Public Expenditure on Health in Maharashtra

Public Expenditure Analysis Series 5 of 8
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Table of Contents

Executive Summary

Amongst India's states, Maharashtra is the second most populous state and the third largest state in terms of area. It is the country's financial capital. It, surprisingly, has much poorer records as compared to the best performing states of Kerala and Tamil Nadu when it comes to institutional births, immunisation, child marriage, and prevalence of anaemia among pregnant women, although, it has reported lower birth rates. The study sought to answer the following specific questions with respect to Maharashtra:

1. Is the health expenditure in line with its health needs?
2. How do the changes introduced by the 14th Finance Commission (FC) translate to changes in policy and health expenditures?
3. What is the role/share of National Health Mission (NHM) in health expenditures?
4. How participatory and responsive is the development of the Gram Panchayat Development Plan (GPDP) at the Gram Panchayat (GP) level, particularly from the perspective of health?

This work is primarily a Public Expenditure Review (PER) of public budget allocations and expenditures on health to understand the trends and discern the priorities as against the health issues that the state is facing. Hence, the methodology mainly included the analysis of state budget documents (2012-13 to 2017-18), National Health Mission (NHM) budget and related documents, and Gram Panchayat Development Plan (GPDP) budget documents accessed through a small fieldwork in two districts and a municipality in addition to literature review. We tried to understand fund flow mechanisms in the three different types of districts and how decentralised planning for health sector is being undertaken at Gram Panchayat (GP), Block Level, and District level in Nandurbar (tribal), Osmanabad (rural) and Mira-Bhayandar (urban, Municipal Corporation). Following the 14th Finance Commission's (FC) recommendations, GPs are receiving untied funds and hence, it could be helpful to understand the priorities and utilization patterns there. In addition to PER, we analysed the data of the 71st round of National Sample Survey (NSS) on social consumption on health, and we have also included relevant findings from the 75th NSS. Review of guidelines for various schemes including NHM was undertaken to make our analysis relevant.

Any PER on health would not be complete without a description of the state's major challenges. We analysed the demographics and health data to understand this first. Six major issues were identified:

a. Rise and Spread of Non-communicable Diseases (NCD): The state's disease trend shows that the infectious diseases are on the decline while non- communicable diseases led by heart diseases are on an increase. The analysis of mortality rates showed the need to focus on (i) neonatal disorders, (ii) cardiovascular and other noncommunicable diseases among all 15+ age-groups, and (iii) mental health issues as this emerged as a major issue for adolescents.

b. Maternal and Child Health (MCH): 45% of the deaths in children under 14 years of age were due to neonatal disorders, which meant these occurred in the first 28 days of a baby's life and therefore, pre-natal and neo-natal care become critical. High rates of wasting in the state further pointed to this area.

c. Tribal Health: The MCH indicators between districts showed a wide inter-regional variance within Maharashtra, with tribal districts and urban congregations showing the poorest indicators. The districts with high tribal concentrations such as Nashik, Nandurbar, Dhule, Yavatmal, Gondiya, Jalgaon and Gadchiroli performed poorly. There was a need to focus on specific diseases like sickle cell disorder as well as alcoholism and substance addictions in these areas in addition to tuberculosis (TB) and skin diseases. Hence, there is a need for health services to cater specifically to diseases affecting this population.

d. Urban Health: The urban population is 45.2% of the state's total population. 23.3% of this population live in Maharashtra's slums, the largest in the country (Economic Survey of Maharashtra,2017-18, 2018). Studies indicate that the health status of people living in slums is far worse than the rest of the urban population, especially in a non-recognised slum, which does not have basic facilities like clean drinking water and sanitary conditions of living. As a result, the Out of Pocket Expenditure (OOPE) is very high for these households[1].

e. Inadequate Availability of Public Health Care Facilities and High Vacancies: According to the rural health statistics of 2014-15, there was 22% shortfall in the number of sub centres, 18% shortfall in number of Primary Health Centres (PHCs), 35% shortfall in the number of Community Health Centres (CHCs) in Maharashtra, as against norms. The state also has high vacancy in PHCs and CHCs of the state. Added to this is the issue of low usage of the public facilities. Lack of public facilities

[1] This observation is based on literature review and the data analysis of the 71st round of National Sample Survey on Social Consumption on Health.

within accessible distance and a general failure in upkeep of facilities along with shortage of staff could have led to the preference of private medical care amongst both urban and rural population.

f. High Out of Pocket Expenditure and Inadequate Coverage though Health Financing (insurance): The average total medical expenditure per hospitalisation case in a private hospital is significantly higher than the all-India average, while the average total medical expenditure per hospitalisation case in a public hospital is much less than the all-India average, in both urban and rural areas. The analysis on this aspect revealed that the coverage of any kind of health expenditure support is also relatively poor in Maharashtra.

The identification of problem areas guided the expenditure review analysis. The last chapter summarises the discussions before outlining the suggestions. The summary of the major findings is presented here:

Macro Level Analysis: The analysis of the health expenditure from all relevant departments[2] of the state government shows the following important points about the state expenditure on health:

The expenditure on health has increased from Rs 6,773 crores in 2012-13 to Rs 14,534 crores in 2017-18 registering a Compounded Annual Growth Rate (CAGR) of 15% in nominal terms, and of 12% in real terms during the same period.

The average per capita expenditure in the state during this period is also one the lowest at Rs 1,011 among these states.

Although there has been an increase in the state health expenditure as a percentage of total state expenditure, it is still at 5%. This is much lower than the national policy goal of states spending about 8% of their total state budget on health.

The health expenditure as a proportion of Social Services Expenditure (SSE) has increased over the years from 10.61% in 2012-13 to 15.21% in 2017-18, but there has been a steady decrease in the share of SSE on the whole, indicating lower prioritisation for others within the social sector.

[2] Public Health Department, Medical Education and Drugs Department, Tribal Development Department, Public Works Department, Districts, and Other Departments.

The Department of Public Health and the Department of Medical Education and Drugs together spend about 87% of the health expenditure; the Public Works Department and Tribal Development Department respectively account for 4% and 3% of the health expenditure.

The implementation of the 14th FC recommendations in 2015-16 has not affected the health expenditure adversely in Maharashtra although the share of total social sectors has shown a decline.

The NHM contribution to the state health expenditure has been increasing and it now comprises 20% of the state's health expenditure.

Amongst the four flexible pools of NHM, the highest expenditure has been incurred under the Reproductive and Child Health (RCH) accounting for an average of 89.3% of the total expenditure followed by Communicable Diseases (CD), Non-communicable Diseases (NCD), and National Urban Health Mission (NUHM) averaging 5.7%, 4.1% and 0.8% of the total expenditure respectively.

At the aggregate level, both the budget allotted and expenditure incurred under NHM have grown but the average growth in the allocations has been much higher (13.3%) than the average annual growth rate for the actual expenditure (4.5%), indicating poor levels of utilization. The average utilization ratio of five years has been 61.6%.

Public Expenditure on Maternal and Child Health (MCH): Maternal and Child Health expenditure can be tracked specifically only through NHM. Maternal and Child Health is the largest component covering about 89.3% of total NHM expenditure. Under RCH, the largest allocation is under human resources (35.8%), followed by child health (23.9%) and maternal health (23.5%). In the time-period, 2012-13 to 2017-18, no expenditures were incurred specifically for medical termination of pregnancies, maternity grants and post-partum centres in the state. There was no special focus or allocations for women under other programmes that target non-reproductive health issues.

Looking at schemes, Janani Shishu Suraksha Karykram (JSSK) has received highest allocations in recent years but has a low (55%) average utilization rate during the period. The allocations for the older component Janani Suraksha Yojana (JSY), which is a cash transfer programme for institutional delivery, has largely remained constant but the average utilization rate at 83% has been high during the period. Both schemes have better uptake in rural areas as compared to urban areas.

While the budgetary allocation for Child Health has seen an average of 24.4% annual growth rate, the expenditure has grown only by 3.2% per annum during this period, indicating a gradually falling utilization rate. Immunisation followed by the Rashtriya Bal Swasthya Karyakram (RBSK) and the National Iron Plus Initiative (NIPI) were biggest allocations under child health. There has been a significant reduction in the facility-based and community level services under Rashtriya Kishor Swasthya Karyakram (RKSK), which are important for adolescent health and wellbeing.

Public Expenditure on Health Care in Tribal Areas: Looking specifically at expenditure on health for tribal populations it was seen that, tribal health expenditure consisted only of 2.89% of the Total State Health Expenditure (TSHE) and is at its lowest in the five years of the study period. The highest allocations under the TSP in the state plan is on National Rural Health Mission (NRHM) and NUHM; they together constitute 87% of the total TSP scheme allocation in 2017-18. Shortage of staff and medicines observed during field work showed an incongruence between higher allocations to tribal districts and the situation at the ground.

Public Expenditure on the Health care in Urban Areas: State level expenditure incurred on urban population accounts for an average of 34.3% (average of 2012-13 to 2017-18) of the total expenditure incurred on health while the rest account for rural health expenditure. But this could be an underestimate as health expenditures under municipal corporations are not included within the state budget. However, urban health expenditures (that can be clearly separated from rural in the budget documents) have seen an increasing trend mainly caused by an increase in the non-wage component during the study period.

An analysis of the allocations for schemes under Public Health Department (PHD) in 2017-18 under the state plan showed a total outlay of Rs 4,57,298.52 lakhs of which 56.9% was for urban specific schemes. Within this, National Health Mission allocations are the highest. The NHM analysis showed that the components like RCH, CD, NCD were not segregated for urban and rural areas. Also looking at district plans, we see that there are no specific urban scheme allocations at the district level.

The utilization levels of the available NUHM funds have been low and this has seen only moderate increase over the years. The utilization rates under NUHM were relatively higher for infrastructure (100%), Accredited Social Health Activist (ASHA) (56%), and human resources (52%) as compared to community-oriented components

such as community processes (38%), untied funds (UF) (18%), and Mahila Arogya Samiti (MAS) (5%).

Public health service delivery and Health financing:

The state expenditure on health (excluding NHM) is almost equally divided between personnel and non-personnel objects during 2012-13 to 2017-18 (ratio of 51:49), showing a gradual increase in expenditure for non-personnel components. The total capital expenditure (physical and human infrastructure) from the state budget has been hovering around 13-14% of the health expenditure during the period 2012-13 to 2017-18, and the revenue expenditure accounted for the remaining 86-87% during the same period.

Within expenditure on personnel in NRHM, utilization rates varied for different kinds and levels of human resources, indicating towards higher presence of vacant positions for certain posts such as anaesthetists, paediatricians, obstetricians/gynaecologists, surgeons, physicians, dental surgeons, radiologists, sonologists, and pathologists (47.7% utilization rate). Primary data from Nandurbar and Osmanabad districts also confirmed high levels of vacancies: five out of 16 PHCs had no Medical Officers (MO), 12 PHCs did not have the requisite number of nurses prescribed by the Indian Public Health Standards (IPHS), 13 out of 16 PHCs had no multiskilled workers, seven had no lab technicians, and only six PHCs had an accountant. Although most PHCs had an ambulance with a driver, most needed an extra driver as one alone couldn't be available for 24 hours.

The Accredited Social Health Activist (ASHA) component forms the backbone of the NRHM. This is one area where allocation has not kept pace with utilization; while the allocation increased by an annual average growth rate of 27.13%, the utilization increased per annum by 29.5% on an average. However, the average utilization ratio was 89.45% during this period.

Although allocations and expenditures under UF have reported a decline in this period, usage has been optimal with an average rate of 91%. Considering that the utilization rate has been very low in urban areas, the high rate is obviously because of an even higher utilization rate in rural areas.

Procurement of drugs and other non-capital items: On an average, procurement by the state budget accounted for 4.3% of the total health expenditure in these five years.

The Mahatma Jyotiba Phule Jan Arogya Yojana (MJPJAY) is the most important state-funded scheme that provides coverage for tertiary health care to all Below Poverty Line. While the expenditure incurred on insurance showed an increasing trend from 2012-13 to 2016-17, there was a steep decline in 2017-18. As a result, the share of insurance fell from 8-10% of the state health expenditure to 2%. This decline is primarily due to the decrease in the expenditure incurred on the MJPJAY.

Public Expenditure on Communicable Diseases (CD) and Non-communicable diseases (NCD)

The total non-NHM expenditure on CD has been increasing with some exceptions. Malaria related expenditure covers nearly 47% of the total pool of communicable diseases, followed by tuberculosis (TB) related expenditure that occupied nearly 20-30% share during this period. Even when the state and NHM expenditures are added, malaria and TB receive the highest allocations under CD. Amongst all the pools of NHM, the CD flexipool has reported the highest utilization rate during this period (on an average 72% for five years). Amongst NCDs, mental health receives the highest allocation under the state budget (73%). Communicable Diseases received a higher share (2.8% of the Total State Health Expenditure as compared to NCD (1.4%) in these five years.

Based on the study findings, following are the recommendations:

Development of District and sub-district level plans with budgets: All districts and sub-districts must develop an integrated annual health plan and budget where allocations from all sources including the health department (through treasury), NHM (other Centrally Sponsored Schemes - CSS), and Tribal Sub-Plan (TSP) are brought together in a single document marked by sources, expenditure heads, and proposed spending by quarters.

Understanding and addressing fund flow delays and low utilizations: The state government could consider direct disbursal of NHM funds to each level from the State Health Society (SHS), where the funds are released directly to the Taluka Health Officer from the SHS instead of it going through the district first.

Access to and affordability of health services: Working towards improving affordability, accessibility and availability of health services to all i.e. Universal Health Coverage (UHC) should be goal of the state which will ensure health for all. Increasing allocations for tribal population or providing tertiary health coverage are all piecemeal solutions that only provide a temporary band aid. The state's fiscal

capacity suggests that it possess resources to push towards UHC but lacks the political will for the same.

Reprioritising health expenditure to suit the needs in tribal and urban areas: Increasing tribal health allocations to match the proportion of tribal population in the state is essential. However, more efforts should be made in undertaking tribal specific measures to match their health care needs.

Creation of urban health plans in tune with urban health conditions: Currently, no special schemes for urban areas exist even though literature suggests that problems of cities are very different from that of villages. Exploring innovative public-private partnership routes to expand the reach of public health care services may be a good idea in urban areas, especially in cities such as Mumbai.

Make data available to enable more responsive GPDPs: There should be proactive utilization of funds available under FC grants by the health department as source of additional income in undertaking health related expenditures at the GP level. This requires coordination between the health department and Panchayati Raj department.

Gender Concerns: A compulsory gender review of proposed plan and budgets at various levels can be institutionalised to prevent women been seen only as a reproductive tool and to strengthen the gender responsiveness of the health sector interventions and spending. Training at all levels, including GPs and other local government bodies, should have a gender focus to enable more gender-responsive planning and monitoring of fund utilization.

Maharashtra is one of the economically advanced states of India. Therefore, it has the potential of adequately addressing it health sector needs but currently it appears to be far from that. Although the state has increased its allocations to the health sector after the implementation of the 14th FC recommendations, which meant access to higher amounts of UF, it still occupies only 5.1% of total state expenditure, which is much lower than the level recommended by the National Health Policy, 2018 (8%). There is enough scope for systemic reforms in making the planning, accounting, and monitoring at various levels much more participatory and comprehensive by making the exercise less fragmented, and we have made suggestions for the same. This, we think, would also improve the efficiency and effectiveness of the public expenditure. This means that the NHM's role can go beyond monetary contribution if the experiences are used to enable process-reengineering reforms.

We also argue for strengthening universal health care through a variety of measures and by making the health planning more responsive to specific issues of respective population groups such as tribal and urban poor, and also by strengthening the gender budgeting processes. We recommend that comprehensive primary care machinery that focuses on both prevention and cure at minimal or no cost to users is critical for improving health indicators of the state. This takes the fact that health indicators in the state point towards the need for greater attention to tribal areas, urban areas, NCD, and gender gaps. The third-tier government bodies in both rural and urban areas can be important partners in this reform process and play a significant role through participation in the process of comprehensive planning and monitoring of the health sector interventions. This is especially important in view of the higher levels of funds being made available to these bodies by respective FCs.

In the end, we would like to reiterate that this study is based on the review of public spending on health in Maharashtra, and the analysis was subject to various kinds of constraints related to data availability. More focused studies on governance processes that impact financing and expenditure may add to this analysis, and consultations with diverse stakeholders at all levels would be crucial for drafting any action plan for the reform process. Any reform process is dependent on political will and bureaucratic support and that remains true for these suggestions as well.

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List of Tables

List of Figures

List of Abbreviations

AE	Actual Expenditure
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
BCC	Behavioural Change Communication
BE	Budgeted Expenditure
CAFO	Chief Account and Finance Officer
CAG	Comptroller Accountant General
CAGR	Compounded Annual Growth Rate
CHC	Community Health Centre
CHE	Catastrophic Health Expenditure
CD	Communicable Diseases
CD-FP	Flexible Pool for Communicable Diseases
CSS	Centrally Sponsored Schemes
DDO	Drawing and Disbursing Officer
DH	District Hospital
DHO	District Health Officers
DHS	Director of Health Services (DHS)
ESIS	Employee State Insurance scheme
ESIC	Employee State Insurance Corporation
FC	Finance Commission
FMR	Financial Management Report
GDP	Gross Domestic Product
GoI	Government of India
GoM	Government of Maharashtra
GP	Gram Panchayat
GPDP	Gram Panchayat Development Plans
GSDP	Gross State Domestic Product
GoI	Government of India
HIV/AIDS	Human immunodeficiency virus/Acquired Immune Deficiency Syndrome
HMIS	Health Management Information System
IEC	Information, Education, Communication
IDSP	Integrated Disease Surveillance Programme
IMR	Infant Mortality Rate
IPHS	Indian Public Health Standards
JSY	Janani Suraksha Yojana
JSSK	Janani Shishu Suraksha Karykram
MAS	Mahila Arogya Samiti
MBMC	Mira Bhayandar Municipal Corporation
MCH	Maternal and Child Health
MCHI	Maternal and Child Health Index

MJPJAY	Mahatma Jyotiba Phule Jan Arogya Yojana
MMR	Maternal Mortality Ratio
MO	Medical Officer
MOHFW	Ministry of Health and Family Welfare
MPSIMS	Maharashtra Plan Schemes Information Management System
NCD	Non-Communicable Diseases
NCD-FP	Flexible Pool for Non- Communicable Diseases
NFHS	National Family Health Survey
NHA	National Health Accounts
NHM	National Health Mission
NIPI	National Iron Plus Initiative
NLEP	National Leprosy Eradication Programme
NMHP	National Mental Health Programme
NPCB	National Programme for Control of Blindness
NPCDCS	National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke
NPHCE	National Programme for the Healthcare of the Elderly
NRHM	National Rural Health Mission
NSS	National Sample Survey
NUHM	National Urban Health Mission
NVBDCP	National Vector Borne Diseases Control Programme
OOPE	Out of Pocket Expenditure
PCPNDT	Pre-Conception and Pre-Natal Diagnostic Techniques
PER	Public Expenditure Review
PESA	Provisions of Panchayats (Extension to the Scheduled Areas) Act
PHC	Primary Health Centre
PHD	Public Health Department
PIP	Programme Implementation Plan
RBSK	Rashtriya Bal Swasthya Karyakram
RCH	Reproductive and Child Health
RSBY	Rashtriya Swasthya Bima Yojana
RNTCP	Revised National TB Control Programme
RKS	Rogi Kalyan Samiti
RKSK	Rashtriya Kishor Swasthya Karyakram
SC	Sub-centre
SDH	Sub District Hospital
SHS	State Health Society
SNP	Supplementary Nutrition programme
SSE	Social Services Expenditure
TB	Tuberculosis
TSHE	Total State Health Expenditure
TSP	Tribal Sub-Plan
U5MR	Under 5 Mortality Rate

UF	Untied Funds
UHC	Universal Health Coverage
UPHC	Urban Primary Health Centre
VHSNC	Village Health Sanitation and Nutrition Committees

Chapter 1: Introduction

The World Health Organisation (WHO) Constitution (1946) declared that achieving the highest standard of health needs to be considered a fundamental right for all. The Government of India (GoI) is also committed towards achieving the Sustainable Development Goals (SDGs) and acknowledges the need to increase the public expenditure towards healthcare through various policies related to healthcare. Currently, in India, we have a vast network of public health facilities, augmented by mushrooming of the private health care sector. The National Health Mission (NHM), a centralised health scheme from 2005 (earlier known as the National Rural Health Mission - NRHM) has been trying to bring about systematic improvements to the health care structure as well improve its outreach for improving Maternal and Child Health (MCH) indicators in the country. Some of its innovations include the Accredited Social Health Activist (ASHA) programme[3], which is the largest community health worker programme of its kind in the world. The use of conditional cash transfers to improve the number of institution deliveries and also the introduction of free delivery care, medicines, and diagnostics for mother and child at all public institutions have improved MCH indicators all over India in the past decade (NFHS 3, 4). However, these changes in indicators vary by state. States like Bihar, Uttar Pradesh, and Rajasthan are some of the underdeveloped states, which show poorer health indicators in comparison to other states like Karnataka, Maharashtra, and Tamil Nadu. Maharashtra is one of the most economically developed and rich states in the country with a Gross State Domestic Product (GSDP) of Rs 25 lakh crores but its child health and nutrition indicators lag behind that of Tamil Nadu and Kerala. The household expenditure (usually known as Out of Pocket Expenditure - OOPE) on health in Maharashtra is also much higher than that in many other states, raising questions on the state of public health care in the state. This report examines some of the issues associated with public health expenditure, and its flows and priorities in Maharashtra, in detail. This chapter presents a brief general profile of the state followed by the rationale for and the objectives of the study.

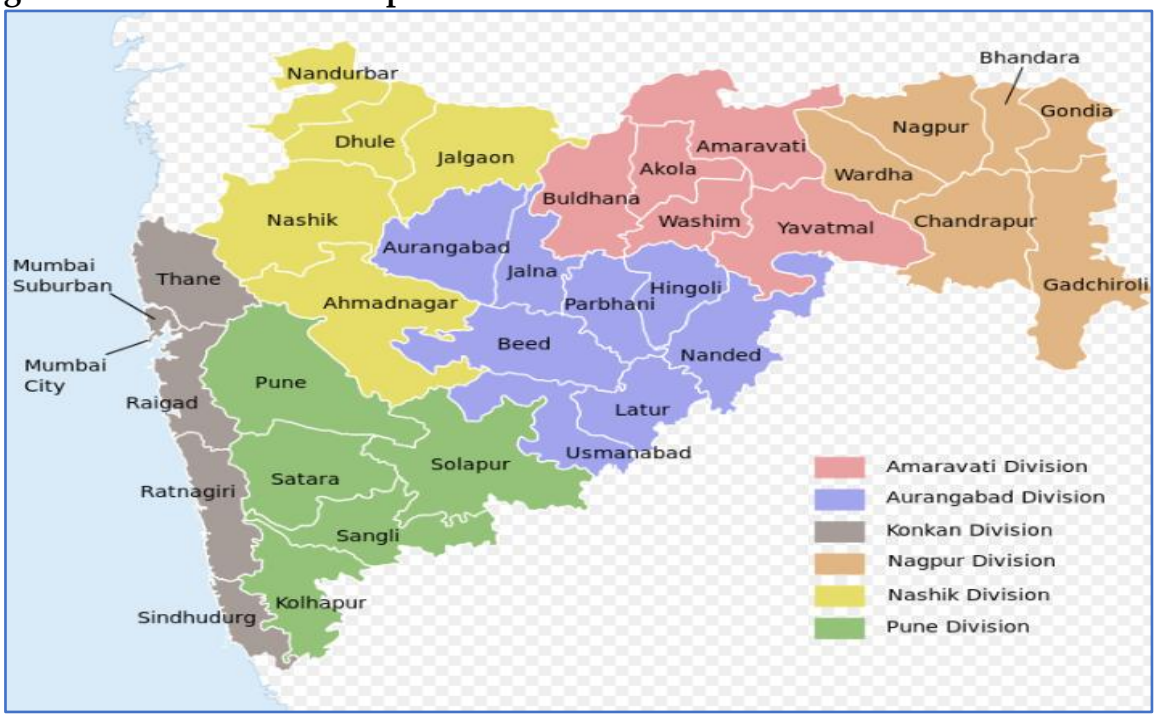
[3] Accredited Social Health Activist (ASHA) programme is a scheme that employs ASHA workers who are trained female community health activists who work as an interface between the community and the public health system.

1.1. State Profile in Brief: Maharashtra

Amongst India's states, Maharashtra is the second most populous and the third largest state in terms of area. Maharashtra is a state of contrasts; while it houses the financial capital of India and is considerably urbanised (about 45% population live in urban areas), the state has an adverse sex-ratio with only 929 female per 1000 male in the state, which is lower than the national average of 943 females per 1000 males. (Economic Survey of Maharashtra,2017-18, 2018). It has 36 districts and 6 revenue units. Four of these districts have been categorised as aspirational districts by NITI Aayog (Nandurbar, Washim, Osmanabad and Gadchiroli)(Niti Aayog, 2018). The literacy rate among men is 92.8%, while that of women is 80.3%. The life expectancy for an average man here is 65.4 years, while that of a woman is 69.5 years (ICMR, PHFI & IHME, 2017). High urbanisation, though a sign of 'development', also means high urban poor population and poses a challenge for ensuring access to public health care services as we would see later. In addition to urbanised population, another important feature of the state is that the 10% of its population is tribal, i.e., Scheduled Tribes. The health status of tribal population is worse than the rest, and hence, a challenge. The document on tribal health in India states that according to 2011 estimates, the Infant Mortality Rate (IMR) for tribal population is 74 per 1000 live births as against 62 per 1000 live births for India in that year. The data on maternal mortality estimates for tribal population is not available but early marriage, premature birth, low Body Mass Index (BMI) and high incidence of anaemia are common amongst tribal women (The Expert Committee on Tribal Health, 2017). Five of the nine districts classified as high priority districts by the Ministry of Health and Family Welfare (MOHFW) come under the tribal sub-plan (TSP) in the state. These are Gadchiroli, Nanded, Aurangabad, Nandurbar, Jalgaon and Dhule4.

[4] Thane, Raigarh, Nashik, Dhule, Nandurbar, Jalgaon, Ahmednagar, Pune, Amravati, Yavatmal, Nagpur, Gondiya, Chandrapur, Gadchiroli and Nanded are the 15 districts with tribal sub-plan component.

Figure 1. 1: District-wise Map of Maharashtra



In fiscal terms, the state is positioned much better than many other Indian states that are facing huge deficits and related challenges. There has been a very steady growth in the revenues of the state. The revenues for the year 2018-19 (Budgeted Expenditure, BE) stood at Rs 3.4 lakh crores which grew at a Compounded Annual Growth Rate (CAGR) of 15% from Rs 1.6 lakh crores in 2012-13. Though the state has revenue deficit, the fiscal deficit is below 2% and this provides a big fiscal space for enhancing the social sector expenditure, the health expenditure in particular.

1.2. Rationale

The country spends less than 2% of its Gross Domestic Product (GDP) on health. For the provision of Universal Health Coverage (UHC), the need of the hour is an increase in expenditure on health. Maharashtra, being the financial capital of India, possesses the fiscal capacity to increase expenditure on health care. In spite of its fiscal prowess, the state lags behind Tamil Nadu, and Kerala in health indicators[5]. Data on public health expenditure on different states shows that Maharashtra spends more on health than these two states (Central Bureau of Health Intelligence, 2018), but this does not translate in to higher per capita health expenditure. The high population in the state, which when compared to Tamil Nadu and Kerala, results in the stretching of the available resources. The state also has a high tribal and urban

[5] Please refer to Chapter 3 for a detailed analysis of health indicators and inter-state comparison.

poor population shares that require concentrated efforts by the state government to provide an equitable distribution of health. As stated earlier, the OOPE in the state on health care is high especially in the urban areas (Central Bureau of Health Intelligence, 2018). All this points out to the need for greater attention to the issue of UHC and also greater public expenditure towards health. However, just increasing allocations for health is seldom useful without proper channels to receive and utilize these allocations, and therefore an understanding of the existing policy and expenditure priorities vis-à-vis the problems is needed. The contrast in the state's financial capabilities and current levels of health related indicators in the state rationalises the need for a research study to understand the public expenditure on health and fund flows juxtaposed against the current healthcare problems in the state to understand the gaps and disconnects, and provide pointers towards the areas that need change.

1.3. Objectives and Specific Aims of the Study

The main objective of the study is to review and analyse public expenditure patterns in health in Maharashtra. An understanding of the health expenditure needs to be rooted in the financial architecture of the country, and it must consider a few recent developments that have influenced the public health system and its functioning. Two important points in this regard are: (i) introduction of the NHM scheme, and (ii) implementation of the 14th Finance Commission's (FC) recommendations.

National Health Mission (NHM) is the flagship scheme of the GoI to improve the overall health status of the country by providing universal access to equitable, affordable, and quality health care services that are accountable and responsive to people's needs6. The Mission was first launched in 2005 as NRHM with a focus only on the rural areas of the country. However, in 2013, it was relaunched as the NHM encompassing both the sub-missions, the National Rural Health Mission (NRHM) and the National Urban Health Mission (NUHM). National Health Mission being a Centrally Sponsored Scheme (CSS) is largely funded by the central government. Maharashtra, being a state with general category status, had a sharing pattern of 85:15 (GoI:State) till 2011-12, and it changed to 75:25 from 2012-13. However, after the recommendations of the 14th FC came into effect in April 2015, the share has been revised to 60:40 where 60% is assigned to the GoI and the state government has

[6] Extracted from https://mohfw.gov.in/sites/default/files/2201617.pdf

been assigned 40%. The routing of the funds from the central government has also changed from 2015. Before 2014-15, the funds were routed directly to the state-level implementing agencies and as such NHM funds were routed to the State Health Society (SHS) directly. However, post 2014-15, the funds have been routed through the state treasury to the SHS along with the state share. Any health expenditure analysis in any state in India needs to take NHM funding into account in a major way.

The FC in India is a statutory mechanism, which is constituted every five years, to determine the distribution of revenue between union, state, and local governments. It becomes important in view of the fact that revenue collection powers are majorly concentrated in the union government's hands. The 14th FC made a significant recommendation of enhancing the untied fund (UF) share of states from 32% to 42% in the union tax collections, and it also made provisions of compulsory transfers of UF to local governments, i.e., Gram Panchayats (GP). This resulted in states having a greater control over their resources and priorities while the union government reduced its allocation for CSS which are tied in nature with the argument that states with greater funds at their command can prioritise the sectors they need to. Gram Panchayats also had a greater scope to decide their priorities. The study objectives, outlined below, are linked to this development as well, especially to gauge what happened in the post-14th FC phase in Maharashtra.

a) The study seeks to answer the following specific questions with respect to Maharashtra:
b) Is the health expenditure in line with its health needs?
c) How do the changes introduced by the 14th FC translate to changes in policy and health expenditures?
d) What is the role/share of NHM in health expenditures?

How participatory and responsive is the development of the Gram Panchayat Development Plan (GPDP) at the GP level, particularly from the perspective of health?

While analysing the public expenditure on health, the report has also taken cognisance of household expenditure on healthcare using the National Sample Survey (NSS) Organisation data in order to get a more complete picture, and also understand its healthcare priorities. The report is organised in ten chapters. Chapter 2 presents the methodology in detail while chapter 3 analyses the issues related with health status and health service delivery of the state. Five distinct issues emerge as important in the state: maternal and child health, urban poor health, tribal health,

delivery of public health care services, and the spread of Non-Communicable Diseases (NCD). The following chapter presents the macro level analyses of the state budget and expenditure on health from where it moves to the issue of Reproductive and Child Health, Tribal Health and Urban Health in the fifth, sixth, and seventh chapters. Chapter 8 discusses the issue of public service delivery while Chapter 9 analyses the expenditure for communicable diseases (CD) and non-communicable diseases. Finally, Chapter 10 provides the summary of major findings and recommendations.

Chapter 2: Methodology and Challenges

In this chapter, we give a detailed description of the methodology used as well as the challenges we faced in conducting the public expenditure review. The methodology primarily includes discussion on the analysis of state budget, NHM budget, fieldwork undertaken and literature review.

2.1 Methodology

2.1.1. State Budget Analysis

In this Public Expenditure Review (PER) on health in Maharashtra, we focus on overall healthcare expenditure in the state, through different state government departments from the period 2012-13 to 2017-18. For this purpose, state budget documents from the period 2012-13 to 2017-18 were obtained from the Department of Finance, Government of Maharashtra (GoM).

Table 2. 1: Inclusions and Exclusions on Health Expenditure as Per National Health Accounts (NHA)

Healthcare Expenditure (Primarily investment that affects health care directly)	1. Out of pocket expenditure on outpatient and inpatient services, (medicines, doctor fees, bed charges, diagnostic, preventive & rehabilitative services, traditional systems of medicine (AYUSH), ambulance and allied services, health enhancing drugs/products (such as vitamins with/ without prescription) at public/private health facilities and pharmacies. 2. All government health expenditures • Budgets to health facilities • Procurement of drugs and consumables • Health programmes - disease control, family welfare & reproductive child health programme • National Nutrition Mission, immunisation, antenatal care, delivery, postnatal Care, abortion etc. 3.Health administration, health insurance, medical benefits to government employees across all departments 4. Household expenditure on healthcare
Capital Account (primarily investment on building healthcare infrastructure, both physical and human)	**1. Capital expenditure on buildings and construction excluding minor repairs** 2. Medical education, research and pre-service training

Exclusions (mainly supplementary health and nutrition related programmes)	**1. Mid-Day meal** **2. Expenditure on relatives/caretaker's Food - lodging and transportation** **3. Environmental health** **4. Supplementary nutrition food programmes** **5. Water supply and sanitation** **6. Compensation for wage loss, disability, maternity leaves, and failure of permanent family planning methods**

Source: Table is modified based on the NHA Boundary for India based on Statement of Health Accounts 2011.

In our study, we use the National Health Accounts (NHA) Guidelines, 2016 for defining what is included within healthcare expenditure. The list of inclusions and exclusions within health expenditure is given in Table 2.1. Capital expenditures on health are in a separate group within health expenditures that includes expenditure on building and constructions of medical facilities (excluding minor repairs), medical education, research, and pre-service training of health professionals. In the context of nutrition, it is important to note that all those programmes and schemes that provide supplementary nutrition (e.g. mid-day meals in schools) are not included in the estimation of health expenditure. Other aspects that influence health of a person but are not included in this estimate are environment health, water supply and sanitation, compensation of wage loss, disability, maternity leave, failure of permanent family planning methods, and expenditure on relatives'/caretakers' food, lodging and transportation (NHA Guidelines 2016). Estimation of health expenditure, as per NHA Guidelines mentioned above, is not restricted to the Health and Family Welfare Departments of any state or central government. It includes expenditure on all health-related activities by the government, spanning across all departments.

2.1.2. National Health Mission (NHM) Expenditure Analysis

The primary source of actual expenditure under the NHM is the audited Financial Management Review (FMR) documents submitted by the State Mission to the National Mission office. For our analysis, we obtained the audited FMR from the Department of Health and Family Welfare, GoM. The Government of India (GoI) also reports quarterly to Health Management Information System (HMIS) where it reports health-related indicators for each state along with financial details (allocations, releases, and actual expenditures). Another important source of this information is the Comptroller Accountant General (CAG) reports that give details

of the GoI's share, and the state share for budget allocations as well as actual expenditures. Apart from these reporting and monitoring systems by GoI and CAG, the state government is also required to make their annual Programme Implementation Plan (PIP) giving details of previous year's financials along with make proposals for the upcoming financial year.

Our study uses the FMR for the analysis of NHM expenditure. The FMR is one of the primary financial reports of NHM which provides a component-wise utilization against the budget allocated. Prepared from the book of accounts, the FMR records only actual expenditure. The SHS submits it to the MOHFW on a quarterly basis.

The format of the FMR includes the below four mentioned financing components:

National Rural Health Mission-Reproductive Child Health Flexible Pool (NRHM-RCH FP)

1) Communicable Diseases Flexible Pool (CD FP)
2) Non-communicable Diseases Flexible Pool (NCD FP)
3) National Urban Health Mission (NUHM)

The fifth component of NHM-Infrastructure Maintenance has its funds directly spent by the state government and not released to the SHS, and hence not included in FMR. It is not possible to separate the infrastructure maintenance from state budget allocation. Therefore, the NHM analysis does not include that component here. Also, the state share under TSP is also not included as the funds for same are routed to the Tribal Department.

As the FMR reports only budget allocations and expenditures, it is possible to calculate the utilization as ratio of 'actual expenditure' to 'budget allocated'. Within each of the above four financing components, especially in the NRHM-RCH FP, expenditures are for a single scheme/programme are spread across different sections. For example, in Janani Shishu Suraksha Karyakram (JSSK), we needed to add the section on procurement of drugs for JSSK from another section to JSSK allocations under maternal health section in RCH flexible pool in order to get a complete picture of JSSK allocations. Similar reallocations have been made across all four components in order to make a more meaningful analysis.

2.1.3. Field work

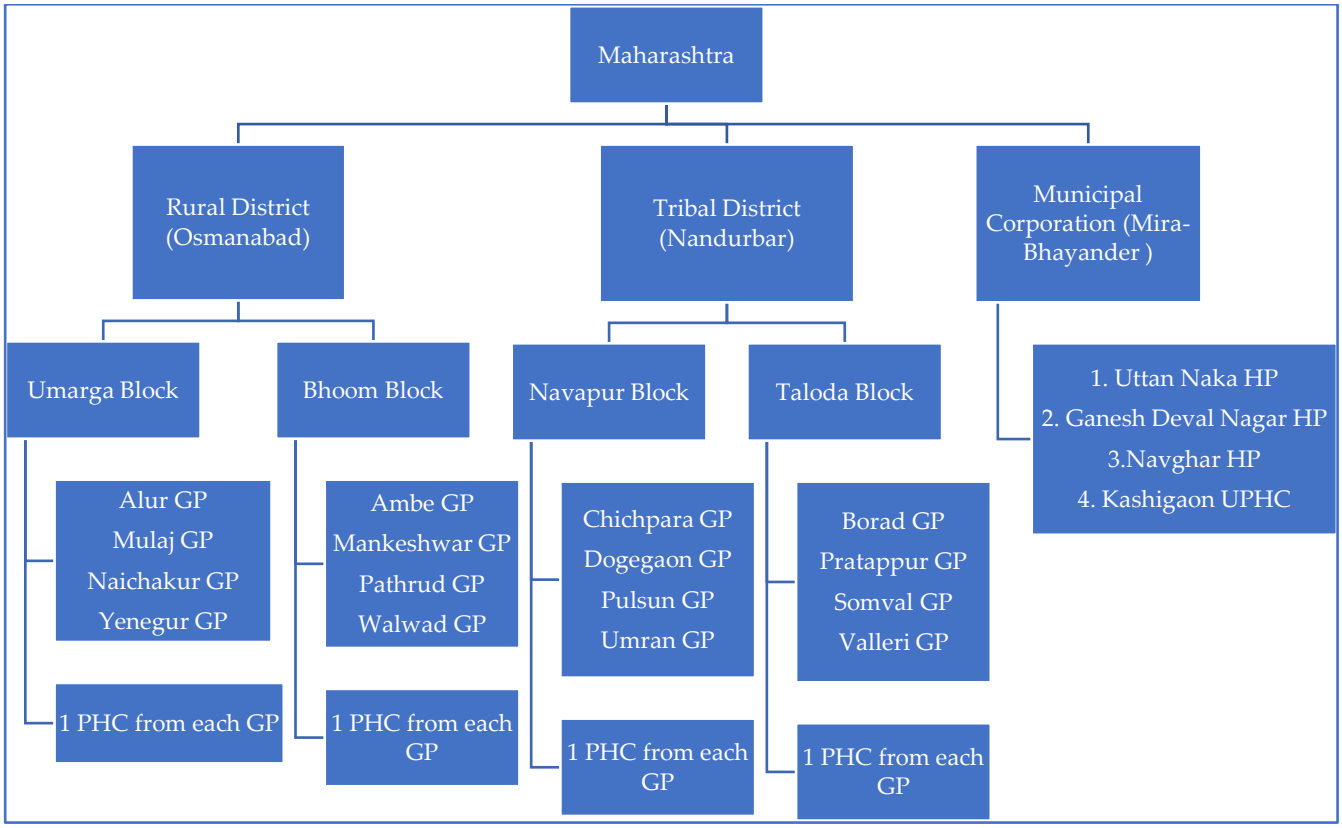
Utilizing primary data collected in three districts and supplementing this information with secondary data in the form of government documents/reports, we tried to understand fund flow mechanisms in the three different types of districts

and how decentralised planning for health sector is being undertaken at GP, Block and District level. The details of primary data collected are given below.

Fieldwork at village and GP level was undertaken to understand planning, execution and reporting of health expenditure, how tied and UF are being utilized at the village level and how GPs are prioritising healthcare expenditure in their GPDP. The main criterion for selection of districts was to ensure representation of at least one rural, one tribal, and one urban district. Using this rationale, purposive sampling method was utilized and three districts, namely Nandurbar (tribal), Osmanabad (rural), and Mira-Bhayandar (urban, Municipal Corporation) was selected in consultation with the principal secretary (Health), GoM and UNICEF officials. Within each district, two blocks were selected such that (i) neither of the blocks belonged to the district headquarters and (ii) one block was close to the district headquarter while the other one was away from the headquarter. These blocks were selected using purposive sampling, in consultation with the district health officer. In Osmanabad, Umarga and Bhoom blocks were selected, while in Nandurbar, it was Navapur and Taloda blocks. Within each block, four GPs were selected with the same criterion as given for the block selection. Two GPs had to be closer to the block headquarter while two GPs had to be away from headquarter and none of the GPs should belong to the block headquarter. This selection was also done purposively, in consultation with the block health officer. In Umarga block in Osmanabad, the following GPs were selected: Alur, Mulaj, Naichakur, and Yenegur GPs. In Bhoom, the following GPs were selected: Ambe, Mankeshwar, Pathrud and Walwad GPs. Similarly, in Nandurbar, the following GPs were selected in Navapur block: Chinchpara, Dogegaon, Pulsun, and Umran; and the following GPs were selected in Taloda block: Borad, Pratappur, Somval, and Valleri. For the Mira-Bhayandar Municipal Corporation (MBMC), the following health posts were chosen in consultation with the officials: Uttan Naka, Ganesh Deval Nagar, Navghar, and Kashigaon Urban Primary Health Centre (UPHC).

At district, block, and GP level, officials belonging to the Health Department and Zilla Parishad / GP and medical officials for the public health institutions were interviewed. Interviews/Focus group discussions with Primary Health Centre (PHC) officials, ASHA workers, GP members, and members of community-based health committees (Village Health Sanitation and Nutrition Committees, VHSNCs and Mahila Arogya Samitis, MAS) were also held to understand health prioritisation and planning. A total of 124 interviews were conducted and four Focus Group Discussions were conducted between Mid -March and Mid-April 2019 (Details are given in Table 2.1 of Annexure 1).

Figure 2. 1: Sample Description for Primary Data Collected



2.1.4. Literature Review

A detailed review of literature, including existing published materials along with government documents, was undertaken to understand the health status, health delivery systems, and health finance in the state. To understand the health status in the state and district level, National Family Health Surveys (NFHS) 3 and 4 reports for Maharashtra were reviewed. State PIPs were analysed from 2012-13 onwards to understand the role, progress, and reach of the NHM in the state. In order to understand the financial burden faced by the households with respect to health, our study undertook analysis of the 71st round of NSS on Social Consumption on health. As data for the 75th round report was unavailable at the time of the report, only select observations from the 75th round were added to the analysis. The NHM implementation guidelines were reviewed to understand the norms of public health delivery systems. Guidelines for various health schemes at the national and state levels were also reviewed.

2.2. Challenges

2.2.1. Challenges in the State Budget

Analysing the state budget for health expenditure is a complex activity. The details of state health expenditures are woefully inadequate. For example, the highest expenditure for tribal districts is through grant-in-aid transfers made by the state. This, however, does not give us any information of the use of these monies.

Secondly, computing the total expenditure incurred on urban health is a difficult task as state expenditure doesn't include complete expenditure by the municipal corporations. Not all of the municipal corporations' fund comes from the state treasury. Municipal corporations generate their own funds through tax revenues and non-tax revenues, which is not included in the state budget. This is further complicated as some scheme expenditures remain under NRHM, like JSY, JSSK or communicable diseases, and have not been classified separately under NUHM in the FMR, which again gives us an incomplete urban picture.

Thirdly, the total expenditure on NHM is difficult to be calculated from the state budget. Analysing the NHM funds flow through the state treasury should have been only a matter of selecting the right budget lines to arrive at the total figures for the NHM. However, in reality, it was far from this. The ambiguous details for each item in the state budget made it difficult to sort out the NHM heads. Additionally, the infrastructure maintenance component is not easily discernible within the state budget. There is no single document that reports the entire expenditure incurred under the NHM programme. But, since NHM accounts for less than 20% of the state's total health expenditure, FMR analysis is also limited to that alone.

2.2.2. Challenges in analysing National Health Mission (NHM) Financials

The GoI has a quarterly reporting system where the states have to report their health care indicators as well as financials related to NHM. The HMIS gives state-wise details of budgets allocated, funds released by GoI, and actual expenditures as reported by the states. The CAG audits the financials under the NHM, separating state and central shares with respect to budget allocations and actual expenditures. The state government reports the budget allocations and audited actual expenditures through the FMR. Theoretically, the financials reported by these three institutions through the HMIS, CAG Report and FMR should match for union and state share. However, a simple exercise wherein we mapped these financials across the study period indicated that the financials reported by the three institutions are not the same. Table 2.2 and Table 2.3 give the budgetary allocations and actual expenditures for NHM in Maharashtra as reported by the three institutions.

Table 2. 2: Budgetary Allocations (Centre, State and Total) for National Health Mission (NHM) in Maharashtra (in lakhs)

Year	HMIS (Centre Share only)	CAG Finance Accounts			Audited FMR (Centre and State Share)
		Centre	State	Total	
2014-15	1,53,658	77,780	32,931	1,10,710	1,99,947
2015-16	1,06,807	1,03,302	64,180	1,67,482	2,12,171
2016-17	1,12,228	1,35,956	1,05,470	2,41,426	2,30,792
2017-18	1,55,582*	1,75,254	1,21,490	2,96,744	2,58,617

* As of 31 December 2018,
Source: HMIS: https://nhm.gov.in/New_Updates_2018/Quarterly_MIS/Dec-2018/Non_High_Focus_States_Large.pdf
CAG: Finance Accounts for various years https://cag.gov.in/state-accounts/maharashtra
Audited FMR: Sourced through NHM Finance Office, Government of Maharashtra

Table 2. 3: Actual Expenditure (AE) (Centre, State and Total) for National Health Mission (NHM) in Maharashtra (in lakhs)

Year	HMIS (Centre Share only)	CAG Finance Accounts			Audited FMR (State and Centre Share)
		Centre	State	Total	
2014-15	1,83,440	77,780	34,603	1,12,383	1,19,515
2015-16	1,67,190	1,13,528	64,180	1,77,708	1,19,370
2016-17	1,57,828	1,35,850	1,05,470	2,41,320	1,26,751
2017-18	1,89,332*	1,73,691	1,22,008	2,95,699	1,48,515

*as of 31 December 2018,
Source: HMIS: https://nhm.gov.in/New_Updates_2018/Quarterly_MIS/Dec-2018/Non_High_Focus_States_Large.pdf
CAG: Finance Accounts for various years https://cag.gov.in/state-accounts/maharashtra
Audited FMR: Sourced through NHM Finance Office, Government of Maharashtra

When we look at both the tables, we see that the budgetary allocations and expenditures from these three sources do not match. In Table 2.3, there is a gap in the total from the CAG report and that from the FMR. This is probably due to the fact that the infrastructure maintenance component of NHM is routed through the state treasury and does not pass through SHS. Therefore, it does not get

incorporated into the FMR resulting in a higher CAG total. However, for our NHM analysis, we have only considered the FMR as it is very detailed and more amenable for analysis. However, the NHM analysis will not consider infrastructure maintenance as details about this expenditure are not available under state budget.

2.2.3. Challenges with respect to District Level Analysis (Primary Data)

Challenges pertaining to district level analysis are related to obtaining primary data documents and the conduct of the field work. The field work was scheduled for mid-March 2019, which coincided around the time of model code of conduct for the 2019 Indian general election was announced and also the financial year ending. This led to non-cooperation from GP officials especially in Osmanabad in procuring GPDP as well as related expenditures. Thus, GPDP plans were obtained only for seven GPs in Nandurbar. None of the GPs shared expenditures details under the plan with our field workers.

Chapter 3: Health Status and Health Care Delivery in Maharashtra

The following section focuses on the health and disease profile of the state as well as the state of public health delivery in the state.

3.1. Maharashtra's Health Profile

3.1.1. Comparing Maharashtra's health profile with its neighbouring states

Maharashtra is the second most populous state after Uttar Pradesh. More than 45% of its population live in urbanised areas. Mumbai, a mega city (an urban agglomeration of eight municipal corporations) is the most populated city in India with a population of around 1.25 crores[7]. Other states comparable to Maharashtra in terms of development and fiscal capacity include Tamil Nadu, Karnataka, and Kerala. Comparing only indicators that influence MCH we see that (Table 3.1) of the four states, Maharashtra has the lowest percentage of institutional deliveries, a low rate of immunisation, and a higher number of pregnant women who have anaemia (NFHS-4). In fact, the percentage of children fully immunised is lower even than the national average. Although the state has shown good improvement in MCH indicators, between 2005-06 (NFHS3) and 2015-16 (NFHS-4), there is still room for improvement. Perhaps, Maharashtra's large and varied population, i.e. large urban as well as second largest tribal population in the country, affects the distribution of resources in the state. Let us consider the general health profile of the state.

Table 3. 1: Maternal and Child Health (MCH) Indicators in Select States, 2015-16

	Maharashtra	Tamil Nadu	Kerala	Karnataka	India
Indicators					
1. Infant Mortality Rate	24	20	6	27	41
2. Under 5 Mortality Rate	29	27	7	31	50
3. Mothers who had at least 4 ANC (%)	72.2	81.1	90.1	70.1	51.2
4. Institutional Births	90.3	98.9	99.8	94	78.9
5. Children age 12-23 months fully immunised* (%)	56.2	69.7	82.1	62.6	62

[7] https://www.census2011.co.in/census/metropolitan/305-mumbai.html accessed on16 October 2019

6. Women aged 20-24 years married before the age of 18 years (%)	26.3	16.3	7.6	21.4	26.8
7. Total fertility rate (children per woman)	1.9	1.7	1.6	1.9	2.2
8. Pregnant women aged 15-49 years who are anaemic (<11.0 g/dl) (%)	49.3	44.4	22.6	45.4	50.4

*BCG, measles, and three doses each of polio and DPT
Source: Indicators 1-8: Compiled from various state National Family Health Survey-4 Fact sheets, 2015-16.

3.1.2. Maharashtra General Disease Profile

The state's disease trend shows that the infectious diseases are on the decline while NCDs led by heart diseases are on an increase. In fact, the top three causes of death (due to individual causes) in Maharashtra (Table 3.2), are ischaemic heart disease, chronic obstructive pulmonary disorder, and stroke (Indian Council for Medical Research(ICMR) et al., 2017). When we look at the leading causes of death by age group in 2016 in Maharashtra in the same study (Table 3.3), we can see neonatal disorders caused the maximum deaths (45.6%) in children under 14 years of age. In the 15-36 years age group, the highest cause of death was suicide and violence (16.2%); and in the older age group of 40 years and above, the most common cause of death was cardiovascular disease[8] (70%). These mortality rates speak volumes on the need for focus on three areas: (i) neonatal disorders, i.e., a focus on health of the new-born child, and therefore focus on its mother; (ii) an emphasis on cardiovascular diseases and other non-communicable diseases; and (iii) a focus on mental health.

[8] Ischemic heart disease, also called coronary heart disease (CHD) or coronary artery disease, is the term given to heart problems caused by narrowed heart (coronary) arteries that supply blood to the heart muscle. https://www.ncbi.nlm.nih.gov/books/NBK209964/ accessed on 17 July 2019.

Table 3. 2: Top three causes (of 10) of Deaths in Maharashtra by age group in 2016

Age Group	Highest Cause of Death	Per cent	Second Highest Cause of death	Per cent	Third highest Cause of Death	Per cent
0-14 years	Neonatal disorders	45.40%	Diarrhoea, lower respiratory tract infections, others	26.10%	Digestive diseases	26.10%
15-39 years	Suicide and Violence	16.20%	Cardiovascular diseases	13.90%	Transport Injuries	13.90%
40-69 years	Cardiovascular diseases	37.80%	Cancer	11.50%	Chronic Respiratory diseases	11.50%
>70 years	Cardiovascular diseases	39.70%	Chronic Respiratory diseases	15.40%	Diarrhoea, lower respiratory tract infections, others	15.40%

Source: India Health of the Nation's States-India State level Disease burden Initiative, 2017

In the older age group of 40 years and above, the most common cause of death was ischaemic heart disease (70%). This disease does not occur in isolation and is most often associated with the presence of obesity, hypertension, or diabetes. India is currently known as the diabetes capital of the world. These chronic diseases require a lifetime of medicines and diagnostic tests making them expensive to treat. A study based on the 71st NSS round found that the mean expenditure for hospitalisation due to heart diseases was Rs 40,947 that was second only to cancer, which cost Rs 57,232. The study furthers points out that of all the households who had any member hospitalised, 49% faced Catastrophic Health Expenditure (CHE)9, of which 58% were on hospitalisation due to NCDs (Kastor & Mohanty, 2018). This does not take into account the OOPE on medicines, which is the largest component of the total OOPE of households (Selvaraj et al., 2014). Therefore, prevention of NCDs is

[9] Catastrophic Health Expenditure (CHE) is when a household incurs expenditure on healthcare more than 10% of their total household income.

the most cost-effective way to improve the health of the population as well as to prevent high health expenditures. For NCDs, National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) has been implemented to focus on the prevention of these diseases and provide early diagnosis of these silent killers. However, this programme is in a very nascent stage in Maharashtra, currently, with a focus on early detection and diagnosis of these diseases.

Looking at the death rates among those aged 15-39 years, we see that suicides is the top cause death in women and the second most common cause of death in men (India State-Level Disease Burden Initiative Suicide Collaborators et al., 2018). A study of 3,000 people in Pune aged 18 years and above showed the prevalence of mental disorders among 5.03%; depression being the most prevalent followed by substance abuse disorder and panic disorder. The prevalence of any of the disorders was highest amongst the employed followed by housewives. The study also pointed out the low use of prescriptions for their illness, which they says points to lack of acknowledgement of disease or a lack of appropriate care (Deswal & Pawar, 2012). The National Mental Health Programme (NMHP) is operational in the state since 1982 and 22 District Hospitals (DH) in the state have been allotted a ten-bed ward for mental health care services and total 20 post have been sanctioned under psychiatry department in each of these hospitals10.

All infectious disease programmes under the NHM are operational in Maharashtra. An area of concern is infections due to HIV/AIDS and TB that cause up to 10% of deaths in those aged 15-36 years and 5% deaths in those aged 37-69 years (ICMR, PHFI& IHME, 2017). Currently, 33 districts and 23 municipal corporations are under Revised National Tuberculosis Control Programme (RNTCP) implementation and there are 1,24,900 notified TB cases in 2016. During 2016, the suspected number of TB patients per lakh population was 203 and cure rate was 82%. Efforts are on to improve notification of TB through private facilities. According to the Maharashtra State AIDS Control Society11, the prevalence of HIV/AIDS has been decreasing in the state in all risk groups as well as general population. Under the National Leprosy Eradication Programme (NLEP), the state achieved leprosy elimination by end of

[10] https://arogya.maharashtra.gov.in/Site/Form/DiseaseContent.aspx?CategoryDetailsID=zmNlJf19cVA= accessed on 31 July 2019.

[11] http://mahasacs.org/images/PDFs/website_data1.pdf

September 2005 i.e., it reduced the prevalence rate of the state to less than 1 per 10,000 population. Additionally, malaria, dengue, chikungunya, Japanese encephalitis, filaria, and plague are included under National Vector Borne Diseases Control Programme (NVBDCP) in the state.

From the above discussions, we can see that the areas of concern in Maharashtra in terms of disease profile are neonatal mortality, the largest cause of death in children under 14 years, and cardiovascular diseases, the largest cause of death in the adult population. We will further explore the health status in specific populations within the state, namely maternal and child, urban, and tribal populations.

3.2 Health Profile: Key issues in Maharashtra

3.2.1. Maternal and Child Health

As seen above, neonatal disorders were the cause for 45% of the deaths in children under 14 years of age; it means these occurred in the first 28 days of a baby's life. Studies reveal that the highest cause of neonatal deaths in India was low birth-weight and premature birth, followed by neonatal infections, birth asphyxia, and birth trauma (Fadel et al., 2017). Deaths due to birth trauma and sepsis can be prevented with adequate antenatal care and conduction of deliveries in health facilities. Hence, availability and access to maternal health services form an important role in prevention of neonatal deaths. As previously seen, Maharashtra's MCH indicators are better than the Indian average; however, it trails behind Kerala and Tamil Nadu. Also, MCH indicators between districts show that there is a lot of regional variance within Maharashtra, highlighting the fact that although the state has shown good improvement in MCH indicators, this has not translated equally between districts (Table 3.3). For e.g., although the number of deliveries in health facilities in the state has gone up from 64.6% in 2005-06 to 90.3% in 2015-16 (NFHS-3,4) (Table 3.3), this improvement in use of health facilities has not translated evenly across all districts; that is, it varies from 55% in Nandurbar to 99.3% in Sindhudurg.

Table 3. 3: Maternal and Child Health (MCH) Indicators within Maharashtra (2005-06 and 2015-16)

	Maharashtra		Bottom 3 Districts with poorest indicator value (2015-16)			District with best indicator value (2015-16)
	(2015-16)	(2005-06)				
Percentage of mothers with at least 4 ANC	72.2	59.8	Nandurbar 52.5%	Nashik 58.6	Dhule 62.5	Pune 85%
Percentage of institutional births	90.3	64.6	Nandurbar 55.5%	Dhule - 72.6%	Buldana 82.6%	Sindhudurg 99.3%
Percentage of children aged 12-23 months who are fully Immunised	56.2	58.8	Nandurbar 32%	Jalgaon 35.4%	Dhule 40%	Gadchiroli 82% Provincial
Percentage of non-pregnant women with anaemia	47.9	48.0	Nandurbar 59.9%	Gondiya 54.9%	Nashik 54.6%	Beed 35.3%
Percentage of children 6-59 month with anaemia	53.8	63.4	Mumbai Suburban 70%	Yavatmal 68.9%	Dhule 67%	Osmanabad 36.7%
Percentage of children under 5 who are stunted	34.4	46.3	Nandurbar 47.6%	Yavatmal 47.4%	Parbhani- 46.4%	Mumbai Suburban 21.3%
Percentage of children under 5 who are wasted	25.6	16.5	Gadchiroli 45.8%	Nandurbar 39.8%	Washim 32.5%	Bhandara 16.2%

Source: NFHS 3 (2005-06) and NFHS 4 (2015-16), Maharashtra State Report.

3.2. Maharashtra Health Profile by Specific Population

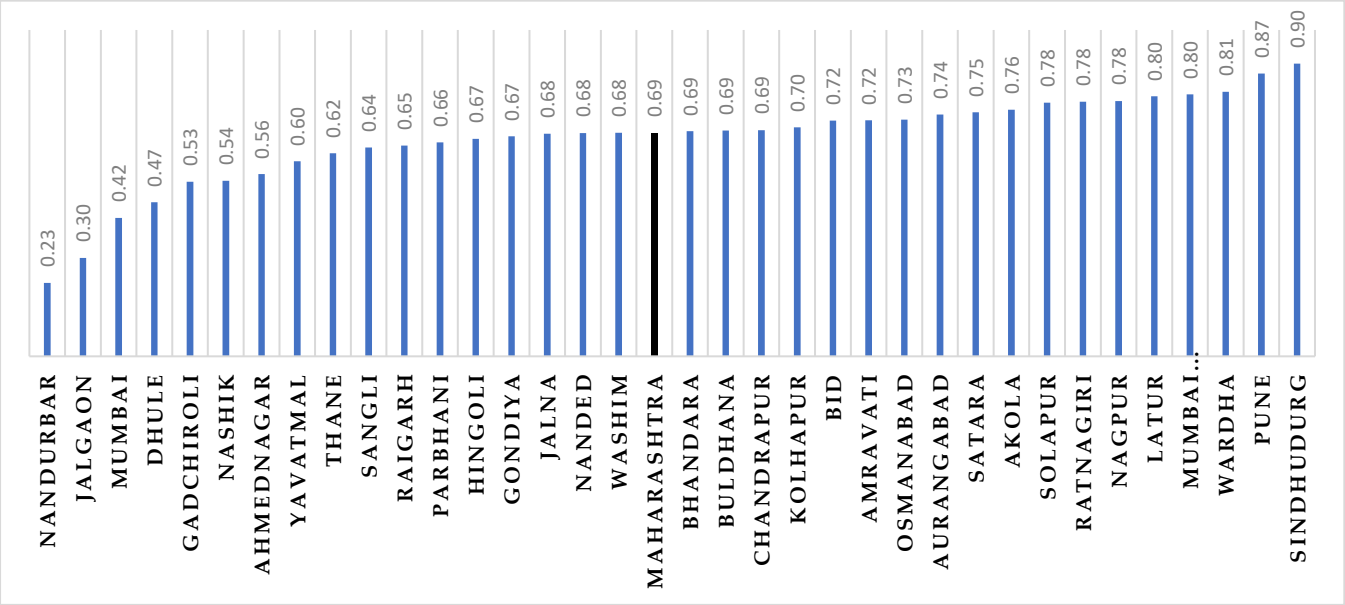
3.2.1 Maternal and Child Health Index (MCHI)

The state has 35 districts; of these, Mumbai district is completely urbanised. The lack of data on general diseases makes it difficult to compare health indicators between districts. NFHS-4 and HMIS (2014-15) give us district level indicators mainly for MCH indicators. In order to facilitate comparison between districts, the MCH indicators have been used to construct a Maternal and Child Health Index (MCHI). Mothers who had at least four antenatal care visits (%), institutional births (%),

children aged 12-23 months who are fully immunised (BCG, measles, and three doses each of polio and DPT) (%), children under 5 years who are stunted (height-for-age) (%), Children under 5 years who are wasted (weight-for-height) (%), non-pregnant women age 15-49 years who are anaemic (<12.0 g/dl) (%), IMR, under 5 mortality rate, and Maternal Mortality Ratio (MMR) were the indicators used to construct the MCHI. This was used to rank the districts to allow comparison (Figure 3.1).

The index shows Nandurbar having the lowest rank or poorest health indicators, followed by Jalgaon and Mumbai. In the bottom six districts, except Mumbai, five districts have a large tribal presence. Mumbai, on the other hand, is a metropolitan city with no rural presence. The city has a large number of health facilities and health professionals with a high concentration of private facilities. Despite this, the index shows that the city has poor health indicators, suggesting that a large number of mothers and children are not availing health care in the city.

Figure 3.1: Maternal and Child Health Index (MCHI) by District for Maharashtra (2015-16)



Source: Maternal and child health index calculated based on indicators obtained from NFHS-4 (2015-16) and HMIS (2015).

3.2.2. Other Child Health Indicators

Looking at other child health indicators, it is seen that the percentage of children aged 12-23 months who are fully immunised came down by two percentage points from 58% in 2005-06(NFHS-3) to 56% in 2015-16 (NFHS-4) (Table 3.3). Although the number of children who are stunted has gone down over the same time period, the number of children not attaining adequate weight for their height (wasted) has

actually increased in the state from 16.5% to 25.6%. There is a need to explore the reasons behind these unfavourable changes in nutrition and health indicators for children in Maharashtra. One of the main programmes for child nutrition is the supplementary nutrition programme. However, this programme is a social welfare scheme and hence not included within health expenditure[12]. Therefore, nutrition related health expenditures for children focus mainly on providing care for severely malnourished children and on micronutrient supplementation like iron, folic acid, vitamin A and deworming.

Focus on school-going children is mainly through the Rashtriya Bal Swasthya Karyakram (RBSK), which conducts health check-ups of all children in anganwadis, government- and government-aided schools and, if needed, refers children to appropriate institutions for treatment. The adolescents (10-18 years) are covered under the Rashtriya Kishor Swasthya Karyakram (RKSK) or Sabla, which focus on counselling adolescents and providing iron/folic acid tablets to adolescents in school and to out of schoolgirls through anganwadis. A single programme that deals with all adolescent interventions is RKSK, which is currently implemented in 11 districts of the state. The 11th common review mission visited Adolescent Reproductive Sexual Health (ARSH)clinics in Wardha district and found the need for IEC (information, education and communication)booklets in regional languages and well as the need for privacy in these clinics (NHSRC, 2017). Table 3.4 gives a list of various MCH schemes in the state.

Table 3. 4: Maternal and Child Health (MCH) specific Schemes in Maharashtra

	Scheme	**Information/Benefits**
1.	Janani Suraksha Yojana	Cash incentives to BPL/ST/SC mothers for institutional delivery
2.	Janani Shishu Suraksha Karyakram	Free Referral Transport, Diet, Diagnostics, Drugs, consumables in public facilities
3.	Pradhan Mantri Surakshit Matrutva Abhiyan	Expert care for high-risk mothers in the ninth month of pregnancy
4.	Pradhan Mantri Matru Vandana Yojana	Cash incentive of Rs 5000 for the first pregnancy

[12] According to the definition in National Health Accounts 2011, supplementary nutrition programme is considered a social welfare scheme and not included within health expenditures.

	Scheme	Information/Benefits
5.	Child health programmes for new-borns:	Home based New-born Care, New-born Care Corners, New-born Stabilization Units, 36 Special new-born Care Units and Nutrition Rehabilitation Centres, Kangaroo Mother Care in the SNCUs and NBSUs of the state.
6.	Routine Immunisation programme	Japanese encephalitis in eight districts, and measles second dose introduced in 2011. Phase 4 of Mission Indradhanush carried out in 9 districts and 17 municipal corporations in 2017.
7.	Programme for diarrhoea and pneumonia control (IMNCI)	Management of diarrhoea with provision of ORS and zinc and early identification of pneumonia
8.	Infant & Young Child Feeding (IYCF), "MAA" – Mothers Absolute Affection	Promotion of exclusive breast feeding and Kangaroo Mother care
9.	National Iron Plus Initiative (NIPI)	Provision of Iron and folic acid supplements and deworming in women of all ages.
10.	Vitamin A and De-worming Drive	Prevention of Vitamin A deficiencies
11.	Nutrition Rehabilitation Centre (NRC), child treatment centres, village child development centres (VCDCs)	For rehabilitation of severely malnourished children
12.	Rashtriya Bal Suraksha Karyakram (RBSK)	RBSK has been started from 01 April 2013 in 33 districts of Maharashtra. It aims at early detection and management of the '4Ds' (Defects at birth, Diseases in children, Deficiency conditions, and Developmental delays including disabilities) prevalent in children.
13.	Rashtriya Kishore Swasthya Karyakram (RKSK)	RKSK is currently operational in 9 districts of the state. There are 413 Adolescent Friendly Health Clinics in the state.
14.	Maternal and Child Tracking System (MCTS)	Mother and child registered in urban and rural government institutions for delivery registered in system, in since January 2011. The mother and child can be tracked anywhere in the country and information can be updated. Information on beneficiary schemes is given to them via telephonic calls.

	Scheme	Information/Benefits
15.	Implementation of the Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act	This act was passed in 1994 to prevent female foeticide to improve the sex ratio in the state.
16.	Family planning programme	To reduce the total fertility rate in the state.
Tribal specific maternal and child health schemes		
1.	Maher Ghar	One room (Maher Ghar) is constructed in PHCs premises. The maher room has amenities like one sanitary block (Toilet and bathroom), one kitchen ota with smokeless chulha and one solar water heater system. A pregnant woman is admitted in maher room 4-5 days before delivery. Currently, this is available in 57 PHCs of 9 districts
2.	Matrutva Anudan Yojana	A pregnant woman is paid Rs 400 in cash for visiting health centre for antenatal check-up along with medicines worth Rs 400 to ensure better health.
3.	Bharari Pathak Yojana	172 Bharari Pathaks have been constituted with one medical officer and two para-medical staff who are appointed on deputation. 172 Bharari Pathaks conduct medical check-up and provide medicines.
4.	Dai Meetings	Regular re-orientation regarding safe motherhood & neonatal care of trained and untrained Dais is being carried out by organising quarterly meetings of Dais at sub centre level.
5.	Pre-Monsoon Activities	This is planned to conduct health check-up, immunisation, and nutritional assessment of all tribal population in said area. In the months of May and June, various Bharari Pathaks are deputed in hilly areas to facilitate uninterrupted treatment, vaccination, and referral services.
6.	Provision of food and loss of wages for SAM /MAM children and their relatives	Provision of food and loss of wages to relatives accompanying SAM/MAM children taking treatment at PHC/RH. Relatives accompanying SAM/MAM children.
7.	Sickle Cell Disease Control Programme	Available in 21 districts. This focuses on early screening, diagnosis, counselling, and treatment.
8.	Hardship allowance	Staff of 405 health facilities in 10 tribal and extremist areas are entitled to hardship allowance.

A number of schemes are operational in the state for mothers and their children; we will look into the state's allocations to understand what is the state's contribution towards betterment of these indicators.

3.2.3. Tribal health

As already seen, the Nashik division (especially Nandurbar, Dhule and Nashik districts) performs poorly across most MCH indicators. These districts have high tribal concentrations. Other districts showing poor indicators include Yavatmal, Gondiya, Jalgaon, and Gadchiroli—these also have tribal presence. This indicates a need to focus on areas with tribal areas. According to NFHS-4, 74% of the tribal women interviewed in Maharashtra delivered at a health facility in 2015-16 as opposed to only 24.2% in 2005-06. Although this improvement in numbers is significant, this is still much lower than the proportion of women from SC, OBC and other categories (Table 3.5). To tackle this problem, the state has various schemes (Table 3.4) aimed at the tribal population. The main aim of these schemes is to reduce the MMR and IMR in tribal population in hard to reach areas of 16 districts in Maharashtra. These schemes provide health care in these areas by use of mobile medical units to improve outreach and a hardship allowance is given to staff in these areas . Rest houses (Maher Ghar) are provided for pregnant women close to their delivery date near PHCs to provide easy access during delivery.

A common disease affecting tribal population is sickle cell disorder. This is a genetic disorder affecting the structure of haemoglobin in red blood corpuscles, which is prominent in the state, especially among the ST, SC, and OBC population. A study in 2002 estimated that 0.125 million sufferers of sickle cell disease live in Maharashtra (Kate & Lingojwar, 2002). The Sickle Cell Disease Control Programme was started in 2008 in a phased manner and extended to 21 districts of the state by 2016-17. In the last ten years, as of January 2018, 17,140 sufferers of the disease have been diagnosed and more than two lakh carriers have been identified.

TABLE 3. 5: PERCENTAGE OF WOMEN GIVING BIRTH IN HEALTH FACILITY BY SOCIAL CATEGORY IN 2005-06 AND 2015-16

Caste/Group	NFHS4 (2015-16)	NFHS3 (2005-06)
Scheduled Caste	93.1	64.1
Scheduled Tribe	74.3	24.4
Other Backward Class	93.7	68.9
Others	92.7	73.4

Source: NFHS 3 (2005-06) and NFHS-4(2015-16)

The document on tribal health in India also states that alcohol and substance addictions are particularly common in this population. This was also seen in the primary data collected during field visits to Nandurbar (in March 2019). The data pointed out to alcohol addiction, substance abuse, TB, and skin diseases as common health problems of tribal population in the district. It also emerged that superstitious beliefs also prevent them from seeking health care. Hence, along with improving access, the need for health services to cater specifically to diseases affecting this population and raising heath care awareness is also important.

3.2.4. Urban Poor

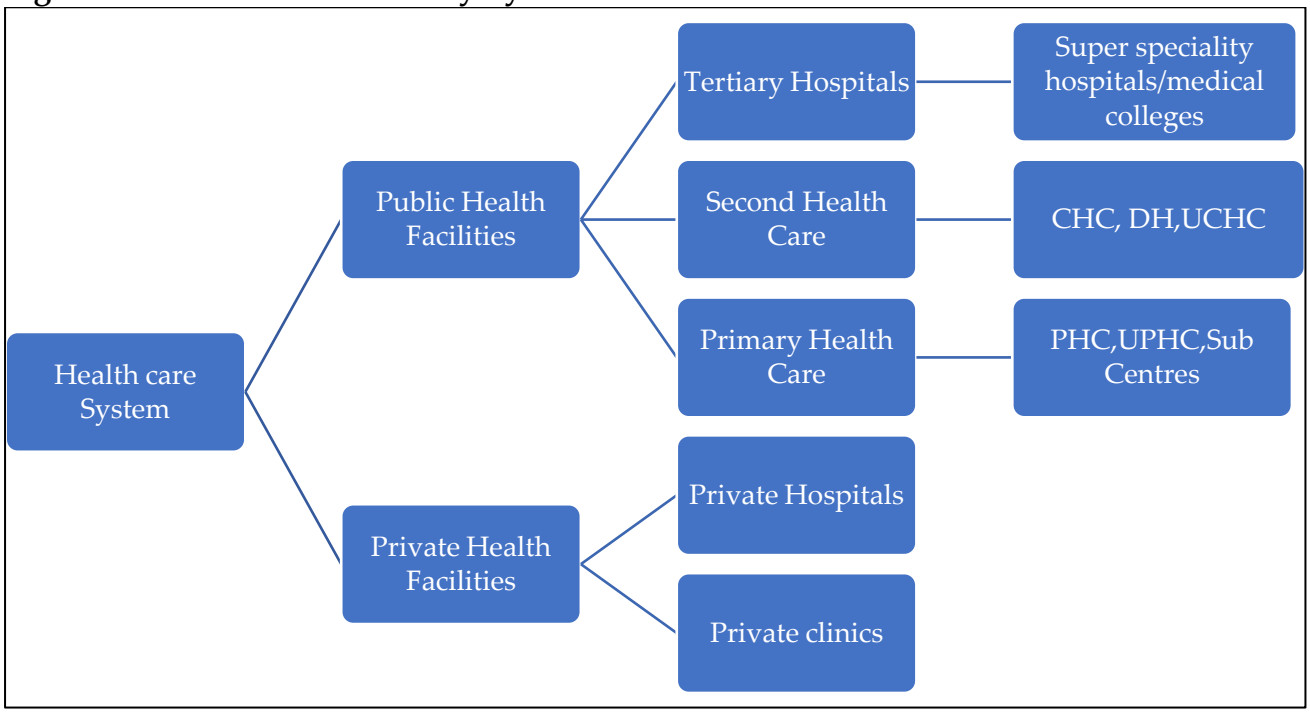
The total urban population is 45.2% of the state's population. Around 23.3% of this population live in Maharashtra's slums, the largest in the country (*Economic Survey of Maharashtra, 2017-18*, 2018). NFHS-4 urban indicators are available for a few districts with high urban population. Although most indicators are better than that for the corresponding rural areas in the same district, some like women with at least four antenatal care check-ups or with full antenatal care check-ups[13] are poorer than those in the corresponding rural areas. It should be also noted that the percentage of women who are obese or overweight is much higher in urban areas than in the corresponding rural areas.

Studies indicate that the health status of people living in slums is far worse than the rest of the urban population, especially in a non-recognised slum, which does not have basic facilities like clean drinking water and sanitary living conditions. This is seen in the poor child health indicators in these areas as compared to other urban areas (Agarwal, 2011; Subbaraman et al., 2012). The MCH Index also shows that Mumbai city, a completely urban district, has really poor indicators (Figure3.1). In Mumbai and Mumbai suburban districts, which are primarily urban, the number of children who received all basic vaccinations is below 50% (NFHS-4 state report). The health facilities, as evidenced from Table 3.6, are not distributed according to the population distribution. This is also evidenced by fact that an urban PHC is expected to serve a population of 50,000 as compared to a rural PHC which serves 30,000, stretching thin the delivery of health services.

[13] Full antenatal care is at least four antenatal visits, at least one tetanus toxoid (TT) injection and iron folic acid tablets or syrup taken for 100 or more days.

Due to the absence or poor quality of public health facilities, the urban poor turn to private practitioners and facilities, pushing them towards high expenditure on health care further impoverishing them (Naydenova et al., 2017). Seeking care in private facilities especially in urban areas is an expensive proposition. The average expenditure on hospitalisation and non-medical expenditure related to hospitalisation was Rs 22,486 in rural areas, while it was Rs 31,028 in urban areas in 2014-15. This poses a significant strain on the finances of the lower income group who, as a result, are pushed to further poverty. A study on trends in health expenditure from 1994-2014, showed that 11.9% people in India were pushed to poverty due to OOPE on medicines alone (Selvaraj et al., 2018). We elaborate this issue of household expenditures later in the section of health expenditures. The NUHM was established in 2013 to address the health care issues of the growing urban poor population. Currently the state PIP has got approvals for development/construction of 611 UPHCs and 45 urban Community Health Centres (CHCs) in the state[14].

Figure 3. 1: Health Care Delivery System



[14] https://www.nrhm.maharashtra.gov.in/NUHM/List%20of%20UPHC%20and%20%20UCHC.pdf last accessed 3 January 2019; it shows the total number of health facilities approved for renovation and new construction in 2014-15.

Note: Primary Health Centre (PHC), Community Health Centre (CHC), District Hospital (DH), Urban Primary Health Centre (UPHC), and Urban Community Health Centre (UCHC)

3.3. Health care services in Maharashtra

3.3.1. Availability of Health Care Facilities

Delivery of health care in the state is done by a large network of public health facilities in Maharashtra, which is similar across states. Its foundation was laid down by the Bhore committee in 1946, which emphasised the need for primary care facilities that included curative as well as preventive services. India's public healthcare system is a three-tier system consisting of primary, secondary, and tertiary health care facilities (Figure3.2). Primary care is the first level of care for a patient to seek medical care. It consists of Sub-Centres (SCs) and PHCs in rural areas, and UPHCs in cities.

Primary Health Centres essentially provide general outpatient services as well as reproductive and child health facilities and preventive services. They also provide basic laboratory facilities and services under the national health programmes like Janani Suraksha Yojana (JSY), RNTCP, etc. Community Health Centres, taluk hospitals and sub-district hospitals at block level serve as secondary level care hospitals. They are referral centres for PHCs and serve as gatekeepers for higher tier hospitals like DHs and super speciality hospitals. They provide inpatient as well as outpatient services for general medicine, surgery, obstetrics and gynaecology, emergency care as well as critical care (in DH), ophthalmology, paediatric and dental facilities. Currently, DHs are also secondary level care hospitals which include facilities for emergency (trauma care) and intensive care units (ICU) at the district level. These DHs have been envisaged to be further developed into tertiary care centres which are super speciality hospitals according to the new Indian Public Health standards document, 2012 (*Indian Public Health Standards (IPHS) Guidelines for District Hospitals*, 2012). Tertiary care centres that include facilities for cardiac care and surgery, nephrology and urology services as well as cancer care are available only in few government medical colleges in the state. Currently, most tertiary care centres are privately run and restricted to the urban areas in the state. Under the NUHM, UPHCs and CHCs are in the process of being renovated or constructed according to new norms established under the Indian Public Health Standards (IPHS), to cater to the urban poor population.

Table 3. 6: Human Resources at Health Facilities in Various States

	State	Functioning PHCs	With 2 doctors PHC	With 1 doctor PHC	No lab technicians PHC	Without Pharmacists in PHC	No surgeons in CHCs	No OBGYN in CHCs
1	Maharashtra	1811	1382	429	564	586	270/360*	143/360*
2	Kerala	827	47	666	709	0	0	202/222*
3	Karnataka	2353	225	1833	536	118	78/206*	33/206*
4	Tamil Nadu	1372	1163	126	701	191	-	-

Source: Rural Health Statistics, 2015. * Number in denominator represents total number of CHCs.

According to the rural health statistics, 2014-15, there was 22% shortfall in the number of SCs, 18% shortfall in number of PHCs, and 35% shortfall in the number of CHCs in Maharashtra (*Rural Health Statistics 2014-15*, 2015)(Table 3.8). However, the mere presence of health facilities is insufficient as the human resources required are of immense importance. Table 3.6 gives a list of vacancies in PHCs and CHCs of the state as of March 2015, pointing to a deficiency of personnel in rural areas thus affecting provision of health care.

Table 3. 7: Percentage break-up of ailments treated on medical advice by healthcare service provider, separately for Maharashtra and India, 2017-18

	Government Hospital	Charitable trust/NGO	Private doctor	Private hospital	Informal health care provider	All
Maharashtra Rural	29.1	1.9	27.7	41.1	0.2	100
Maharashtra Urban	22.1	1.9	22.7	53	0.3	100
India Rural	32.5	0.9	20.8	41.4	4.3	100
India Urban	26.2	1.3	27.3	44.3	0.9	100

Source: NSS KI (75/25.0): Key Indicators of Social Consumption in India: Health

Although the network of public facilities is wide, the usage is low. Lack of public facilities within an accessible distance and a general failure in upkeep of facilities

along with shortage of staff could have led to the preference of private medical care amongst both urban and rural population. The NSS in 2017-18 showed that 68% of ailments in rural areas and more than 75% ailments in urban areas were treated at private facilities (Table 3.7). However, urban poor living in the unregistered slums, footpaths, etc. cannot afford private care. In such cases, they can only turn to public facilities which, when unavailable, prevent them from availing their basic right to health.

Table 3. 8: Health Infrastructure Status in Maharashtra

Type of Infrastructure	Norm as Per Indian Public Health Standards (IPHS)	Required number of Facilities*	Number in Maharashtra*	% Shortfall*
Sub-centre (SC)	1 sub-centre for every 5,000 population in non-tribal areas and 1 sub-centre for every 3,000 population in tribal/hilly areas.	13512	10,580	22
Primary Health Centre (PHC)	1 PHC per 30,000 population in general areas and 1 PHC per 20,000 population in difficult/tribal and hilly areas.	2201	1,811	18
Community Health Centre (CHC) or Rural Hospital (RH)	Block level public health unit and health administrative unit; gatekeeper for referrals to higher level of facilities. It is mandatory for every CHC to have functional Rogi Kalyan Samitis (RKS)	550	360	35
Sub District Hospitals (SDH)**	Sub-district (Sub-divisional) hospitals are below the district and above the block level (CHC) hospitals and act as First Referral Units (FRU)		86	

Type of Infrastructure	Norm as Per Indian Public Health Standards (IPHS)	Required number of Facilities*	Number in Maharashtra*	% Shortfall*
	for the Tehsil/Taluk/block. It serves 5-6 lakhs population			
District Hospitals (DH)**	A district level hospital with 70 to 500 beds depending on the population of the district. It can be converted to a super-speciality/tertiary care if need be.		23	
Urban Public Health Centre(UPHC)***	1 UPHC for every 50,000 slum population		611	
Urban Community Health Centre (UCHC)***	1 UCHC for every 5-6 UPHCs		45	

*Source for SC,PHC and CHC from Rural Health Statistics as on 31 March 2015, https://wcd.nic.in/sites/default/files/RHS_1.pdf accessed on 15 October 2019
**Source: https://arogya.maharashtra.gov.in/1112/Health-Services-at-a-glance last accessed on 5 December 2018
***Source: https://www.nrhm.maharashtra.gov.in/NUHM/List%20of%20UPHC%20and%20%20UCHC.pdf last accessed on 3 January 2019; it shows the total number of health facilities approved for renovation and new construction in 2014-15.

Similarly, the coverage of tribal population in the remotest districts of the state also needs attention. It is difficult to find health care providers in remote areas, necessitating people to go without treatment or delaying seeking health care till the very end thus leading to poor health indicators.

3.3.2. Access to health care

In order to understand the financial burden faced by the households with respect to health, our study undertook analysis of the 71st round of NSS on social consumption on health. Select observations from the 75th NSS health round report have also been added where applicable. Since we have access to raw data from the 71st round, we

analysed OOPE using that data only while we took note of the 75th round for other critical indicators.

3.3.2.1. Household Health Care Expenditure

National Sample Survey data (2017-18) reveals that Maharashtra is amongst the states with a high household expenditure on health (Table 3.9). In rural Maharashtra, the average total medical expenditure per hospitalisation case in a public hospital is Rs 5,606, much higher than the all-India average of Rs 4290. Meanwhile, the average total medical expenditure per hospitalisation case in a rural private hospital is Rs 23,821, much lesser than that of the other selected states. Similarly, in urban Maharashtra, the average total medical expenditure per hospitalisation case in a public hospital is Rs 7,189, higher than the all-India average of Rs 4,837 and that of the other states. Meanwhile, the average total medical expenditure per hospitalisation case in an urban private hospital is Rs 42,540, which is the highest of all the selected states. In short, Maharashtra's urban health expenditures are amongst the highest in the country both in private and public health sectors.

Table 3. 9: Average Medical Expenditure Incurred for Treatment During Stay at Hospital Per Case of Hospitalisation (2017-18) By Select States

State	Average medical expenses (Rs) during hospital stay per case of hospitalisation in								
	Public Hospitals			Private hospitals			All (incl. NGO, trust-run)		
	R	U	R+U	R	U	R+U	R	U	R+U
Rajasthan	7332	6707	7174	25788	35228	28226	16268	20824	17435
Maharashtra	5606	7189	6177	23821	42540	32566	13383	36612	27096
Odisha	5098	6698	5283	29974	33935	30947	11159	18748	12295
Kerala	4395	4589	4469	25949	32746	24775	17054	22123	19190
Tamil Nadu	520	433	485	28412	41566	35581	12362	23260	17570
India	4290	4837	4452	27347	38822	31845	16676	26475	20135

Source: NSS 75th round, 2017-18. *Excluding hospitalisation for childbirth.

Breaking down hospitalisation cost reveals that medicines still constitute the highest proportion of all expenditure incurred on hospitalisation in 2017-18 as compared to 2014 (Table 3.10). Although the proportion spent on medicines seems to have decreased from 2014 to 2017-18, costs associated with diagnostic tests seem to have increased. On the whole, private facilities show higher increase in hospitalisation expenditure.

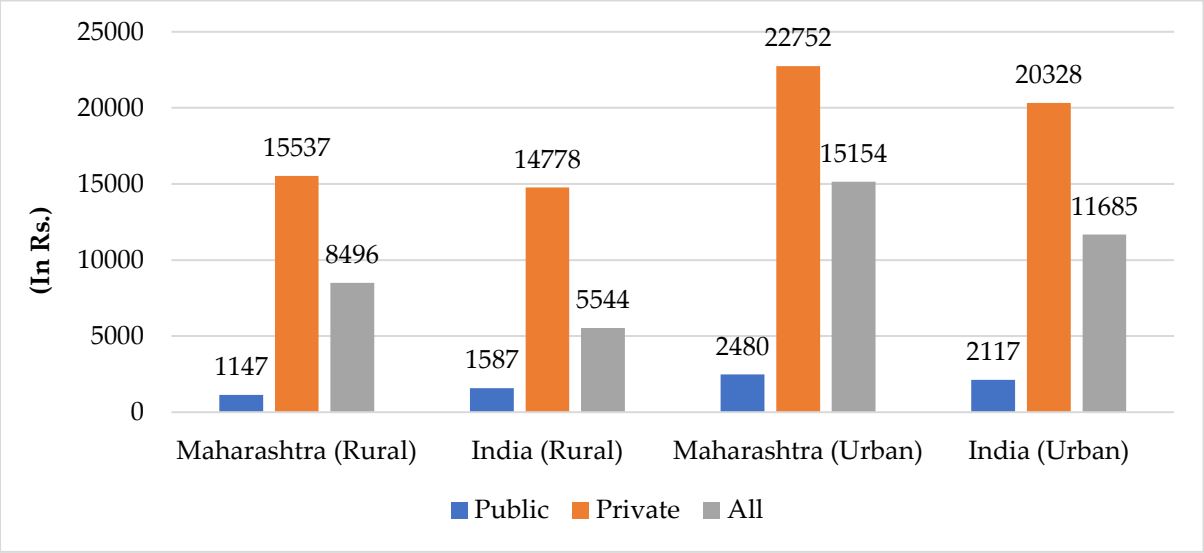
Table 3. 10: Percentage Break-Up of Hospitalisation Expenses Incurred for Treatment During Stay at Hospital, Separately for Public and Private Hospitals in Each Sector in Maharashtra in 2017-18 and 2014

Sector	Facility type and year	Package	Doctor's fee	Medicines	Diagnostic	Bed Charges	Other
Rural	**Public 2014**	10.3	11.2	48.9	11.5	7.8	10.3
	Public 2017-18	7.9	8.5	41.5	21.6	8.6	11.8
	Private 2014	30.4	19.9	24.6	8.1	10.8	6.2
	Private 2017-18	15.6	23.7	28.5	9.5	14.2	8.5
Urban	**Public 2014**	15.5	6.4	50.4	15.4	3.9	8.5
	Public 2017-18	35.4	5	35.2	10.9	3.8	9.7
	Private 2014	35.6	19.3	21.0	9.1	10.5	4.5
	Private 2017-18	29.5	22.5	17.4	9.9	14	6.7

Source: NSS 75th Round: Health Survey, excluding childbirth; and analysis of NSS 71st Round: Health Survey, excluding hospitalisation due to childbirth.

Hospitalisation due to childbirth is a separate category within NSS which is not included with hospitalisations due to other causes. As per 2014 data, the average total medical expenditure for hospitalisation for childbirth was Rs 1,147 in public hospital, as against Rs 15,537 in private hospital in rural Maharashtra. Meanwhile in urban Maharashtra, the average total medical expenditure for hospitalisation for childbirth in public and private hospital is Rs 2.480 and Rs 22.752 respectively. Again, expenditures in public institutions in rural Maharashtra are less than that of the all-India average of Rs 1,587 in; however, in private institutions, it is clearly higher than the national averages (Rs 14,778 in rural and Rs 20,328 in urban) (Figure 3.3). This follows the trend like that of general hospitalisations as seen above. With the introduction of JSSK in 2011, the expenditures on childbirth should have come down drastically in public hospitals as all expenses are covered under this scheme. All India data (2017-18) shows that average cost of hospitalisation in public hospitals due to childbirth came to Rs 1,324 in rural areas and Rs 1,919 in urban areas, which is lower than the 2014 survey. However, the average cost of hospitalisation in private hospitals due to childbirth came to Rs 18,771 in rural areas and Rs 27,451 in urban areas, which is higher than the 2014 survey. State-specific statistics are not available for further analysis.

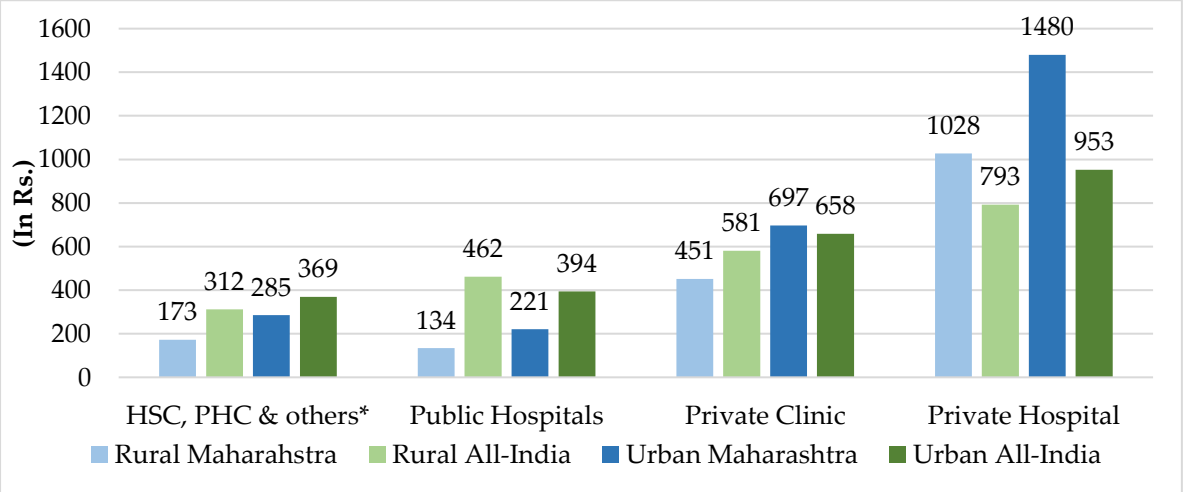
Figure 3. 2: Average Total Medical Expenditure (Rs) for Treatment Per Childbirth During Stay at Hospital (2014)



Source: NSS 71st Round: Health Survey Analysis

That is, the expenditure incurred in private hospitals tend to be higher in Maharashtra than the national average expenditure. A similar trend is observed for average total medical expenditure incurred for non-hospitalisation treatment where the expenditure in public institutions (health SC, PHC, and otherpublic hospitals) in Maharashtra is below the all-India average but the average total medical expenditure incurred in private institutions (private clinics or hospitals) is higher than the all-India average. This same trend was seen in the in-patient treatment as well (Figure 3.4).

Figure 3. 3: Average Medical Expenditure for Non-Hospitalised Treatment Per Ailing Person



Source: NSS 71st Round: Health Survey Note: Others include Auxiliary Nurse Midwife (ANM), ASHA, Anganwadi Workers (AWW), Dispensary, CHC, Mobile Medical Unit (MMU) (similar data not available for the 75th round at the time of the study)

As data on outpatient expenditure was unavailable for the 75th round, we have analysed this for the 71st round. Break-up of expenditure incurred for out-patient treatment shows that medicines still constitute the highest share of the total expenditure, followed by doctor fees. This is a similar trend to that of in-patient treatment (Table 3.11).

Table 3. 11: Break-Up of Average Medical Expenditure for Non-Hospitalised Treatment Per Ailing Person

(In Rs)	Doctor Fees	Medicine: AYUSH	Medicine: Non-AYUSH	Diagnostics test	Others
Rural	121	17	312	44	22
Urban	188	22	469	86	49

Source: NSS 71st Round: Health Survey

Despite the conspicuous difference between the levels of expenditure incurred for healthcare in private vs public for both in-patient and out-patient treatment, it is observed that 71% of the rural population of Maharashtra rely on the private health facilities; this proportion is much higher than the national average of 51.9%. Likewise, 76.9% of the urban population uses private hospitals, which is substantially higher than all-India average of 61.4% (NSS 75th round, 2017-18). Analysis for the reasons for this seemingly preference for private health care facilities reveals that 43.3% of the rural population cited unavailability of quality facilities/services as the reason, while the second highest reason (25.6%) was that specific services were not available in public facilities. Correspondingly, 55.7% of urban population cited unavailability of quality facilities/services as the main reason for not being able to access government facilities followed by 23.9% of the population citing long wait in government facilities as a reason (NSS 71st round, 2014).

3.3.2.2. Out of Pocket Expenditure (OOPE)

Owing to high average expenditure and low insurance coverage in Maharashtra, the OOPE is considerably high. Out of pocket expenditure is defined as the expenses for medical care after accounting for reimbursements from insurances. Out of pocket expenditure incurred on hospitalisation cases other than childbirth is almost 1.4 times and 1.1 times more than the national average for the rural and urban areas respectively. For childbirth related reasons, the OOPE is 1.5 times and 1.3 times greater than the national averages for the rural and urban areas respectively (Table 3.12). Factsheets of National Health Systems Resource Centre also report the percentage of households with CHE, which is calculated as the percentage of

households whose total OOPE is more than 10% of their total household expenditure nationally. The percentage of households with CHE in Maharashtra was reported to be much higher at 20% for the year 2011-2012; this has gone up from 18% reported for the year 2004.

Table 3. 12: Out of Pocket Expenditures on Healthcare (OOPE) at Current Prices

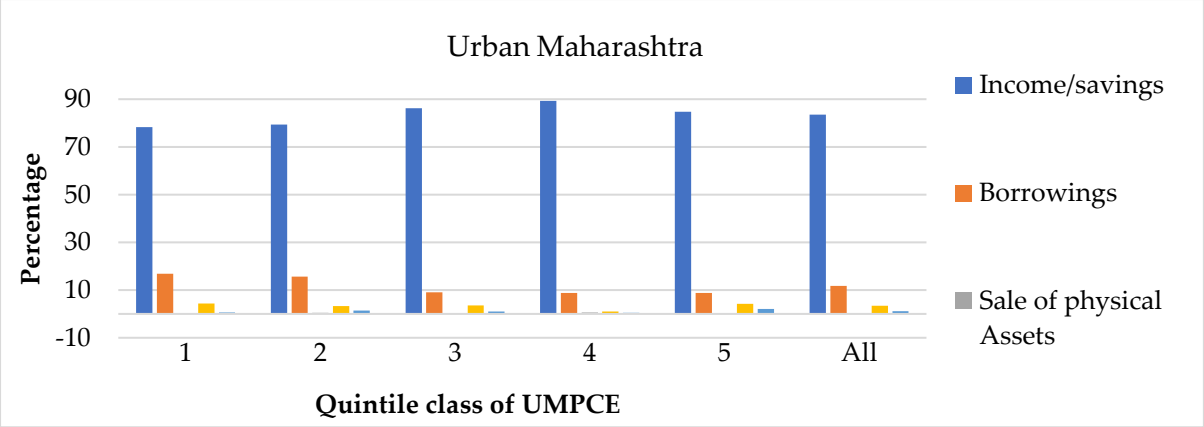
	Maharashtra		**All India**	
	Rural	Urban	Rural	Urban
Hospitalization Expenditure (excluding childbirth) (In Rs)				
OOPE per hospitalised case (Rs)-All	20200	23916	14473	21985
OOPE per hospitalised case (Rs)-Public	5278	4516	5369	7189
OOPE per hospitalised case (Rs)-Private	23748	28778	21034	28958
Childbirth Expenditure (as inpatient) (In Rs)				
OOPE per childbirth-(Rs)All	8490	14069	5518	11033
OOPE per childbirth (Rs)– Public	1147	2480	1572	2094
OOPE per childbirth (Rs)– Private	15525	21017	14727	19107

Source: NHSRC analysis from NSSO 71st Round: Social consumption on health January-June 2014. Data for the year 2004-05 is from NSSO 60th round report. Catastrophic health expenditure, CHE, calculated using consumer expenditure survey 60th and 68th round and indicators for the year 2014 in Table 2 are in real terms deflated by GDP deflator.

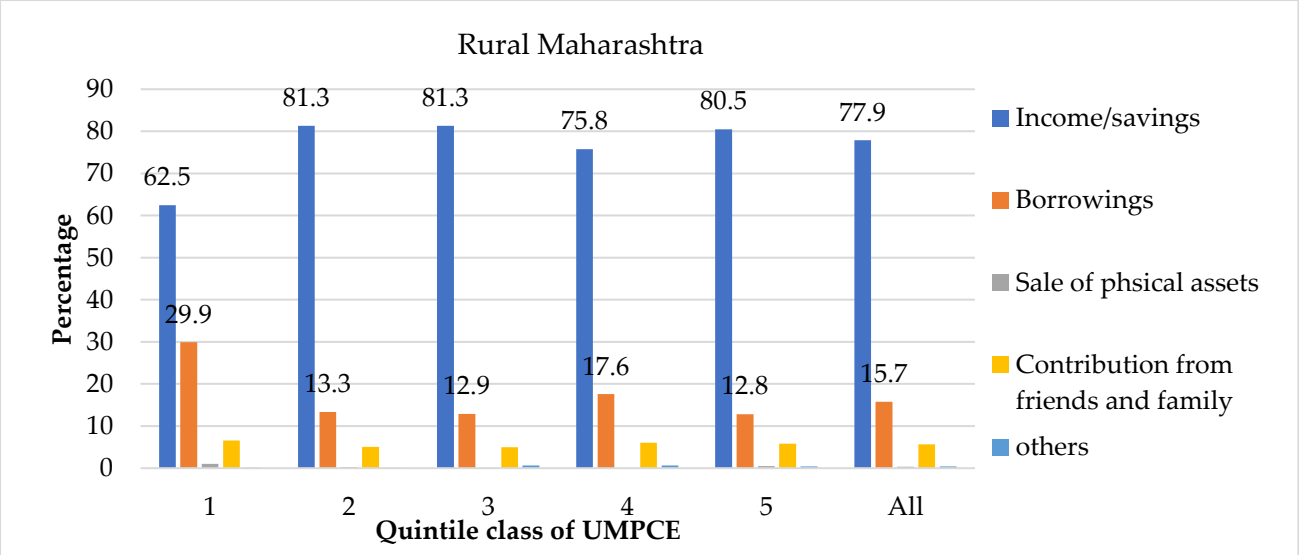
3.3.2.3: Major source of household finance for Out of Pocket Expenditure (OOPE) (Analysis of NSS 71st round, 2014)

To meet these expenditures, households depend on a limited range of financial sources of which income/savings seem to be the most relied on source followed by borrowings. In urban Maharashtra, more than 80% of hospitalisation expenditure was borne from income or savings. In absence of this, people resorted to borrowing which was highest in the lowest quintile at 16%. This percentage was higher rural Maharashtra, where almost 30% population belonging to the lowest quintile resorted to borrowing to meet hospitalization expenditures (Figure 3.5).

Figure 3. 4: Major Source of Finance to Meet Health Care Expenses by Quintiles in Urban and Rural Maharashtra



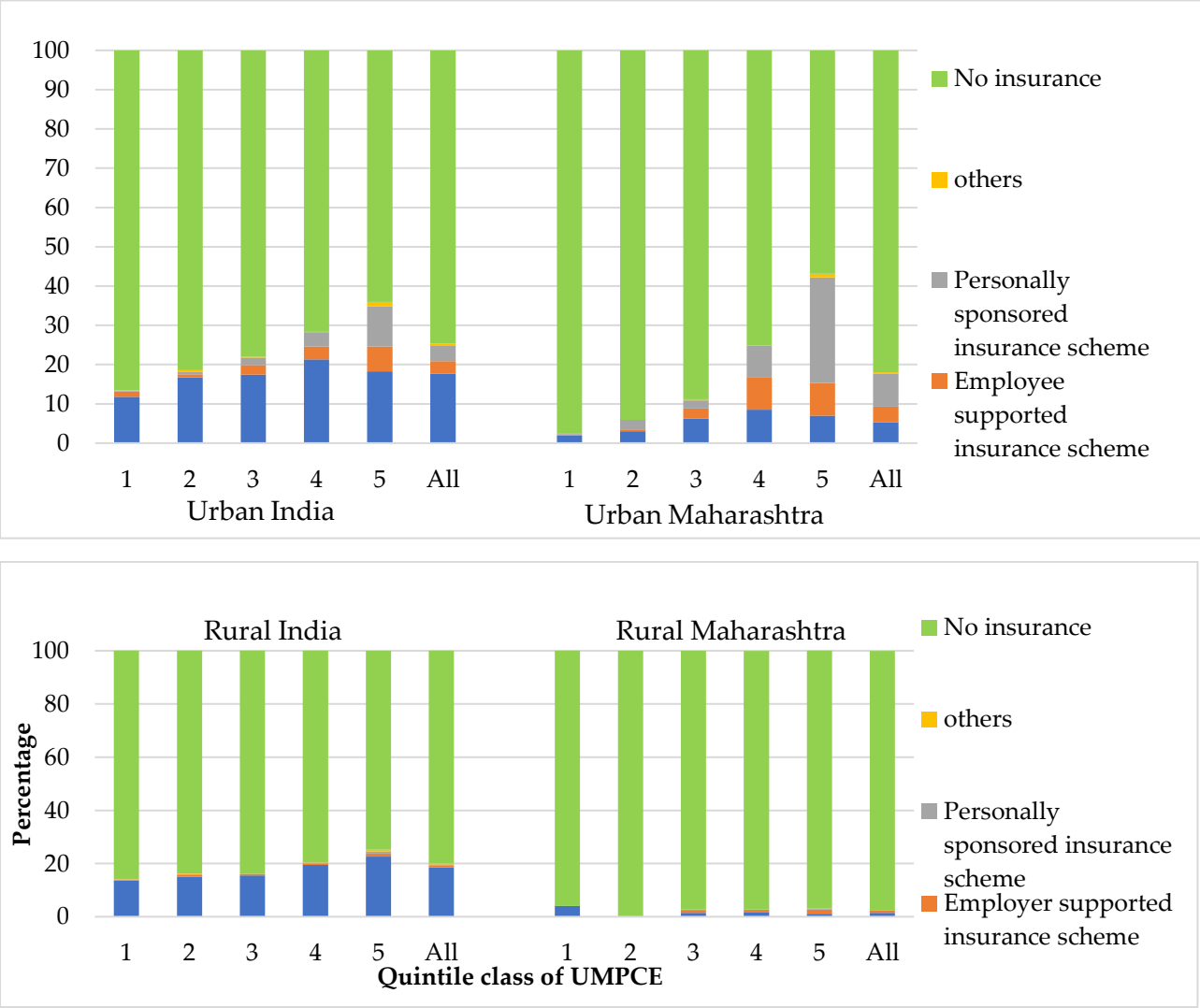
Source: NSS 71st Round: Health Survey.
Note: UMPCE stands for Usual Monthly Per Capita Expenditure



3.3.2.4: Health Care coverage in Maharashtra:

On further analysis to check how much of these expenditures are covered by insurance, it is seen that the coverage of any sort of health expenditure support is poor in Maharashtra.

Figure 3. 5: Coverage of Health Insurance by quintile class of UPMCE in Urban/Rural Maharashtra and India



Source: NSS 71st Round: Health Survey
Note: UMPCE stands for Usual Monthly Per Capita Expenditure

According to the 71st NSS data, percentage of people not covered under any insurance scheme in Maharashtra is higher than the national level. It is seen that as many as 82% in urban Maharashtra, and 97.4% in rural Maharashtra are not covered under any scheme. From the available data, it can be further deduced that the coverage was broadly correlated with levels of living. The relationship seems to be stronger in urban than in rural area (Figure 3.6).

In order to ease access to health care facilities, some states have come up with their own state-run insurance schemes for the benefit of the economically backward population. Maharashtra has its own state-run insurance scheme called the Mahatma

Jyotiba Phule Jan Arogya Yojana (MJPJAY), which was introduced in 2012[15]. Under this scheme, yellow and orange ration card holders[16] and their families in 36 districts can avail cashless treatment under 971 surgeries/therapies/procedures along with 121 follow up packages in the empanelled public and private hospitals in the state The Scheme provides coverage for meeting all expenses relating to hospitalisation of beneficiary up to Rs 1,50,000 per family per year in any of the empanelled hospital subject to package rates on cashless basis through eligible ration card. This scheme mainly covers tertiary care, which consists of the most expensive surgeries like neurosurgery, renal surgery, or cancer care.

As of December 2017, more than 2.38 lakhs surgeries have been performed under this scheme in the state (Economic Survey of Maharashtra,2017-18, 2018). Studies have pointed to an urban-rural divide in availability of services, with a higher concentration of private health facilities with superior quality in urbanised areas as compared to rural areas. The disparity can be seen in the number of hospitals empanelled by districts under MJPJAY. Mumbai and its suburbs have 43 empanelled hospitals while Nandurbar, a district with poor health indicators, has only five empanelled hospitals. A study on MJPJAY found that 83.7% of the hospitals empanelled were private. It further revealed that several districts did not meet the minimum number of required empanelled hospitals and these were mainly the backward districts. The same study also found that there were disparities in terms of treatments available in private hospitals with tribal and less urbanised districts having lesser specialties like medical and radiational oncology treatments, cardiac and cardiothoracic treatments as well as burns (Wagle & Shah, 2017).

It is also to be noted that Rashtriya Swasthya Bima Yojana (RSBY), a centrally sponsored insurance scheme, which provides free primary and secondary care treatments, was stopped in 2013 in Maharashtra after the introduction of MJPJAY. This move may create problems of access of healthcare for the poor, especially women, as the number of people seeking treatments for primary and secondary are certainly larger than those seeking tertiary care which MJPJAY provides (Gothoskar, 2014). Given the state of public health facilities, many beneficiaries may be forced to

[15] On introduction in 2012, the scheme was called Rajeev Gandhi Jeevandayee Yojana and was renamed to Mahatma Jyotiba Phule Jan Arogya Yojana in 2017.

[16] Yellow ration card holders for Below Poverty Line families and orange ration cards are for families whose annual income is less than Rs 15,000.

seek treatments in private facilities, which as discussed earlier, is concentrated in more urbanised areas to avail benefits under the scheme. In terms of reduction of OOPE, one study pointed out that despite availing MJPJAY, people still incurred expenditures for medicines, diagnostics, and other consumables in Mumbai and its suburban areas (Rent & Ghosh, 2015). In other cases, due to lack of knowledge of the scheme, people got admitted at the hospital and end up paying part of the money from their pockets. However, due to the free treatment for certain elements, people tend to overlook this expenditure (Wagle & Shah, 2017). A positive finding comes from a tertiary municipal hospital in Mumbai wherein responses from 91 beneficiaries of the scheme were studied. Fifty-six percent of the respondents felt that if not for the scheme, they would have succumbed to their illness, while others (32%) felt they would have sold their assets or taken a loan to cover their expenses (Katke et al., 2018). These findings point to the gaps in the road to providing universal health care which need to be bridged in order to make access to health truly a right. Even if the choice of health care financing is preferred over provision of universal health care facilities, a balance in the availability of public and private health care facilities prevents indiscriminate exploitation in private hospitals. As of 2018, this scheme has been integrated with the Pradhan Mantri Jana Arogya Yojana (PMJAY). It remains to be seen how this affect the access to quality health care in the state.

The other insurance scheme in the state is the Employee State Insurance scheme (ESIS). This scheme is a social security scheme undertaken by the autonomous Employee State Insurance Corporation (ESIC). It covers non-seasonal factories, shops, hotels, restaurants, cinemas including preview theatres, road-motor transport undertakings, newspaper establishments, establishments engaged in insurance business, non-banking financial companies, port trust, airport authorities and warehousing establishments employing ten* or more persons. It provides full medical benefit to the insured member and his family. Employees with a maximum salary of Rs 21,000 a month are eligible for this scheme. Currently, the employee's contribution rate (w.e.f. 01 July 2019) is 0.75% of the wages and that of the employer's is 3.25% of the wages paid/payable in every wage period. Employees in receipt of a daily average wage up to Rs 176.00 are exempted from payment of contribution17. The healthcare is provided by a network of hospitals and

[17] https://www.esic.nic.in/contribution accessed on 22 July 2019

dispensaries run by the ESIC and state government. A 2014 CAG report on the ESIS states that the although the collections under the scheme has increased, its expenditure on the services to be provided to the insured has declined. The number of hospital beds have decreased although the number of Insured person's per bed had increased. The report also stated that there were delays in settlement of claims of cash benefits and excess payment in other cases (Comptroller and Auditor General of India, 2014).

From the above analysis it can surmised that total expenditure on health is still high in Maharashtra, with a preference for private health care. Although the proportion of expenditure on medications seems to have decreased in the public sector, this is not true for private sector for which there is clear preference. This, in turn, results in Maharashtra reporting one of the highest household health expenditure levels amongst other states of India. Insurance coverage is still at its infancy in the state in 2014 to make significant dents in OOPE on health care. Health care coverage is especially important to providing access to vulnerable population in the state, namely the tribal and urban poor.

Looking at the health status of the population, along with MCH indicators, focus of the state should be to fight against rapidly growing NCD. In terms of access to health care facilities, areas that need focus include reducing the shortfall of public health facilities and human resources, especially specialists in the state. Improving the access to health care facilities by reducing household health care expenditure is another area that is pertinent. The state's priorities in health care can be assessed by its allocations and expenditures on health care. Hence, in the following chapters our study will look at how Maharashtra spends on healthcare and whether the state prioritises the areas of poor health functionality as identified above.

Chapter 4: Public Expenditure Review on Health: Macro Level Analysis

In this section, we will discuss the overall findings of our expenditure review on health. The chapters that follow will each discuss a problem statement identified in the health profile section, namely, MCH, tribal health, urban health, CD and NCD, and health care service delivery.

4.1. How Maharashtra Spends on Healthcare: A Macro-level Analysis

The analysis of state budget documents shows that the health expenditure across all departments[18] has increased from Rs 6,773 crores in 2012-13 to Rs 14,534 crores in 2017-18 registering a CAGR of 15% (Figure 4.1). The real expenditure (2011-12 prices) also increased from Rs 6,302 crores to Rs 11,709 crores during the same period. The health expenditure as a percentage of GSDP increased from 0.46% to 0.6% for the same period. However, this is much lower than the suggested healthcare expenditure of 1.87% of GDP (combined expenditure of union and states) by end of 2016-17 as per the 12th five-year plan[19]. India proposes to increase it to 2.5% of GDP by 2025[20] from the current level of 1.15%. Studies show that the income of the state influences public expenditure on health and other social sectors to a great extent (Hooda, 2015). However, this does not seem to apply to Maharashtra. In 2015-16, Maharashtra's public expenditure on health was Rs 12,066 crores, which was highest amongst the group of major non-EAG[21] States which included Karnataka, Tamil Nadu, and Kerala, but its per capita expenditure was one of the lowest at Rs 1,011. The state also has the lowest health expenditure as percentage of GSDP amongst the four states (Table 4.1).

[18] Public Health Department, Medical Education and Drugs Department, Tribal Development Department, Public Works, Districts and Other Departments.

[19] http://www.nhm.gov.in/images/pdf/publication/Planning_Commission/12th_Five_year_plan-Vol-3.pdf (last accessed on15 May 2019)

[20] https://economictimes.indiatimes.com/news/economy/policy/india-to-increase-public-health-spending-to-2-5-of-gdp-pm-modi/articleshow/67055735.cms?from=mdr

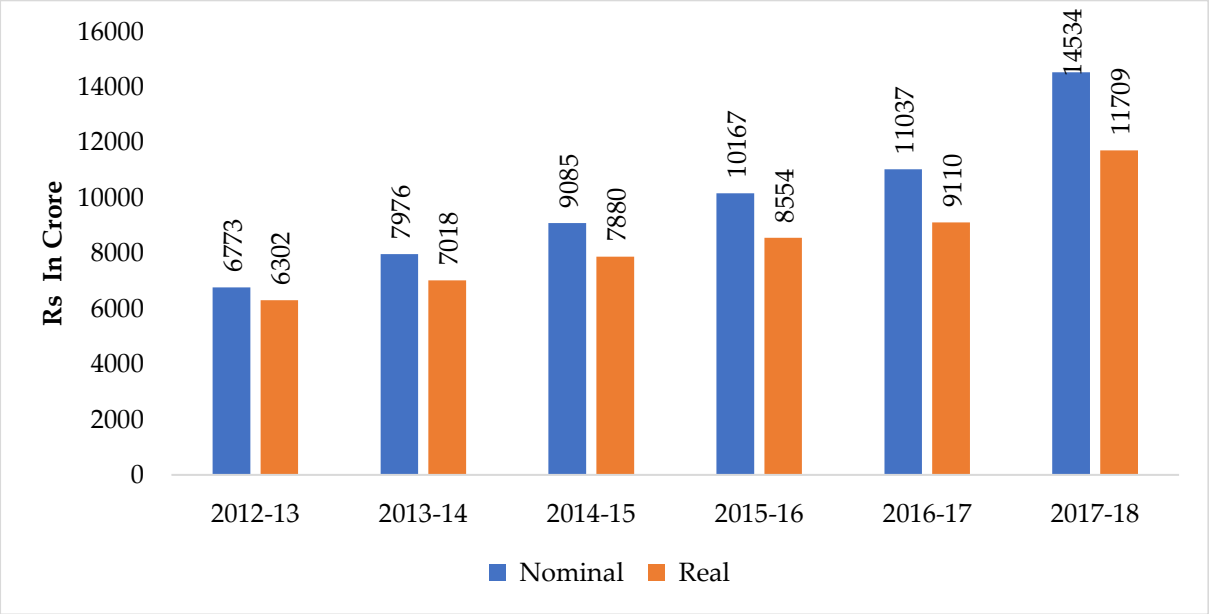
[21] Empowered Action Group (EAG) States are the eight socioeconomically backward states of India: Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttaranchal and Uttar Pradesh which lag behind in the demographic transition and have the highest infant mortality rates in the country. Non-EAG states are the states that are not classified as EAG.

Table 4. 1: Health Care Expenditure in Maharashtra and Select States (2015-16)

Indicator	Maharashtra	Tamil Nadu	Kerala	Karnataka
Total state Expenditure on Health in Crores (Rs)	12066	8543	5207	6980
Health Expenditure as% of Total State Expenditure	5.08%	4.99%	5.85%	5.03%
Population 2015-16 (in Crores)	11.94	6.92	3.56	6.21
Per Capita Health Expenditure (Rs)	1011	1235	1463	1124
Health Expenditure as% of GSDP	0.60%	0.74%	0.93%	0.69%

Source: National Health Profile 2018, http://www.cbhidghs.nic.in/Ebook/National%20Health%20Profile-2018%20(e-Book)/files/assets/common/downloads/files/NHP%202018.pdf

Figure 4. 1: Growth of Health Expenditure in Maharashtra in Nominal and Real Terms (Rs in Crore)

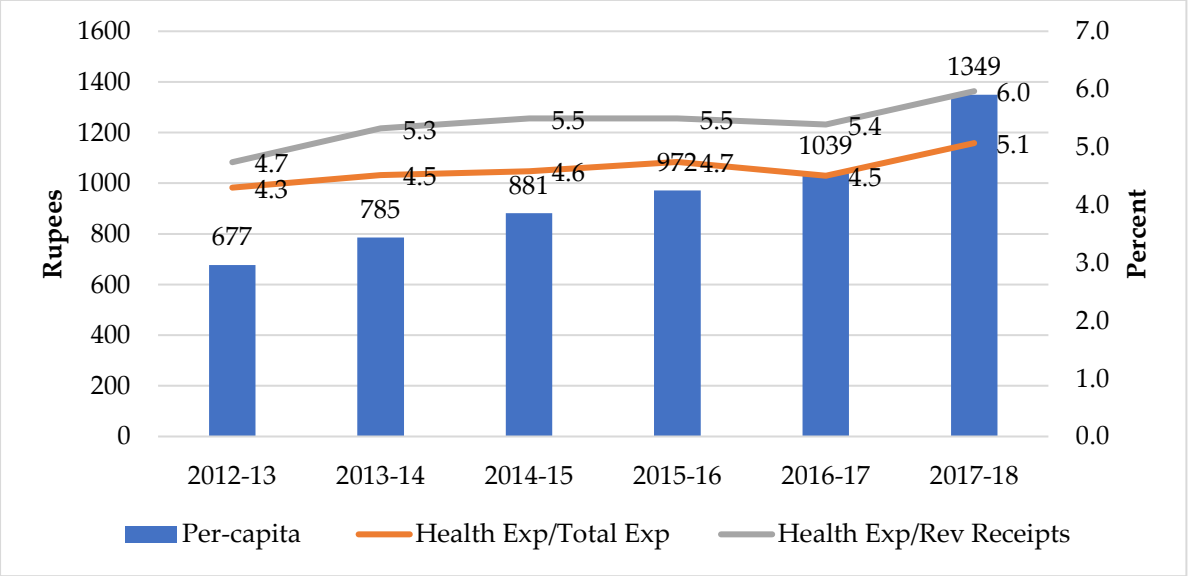


Source: Maharashtra state budget documents 2012-13 to 2017-18

The total expenditure on health as a percentage of total state expenditure has increased from 4.3% in 2012-13 to 5.1% in 2017-18 (Figure 4.2). Health expenditure as a percentage of total revenue receipts also has shown an increase with a dip only in the year 2016-17. The per-capita expenditure (nominal terms) has increased from Rs 677 in the year 2012-13 to Rs 1,349 in the year 2017-18. Although there has been an increase in the state health expenditure as a percentage of total state expenditure, this is still at 5%. As per the National Health Policy, states need to allocate and spend

about 8% of their total state budget on health in order to accomplish various health related goals.

Figure 4. 2: Per-Capita Health Expenditure Over Years

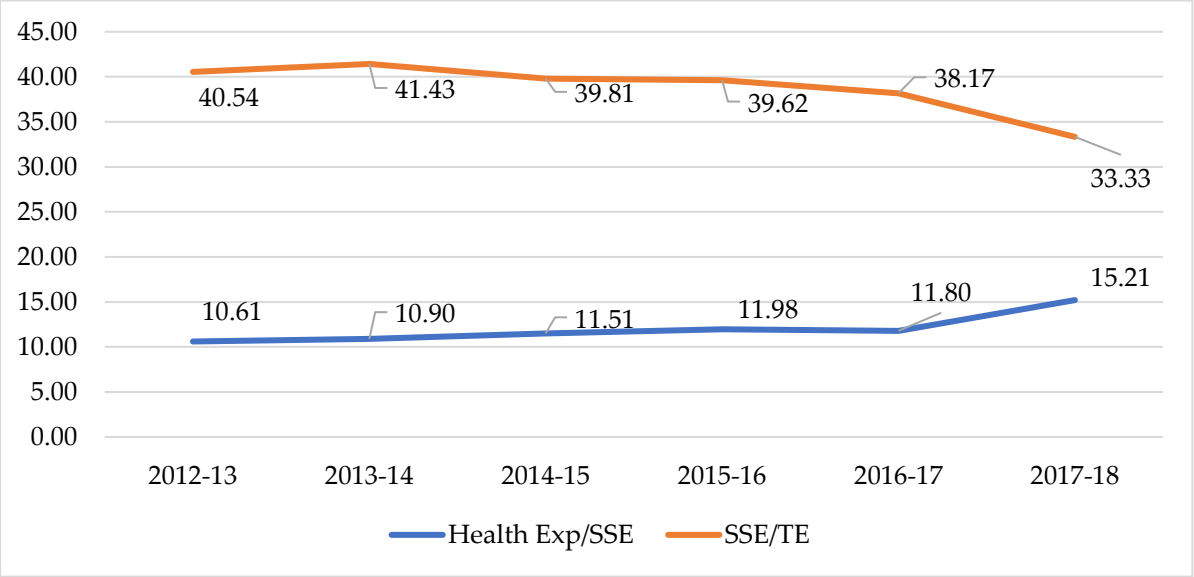


Source: State Budget Documents 2012-13 to 2017-18 and population projected from figures in census 2011

4.2. Health Expenditure as proportion of Social Sector Expenditure (SSE):

The health expenditure as a proportion of Social Services Expenditure (SSE) increased over the years from 10.61% in 2012-13 to 15.21% in 2017-18 (Figure 4.3). However, during this same period, there has been a steady decrease in the share of SSE as whole, indicating lower prioritisation in for others within the social sector. Social services expenditure as a proportion of total expenditure decreased from 40.54% in 2012-13 to 33.33% in 2017-18. This is important as many components within the social sector are interlinked with health for e.g. water and sanitation and nutrition, which could still affect health outcomes despite higher spending for health.

Figure 4. 3: Share of Health Expenditure in Social Services Expenditure (SSE) and Total Expenditure



Note: Social Services Expenditure (SSE) includes expenditure on education, sports and culture, health and family welfare, water supply and sanitation, housing, urban development, information broadcasting, welfare of SC/ST and OBC, labour and labour welfare, social security & nutrition and other social services. Total Expenditure (TE) is total expenditure of the state. Source: State Budget Documents 2012-13 to 2017-18.

4.3. Expenditure on Health by Various Departments of the State Government

The health expenditure of the state is spread across different department and different major heads of accounts. Table 4.2 gives the details of the health expenditure by different departments. Apart from Public Health Department (PHD) and Medical Education and Drugs Department which incurs a bulk of the health expenditures for the departments of governor, jail, civil defence, rural employment, social security and welfare and village and small industries, it involves payment of medical charges for treatment and/or insurance and provision of medical facilities. The police department maintains police hospitals in Mumbai and at district levels; this expenditure is categorised as healthcare expenditure. Revenue and Forest Department supplies medicines, along with other items of essential use, to relief camps during natural calamities. Department of Welfare of Scheduled Castes, Scheduled Tribes Other Backward Classes and Minorities offers scholarships to tribal students, reimburses medical expenditure and contributes to healthcare programme in tribal districts. Labour Department maintains a Directorate of Safety and Industrial Health and undertakes research on industrial diseases and hazardous opportunities, along with implementing RSBY, a centrally sponsored insurance

scheme, (however, this scheme has been discontinued since 2013) for unorganised labour.

Table 4. 2: Details of Health Expenditure by Various Departments

Major Head	Department	Details for the Healthcare Expense (Minor Head and/or Sub-Group Head details as given in the Budget Document)
2210	Public Health Department, Medical Education and Drugs Department, Tribal Development Department	Personnel cost, number of healthcare programmes and schemes, maintenance of healthcare infrastructure, medical education, training, awareness programmes, drugs and consumables.
2211	Public Health Department, Tribal Development Department	
4210	Public Health Department, Medical Education and Drugs Department, Public works department, Tribal Development Department	Capital works related to public health and family welfare and building construction.
2012	General Administration Department	Medical facilities to the governor, his family and staff.
2055	Home Department	Expenses of police hospitals in Greater Mumbai and districts.
2058	Industries, Energy and Labour Department	Medical charges
2070	Home Department	Medical charges including personnel cost
2225	Tribal Development Department	Tribal Sub-Plan contributions for health programmes in tribal districts, scholarship to tribal students in medical and similar colleges and wages to parents of tribal children who have been hospitalised.
2230	Industries, Energy and Labour Department,	Directorate of Safety and Industrial Health, research for industrial diseases and hazardous occupations and Rashtriya Swasthya Bima Yojana (RSBY) scheme

Major Head	Department	Details for the Healthcare Expense (Minor Head and/or Sub-Group Head details as given in the Budget Document)
2235	Maharashtra Legislature Secretariat	Cashless medical insurance scheme for members and ex-members of Maharashtra Legislature Assembly.
2245	Revenue and Forests Department	Supply of medicine, water, fodder, temporary shelter, clothing etc. in relief camps
2251	Public Health Department, Medical Education and Drugs Department	Maintenance of secretariat for Public Health, Medical Education and Family Welfare
2505	Planning Department	Payment for medical treatment
2851	Co-operation, Marketing and Textiles Department	Health insurance scheme for handloom weavers
2401	Agriculture, Animal Husbandry, Dairy Development and Fisheries Department	National Ayush Mission on medicinal plants
6211	Public Health Department	Other loans

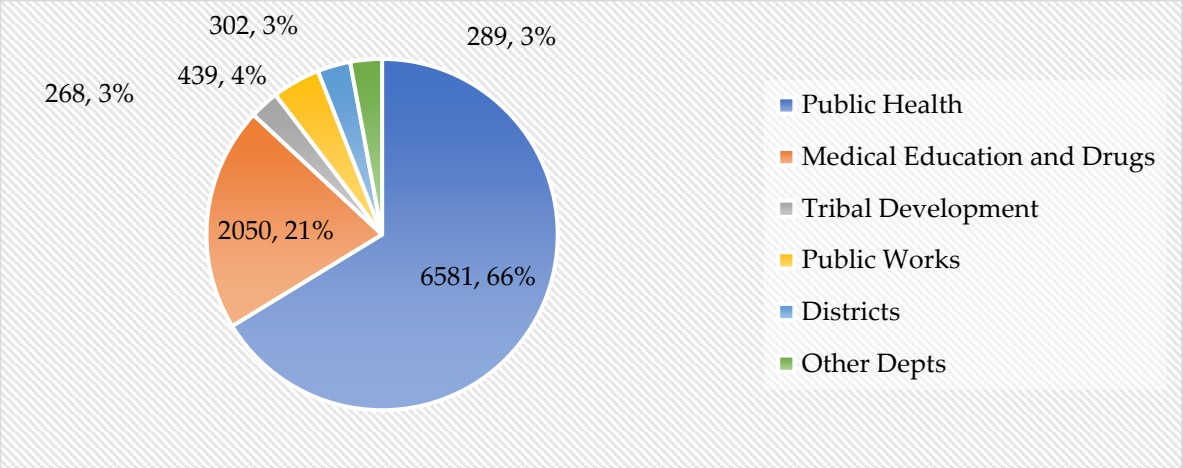
The Department of Public Health and Department of Medical Education and Drugs together spend about 87% of the health expenditure of the state (Table 4.3 and Figure 4.4). Public Works Department and Tribal Development Department account for 4% and 3% of the health expenditure respectively. The expenditure through district allocations (again by the health department) and other departments together account for another 6%.

Table 4. 3: Details of Health Expenditure by Various Departments, 2012-13 to 2016-17 (Rs in Crore)

Department	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE
Public Health	4138	4803	6108	6718	7290	10428
Medical Education and Drugs	1525	1705	1860	2107	2371	2734
Tribal Development	174	212	306	335	284	295
Public Works	282	328	410	519	483	610
Districts (Public Health)	227	219	312	366	329	359
other Depts	427	709	89	121	280	108
Total	6773	7976	9085	10167	11037	14534

Source: Compiled from state budget documents 2012-13 to 2017-18. 2012-13 to 2016-17 include actual expenditure while 2017-18 is RE.

Figure 4. 4: Health Expenditure by Different Departments in the State



Note: Numbers are Rs in crores (average for years 2012-13 to 2017-18)
Source: Compiled from state budget documents 2012-13 to 2017-18.

4.5. Expenditure under National Health Mission (NHM)

According to CAG, the share of NHM which has increased from 12.4% in 2014-15 to 20.3% in 2017-18 (Table 4.4). Hence, the NHM comprises 20% of the state's health expenditure. Its allocations fall under four main components,

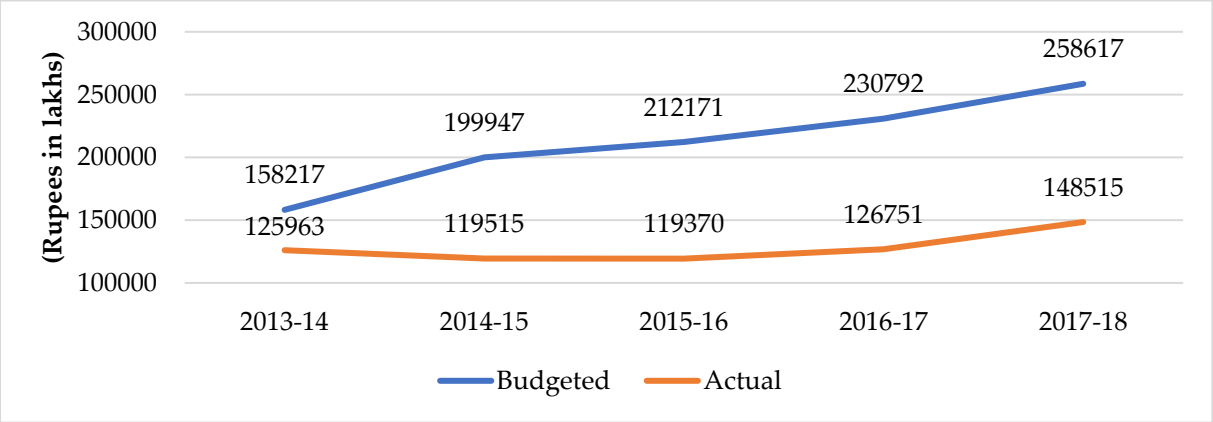
1. National Rural Health Mission-Reproductive Child Health Flexible Pool (Nrhm-Rch Fp)
2. Communicable Diseases Flexible Pool (Cd Fp)
3. Non-Communicable Diseases Flexible Pool (Ncd Fp)
4. National Urban Health Mission (Nuhm)

Table 4. 4: Share of National Health Mission (NHM) expenditures in total health expenditure. (Rs in crore)

	2014-15	2015-16	2016-17	2017-18 RE
Centre	778	1135	1358	1737
State	346	642	1055	1220
Total NHM	1124	1777	2413	2957
Total health exp	9085	10167	11037	14534
NHM Share (%)	12.4	17.5	21.9	20.3

CAG: Finance Accounts for various years https://cag.gov.in/state-accounts/maharashtra
The NHM analysis does not include the analysis of infrastructure maintenance.

Figure 4. 5: Total Budgeted Expenditure (BE) vs. Actual Expenditure (AE) in NHM (2013-14 to 2017-18)

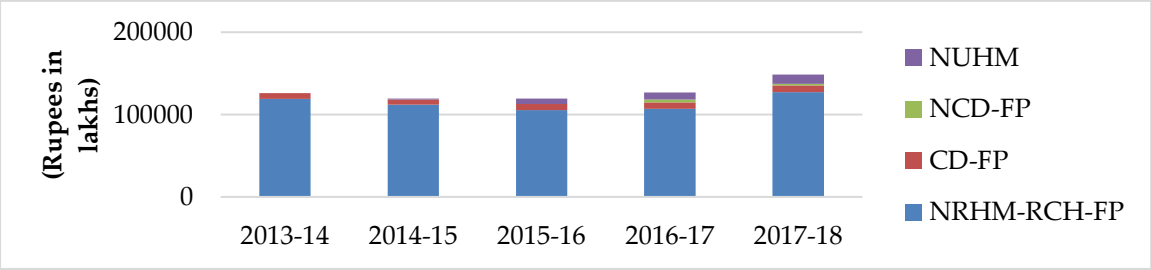


Source: Consolidated from audited FMR of 2013-14 to 2017-18

As the FMR reports only budget allocations and expenditures, we have calculated the utilization as ratio of actual expenditure to budget allocated. At the aggregate level, both the budget allocated and expenditure incurred under NHM have grown (Figure 4.5). There is, however, a wide gap between budget allocations and actual expenditure and it has been increasing over the years. On an average, the budget allocated has seen a 13.3% growth rate per year while the average annual growth rate for the actual expenditure incurred has only been around by 4.5%, indicating poor levels of utilization. Average utilization ratio of five years has been 61.6%.

Amongst the four flexible pools of NHM as seen in the FMR from 2013-14 to 2017-18 (Figure 4.6), the highest expenditure has been incurred under the NRHM-RCH FP accounting for an average of 89.3% of the total expenditure followed by CD FP, NUHM, and NCD FP averaging at 5.7%, 4.1% and 0.8% of the total expenditure respectively.

Figure 4. 6: Expenditure under Four Components of National Health Mission (NHM) (2013-14 to 2017-18)



Source: consolidated from audited FMR of various years

Note: The components are National Urban Health Mission (NUHM), Non-communicable Diseases Flexible Pool (NCD-FP) Communicable Diseases Flexible Pool (CD-FP), and National Rural Health Mission Reproductive Child Health Flexible Pool (NRHM-RCH-FP).

The FMR is a highly detailed financial document consisting of more than 2,000 line items. Therefore, further analysis of its components is split into relevant health sections to make the report more meaningful.

4.6. Utilization of allocations within National Health Mission (NHM):

As already seen above, the average utilization ratio of within NHM for the last five years 2012-13 to 2017-18) was only 61.6%. This shows the degree of use of available resources within the programme. Looking into the major components for NHM expenditure in table 4.5, we see that the utilisation ratio varies from 50% for the NPCDCS to 91% under UF. Utilization is also high under ASHA expenditures. Untied funds are planned and expended at the level of the health facility giving it a say over the usage of funds, which may show the popularity of this feature within NHM. Indeed, the field data shows that almost all PHCs visited in Osmanabad and Nandurbar have utilized their UF with some even demanding an increase in the amount provided. Similarly, the ASHA programme is the world's largest community volunteer programme that has revolutionised the rural health care landscape in India. The largest component within ASHA is provision for ASHA incentives. These incentives are a good motivator for the ASHA; its high utilization denotes it popularity.

Table 4. 5: Proportion of Average Allocation and Corresponding Utilisation Ratio from 2012-13 To 2017-18) for Selected National Health Mission (NHM) Components in Maharashtra

Component	Proportion of average allocation (%)	Average Utilization Ratio (%)
HR under NRHM	15.7	69.5
Procurement under NRHM	11.5	51.4
Child Health under NRHM	10.5	60.4
National Urban Health Mission	10.5	39.9
Maternal Health under NRHM	10.3	58.5
ASHA under NRHM	5.7	89.5
Untied Funds/Annual Maintenance Grants /Corpus Grants to HMS/RKS under NRHM	4.7	91.7
Revised National Tuberculosis Control Programme	3.6	76.7
National Leprosy Eradication Programme	0.5	68.0
National Vector Borne Disease Control Programme	0.5	54.1
National Programme for Control of Blindness	0.5	58.2

Component	Proportion of average allocation (%)	Average Utilization Ratio (%)
National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke	0.3	50.7

Source: Proportion of allocation and utilisation is an average for five years calculated from Audited FMR 2012-13 to 2017-18.

However, low utilisations within other components of the programme is concerning. There can be many reasons for low utilisation; the most common being the delay of transfer of funds to each level of the mission from centre to the PHC. Most personnel expenditure in this case is borne by the state share of NHM, and hence, it doesn't get compromised. However, the programme component may not get implemented or may get delayed due to the lack of funds or insufficiency of time. Looking at problem areas under health care, we see that utilisations under child health and maternal health are 60% and 58% respectively. Similarly, NUHM has less than 40% utilisation. Hence, there is a need to address the gaps to improve utilisation of the funds available.

4.7. Impact of 14th Finance Commission (FC) recommendations on Health Expenditure

The 14th FC recommendations were implemented for the five-year period starting from 2015-16. One of the important recommendations involved the increase in the share of taxes to the states from the divisible pool of taxes at GoI. While GoI accepted these recommendations, its share in the CSS was reduced. The share of GoI in the CSS that varied between 55- 90% was fixed at 60% for all the states except for the north-eastern states where the GOI share was fixed at 90%. This was also to enable the states to prioritise based on its own requirements given the availability of higher tax share. However, it also forced states to fill the gap which was created because of the reduced share of GOI in CSS.

The health expenditure as a share in total expenditure as well as a percentage of revenue receipts in 2015-16 recorded a mild increase over the previous year. However, it saw a dip in the year 2016-17 before increasing in the year 2017-18. The health expenditure as a percentage of revenue receipts increased to 6% in the year 2017-18 from 5.5% in 2015-16. This shows a healthy growth in line with the expansion of revenue receipts of the state government indicating that the state has used its fiscal leeway in the form of increased tax share to augment the health

expenditure. However, considering the fiscal prowess of the state with very low fiscal deficit (below 2% of GSDP), there is very good scope to enhance the public expenditure on health and other social sectors as well.

4.8. Gram Panchayat Development Plans (GPDP) in Maharashtra

The 14th FC provided grants only to the GPs among the three tiers of Panchayat Raj Institutions (district, block and gram panchayat) stating that GPs along with the urban local bodies are the local governments responsible for provision of basic services, which is critical for development. Government of India also advocated for the GPDP as a tool to formulate and execute the developmental plans of the area by pooling different sources of funds received by GP along with the Own Source Revenue raised through taxes and non-taxes.

Gram Panchayats receive funds from different schemes apart from the union FC and state FC grants. Gram Panchayats receive funds under 14th FC grants; 5% of the funds under TSP to the Provisions of Panchayats (Extension to the Scheduled Areas) Act (PESA panchayats), Mahatma Gandhi National Rural Employment Act, Swachh Bharat Abhiyaan, National Rural Drinking Water Programme etc. With this and the Own Source Revenue, GPs are expected to develop a plan for their area, through a GPDP. The important objective of this GPDP is to enable GPs to take stock of resources available to them and prioritise based on the requirements of the people of the GP. The projects of the GPDP have to be discussed and approved in the Gram Sabha which makes it participatory and transparent.

Gram Panchayat Development Plans (GPDP) field findings:

Interviews were held in 15 GP with GP members; 8 were from Nandurbar district while the other 7 were from Osmanabad district (Table 4.6). All 15 GPs had formulated the GPDP. Majority of the members informed that the GPDP was formulated based on discussions in monthly meetings and that of the Gram Sabha. One member from Osmanabad said the meetings also included teacher, Medical Officers (MOs), Anganwadi Workers, and reputed people from the villages, while another member said GPDP is formulated in the meetings of the members including Gram Sevak, sarpanch, and representatives of department of health, water, road, electrification, women and child development and Anganwadi. On the whole, GPDP formulation was found to be a collective effort with inputs from concerned authorities of each sector.

Gram Panchayat members informed that a survey was conducted before the GPDP formulation to assess the situation on basic services like water supply, sanitation,

streetlighting, roads, hand pumps, waste management. Members also informed that ASHA, Anganwadi workers and health workers were also involved in the surveys. Members opined that the survey helped to assess deficits in social and human development apart from issues such as open defecation, management of open lands, common property resources etc. On the whole, the GPDP took roughly four meetings to get finalised. When asked about participation and record keeping on member from Osmanabad replied, "The whole body of GP looks after these meetings. It includes the sarpanch and all members including the Gram Extension Officer and Gram Development Officer who advise and supervise the process. Gram Sewak has the copies of records of these meetings". Majority of the members opined that the GPDP process was overseen by the block development officer or the chief executive officer (CEO).

Of the 15 GP members, only one said that they had not undergone training for the formulation of GPDP, while others had obtained the training. Another member did not have training as he was elected as the sarpanch after the formulation of GPDP for that year and hence didn't receive training. One member explained about the three-day training programme that the sarpanch and the members undergo that included the GPDP formulation processes, the 14th FC grants, basic and performance grants etc. Few members also discussed about the inputs from officers who came from district to train them while another member said that a person from an NGO had also trained the members.

The government of Maharashtra has stipulated the usage of funds through GPDP.[22] The critical sectors like health, education, and livelihood are supposed to get 25% of the funds through GPDP. Similarly, 10% of the funds are to be reserved for the cause of women and children while 15% is to be allocated for welfare of backward classes. It is also to be noted that these categories are not mutually exclusive and the projects overlap across these sectors. These stipulations guide the GPs to focus on the marginalised communities and the often-neglected sectors. The projects related to education focused on school building repair, providing a compound wall, providing

[22] Source: https://www.panchayatgyan.gov.in/web/guest/hidden/-/asset_publisher/LWFdLdY7l9Hs/content/maharashtra-state-gpdp-processes-current-status/20181?redirect=https://www.panchayatgyan.gov.in/maharashtra?p_p_id=122_INSTANCE_C5VVz8OlOdZp&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-1&p_p_col_count=1&p_r_p_564233524_resetCur=true&p_r_p_564233524_categoryId=58159&entry_id=143485&show_back=true

drinking water and toilet facilities in schools and Anganwadis, providing water purifiers etc. Many health projects were largely related to sanitation projects focusing on drinking water, storm water drains and solid waste management. The projects relating to women and children largely focused on improvement, upgradation and provisioning of services such as drinking water, toilet, compound wall, augmenting the nutrition efforts etc in anganwadi. An analysis of the GPDPs across the sample GP was attempted to understand the priorities of development and focus on the sectors/ communities as stipulated by the state government.

Table 4. 6: Availability of Gram Panchayat Development Plans (GPDP) Data across Gram Panchayats (GP)

Gram Panchayat	2016-17	2017-18	2018-19	2019-20	District
Chinchpada	X	Yes	Yes	X	Nandurbar
Dogegaon	X	Yes	X	X	Nandurbar
Palsun	Yes	Yes	X	X	Nandurbar
Pratappur	X	X	Yes	X	Nandurbar
Somaval Budruk	Yes	Yes	Yes	Yes	Nandurbar
Umran	X	X	Yes	X	Nandurbar
Walheri	X	X	Yes	X	Nandurbar

Source: CBPS primary fieldwork

The size of the GPDP varied across the GPs and years. While the GPs of Chinchpada, Dogegaon, Palsun, and Pratappur have managed to allocate more than the stipulated 25% of the GPDP funds for health, education and livelihood sectors, Somval Budruk, Umran, and Walheri GPs have allocated less than the stipulated 25%. Similarly, except for Chinchpada, Dogegaon and Palsun in 2017-18, other GPs have not provided the stipulated 10% share for women and children related GPDP projects (Tables 4.7, 4.8, 4.9).

The top five priorities highlighted, by the members included increasing the provision of nutritious food for pregnant and lactating women and malnourished children, addressing the issues of adolescent health and education, and working for enhancing the welfare of dalit community apart from the improvement in basic services like roads, drains, maintenance of Anganwadi centres. The costless

initiatives included shramadan for planting of trees, followed by undertaking cleaning of various parts of the villages, including cleaning of a riverfront.

Table 4. 7: Gram Panchayat Development Plans (GPDPs) across 7 Gram Panchayats (GPs) in Nandurbar District, Maharashtra (Rs. in lakhs))

Gram Panchayat	2016-17	2017-18	2018-19	2019-20
Chinchpada		51.15	127.19	
Dogegaon		10.78		
Palsun	19.02	13.02		
Pratappur			175.56	
Somaval Budruk	49.40	61.97	51.46	51.45
Umran			191.30	
Walheri			90.22	

Source: CBPS primary fieldwork

Table 4. 8: Share of Health, Education and Livelihood Sector Together in Gram Panchayat Development Plans (GPDPs) in 7 Gram Panchayats (GPs) of Nandurbar (in Percent)

Gram Panchayat	2016-17	2017-18	2018-19	2019-20
Chinchpada		29	38	
Dogegaon		50		
Palsun	53	29		
Pratappur			31	
Somaval Budruk	14	13	23	23
Umran			10	
Walheri			12	

Source: CBPS primary fieldwork

Table 4. 9: Share of Projects Related to Women and Children in Gram Panchayat Development Plans (GPDP) (in Percent)

Gram Panchayat	2016-17	2017-18	2018-19	2019-20
Chinchpada		11	5	
Dogegaon		20		
Palsun	5	10		
Pratappur			2	
Somaval Budruk	2	2	3	3
Umran			2	
Walheri			4	

Source: CBPS primary fieldwork

4.9. Summary of Findings in Macro Level Analysis

The state spends 5.1% of total expenditure on health. The state's expenditure on social sector has decreased since 2012-13; however, the expenditure in the health sector has increased. In 2017-18, it spent an average of Rs 1,439 per person which has increased from Rs 677 from 2012-13. The PHD is the one with the largest expenditure on health in the state followed by Medical Education and Drugs Department. National Health Mission is the single largest expenditure on health in the state which takes up 20% of the total state expenditure which covers a wide spectrum of diseases and health services. However, the utilization ratio within the scheme is only an average of 61% over the last five years. Decentralisation in health care is not very evident in Maharashtra as seen from the field data. Although GPDP have been developed by various GPs, the data on utilization of funds is unavailable to undertake a concrete analysis.

The following chapters will focus on allocation and expenditure by the PHD of the state on the priority areas identified in the literature review namely, MCH, tribal health, urban health, delivery of health services and NCDs. Most of these are from the NHM.

Chapter 5: Maternal and Child Health (MCH)

Health indicators of women and children are considered the most critical as a marker for overall health indicators and status. As already seen Maharashtra's MCH indicators are poorer as compared to Tamil Nadu and Kerala. Neonatal death was highest cause of mortality in children under 14 years. The MCHI showed that the tribal areas had poorer indicators than the rest of the state. Surprisingly, Mumbai, a complete urban area, also showed poor MCH indicators. Hence, the improvement in MCH indicators in the state has been unequal. Expenditure on women and children also indicate the health priorities for the same, which influence the indicators in turn. The following chapter describes expenditure on MCH in the state first solely based on the state budget and then analyses NHM in detail.

5.1. State level expenditures for Maternal and Child Health (MCH)

Excluding NHM allocations in the state budget and analysing the sub-group head wise descriptions for the state budgets, it can be inferred that a greater allocation and expenditure on women and child are spent on a regular basis on immunisations, compared to other activities (table 5.1). Sporadically, greater expenditures have been undertaken under Pradhan Mantri Matru Vandana Yojana and grants for reduction in the IMR. Women specific expenditures are restricted to women hospitals, located in select districts and provision of conventional contraceptives. In the time-period 2012-13 to 2017-18, no expenditures were incurred specifically for medical termination of pregnancies, maternity grants, and post-partum centres in the state. This is consistent to the OOPE analysis using NSS Organisation data which indicates that about 90% of medical termination of pregnancies take place in private health institutions and leads to increased OOPE. Another critical aspect that emerges is that women health related expenditure is restricted to reproductive and maternal health and there are no special allocations for women under other programmes that target non-reproductive/non-maternal health issues.

Table 5. 1: Actual Expenditure (AE) on Women and Children (Rs in lakh)

Programmes/Activities	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE
Immunisation	5660	6066	6352	6423	6704	7443
Grants for reduction in the Infant Mortality Rate	0	93	20542	0	0	16126
Reproductive and Child Health Programme	5554	4770	4838	5263	5731	6532
Family Welfare Bureau	1590	1643	1681	1762	1869	2374
Pradhan Mantri Matru Vandana Yojana	0	0	0	0	0	9000
Others	1557	1053	742	713	743	1046
Special Programme for Upgradation of Services and Equipment in District/ Sub-Districts/ Rural/ Women Hospitals	51	604	816	1609	526	1185
Women's Hospitals	409	417	674	1004	660	713
Conventional Contraceptives	500	499	500	403	603	1019
MCH - State Budget	15322	15146	36145	17177	16835	45437

Source: State Budget documents

Note: Others include Teaching of Family Welfare Medical College, Wages to parents whose children of Grade III and IV are hospitalised, Regional Family Welfare Training Centres, Incentive for Vasectomy Operation, School Health Clinics, Medicinal Grants to high risk Mothers and Children of Grade III & IV, Health Check-up in schools, Urban Family Welfare Centre, Training in Para Medical Personnel Auxiliary Nurse, Midwives, Dais and Health Visitors, Family Welfare Cell in Secretariat, Payment of instalments of Rashtriya Swasthya Bima Yojana for unorganised labour under Below Poverty Line.

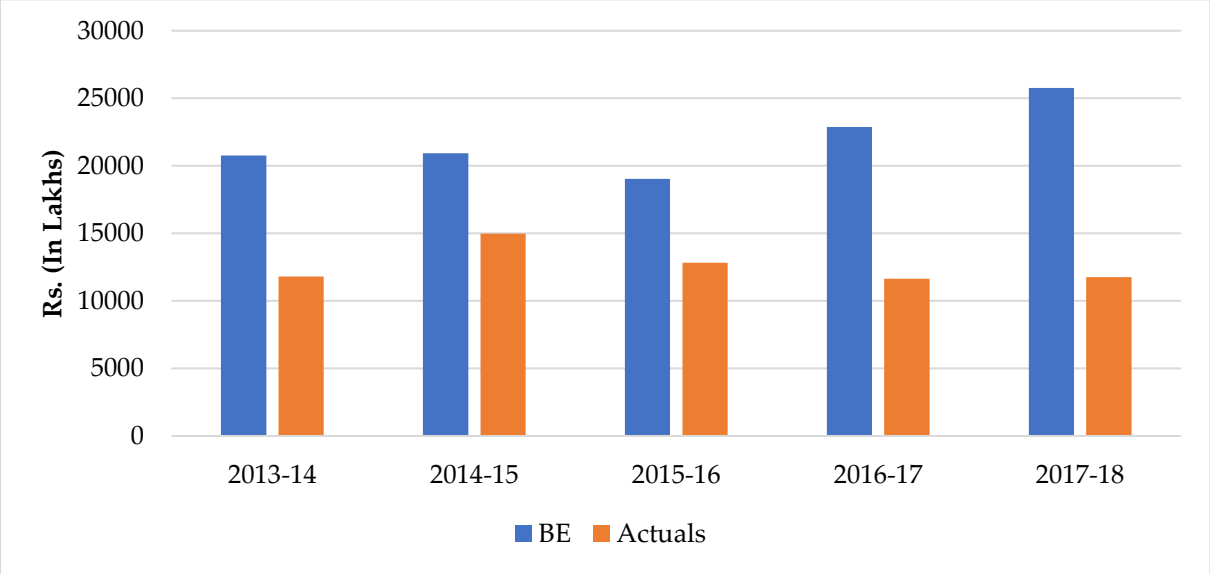
From the above table, it is evident that a major share of the expenditure on women and child are being directed towards only child health specific programmes. Proportion of women and child health expenditure spent on women specific programmes constitute has been less than 10% in the given time period despite an increase in between.

5.2. National Health Mission (NHM) Analysis: Reproductive and Child Health (RCH) Flexi-pool

This is a separate component under NHM which forms 89.3% of total NHM expenditure. Improving the MCH and their survival are central to the achievement of national health goals under NHM. The components of RCH are maternal health, child health, family planning, adolescent health, RBSK, tribal RCH, Pre-Conception

and Pre-Natal Diagnostic Techniques (PCPNDT) activities, human resources, training, programme management, vulnerable groups, urban reproductive child health (Annexure). Under RCH, the largest allocation is under human resources (35.8%), followed by child health (23.9%) and maternal health (23.5%). The most important components of this flexi-pool are described below.

Figure 5. 1: Budgetary Allocations and Expenditure on Maternal Health (Rs In Lakhs)



Source: Consolidated from audited FMR of 2012-13 to 2017-18

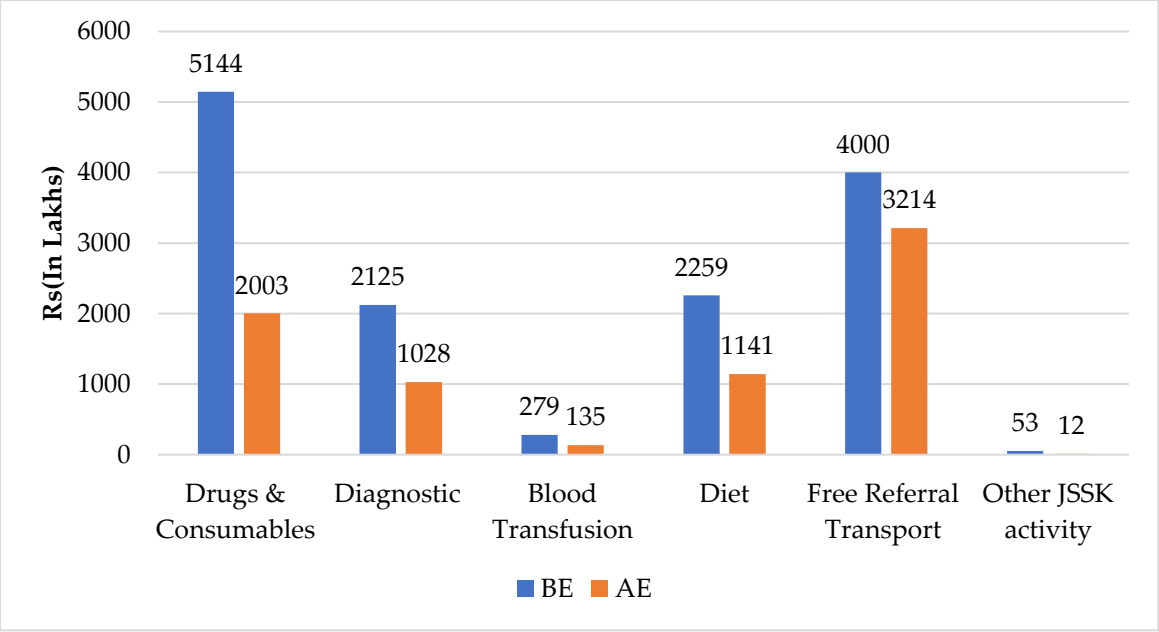
5.2.1. Janani Shishu Suraksha Karyakram (JSSK)

Janani Shishu Suraksha Karyakram was launched in 2011 with a view to encourage institutional deliveries. Women delivering in government health institutions are entitled to the benefits under the scheme. The initiative entitles all pregnant women delivering in public health institutions to an absolutely free and no-expense delivery, including caesarean section. The entitlements include free drugs and consumables, free diet up to three days during normal delivery and up to seven days for C-section, free diagnostics, and free blood wherever required. This initiative also provides for free transport from home to institution, between facilities in case of a referral and drop back home.

Looking at individual components within maternal health, JSSK has received the highest allocation in the past five years with a 11% increase in the allocations from 2013-14 to 2017-18 (Refer Annexure for components under maternal health). However, the average utilization ratio has been only 55% from 2013-14 to 2017-18. Within JSSK, drugs and consumables received the highest allocation on average, followed by allocations for free referral transport, diet and diagnostics. The actual expenditures showed that the highest utilization ratio was for the free referral

transport, followed by diet, diagnostics and lastly drugs and consumables (Figure 5.2).

Figure 5. 2: Average Allocation and Expenditure Under Janani Shishu Suraksha Karykram (JSSK) Components 2013-14 to 2017-18 (Rs In Lakhs)



Source: Consolidated from audited FMR of 2012-13 to 2017-18

5.2.2. Janani Suraksha Yojana (JSY)

Janani Suraksha Yojana was launched in April 2005 as a safe motherhood intervention to reduce the maternal and infant mortality by promoting institutional delivery among pregnant women. Under this initiative, eligible pregnant women are entitled to get JSY benefit directly into their bank accounts.

This component received the most allocation after JSSK. The allocations and expenditure under JSY remained more or less same in the last five years. The biggest expenditures were on institutional deliveries (58.3%), followed by incentives to ASHA (37%). Expenditures on home delivery and administration constituted the remaining 4.5% of expenditures. The average utilization under the scheme was 83%, which was driven mainly by rural use of these services as well as 100% utilization under ASHA incentives (Table 5.2). When we split the expenditure on institutional deliveries under JSY by rural or urban, we find that the utilization in rural areas was much higher than that in urban areas. However, utilization in rural areas has seen a decrease in the past two years after it reached 100% use in 2015-16. Data on performance of JSY in the state indicates that the number of beneficiaries under JSY have steadily decreased over the last five years (Table 5.2). However, this is not visible in total expenditures under JSY, which remains stagnant.

Looking at use of JSY in the field and interviews with PHC accountants, ASHA and MOs, in rural as well as urban areas, confirmed the receipt of JSY entitlements on time. However, problems still existed in entitlements to the benefit due to the following: (i) the need for having a minimum balance for maintaining an account, (ii) the absence of Aadhar cards, and (iii) problems with home address as pregnant women frequently travelled to their parents' house for delivery. This was found more frequently in interviews with ASHAs and MOs in urban health posts as they dealt with a high migratory population. One ASHA remarked, "We get the incentive only when the JSY case is complete. We do not get proper incentives for JSY because the beneficiaries usually do not have the proper documents or they do not have Aadhaar card and hence they cannot open bank accounts. All our efforts go in vain. Our incentives get cut due to this." Therefore, there is a need to focus on improving uptake of JSY in urban areas.

Table 5. 2: Number of Beneficiaries, Expenditures and Utilization Ratios Under of Janani Suraksha Yojana (JSY) in Maharashtra (2013-14 to 2017-18)

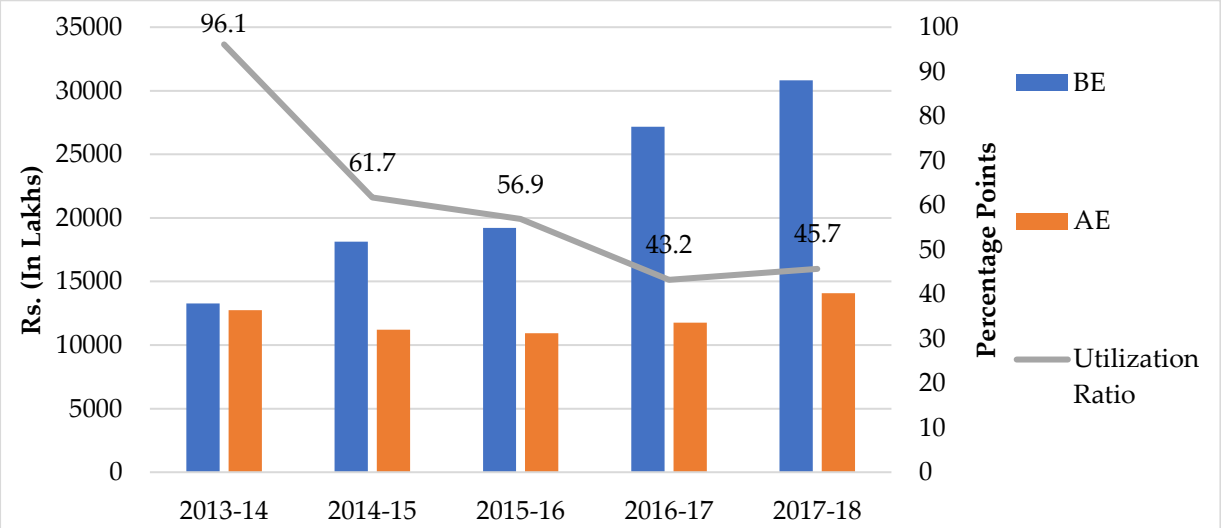
	2013-14	**2014-15**	**2015-16**	**2016-17**	**2017-18**
No. of beneficiaries	403405	345761	339251	281027	103958
BE under JSY in lakhs	5934	5492	5636	5087	5335
AE under JSY in lakhs	4455	4630	4762	4162	4641
Utilisation Ratio under JSY	75	84	84	82	87
Incentives to ASHA utilisation	100	100	100	99.7	115.7
Utilization ratio for Institutional deliveries					
Rural	100.0	96.2	100.0	79.8	82.7
Urban	28.1	40.3	37.9	69.6	61.8

Source: PIB, GoI, MOHFW : http://pib.nic.in/newsite/PrintRelease.aspx?relid=133709,
Data: https://data.gov.in/resources/stateut-and-performance-wise-number-janani-suraksha-yojana-jsy-beneficiaries-2015-16-2017
Source: Consolidated from audited FMR of 2012-13 to 2017-18

5.2.3. Child Health

The budgetary allocation for Child Health has seen an average increase of 24.4% annual growth rate while that in expenditure has only been 3.2%. The average utilization ratio was only 60.7% (Figure 5.3). It has seen a sharp fall from 96% in 2012-13 to 45.7% in 2017-18.

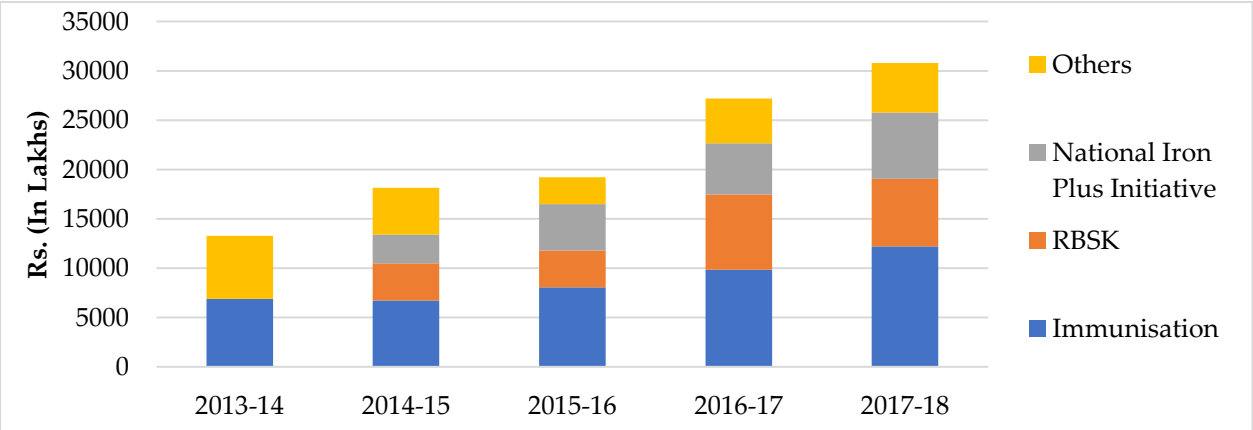
Figure 5. 3: Budgetary allocation and expenditure of child health (Rs In Lakhs)



Source: Consolidated from audited FMR of 2012-13 to 2017-18

Looking at individual components, 39.9% of total allocation goes into immunisation, followed by 21.5% towards RBSK and 18.4% towards National Iron Plus Initiative (NIPI) if we take the entire five years' expenditure together (Figure 5.4). The remaining allocations are for other minor components including RKSK, care of sick children and malnutrition, facility based new-born care, home based new-born care, management of diarrhoea and acute respiratory infection (ARI), micronutrient malnutrition, micronutrient supplementation, child death review and JSSK (sick infants up to one year). Individual components within child health are discussed below.

Figure 5. 4: Budgetary Allocation of individual Components of Child Health



Source: Consolidated from audited FMR of 2012-13 to 2017-18

Note: Others include RKSK, drugs & supplies for child health, nutrition, facility-based new-born care/FBNC, JSSK, child health training, behavioural change communication (BCC), any other intervention, procurement of equipment, CH, child death review, other strategies/activities, and incentive to ASHA under child health

5.2.4. Immunisation

The programme is now known as Universal Immunisation Programme and is one of the key components under NRHM. Under this programme, the government provides vaccination against seven vaccine preventable diseases such as diphtheria, pertussis, tetanus, polio, measles, hepatitis B and TB.

Table 5. 3: Budgeted expenditure (BE) and Actual expenditures (AE) Under Immunisation (Rs In Lakhs) (2013-14 to 2017-18)

	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 AE	Average Utilization ratio
RI strengthening	3368	3368	2489	1847	3629	2472	3706	2197	5898	2670	69.4
Pulse Polio operating costs	3526	3467	2865	3210	2865	3099	3250	1813	3151	3409	96.5
ASHA Incentive			1259.44	1259.44	1474.45	1473.74	2769.73	1605.3	2956.76	1687.35	57% in last 2 years
Others	0	0	121.25	98.47	78.06888	65.95	111.71	61.07	198.99	126.69	71.0
Total	6893	6835	6735	6415	8047	7111	9838	5676	12205	7894	81.0

Source: Consolidated from audited FMR of 2012-13 to 2017-18

Analysis of FMR highlights the same pattern (table 5.3). While allocation for the programme has steadily increased in the past five years, there has been poor utilization of the available funds. The last two years specifically show lower rates of utilization (below 65%). Within immunisation, the highest allocation goes to routine immunisation strengthening project with a utilization ratio of 69%. The second highest allocation goes as operating cost for Pulse Polio with a utilization ratio of 97%. Incentives for ASHAs constituted the third highest allocation (23%), which had 100% utilization in the first three years, and it fell to 57% in the last two years. However, there is mobilisation of children through ASHA or other mobilisers under routine immunisation strengthening, which also receives a high allocation. Hence, we cannot state with surety that utilization of ASHA incentives has fallen. The

allocations for training, salaries of contractual staff, and cold chain maintenance constitutes for less than 2% of the total allocation for immunisation.

However, one must keep in mind that immunisation did not include the cost of procurement of vaccines that are directly supplied by the centre, which would then occupy the largest chunk of expenditure within immunisation. As mentioned earlier, the number of children getting all basic vaccinations has decreased from 58% to 56% in Maharashtra. This decrease in immunisation also varies with region; backward districts like Nandurbar having lowest immunisation for children (12-23 months), with all basic immunisations at 32% to Gadchiroli at 82%. Field visits showed that immunisation was one the important duties that the ASHAs were involved in and coordinated with the Anganwadi workers to ensure outreach for immunisations.

5.2.5. Rashtriya Bal Swasthya Karyakram (RBSK)

This scheme is aimed at early identification and early intervention for children from birth to 18 years to cover defects at birth, deficiencies, diseases, and development delays including disability in Anganwadi, government, and aided schools. Although budget allocations for this scheme were made from 2014-15 onwards, most of the expenditure was incurred on operational costs of preparing and disseminating guidelines and operational plan across districts and providing referral support for secondary/tertiary care. Based on details available for operational cost from 2017-18, a basic pattern of previous years can be estimated. Within operational cost, major allocation (92%) goes for mobility support for mobile health team, followed by new-born screening for inborn error of metabolism (5%). However, no cost was incurred against the same resulting in 0% utilization ratio for the funds for screening. Other than operational cost, allocation is made for referral support for secondary/tertiary care starting from 2014-15, which has seen a gradual increase in four years. The average utilization ratio for RBSK is 53.5%. Within RBSK, support for Mobile Health Unit is the biggest component with the highest allocation and expenditure. It should be also noted that the Mobile Medical Unit for RBSK has the highest allocation under human resources.

5.2.6. The National Iron Plus initiative (NIPI)

This programme receives the third highest allocation at 18% of total allocation for child health. The average utilization ratio for the past four years is 8.8%. The biggest allocation in this initiative is for procurement of drugs namely, iron syrup, IFA tablets, albendazole for under-five children, children aged 5-10 years, and aged 10-19 years (pregnant and lactating women were only added from 2017-18, hence not included in analysis). For an average of four years (2013-14 to 2016-17), children

under-five received the highest allocation under drugs and supplies with the poorest utilization.

5.2.7. Adolescent Health / Rashtriya Kishore Swasthya Karyakram (RKSK)

This programme focuses on adolescents aged 10-19 years, with the objective of improving their nutrition, enhancing mental health, preventing injuries and violence, enabling sexual and reproductive health, preventing substance abuse, and addressing conditions for NCDs. It is observed that allocation dropped to 77.7% in 2014-15 even when the utilization of the available funds in the previous year was well utilized at 97.8%. Although the allocations increased in the following years from the second year, it is still below the allocation of the first year. The deduction in the overall allocation saw a reduction solely due to a reduction in community-based services which receives the highest allocation under RKSK. Allocation for facility-based services has also been halved in five years, albeit with moderate levels of utilization rates. Studies on adolescent health programmes in India impress the need to focus on counselling parents and care providers on the need of adolescents. There is also a need for availability of adolescent services as a part of preventive package at PHCs. In such a scenario, reduction in allocations for community-based services for adolescent health highlights the lack of priority in addressing adolescent health beyond iron and folic acid supplementation.

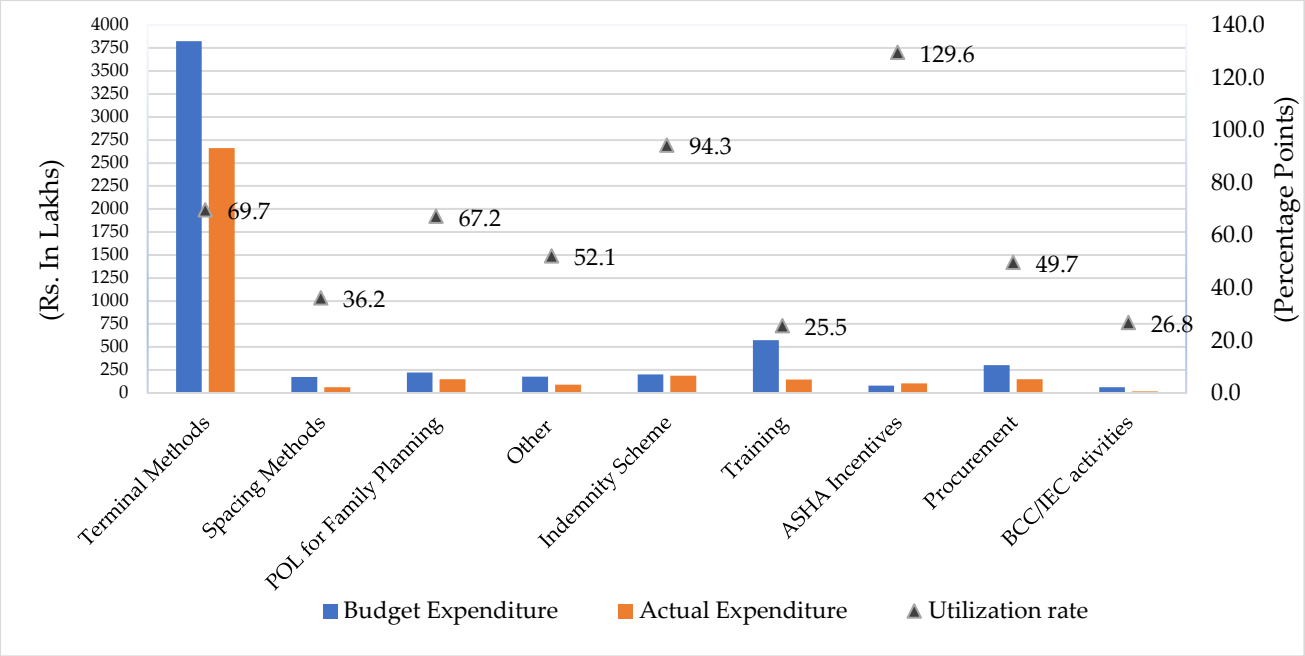
The other allocations under other components of child health form a very small part of expenditures. Care of sick and severely malnourished child is the component that focuses on expenditures related to nutrition, for e.g., establishment of nutrition rehabilitation centres, community-based programmes etc. Within child health are all programmes that directly affect the nutrition status of the child such as care of sick children and severe malnutrition, management of diarrhoea, acute respiratory infection and micronutrient malnutrition, micronutrient supplementation, Infant and Young Child Feeding/IYCF. The expenditures for these are not very detailed. Also, we cannot figure in costs related to human resources as it difficult to separate costs for MCH.

5.2.8. Family Planning

Consolidation of different components (as illustrated in the figure 5.5) of family planning programme accounted under various heads shows that there has been an average of 11% year-on-year growth over the years of the total allocation. Furthermore, our analysis shows on an average 68% was directed to provision of terminal or limiting methods, while spacing methods received only 3% on average. Within the allocations made for the provision terminal/ limiting methods, greater

allocation (an average of 59.4%) is apportioned towards the compensation for female sterilisation, while male sterilisation consisted of only 5%.

Figure 5. 5: Average Budget Expenditure (BE) vs Actual Expenditure (AE) of Family Planning Programme



Note: Utilization rates shown in percentage points
Source: Consolidated from audited FMR of 2012-13 to 2017-18

Training received an allocation of 10%, and procurement of equipment received 5.4%, while nothing was allocated for the procurement of drugs and supplies. Additionally, only 1.4% of the total fund under family planning was allocated for ASHA incentives. Interestingly, the utilization for ASHA incentives under this is 129% that may point to ASHA as an important vehicle for influencing decisions of beneficiaries under family planning. While progress has been made under family planning in Maharashtra, budgetary allocations tend to be skewed towards terminal methods with very little emphasis laid on investment in Behavioural Change Communication (BCC)/ Information, Education, Communication (IEC). This is especially important as Maharashtra's TFR is 1.9 which is higher than that for Kerala and Tamil Nadu. Family Planning also plays an important role in spacing between births, which helps a woman recover her nutritional status before planning another pregnancy. Therefore, there is a requirement to focus on spacing methods and as mentioned earlier, this will need improvement in BCC/IEC spending.

5.2.9. Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Activities

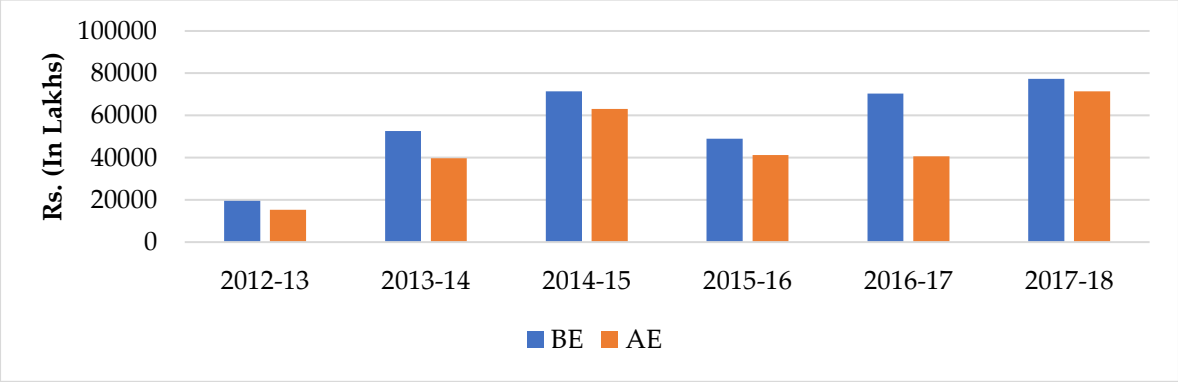
The child sex ratio is an important indicator of discrimination against the girl child. The child sex ratio in Maharashtra was recorded as 894 in 2011 Census data, down

from 913 in 2001 Census. The statistics hints at prevalence of female foeticide in the state. To combat this practice of sex selection and prenatal sex detection from all over India, the PNDT Act was established in 1994. This mission under NHM contributes to the successful implementation of the act. However, considering the lower sex ratio in Maharashtra, the money allocated on this mission, an average of less than 1% (0.1%), seems to be quite insignificant as a proportion of the total RCH, the allocation has seen considerable decrease over the years from Rs 292 lakhs in 2013-14 to Rs 55 lakhs in 2017-18. Utilization levels have been at an average ratio of 49% over the five years.

5.3. Total Expenditure on Maternal and Child Health (MCH) by the State

After adding up NHM and other programmes under RCH for the period 2013-14 to 2017-18, the average total expenditure under RCH results in 2.49% of the total expenditure incurred on health in Maharashtra. Out of which, more than 99% (an average of 2013-15 to 2017-18) of the state health expenditure comes from the NHM programme. However, this does not take into account other expenditures such as provision of public health facilities and health care personnel, which are the state's responsibility. Also, the state also runs certain schemes for mother and children of the tribal population. These schemes are not highlighted under the NHM FMR, hence not identifiable. Therefore, this figure is an underestimate.

Figure 5. 6: Total Budgetary Allocation and Expenditure on Reproductive Child Health (RCH)



Source: Consolidated from audited FMR of 2012-13 to 2017-18

On the whole, the expenditure on MCH has seen an increase over the past five years; however, there seems to a decreased efficiency in spending the allocated amount evidenced from low utilization ratios across all schemes for MCH under NHM. These need to be addressed to accelerate the improvement in MCH indicators in the state.

Chapter 6: Tribal Health

As mentioned earlier, Maharashtra has a high tribal population who have relatively poor healthcare indicators as compared to the state average. For instance, the tribal district of Nandurbar has only 56% institutional delivery rates as against 88% in predominantly rural district of Osmanabad while the state average is almost universal at 90%. Only 33% of children in Nandurbar (as against 56% in Maharashtra) have completed basic vaccination. The poorest MCH indicators amongst the districts were seen in tribal districts, especially those of the Nashik division. Malaria, MCH, malnutrition, sickle cell disease, population growth and infertility, animal bites, substance addictions, poor health literacy, and health of children in ashram schools are the top ailments seen in the tribal population in the country (Expert Committee on Tribal Health, 2018). In order to accelerate the health coverage of the vulnerable tribal population in the state, relaxations in norms for setting up of different healthcare institutions have been provided. For example, in a TSP area, a sub-centre can be set up for a population of 3,000 (as against population of 5,000 in non-TSP area), PHC for a population of 20,000 (as against 30,000 in non-TSP area)[23]. In addition to this, primary health units and mobile health units also have been set up in difficult terrains inhabited by the tribal population.

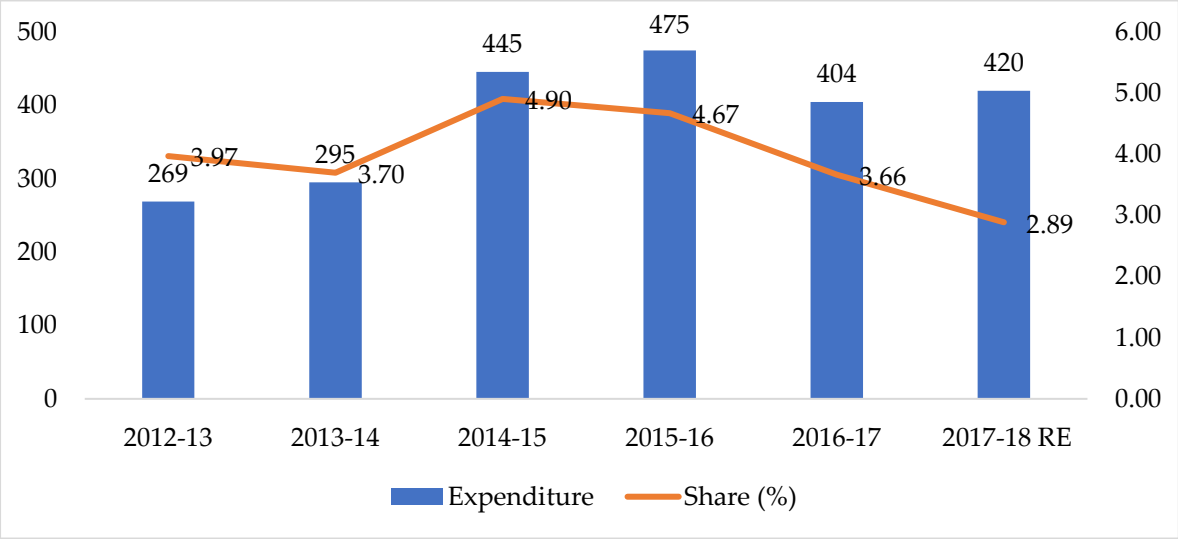
6.1. State level expenditures for Tribal Health

To calculate the state's expenditures on tribal health, all expenditure of Public Health and Family Welfare under Tribal Development Department through TSP were added to the health expenditures in the tribal districts (15) to calculate the total expenditure on the tribal population. The tribal health expenditure has increased from Rs 304 crores in 2012-13 and reached a peak of Rs 811 crores in 2015-16 to come to its lowest in six years of Rs 300 crores in 2017-18. The spike in allocations in 2015-16 was due to the inclusion of NHM funds in the state treasury from that year24.

23 Annual Tribal Component Schemes 2018-19, Tribal Development Department, Government of Maharashtra

24 Before 2015-16, the NHM funds from the centre used to flow directly to the state health societies and therefore were not part of the state budget. This changed from 2015-16.

Figure 6. 1: Total Tribal Health Expenditure as actuals and as percentage of Total Health Expenditure in Maharashtra 2012-13 to 2017-18. (Figures in Rs in Crores)



Source: Maharashtra State Budget Documents 2012-13 to 2017-18.

The actuals show that the expenditure has stagnated and is slowly falling from 2014-15 to 2017-18 after a spike in 2014-15[25] (Figure 6.1). The tribal expenditure in the state is estimated to be only 2.89% of Total State Health Expenditure (TSHE) in 2017-18, which is its lowest in five years.

Among the expenditures incurred under TSP for the Department of Public Health and Family Welfare, the highest average expenditure is undertaken as grants-in-aid to various tribal districts (Table 6.1). The second major expenditure incurred is under the programme of NHM. The third highest average expenditure is done for the purposes of establishment/maintenance/construction of health institutes. Through the analysis of budget documents, we do not get a clear picture on what expenditures occur at the district level. It is also not possible to surmise whether these expenditures are above what the state should already be spending for the individual district.

[25] While the 15 districts have been considered as they are defined as tribal districts, there are other expenditures undertaken in these districts which are not under the purview of TSP and hence district figures are a little overestimated. Due to lack of a fool proof exclusion method of expenditure done purely under TSP, the figures do not denote expenditure exclusively for Tribal. However, none of these districts have been accounted for the grants-in-aid for salary, and hence the district figures are an underestimation already. However, the net result of this wanting calculation is best seen as an underestimation i.e., the total expenditure undertaken for purely the tribal would be greater than the figures mentioned in the report.

As expenditure data under TSP is unclear in the state budget, we undertook analysis of data available through Maharashtra Plan Schemes Information Management System (MPSIMS) website. The data consists of department outlays on schemes only, hence we cannot discern the use of TSP funds for non-programme allocations. We analysed data on outlays by the PHD for the year 2017-18, within the state plan and district plan. The total of state and district outlays within the PHD was Rs 515,668.75 lakhs in 2017-18 (Table 6.1). Looking at the source of funding for the schemes, we see that TSP funds cover 7.7% of the total scheme allocation; it covers 3.4% of the allocations at the state level and 4.3% at the district level.

Table 6. 1: Allocation of funds within the Public Health Department (PHD) within the State Plan and District Plan in 2017-18

Type of Funds	Level of Allocation	Outlay in Lakhs (Rs)	Percent of Total Outlay (%)	Percent of total outlay by fund type
General	State Plan	404625.58	78.5	84.9
	District Plan	33426.71	6.5	
TSP	State Plan	17529.92	3.4	7.7
	District Plan	22400.53	4.3	
OTSP	State Plan	0	0.0	0.5
	District Plan	2542.99	0.5	
SCSP	State Plan	35143.02	6.8	6.8
	District Plan	0	0.0	
		515668.75	100.0	100.0

Source: Consolidated from MPSIMS, https://mahades.maharashtra.gov.in/MPSIMS/userLogin.do#
TSP-Tribal Sub-Plan, SCSP-Schedule caste Sub-Plan, OTSP-Other Tribal Sub-Plan (areas outside TSP districts)

Table 6. 2: Allocation of Funds under National Health Mission (NHM) and Non-NHM within State Plan (Rs. In lakhs)

Category	NHM	Non-NHM	Total
General	280779.39	123846.19	404625.58
SCSP	32178.71	2964.31	35143.02
TSP	16809.83	720.09	17529.92
Grand Total	329767.93	127530.59	457298.52

Source: Consolidated from MPSIMS, https://mahades.maharashtra.gov.in/MPSIMS/userLogin.do#
TSP-Tribal Sub=Plan, SCSP-Schedule Caste Sub-Plan.

Table 6. 3: Allocation of Funds to Health-related Schemes under Tribal Sub-Plan (TSP) within State Plan, 2017-18

Sr No	Scheme Name	Outlay in lakhs (Rs)	% of TSP Outlay
1	National Rural Health Mission (NRHM)	12243	69.8
2	National Urban Health Mission (NUHM)	3196.1	18.2
3	Revised National Tuberculosis Control Program (RNTCP)	589.49	3.4
4	Mahatma Jyotiba Phule Jeevandayee Arogya Yojana	500	2.9
5	National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)	411.98	2.4
6	National AYUSH Mission	220.08	1.3
7	National Programme for Control of Blindness (NPCB)	133.35	0.8
8	National Leprosy Eradication Programme (NLEP)	62.1	0.4
9	National Vector Borne Disease Control Programme (NVBDCP)	48.6	0.3
10	National Tobacco Control Programme (NTCP)	39.81	0.2
11	National Mental Health Programme (NMHP)	38.92	0.2
12	Integrated Disease Surveillance Project (IDSP)	28.37	0.2
13	National Programme for Health Care of the Elderly (NPHCE)	17.68	0.1
14	National Oral Health Programme (NOHP)	0.01	0.0
15	National Programme for Prevention and Control of Deafness (NPPCD)	0.01	0.0
16	Free Travel to Sickle Cell Patients in ST Fare along with one Companion Scheme	0.01	0.0
17	Rajiv Gandhi Jeevandayee Yojana TSP	0	0.0
	Total	17530	

Source: Consolidated from MPSIMS, https://mahades.maharashtra.gov.in/MPSIMS/userLogin.do#

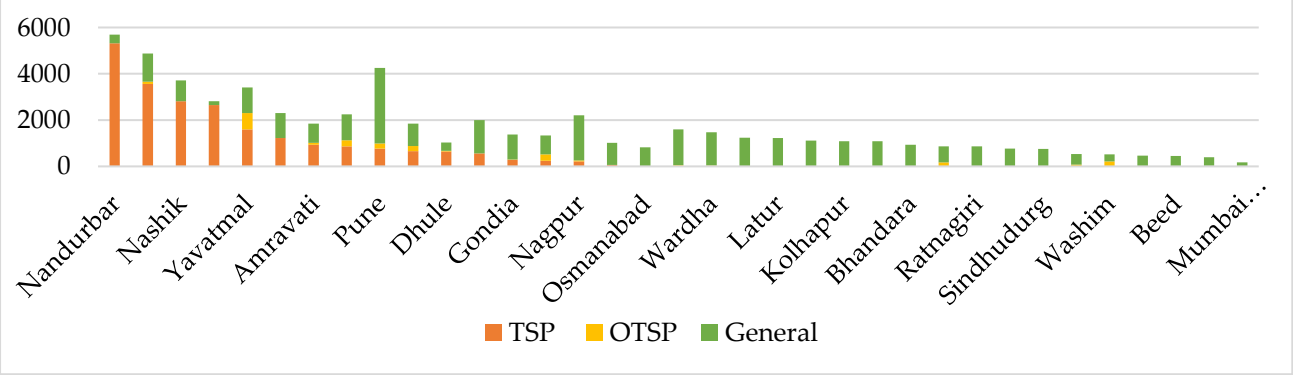
Within TSP, NHM forms the bulk of the allocations under the state plan with 95.89% of funds. However, the share of TSP under NHM is 5.1% (Table 6.2). In addition, TSP allocations under NHM cannot be traced at the district level both from the FMR as well as from MPSIMS. Hence, it is difficult to ascertain the NHM expenditure on tribal health. The highest outlay under TSP under the state plan was for NRHM,

followed by that for NUHM and the RNTCP (Table 6.3). The use of TSP funds under NUHM for urban areas needs further explanation; it forms 18.2% of total TSP outlay in the state whereas tribal population is largely concentrated in rural/hilly areas/forest areas. It would be interesting to know how TSP allocations in urban areas are used—something that is beyond the scope of this study.

Allocation of TSP under District Plan:

The TSP flows to 15 districts in Maharashtra. As the tribal population presence is not restricted to only these 15 districts, separate Other TSP funds are made available in areas other than those under TSP. At the district level, however, Other TSP funds cover only 0.5% of total scheme allocations. Figure 6.2 shows the district wise scheme outlays for the year 2017-18. The districts with the highest allocations are those which receive TSP. In fact, allocations for schemes under TSP are much higher than those from the state's general coffers. These allocations cover construction and establishment of SCs, PHCs and CHCs as well as tribal area specific schemes including dai (midwives) meetings and special incentives for staff in these districts (see Tables 5 & 6 in Annexure for examples of outlay in district plan). However, though seemingly the districts under TSP have been allocated higher money than others, if one combines TSP and the Health Department's allocations, the picture is not complete as it does not include NHM expenditures. Unless NHM expenditure is also added, nothing can be inferred with confidence and it is not possible to access district-wise allocations under NHM using publicly accessible documents. It is also important to look at the utilization of the funds available in tribal districts. The overall utilization of TSP for health stood at 67.81% for the five years from 2012-13 to 2016-17 (Table 6.4). However, this does not tell us about the utilization at district level.

Figure 6. 2: Scheme Outlays under District Plan in Maharashtra 2017-18 (excluding allocations through National Health Mission - NHM)



Source: Consolidated from MPSIMS, https://mahades.maharashtra.gov.in/MPSIMS/userLogin.do#

Table 6. 4: Expenditures and Utilization of Funds for Health Under Tribal Sub-Plan (TSP) in Maharashtra State Budget from 2012-13 to 2016-17. (Rs. In crores)

	Budgeted Expenditure	Actual Expenditure	Utilization%
2012-13	221.45	174.20	78.66
2013-14	263.38	211.82	80.42
2014-15	290.60	306.25	105.38
2015-16	686.51	335.63	48.89
2016-17	473.01	284.13	60.07

Source: Calculated based on State Budget Documents for years 2012-13 to 2016-17

6.2. National Health Mission (NHM) Expenditure on Tribal Health:

As seen earlier, the highest allocations under the TSP is on NRHM and NUHM, which together 87% of total TSP allocation. Within NHM, the only expenditure that can be clearly discerned as tribal is the Tribal RCH from the FMR. Although the allocation has increased over the years, it is observed that under this particular scheme, the amount spent as a percentage of the total RCH has consistently been 0.5% (average of 2013-14 to 2017-18). While the allocation recorded an average of 25% year-on-year growth, the expenditure recorded only 13.4% of average year-on-year growth. The average utilization of funds of the five years has been 82.6%. Other expenditures for tribal population under NHM are not discernible through the FMR as they are not split district-wise. However, the state also has various other health schemes that are tuned towards the tribal population (Table 3.4). Some others like the Mobile Medical unit in Nandurbar or Gadchiroli do not have enough details. However, from MPSIMS we can understand that TSP allocations for national disease control programmes like RNTCP, etc. also flow to districts. Similarly, we are unable to discern specific tribal related expenditure under NUHM. It appears that the state contribution towards NRHM/NUHM includes TSP funds but we are not able to see whether this fund is ploughed back to tribal districts or not as district-wise disbursement of NRHM fund is not accessible.

Although scheme-wise allocations to tribal districts seem to be highest in the state, field data on the unavailability of public health facilities do not really confirm this. Nandurbar that gets the largest scheme linked allocation in the district has vacancies in health posts as well as shortage of medicines in the PHCs. Its health indicators are also the worst in the state. Other studies have questioned the adequacy of allocations for health sector under TSP (TISS, 2015). This raises three questions that remain unanswered and need further investigation: (i) whether allocations on the non-scheme aspects such as human resources and institutions are enough to enable the utilization of funds on schemes, (ii) whether the allocations through NHM to tribal

districts are adequate to address the health needs, especially in view of the fact that TSP funds are almost entirely transferred to NHM at state level, and (iii) whether allocations are being made for tribal specific diseases problems like sickle cell disorders or de-addiction programmes. Our analysis shows, expenditures incurred on programmes like sickle cell disorders are not discernible through the budget and expenditure analysis. Field data from ASHA interviews point to problems of alcohol and tobacco addictions in both men and women in Nandurbar, which need to be addressed in the region-specific programmes.

Chapter 7: Urban Health

Maharashtra has a very large urban population i.e., 45.2% of its total population resides in cities. Although most of this is due to the concentration of population in the Mumbai metropolitan agglomerate and Pune city. Mumbai alone has a population of 1.2 crores, of which 41% live in its slums, according to the 2011 census. Studies point to poor health indicators in the slum populations. There is also a huge floating population, like construction workers and pavement dwellers, in the city that may not have access to health care. This is compounded by the large private sector presence in health care that increases costs on household health expenditure, which may not be affordable to all. The following sections provide an analysis of urban health expenditure at the state level, followed by expenditure on specific schemes in urban areas and then presents an analysis of health expenditure at the Mira Bhayandar Municipal Corporation (MBMC).

7.1.1. State Level Expenditures for Urban health

State level expenditure incurred on urban population accounts for an average of 33.9% (average of 2012-13 to 2017-18) of the total expenditure incurred on health as seen in state budget documents. It should be noted that health related expenditures incurred by individual municipal corporations are not a part of the state budget. Also, expenditures via the NUHM have been described separately. In the state budget, urban health expenditure has seen an increase over the years (table 7.1). State level expenditures in urban areas include grants-in-aid to various hospitals, purchase of machinery and equipment for the hospitals, and repairs and construction work of hospitals, urban family welfare centres etc.

Table 7. 1: Actual Expenditure (AE) of Urban Health (in lakhs) in State Budget 2012-13 to 2017-18

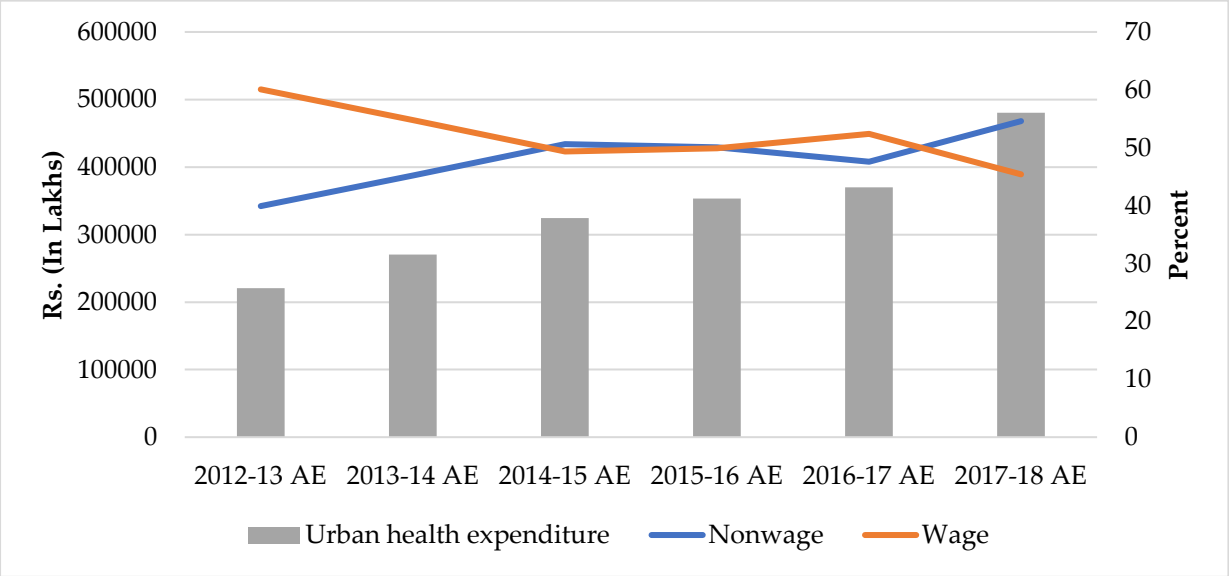
(in lakhs)	2012-13 AE	2013-14 AE	2014-15 AE	2015-16 AE	2016-17 AE	2017-18 RE
Salaries	132673	148183	160042	176449	193799	218195
Grants-in-aid	22427	54616	106616	109421	113476	192635
Capital Assets	36399	44163	35550	46050	37697	42257
Management & operati-on of medical facilities	26693	20560	16849	19121	19171	19328
Others	2628	2982	5212	2486	5712	8177
Total	220819	270505	324269	353527	369854	480591

*Note: Others include advertising and publicity, deduct recoveries, inter-account transfer, livestock, publications, scholarships/stipends and subsidies.
Source: Consolidated from State Budget documents 2012-13 to 2017-18.

The highest component of urban health expenditure is on salaries. The second highest allocation goes to grants-in-aid given to various hospitals or medical institutions. Creation of capital assets and maintenance incurs the third highest expenditure. Management and operation of medical institutions, which follows, incurs expenditure on the running of various medical institutions, but it has seen a decline from the earlier years.

A break-up on the basis of wage classification indicates that a majority of the expenditure goes into remunerating wages (refer to Figure 7.1). While the trend has been of that of an overpowering wage component, it has been moderated in the later years and the non-wage component has improved.

Figure 7. 1: Urban Health Expenditure in Maharashtra 2012-13 to 2017-18



Source: Consolidated from State Budget documents 2012-13 to 2017-18

7.1.2: Urban Scheme Allocation within Public Health Department (PHD) in State Plan

Programme allocations for urban health in the PHD are available on the MPSIMS website. Analysis of the allocations for 2017-18 under the state plan shows a total outlay of Rs 4,57,298.52 lakhs in the PHD (Table 7.2). Of this, 56.9% (Rs 2,60,064.29 lakhs) was for urban specific schemes. These included major constructions, national AIDS control programme (for Mumbai), NUHM and urban family welfare centres. National Health Mission (NRHM + NUHM) formed 12% of total scheme allocation. However, the scheme-wise analysis of the state budget or the MPSIMS data does not provide a clear picture of the entire urban health expenditure; the gaps exist especially with regards to NHM. For example, it was seen that allocations for various urban welfare centres figured under NRHM rather than under NUHM.

Similarly, it was seen from municipal budget analysis (described below) that components of NRHM like RCH were not separately segregated for urban and rural areas. Hence, just adding expenditures under NUHM gives an incomplete picture of urban expenditure. Also, looking at district plan, we see that there are no specific urban scheme allocations at the district level. It was also noticed that 1.46% and 1.23% of the urban scheme allocations (NUHM) flowed through the Schedule caste Sub-Plan and TSP funds respectively.

Table 7. 2: Scheme Allocation in Maharashtra State Plan according to Maharashtra Plan Schemes Information Management System (MPSIMS) 2017-18 in (In Rs. Lakhs)

Sr No.	Scheme Name	Total outlay	Fund Source	Scheme	Percent of urban allocation
1	City Family Welfare Bureau	26.26	General	NRHM	0.01
2	Urban Family Welfare Centre.	1657.84	General	NRHM	0.64
3	Grant for Urban Family Welfare Centres run by Local Bodies & Other Agencies.	1470.01	General	NRHM	0.57
4	Major Constructions - Urban Health Services	15000	General	Non-NHM	5.77
4	National Urban Health Mission	21119.85	General	NUHM	8.12
6	National AIDS Control Programme Mumbai	4088.13	General	Non-NHM	1.57
7	NUHM Cell in Secretariat	0	General	NUHM	0.00
8	National Urban Health Mission	3809.75	SCSP	NUHM	1.46
9	National Urban Health Mission (NUHM)	3196.09	TSP	NUHM	1.23
	Total Urban allocation	260064.29	(% of total scheme allocation in state plan)		56.9
	NHM allocation within total urban allocation	31279.8	(% of urban allocation)		
	Total Health allocation state plan	457298.52			

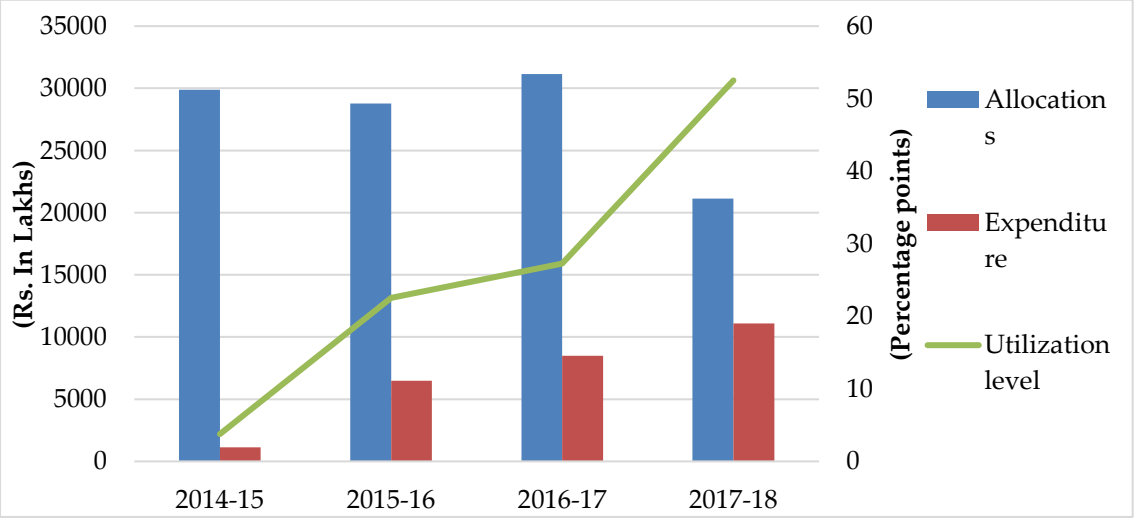
Source: Consolidated from MPSIMS, https://mahades.maharashtra.gov.in/MPSIMS/userLogin.do#
Note: SCSP stands for the Schedule caste Sub-Plan and TSP stands for Tribal Sub-Plan.

7.2. National Health Mission (NHM) expenditure on Urban Health: National Urban Health Mission (NUHM)

Although NUHM was started from the year 2014-15 with an aim to address the health concern of the urban areas, it is still an evolving mission. Allocations have not been completely segregated between NRHM and NUHM. Some, especially those under RCH, continue to flow through NRHM. Hence the municipal corporation gets allocations both under NRHM and NUHM. The proportion of allocation under NRHM being routed to urban areas is not available through the FMR. Therefore, the following analysis focuses on NUHM only.

National Urban Health Mission receives on an average 10.3% of the total budget allocated under the umbrella of NHM. These allocations have seen a downward trend, with the allocation in the latest year under study (2017-18) falling to the lowest level in four years. Moreover, utilization levels of the available funds have seen very sluggish and moderate increase over the years. Individual expenditures are only available for 2017-18. The biggest allocation is for strengthening of health services (69% of total NUMH allocation for 2017-18), which includes expenditure on human resources, infra structure strengthening, procurement, untied grants and outreach services. Let us look at some of the components below.

Figure 7. 2: Trends of National Urban Health Mission (NUHM) programme (2014-15 to 2017-18)



Source: Consolidated from FMR of various years

7.2.1. Human Resources

Human resources were allocated the highest component (65% of health strengthening); however, utilization in the last year was only 52%. Looking deeper, only ANMs salaries were utilised by 72%, but salaries for staff nurse, full time MOs at UPHCs remained under 60%. In fact, part-time MOs at the UPHCs showed only

7% utilization. Field insights point to a need for an extra MO at the PHCs. As with rural PHCs, the MO is tasked with administrative as well as clinical tasks, which are especially taxing when there are programmes be implemented like Mission Indradhanush in 2016-17 that required the doctors to visit schools to give information on vaccination to parents. Staff remarked that employing volunteers for programmes like pulse polio rounds was difficult as they did not get sufficient remuneration for the work.

7.2.2. Infrastructure Strengthening

Construction of new PHCs, CHCs, and their upgradation received 18% of allocation within infrastructure strengthening, which has seen more than 100% utilization. This was observed during field visits where four primary health posts were visited. Three of the buildings were old while one was newly constructed. The most urgent need according to the MOs in three of the PHCs was the need for renovation and space, while the fourth one was only recently upgraded and the space was available. There were also plans to construct another PHC in one of the areas. None of the PHCs offered delivery services or 24-hour emergency services.

7.2.3. Untied Funds (UF)

Untied funds were released to only UPHCs in 2017-18. The utilization was only 18% for that year. There is no information on allocations for previous years. Our field data showed that although all the four PHCs received UF since last year, most have not utilised the funds. The Rogi Kalyan Samitis (RKS) were only set -up last year and are not functional yet. The MOs indicated that the funds would be used for purchasing benches and chairs and renovating and decongesting the UPHC.

7.2.4. Community Processes

Community processes were allocated 10% of total NUHM budget in 2017-18. Utilization under community processes was 38.8%. The components under community processes included ASHA costs and MAS.

Accredited Social Health Activist (ASHA) Cost:

Utilisation under ASHA was 56% in 2017-18. Under ASHA costs, the highest allocation and expenditure was for incentives. Utilization was over 100% for ASHA incentives. More insights into the role of ASHA can be found from field data. All PHCs visited had at least 15 ASHAs attached to them.

Each urban ASHA has a very important role in outreach. Unlike her rural counterparts who cover a population of 1000, she covers a population of 1000-2500 (Ministry of Health and Family Welfare, 2014). This is because her area of coverage is

mostly slums that have a high density of population in a small area. This, however, increases her workload. Each ASHA also had a few MAS26 under each. The ASHAs are also motivators to the women of the MAS who can play an important role as a community mobiliser. All the ASHAs (4) interviewed felt their honorarium was too little for the mount of work they had. One ASHA said," The salary is very less. It should be increased. People ask us what our salary is and when I tell them they say it's not enough and that I am working for very less". Another said, "If someone works as a housemaid, they get more salary than us". The ASHAs also faced difficulties in closing the JSY cases to avail incentives as beneficiaries do not have proper documents or Aadhar cards to avail benefits. They also felt the need for renumeration of travel expenses as they are required to go around their areas and the PHCs. In conclusion, the PHCs face issues of shortage of staff and contractual staff like ASHA, volunteers believe that their renumeration is low compared to the work required.

Mahila Arogya Samiti (MAS)

Under MAS, UF have got almost all of the allocation; however, their utilization is only 5%. Field data showed that the MAS had received their UF last year but they received their training only in March, just before the closing of the financial year 2018-19. MAS is still in its infancy during the course of the study. Focus group discussions were conducted with MAS members in Mira Bhayandar (Box 7.1).

7.3. Mira Bhayandar Municipal Corporation (MBMC)

Mira Bhayandar is a suburb of Mumbai which forms a part of the Mumbai urban agglomeration. According to the 2011 census, its population is more than 8 lakhs, of which 7.61% or more than 61,000 people reside in slums. The health department under the MBMC has 9 UPHCs, 1 mother and child hospital, and one general hospital under its jurisdiction. The main health-related functions of the corporation include the running of the PHCs, hospitals under its jurisdiction, and immunisation (including pulse polio) and implementation of the disease control programmes. The expenditure under health has seen a consistent increase from Rs 884.75 lakhs in 2014-15 to Rs 3,011.52 lakhs (revised estimates) in 2018-19 (Table 7.3).

[26] The MAS (Mahila Arogya Samiti) is a group of women under the ASHA who function as community mobilisers within their area. Each MAS receives an untied grant of Rs 5,000 per year. Each ASHA is responsible for around 10 MAS.

Table 7. 3: Expenditure under Health for Mira Bhayandar Municipal Corporation (MBMC) 2014-15 to 2018-19 in lakhs

Expenditure on	2014-15	2015-16	2016-17	2017-18	2018-19 RE
Hospitals and Dispensaries	802.55	1041.36	1680.17	2040	2886.52
Immunisation	82.2	80.73	83.95	112	125
Total	884.75	1122.09	1764.12	2152	3011.52

Source: Municipal Corporation Budget Documents
https://www.mbmc.gov.in/view/mr/budget

Table 7. 4: Allocations under National Health Mission in Mira Bhayandar Municipal Corporation (MBMC) for 2018-19

Sr No	FMR Heads under NHM in Mira Bhayandar Municipal Corporation 2018-19	NHM Budget allocation in lakhs (Rs)	
		NRHM	NUHM
1	Service Delivery Facility Based	17.4	12.34
2	Service Delivery Community Based	20.31	9.66
3	Community Interventions	58.5	14.7
4	Untied Fund	0	25.7
5	Infrastructure	0.34	0
6	Procurement	15.48	0
7	Referral Transport	0.45	0
8	Human Resources	18.74	192.7
9	Training	1.58	0
10	Reviews, Research, Surveys and Surveillance	0.5	0.3
11	IEC/BCC	1	1.71
12	Printing	2.67	0.24
13	Quality Assurance	0	0.71
14	Drug House Warehousing and Logistics	1.61	0
15	Public-Private Partnership (PPP)	10.02	0
16	Programme Management	21.9	13.52
17	IT Initiatives for Strengthening Service Delivery	0	0
18	Innovations	0	0
	Total	170.5	271.58

Source: Documents shared by the MBMC. Note: The FMR heads have been revised under the new PIP guidelines, and same heads are in use for NRHM and NUHM.

National Health Mission is an addition to this budget. The analysis of documents shared by MBMC, shows NHM allocations for year 2018-19 (Table 7.4). NRHM allocations form 38% of the total NHM allocations. National Rural Health Mission

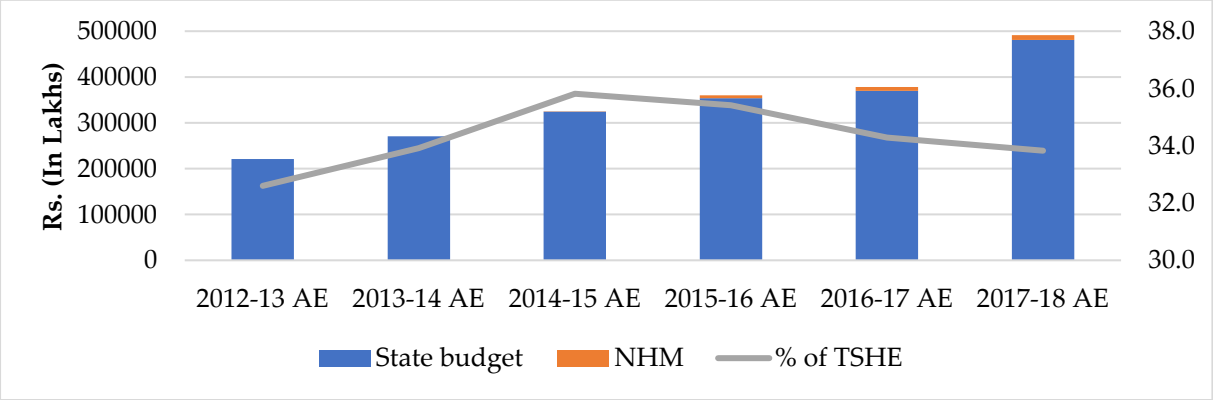
allocations consisted mainly of scheme related expenditure such as JSY compensation, measles-rubella immunisation operation costs, ASHA activities, RNTCP related expenditure, and strengthening of district level programme management unit. National Urban Health Mission was mainly responsible for operational costs at the UPHCs (9 UPHCs), staff salaries for MOs, staff nurses, ANMs, and lady health visitors (LHVs), and the city programme management unit.

7.4. Total Urban Health Expenditure in the State

Adding up the state health expenditure and NUHM for each year shows that the total expenditure on urban health was an average 34.3% of the TSHE. Although the overall expenditure on urban health has increased gradually over the years, the year on year growth rate of the total expenditure showed a decreasing trend since 2014-15, except for a rise in the last year. Additionally, the introduction of NUHM in 2014-15 did not contribute to any significant increase in the total health expenditure on urban health.

It should it be noted that MBMC is just one of the eight municipal corporations under the Mumbai agglomeration with Mumbai city being the biggest and one of the 26 total municipal corporations in Maharashtra. Absence of contributions to health by the municipal corporations in the state budget gives an incomplete picture of the urban health expenditure. Also, a significant percentage of urban health expenditure occurs as part of RCH and the communicable and non-communicable disease flexi-pool within NRHM. This maybe especially significant in the case of Brihanmumbai Municipal Corporation, of Mumbai city, which is the nation's largest municipal corporation.

Figure 7. 3: Urban Health Expenditure: Absolute Figures and as a Percentage of Total Health (Department of Health and National Health Mission Excluding Expenditures by City Corporations and Municipal Bodies)



Source: Consolidated from State Budget and FMRs from 2012-13 to 2017-18
Note: TSHE refers to Total State Health Expenditure

Urban health expenditure, therefore, is confined to the same set of schemes that are part of rural health programmes although the spectrum of disease varies between the two areas. For example, it is well known that NCD like diabetes, hypertension and hence resultant cardiac diseases are more prevalent in the urban areas due to the sedentary and stressful lifestyle. Similarly, recent instances of high air pollution and its resultant diseases need greater attention in urban areas. In child health, there is a need to focus on childhood obesity. Constraints in the availability of open spaces and easy access to junk food further complicate this situation. There is also a need to focus on mental health problems resulting in anxiety and depression in adolescents. Therefore, the health battles of urban spaces call for different focus areas as compared to rural areas.

High density of population especially within the Mumbai agglomeration calls for different strategies to address its health problems. An UPHC caters to 50,000 slum population, a population comprised of low-income migrants with poor health indicators. ASHAs employed here have to put up with a huge workload, a large area to cover, and not enough remuneration. National Urban Health Mission although envisioned to work in the urban spaces has yet to gain its footing like the NRHM, as evidenced by the lack of separate accounting for RCH and diseases under NUHM. Currently the municipal corporations focus on only maintenance of already existing health facilities and serves as a conduit for dissemination of the NHM disease programmes. Area wise focus of health needs is missing in the current health approach.

Box 7.1: Mahila Arogya Samiti (MAS): Member Perspectives

Six focus group discussions were conducted with members of the MAS. Each group consisted of women from two different MAS but within the same PHC. Each group had about five-six women. Most women have been part of the group for six months to a year. Most women except two have been a part of other women's groups. Most of the women have been counselled by the ASHAs to join the MAS. In each group, the women state the need to help others in the community as a reason for joining. For instance, a lady from Navghar area says, "We can give information to people about the various services available in the PHC and the municipal hospital. We live in a slum area. So, we all help each other. We have taken people to the hospital too when they were not able to go by themselves." Although some women are not convinced, they joined because of ASHA; one woman in Uttan Naka said, "The ASHA worker met me and asked me if I want to join a group like this and I agreed". Similarly, another one said, "I didn't know much about this, but I joined anyway to see how the group works".

Role of MAS: The women largely say that the role of MAS is to help the needy. Examples include paying for medicines of people in need, arranging a ride to hospital, giving information to pregnant women about various vaccinations, convincing resistant mothers for the need for vaccination, and buying necessities for the local anganwadi, etc. All the women were aware of the Rs 5,000 that was received in the bank account of MAS. Only one group was yet to use the money in the account as they were unable to spend the time to collect the cheque book from the bank and the bank was also very far.

Use of funds: One of the groups used the fund to clean up public toilets and install locks to make it safer for women to use them. They also provided a dustbin there. Another group visited people's homes and counselled pregnant women regarding check-ups and also facilitated visit to the hospital. Another group organised a session on the importance of sanitary pads for adolescents and also distributed some to the girls. The fund was also used to buy medicines and other food items for some elderly people as well as some disabled. A few of the groups bought mats, books, and posters for the children in the Anganwadi centre. In the future, many women want to bring improvements in their areas by providing dustbins in the street as well cleaning up gutters that leads to unhygienic conditions. One of the groups wanted a couple of MAS groups to come together in order to bring about better improvements. All the decisions were participatory in nature. The women meet once a month and deliberate on the issues the funds should be used for. One of the women said, "All of us (MAS members) meet with ASHA workers and we list out the problems faced by people. Since we all gather together, we can discuss our problems; usually we have the same problems. So, we all have one goal". Sometimes, the ANM was also consulted in order to come to a decision.

Challenges: The women feel that the amount received is insufficient. They also feel that they are unable to use the money immediately at times of urgent need. "If someone is very poor and they need medicines, we cannot give it. But this should be allowed since it is the immediate need", said one member. "One of the group members needed to do a CT Scan, and the MO advised her to go to KEM hospital, but even travelling costs are a lot, which they cannot afford. If we give someone money, then the others will ask too." The other challenge was that the women could not use all the money at one time.

In terms of forming the MAS, some of the women felt the fixing a timing for the meeting was difficult as many women were at work, and it was difficult to find time to attend the meetings. One ASHA remarked that it would be good to provide some extra money to supply refreshments to the women attending. Another recommended that the women should be awarded a certificate/ID designating them as part of the samiti; it would serve as an encouragement to them. The women mentioned it was difficult working as a group initially but with time they have been able to put aside their differences and work together.

The ASHAs received training for MAS only in March 2019 although some of the MAS received money in 2018. Hence, MAS are still in an initial phase, only time will tell whether they are sustainable and effective mobilisers of health in urban areas.

Although recently there have been a lot of activities in terms on construction of new PHCs in the area, it is yet to be seen whether this strategy encourages use of public facilities. In order to provide universal health coverage, there needs to be simultaneous improvement in all aspects of public facilities including provision of human resources and adequate facilities as well as improvement in quality of services. Provision of services and schemes that are fine-tuned to the area they serve is essential. This requires the municipal corporations to be proactive in their roles of health provision.

Chapter 8: Delivery of Health care services

The delivery of health care services is the most important component of health care expenditure. It includes expenditure on human resource and capital expenditure, which influences the availability of health care when required and also is the most expensive component. Delivery of health services also requires improving its accessibility. In Maharashtra's case, improving accessibility means reducing OOPE on health care in the state. This can be done by means of providing universal care or by providing universal coverage. Maharashtra is still at a nascent stage in providing universal care; however, the state-run insurance scheme provides some protection against CHE in the poor. Let us look at how the state spends health service delivery by analysis of state budget documents and FMR.

8.1. Human Resources

8.1.1. Human Resources: State

Personnel and Non-Personnel Health Expenditure:

Health related expenditure from these departments can be classified as personnel and non-personnel expenditure. Personnel expenditure includes the following object Heads: salary, wages, professional services, contractual services, overtime allowances, rewards, grant-in-aid (salary), and other contractual services. All other object heads have been classified as non-personnel expenditure. An analysis of the health expenditure indicated that the share of personnel expenditure has declined while the share of programme costs has been increasing over years (Table 8.1). The average share of personnel expenditure stood at about 51% for the years 2012-13 to 2017-18. The non-personnel expenditure includes the construction, repair and maintenance of hospitals, and office and administrative expenses.

Table 8. 1: Share of Personnel and Non-Personnel in State Budget Excluding National Health Mission (NHM)

(In lakhs)	2012-13 Act	2013-14 Act	2014-15 Act	2015-16 Act	2016-17 Act	2017-18 RE
Non-Personnel	268742.1	340101	429031.6	490884.1	536496	795029.4
Personnel	408607.4	457449.6	479484.6	525847.3	567155.7	658374.1
Total	677349.6	797550.7	908516.2	1016731	1103652	1453403
Share of Personnel cost (%)	60.3	57.4	52.8	51.7	51.4	45.3

Source: Consolidated from State Budget documents from 2012-13 to 2017-18

8.1.2. Human Resources: National Health Mission (NHM)

Human resources are the backbone of the NHM as the efficient working of programmes require sufficient staff to run it at various capacities. Allocations for human resources have been accounted under two different sections in FMR (2013-14 to 2016-17 under RCH and 2017-18 under Additionalities) and for our analysis we have discussed them together. Allocations for human resources in total has seen an average increase of 26.2% year on year growth, while the average year on year growth for expenditure has been 69.5%. The average utilization ratio for five years has been 74.7%. Under RCH, the highest allocation (18.3%) is made towards remunerating staff contracted under NHM. However, the utilization levels (average utilization for four years is 69.5%) have been falling each year, which may signal vacancies in the programme.

Within human resources (Table 8.2), the highest allocation (37% of total remuneration for all contractual staff) goes into remunerating the ANMs, supervisory nurses and lady health visitors. The second highest allocation (33% of total remuneration for all contractual staffs) under human resources goes to 'Others'. Under this, the highest allocation is for RBSK exclusive teams. However, the average utilization rate stood at 76.3%. The next highest allocation goes to specialists that include anaesthetists, paediatricians, obstetricians/gynaecologists, surgeons, physicians, dental surgeons, radiologists, sonologists, and pathologists. Utilization rate for specialists remained among the lowest with mere 47.7% depicting yet another gap in recruitment.

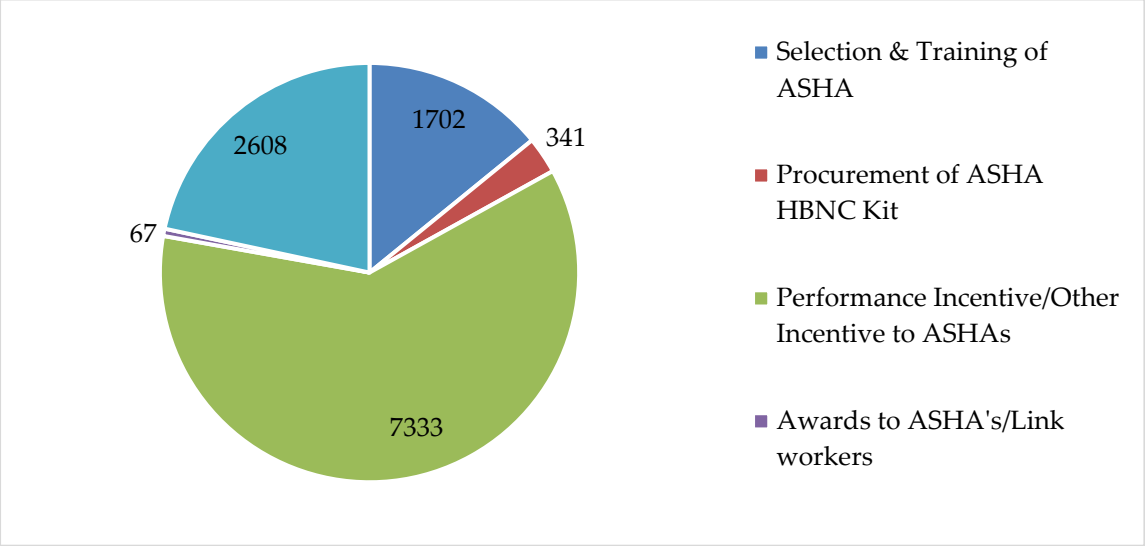
Primary data from visits to Nandurbar and Osmanabad showed that a total of 16 PHCs required an additional MO. The shortage was acute for nurses, where 12 of the PHCs, did not have the requisite number of nurses prescribed by IPHS. There were also vacancies for multiskilled workers in 13 out of 16 PHCs. However, six of eight PHCs in Nandurbar have a lab technician as opposed to three of eight in Osmanabad. Only four PHCs have an accountant in Nandurbar and only two in Osmanabad. Although most PHCs had an ambulance, almost all of them needed an extra driver as one driver alone couldn't be available for 24 hours. When asked what was the most urgent need at the PHC, most MOs answered that requirement of staff was one of the most urgent things at the PHC.

Accredited Social Health Activist (ASHA):

This component pertains to the hiring and remunerating of ASHAs that are backbone of NHM. Allocations under ASHA are 14.3% of additionalities and 6.8% under NRHM RCH FP. The allocation under ASHA have increased with an average

year-on-year growth of 27.13%, while expenditure recorded an average year-on-year 29.5% increase. The average utilization ratio was 89.45%. Within the cost incurred on ASHA, performance incentives provided to ASHA constituted the major cost, followed by the cost incurred for the selection and training of ASHA, followed by procurement of ASHA Home-Based New-born Care kit (Figure 8.1). While incentives to ASHA have seen a steady increase, there has been a decline of allocation under selection and training, and awards to ASHAs. The allocation for the procurement of Home-Based New-born Care kits was reduced to zero in 2017-18. Allocations for ASHA Resource Centre was made only in the last two years and has seen a year over year increase.

Figure 8. 1: Average allocation of Accredited Social Health Activist (ASHA) from 2013-14 to 2017-18 (in Rs Lakhs)



Source: Consolidated from FMRs of various years.
Note: The figures are in Indian Lakh Rupees. HBNC refers to Home Based New-born Care.

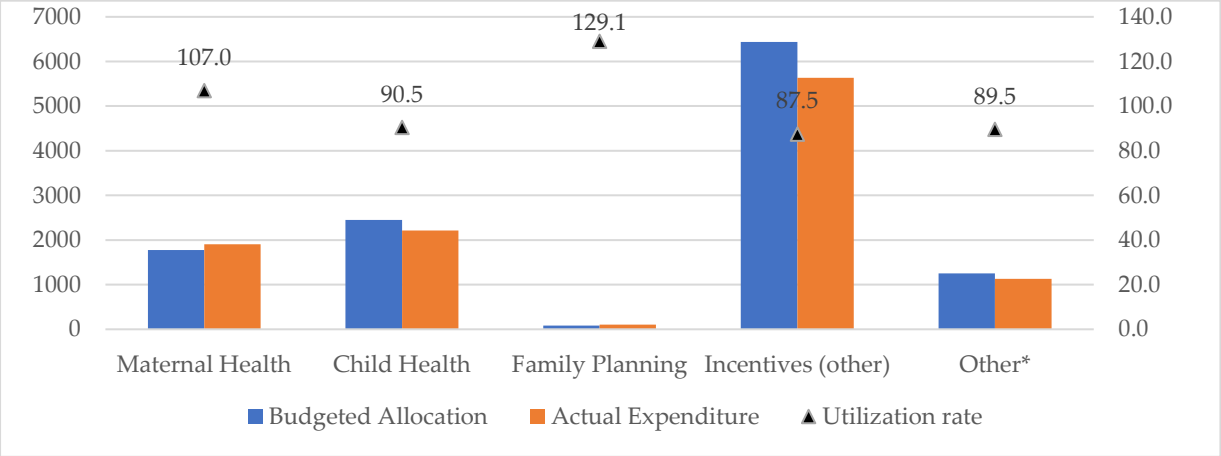
Incentives for ASHAs under each programme gives a holistic picture of how ASHA is successfully employed for each of the programmes under RCH. Based on the available detailed data for the latest two years, ASHA receives greater incentives for 'other' (an average of 51%), followed by incentives for child health[27] (20.2%%). It is noted that incentives received under maternal health[28] constitute only 17% of the

[27] Child Health incentives includes Rashtriya Kishori Swasthya Karyakram (RKSK) and National Iron Plus Incentive (NIPI) incentives

[28] JSY incentives are not part of ASHA incentives under additionalities but were included in JSY under maternal health. These have been included here only for analysis of ASHA incentives and not

total incentives, which highlights the lack of active involvement of ASHA in achieving better maternal health. Similarly, involvement of ASHA for achieving better family health programme is barely seen as the incentives under the same head and accounts for only 1% of the total incentives.

Figure 8. 2: Average Budget Expenditure (BE) and Actual Expenditure (AE) of Accredited Social Health Activist (ASHA) under National Health Mission (NHM) (Rs. In lakhs)



Source: Consolidated from FMRs of various years (2013-14 to 2017-18)
Note: Utilization rates shown in percentage germs.
*Other refers to support provisions to ASHA such as uniform, diary, ASHA Ghar, etc.

Table 8. 2: Addition of State and National Health Mission (NHM) component for Human Resources (2012-13 to 2017-18)

(In Lakhs)	2012-13 Act	2013-14 Act	2014-15 Act	2015-16 Act	2016-17 Act	2017-18 RE
Personnel	408607	481644	509209	557021	600922	704611
Total	677350	797551	908516	1016731	1103652	1453403
Share of Personnel cost	60.3	60.4	56.0	54.8	54.4	48.5

Source: Consolidated from State Budget and FMRs of (2012-13 to 2017-18)

With the addition of the NHM component to the state personnel cost component, there has been an increase of 3% per year on average. However, overall, the share of personnel cost in the THE sees a declining trend (refer to table 8.2)

as part of ASHA as a whole. ASHA incentives already form a biggest part of ASHA expenditure, adding JSK incentives would only increase the total but not affect the proportions as a whole.

8.2. Capital expenditure

8.2.1. Capital Expenditure: State Budget

As per the NHA guidelines, it is critical to account separately for current expenditure on healthcare goods and services and capital expenditure on healthcare; it discourages the use of total health expenditure in health as an overarching concept. Capital formation in healthcare system is defined by NHA, as "…total value of assets that providers of health services have acquired during the accounting period (less the value of disposals of assets of same type) and that are used repeatedly or for more than one year in the provision of health services" (NHA Guidelines, p.3). National Health Accounts boundary for India includes capital expenditure on buildings and construction (excluding minor repairs), medical education and pre-service training (NHA Guidelines, Figure 2.1). Based on this definition, capital expenditure on health include major heads of 4210 and 4211 that are capital expenditure for health care and the expenditure on medical education, research and training falls under major head 2210.

Table 8. 3: Share of Capital and Revenue Expenditures from State Budget Document (Rs In Lakhs)

(in lakhs)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE
Physical Infrastructure Exp	36000	41500	47000	65100	60200	83700
Human Infrastructure Exp	54400	65000	69100	81300	91400	104100
Revenue expenditure	586950	691051	792416	870331	952052	1265603
Total Expenditure	677350	797551	908516	1016731	1103652	1453403
Physical Infrastructure Exp (%)	5.3	5.2	5.2	6.4	5.5	5.8
Human Infrastructure Exp (%)	8.0	8.1	7.6	8.0	8.3	7.2
Total capital exp (%)	13.3	13.4	12.8	14.4	13.7	12.9

Source: Consolidated from State Budget of various years.

The expenditure on physical infrastructure in the state mainly comprised of construction and extension of rural hospitals. Purchase of machinery and equipment recorded the highest expenditure within physical infrastructure. The training of various health personnel comprised of the human infrastructure component within

the medical education and research department. The total capital expenditure (physical + human infrastructure) has been hovering around 13-14% during the period 2012-13 to 2017-18 (Table 8.3). Therefore, the state spent a larger amount on training and updating of its personnel. The revenue expenditure accounted for the remaining 86-87% during the same period.

8.2.2. Capital Expenditure: National Health Mission (NHM)

Under NHM, capital expenditure includes constructions and training. The logic is of course linked with the idea of human resource development being a capital rather than revenue expenditure. The distribution between construction and training is seen in Table 8.4.

Table 8. 4: Allocation (Budgeted Expenditure) of funds under Capital Infrastructure (Rs In Lakhs)

	2013-14	2014-15	2015-16	2016-17	2017-18
Constructions	6121	9178	12782	7212	10987
Training	3959	3875	3645	5463	4952
Total	10080	13053	16428	12675	15939

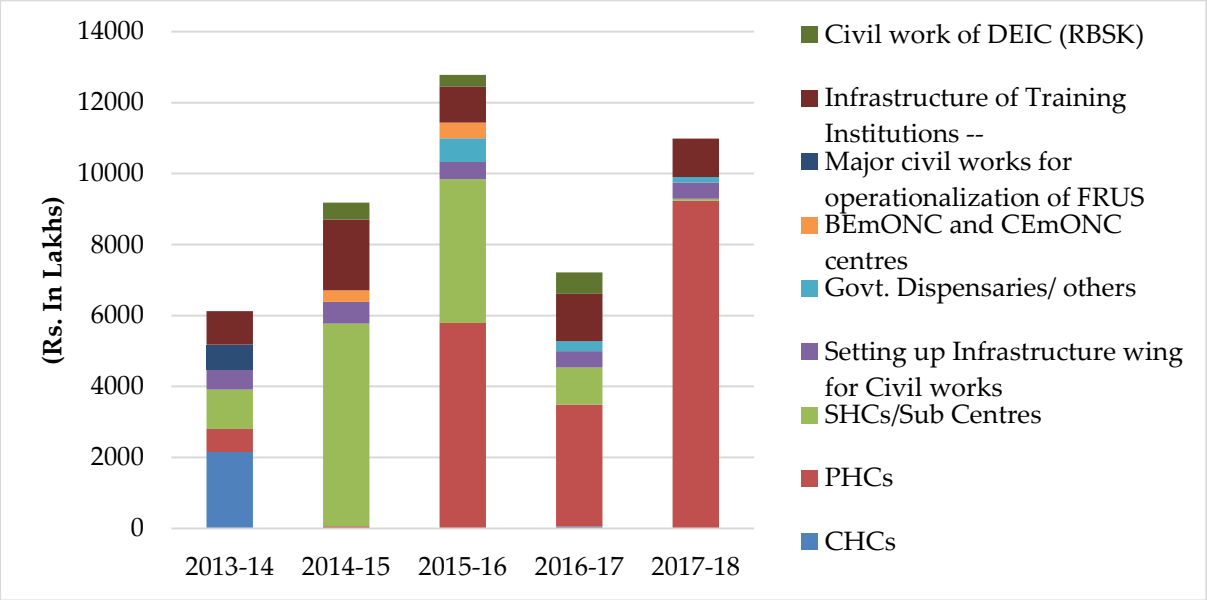
Source: Consolidated from audited FMR of various years

8.2.1.1 Hospital strengthening and New Constructions

Under NHM, this includes activities of upgradation of existing public hospitals at different levels. Allocation under this activity have seen sharp drops over the past five years with an average year-on-year decrease in growth rate of 47%. Under Hospital Strengthening, all of the allocation has been made to the upgradation of CHCs, PHCs etc. Under upgradation, the highest allocation was made towards upgradation of mother child health wings, and constructions other than DH, CHCs, PHCs, SCs in 2013-14 with 100% utilization rate.

While provisions for strengthening have reduced, the share for new constructions has seen an increase, however with mixed utilization levels. Years 2014-15 and 2015-16 both saw poor utilization levels going below 50%, while 2016-17 experienced an overutilization. A shift in allocation was noticed from construction of new SCs to PHCs from 2015-16 (Figure 8.13).

Figure 8. 3: Allocation of Funds Under New Constructions



Source: Consolidated from audited FMR of various years

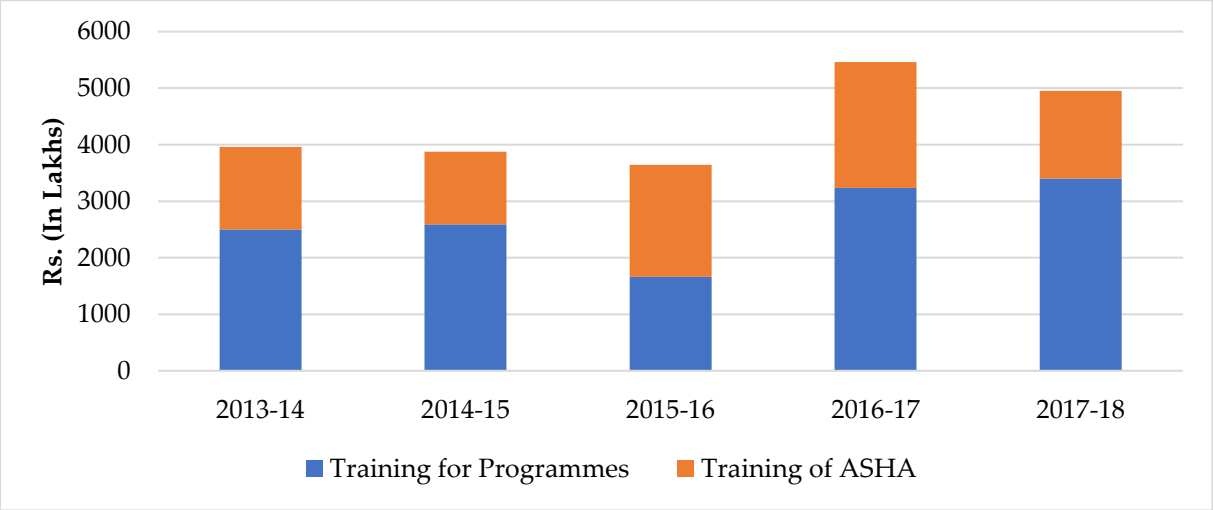
8.2.1.2. Training

Allocation to training has seen an increase over the five years except for a dip in the year 2015-16. Training for programme includes training for maternal health, child health, family planning, adolescent health, programme management, etc. On an average training for family planning constitutes the highest allocation over the five years; it saw a sharp increase in 2016-17 from the previous year. Meanwhile, allocation for training provided to nurses has seen a steep decline from the second year onwards. The programme that received the least allocation is the PCPNDT where nothing was allocated for any of the years. Average of five years shows allocations on maternal health training constitute of 16.9%, while allocations on child health training constitute of 10.4% of the total allocation under training component.

On an average, the utilization levels have been less than 80% across all components of the training programme. The least average utilization rate (19.5%) was recorded for the component of development of training packages. The highest utilization (average- 79.4%) was recorded for the training of other health personnel.

Other than the training mentioned above, there are specific trainings provided to ASHAs with regards to their involvement in various health programmes under NHM. The average utilization ratio of five years has been 70%.

Figure 8. 4: Allocation of Funds under Training



Source: Consolidated from audited FMR of various years

8.2.1.2. Total Capital Expenditure

Addition of capital expenditure from NHM to the capital expenditure of the state increased its share by 1% every year on an average. On an average, capital expenditure accounts for 14.2% of the TSHE.

Table 8. 5: Share of Capital and Revenue Expenditures in Total Health Expenditure. (Rs in lakhs)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE
State share	90400	106500	116100	146400	151600	187800
NHM share		7894	5110	8346	11814	13935
Total Capital Expenditure	90400	114394	121210	154746	163414	201735
Total State Health Expenditure	677350	797551	908516	1016731	1103652	1453403
Capital (%)	13.3	14.3	13.3	15.2	14.8	13.9

Source: Consolidated from State Budget and FMRs of 2012-13 to 2017-18

The upward trend in capital expenditure is a good thing in the state with its large population. There is a shortfall of 18% in the number of PHCs, 22% in the number of SCs, and 35% in the number of CHCs in the state in 2015[29]. Increase in expenditure on the construction is a positive sign for improvements in public health facilities.

29 Rural Health Statistics document,2015

Similarly, upgradation and constructions are also occurring in the urban landscape; field visits to MBMC showed that new constructions of urban health posts are ongoing that helped in decongestion of the PHC, enabling better access to the patient. Regular trainings and updating in medical knowledge are also important in addressing current health needs.

Upgradation in public health facilities is one of the first steps in the route towards providing universal care as the presence of functional public health facilities means a reduction in OOPE on private health care, thus reducing CHE.

8.3. Untied Funds (UF)

With the objective of increasing the functional, administrative, and financial autonomy of various health facilities, provisions in the form of UF, annual maintenance grants and RKS[30] funds are made available. These funds are available for use of undertaking of any innovative or responsive facility specific need-based activity. Thus, they help in increasing the functionality of the health facility.

Box 8.1: Rogi Kalyan Samiti (RKS)

Each health facility be it PHC, CHC or DH has an RKS. This samiti is formed with representations from local government as well as the functionaries of the health facility. The RKS members review the case load and progress of the health facility and make decisions regarding the use of untied funds. In Osmanabad and Nandurbar, **the Rogi Kalyan Samitis** were formed in 2007 and were present at every public health facility till the PHC. All decisions regarding the expenditure under the grant were undertaken by them after discussion in the meetings. Interviews showed most RKS functioned smoothly; however, RKS in bigger hospitals such as DHs were prone to undue influence of political parties due to Zilla Parishad representations. Untied funds in for hospitals for urban area i.e. Mira Bhayander Municipal Corporation (MBMC) were yet to be utilised as the RKS were just formed.

[30] Rogi Kalyan Samiti (Patient Welfare Committee) / Hospital Management Society is a registered society, acts as a group of trustees for the hospitals to manage the affairs of the hospital. RKS / HMS is free to prescribe, generate and use the untied funds with it as per its best judgement for smooth functioning and maintaining the quality of services.
https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=1078&lid=145 accessed on 26 August 2019.

From 2014, the three separate grants of UF, RKS corpus, and the annual maintenance grant were merged into one single Untied Grant. The grant given to CHC and DH was doubled; it was raised to Rs 5 lakhs from 2.5 lakhs for CHCs and its equivalent, and from Rs 5 lakhs to Rs 10 lakhs for DHs. Also, it was decided to allocate the funds in two parts. The first part is a fixed grant of half the amount for each facility (for example, Rs 87,500 for PHC). The second part will go to a pool of all the remaining PHC funds together and will be allotted according to the case load of the PHC.

Allocation and expenditure have both fallen over the past three years; however, usage has been greatly optimal with an average rate of 91%. The highest allocation goes to VHSNCs at 35.5%, followed by PHCs at 28% on average with average utilization rates of 83.9% and 100.8% respectively. Sub Centres received 19% of the allocation with an average utilization rate of 95.6%.

The most common uses under untied grants from data collected on field are given in Table 8.5. It is interesting to note that for every PHC visited, the most common expenditure of their UF was for stationery and photocopies, followed by the cost of medicines to be provided for patients in case of shortage, especially in Nandurbar. On enquiry about the sufficiency of the UFs, most officials in Nandurbar felt that the funds were insufficient to meet the expenses. A PHC MO said, "They are not sufficient. An increment of 20% is necessary. The number of patients is increasing, so more medicines are required. Repairing of the building or its construction is also required". Another added, "It is not sufficient. For medicines and stationery, the funds should be raised by 20%". One accountant in Osmanabad said, "More funds are required for proper water supply, bio-medical waste management, repairing of the compound wall, and purchasing RO water filters and medicines that are not available in the PHCs." Therefore, on the whole, most of the officials interviewed were in agreement that the UF was insufficient.

In MBMC area, the use of UF by the Urban Health Posts had not yet occurred due to absence of a functional RKS. At the time of field visits, the RKS had been formed but committee meetings were yet to take place to decide the use of the funds.

The most common challenges faced in utilizing the funds included delay in receiving the funds and an increase in paperwork required in the utilization of the funds. Other challenges included the unavailability of bills for small purchases using the UF. According to one the MOs, larger purchases required an invitation for quotations that increased the burden of paperwork on them. Although thought to be

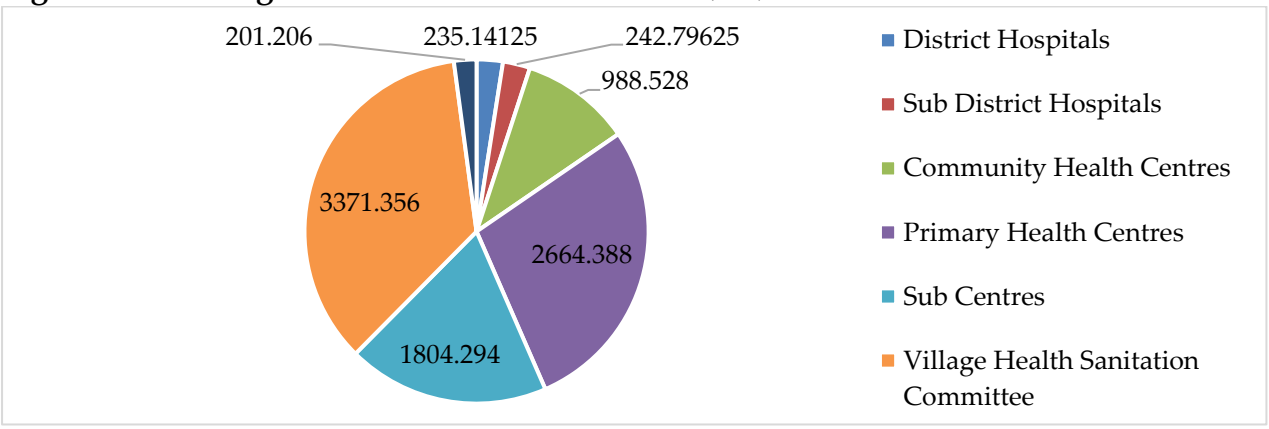
insufficient by many, UF are one of the successful features of NHM which show promise of autonomy in planning which is visible in its high utilization ratios.

Table 8. 6: Use of Untied Funds (UF) under National Rural Health Mission (NRHM) in Various Health Facilities in Nandurbar and Osmanabad districts, Maharashtra

Type of facility	Untied funds used commonly for		
VHSNC	1) Providing food and medicines for malnourished children and pregnant women	2) Cleanliness of premises	3) Organising Bal Vikas camps, breast feeding camps
PHCS	1) Stationery and Photocopying	2) Medicines in case of shortage	3) Water coolers for the PHCs, buying doppler machine, baby warmer, lid for water tank, nets for windows, bedsheets, repairing the gates, and on need of patients
SDH/RH	1) Installation of RO filter/water purifier	2) Emergency services, medicines, treatment of sick people	3) Cleanliness and maintenance of facilities
DH	1) Expenditure related to patients are done	2) Repairing, of lights, painting and blood collection	3) Bathroom & toilet maintenance,

Source: Field data interviews of relevant officials at various levels, February 2019.

Figure 8. 5: Average Allocation of Untied Funds (UF)



Source: Consolidated from audited FMR of various years
Note: The figures are in lakhs of Indian Rupees

United funds at all levels of health facility have been very popular as seen by its utilization ratio. They have been successful to a small extent in bridging the gap between the allocation and requirement. Although the most popular use of the grants has been for office expenses, it has been used for other things like providing water purifiers and other essential equipment at the PHCs. Untied funds make a case for a more decentralised decision making in health care.

8.4. Procurement

8.4.1. Procurement in State Budget

Procurement under state budget is classified as purchase of medicines, equipment, machinery, materials and supplies that are required at various hospitals and health facilities. Procurement under the state budget has seen a mixed trend in its share of TSHE. Expenditures for the same have fallen in two years from its previous levels. On an average, procurement by the state accounts for 4.3% of the total health expenditure (Table 8.7). However, due to lack of details on procurement in state budget, it's difficult to analyse further.

Table 8. 7: Expenditure on Procurement in State Budget from 2012-13 to 2017-18

(in lakhs)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE
Procurement	34175	36949	31736	50562	43899	56356
Grand Total	677350	797551	908516	1016731	1103652	1453403
Procurement (%)	5.0	4.6	3.5	5.0	4.0	3.9

Source: Consolidated from State Budget from 2012-13 to 2017-18.

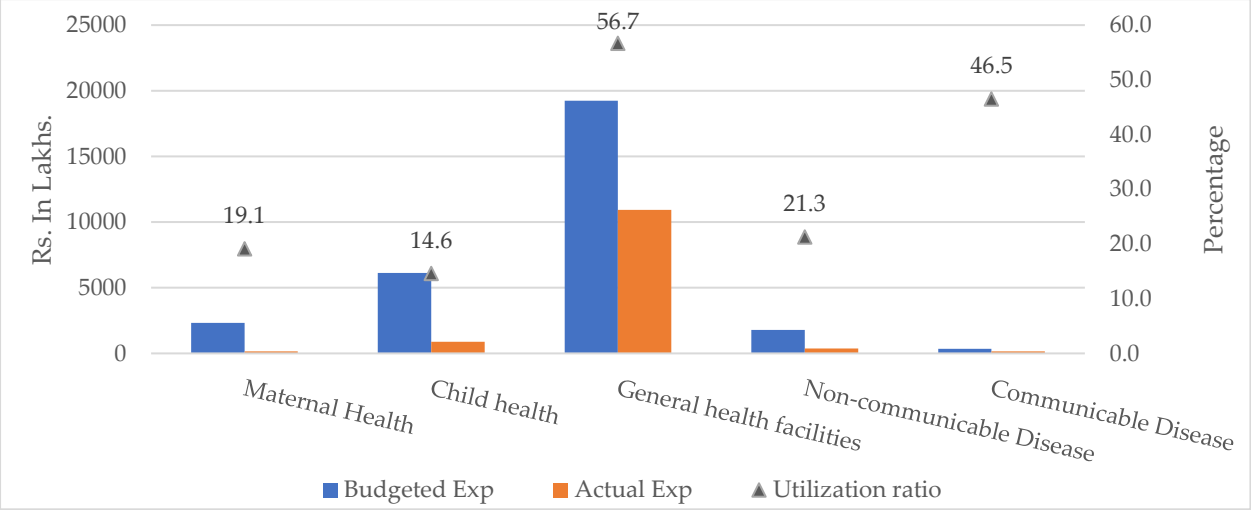
8.4.2. Procurement in National Health Mission (NHM)

Procurement consists of procurement of equipment, medicines and provision of free diagnostic services. Procurement of drugs and supplies constitute the major allocation of this component (Figure 8.6). While budget allocations have gone up for procuring medicines, the utilization level on an average has been only 44.6% in Maharashtra. Estimated expenditure on drugs in 2017-18 has fallen to a five-year low. Medicines constitute of the major expense for hospitalisation cases in government hospitals in both urban and rural Maharashtra. A similar trend is observed for out-patient cases where medicines contribute the most to the total expenditure incurred on treatments for ailment. It should also be noted that average expenditure on medicines in Maharashtra is higher than all-India average for medicines.

Within procurement of drugs and supplies, the highest allocation goes to the procurement for general health facilities. Utilization of the funds for the same have

been poor at 57%. The second highest allocation was made towards procurement for NIPI. However, actual expenditure incurred was very low resulting in an abysmal rate of utilization 7%. The third highest allocation goes for procurement for maternal health, which constitutes 7.8% of all procurements. However, no allocations have been made towards procurement of ASHA Drug Kit or supplies for blood services or National Programme for Health Care of the Elderly (NPHCE). Meanwhile, despite allocations made for the procurement of sanitary napkins under RKSK programme, negligible expenditure has been incurred (utilization rate of 1.3%).

Figure 8. 6: Budgetary Allocation and Expenditure of Procurement of Drugs and Supplies

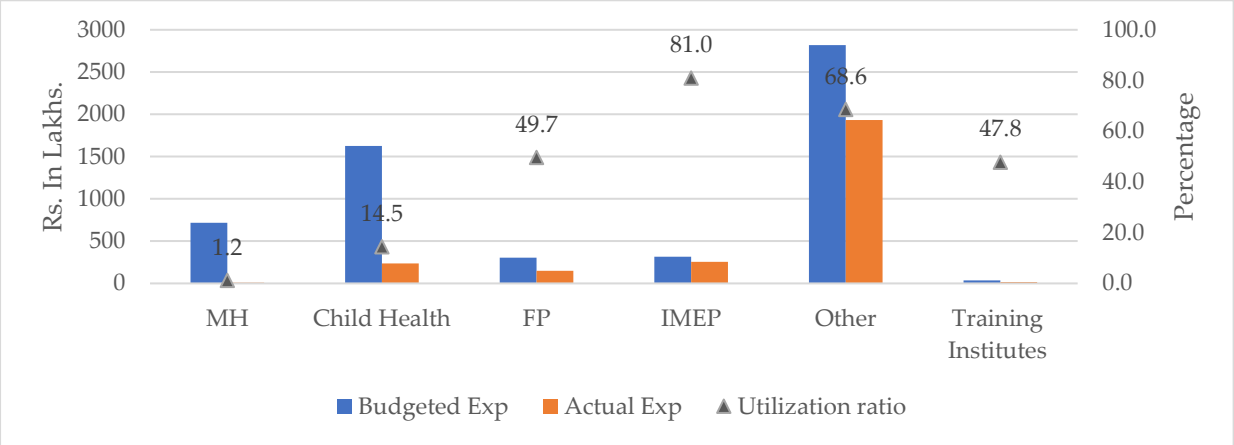


Note: Procurement under RBSK and NIPI added to Child health, Procurement under NVBDCP, NLEP and RNTCP added to Communicable diseases, Procurement under NPCB, NMHP, NTCP and NPCDCS added to Non-communicable diseases. Categories with not expenditures incurred have been deleted.
Source: Consolidated from audited FMR of various years

While provision of free diagnostic tests was only started in 2016-17, its allocation has seen an increase year over year. However, outlay hasn't seen an equal increase leading to lower utilization levels. Within diagnostic tests, pathological tests recorded a 10% utilization rate and radiological services recorded 0% utilization.

The least allocation among procurements goes to the procurements of equipment. The highest allocation under procurement goes towards "others". These are mostly general procurement which cannot be put under any single programme. However, utilization remains poor at 66.5%. The second highest allocation goes to RBSK and RKSK; however, their average utilization rate is suboptimal at 18% thus highlighting the huge gap between allocation and actual spending. Meanwhile programmes like NPCDCS, RNTCP do not receive any allocation for procurement of equipment.

Figure 8. 7: Budgetary Allocation and Expenditure of Procurement of Equipment



Note: Procurement under RBSK, RKSK added to Child health, Procurement under AYUSH, NPCDCS, RNTCP, NPCB, NMHP, IDSP, NTCP and NOHP added to others as expenditures negligible. IMEP stands for Infection Management and environment Plan. 'Other' excludes all the programme mentioned already.
Source: Consolidated from audited FMR of various years

After adding procurement under NHM programme to the state procurement (NHM data is available only from 2013-14), there has been at least a 1.5% increase in the share of total procurement each year. Overall, the procurement for all six years accounts for 5.1% of the total health expenditure.

Table 8. 8: Expenditure on Procurement in State Budget and National Health Mission (NHM) from 2012-13 to 2017-18

(in lakhs)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE
Procurement of the state	34175	36949	31736	50562	43899	56356
Total State Health Expenditure (TSHE)	677350	797551	908516	1016731	1103652	1453403
Procurement as a share of TSHE (%)	5.0	4.6	3.5	5.0	4.0	3.9
Procurement under NHM programme		13240.56	17924.53	15028.27	16326.91	12783.44
Total procurement- NHM + State	34175	50190	49660	65590	60226	69139
Total Procurement as a share of TSHE (%)	5.0	6.3	5.5	6.5	5.5	4.8

Source: Consolidated from State Budget and FMRs of various years.

8.5. Coverage

Insurance in the state budget consists primarily of MJPJAY, ESIS, RSBY, and cashless medical insurance scheme for members and ex-members of Maharashtra legislature.

Mahatma Jyotiba Phule Jan Arogya Yojana, previously Rajiv Gandhi Jeevandayee Arogya Yojana, is a scheme run by the GoM for the poor people of the state who hold one of the four cards issued by the government; Antyodaya card, Annapurna card, Yellow ration card, or Orange ration card.

Employee State Insurance Scheme is a multidimensional social security system tailored to provide socio-economic protection to worker population and their dependents covered under the scheme. Besides full medical care for self and dependents, the insured persons are also entitled to a variety of cash benefits in times of physical distress due to sickness, temporary or permanent disablement resulting in loss of earning capacity, and due to confinement in respect of insured women. Dependents of insured persons who die in industrial accidents or because of employment injury or occupational hazard are entitled to a monthly pension called the dependents' benefit.

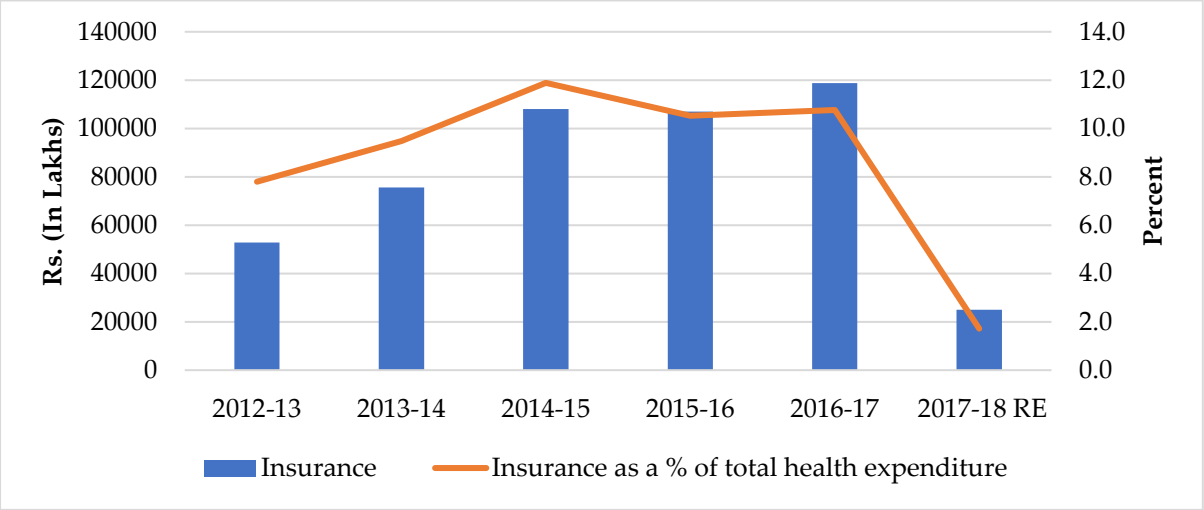
Rashtriya Swasthya Bima Yojana is a government-run health insurance programme for the Indian poor. The scheme aims to provide health insurance coverage to the unrecognised sector workers belonging to the Below Poverty Line category and their family members shall be beneficiaries under this scheme.

While the expenditure incurred on insurance showed an increasing trend from 2012-13 to 2016-17, there was a steep decline in the 2017-18. This decline is primarily due to the decrease in the expenditure incurred on MJPJAY.

Under NHM, although there are no insurance schemes, there is the free drug scheme as well as the free diagnostics scheme. These schemes provide free generic medicines as well as free basic diagnostics at the PHCs. These have been discussed in the above section of procurement.

The other free service is the JSSK that provides free delivery services to women at public health facilities. As already seen in the section on MCH, the highest utilization was for the free referral transport of the scheme, pointing to another area that requires attention in provision of access to health care services.

Figure 8. 8: Actual Expenditure (AE) on Insurance from the State Budget and its Share in Total Health Expenditure



Source: Consolidated from State Budget of various years.

Despite all of these measures at public facilities, utilization of public services remains low. The NSS points to lack of quality services as well absence of specific services as the reason for use of private facilities over public facilities (refer to Chapter 3 for details). Hence, provision of free services alone does not determine the use of services.

Chapter 9: Communicable Diseases (CD) and Non-communicable Diseases (NCD)

9.1. Communicable Diseases (CD)

9.1.1. State Expenditure on Communicable Diseases (CD)

Expenditure on CDs has seen an increase over the years, except in the year 2016-17 where it saw a decrease. Amongst the CDs, the state prioritises on malaria as it spends nearly 47% of its total pool of CDS on it. Next, it spends most on under CDs is TB.

Table 9. 1: Expenditure on Communicable Diseases (CD) by the State excluding Expenditure under the National Health Mission (NHM) Programme

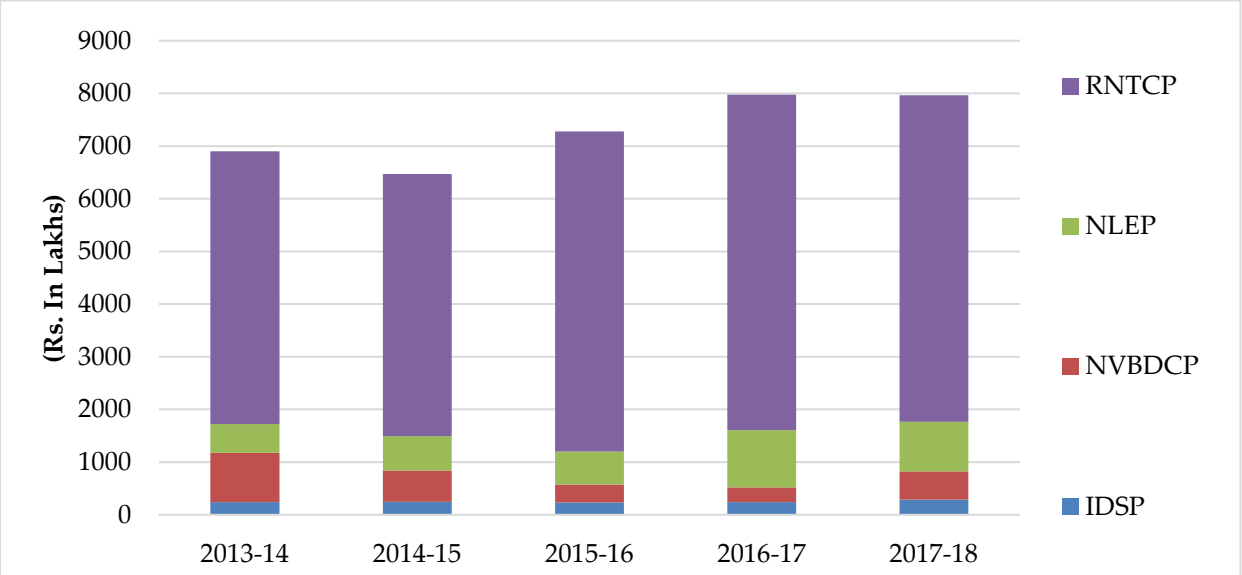
(in lakhs)	2012-13 AE	2013-14 AE	2014-15 AE	2015-16 AE	2016-17 AE	2017-18 RE
Guinea worm	11	14	12	12	12	15
Plague	37	46	42	50	46	68
Venereal	51	45	43	43	42	74
Integrated Disease Surveillance Programme	0	0	191	62	516	227
Cholera	73	112	107	424	131	239
Epidemic	505	800	693	949	285	841
Vector Borne	0	0	416	673	688	2992
Filaria	2818	3069	2924	3147	3145	6617
AIDS	0	0	13076	8721	0	14549
Leprosy	6207	6665	6668	7066	6902	8986
TB	6311	7395	12035	22563	20613	28448
Malaria	25242	28129	29501	33082	34171	34490
Total	41255	46273	65708	76791	66551	97546

Source: Consolidated from State Budget from 2012-13 to 2017-18

9.1.2. National Health Mission (NHM) Expenditure on Communicable Diseases: Flexible Pool for Communicable Diseases (CD-FP) - NHM

This pool includes all programmes for CDs. Amongst all the pools, this is the one with the highest utilization rate (on an average 72% for five years). Four programmes under it have been analysed below:

Figure 9. 1: Components of Flexible Pool for Communicable Diseases (CD-FP) (Budgetary expenditure)



Source: Consolidated from FMR of 2013-14 to 2017-18

Note: RNTCP refers to Revised National TB Control Programme, NLEP refers to National Leprosy Eradication Programme, NVBDCP refers to National Vector Borne Diseases Control Programme, and IDSP refers to Integrated Disease Surveillance Programme.

1. Revised National TB Control Programme (RNTCP)

From the funds allocated under the flexible pool for CDs, provision of funds is the highest (74%) under the programme for early detection and treatment of TB. However, the utilization levels remain below optimal levels (an average of 77%) over the years. Details for the allocation is available only for the last year thus delimiting further deeper analysis. However, based on the details of last year, we can see that the highest share has been allocated to financing contractual services. This allocation under RNTCP is an incomplete picture as this programme's largest expenditure is on anti-tubercular drugs that are bought and supplied centrally and are not part of the NHM component.

2. National Leprosy Eradication Programme (NLEP):

Under the Flexible Pool for Communicable Diseases (CD-FP), NLEP receives the second highest allocation (around 11%). Maharashtra achieved elimination of leprosy as a public health problem (prevalence rate < 1 case/10,000 population). Maharashtra reported a prevalence rate of 0.82 as on March 2017. "In Maharashtra, it is found that very few districts within the state or very few pockets within the district are actually having a leprosy burden."(Katkar et al., 2017) However, allocation for this programme has been seeing a rise over the five years. Under

NLEP, the highest allocation goes for case detection and management (78%) followed by the Disability Prevention and Medical Rehabilitation and Programme Management where both receive around 8%.

3. National Vector Borne Diseases Control Programme (NVBDCP):

This is an umbrella programme for the prevention and control of vector borne diseases such as malaria, Japanese encephalitis, dengue, chikungunya, kala-azar and lymphatic filariasis. According to an article in the Free Press Journal, the Union Health Ministry reports that 25% of the deaths caused in Maharashtra are due to dengue and malaria. "As per the statistics by the ministry of health and family, welfare showed that Maharashtra ranks first in terms of dengue deaths in the country and fifth in terms of malaria deaths in past three years."(Mishra, 2018) The number of deaths by malaria and dengue recorded in the article are 104 and 97 respectively, in the period 2015-2017 (until February 2017). Despite such an appalling death toll, the funds allocated under this programme have reduced drastically. Moreover, the funds allocated have not even been utilized adequately with their utilization ranging between 27- 46% during the period 2014-15 to 2016-17 . Expenditure and utilization improved slightly during the study period; however, they are still not commensurate with the blatant demand of the state. For the year 2017-18, within the programme, the highest allocation was made to malaria (56.5%), followed by lymphatic filariasis (29.1%). Part of the fund apportioned for dengue and chikungunya under this programme is 12.1%.

4. Integrated Disease Surveillance Programme (IDSP):

The key objective of the programme is to strengthen/maintain decentralised laboratory-based IT enabled disease surveillance system for epidemic prone diseases, to monitor disease trends, and to detect and respond to outbreaks in early rising phase through trained Rapid Response Teams. Amongst the programmes under CD-FP, IDSP receives the least allocation. Based on details available only for the last year 2017-18, it is noticed that 61% of the total allocation goes into remunerating contractual staff. Within remunerations, major allocation goes to district epidemiologists (43%) followed by allocations to data entry operators (26%) and district data managers (24%). The second highest allocation goes for operational cost which constitute of 21%. However, the utilization rate is an abysmal 26%. Moreover, training and laboratory support receives 1% and 4.4% respectively of the total allocation for ISDP. Even with the addition of NHM expenditure to the state

expenditure on CDs, expenditures show that malaria still gets the highest allocation under CDs, followed by TB.

Table 9. 2: Total Expenditure on Communicable Diseases (CD) by the State including Expenditure under the National Health Mission (NHM) programme in lakhs (Rs.)

Disease Programme	2012-13 AE	2013-14 AE	2014-15 AE	2015-16 AE	2016-17 AE	2017-18 RE
Guinea worm	11	14	12	12	12	15
Plague	37	46	42	50	46	68
Venereal	51	45	43	43	42	74
Integrated Disease Surveillance Programme	0	239	440	297	755	517
Cholera	73	112	107	424	131	239
Epidemic	505	800	693	949	285	841
Vector Borne	0	937	1009	1010	969	3528
Filaria	2818	3069	2924	3147	3145	6617
AIDS	0	0	13076	8721	0	14549
Leprosy	6207	7208	7319	7692	7988	9923
TB	6311	12573	17011	28639	26982	34649
Malaria	25242	28129	29501	33082	34171	34490
CD - State + NHM	41255	53171	72177	84066	74527	105510

Source: Consolidated from State Budget and FMRs of various years.

9.2. Non-Communicable Diseases (NCD)

9.2.1. State Expenditure on Non-Communicable Diseases (NCD)

Amongst NCDs, mental health receives the highest allocation under the state budget. It receives nearly 73% of the total expenditure for NCDs. Expenditure incurred for diseases under NPCDCS receives merely 17% of the total expenditure.

Table 9. 3: Expenditure on Non-Communicable Diseases (NCD) by the State, excluding Expenditure under the National Health Mission (NHM) (Rs. In Lakhs)

Disease Programme	2012-13 AE	2013-14 AE	2014-15 AE	2015-16 AE	2016-17 AE	2017-18 RE
Oral health	0	0	0	33	42	0
Goitre	9	17	18	11	15	33
Deafness	0	0	0	145	51	0
Sickle cell	78	88	50	78	342	20
Elderly	0	0	166	262	163	415

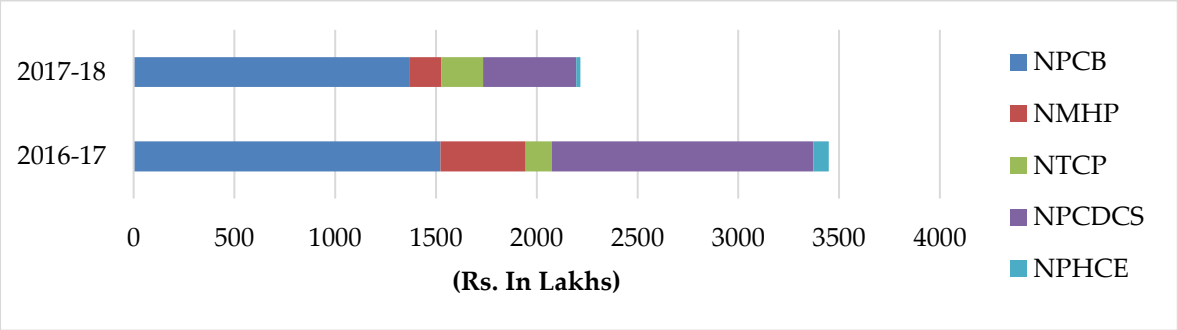
Tobacco Control	0	0	30	207	264	833
Blindness	13	9	66	1157	1113	2694
NDCDCS	15	753	980	1641	1764	8701
Mental	8013	8530	8992	10741	10505	11952
NCD – state total	8129	9396	10302	14275	14257	24649

Source: Consolidated from State Budget of various years.

9.2.2: Flexible Pool for Non- Communicable Diseases (NCD-FP) - NHM

Due to unavailability of data for three years (2013-14 to 2015-16) in the audited FMR, the analysis has been done only for the last two years under study. The utilization ratio has fallen from 56% to 48%. The five programmes included under it have been analysed below.

Figure 9. 2: Expenditure under Components of Flexible Pool for Non-Communicable Diseases (NCD-FP) for 2016-17 & 2017-18



Source: Consolidated from FMR of various years

Note: NPCB refers to National Programme for Control of Blindness, NMHP refers to National Mental Health programme, NTCP refers to National Tobacco Control Programme, NPCDCS refers to National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke, and NPHCE refers to National Programme for the Healthcare of the Elderly.

1. National Programme for Control of Blindness (NPCB):

For both years, higher allocation was apportioned to NPCB under NCD-FP. Moreover, it is the only programme to have received higher allocation for the next year. Under this programme, major expenditure for 2017-18 was incurred on providing recurring grant-in-aid, which is majorly used for reimbursing cataract operations done by NGOs and private practitioners. Again, detailed data is available for only one year, and hence, it is difficult to analyse the expenditure trend for the same.

2. National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS):
This programme receives the second highest allocation under NCD-FP. However, it has seen a steep decrease (65%) in allocation from Rs 2,585 lakhs in 2016-17 to Rs 903 lakhs in 2017-18. Utilization level has marginally improved from 50% in 2016-17 to 51% the next year. The programme is at its infancy and most of the fund allocation has gone towards setting up the programme apparatus in the state.

3. National Mental Health programme (NMHP):
Allocation was reduced 64% year over year in 2017-18. Marginal improvement in utilization was observed from 2016-17 to 2017-18.

4. National Programme for the Healthcare of the Elderly (NPHCE):
This programme receives the least allocation (1.6% on an average of two years) under this flexible pool. Furthermore, NPCB under this flexible pool has the highest reduction year-on-year (75%) from 2016-17 to 2017-18.

5. National Tobacco Control Programme (NTCP):
Allocation has fallen year-over-year by 29% in 2017-18 from 2016-17. Meanwhile, expenditure in nominal levels increased from Rs 128 lakhs to Rs 208 lakhs over the same period leading to increased utilization ratios in 2017-18 (45.5%) from 19.9% in 2016-17.

9.2.3: Total Expenditure on Non-communicable Diseases (NCD)

Adding the NHM component of NCD to the state expenditure reflects the highest expenditure for mental health followed by NPCDCS. As NCD programmes under NHM started only in the later years, the first four years don't see any difference.

An overall comparison between CD and NCD shows that CD receives a higher share of the TSHE while NCD receives a lower allocation. On an average, CD constitutes 2.8% of the TSHE over the six years while NCD constitutes of only 1.4% of the TSHE. Cardiovascular disease, which is the most common cause for mortality in the state and is also one of the most expensive to treat, receives much less attention as compared to infectious/communicable diseases.

Table 9. 4: Total Expenditure on Non-Communicable Diseases (NCD) by the State including Expenditure under the National Health Mission (NHM) Programme

(in lakhs)	2012-13 AE	2013-14 AE	2014-15 AE	2015-16 AE	2016-17 AE	2017-18 RE
Oral Health	0	0	0	33	42	0
Goitre	9	17	18	11	15	33
Deafness	0	0	0	145	51	0
Sickle Cell	78	88	50	78	342	20
Elderly	0	0	166	262	239	436
Tobacco Control	0	0	30	207	393	1041
Blindness	13	9	66	1157	2635	4060
NPCDCS	15	753	980	1641	3063	9163
Mental	8013	8530	8992	10741	10928	12112
NCD – state + NHM	8129	9396	10302	14275	17707	26865

Source: Consolidated from State Budget and FMRs 2012-13 to 2017-18

Table 9. 5: Share of Communicable Diseases (CD) and Non-Communicable Diseases (NCD) in the Total State Health Expenditure (TSHE) Budgeted Expenditure

(in lakhs)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Communicable Diseases (CD)	16257	18792	20604	28517	35372	53730
Non-Communicable Diseases (NCD)	8129	9396	10302	14275	17707	26865
Total State Health Expenditure (TSHE)	677350	797551	908516	1016731	1103652	1453403
Share of CD as a% of TSHE	2.4	2.4	2.3	2.8	3.2	3.7
Share of NCD as a% of TSHE	1.2	1.2	1.1	1.4	1.6	1.8

Source: Consolidated from State Budget and FMRs 2012-13 to 2017-18

The National Mental Health survey (2015-16) concluded that the prevalence of mental health in India is about 10%, which is nearly 150 million people in the country. The study also pointed out that common mental disorders (depression, anxiety disorders and substance use disorders) constituted 10% of the mental

disorders in the country and were linked to many NCDs, increasing its burden in the country (Gururaj et al., 2016). The Mental Health Care Act of 2017 is a step in the right direction towards dealing with mental health disorders. According to a study, implementing the above act will return 6.5 times the investment (Math et al., 2019). Expenditure on prevention on cardiovascular diseases also follows the same rule where investment on prevention of these diseases is less expensive than treatment of these diseases. On the other hand, the costs incurred on hospitalisation due to cancer and heart diseases can be very high (Kastor & Mohanty, 2018).

Hence, there is need for increased allocations on the NCD programmes, at least an amount comparable to that on CDs as its burden in the state and in the country is on the rise.

Chapter 10: Conclusions and Recommendations

Maharashtra, surprisingly, despite better economic status, has much poorer records as compared to the best performers like Kerala and Tamil Nadu when it comes to in health indicators institutional birth, immunisation, child marriage and prevalence of anaemia among pregnant women although it has reported relatively lower birth rates. This study started by identifying six health challenges in the state: (i) rise and spread of Non-Communicable Diseases (NCD),(ii) wide intra-state disparities in MCHI where the districts with high tribal concentrations such as Nashik, Nandurbar, Dhule, Yavatmal, Gondiya, Jalgaon and Gadchiroli perform poorly, (iii) with poor health indicators in urban areas with 45.2% of the state's population living in urban areas, and Mumbai which is completely urbanized being in the bottom three poorest MCHI, (iv) inadequate availability of Public Health Care Facilities and high level of staff vacancies, (v) high out of pocket expenditure in health and high level of privatisation, and (vi) Inadequate coverage though health financing (insurance).

In this chapter, we present conclusions and recommendations based on the review of public expenditure from the lens of these issues that we have identified.[31] However, PER needs to follow the budget and related practices in terms of the analyses, and therefore, a one-to-one connection with the identified health challenges is not always possible. Also, the analysis is as much a review of the budgetary practices (some inconsistencies mentioned earlier in the chapter) as of the findings in terms of expenditure patterns and priorities. This is because the budgeting practices are such that a number of desirable analyses cannot be undertaken. Hence, our recommendations later include both these strands. In other words, the GoM could take steps to ensure both an improvement in its system of managing and reporting health related finances with implications for planning as well as a shift in terms of its health priorities and policy choices. Therefore, we present our five recommendations that address the planning, fund flow and accounting processes, and the health sector priorities. The focus is on suggesting reforms that can have systemic impact on the efficiency and effectiveness of public spending and address the issue of health care for needy population groups in the long run.

[31] The executive summary provides a summary of findings and therefore we are not including that here.

10.1. Development of District and sub-district level plans with budgets

Our analysis showed that NHM follows a very detailed budget (FMR) at all levels from state to district and block levels. However, NHM consists only of 20% of the state health expenditure, and the remaining 80% of the expenditure lacks this kind of detailing. The personnel placed at district and sub-district levels usually had no idea about details of expenditure at their levels other than NHM expenditure, which was often considered synonymous with total health expenditure in the state, rendering other district/block expenditures invisible. On the other hand, NHM reporting, which follows the national guidelines, is considered 'too detailed and cumbersome' by many officials of the health department. This hinted towards the possibility of rationalising this to make it more efficient while retaining the necessary details. In tribal districts, tracing expenditures under TSP adds another layer to this challenge as the disaggregated details of expenditure on health through this route was largely unavailable. Also, the health-related expenditure incurred by municipal corporations and other such bodies are not reflected under the state budget.

While recognising that certain constraints of schemes, programmes, and departmental coordination are difficult to erase immediately, we also acknowledge that for ensuring greater transparency, efficiency, and effectiveness it is critical to gain greater clarity and a shared understanding about health-related allocations and expenditure at district and sub-district levels by (i) their sources, (ii) purpose/item/institution of expenditure, and (iii) period of spending.

We, therefore, recommend that all districts and sub-districts must develop an integrated annual health plan and budget where allocations from all sources including the health department (through treasury), NHM (other Centrally Sponsored Schemes, CSS), and TSP are brought together in a single document marked by sources, expenditure heads, and quarterly proposed spending. In addition, third tier of governments such as corporations or other municipal bodies in urban areas and panchayat bodies in rural areas should also be added here to get a complete picture. This can be developed using a software. Although there are several software that may have been developed and in use by the health department but what we need is something simple that enables better and decentralised planning and monitoring.

The NHM societies at respective levels could be made responsible for developing these simple plans and budgets that can be used for monitoring the progress as well as fund flow. Once all the major actors at respective levels are aware of the entire plan and budget, it would establish mutual responsibility and bring in greater

accountability. Once functional, this can also help in identification of any deficiency or excess in funding at that particular level. Delays in fund flows could be easily identified through their sources and some efforts can be made to address those in timely manners.

While initially it can be started as an ex-post exercise by combining all the allocations, slowly this can be extended to both ex-ante (planning) and ex-post exercise, strengthening the state level planning exercise by making it much more evidence based.

The success of such an initiative will be dependent on the following: (i) political and bureaucratic message from the top about the seriousness of the effort, (ii) ease of access to technology (software), (iii) training and reinforcing support through hand-holding in the initial phase, and (iv) long term commitment to such measures.

10.2. Understanding and addressing fund flow delays and low utilizations

Since NHM is the only component for which fund flow data is available, this analysis is limited to NHM. Amongst all the CSS, NHM is the biggest programme, constituting about 18-20% of the total state allocation for health purposes in Maharashtra. However, the utilization ratio for the same has remained less than optimal at about 61% on an average for five years between 2013-14 to 2017-18. Maharashtra is one of the biggest recipients of the NHM funds along with Uttar Pradesh , and there is enough potential to raise the utilization ratio and therefore the efficiency of these funds. One major reason for lower utilization rates is the delays experienced in the receipt of funds from the union government. A perusal of NHM annual reports of the Union Health Ministry reveals that the transfers from union to state government has been heavily tilted towards the last quarter. This gets compounded by the fact that the state government also takes long in releasing the money from the state treasury to the SHS in Maharashtra, as revealed by a recent study. In 2017-18, Maharashtra received only 44% of the total allocation for NHM by the third quarter of the financial year. It took an average of 145 days for the transfer from the state treasury to the SHS to happen in 2016-17 where as it should have happened in 15 days as per guidelines (Centre for Policy Research, 2019). Our field interviews with PHC accountants showed that the first instalment of funds for 2019-20 reached them only by June or July instead of April, and the second instalment reached only by December, highlighting a delay of minimum 60-90 days.

Although the focus of our study was an analysis of public expenditure on health, and the issue of transfer of funds from one level of government to another could be

an area of another in-depth research, we share our analysis and suggestions to serve as pointers for further action. What is clear that there is a need for process reengineering to make the transfer process more efficient and less time consuming while maintaining the accountability.

We have identified three processes/factors that impact NHM utilisation:

(a) The release of NHM funds is contingent on the submission of utilisation certificates. The MOs in PHCs shared during our fieldwork that this, according to them, was a cumbersome process, as the expenditures incurred at the PHC level are very small; this is further worsened by the absence of clerk or accountant at the PHCs to undertake this task. The need for utilisation certificates comes from the union government and therefore the GoM does not have much room to act other than (i) negotiating with the union government, and (ii) facilitating human resource linkage (e.g., making accountants available from other institutions) with other institutions to fasten the process of preparing utilisation certifications.

(b) The disbursement of funds currently follows a hierarchical path where funds are first transferred to the SHS, from where it goes to districts, and then to the sub-district levels. The state government could consider direct disbursal of NHM funds to each level from the SHS where the funds are released directly to the Taluk Health Officer from the SHS, instead of it going through the district first. This will considerably reduce delays in transfer of NHM funds and the presence of technology assisted accounting processes can make it easy to monitor.

(c) The presence of a large number of vacancies in posts for clerks and accountants as well as medical staff at various levels also contribute to under-utilisation of funds on time. The development of district and taluka plans and budgets may help to some extent in smoothening the processes but without adequate human resources, it is not easy to incur public spending efficiently. Absence of adequate staff at various levels also has negative implications for the use public services, which we discuss later. The GoM needs to address this issue comprehensively.

10.3. Access to and affordability of health services: moving towards converting Primary Health Centres (PHCs) into Health and Welfare Centres

Studies show that PHCs are the foundation for the provision of universal health care. NHM envisions PHCs as the providers of comprehensive health care inclusive of diagnostics, curative and preventive services. Primary Health Centres act as the gatekeepers preventing high expenditure in secondary and tertiary care. However, in Maharashtra, PHCs are unable to provide all three effectively due to shortages in

staff and supply of medicines and absence of pro-active preventive measures. This leads to over-burdening of secondary level public health facilities. These have also resulted in high dependence on private providers leading to higher OOPE. Some specific findings from our study are as below:

a) Preventive care has not received adequate attention and most of the allocations are directed towards curative measures. The allocations towards BCC/IEC are low and therefore the incidence of NCDs like diabetes, hypertension, cancer and cardio-vascular diseases has been going up, which is also one major reason for also attract very high private expenditure. Greater focus on prevention is also directly linked with malnutrition among children, which requires attention.
b) Purchase of drugs constitute of the highest component of health expenditure by households in Maharashtra. While allocations have been made towards the procurement of drugs, utilization of free drug and diagnostics schemes remain low partly because of unreliability in terms of regular availability of drugs and partly because of the shortage of staff at different levels including nurses, multiskilled Group D workers, lab technicians and ambulance services.
c) Shortage of medical equipment and inadequate supply of electricity in PHCs is observed in the two districts (Nandurbar and Osmanabad) of field visits. Untied funds were mostly being used for purchasing of stationery, photocopying, general repair works and purchase of equipment around PHCs. Given multiple usage, the size of the presently available UF was deemed insufficient by MOs of the PHCs.

We, therefore, suggest that selected PHCs should be reconceptualised as Health and Welfare Centres that can function as a one stop centre for all primary health care needs. This would entail upgradation of one or two PHCs in every block; they could be identified on the basis of utilization patterns and/or proximity to resource poor areas/high need areas (e.g., tribal areas). Such centres should be made fully functional with no vacancies in staff, no dearth of equipment, drugs and facilities and with provisions for free health care, treatment and diagnostics. Such centres should also be staffed with specialists who visit it on fixed days to provide all round care.

Focus on prevention is a must to arrest the growth of NCDs, which necessitates the need for a presence of a health educator/nutritional counsellor. This is especially important for reducing malnutrition in children as well as early diagnosis and treatment of NCDs. Ensuring the supply of medicines and equipment is adequate to meet demands of the population is important as well. Providing ease of access to this

PHC by improving roads and transport services through coordination with other departments would also help in certain areas.

Such measures are especially important for population groups that are high in number with adverse health indicators and need affordable and accessible public health care services, e.g., tribal population and the urban poor. We discuss the needs of these population groups in our next point.

10.4. Reprioritising health expenditure to suit the needs in tribal and urban areas

We started by identifying two major population blocks: tribal and urban, as being major concerns for health expenditure and health care services. The three recommendations made above are relevant to these population groups / areas; however, here we make some specific additional points in that respect.

Tribal areas

As stated earlier, the tribal population forms about 10% of the state's population and our tentative estimates suggest that the tribal districts receive only about 2.89% share of health expenditure.

(a) What is clear is that the tribal districts have one of the worst health indicators including hose related with MCH and they need greater investment for improved health care provisions. The riddles of high allocations seen under TSP and for NHM through TSP coupled with prevalence of poor health indicators need to be understood through other focused studies.

(b) Development of district and taluk specific integrated plans and budgets coupled with joint accountability measures may be especially helpful in identification of gaps in tribal areas but that alone is not going to lead to desired changes. Our study showed that a decrease in social sector expenditure can have spill-over effects on health, especially in the water and sanitation, and nutrition sectors. A district level plan along with well-developed GPDPs can prove to be useful tools to tackle poor health indicators through coordinated efforts. Health department should proactively get involved in GPDP processes and make use of the stipulated funds under 14th FC grants.

(c) In addition, social mobilisation and awareness campaigns are critical in tribal areas, and this component should receive special emphasis in tribal areas to enhance the use of services. Utilisation within IEC/BCC components have been low over the years. Investments on IEC/BCC are low cost but yield higher returns only when

incurred substantially over a period of time. A focused ethnographic study can also be undertaken to develop better and more nuanced understanding of health practices and needs of tribal population in different parts of the state. Please note that certain issues are discussed under the gender section below.

Urban areas

As in the case of tribal areas, it is difficult to ascertain complete expenditure on health in urban areas and even more difficult still to ascertain that for the urban poor. Urban population is slightly less than half of the total population (45%) in the state and the estimated expenditure in urban areas seems to be much less than that proportion (34%). In addition to integrated planning, budget, and monitoring that could bring together the health department, NHM and local government's expenditure together, certain other areas also need greater attention. Although recent NHM PIPs show a focus on constructing new PHCs and improving community outreach through ASHA and MAS, available evidence also points towards the need for a different approach to urban health planning. Again, though we are constrained by the fact that our study focused on analysis of public expenditure, we have a few suggestions in this regard:

(a) There should be creation of urban health plans in tune with urban health conditions. Currently, no special schemes for urban areas exist even though literature suggests that problems of cities are very different from that of villages. This is evidenced in urban allocations that are mainly for running of major hospitals across the cities and for running national schemes. There is a lack of focus on diseases like child obesity and mental health problems in urban areas. Municipal corporations should move beyond maintenance of health facilities to health planning and use schemes like NHM to fulfil their requirements.

(b) Non-addition of municipal corporations' contributions to health in state budget shows the lack of priority attributed to urban areas by the state. There is a need to prioritise urban health in cities and their myriad population beyond mere construction of health facilities and running of schemes such as NHM. Municipal corporations should also be part of the integrated district planning for health for an all-round improvement in health indices of the state.

(c) Health financing through insurance answers some of the tertiary care needs but the real burden of primary and secondary care remains high for urban poor, and improvement of public health care services seems the only answer. While PHCs in rural areas serve a population of about 30,000, the urban PHCs in cities end up

serving a much higher population of about 50,000; this makes it difficult to cater to all the needs there. It is important to change these norms. Also, a reason of low utilization of PHCs in urban areas could be the timings; since most people work during the day, it is important to run PHCs during early morning and evening hours even if they do not remain open for 24 hours.

(d) Exploring innovative public-private partnership routes to expand the reach of public health care services may be a good idea in urban areas, especially in cities such as Mumbai. Considering that space is a major constraint, one form of PPP may be starting PHCs in spaces provided by universities, corporates, traders, schools, etc. Another form of PPP can be thought of in the form of having a pool of private practitioners (medical doctors) who serve in PHCs for a smaller fee charged to the government (either local or state); this will also address the issue of shortage of medical personnel to some extent. More such ideas can be generated though specific consultations for this purpose. However, what is important that the PPP models should not turn into profitable business for private parties at the cost of public expenditure; these should rather be genuine partnerships where both parties are contributing.

(e) Considering that urban areas are much more complex in their cultural, linguistic and work compositions, ASHAs' work becomes much more challenging and calls for a different approach in terms of their identification and payments. In order to make it competitive, it is important that payments are made taking into account purchasing power as well as prevalent wage ranges for other services. Ideally, prevalent minimum wage rates should also be considered while fixing the honorarium and incentives for ASHAs.

10.5. Make data available to enable more responsive Gram Panchayat Development Plans (GPDPs)

Although our feedback on GPDP processes and expenditures based on interactions with GP members in two districts, Nandurbar and Osmanabad, remain rather weak because of unavailability of expenditure data, we found that GPDP formulation was a collective effort with inputs from representatives of each sector such as ASHA and Anganwadi workers. The government has also organised training of members towards preparation of GPDP, and, in many cases, the GPs demonstrated some level of autonomy in deciding their priorities by not necessarily following the guidelines provided by the state government. However, there is a need for a more focused study using a larger sample and by analysing the actual expenditure rather than just the budgets for gaining a deeper understanding of the priorities.

Nevertheless, based on our analysis, we make the following suggestions to make the GPDP planning and monitoring process more inclusive and responsive to local needs:

(a) The availability of data itself generates a different kind of awareness and commitment which is not possible in the absence of any reliable data. Therefore, an effective way of improving the planning process of GPDP would be to make the GP level data linked to social and economic indicators available to GP and other concerned citizens. Subsequently, the analysis of its own allocations and expenditure, along with that of other GPs could also be shared to make them aware of their own progress in absolute as well as relative terms. An idea bank based on various experiences can also be developed to be shared with the GPs to facilitate generation of new ideas.

(b) Development of proper systems to track both budget and allocations for GPDP wold make the process more transparent and accountable. These data must also be made open to public as part of voluntary disclosure policy and to strengthen the general accountability at all levels.

(c) Proactive utilisation of funds available under FC grants by the health department as source of additional income in undertaking health related expenditures at the GP level. This requires coordination between the health department and Panchayati Raj department.

10.6. Gender Concerns

The entire analysis of health-related expenditure in Maharashtra raises a number of very important gender related issues that need to be addressed. It is possible that many of these issues are not specific to Maharashtra, and may be a country-wide phenomenon; however, it is still important to identify these and urge GoM to take a lead in addressing them. Some of the specific finding that points towards the health expenditure not being gender responsive include the fact that they receive only 10% of the MCH expenditure with children receiving the remaining 90%. What makes it worse is that women health related expenditure is restricted to reproductive and maternal health, with no special focus/allocations for women under other programmes that target non-reproductive health issues despite high prevalence rate for certain diseases such as diabetes, osteoporosis and mental health. This means women's health is reduced to their womb and they are rarely recognised as individuals. Disproportionate emphasis on female sterilisation and the absence of

focus on spacing or male sterilisation as part of family planning measures further strengthen this argument.

A related issue with significance for adolescents is the absence of focus on medical termination of pregnancies, maternity grants, and post-partum centres in the state. As stated earlier, about 90% of medical termination of pregnancies takes place in private health institutions leading to not only high OOPE but also making adolescents vulnerable to unscrupulous practices linked with such terminations. The reduction in allocations towards community mobilisation services and facility-based services under RKSK for adolescents also reflects the low priority given to their needs.

Considering the stigma attached with the issue of termination in India and its critical linkages with adolescents' health and well-being, it is important to take suitable measures to address this issue. A compulsory gender review of proposed plan and budgets at various levels can be institutionalised to prevent such occurrences and strengthen the gender responsiveness of the health sector interventions and spending. Training at all levels, including at GPs and other local government bodies, should have a gender focus to enable more gender-responsive planning and monitoring of fund utilization.

10.7. Concluding Thoughts

Maharashtra is one of the economically advanced states of India and it, therefore, has the potential of adequately addressing it health sector needs but currently it appears to be far from that. Although the state has increased its allocations to the health sector after the implementation of the 14th FC recommendations, which means access to higher amounts of UF, total state health expenditure still occupies only 5.1% of total state expenditure, which is much lower than the level (8%) recommended by the National Health Policy, 2018. The allocations to social sector as a whole have decreased in this period, which may also not be good news for the health sector. Decrease in allocations to sectors of social welfare such as nutrition, sanitation, and hygiene will potentially have a negative impact on the health sector due to the inter linkages among them; nutrition, sanitation and hygiene play a major role in promoting preventive healthcare.

The state receives one of the highest allocations under NHM in absolute terms, and this forms about one-fifth of the total health expenditure in the state. The NHM procedures are well-defined with very detailed monitoring at all levels but this is not true for money coming from other sources thus making it difficult to get a

comprehensive understanding of health-related public expenditure in the state. There is enough scope for systemic reforms in making the planning, accounting, and monitoring at various levels much more participatory and comprehensive by making the exercise less fragmented, and we have made suggestions for the same. This, we think, would also improve the efficiency and effectiveness of the public expenditure. This means that the NHM's role can go beyond monetary contribution if the experiences are used to enable process-reengineering reforms.

We also argue for strengthening universal health care through a variety of measures including by making health planning more responsive to specific issues of respective population groups such as tribal and urban poor, and also by strengthening the gender budgeting processes. We recommend that a comprehensive primary care machinery that focuses on both prevention and cure at minimal or no cost to users is critical for improving health indicators of the state. This takes into consideration the fact that health indictors in the state point towards the need for greater attention to tribal areas, urban areas, NCD and gender gaps. The third-tier government bodies in both rural and urban areas can be important partners in this reform process and play a significant role through participation in the process of comprehensive planning and monitoring of the health sector interventions. This is especially important in view of the higher levels of funds being made available to these bodies by respective FCs.

In the end, we would like to reiterate that this study is based on the review of public spending on health in Maharashtra and the analysis was subject to various kinds of constraints related to data availability. More focused studies on governance processes that impact financing and expenditure may add to this analysis, and consultations with diverse stakeholders at all levels would be crucial for drafting any action plan for the reform process. Any reform process is dependent on political will and bureaucratic support and that remains true for these suggestions as well.

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Annexure 1: Detailed Tables

Table A1. 1: Budgetary allocations and expenditure under National Health Mission (NHM) (in lakhs)

	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 AE
NRHM	149856	119064	158847	111919	171340	103308	182846	106833	222909	127231
Communicable Diseases	8038	6898	11213	6469	12047	7275	10485	7975	9928	7964
Non-Communicable Diseases							6308	3449	4637	2216
NUHM			29887	1126	28788	6485	31153	8494	21143	11104

Source: Maharashtra NHM FMR Analysis 2012-13 to 2017-18

Table A1. 2: Budgetary allocations and expenditure, proportion of each component based on average allocation for five years and average utilization ratios for Reproductive and Child Health (RCH) Programme after reallocation (in lakhs)

	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 AE	Proportion of average allocation (%)	Average utilization ratio (%)
HR	22604	18545	28278	19963	27695	20322	33754	21364	53928	31374	35.8	69.5
Child Health	13261	12748	19799	11885	19964	11168	27241	12079	30857	14108	23.9	60.4
Maternal Health	20755	11808	20919	14971	19024	12832	22868	11639	25758	11768	23.5	58.5
Programme Management	5303	5228	6901	5482	6617	5252	12204	5377	9163	11481	8.7	85.3
Family Planning	5069	4435	4203	3392	4862	3276	6287	3064	7493	3010	6.0	64.9
Training	1204	738	994	275	470	305	737	366	1069	809	1.0	55.8
Tribal RCH	308	294	360	316	371	303	479	394	721	474	0.5	82.6
Urban RCH	2027	1582	0	0	0	0	0	0	0	0	0.4	15.6
PNDT Activities	292	209	154	59	52	25	53	27	55	20	0.1	49.0
Vulnerable Groups	60	25	64	32	42	36	51	31	51	161	0.1	110.1
Previous Year Exp. Due to rewriting - Arrears	0	0	0	462.93	0	0	0	0	0	0	0.0	0.0
Total of RCH	70882	55612	81673	56838	79096	53517	103674	54340	129096	73204		65.0

Source: Maharashtra NHM FMR 2013-14 to 2017-18

Table A1. 3: Budgetary allocations and expenditure under Maternal Health (MH) after reallocation (in lakhs)

	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 AE	Average proportion allocation	Average Utilization
JSSK- Janani Shishu Suraksha Karyakram	13675	6713	14227	9495	11194	7738	14822	6984	15222	6699	63.2	55.0
Janani Suraksha Yojana / JSY	5934	4455	5492	4630	5636	4762	5087	4162	5335	4641	25.1	82.5
Drugs & supplies for Maternal Health (MH)	441	56	650	485	922	51	884	0	2973	51	5.4	18.9
Procurement of equipment: MH	136	5	68	17	866	0	1397	0	1116	19	3.3	6.2
Maternal Health Training	546	284	326	193	241	248	539	451	616	292	2.1	69.0
BCC/IEC activities for MH	0	281	131	129	131	2	104	37	285	15	0.6	35.1
Other strategies/activities (please specify)	15	10	19	19	30	27	30	5	207	50	0.3	60.6
Maternal Death Review (both in institutions and community)	7	4	7	2	4	3	4	0	4	1	0.0	37.1
Total of Maternal Health	20755	11808	20919	14971	19024	12832	22868	11639	25758	11768		58.5

Source: Maharashtra NHM FMR 2013-14 to 2017-18

Table A1. 4: Actual Expenditure (AE) under Tribal Development Department and Tribal Districts (2012-13 to 2017-18)

(in lakhs)	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE
National Oral Health Programme	0	0	0	0	42	0
National Programme for Prevention and Control of Deafness	0	0	0	13	51	0
Integrated Disease Surveillance Project	0	0	19	10	51	28
National Mental Health Programme	0	0	0	38	45	56
National Programme for Health Care of the elderly	0	0	18	36	47	61
National Tobacco Control Programme	0	0	3	27	49	96
National Leprosy Eradication Programme	0	0	28	35	49	100
National AYUSH Mission	0	0	0	0	18	220
National Vector Borne Disease Control Programme	0	0	57	43	33	138
National Blindness Control Programme	0	0	0	101	41	366
National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke	0	0	0	220	87	1088
Strengthening of Primary Health Centres.	291	476	420	313	266	0
Revised National Tuberculosis Control Programme	0	0	0	615	486	1741
Rajeev Gandhi Jeevandayi Arogya Yojana	640	800	2000	210	10	0
Centrally Sponsored Scheme-National Malaria Eradication Programme	967	796	855	979	587	0
Community Health Centres	233	2913	3925	685	805	0
Others	4173	2462	1858	2387	1843	820
Upgradation of Primary Health Centres into Rural Hospitals	1124	2266	2869	3748	3681	0
Establishment/maintenance/Construction of Health Institutes	5706	6696	7696	9474	10637	0
National Health Mission	796	880	8816	10962	5059	24761
Grants- in- aid to tribal Districts	28244	31623	46609	50743	44925	45685

Source: Consolidated from State Budget from 2013-14 to 2017-18.

Table A1. 5: Allocations in Public Health Department (PHD) in Nandurbar District Plan in 2017-18 in lakhs

Sr No.	Scheme Name	Outlay Rs
1	Repair and maintenance of primary health centres and subcentres.	371.48
2	Establishment of Ayurvedic/Unani Dispensaries	20.32
3	Establishment Construction and Maintenance of Health Centre	10
4	Provide special health services in sensitive tribal areas	424.3
5	Repairs and maintenance of Rural Hospital	150
6	Establishment of Paediatrics ICU at Rural Hospital	50
7	Meeting of Dai	5.7
8	Construction of Rural Hospitals	300
9	Providing Staff as per norms in Rural Hospitals	10
10	Diet facilities at Rural Hospital	200
11	Diet facilities at Primary Health Centre	30.8
12	Establishment of Primary Health Sub Centres	1008.47
13	Construction of Primary Health Centre	2252.47
14	Increase in medicine grant for Primary Health Sub Centre	33.6
15	Establishment of Rural Hospitals	100
16	Increase in medicine grant of Rural Hospitals	220
17	Increase in medicine grant for Primary Health Centre	16.68
18	Drusti dan yojana	5
19	Repairs & maintenance of Primary Health Sub-Centres	120
20	Strengthening of Primary Health Centre	70.4
21	National Malaria Eradication Programme	100
22	Purchase of Medicines, Machinery and Equipment for Primary Health Centres	1.92
23	National Rural Health Mission	10
24	Rajiv Gandhi Jeevandayee Yojana	50
25	Fund for beneficiary in St category under national Ayush Abhiyan	20
26	National programme for prevention and control of cancer, diabetes, stroke, paralysis	10
27	National oral health programme	10
28	National tobacco control programme	5
29	National programme for deafness control	5
30	National programme for health care of senior (old) citizens	0.1
31	National mental health programme	10
32	National programme for blindness control	10
33	National leprosy eradication programme	10
34	Integrated diseases surveillance Programme	11
35	National vector borne disease control programme	11
36	Revised national tuberculosis control programme	11
37	National rural health mission	11
	District Plan Total	5685.24

Source: MPSIMS, https://mahades.maharashtra.gov.in/MPSIMS/userLogin.do#

Table A1. 6: Allocations under Public Health Department (PHD) in Sindhudurg District Plan in 2017-18 in lakhs

Sr No.	Scheme Name	Total outlay
1	Repair and maintenance of primary health centres and subcentres.	120
2	Repair and maintenance of ayurvedic and unani hospitals.	2
3	Construction of ayurvedic and unani hospitals.	20
4	Children's Health Check-up Programme at Ashram Schools.	0.2
5	School Health Check-up Programme.	1
6	Purchase of Medicines, Machinery and Equipment for Sub District Hospitals	40
7	Purchase of Medicines, Machinery and Equipment for Rural Hospitals	40
8	Purchase of Medicines, Machinery and Equipment for Sub-centres	14.88
9	Purchase of Medicines, Machinery and Equipment for Primary Health Centres	22.8
10	Construction and Extension of Rural Hospitals	0.01
11	Construction and Extension of Sub Centres.	200
12	Construction and Extension of Primary Health Centres.	300
	District Plan Total	760.89

Source: MPSIMS, https://mahades.maharashtra.gov.in/MPSIMS/userLogin.do#

Table A1. 7: Budgetary allocations and expenditure, proportion of each component based on average allocation for five years and average utilization ratios for Communicable Diseases (CD) (in lakhs)

	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 AE	Proportion of allocation (%)	Average utilization ratio (%)
Revised National Tuberculosis Control Programme	5548	5178	7556	4977	9968	6076	7773	6369	7621	6201	74.4	76.7
National Leprosy Eradication Programme	1025	544	1054	651	940	626	1466	1086	1110	937	10.8	68.0
National Vector Borne Disease Control Programme	1099	937	2187	593	739	338	788	281	700	536	10.7	54.1
Integrated Disease Surveillance Programme	366	239	417	249	401	235	460	239	497	290	4.1	58.8
Total of Communicable Diseases	8038	6898	11213	6469	12047	7275	10485	7975	9928	7964		72.0

Source: Maharashtra State budget Documents 2012-13 to 2017-18

Table A1. 8: Budgetary allocation and expenditure on Communicable Diseases (CD) from the State Budget (in lakhs)

(in lakhs)	2012-13 BE	2012-13 AE	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 RE
AIDS	0	0	0	0	13012	13076	0	8721	14153	0	14549	14549
Cholera	177	73	184	112	138	107	131	424	135	131	144	239
Epidemic	1000	505	100	800	700	693	972	949	1041	285	1044	841
Filaria	3193	2818	3335	3069	3206	2924	3650	3147	3764	3145	3644	6617
Guinea worm	11	11	13	14	15	12	16	12	17	12	15	15
IDSP	0	0	0	0	325	191	301	62	142	516	275	227
Leprosy	5997	6207	7103	6665	7229	6430	8109	6691	8369	6684	8372	8234

(in lakhs)	2012-13 BE	2012-13 AE	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 RE
Malaria	29568	25242	31712	28129	33154	29501	32045	33082	31185	34171	33575	34490
NLEP	0	0	0	0	912	237	689	375	261	218	602	752
Plague	50	37	55	46	56	42	64	50	68	46	70	68
TB	5497	6311	5227	7395	10849	12035	18544	22563	9789	20613	23802	28448
Vector Borne	0	0	0	0	1984	416	2761	673	957	688	947	2992
Venereal	58	51	58	45	63	43	61	43	67	42	74	74
CD	45550	41255	47788	46273	71642	65708	67342	76791	69947	66551	87112	97546

Source: Maharashtra State budget Documents 2012-13 to 2017-18

Table A1. 9: Budgetary allocation and expenditure on Non-Communicable Diseases (NCD) from the State Budget (in lakhs)

	2012-13 BE	2012-13 AE	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 RE
Blindness	0	13	17	9	2045	66	1901	1157	810	1113	1426	2694
Deafness	0	0	0	0	272	0	386	145	153	51	0	0
Elderly	0	0	0	0	1463	166	1365	262	369	163	189	415
Goitre	0	9	32	17	34	18	0	11	40	15	33	33
Mental	8067	8013	8623	8530	11096	8992	11979	10741	13325	10505	12256	11952
NPCDCS	0	15	713	753	499	980	2491	1641	1445	1764	2648	8701
Oral Health	0	0	0	0	91	0	126	33	76	42	0	0
Sickle Cell	150	78	140	88	84	50	84	78	519	342	25	20
Tobacco Control	0	0	0	0	319	30	288	207	173	264	426	833
NCD	8217	8129	9525	9396	15903	10302	18620	14275	16910	14257	17004	24649

Source: Maharashtra State budget Documents 2012-13 to 2017-18

Table A1. 10: Budgetary allocations and expenditure, proportion of each component based on average allocation for two years and average utilization ratios for Non-Communicable Diseases (in lakhs)

	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 AE	Proportion of average allocation (%)	Average utilization ratio (%)
National Programme for Control of Blindness	2161	1522	2979	1366	47.0	58.2
National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke	2585	1299	903	461	31.9	50.7
National Tobacco Control Programme	645	128	457	208	10.1	32.7
National Mental Health programme	631	423	226	160	7.8	68.9
National Programme for the Healthcare of the Elderly	286	77	73	20	3.3	27.3
Total of Non-Communicable Diseases	6308	3449	4637	2216		51.2

Source: Maharashtra NHM FMR Analysis

Table A1. 11: Budgetary allocations and expenditure, proportion of each component based on average allocation for two years* and average utilization ratios for National Urban Health Mission (NUHM) (in lakhs)

	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 AE	Proportion of average allocation (%)	Average utilization ratio (%)
Strengthening of Health Services					22447	7530	14618	9108	70.9	47.9
Community Processes					3394	348	1819	707	10.0	24.6
Training/Orientation					2735	146	107	61	5.4	31.0
Innovations					163	151	2015	256	4.2	52.6
EPF					1435	0	706	300	4.1	21.3
Programme Management					481	276	498	287	1.9	57.5
Annual increment for all the existing positions					287	0	561	43	1.6	3.8
Regulation & Quality Assurance					210	8	228	18	0.8	5.8
IEC/BCC – NUHM					0	0	420	270	0.8	32.1
loyalty bonus					0	0	100	47	0.2	23.3
Any Other activities					0	0	71	8	0.1	5.8
Planning & Mapping including Baseline/ end line surveys					0	34	0	0	0.0	0.0
	29887	1126	28788	6485	31153	8494	21143	11104		39.9

Note: details for the years 2014-15 and 2015-16 are not available and hence the average has been taken for two years with details

Table A1. 12: Budgetary allocations and expenditure under Human Resources (in lakhs)

	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE
Contractual Staff & Services (Excluding AYUSH)	22604	18545	28278	19963	27695	20322	33754	21364
ANMs, Supervisory Nurses, Lady Health s	8385	8385	10783	9295	11212	9236	11880	9423
Laboratory Technicians, MPWs	353	208	396	226	317	216	419	227
Specialists (Anaesthetists, Paediatricians, Ob/Gyn, Surgeons, Physicians, Dental Surgeons, Radiologist, Sonologist, Pathologist, Specialist for CHC)	2939	1660	4062	2082	3960	2021	5988	1922
PHNs at CHC, PHC level	396	1	0	0	0	0	0	0
Medical Officers at CHCs / PHCs	189	192	887	425	763	329	970	373
Additional Allowances/ Incentives to M.O.s of PHCs and CHCs	0	0	0	0	0	0	0	0
Others - Computer Assistants/ BCC Co-ordinator etc	8835	6923	9903	6724	8841	7346	9768	7407
Incentive/ Awards etc. to SN, ANMs etc.	10	3	10	0	16	1	12	5
Human Resources Development (Other than above)	658	487	1302	590	1421	424	1840	375

	2013-14 BE	2013-14 AE	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE
Other Incentives Schemes	838	686	612	370	769	499	833	826
Support Staff for health facilities			323	252	396	252	2044	805

Source: Analysis of Maharshtra NHM FMR 2012-13 to 2017-18

Table A1. 13: Budgetary allocations and expenditure under National Urban Health Mission (NUHM) (in lakhs)

	2014-15 BE	2014-15 AE	2015-16 BE	2015-16 AE	2016-17 BE	2016-17 AE	2017-18 BE	2017-18 AE	Proportion of average allocation	Average utilization ratio
Strengthening of Health Services					22447	7530	14618	9108	70.9	47.9
Community Processes					3394	348	1819	707	10.0	24.6
Training/Orientation					2735	146	107	61	5.4	31.0
Innovations					163	151	2015	256	4.2	52.6
EPF					1435	0	706	300	4.1	21.3
Programme Management					481	276	498	287	1.9	57.5
Annual increment for all the existing positions					287	0	561	43	1.6	3.8
Regulation & Quality Assurance					210	8	228	18	0.8	5.8
IEC/BCC - NUHM					0	0	420	270	0.8	32.1
loyalty bonus					0	0	100	47	0.2	23.3
Any Other activities					0	0	71	8	0.1	5.8
Planning & Mapping including Baseline/ Endline surveys					0	34	0	0	0.0	0.0
	29887	1126	28788	6485	31153	8494	21143	11104		39.9

Source: Analysis of Maharshtra NHM FMR 2012-13 to 2017-18

Table A1. 14: Key Officials Interviewed at various levels

Level	Designation	Tool used	Number of interviews in each District	Total Number of Interviews
District (2)	District Health Officer (DHO)	A1	1	2
	District Civil Surgeon	A2	1	2
	District NHM Officer	A3	1	2
	Accounts officer	A1	1	2
	Rogi Kalyan Samiti Member	A4	1	2
Block (4)	Block Health Officer	B1	2	4
	Medical Officer SDH/CHC	B2	2	4
	RogiKalyanSamiti Head for Subdistrict/Taluk Hospital	A4	2	4
	Accounts Officer	B2	2	4
Gram Panchayat (16)	GP Member	C2	8	13(3-NA)
	Asha	C1	8	16
	PHC Medical Officer	B3	8	16
	PHC Accountant	B4	8	16
	RKS Member	A4	8	16
Municipal Corporation (1)	Chief Health Officer	D1	1	1
	NUHM Officer	D1	1	1
	NUHM Accountant	D1	1	1
	Medical Superintendent of UCHC	A4	1	1
	MO UPHC	D2	4	4
	ASHA -Urban	D4	4	4
	UPHC Accountant	D3	1	1
	RKS member -UPHC	A4	-	-
	Mahila Arogya Samiti (MAS)	D5	4	4
Total			74	124
PHC Profile	Responsible staff of the Institution	Facilities	20	20

Annexure 2: Fund Flows within Health Sector

Given the federal structure of governance in India, the flow of funds sees a decentralised method of routing where the funds flow from multiple rungs of government, beginning from the central government to the local bodies where the funds are finally spent. This section focuses on flow of funds expended for health purposes in Maharashtra. Owing to different organisational structures in rural local governance and urban local governance, the flow of funds is different and as such has been mapped and explained separately in this section. Within rural local governance, the flow of funds is different for the Tribal area and therefore has been discussed separately.

A.2.1. Flow of funds in rural local governance

The main department under which most of the health expenditure occurs is the Public Health Department (PHD). There are two main sources of health fund: (i) the funds allocated by the state as part of budget allocation for health and (ii) funds that come through Centrally Sponsored Schemes (CSS), mainly National Health Mission (NHM). Both these types of funds are routed to the state treasury, who then disburses funds to the PHD. This follows a hierarchical structure where the funds from the secretariat (responsible for policy) flows to the directorate level (responsible for implementation). At the directorate under PHD, there are four directors: Director of Health Services, Director of NHM, Project Director of Maharashtra State AIDS Control Society, and Commissioner of Employee State Insurance Scheme (ESIS). However, for tracking the flow of funds, our study focuses on the first two as the other two are for specific purposes. Funds which are allocated as part of the state budget flow mainly through the directorate of health services, while funds for NHM flow through the directorate of NHM. Although the destination of both these funds are frequently the same level/facility, the channels followed for each is separate. For example, the honorarium for Accredited Social Health Activist (ASHA) is a state expenditure, but the incentives for ASHA are a NHM expenditure; both follow different routes despite having the same destination. We will therefore look at these two separately (Figure A.1).

Funds for Tribal areas is channelled under the Tribal Sub-Plan (TSP) and are separate. Therefore, the TSP and Non-TSP funds have been explained in different sections.

A.2.1.1. Non-Tribal Sub-Plan (TSP) funds

These funds include funds for the entire district with no allocation made specially for any section. Within a district, the provision of health services occurs parallelly

both through the director of NHM and director of Health Services; we will discuss the two channels separately to capture the flow of funds in a more precise and clear manner.

Director of Health Services (DHS):

A director is usually supported by a team of additional directors, joint directors and deputy directors. In Maharashtra, the grants pertaining to the DHS are transferred to the joint director, budget, accounts and administration by the PHD. This procedure of transferring funds from one level of governance to another provides each successive receiver (the DDO, Drawing and Disbursing Officer) the authorisation to further disburse the funds or spend them as would be the case.

The next link, the joint director then distributes the funds to the eight deputy directors who are each in charge of a regional division[32].The next link of transfer is the funds disbursed from the deputy directors to major hospitals of all the districts as well as to District Health Officers (DHO) in each of the districts. Hence, we see a split in the route of funds where the funds flow to hospitals, at the district and sub-district level, headed by the civil surgeon and they flow to the PHCs and sub-centres under the DHO. While the civil surgeon is the supervisory head of all hospitals in the district, medical superintendents are the administrative heads of most of the hospitals except the district hospital where the civil surgeon is the administrative head. And therefore, the funds flow to administrative heads who are the DDOs at their hospitals.

Parallelly, funds are also transferred from the state to the DHOs, who then transfer the funds directly to PHCs or the funds are channelled via the Chief Account and Finance Officer (CAFO) of the Zilla Parishad who disburses them to the block development officer who then transfers them to the PHCs.

Director of National Health Mission (NHM):

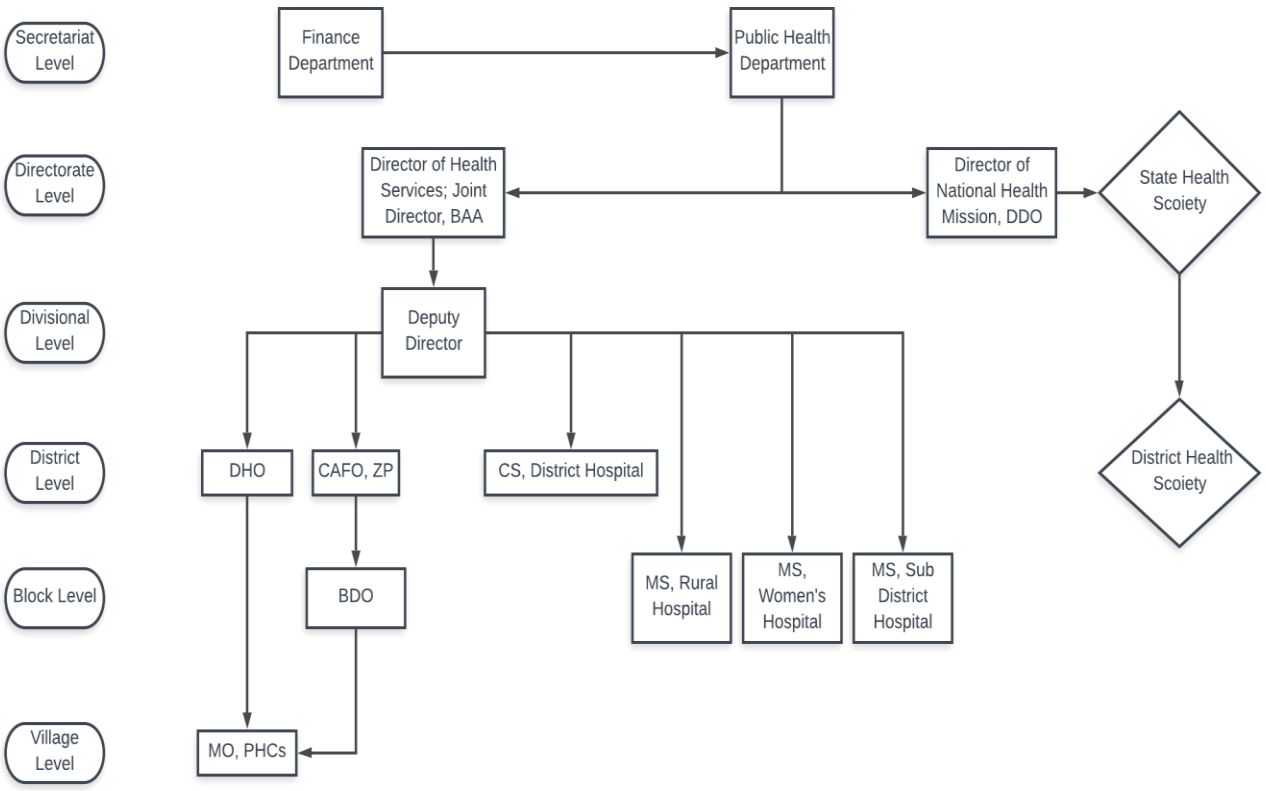
Routing of CSSs had been different prior to 2014 where the funds from the centre were directly transferred to the implementing agencies in the state. National Health Mission, which is one of the important CSSs, also saw the central funds transferred

[32] This is separate from revenue division,

directly to the State Health Societies (SHS). However, after 2014, the funds were routed through the state treasury, as mentioned earlier.

Flow of NHM funds initiates from the central government which transfers the funds to the state treasury which is handled by the finance department. Then, the finance department forwards the funds to PHD, from where the funds are channelled to the directorate level. National Health Mission funds are routed to the account of the DDOs at the directorate level who then transfer it to the bank account of the SHS. The next link is from the SHS to the district health societies. Funds from the district health societies then follow a pattern similar to health services, where they are transferred to the block level which is under the jurisdiction of the Taluka health officer, who disburses the funds directly to facilities under him, i.e., to CHCs, PHCs, SCs and VHSNCs.

Figure A2. 1: Fund Flow structures for Health Expenditure through the Public Health Department (PHD)



Note: BAA refers to Budget Accounts and Administration, DDO refers to Drawing and Disbursement Officer, DHO refers to District Health Officer, CAFO refers to Chief Accounts and Finance Officer, ZP refers to Zilla Parishad, CS refers to Civil Surgeon, BDO refers to Block Development Officer, MS refers to Medical Superintendent, MO refers to Medical Officer, and PHC refers to Primary Health Centre.

A.2.1.2. Tribal Sub-Plan (TSP) funds

The TSP funds are the funds used for the implementation of the strategy for rapid socio-economic development of Tribal people. These funds are in addition to the general funds that the district receives (section A). Just as in the case of non-TSP funds, the funds flow through two channels as discussed below.

Director of Health Services (DHS):

Funds for health in a district also flow from departments other than the health department. In case of TSP which constitutes of fund allocations for different implementing agencies such as health or education, the funds come from the Tribal department at the secretariat level directly to the district collector[33]. The district collector then distributes it to the implementing agencies such as the civil surgeon for hospital line or any other heads of the hospitals, DHO or the Zilla Parishad for PHCs.

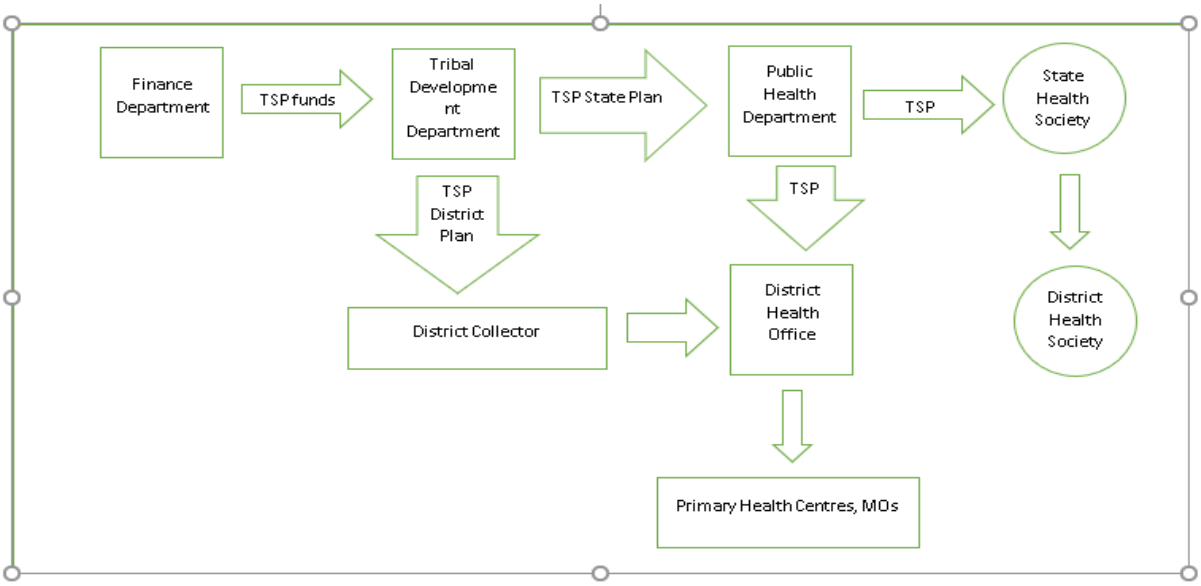
Director of National Health Mission (NHM):

In Maharashtra, there is a difference with regards to NHM state share under TSP where funds are directly transferred by the Tribal Development Department to the district collector at the district-level. This is in line with the routing norms of the TSP discussed under the director of health services.

The issue with the different routing method is that at a given district, it is difficult to track where the TSP fund is ultimately being used. It is also not possible to ascertain how much of the TSP fund is solely used for the benefit of Tribal population as the funds cannot be tracked to individual Tribal schemes. Similarly, while it is known that the state share of NHM goes directly to Tribal Development Department and then is routed to the districts, it is difficult to track the utilization of the same. And therefore, routing funds under TSP makes the picture ambiguous.

[33] A District Collector is the administrative and financial head of a district and reports directly to the Secretary of the Finance Department.

Figure A2. 2: Flow of funds under Tribal Sub-Plan (TSP) within the Department of Health

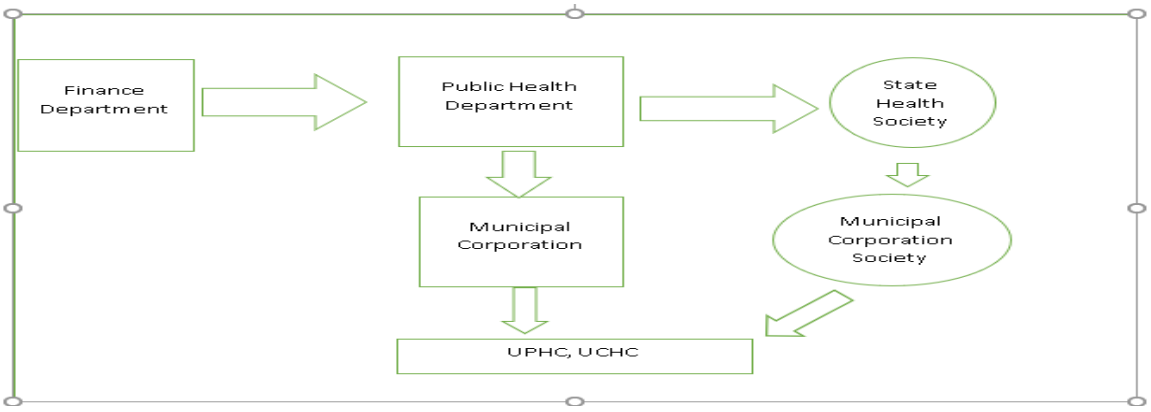


A.2.2. Flow of funds in Urban Local Governance

Urban local governance in India can broadly be classified into three categories: municipal corporation, municipal councils, and towns. Among the three, municipal corporation enjoys a greater degree of fiscal autonomy and works independently of the district jurisdiction it falls under in fiscal and administrative concerns. For the same reason, this section focuses on the flow of funds in a municipal corporation. There are 27 municipal corporations in Maharashtra. In definitional terms, a municipal corporation is a local government body that is in charge of the administration of urban area with a population greater than one lakh. The mayor is the statutory head of this urban administration while the commissioner is vested with the executive powers.

Sources and flow of funds in a municipal corporation differ from that of a district in the way that corporations majorly generate their own revenue and it is at their disposal for running the administration. The two major sources for incurring health expenditure at a municipal corporation level are discussed below.

Figure A2. 3: Flow of Health Funds through Municipal Corporation



A.2.2.2. Municipal Corporation Funds

These are the resources that the municipal corporation generates on its own through tax revenues and non-tax revenues. Tax revenues include but is not limited to property tax, vacant land tax, taxes on water, entertainment, parking, etc., while non- tax revenue constitute of municipal fees, sale and hire charges, user charges, and lease amounts to name a few. They also receive their share from the divisible pool of the state and centre funds. Over and above these revenues, the corporations receive grants from upper tier of government and based on shortage of funds also borrows from financial institutions. These funds are then allocated to different departments based on their needs. The commissioner who is the administrative head of the municipal corporation decides the budgets. For health, the funds are transferred to the head of the health department who is usually a doctor. The head then disburses the fund to various health units such as PHCs (urban health posts in common parlance) and other hospitals which may fall under their administrative control.

A.2.2.3. Health Society allocation

Like districts, municipal corporations also receive funds the NHM which follow the same route till the SHS. From the SHS, the funds are directly transferred to the municipal corporation health societies (equivalent to the district health society at a district level). The funds are sent into the bank accounts of the DDOs at the municipal level of implementing agency (Municipal Corporation Health Society). These are then distributed to various health bodies in the corporation as per guidelines.

Given the flow of funds in a municipal corporation, it is difficult to ascertain the total health expenditure at a corporation level from the budgets. More importantly, the state budget doesn't include expenditures on municipal corporations since the corporations majorly depend on their own generated funds. Therefore, to understand the total health expenditure in Maharashtra, an exercise of collection of budgets of individual municipal corporation needs to be undertaken.

To sum it up, it can be seen that funds flow through various channels before they reach the lowest level of the health care system. While the rationale to have such segregated channels is to have a more systematic way for the funds to be used and be accounted for, a very ambiguous picture emerges in practice as seen in our field study. While NHM fund flows through the treasury, it has a separate channel for its funds and therefore is accounted in detail separately by the health societies which follow accounting standards different from what it is for other expenditure. Hence, consolidating and understanding the total state expenditure is a herculean task. Table A.1 gives us a glimpse into the gaps in expenditure analysis.

Table A2. 1: Gaps in Fund Flows

	Pros	Gaps
State Budget	All health funds now flow through state treasury. Can trace health through major heads 2210 and 2211.	Does not include municipal health expenditure.
District level expenditure available from Koshwahini	Gives health expenditure under 2211 and 2210 at district level.	NHM expenditure cannot be traced through Koshwahini. NHM expenditure is often synonymous with district total health expenditure. Total district level health expenditure is difficult to ascertain due to difference in NHM accounting and other health expenditure accounting.
PHC -level expenditure	Gets funds under NHM and from state treasury.	Good utilisation of untied funds (UF) in rural areas. Untied funds not yet utilized in urban areas in PHCs as well as under Mahila Arogya Samitis. Urban field data shows low ASHA salary and low renumeration for volunteers for immunisation drives.
NHM Expenditure from FMR	Expenditures available in detail.	Large number of line items make it complicated to analyse. Utilisation for NHM at 60%. Does not give expenditure by district. Funds available at PHC only in June-July

	Pros	Gaps
		although Financial year starts from 01 April. Utilisation certificates difficult to obtain as some expenditures, especially at PHC level, are very small.
Health Expenditure under tribal sub-plan	Can separate tribal sub-plan from other health expenditure at state level.	All health allocations first flow to Tribal Development Department and then get transferred to health department. Unable to trace whether this expenditure is strictly on tribal population
Health Expenditure under urban health	Can separate urban expenditure from state budget documents and NUHM within FMR. Municipal corporations get funds from their revenue, state as well as from NHM.	NUHM utilisation is amongst the lowest under NHM. Untied funds not yet utilized in urban areas in PHCs as well as under MAS. Urban field data shows low ASHA salary and low renumeration for volunteers for immunisation drives. No details on how much of revenue is to be spent on health in a municipality. State funds goes towards hospital expenses, while NUHM goes towards PHC facilities.

Notes

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