinary hospitals and abattoirs and
vii. Fogging and anti-malarial spraying.

Primary level services: Services at the primary level are also provided from two sources:

State Health and Family Welfare/AYUSH Department operates 16 Urban PHCs in Raipur, providing primary level care including family planning services. Fully functional UPHCs also has an operation theatre and a labour room. AYUSH services are also provided through 10 AYUSH clinics in Raipur city. These clinics are headed by Medical Officers who provide Ayurvedic and Homeopathic health services.

Raipur Municipal Corporation: RMC's primary focus is on sanitation, drinking water and social welfare schemes. In addition, it runs five allopathic dispensaries and nine Ayurvedic dispensaries. However, the health services they provide are limited, with limited human resources.

8 Nandi.S et.al, City Urban Health Review Report: Raipur, Chhattisgarh Submitted to the Technical Resource Group On NUHM, NHSRC, December 2013.

The RMC plays a major role in identifying the source of disease outbreaks and informing the Health Department. The Health and Sanitation Unit reports to RMC and data and reports are shared so as to support integration of services between RMC and the Health Department (Nandi et al, 2013).

Secondary level services are provided by the State Health and Family Welfare Department: A District Hospital, Civil Hospital, Mother and Child hospital, Urban-CHC and CHCs provide secondary health care under the ambit of Ministry of Health and Family Welfare, Chhattisgarh.

U-CHCs serve as first referral units for the UPHCs and cater to a population of two lakh UPHCs have inpatient medical care, surgical facilities, and 24x7 institutional delivery facilities. There is also a Panchakarma facility available at the District Hospital (Modern Medicine) which provides Panchakarma treatment to patients who approach the facility.

Tertiary level services

- ***State Health and Family Welfare Department*** provides tertiary care through three medical colleges:—Pt. Jawaharlal Nehru Memorial Medical College; DKSPGI and Research Centre, and Government Dental College with attached hospitals, and CGHS empanelled hospitals. AYUSH Services are provided by Shri Narayan Prasad Awasthi Government Ayurveda College Hospital, a 190-bed hospital affiliated to the AYUSH and Health Science University Chhattisgarh, Raipur.
- ***Autonomous Institutes:*** AIIMS-Raipur: AIIMS-Raipur was established by the MOHFW, Government of India under the Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) in 2012.

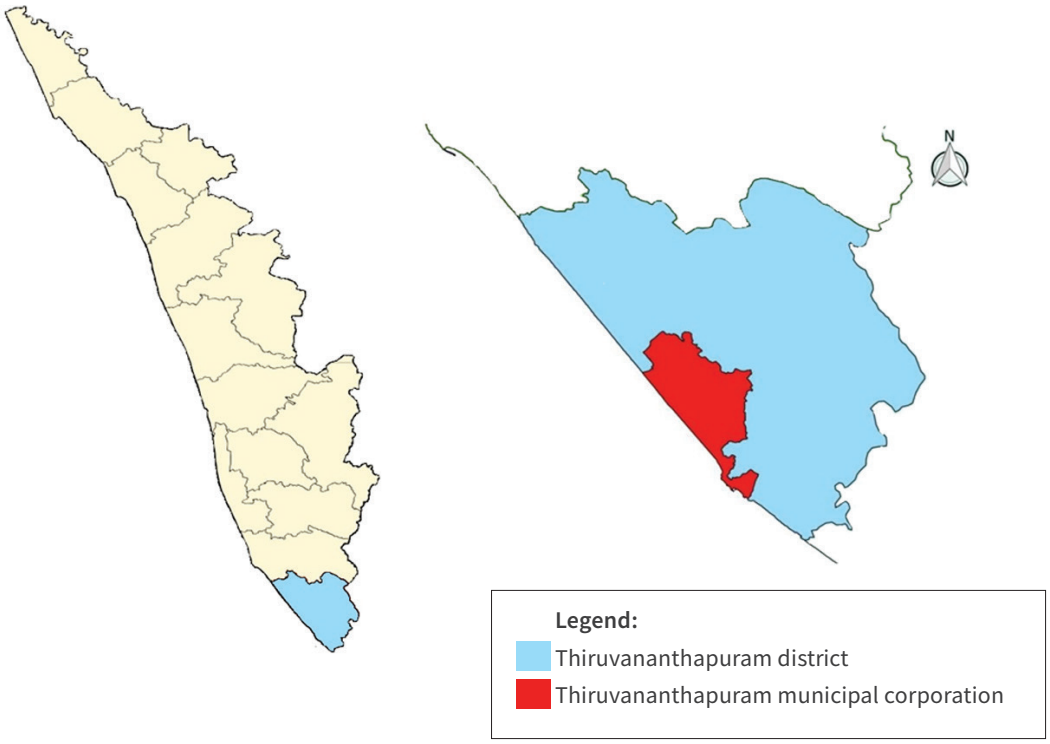
Health Services for Special Categories: Health care for employees in the public sector such as railways, KSEB and central government employees stands out as a key feature in the relatively small city capital of Raipur.

	Primary	Secondary	Tertiary
Railway	**Clinic – 1**	**Hospital – 1 (50 bedded)**	
KSEB	**Clinic – 1 Hospital – 1 (10 bedded)**		
CGHS*		**Nursing home – 1 Eye Care centre- 1**	**Allopathic Hospital – 1 Super speciality hospital –1 Eye hospital – 2**

* With the historical bifurcation of states, and Chhattisgarh becoming a newly formed state, the headquarters of Raipur-CGHS is still with CGHS Nagpur-Maharashtra. All the facilities mentioned are empanelled hospital (CGHS Nagpur, n.d.)

III.Thiruvananthapuram: Capital City, Kerala

Figure IV : Map of Thiruvananthapuram City



Thiruvananthapuram metropolitan area comprises Thiruvananthapuram Corporation, three municipalities and 27 Panchayats. Thiruvananthapuram Municipal Corporation (TMC) is the largest city corporation in Kerala, which spreads over 214. 86 square kilometres[2].

It has 100 wards and a population of 9,57,730[2] (Census, 2011). The Corporation area is divided into 11 administrative zones. It has 18 revenue villages and a taluk. It is a tier-2 city and the State capital. The city is located along the coastline and it has a flourishing economy including IT companies and technology/software-based companies.

There are total 834 slums in Thiruvananthapuram city, with a population of 3,320 individuals. This is approximately 0.40 percent of total population of the city (Office of the Registrar General, India, 2011b).

Urban Governance in Thiruvananthapuram

There are three lakh households and a floating population of 30 lakh in the city corporation jurisdiction with quite a huge population inflow to city for education and jobs. Other than medical colleges, general hospitals, and specialised hospitals, all other health institutions are under the Thiruvananthapuram Municipal Corporation (TMC), including public and private health facilities for different levels of care. However, the staff salaries and the recruitment and transfers of HR are managed directly by the Government of Kerala.

Table VII : Demographic details of Thiruvananthapuram

Thiruvananthapuram City	Total
City + Out growths	788,271
City Population	743,691
Literates	645,863
Children (0-6)	64,566
Average Literacy	95.10%
Sex Ratio	1054
Child Sex ratio	967
SC population	8.13%*
ST population	0.82%*
Slum population	3320

* 8.13 percent of the total population in the Thiruvananthapuram city is Scheduled Caste (SC) and 0.82 percent is Scheduled Tribe (ST)
Source: https://www.census2011.co.in/census/city/462-thiruvananthapuram.html Accessed on 01 Mar 2021

Health Infrastructure and Service Delivery

Table VIII Health facilities in the Thiruvananthapuram Municipal Corporation

Sl. No	Facilities	No	Bed strength
1	GH	1	747
2	DMH	1	337
3	TH	1	76
4	CHC	2	89 / 24
5	24*7 PHC	1	0
6	PHC	11*	0
7	UPHC	12	NA
8	FHC	3	24/0/0
9	DTBC	1	0

Sl. No	Facilities	No	Bed strength
9	OTHERS (Mobile units& Dispensaries)		
	GD	3	0
	Central Prison Hospital	1	36
	Health Clinic	1	0
	GH	1	10
10	W&C Hospital	1	428
11	MHC	1	507
12	TB Hospital	1	508
13	Specialty Others		
	Govt. Ayurvedic Maternity Hospital	1	6
	Coastal speciality hospital	1	34

Source: https://dhs.kerala.gov.in/wp-content/uploads/2020/03/list_10052019.pdf Accessed on 15 Feb 2021

(GH: General Hospital, DMH: District Model Hospital, TH: Taluk Hospital, CHC: Community Health Centre, PHC: Primary Health Centre, FHC: Family Health Centre, DTBC: District TB Centre, GD: Government Dispensary, W&CH: Women & Children Hospital, MHC: Mental Health Centre, TB: TB Hospital, LEP: Leprosy Hospital);

*One among the 11 PHCs is MCH Unit.

Table IX : Health Service Delivery in Thiruvananthapuram City

Public Health Care Services					
Level of Care	Health Dept. Govt. of Kerala	AYUSH	City Corporation	ESI	CGHS
Community level / Primordial prevention level	ASHAs, JPHN		Sanitation, Drainage, Food safety, Fogging Health Circle offices Community health programs Mobile Medical Unit – 1(Before Covid)		
Primary Level Health Care	UPHCs – 12 PHCs – 12 FHCs – 3 Vazhikatti	AYUSH clinics – 12 (Ayurvedic and Unani dispensary) Homeopathy dispensaries – 13	Palliative Care centres – 10 Ananthapuri Medical Stores – 2 Medical camps	Dispensaries	Wellness centres, Ayush and Modern medicine dispensaries
Secondary level health care	CHC – 2 District Hospital General Hospital Taluk Hospital Central Prison Hospital W&C hospital MHC TB hospital Dialysis units – 2 PMR Centres – 2 Institution with Palliative care program – 1 Blood banks	Govt. Ayurvedic Maternity hospital – 1 Govt. Homeopathy hospital- 1	Nursing homes, Blood banks General hospital Maternity and fertility centres Eye hospital and research institutes	Exclusive diagnostic centres	Diagnostic centres and hospitals (public)
Tertiary Care	Government Medical College	Ayurveda College hospital	Medical Colleges Dental Colleges Regional cancer centre Super-specialty & multi-specialty hospitals	Tie-up super specialty hospitals	

Community level services are provided from two sources:

State Health and Family Welfare Department: ASHAs and JPHN work at the community level and are the primary outreach personnel. Sub-centres exist only in those places which were under Panchayats and recently got merged to the Corporation.

TMC operates:

i. Mobile Medical Units, which used to visit every ward of the TMC, before the pandemic started.
ii. It also implements Vayomithram (care for elderly)—a project that provides holistic care to people aged above 65. The project provides mobile medical camps, counselling and palliative care. Two camps are conducted in every ward in a year, with a Medical Officer, nurse and other health workers. They are jointly funded by the Departments of Social Justice and the TMC.
iii. A third activity is the COTPA awareness programmes, including pamphlet distribution, announcements and so on, in collaboration with the Excise dept.; and
iv. Medical Camps for migrant labour with a fixed schedule.

Primary level services are also sourced from two jurisdictions:

State Health and Family Welfare Department runs 12 UPHCs and PHCs in the TMC area and three upgraded Family Health Centres. PHCs are categorised into three types, with defined IPHS norms: without 24x7 services, with 24x7 nursing facilities, and with 24x7 emergency hospital care facilities. PHCs function between 8 AM and 6 PM and UPHCs work between 2 PM and 6 PM. Vazhikatti is a special clinic, set up in the Thampanoor Bus stand for travellers to screen for NCD and to treat minor injuries. It has a staff nurse posted by NUHM working 9 AM to 4 PM every day except on Sundays.

Aardram Mission is one of four Nava Kerala missions to reach the grassroots with a comprehensive health care package. Aardram is a patient-friendly hospital initiative aimed at providing**:**

i. People-friendly out-patient services;
ii. Re-engineering PHCs into Family Health Centres;
iii. Access to comprehensive health services for marginalised/vulnerable population;
iv. Standardisation of services from the primary to the tertiary levels.

Aardram mission is carried out by the NHM in collaboration with Local Self Governments (National Health Mission, n.d.).

TMC provides:

i. Annual health check-up and certification for hotel employees to ensure food safety by screening for typhoid and hepatitis-A at the Corporation office by the Corporation Health Officer. In addition, they are screened for hypertension/ diabetes and skin conditions. All hotel employees are furnished with a Health Card by the Corporation;
ii. Dispensary and laboratory services, providing free treatment and diagnostic tests and investigations at a 50 percent concession;
iii. Subsidised medicines (30-50 percent concession) at the Ananthapuri medical store
iv. Magic Training for MR/Autistic children (project proposal is approved, but yet to start) through Gopinath Muthukad Academy, to catalyse the development of MR/ autistic children.

Secondary level services are also provided from two jurisdictions:

State Health and Family Welfare Department itself provides services from two sources:

i. Directorate of Health Services operates the Central Prison Hospital, W&C hospital, MHC TB hospital, Dialysis units (two), PMR Centres (two), Palliative care facility (one) and blood banks and
ii. the NUHM operates CHCs (two), district hospital (one), General Hospital (one), and Taluk Hospital (one).

TMC provides its own set of services such as:

i. Free dialysis for BPL patients
ii. Free medicines for all senior citizens belonging to BPL households through Corporation-run Ananthapuri medicals
iii. 10 Palliative Care centres, providing regular house visits to bedridden patients with a team of nurses and doctors from the PHC, and Kudumbashree members and
iv. Free medicines for patients with an annual income of less than one lakh with cancer and organ transplantation (proposed for renal and stroke patients too).

Tertiary level services are provided by:

- ***Directorate of Medical Education (DME):*** Medical College Hospital, a 3250 bedded multi-specialty tertiary care hospital; Government Medical College[9]; Dental College; Nursing college; College of Pharmaceutical Sciences; Priyadarsini Institute of Paramedical Sciences; SAT Hospital, Vellanad; and Regional Institute of Ophthalmology.
- ***Autonomous Institutes:*** (1) Regional Cancer Centre is one among the 28 centres in the country functioning under the 'National Cancer Control Program', MoHFW, Govt. of India; (2) Sree Chitra Thirunal Institute of Medical Science & Technology (SCTIMST) is a 253 bedded tertiary level referral centre under the Department of Science and Technology, Government. of India. It has departments of cardio-vascular, thoracic, and neurologic diseases, and has been conferred university status; and (3) Sree Avittom Thirunal Hospital for Women and Children (SAT Hospital), a 1025-bedded hospital, is a maternal and child health wing of Government Medical College, Thiruvananthapuram, with Obstetrics and Gynaecology and Paediatrics departments.

Health Services for Special Categories include:

- **ESI facilities** provide primary care through their own dispensaries, diagnostic facilities (two), and tertiary/super-speciality care through tie-ups with private institutions.
- **Railway Hospital** provides tertiary level of health care to railway employees. Medical consultants are empanelled on a case-to-case basis.
- **CGHS** has wellness centres (three), medical stores and empanelled diagnostic centres (three).

9 This is the oldest Medical College in the state, founded in 1951. The Medical College campus houses multiple institutions other than Medical College, viz., Colleges of Nursing and Pharmaceutical sciences, the Regional Cancer Centre, Thiruvananthapuram Dental College, Sree Chitra Thirunal Institute for Medical Sciences and Technology, the Priyadarshini Institute of Paramedical Sciences and the Sree Avittom Thirunal Hospital for Women and Children (SAT Hospital). The Regional Institute of Ophthalmology (RIO).

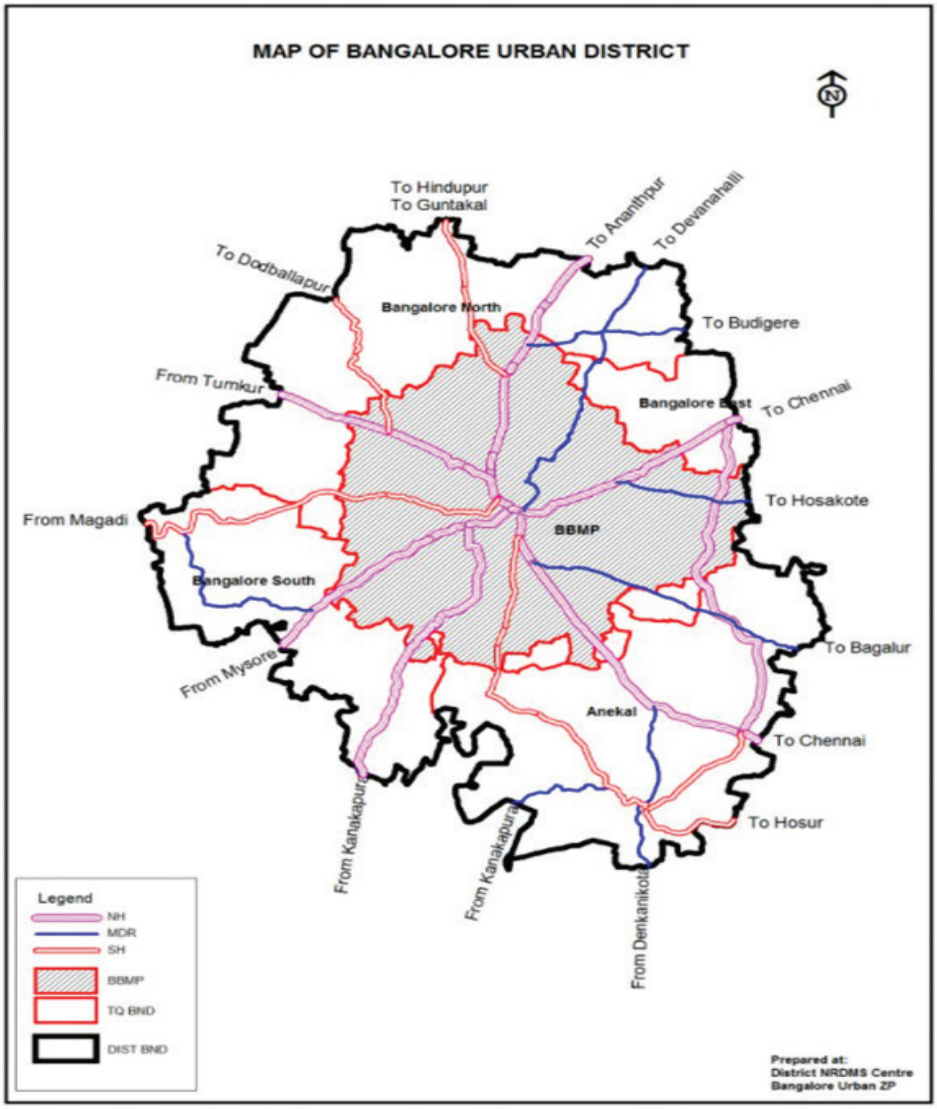
Central Government Health Scheme (CGHS) – Trivandrum

CGHS was introduced in Thiruvananthapuram in 1996, for Central Government employees (both in service and retired), their family members and other entitled categories. It was initiated with three allopathic dispensaries but has grown to include an ayurvedic and a homeopathic unit, funded by the AYUSH department (CGHS Thiruvananthapuram, n.d). The services include (1) Medical consultation (2) Specialist consultation in selected Centres/Hospitals (3) Medicines (4) Domiciliary visit for pensioners residing within three kilometres of the CGHS dispensaries (5) Hospital services at Govt. Hospitals and selected hospitals recognized under CGHS and (6) Ayurvedic / Homoeopathic treatment from the AYUSH dispensaries.

IV. Bengaluru Urban: Capital of Karnataka

The state of Karnataka, through NUHM, covers 2.36 crore urban population, which includes the metropolitan city of Bengaluru and 79 additional cities/towns. The metropolitan city of Bengaluru is referred to here interchangeably as Bengaluru Urban, and forms the core part of the Bengaluru Urban district. The Bengaluru Urban district is subdivided administratively into East, North, South and Anekal talukas. The former three have a significant overlap with the Bruhat Bengaluru Mahanagara Palike (BBMP) jurisdiction. Bengaluru district has a population of 9.6 million, and ranks third in population among the 640 districts of India (Office of the Registrar General, India, 2011c)

Figure V : Bengaluru Urban Map



Source: Bengaluru Urban District, About District https://bengaluruurban.nic.in/en/aboutdistrict/ (Accessed: 14 May 2021)

Table X : Demographic details of Bengaluru Urban (Census 2011)

Bengaluru City	Total
City (Urban District) Population	9,621,551
Literates	87.67%
Children (0-6)	916,441
Sex Ratio	916
Child Sex Ratio	942
SC population	1,198,385
ST population	190,239
Slum population	712,801*

* Total number of slums in Bengaluru city and its outgrowth number 165,341 with a population of 712,801. This is 8.39% of total population of Bengaluru city & its outgrowth which is 8,495,492 (Source: Govt. of India, Accessed on 22 March 2021).

Urban Governance in Bengaluru

Governance in Bengaluru Urban is shared by the State administration and the BBMP. The state administration covers the entire Bengaluru Urban district and is headed by a District Commissioner, managing government departments common to all districts (including health). BBMP is the administrative body for civic amenities and some infrastructural matter within the core of Bengaluru Urban (see map above). It is headed by a Commissioner, supported by seven special Commissioners and two additional Commissioners. The total area covered by BBMP is 741 square kilometres, divided into eight zones across 198 wards; with each zone administered by a Zonal Commissioner since 2007. In a recent move (15 October 2020), the Karnataka government issued a notification to increase the wards from 198 to 225 in the newly enacted BBMP Act 2020 (PRS India 2020). These overlapping structures lie at the core of the issues facing health system governance in Bengaluru Urban.

Health Infrastructure and Service Delivery

Table XI : Health Infrastructure in Bengaluru Urban

Category	Facility	No. of facility (Existing)
Public	No. of UPHC	212[i]
	No. of UCHC	11[i]
	No. of Subcentres	280[i]
Private Facilities	No. of Pvt. Hospital	6138[ii]

[i] PHC and CHCs numbers extracted from NFHS-4 (2015-16).
[ii] Government of Karnataka, n.d. -a

Table XII : Health Personnel and Facilities under Various Jurisdictions in Bengaluru Urban

	Public Health Care Services					Private	Charitable Institutions
Level of Care	NUHM - HWF	BBMP	ESI	AYUSH	CGHS		
Community level	ASHAs, ANMs MAS Sub-centres National Programmes Community Outreach – health camps	MAS Health Out-posts MMU Indira Transit Clinics --- Sanitation, Drainage, Drinking Water					
Primary Level Health Care	PHCs ARS	UPHCs ARS UFWC Health Kiosks	Provided through other institutions 112 Dispensaries	AYUSH dispensaries	Wellness Centres	Clinics Day Care Facility (Medical/surgical), Dental Clinics Diagnostic Centre Diagnostic laboratory	
Secondary health care	UCHCs Citizen Help Desks District Hospital	Maternity Homes Referral Hospitals General Hospitals	ESI Hospitals	Hospitals	Empanelled Hospitals	Nursing Homes, Hospitals Blood Banks Maternity home General Hospital	✓✓
Tertiary Care	Medical College Hospitals Autonomous Hospitals – NIMHANS, SJICSR, KMIO, SGITO etc.		Through Empanelled Hospitals	Medical college affiliated hospitals	Empanelled Hospitals	Medical Colleges, Dental Colleges Specialty Hospital Multi-specialty hospitals	✓✓✓✓

Community level services

State Department of Health and Family Welfare (DoHFW) operates 279 sub-centres in Bengaluru Urban district, of which 232 are in the Bangalore east, north and south talukas which overlap with the jurisdiction of BBMP zones. Overall, it estimated that DoHFW supports 670 anganwadis, 209 junior health assistants (ANMs), 58 birth attendants, 218 liaison volunteers (samparka karyakartheyaru), and 402 ASHAs in Bengaluru Urban. (https://bbmp.gov.in/departmentwebsites/Health/Pressreleases.html)

BBMP also operates a number of community level services:

- ***Mahila Arogya Samitis (MAS):*** The report of the State HFW department states that one MAS unit has been constituted per 50-100 households in the slums and provided INR 5000/- untied fund grants per annum for MCH and sanitation activities. They receive one day's training and printed materials to sensitise them about the health issues and other related matters (Government of Karnataka, n.d. – b).
- ***Health outposts (Kiosks):*** Of the 39 Kiosks in Bengaluru Urban, 25 are in the BBMP core area. Health Kiosks are the smallest health outposts in slums, providing basic MCH care and follow-up as well as guidance on CDs and NCDs. A trained ANM is posted to head it with basic drugs and MCH materials (Government of Karnataka, n.d. – c).
- ***Mobile Medical Units (MMU):*** Of the 62 MMUs in operation in the State, six are in the BBMP jurisdiction (Government of Karnataka, n.d. – c).

Indira Transit Clinics: Two Indira Transit Clinics, one each in Kempegowda and Yashwanthpura BMTC bus stand in Bengaluru city, have been started. This is to meet the health needs of commuters, footpath dwellers and other vulnerable groups. The clinic has a doctor, staff nurse, pharmacist, lab technician, with a semi-auto analyser and other lab equipment. Free drugs are provided to all patients.

Primary level services

DoHFW provides

i. Immunisation and preventive programmes, including Mission Indradhanush (Pentavalent vaccine, Measles-rubella, pulse polio); Urban Leprosy Eradication Programme (ULEP); DOTS and RNTCP, and a provision of INR 500/- monthly to assist patients through the Direct Beneficiary Transfer scheme; screening and treatment under National Blindness Control Programme; urban malaria prevention programme and so on
ii. Reproductive, antenatal and maternal health care programmes that includes sterilisation, ambulance facilities and cash-incentives under Janani Suraksha Yojana (JSY)
iii. Emergency 108 Ambulance services
iv. Bike ambulances: Bengaluru city is one of the locations where these first response units are deployed through 19 units of bike ambulances in 2018-19
v. Phone consultation via a toll-free Arogya Vani, a service through which people can avail consultation for minor ailments, counselling services, information on services available in public Health facilities, directory services (Eye Bank, Blood Bank) and grievance redressals.

BBMP operates:

i. 95 Urban Primary Health Centres, distributed across eight zones
ii. Additional Urban Health Centres in slums, providing antenatal care, postnatal care, referral for institutional deliveries, immunisation, services under national programmes that include DOTS, NMEP, contraceptive services and so on
iii. Evening OPDs planned in all UPHCs, between 5 PM to 8 PM, for the benefit of the poor and daily-wage earners to get quality treatment by specialists. Specialists and in some cases generalist doctors are to be contracted on hourly payment basis and
iv. Drugs worth INR 1,00,000 per month are to be provided to the UPHCs to
v. Provide free treatment to all OPDs for both CDs and NCDs.

Secondary level services

There are 11 Urban CHCs in Bengaluru Urban of which the DoHFW operates five.

BBMP operates the remaining six CHCs (referral hospitals), as well as maternity homes, and one general hospital located in the West zone.

Table XIII : Hospitals managed by BBMP

Type of facility	East Zone	West Zone	South	
Maternity Home	6	7	13	26*
Referral Hospital/CHCs	1	3	2	6**
General Hospital	-	1*	-	1*
Total	7	11	15	33

Source: *Palike Hospital Details, Health Department-BBMP (N.B.: There is no data on the hospitals/health centres of other 5 zones)** Government of Karnataka, Health and Family Welfare Department, Annual Report (2018-19), p.56

Referral Hospitals and Maternity Homes provide out-patient services, inpatient services, and reproductive health care services. *General (Public) Hospital:* The 50-bedded Dr. Babu Jagajeevan Ram General Hospital, established in 2018, is the only general hospital that is under the administration of BBMP. Besides the OPD services that includes treatment for TB, dog bites and more, it provides, ENT, ophthalmology, dental and paediatric care including surgery (BBMP – Health Department, n.d.).

Tertiary level services:

Bengaluru Medical College and Research Institute (BMCRI) is the primary medical college that offers health services through its affiliate tertiary health care hospitals (Bengaluru Medical College and Research Institute, n.d.). It was established under the Pradhana

Mantri Swastya Suraksha Yojana (PMSSY) and is affiliated to Rajiv Gandhi University of Health Sciences. The Institute also provides health services at the Urban Family Welfare Centre (Siddiah road), and PHCs at Sondekoppa, K G Halli, Hesarghatta and Pavagada.

Hospital Services are provided by four tertiary care hospitals, namely, Victoria Hospital, Vani Vilas Women and Children's Hospital, Minto Ophthalmic Hospital and Bowring and Lady Curzon Hospital, accessible to both general and vulnerable populations either directly or through referral. There are other tertiary health care institutions in Bengaluru catering to various speciality health care needs.[10]

Table XIV : Tertiary care public hospitals in Bengaluru Urban

Name of the Hospital	Bed Strength	No. of Patients treated
Victoria Hospital	1000	900 out-patients (daily), on average 800 in-patients treated
Vani Vilas Women and Children's Hospital	536	75-80 out-patients (daily), 17-20 in-patient admissions (daily), 500 surgeries (per month)
Minto Ophthalmic Hospital	300	NA
Bowring and Lady Curzon Hospital	686	700-900 out-patients (daily), admission of 70-80 in-patients, 420-450 deliveries (per month), 800 surgeries (per month)
Total	2522	

Source: Extracted from Bangalore Medical College and Research Institute (An Autonomous Institute of Government of Karnataka), http://www.bmcri.org/index.html (Accessed: 04 March 2021)

Autonomous Public Health Care Institutions, with their specific governance systems, form another important avenue for health care services in Bengaluru Urban. National Institute of Mental Health and Neurosciences (NIMHANS), Sri Jayadeva Institute of Cardiovascular Sciences and Research (SJICS), Kidwai Medical Institute of Oncology (KMIO), and Sanjay Gandhi Institute of Trauma and Orthopaedics (SGITO) are some of the premier autonomous institutes in the city of Bengaluru. These institutions have their own history of evolution and care, and some of them are oriented towards providing affordable treatment to the poor. While most of them are under Government of Karnataka, some of them (such as NIMHANS) are directly under the central government.

These speciality care institutes are also linked to several government schemes such as Arogya Bhagya, ESIC, Yeshaswini, CGHS, and Vajpayee Arogyashree. They also provide care to several other government departments, including NABARD, BBMP, BMTC, KSRTC and CRPF.

Health Services Under Indian Systems of Medicine: National AYUSH Mission (notified in 2014), reiterates the proposal of providing cost-effective AYUSH services to the general

10 Indira Gandhi Institute of Child Health, SDS Tuberculosis Research & Rajiv Gandhi Institute of Chest Diseases, ESI Medical College, Institute of Nephro Urology, Institute of Aerospace Medicine, Indian Airforce, Command Hospital Airforce, Epidemic Diseases Hospital.

population (National Ayush Mission, n.d.). In addition to the government managed AYUSH institutions, there are NABH accredited institutions offering health care that include Ayurveda and Unani Colleges with hospitals, and other hospitals and health care centres in Bengaluru (AYUSH, n.d.).

Table XV : AYUSH Facilities in Karnataka and Bengaluru Urban District

Sl. No	Type of Care	College	Dispensary	Hospital	College	Dispensary	Hospital
		KARNATAKA			BENGALURU URBAN DIST.		
1	Ayurveda	62	580	119	8	11	3
2	Homoeopathy	11	53	19	2	2	2
3	Nature Cure	-	6	3	NA	NA	1
4	Nature Cure & Yoga	4	8	6	1	NA	1
5	Unani	4	60	26	1	2	2

Source: Department of AYUSH, Govt. of Karnataka, https://kgis.ksrsac.in/ayush/ReportsPage.aspx

Health Services for Special Categories include:

Employees State Insurance (ESI) Scheme directly provides a range of services at four hospitals, 48 dispensaries (including ESIS Model Hospital, Rajajinagar), six IMP (Insurance Medical Practitioner) Systems and one Diagnostic Centre. In addition, the Scheme makes provisions for primary, secondary, tertiary or specialty services through tie-ups with various hospitals, with provision for online appoinments. https://www.esic.nic.in/dispensaries-karnataka; https://www.esic.nic.in/hospitals/index/page:4.

Central Government Health Service (CGHS), Bengaluru provides primary, secondary, tertiary or specialty services to approximately 1.25 lakh members through a network of institutions and empanelled

Cash Benefits under ESIS

- Sickness Benefit (70% of wages for 91 days)
- Disablement Benefit (for self)
- Temporary @ 90% of last wages as long as last
- Permanent disablement @ pro rata loss of earning capacity lifelong
- Maternity Benefit (100% of wages for 12 weeks)
- RGSKY for unemployment (50% of last wages for 1 year)
- Dependent benefit (90% of wages)
- Funeral Expenses (INR 10000/-)

government and private hospitals (CGHS Bengaluru, 2020). Health services are provided under multiple systems of medicine, including allopathic and AYUSH services, with provision of online appointments for all available doctors. Under CGHS - Bengaluru, there are 10 Wellness Centres, one polyclinic, one dental unit, two Ayurveda units, one Homeopathy unit and one Unani unit. *Wellness Centres* provide OPD treatment, laboratory investigations, nodal specialists, and referral facility. *Polyclinics* have laboratory investigations, specialist consultation and dental treatment services. In addition, *Tertiary and Speciality Care* is provided at Government and Empanelled Health Care Organisations (HCO), including investigations at Government and Empanelled Diagnostic centres; as well as cashless treatment for pensioners and other identified beneficiaries.

Reimbursement: Reimbursement is provided for medical expenses for emergency treatment availed in Government /Private Hospitals as per CGHS guidelines; as well as for purchase of hearing aids, artificial prosthetics, CPAP/BiPAP machines, oxygen concentrators; and other specified medical devices.

Private-for-profit and Philanthropic-charitable health care institutions: As on 31 May 2019, a total of 24,532 clinical establishments of all categories have been registered under this Act, of which Bengaluru urban accounts for 6138 institutions registered (Government of Karnataka n.d.). Private-for-profit and philanthropic institutions comprise a range of health care facilities that differ in size and type of care.

Appendix 4: Addressing health vulnerability in urban areas: Vignettes from organisations and networks

4a: SWAN (Stranded Workers Action Network)

Locked Out from Accessing Health: State of Stranded Workers during the COVID-19 Lockdown

Stranded Workers Action Network

The Stranded Workers Action Network (SWAN) started with a handful of volunteers responding to distress calls from migrant workers during the nationwide lockdown announced on 24th March 2020 to check the spread of the COVID-19 virus. By July 2020, SWAN's volunteer base had increased to nearly 130 members who were working across multiple states and had reached out to 36,000 workers in need of assistance. The relief extended included connecting workers in need to organisations providing rations and cooked food, assisting with travel back home, and transferring small amounts as cash to meet emergency needs.

What was the nature of vulnerability SWAN addressed? When SWAN first started attending to distress calls, the appeals were from daily wage earners, mainly migrants stranded in cities, sometimes with families. As the lockdown progressed, there was a widening net of vulnerability to include those working as delivery boys, employees in the hospitality sector, beauticians and so on. Soon distress calls also started pouring in from settled populations of the urban poor living in slums. The vulnerabilities changed over time too—desperate calls of hunger in the initial days were soon followed with urgent requirements for cash to pay for essentials such as cooking gas and medicines.

A total of 3,204 people had reached out to SWAN for medical assistance and of this 1,588 were women and children. The calls that SWAN received provide an indication of the extent to which hunger and deprivation had pervaded the workers during the lockdown.

On the other hand, the elderly were already at risk from lack of access to food. Some of them were in an even worse situation having to shoulder the burden of family. An old lady, a rag-picker living on a single meal of khichdi, also had to care for her orphaned grand-daughter.

The situation of families with children was particularly worrying. In the case of toddlers, families were struggling to find suitable food, as milk supplies were disrupted. The children were too young to eat food being provided for adults or were falling sick eating in feeding centres. Sometimes, they had to leave the feeding centres hungry as the queues were long and by the time it was their turn the food had run out.

Another vulnerable group was the differently abled (both physical and mental). A single mother in Bengaluru who had not been paid wages since February was struggling to take care of her two disabled children and ailing elderly parents. Another lady who worked as a house help in New Delhi was struggling to care for her paralysed husband even as her employer refused to pay her during the lockdown. We also had members of the transgender community reaching out for help for rations, and also worried about medical needs.

What were the health challenges of the migrants? SWAN received many SOS calls for medical needs of children suffering from diarrhoea and pneumonia—diseases that are the leading causes of death among children in India. We also received calls for assistance with children suffering from chicken pox, sepsis, heart disease and burns.

We encountered many pregnant women, some close to their delivery date but unable to access government hospitals for check-ups and also unable to pay exorbitant rates at private hospitals. Added to this was the lowered intake of food both in terms of quantity and nutrition. One pregnant woman in Coimbatore was living mainly on *idlis*. We received a call late at night, from a distraught father whose starving wife had not been able to nurse the baby. Women with abusive husbands, and single mothers who had to take on the burden of feeding elderly and children were an even more vulnerable group. A nursing mother with a newborn who reached out to SWAN, had lost her husband two months ago but had to also take care of her other three young children and an elderly mother-in-law.

The stress and anxiety of worrying about food and dwindling cash had begun to take its toll on the mental health of the workers. Callers broke down on the phone, incoherent. They had very little food to eat, had lost their jobs, were out of whatever money they had and worried about their families with them or back in their hometowns. Mental health issues that a person had been struggling with was an additional burden family members had to bear especially in accessing medication. SWAN received a call from a young

mother in Hyderabad with a one-year-old child. Her husband who was being treated for depression had run out of medication and she had no idea where she could get the medicines.

SWAN also received calls from those who had travelled in the hope of better treatment to hospitals in towns and cities and found themselves stranded. A couple from Uttar Pradesh had travelled to Mumbai for the treatment of the husband who had suffered a brain injury two years ago. But the sudden lockdown found them stranded with dwindling resources and desperate to get back home. Another family had come to New Delhi for the heart operation of their two-year-old but were stranded and in need of food and medicines. Chemotherapy treatments of cancer patients too were affected. One of the callers had travelled from Assam to Vellore in Tamil Nadu for treating her mother's cancer but were stuck in a lodge with mounting expenses.

Table XVI : A snapshot of vulnerable groups and their health vulnerabilities

Group	Kinds of health vulnerabilities
Infants and children	Typhoid, pneumonia, diarrhoea, chickenpox, fever, allergies, epilepsy
Pregnant women and nursing mothers	Medication and check-ups for pregnant women Food and medical issues of nursing mother and babies as young as four days old New mothers recovering from C-sections
Elderly	Medication for diabetes, blood pressure, heart ailments, thyroid
Suffering from chronic illness or undergoing treatment for life threatening ailments	Ailments related to thyroid, liver, kidneys and stomach Undergoing treatment for cancer, TB, epilepsy
Facing stress and mental health challenges	Medication for depression
Others	Recovering from fractures to hand and leg, and injury to nose Recovering from surgeries such as appendicitis, angioplasty and ear surgery Medical help for typhoid, fever, nose bleeds, respiratory infection, and eye treatment Differently abled requiring medication Medical issues of mentally challenged member Family members suffering from paralysis Transgenders reaching out for medical assistance

Health systems issues: The lockdown revealed the gaping holes in the existing health infrastructure and services for the poor in the country. Even fevers and colds treatable at other times became a cause for concern in the absence of access to medicines and food. An eight-year-old girl in New Delhi recovering from typhoid but extremely weak could not have the diet prescribed as there was no money. The father worked in a garage which had shut down. With just Rs. 300/- in hand a young mother had to make the choice whether

to spend it on food or to buy medicines. SWAN also received several calls from families whose children suffered from epilepsy but were unable to have access to prescribed medication. A six-month-old in Bengaluru had to be hospitalised (an extremely complicated process as hospitals were shut for non-COVID cases) for seizures as the family had run out of the prescribed medicine. The medicine was not available in pharmacies across the city, and the child's doctor was inaccessible. It took the efforts of several citizens in Bengaluru to coordinate the hospital visits and fly down the medicine from Mumbai. Ironically, the drug while being made in India is meant mainly for export, and those in need in India were struggling to procure it or paying high prices for a single strip. Parents were starving themselves to feed their children. A father in Gurugram had not eaten for three days, keeping what little food he got for his wife and his child who suffered from pneumonia.

As the lockdown extended, SWAN began to see an increased appeal for prescription medicines taken by elderly who were suffering from diabetes, thyroid problems and heart conditions as well as others suffering from chronic stomach and liver conditions. One of the most affected seem to be those suffering from chronic kidney ailments, and SWAN received nine calls for help. A recent study has highlighted that there was a 64 percent rise in mortality among dialysis patients between March and May, that is, during the initial months of the lockdown. SWAN received seven calls where a family member was undergoing treatment for TB. The help sought was for rations, medicines and for check-ups that were due.

At the best of times, access to medical care in India is beyond the reach of the poor. But during the lockdown the health infrastructure seemed to have completely failed the poorest—and the ones most in need.

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4.b SPARC – Society for Promotion of Area Resource Centres

The pavement dwellers and their quest to secure a habitat

Vinod Kumar Rao, Sheela Patel

SPARC began working with a group of pavement dwellers in the 1980s in Mumbai. Though the introduction of the founders of SPARC to the pavement dweller women (who then laid the foundation of the women's collective called Mahila Milan) was on the basis of health, frequent and forced evictions meant the families could not make any viable investments in health and well-being of themselves and their children. SPARC then focused the core issues that the pavement dweller women prioritised: security of tenure. Though that was the final goal, it was understood that this would be a long-term struggle and there were issues that required to be addressed in the interim. Access to water, sanitation, ration cards, were primary. There was no such civil society support for pavement dwellers during that time.

What was the nature of vulnerability they faced? Pavement dwellers remain one of the most marginalised city residents, with extremely precarious residency tenure and they face constant evictions for having 'encroached' public spaces and hampering regular road traffic. The temporary nature of their tenure, and the absence of a 'clear address', ensures they will never get formal access to government subsidies, water or sanitation services. Often informally acquired necessities like water costs several times the cost paid by city residents for accessing the same amount of water. Large portions of income are spent on water, sanitation, food and rebuilding shacks, that are constantly demolished by city authorities, leaving little to ensure their health needs. The risky nature of their habitat, especially for young children, places a double burden on women to supervise children at all times and arrange for supervision during times when they have to go for work (mostly low paid domestic work).

What were the health challenges of the community? The health risks of living along a pavement and inhaling smoke from vehicle fumes and dust all day is humongous, but yet not studied deeply. The danger of being injured by moving traffic is substantial, especially among young children. When SPARC started work with the pavement dwellers in the late 1980s, tuberculosis and malnourishment in children were prominent issues. Since 2019 SPARC is working on a health research project called ARISE (Accountability and Responsiveness in Informal Settlements for Equity). Preliminary discussions with the pavement dwellers have shown higher incidence of diabetes and hypertension as the most common illnesses.

Health system issues: Most pavement dwellers use public health facilities, such as the OPD of municipal hospitals as they were using them in the past. Interestingly, the facility that was closest to their pavements continues to be used by them even if relocating to another locality 20 kilometres away, as they are comfortable with the navigations there. Recently, SPARC has begun looking at health and well-being issues of residents of relocation colonies. Three important areas have emerged where interventions are critical to improve health and well-being of relocated pavement dwellers are:

- Access to affordable curative care
- Knowledge, capacity and access to preventive care, and
- Advocating for participatory action between organised residents and Government institutions around health

How has SPARC intervened? Most issues of the pavement dwellers that directly affect their health and well-being emerge primarily from the precarity of their habitats. Therefore, housing (along with safe water and sanitation) was prioritised. Since 1984, the work with pavement dwellers has resulted into close to 8000 of them being housed primarily under the Rehabilitation and Resettlement Policy of the state. Post relocation, SPARC continues to invest in maintaining their collectives, because although habitat induced vulnerabilities have reduced, many remain economically vulnerable.

In 1986, SPARC conducted a survey of 3000 pavement dweller families in Mumbai called 'We the invisible', later extending to the pavement dwellers across Mumbai. When SPARC began partnering with the National Slum Dwellers Federation,, the movement to enrol and engage with slum dwellers forming their federations within their cities gathered steam and spread across cities and towns in over six states. This focus on collecting and maintaining a comprehensive database held them in good stead when planning their intervention during the pandemic.

Work during COVID-19 pandemic: During the COVID-19 crisis, and lockdown SPARC received dry ration support from many donors for distribution among slum and slum relocation colony residents. The federation network used a staggered approach, where families with absolutely no reserves were assisted first, followed by other families who quickly ran out of reserves as the lockdown progressed. In all relocation colonies, every building society committee was asked to survey households and produce a list of families requiring support. Kits were handed over to the society committee accordingly. In slums,

the savings networks of the Mahila Milan were able to identify households to be assisted as the women knew which household required immediate help. The federations also mobilised help when distress calls from locations outside the network came up. For example, a group of migrant workers from Tamil Nadu were stranded in the city, and when their distressed videos reached the federations through Whatsapp forwards, the Mahila Milan of that area went in and provided essential grains.

4c. Voluntary Health Association of Assam, Guwahati, Assam

Community Health and Development Initiative

Jyotika Baruah and Ruchira Neog

Voluntary Health Association of Assam (VHAA), a non-profit organisation, has come a long way from its inception in the year 1990-1991. Committed to meet its mandate of "Making health a reality for the people of Assam", the organisation is engaged in the field of health and development, enabling communities irrespective of their identity in improving their health status. VHAA emphasises preventive and promotive approaches to address a range of health concerns at the community level. Community Health and Development Initiative (CHDI), a CSR initiative of VHAA is being implemented in Jyotinagar, an urban ward, and in specific areas of semi-urban Panikhaity (about eight-10 km away from Guwahati city) since 2009.

What was the nature of vulnerability VHAA faced? Jyotinagar comprises hilly tracts and some forest land, populated mainly by migrant labourers, petty traders and BPL groups. The population is mixed, having representation of all religions, communities and linguistic backgrounds. While a majority of the households living by the roadside are well off, households on the hilly tracts are mostly from marginal income groups engaged as petty traders, casual workers, daily wage earners, rickshaw/cart pullers, hawkers and so on. Despite its proximity to Guwahati, basic amenities are lacking.

Most of the project areas under Panikhaity GP are located in the foothills/forest fringe amid paddy fields, with a heterogeneous population of migrant and permanent settlers belonging to indigenous groups like the Bodos, Garos, Karbis, Nepalis, Assamese and Bengali, from mixed religions. Most of the households do not have access to safe drinking water (which they purchase from private parties), safe and hygienic toilets, electricity and proper housing. Food and nutrition are compromised since the brick kilns make the soil unfit for cultivation of fruits and vegetables and they cannot afford to purchase them either. A few families own paddy fields, some poultry, and/or are in regular service in the public or private sectors. Most are engaged as casual, seasonal workers in nearby industrial units, work as daily wage earners, domestic workers and so on.

What were the health challenges of the community? The project area has incidences of malaria due to heavy rainfall and the resulting waterlogging and submersion for many months of the year. In Jyotinagar, unregulated earth cutting and deforestation of the hilly tracts along with construction of houses on the hill sides, lead to flash floods and landslides particularly during the rainy season.

Though there are no specific slum areas, most people live in congested, sub-standard housing conditions, with poor hygiene and sanitation, leading to diseases such as respiratory infections, TB, diarrhoea and now, COVID-19.

The consumption of alcohol and tobacco products (both smoking and smokeless forms) is quite common. Community FGDs show that the younger generation is highly influenced by advertisements and social media and prefers junk food over traditional home cooked food. The incidence of NCDs has been found to be increasing steadily, possibly because of adoption of erratic food habits and consumption of alcohol and tobacco products.

Health system issues: Access to basic health services is quite poor. Overall health awareness is also low. Residents of Panikhaity have poor access to the existing Mini Primary Health Centre (MPHC, Thakurkuchi) due to lack of public transportation. Hence, the community depends on the Sub Health Centre (SHC), Panikhaity and SHC, Bonda, the latter having been recently upgraded to Health and Wellness Centre specifically for the control of NCDs. Community perception is that the SHCs can provide only Maternal and Child Health Care. In fact, all basic health care services such as ANC (antenatal care), PNC (postnatal care), Immunisation, Family Planning, DOTS (Directly observed treatment –short course] and detection and treatment of vector-borne diseases are available. However, health system challenges include non-availability of doctors and break in services (the latter more so during the lockdown period last year), poor testing facilities, geographic inaccessibility, poor quality of care and out of pocket expenses. People therefore mostly frequent the 'round the corner' kind of drug stores which are run by lay persons. It is also doubtful whether such drug stores have proper licences.

The project area in Jyotinagar is served by an Urban Health Centre located in Chandmari but rarely frequented due to distance and poor accessibility. There are two other Government facilities - one is the State Dispensary and the other is an Urban PHC within a radius of 4-5 kilometres. Both the facilities conduct essential diagnostic tests. Major referral centres (Medical College Hospital, Civil Hospital) are approximately 15-20 kilometres away.

Besides this, there are quite a few private facilities and a PSU (Public Sector Undertaking) hospital in the project area. The private facilities are expensive, yet, due to a lack of faith in government services, many people continue to access their services. One visit to a private practitioner costs anything from INR 500-1000/- (doctor's fee, medicine, conveyance besides being prescribed a battery of tests).

How has VHAA intervened? The Community Health and Development Initiative (CHDI), a CSR intervention was started by VHAA in collaboration with SC Johnson PPL. Since 2009, VHAA has supported access to health care through Health Clinics (OPD based and outreach) and community-based health promotion in Jyotinagar and Panikhaity.

> *"Samina Nesa is an elderly woman aged 76. She avails health check-up and free medicines at our clinic. As Samina Nesa puts it, our OPD services are beneficial to her and many others, as she can use her Registration Card to avail of free services and medicines throughout the year. She has a son who is mentally ill and a grandson. There is no one in her family who can take her to a doctor or any facility. Here, she can come on her own and save on money too."*

The intervention has the following components:

Basic Health Check-up & Treatment at eight-ten clinics a month General and Women Health Clinics (outreach and OPD) clinics are organised with a physician, an ANM and a team of community health volunteers. Medicines are provided free of cost, as well as blood pressure readings, random sugar tests, weight measurement and so on. On an average 3000-3500 patients access these basic health check-up services annually. Referral linkages with government health centres are maintained for further follow-up.

Community Mobilisation for NCD Control: Regular community-based awareness and screening camps are organised, with early detection, necessary referrals, diagnosis, counselling and regular follow up of the patients. High-risk patients are referred to the nearest Health and Wellness Centre, Urban Health Centre or PSU run hospital. During the lockdown, care was taken to ensure continuity of care for high-risk patients through tele-consultations. Community Based Assessment Checklist (CBAC) forms, for early detection of NCDs, are shared with the concerned ANMs, ASHAs and Volunteers, to identify those at high-risk for NCDs, and refer them to government health facilities for treatment.

Tracking and Testing of Fever cases /Mosquito Net Treatment camp: Prevention and control of malaria and other vector borne diseases is done through tracking of fever cases, blood testing and treatment/referrals for positive cases. Besides distribution of 2500 long lasting impregnated bed nets, the project also organises regular treatment of community-owned bed nets, reaching out to 750-1000 households per year. Community health volunteers make household visits to track and follow-up on any suspected fever or other seasonal ailment cases. The project works closely with the Vector Borne Diseases Control Project officer, particularly during the high transmission season.

Behaviour change communication (BCC): Awareness generation on issues related to malnutrition, anaemia, personal and environmental hygiene, safe drinking water, communicable and non-communicable diseases, substance abuse and so on, is carried out on a regular basis through print and audio-visual media, counselling sessions and group discussions.

Ms. Bona Kakati, age 39 years, of Gopalnagar (Choonsali) attended the NCD Screening camp held at Gopal Nagar on 7th November, 2019. During the screening, it was found that her blood pressure was 148/103 and blood sugar was RBS- 315. She was shocked as she had never undergone any test before. While taking her detailed case history, we found out that she leads a sedentary lifestyle. After counselling by our NCD team, she was referred to the nearest Health Facility, Choonsali UPHC cum Health and Wellness Centre for further investigation and treatment.

During the follow-up, our team member found that though Ms. Kakati had started her treatment from Choonsali UPHC, and had even started taking her medication as per the doctor's advice, she later stopped taking her medicine on a regular basis. After counselling by our health workers, Ms. Kakoti resumed her medication as prescribed by the doctor. During telephonic follow-up (due to lockdown), she stated that she is taking medicine regularly as per the doctor's advice and her BP & blood sugar level has improved.

In short, the CHDI project has earned a reputation for its dedicated, quality-oriented and community-friendly health services. People in the communities in the project area consider CHDI service as essential for meeting their health service requirements. Strong linkages with the government health facilities and the NHM around the project area have been essential for referral of cases requiring further investigation and treatment.

4d: Sarvagna Health Care Institute, Institute of Public Health, Bengaluru

Urban Health Action Research Project

Thriveni S Beerenahally

The Urban Health Action Research Project (UHARP), implemented by the Institute of Public Health (IPH) in Kadugondanahalli (KG Halli) since 2009 to 2015, continues till today through Sarvagna Health Care Institute. KG Halli is one of the 198 administrative units of Bengaluru. It has a population of over 55000 individuals in an area of less than a square kilometre, with two recognised slums housing people from Karnataka as well as migrants from other Indian states. A majority of the population in the community are daily wage workers.

What were the health challenges of the community? A cross sectional survey was conducted in 2009-2010 by IPH to understand self- reported illness and health seeking behaviour. The study showed that diabetes was the second most commonly reported chronic condition in KG Halli and out-of-pocket spending on out-patient care for chronic condition was 69.6%, where 66.3% was spent on medicines[11].

In addition, domestic abuse and addiction to whitener/thinner/correction fluid and petrol sniffing is another major issue in the slums of KG Halli. School dropouts in these slums are high and many young boys are rag pickers making some money on a daily basis, which they spend on their addiction.

Health system issues: KG Halli has a mixed health care system with two government facilities run by the municipal and state government and around 32 private health care facilities. The government health facilities mainly provide out-patient care and outreach services. The services provided by these two health centres are free for people living below the poverty line, with nominal user-fees for selected services for other patients. Though public health care is free, the slum residents do not always have access to medicine and laboratory services.

11 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4537574/
https://link.springer.com/article/10.1186/1753-6561-6-S5-O13
https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-13-306
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4649018/

Also, public care centres do not stock all types of medicines to manage NCDs. Hence people get only free consultation services and end up spending on medicine and laboratory service. Continuity of care for NCDs is one of the major challenges, leading to early complications like kidney failure, heart attack, loss of eye sights, and so on.

Private health facilities are composed of single-doctor clinics and hospitals. Private providers work on a fee-for-service basis and have been trained in different systems of medicines: Unani, Ayurveda and modern allopathic medicine. Irrespective of the training received, the majority of KG Halli private providers either practice modern medicine or a mix of systems. However, what is worrying is that many untrained (that is, a lack of training in any system) people who have had some experience working in the clinic/hospitals have started their own practice. People are not aware who is qualified and who is not. Even if they know, what matters is that these providers give time to listen to them and their cost of consultation is less, so they prefer to consult them rather than qualified doctors.

How IPH and Sarvgna intervened

Though the UHARP was started with the aim of understanding the issues related to illness, during the initial phase, the team spent considerable time addressing the community needs on priority. This was helpful to gain their trust and to build a relationship with the community. Water scarcity (a basic need) was addressed by constructing a few water storage tanks in the area. Building water storage tanks helped people address the issue to some extent. Another issue the team addressed together with the community was solid waste collection and cleaning waste dumping spots in the residential area. These two actions paved a way for the community to trust the team and realise that they were there for them.

Training Community Health Assistants

Women from the community were recruited to help with conducting a survey on chronic conditions and they were further trained to be community health assistants by the team of public health doctors from IPH. The criteria for selecting them was that they should have interest and commitment and be comfortable with local language. All of them could speak at least two more languages along with a local language, which was an advantage to work with the community. Their education varied from 7-12th grade. Few of them dropped out in the middle of the training which we anticipated and six completed the training which involved mainly hands-on training in the field by accompanying doctors in the team and classroom teaching as well.

Working with Health care Providers

Once the survey showed high prevalence of NCDs and out-of-pocket expenditure incurred, with a majority spent on medications, the team decided to address this. IPH Team consulted all the private and the government health care providers in KG Halli. A brochure with the list of service providers with their specialty, working hours and contact details were printed and distributed in the community. The team also organised a few rounds of meeting with the providers to discuss how we can all work together to improve the continuity of care and reduce the cost of care. Organising meetings itself was a challenge. Allopathy trained doctors were not happy to have a discussion with non-allopathy trained health providers. However, this exercise led to two outcomes:

- To improve access to care: To give ID cards to poor people with NCDs (identified by the Community Health Assistants of IPH team). Those who went with this card would get free or subsidised consultation services from the private health care providers.
- To improve continuity of care and to reduce the cost of medicine: Stocking low-cost generic medicines in the IPH community centre in KG Halli, to be given to the people referred by the providers.

This arrangement went on for few months. However not many people with NCDs trusted the low-cost, generic medicines and even some providers started saying that the quality of the medicine was not good, Eventually, we started a weekly NCD clinic in KG Halli, providing free consultation with medicines to those issued with ID card. This system continues under the ambit of the Sarvagna Health Care Institute since 2015.

How has Sarvagna intervened? Sarvagna Health Care Institute (SHCI) is a non-for-profit organisation, started with the aim of providing integrated primary care with a focus on diabetes care, dialysis service (free for poor) and to conduct free screening for diabetes and hypertension in the poor urban neighbourhoods of Bengaluru. When the survey data of the IPH was disseminated in the year 2013, the information caught the interest of the local elected Member of Legislative Assembly (MLA) who decided to do something for the constituency. After a few meetings to advocate the need for an integrated primary care centre with a focus on chronic disease, particularly diabetes, a trust (SHCI) was registered under his chairmanship and a hospital was set up in KG Halli.

It now offers comprehensive out-patient care, counselling and laboratory services and is equipped with a minor operation theatre and pharmacy which stocks only generic

medicines. Poor patients identified by the IPH team and many more (around 600 individuals) with NCDs get all services (including medicines and investigation) free of cost every month and all the services are provided at a very subsidised rate for the others.

The community health assistants trained by the IPH team also continue to work with SHCI and have acquired many additional skills over a period of time that range from basic computer skills, helping to maintain hospital data, conducting peripheral neuropathy test for diabetes patients, assisting in the pharmacy and helping conduct screening for diabetes and hypertension. This shows that with dedication, interest and commitment, one can grow professionally and acquire multiple skills.

Acceptance grew through continuous engagement and creating awareness about generic medicine through community health assistants and people in the community soon overcame their hesitancy in using the centre. Currently SHCI has more than 22000 registered individuals and more than 3500 people with NCDs availing primary care service. Bangalore Baptist Hospital is the referral hospital for SHCI, that is, any referral from SHCI gets a service there at a reduced cost.

This initiative has expanded many fold. SHCI conducts regular screenings for diabetes and hypertension, promoting early diagnosis and better management, empowering women and youth through skill training, upgrading government schools and *anganwadis,* supporting the poor with secondary and tertiary care, free ambulance service, helping the poor to get social welfare schemes benefits by organising welfare drives/camps with the government department, and more.

The Primary Health Care facility of SHCI shows that if people get quality comprehensive primary care service in one place, it will reduce their burden of visiting multiple centres and will improve their quality of life and reduce mortality and morbidity.

4e: SAHAYOG Society for Participatory Rural Development

Life behind the buildings

Sangeeta Maurya, Poonam Yadav and Harshita Khan

SAHAYOG takes a rights-based approach to promote gender equality and the issues of marginalised women and youth. SAHAYOG has a vision of creating a space for those engaged in effective advocacy for human rights, towards building a society where marginalised groups and individuals, particularly women and young people, raise their voices to claim equal human rights. The organisation is committed to bringing about grassroots empowerment leading to policy and programmatic change. SAHAYOG works in 25 districts of Uttar Pradesh and 1 district of Uttarakhand. Since 2016, it has also been working in 20 urban slums of Lucknow.

What was the nature of vulnerability SAHAYOG faced? The people SAHAYOG works with are below the poverty line and are not able to access the social security schemes offered by the government as they do not have proper official document to avail these services. Most of the families are migrants who have come from eastern UP and Bihar. Women are mostly engaged in domestic work and *chikenkaari* (embroidery) work for which they are paid very a nominal amount. Men are mostly engaged as daily wage labourers. Many adolescent girls work as full-time maids in higher income group (HIG) households. Eight-10 family members reside in a single room accommodation in urban slums with no toilets, drinking water and with poor sanitation, that worsens in the monsoon. In some of the slum areas, people live on disputed land, under temporary shelters they have constructed with bamboo and plastic. Hence, they are constantly in danger of displacement by the municipal corporation and landowners.

What were the health challenges of the community? Girls and women lack safe spaces for themselves as they live in a shared space where they do not have separate toilets and washrooms to bathe. At their workplace as well, women and girls are not allowed to use the toilets in the buildings that they work in. This enhances the risk of having UTI (Urinary Tract Infections) and other health problems. Living in poor economic and social conditions pushes men and boys towards substance abuse and leads to domestic violence against women and girls. The situation got worse during the pandemic as the level of aggression increased due to lack of livelihood in these families. SAHAYOG has experienced during its intervention in schools that substance abuse contributed to poor attendance and increased levels of aggression among boys. Besides this, deep rooted patriarchal norms contribute to and are responsible for the behaviour of men and boys towards women of all ages.

Health systems issues: Women and girls who work as daily wage labourers are primarily concerned about food and livelihood, rather than their health. These workers are not able to access free health services offered by the government as it clashes with their working hours. Their option is to seek health care at the cost of loss of a day's wages. This condition not only affects their health but also compels them to discontinue their studies. Anaemia and dropout rates are common.

How has SAHAYOG intervened? SAHAYOG engages with women and girls by mobilising them and forming collectives at communities and school levels. It strengthens their capacities by orienting them and addressing their emerging issues through individualised home visits. In addition, safe spaces are developed to enable them to raise their voice and claim their rights and entitlements. Women and girls develop a sense of ownership by contributing to community-based monitoring systems.

Violence against women and girls, and livelihoods are also equally important to address. The health system is gender biased as it focuses only on girls and women, with no dedicated male worker who can engage with men and boys at the community level. Currently the adolescent health programme is seen as a supplementary programme with officers posted on additional charge, which seriously impacts programme quality. There should also be a separate official in charge of the programme.

All government programmes need to be closely monitored to assess service uptake and ensure last mile delivery. Programme implementation also needs to be flexible, so that beneficiaries can be engaged based on their convenience and need.

4f. Urban Health and Climate Resilience Centre of Excellence (UHCRCE), Surat

Adolescents – Vulnerable as well as capable group for city's health

Vikas Desai and Anuj Ghanekar

Surat is a city in western India, known for its rapid growth, climate vulnerability and urban reforms. Surat has grown 55.29% in the last decade, with density of 13,680 persons per square kilometre. 37 percent of its population resides in slum and slum like areas. According to UNSECO (2013), 57 percent of Surat's population comprises migrants, with industries like textiles and diamond cutting acting as strong 'pull' factors.[1]

What was the nature of vulnerability UHCRCE faced? Adolescents from Surat slums are a "hard to reach" population and connecting them with the public health system is a challenge due to various socio-economic, educational, cultural and health system limitations. 12.6 percent of the population of Surat comprises adolescents between 10-19 yrs. old, 7.5 percent are 10-14 yrs. and 5.3 percent are 15-19 years old. Zones with higher slum and migrant population have higher proportion of adolescents than other zones.

What were the health challenges of the community? The table shows how health vulnerabilities of urban adolescents are multi-dimensional, holistic and beyond the notions of "physical health" or "disease".

Source	Observation/evidence/anecdote	Thematic vulnerability related to health
Children's Charter of Demands 2018	"In gardens, the corners of play material and toys are not soft…. If grass and soft sand (reti) is put on surface, we will not get injury even if we fall" (Adolescents voices from South (Udhana zone))	Accidents and injuries, intersection of children's rights of health, safety and development
Slum level vulnerability assessment study	"We don't have speed-breakers across lanes. Rash driving of youth often becomes reason to fight……" – 16 years boy sharing experience in safety mapping study.	Urban infrastructure, accidents and social health issues-interconnections
Heat and health action plan research	Intra-domestic heat discomfort is more experienced by adolescents from slums.	Climate induced health impacts (Urban heat island effect)
"Out of school adolescents" research study	8.1 percent adolescents (76 out of sample of 931) were school dropouts.	Gaps in access to RBSK programme, health education obtained from schools and teachers

Source	Observation/evidence/anecdote	Thematic vulnerability related to health
Media analysis study (2017-18)	38 percent of newspaper articles related to children covered crimes against children like molestation, rape, suicide, sex determination, murder and so on. Majority of cases involved girls and adolescents as victims.	Social and mental health, intersections of rights of safety and survival
Community Mental Health Program 2020-21	COVID-19 and the lockdown precipitated uncertainty about family income, food, space compromise while maintaining distancing, worry about younger siblings and challenges in online learning with possibilities of school dropouts	Mental health crises
Child Friendly Smart City Knowledge Centre	Physically disabled adolescents experienced absence of ramps, functional lift in public and private health and medical care institutions.	Differential needs within adolescents' sub-group, health care access and acceptability
Adolescents Responsive Health System – pilot project	Adolescent pregnancy case study (18 years old migrant girl) from Surat revealed different barriers in health care access. System barriers included Mamata card and ANC services not linked with native state, Lack of health-ICDS joint coordination and Community surveillance missed registration of ANC. Community level barriers included underage, anaemia, migration, Lack of social support network, Long working hours for husband who was only caretaker, Out of pocket expenditure for private health care	Adolescent pregnancy and structural vulnerabilities associated with it
Community Mental Health Program 2018-19	Mental health assessment of adolescent boys with the help of Strengths and Difficulties Questionnaire (SDQ) and qualitative data showed 64.4 percent had normal SDQ score, 21.2 percent had borderline SDQ score, and 14.4 percent had abnormal SDQ score. Early adolescent (11-14 years) had worse SDQ scores compared to late adolescent boys.	Mental health and peer relationship concerns among adolescents, differentiated by age
Cyber safe Surat-sharing learning dialogue (June 2019)	Parents and teachers worry that cyber addiction is making teenagers depressed, creating internet dependency and even contributing to obesity.	Lifestyle causes of health vulnerabilities
Situation analysis report (2019)	Adolescents experience multiple health problems. RBSK data (2018-19) revealed that 10.8 percent students from secondary schools experienced clinical anaemia, dental caries, reactive airway, skin problems and vision problems. 0.7 percent were referred to higher centres for treatment. Similarly, ICDS data revealed that 36 percent girls had low BMI, while 11 percent were obese.	Need for evidence-based actions using disaggregated data

Thus, urban adolescent health vulnerabilities are multi-dimensional and often connected to systems "beyond health and health care" purview. Therefore, solutions need to be tailor made, innovative promoting multi-stakeholder convergence.

Health systems issues: Public health services in the project area are provided by Vijayanagar Health and Wellness Centre (HWC). The HWC is managed by the Department of Health and Hospital. The staff includes two Medical Officers, one LHV, one Staff nurse, one lab technician, one TBHV, one STD Counsellor, nine ANMs, one pharmacist and three support staff. Outreach services are provided in nine sub-areas by 24 ASHA and 26 Mahila Arogya Samitis with 221 members. The centre OPD timings are from 9 AM to 1 PM and from 3 PM to 5 PM. A weekly MAMTA divas (VHND) is also organised.

Although the public health centre is within five kilometres and the referral centre is within 15 kilometres of the neighbourhood, the community prefers private health care. The factors that drive this preference include UHC timings, lack of awareness of services at UHC, staff behaviour and (lack of) trust. An orientation visit which allowed out-of-school adolescents to interact with health centre staff helped both sides to understand each other better and resulted in adolescents visiting the centre for the first time.

Lessons learnt during the "Adolescents Responsive Health Program" were:

i. regular comprehensive health screening is necessary for adolescents
ii. services for adolescents must be coordinated at one stop
iii. reach and access can be improved by technology that enables efficient data compilation and convergence
iv. participation of adolescents needs to be encouraged, by providing reliable behaviour change information and demonstration of good health practices, via creative platforms.

Overall, UHCRCE's experience has shown that there are three major challenges that need to be addressed urgently:

- Adolescent responsive health system including health, education, safety and social development
- Social Behaviour Change Communication rather than IEC approach
- Climate and health monitoring through active participation of adolescents.

How has UHCRCE intervened? Urban Health and Climate Resilience Centre of Excellence (UHCRCE) is a registered trust settled by Surat Municipal Corporation (SMC) in the year 2017 as unique Public Private Partnership model. UHCRCE is a non-profit trust with a mandate of research, documentation, capacity building, networking and advocacy. The trust is the institutionalisation of a seed project "Urban Health and Climate Resilience Center (UHCRC)" (2013-2016). UHCRC and UHCRCE have critically engaged with adolescents' health as part of several projects and interventions:

Intervention/ project	Project brief and connection with health	Year
Climate Smart Healthy Children (Peer education approach)	This is a peer education "Student to Student" model created to promote peer learning. Students of one school imparted knowledge, skills and attitudes of "healthy living action" to that of another school. In all, 12 schools have participated in the model, covering 2342 children.	2015-16
Adolescents Responsive Health care-urban pilot	This was a pilot implementation research (2018-19) by SMC and UNICEF with UHCRCE as an implementation partner. The objective was to demonstrate a feasible model of Adolescents Responsive Health System specific to urban slum context. The programme reached 212 health care providers, 53 institutions/ schools working with adolescents and 3540 adolescents themselves. The strategic planning involved three phases: Local working group formation - a "multi-stakeholder" network of 53 city institutions working with adolescents was created for technical guidance and review; Evidence generation - involved primary research for, by and with adolescents, city-wide secondary data analysis, adolescents' health surveys, issue specific rapid surveys of adolescent health problems and service needs, adolescents charter of demands preparation, and stakeholders mapping; Capacity building, system planning and behaviour change communication actions with systematic screening for health, coordination within multiple protocols, joint capacity building of health care providers of different levels, life skills education, visits of adolescents to health centres, intergenerational dialogue and capacity building of parents.	2019-20
Child Friendly Smart City Knowledge Centre	CFSCKC is a joint initiative of SMC and UNICEF, implemented by UHCRCE. 8000 children and adolescents were impacted by the centre's innovative activities. Activities included the Children's Charter of Demands 2018, life skills education programme, children's participation in city assessment, child rights mela and audits and pilot innovative interventions for most vulnerable adolescents like girls living with HIV, out of school adolescents and so on	2017-20
Community Mental Health Program	This is a multi-disciplinary approach that includes promotion of mental health and prevention of mental illness. 2350 adolescents were covered through 83 sessions under targeted interventions & mental health self-assessment through SDQ. A large number of handbills, wall paintings and communications displays were deployed in support of creative communication strategies for mental health promotion.	2018-20

1 UNESCO (2013) Social inclusion of internal migrants in India. UNESCO, Delhi

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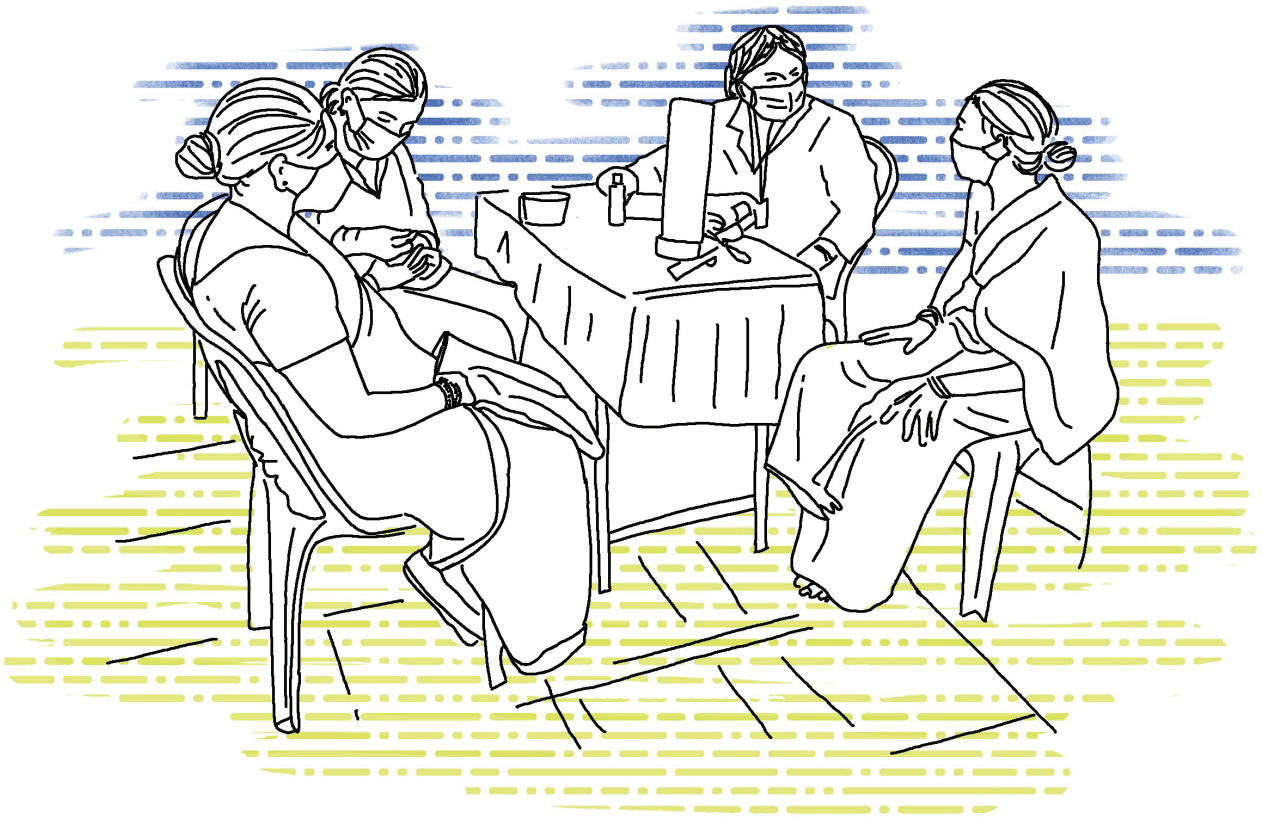

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