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INDIAN INSTITUTE OF PUBLIC HEALTH GANDHINAGAR

National Health Mission – Impact and Learnings for the future

Impact of the National Health Mission on Governance, Health System, and Human Resources for Health

Draft Report

Indian Institute of Public Health, Gandhinagar

Indian Institute of Management, Ahmedabad

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Draft Report by

Indian Institute of Public Health, Gandhinagar & Indian Institute of Management, Ahmedabad

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The findings presented in this report are the result of months of efforts by researchers at the Indian Institute of Public Health, Gandhinagar, and the Indian Institute of Management, Ahmedabad. This report represents a part of NITI *Aayog*'s vision and comprehensive undertaking to encourage research into the National Health Mission and its impact on the Indian health system from the time of its inception in 2005, through 15 years of implementation.

The authors of this report express their gratitude to all the officials and experts at various levels of government and the NHM, and other organisations who provided invaluable insights into the mission through their in-depth knowledge of the health system, and exhaustive understanding of its functioning at various levels.

The aim of this report is to present a stock-taking of the NHM after fifteen years of implementation across the country, through a wide variety of schemes and programs, some of which preceded the mission itself and were then brought under its umbrella in order to provide an affordable, seamless, and comprehensive experience to the Indian healthcare seeker. The authors are confident that this report will initiate a discussion into the future of the NHM, what directions it should take, and provide a plethora of lessons, especially in the areas of governance in healthcare, the management of human resources for health, and the decentralisation and communitisation of health decision making.

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DISCLAIMER

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Contents

ACKNOWLEDGEMENT....iii

DISCLAIMER....iii

List of Tables and Figures....vii

ABBREVIATIONS....x

EXECUTIVE SUMMARY....1

Background....**Error! Bookmark not defined.**

Objectives....

Findings....

1. Structural and coordination issues....

2. Data based strategic planning concerns and M & E Issues for states....

3. Issues related to HRH- Equity and justice concerns....

Conclusion....

INTRODUCTION....13

OBJECTIVE....16

METHODOLOGY....17

Study Setting....17

Tool Development....19

Data Collection....23

Data Analysis....25

FINDINGS....28

1. Governance....28

1.1 Background....28

1.2 Findings....31

1.3 Recommendations....48

2. Human Resources for Health....53

2.1 Background....53
2.2 Findings....56
2.3 Recommendations....65
3 Impact of the National Health Mission on Health Systems....68
3.1 Background....68
3.2 Findings....69
3.3 Recommendations....77
4. Procurement and Logistics....79
4.1 Background....79
4.2 Findings....80
4.3 Recommendations....85
5 Rogi Kalyan Samitis (RKS) and Untied Funds....87
5.1 Background....87
5.2 Findings....90
5.3 Recommendations....93
6 Monitoring and Evaluation (M&E)....94
6.1 Background....94
6.2 Findings....95
6.3 Recommendations....100
7 ASHA....103
7.1 Background....103
7.2 Findings....107
7.3 Recommendations....111
8 Process Implementation Plans and Budget....114
8.1 Background....114
8.2 Findings....117
8.3 Recommendations....121

9 Key issues and recommendations....125
9.1 Governance and structural aspects at central and state levels....125
9.1.1 Issues....
9.1.2 Recommendations....
9.2 Human Resource for Health....127
9.2.1 Issues....
9.2.2 Recommendations....
9.3 Preparing a strategic plan for healthcare delivery systems in the states....129
9.3.1 Issues....129
9.3.2 Recommendations....
9.4 Technological challenges in HMIS....130
9.4.1 Issues....130
9.4.2 Recommendations....
9.5 Enhancing the effectiveness of PIP process....131
9.5.1 Issues....131
9.5.2 Recommendations....
9.6 Monitoring and evaluation mechanisms in the state....134
9.6.1 Issues....
9.6.2 Recommendations....134
9.7 Procurement and logistics systems....135
9.7.1 Issues....135
9.7.2 Recommendations....135
9.8 ASHA workers....137
9.8.1 Issues....
9.8.2 Recommendations....
9.9 Strengthening local governance and capabilities....139
9.9.1 Issues....

9.9.2 Recommendations..
Conclusion………………………………………………………………………………… 140
REFERENCES...141
ANNEXURE...146

List of Tables and Figures

Table 1 Examples of qualitative research aims, objectives and questions in the interview tool for key informants...23

Table 2 Sample of Thematic Network Analysis framework - From global to basic themes.............27

Table 3 Members and Structure of the Empowered Program Committee and the Mission Steering Group of the NHM..32

Table 4 Year Wise number of meetings of State Health Mission Held..34

Table 5 Year Wise number of meetings of District Health Mission Held...41

Table 6 Year wise Number of Districts prepared annual District Health Action Plan (DHAP) under NHM..42

Table 7 Human Resources under National Health Mission...55

Table 8 Status of Non-Technical Human Resources for Health in Gujarat NHM............................56

Table 9 Status of Technical Human Resources for Health in Gujarat NHM....................................56

Table 10 Status of Human Resources for Health in Uttar Pradesh Health Department......................57

Table 11 Status of Human Resources for Health in Rajasthan Department of Health.......................57

Table 12 Status of Human Resources for Health in National Health Mission Rajasthan at State Level 58

Table 13 Status of Human Resources for Health in National Health Mission Rajasthan at Districts Level...59

Table 14 Number of ERS vehicles operational in the States/UTs under NHM................................69

Table 15 Number of Rogi Kalyan Samitis registered across various levels of healthcare in the country..89

Table 16 Year wise number of ASHAs selected across the country...104

Table 17 Program wise training duration for ASHA...107

Figure 1 Objectives of the National Health Mission....14

Figure 2 Various Phases of the study....17

Figure 3 Map of India with study states....18

Figure 4 Study states with districts....19

Figure 5 Tool Development Process....20

Figure 6 Terms of reference of the Common Review Missions....21

Figure 7 Health functionaries interviewed (Various Levels)....25

Figure 8 Structure of the Governing body of the SHS....34

Figure 9 Structure of Executive Committee of the SHS 35

Figure 10 Organogram of the NHM in the state of Gujarat....36

Figure 11 Organogram of the NHM in the State of Rajasthan 38

Figure 12 Organogram of the NHM in Uttar Pradesh (NHM State Programme Management Unit. .40

Figure 13 Structure of the Governing Body and Executive Committee of the District Health Society 43

Figure 14 Organogram of the Directorate General of Health Services at National Level, Government of India....46

Figure 15 Institutional Mechanisms under National Health Mission....54

Figure 16 Percentage reduction in the Infant Mortality Rate in India, Gujarat, Rajasthan, and Uttar Pradesh (Sample Registration Survey data from 2005-2017)....70

Figure 17 Percentage reduction in the Maternal Mortality Rate in India, Gujarat, Rajasthan, and Uttar Pradesh (Sample Registration Survey data from 2005-2017)....

Figure 18 Percentage reduction in the Total Fertility Rate in India, Gujarat, Rajasthan, and Uttar Pradesh (Sample Registration Survey data from 2005-2017)....71

Figure 19 Infant Mortality Rate in India and the study states (NFHS - 2005-2006 & 2015-2016)....71

Figure 20 Total fertility rate in India and the study states (NFHS 2005-2006, 2015-2016)....72

Figure 21 Maternal Mortality Rate for India (1998-2012) (NFHS)....72

Figure 22 Expenditure of NHM from 2005-2018 in crores of rupees....73

Figure 23 Public-private distribution of in-patient and out-patient treated episodes of illness from the National Sample Survey Organisation (NSSO)..73

Figure 24 Doctors and nursing staff per 10,000 populations in PHCs and CHCs (2005-2018).........75

Figure 25 Structure of RKS at various levels of health system..89

Figure 26 Decreasing number of public health facilities meeting IPHS norms.................................97

Figure 27 Structure of the Performance Monitoring and Control Centre in Gujarat..........................99

Figure 28 Structure of ASHA supervision and management at state level......................................105

Figure 29 Key support systems and activities for ASHA at various levels......................................106

ABBREVIATIONS

AB	Ayushmaan Bharat
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
AWW	Anganwadi Worker
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha
BPL	Below Poverty Line
BPM	Block Program Manager
BPMU	Block Program Management Unit
CBR	Crude Birth Rate
CD	Communicable Diseases
CDHO	Chief District Health Officer
CDMO	Chief District Medical Officer
CHC	Community Health Centre
CMO	Chief Medical Officer
CPHC	Comprehensive Primary Healthcare
CRS	Census Registration System
DDO	District Development Officer
DHO	District Health Officer
DHM	District Health Mission
DHS	District Health Society
DM	District Magistrate

DPM	District Program Manager
DPMU	District Program Management Unit
EPC	Empowered Program Committee
FRU	First Referral Unit
GoI	Government of India
HBNC	Home based New born Care
HMIS	Health Management Information System
HR	Human Resources
HRH	Human Resources for Health
HTA	Health Technology Assessment
ICDS	Indian Child Development Services
IDSP	Integrated Disease Surveillance Program
IEC	Information, Education and Communication
IMR	Infant Mortality Ratio
IPHS	Indian Public Health Standards
JSSK	Janani Shishu Swasthya Karyakram
JSY	Janani Suraksha Yojana
LMIC	Low and middle-income countries
MCTS	Mother and Child Tracking System
MLA	Member of Legislative Assembly
MMR	Maternal Mortality Ratio
MNCH	Maternal, New born and Child Health
MoHFW	Ministry of Health and Family Welfare

MSCL	Medical Services Corporation Ltd. (in every state)
MSG	Mission Steering Group
NCD	Non Communicable Diseases
NFHS	National Family Health Surveys
NHA	National Health Authority
NHM	National Health Mission
NHSRC	National Health Systems Resource Centre
NIC	National Informatics Centre
NPCDCS	National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke
NRC	Nutrition Rehabilitation Centre
NRHM	National Rural Health Mission
NSSO	National Sample Survey Organization
NUHM	National Urban Health Mission
OOP	Out-Of-Pocket
OP	Outpatient
OPD	Outpatient Department
PFMS	Public Financial Management System
PHC	Primary Health Centres
PM-JAY	Pradhan Mantri Jan Arogya Yojana
PPP	Public Private Partnership
PRI	Panchayati Raj Institutions
RBF	Results based financing
RFP	Request for Proposals

SC	Sub Centre (now known as Health and Wellness Centre—HWC under Ayushmaaan Bharat
SHM	State Health Mission
SHRC	State Health Systems Resource Centre
SHS	State Health Society
SNCU	Special New born Care Unit
SRS	Sample Registration Survey
TFR	Total Fertility Rate
THE	Total Health Expenditure
THO	Taluka Health Officer (same as Block Health Officer BHO)
UHC	Universal Health Coverage
VHND	Village Health and Nutrition Day
VHSNC	Village Health, Sanitation, and Nutrition Committee
WASH	Water, Sanitation and Health
WHO	World Health Organization

EXECUTIVE SUMMARY

The National Rural Health Mission (NRHM) was launched in 2005 with a view to shift the focus of public health in the country from a vertical, disease focused, and programmatic approach towards one that recognises the complex adaptive nature of the health system. The rationale for the NHM was to provide India with a coherent and robust nation-wide mission that would create a health system where healthcare services, and health decision making and planning would be communitised.

As the present phase of the NHM is coming to a close, it was deemed necessary to conduct assessment of the mission progress, the challenges faced in its implementation, the changes it brought to the approach used by the country towards healthcare and public health, and the overall impact of the mission. Therefore, NITI Aayog commissioned this study for evaluating the impact of National Health Mission on Governance, Health System and Human Resources for Health. The present study has been implemented by IIPH-Gandhinagar with help from two senior faculty members of IIM Ahmedabad. This study was one of the three studies commissioned by NITI Aayog – other two studies were done by PGI Chandigarh, and NIPFP.

The study had the following TORs spanning across various dimensions of governance- at multiple levels- central, state and district and from top management to the frontline workers. The TORs were:

1.To analyse the strengths and weaknesses of the governance setup of the NHM, identify best practices going forward in context to the framework of Ayushmaan Bharat, SDGs, Universal Health Coverage (UHC) and health equity

2.To analyse the systematic, technical capacity and decision making at the National, State-level in carrying out the NHM, and study the HR Capacities across difference states.

3. To study human resource gaps by looking at the requirements vis-a-vis actual officers posted as a way of understanding state capacities to carry out the mission.

4. To analyse the State strategies, plans and actions taken to bridge the evident gaps in human

resources and the effectiveness of such actions

The study was executed in three phases: - (i) Document and literature review (ii) Development of a qualitative tool and data collection via key informant interviews and focus group discussions (iii) Data analysis and report writing. A mixed-methods approach was used where secondary data was collected from published reports and other government documents, the experiences of health functionaries at the central, state and district levels of the health system, including policy makers and care providers collected through in-depth management focused key informant interviews, and field visits carried out by researchers for validating qualitative findings. The study was carried out in 3

states namely, Gujarat, and Uttar Pradesh and Rajasthan. Additionally, the NITI Aayog team has also provided input from Andhra Pradesh, Karnataka and Chhattisgarh. Approximately, 120 Key Informant interviews were conducted spread across all levels central, states and districts/city.

Findings

To structure the findings and the recommendations we draw upon the aspects of good governance. Based on the literature, good governance relates to following 4 aspects

1. Empowerment plus Accountability
2. Fairness and transparency
3. Coordination amongst diverse stakeholders
4. Organizational Justice- Procedural, distributive and interactional

The following sections represent the findings drawn from the qualitative study conducted in the three states and the inputs from NITI Aayog team that studied other three states. The sections refer to our key findings and corresponding recommendations on three aspects:

1. Structure and coordination issues
2. Data based strategic planning and M & E for states
3. Issues related to HRH

These three dimensions span across the TORs along which the study was carried out.

1. Structural and coordination issues

The mission structure is aligned with matrix form of organization with overlapping project and functional aspects of organizational systems. The advantages of Matrix form and mission mode was evident in the findings across the states with stakeholders highlighting the important positive aspects of a matrix structure- namely, Flexibility, Innovativeness and Empowerment. With systematic structures at centre, state and district levels, NHM has significantly focused on empowerment of the health facilities and frontline workers. The mission mode was important for building flexibility. These aspects were evident in increased finances available for the health system, and creating the space for contractual, temporary staff to fill the gaps in HRH.

However, in a typical matrix structure, the coexistence of the two parallel structures frequently results in coordination issues, which relate to Role ambiguity, Accountability and Organizational power and politics. These aspects are especially prominent at the managerial level where there are dual (or multiple) chains of commands. While the advantages of the mission mode were evident, we also found evidence for coordination challenges across multiple levels, described below. These aspects need to be addressed by designing effective coordination mechanisms, monitoring of the

system for potential issues such as power play and politics in the organization, and focus on communication capabilities amongst the managers.

1.1 Coordination between NHM and directorate

Issues of lack of coordination and at times clashes between Mission Director-NHM and Directorate of Health Services have been reported in some states such as Uttar Pradesh, the directorate does not participate actively in decision making even though they are the technical wing of the department. One of the key areas of concern was the disconnection and lack of integration between the State Health Society and the directorate. With the introduction of NHM, the role of the directorate had decreased and it now functions merely as a signatory for the SHS on PIPs. The directorate's lack of say in the flow of funds into the SHS is often seen as its inability to exercise control over programs. Due to this there is limited capacity and willingness to manage new programs. Gujarat has a better SHS-NHM-Directorate integration model where the member-secretary of the state health society is the Additional Director of health. In Gujarat, where the directorate was well integrated with the SHS, which led to the effective and efficient delivery of public healthcare services.

There were several other concerns related to governance including short term posting at the MD NHM level, lack of specialist public health cadre and absence of a formal post for managing the diverse role of administrative and technical skills in the health sector- MD NHM and directorate, respectively.

These coordination issues reflected across levels- at the peripheral level, conflicts between cadres amongst NHM contractual staff and the state employees (permanent), ASHAs and ANMs, have been noted both, in the outreach and in the healthcare facilities. All this affects performance of services.

1.2 Role ambiguity

We found that the role ambiguity existed both at the institutions level and at the managerial level.

<u>At institution level</u>

Multiple institutions exist with lack of clarity about their respective roles, eg. SHM, SHS, SIFHW, SHSRC, TSU, especially in Uttar Pradesh where multiple large donor assisted projects were implemented. Some of their roles are clear and complementary, but at times their efforts are overlapping, duplicated and also increase the ambiguity about their role. Indeed, some of the organizations such as SIFHW, SHSRC are struggling due to various reasons including their identity/purpose in the new schema of the things. We found that there is a need for rationalization of the institutions, programs and corresponding Human Resources Management. With the NHM getting matured there is an urgent need to formally redefine the role of institutions rather than allowing them to search for their own identity. Each new major project, instead of reforming and strengthening the

directorate sets up its own organization for fast implementing of the project. In turn this weakens the directorate further.

At Managerial level

The researchers noted role ambiguity related to a dual chain of command characteristic of a matrix organization, at the CMO/CHDO level, which is the key stakeholder in district health management, in many cases, the CMOs office worked directly with NHM, and the directorate is by passed. MD NHM directly speaks to the CMO and control the function of CMOs. The common perception was that the money flows from the NHM and the power lies where the money comes from. These findings can be attributed to a lack of authority with directorate officials in NHM, work flow and fund flow with standardization of data reporting structure. Capacity building related to coordinating roles, especially at the level of CMO/CDHO who is a crucial link in the dual reporting structure was also lacking.

1.3 Money flow and budgeting

Previously, the NHM were getting funds directly in the State Health Society Account. However, this has been restructured to route funds through state treasury. This had resulted in an average delay of about 70-80 days. Further, there are multiple program accounts, as much as 30 different accounts from which the funds are released as per the program requirements, which creates a lot of confusion. The structural financial bureaucracy thus jeopardises not only flexibility and empowerment but also accountability.

There were some issues in fund allocation which are based on performance incentives. While this is welcome as it may result in PHCs performing better to claim the rewards, it also results in disadvantages to the new PHC and poorly performing PHCs. Indeed, some of the poor performing PHCs and the newer ones might be in dire need of funds to break the vicious cycle. We noted a lack of flexible and need based mechanisms for funds allocation catering to the requirements along with the performance based allocation

NHM has provided financial power to the periphery through the District Health Society model. The societies are working well. However, we found an urgent need to invest in capacity building amongst stakeholders who are part of DHS for optimal involvement. It can also improve the coordination between the periphery and the center.

Recommendations: Structural and coordination issues

Coordination and integration mechanisms between NHM and DGHS at central level and /DHS at state level.

Role clarity

There should be a defined role of both the MD-NHM and directorate officials in the planning, implementation, monitoring and funding of various programs in the state in context of NHM.

Structures and processes for coordination at central and state levels

Appropriate representation of DGHS in MSG and other decision making bodies is essential and these may be reflected at all the levels across the state. States should have strategies to build better coordination and cooperation for directorate and NHM with proactive engagement and involvement of the directorate officials in planning and execution/review as per official protocols such as in conducting joint reviews every six months.

Review of Directorate of Health Services and its capacity building

HR Audit of the directorates- Planning and rationalization

The directorates should initiate a detailed HR audit of existing HR and also in terms of manpower requirement for the next three to four years, leadership pipeline and career planning mechanisms, preferably carried out by a third party, such as an academic institute, or consulting company. Based on the recommendations, the directorate can be expanded and improved in capacity.

Career planning and capacity building

Training programs in various aspects of public health management should be conducted for mid-level and senior officers. Senior officials at the directorate should be appointed for at least 3 years' tenure. Promotion criteria need to be made more transparent. Lateral entry at some key posts (from medical colleges, public health institutes and management institutes); for specialized roles such as logistics and procurement, strategic planning, MIS should be made. State and central government should make provision for inviting experts from other countries as advisors for short to midterm periods. Senior academics, consultancy company managers may also be invited for a short time to take sabbatical from parent organizations and work in directorate or ministry as special advisors.

Building a cadre of Public Health and health management

While the directorates have technical knowhow and the SPMUs have administrative competencies, there is a need for developing and nurturing public health cadre. For example, it is done in Tamil Nadu and is being planned in Odisha. Similarly, large hospitals should have professionally trained

hospital managers. Health insurance programs should have health managers etc. This can be done by developing a health management cadre or public health management cadre which combines public health and health management skills. The vast potential of schools and institutes of public health and hospital administration can be utilized. The PGDPHM programme implemented under the NHM for managerial training of government sponsored medical officers at renowned schools of public health in India is welcome step and till now approximately 1200 medical officers have been trained. However, there is discontinuity in sending medical officers to this programme and some states are not following central NHM guidelines pertaining to PGDPHM program. Further, the emphasis should be on posting PGDPHM graduates on managerial and public health positions rather than as a medical officer even after 1-year investment on them residential training.

2. Data based strategic planning concerns and M&E Issues for states

One of the important contributions of NHM has been the focus on data based decision making. The design of the system including PIP process and reporting entails empowerment of the frontline in the system as well as enables the top management to make data based decisions. Transparency and accountability, two important pillars of good governance depend upon data based decision making. NHM put major emphasis on strengthening capacities for data collection, assessment and review for evidence based planning, monitoring and supervision for achieving its goals. NHM framework proposed accountability by a three pronged approach of internal monitoring through MIS, community based monitoring and external surveys like the SRS, DLHS, and household surveys.

The NHM envisages robust monitoring and evaluation mechanisms, ranging from regular reviews by Central NHM, State NHM, and District Level institutions. The M&E is a key component of the NHM and various M & E systems helped in identifying and developing mid-course corrections so that the goals of the NHM and the SDGs could be achieved.

2.1 Data Collection and its use

Capabilities of the frontline staff in using the data system is a significant issue. The ease of data collection and reporting, considering the fact that the data comes from the frontline health workers, was reported as a serious concern. There is a need for planning and implementation of training programs and support systems for the frontline workers regarding data collection and reporting. Some state like Gujarat have done innovations by using cell-phones to collect data at the ground level.

2.2 System duplication and redundancy

We found that duplication of data systems is an important aspect in newly designed and evolving systems, especially of parallel programs. Same data is uploaded on different systems. Sometimes the

data does not correlate raising questions about authenticity of data. Further, the data suffers from lack of standardization that limits its usability in decision making.

2.4 Data analysis and reporting

Data, unless analyzed and used for decision making is useless. There is a significant lack of capabilities to make sense of data and analyze the data. This is because the existing officers and staff are not trained in public health and health statistics, and there is very limited or no health data experts hired in NHM. Even NHSRC has this weakness. This is a major hurdle in data based decision making. The need is to build a credible public health work-force who are apt at data analysis and interpretation. Other option is to outsource the data management functions. There is not state wise or national statistical and narrative report of NHM, which is highly desirable.

2.5 Integration issues

As discussed above, there were multiple platforms and systems running parallel. For example, in UP, platforms for monitoring maternal and child health indicators were being maintained as a part of a comprehensive platform as well as part of RMNCH program health. Multiple introductions of software based programs without linking them to already existing programme led to duplication of efforts. There is an urgent need to build a standardized data system over which the applications can be built. Such data based platforms can also help in strategic planning and ignite innovative solutions. A concentrated effort to make an integrated standardized data system would enable the stakeholders to design innovations that would use standard and interoperable data. For example, procurement can be linked to the disease patterns only if the systems and data are interoperable.

2.6 PIP process issues

PIP has been one of the key processes that has resulted in empowerment at the peripheral level as well as institutionalized flexibility. The NHM needs to strengthen the process of PIP further by enabling the periphery to make optimal use of the opportunity. One of the issues we found that the 1800 line items of the PIP budget jeopardized flexibility and introduces centralized micromanagement. Standardization and coding along with instituting mechanisms for capacity building in terms of the PIP process at the peripheral level will be a key to achieving transparency and accountability and also enhance the perception of justice- procedural and distributive.

Recommendations: Data based strategic planning and M&E for states

Preparing a strategic plan

The states need to prepare a strategic plan for health (Three years at least) based on the current public health circumstances, the disease burden, infrastructure and human resources aspects. This plan should guide the health investments and PIP development for NHM.

Longer term PIPs based on strategic plan

PIP need to be forward looking for five or at least three years, with large proportion of activities being constant for every year. The decentralised planning under PIP may start at village level and gets integrated into higher-level action plans at district and state levels. This is already initiated in some states.

Regular Annual Performance Report

A small portion of NHM funds should mandatorily be dedicated to the creation of a standardized detailed annual statistical and narrative performance report by each state, submitted to the central government, and made available to the public.; Directorate of Health Services Officials should be involved in in this. This report can be also used to monitor progress and evaluate the NHM program. There should be a state-wide M&E plan which should guide the process.

Single standardized system for data collection and reporting

A unified standardized system for data reporting should be created for all processes, ensuring ease of use as these systems will be used by the frontline workers. The data triangulation and verification mechanisms need to be implemented to ensure quality of data. Capacity building should be enhanced at all levels to enhance data based decision making.

Reducing the number of budget heads in PIP

Reduction in the number of heads in PIP/Budgeting is strongly recommended to bring more flexibility- To bring it down to 1000 from 1800 in the first year and in next 2-3 years make it about 500 budget lines under 5-6 major heads.

Software based planning

PIP/ Budgeting should become online where most of the aggregation and duplication work may be done by backend software.

3. Issues related to HRH- Equity and justice concerns

NHM's major contribution was expansion of the human resources for Health. NHM brought in flexibility in recruitment as the process does not depend on state public service commission exams for recruitment – which is a very slow process. Further, managerial capabilities were built in the system by designing program management units at multiple levels and hiring managers for these units. The NHM has improved overall capacity in management, finance, and data by creating the space for contractual, temporary program management staff, such as the State Program Management Unit (SPMU) and the District Program Management Unit (DPMU). It should be noted that the improvement of technical capacities has been achieved by the NHM not only by adding cadres and personnel to the existing system, but also by creating a dynamic and action oriented health system culture through induction of young professionals.

To develop a connection with the community about 1 million strong cadre of ASHA workers was created across the nation. This is seen as a game changing innovation of NHM. It has helped in many ways – improving coverage of services, improving community contact and establishing village level presence of health services.

Under NHM funding the deficiencies in HRH were quickly filled by the contractual work force hired under NHM. However, coexistence of contractual and regular staff in the system posed challenges.

Perception of equity amongst the employees is an important aspect of all three forms of organizational justice- procedural, distributive as well as interactive. Equity relates to 'similar pay for similar work', equal opportunities for career progression and appropriate allocation of work. While NHM had enabled decentralization, shifting the power to the district and state level through the PIP process, there were other issues related to collocation of two different types and levels of employees- jeopardizing the equity perceptions amongst the employees. These are given below.

3.1 Pay

The pay structure and work allocation in the NHM versus the permanent staff was significantly different, especially at the senior levels. The perception was that the contractual NHM staff are made to do all the hard work while their pay is lesser than the permanent staff who enjoyed many benefits besides higher pay.

3.2 Training and development

Skilling is an important component of empowerment. We found several impediments to this. While there have been several programs and emphasis on training the real capacity building in is limited, even the funds allocated for these are limited. Inadequate training budgets and improper allocation of the allocated budgets are important causes of lack of skills amongst the staff, especially the frontline

staff. The training system including NIHFW, SIHFW and regional training centres are weak. While medical colleges and institutes of public health have been used for capacity building on a limited scale, except for PGDPHM program.

3.3 Career development

Career progression is yet another dimension of fairness and equity. One of the important dimensions of work allocation and career progression that we observed at a senior level was lack of administrative and managerial capacities and public health skills. The role of clinical specialist, administrator, manager and the public health are intertwined in the system, with one person expected to perform the three roles from time to time. Many times a one director holds charge of many different programs and hence not able to do justice to any. Cadre rationalization with creating a career plan for specialist, administration and public health needs to be undertaken in each state and central level on urgent basis.

At the frontline level, there were issues related to uncertainty and lack of clarity about career progression. While there was a provision for periodic regularization of NHM staff in the NHM blueprint, the same has not been implemented, except in some few states such as Tamil Nadu. It was reported that the work allocation is asymmetric, with contractual NHM staff doing the majority of the work.

3.4 Lack of key capabilities

While there are multiple and diverse personnel involved in the implementation of NHM including the consultants, program managers and technical service delivery employees etc; rationalization of the staff and the roles was lacking. Some key capabilities are lacking. - for example, there was a significant gap in capabilities regarding procurement, supply chain, public health, epidemic control and data sciences.

3.5 ASHA

We found several issues related to ASHA. Concerns were raised about their recruitment and the lack of the MO's role in the same. With increasing urbanization and education levels in the communities, there was a perceived need to take a relook at their qualification levels in urban areas. Further, with the increasing focus on wellness centres, there was an envisaged need to revamp their training programs. Furthermore, respondents cited issues related to their performance monitoring and career planning as it was perceived to be a 'dead end job' with no career progression. ASHA management systems are also week at state and central level.

Recommendations

HRH

Establishing a well-resourced professional, efficient HRH cell at the state level

Enhancement of HRH has been one of the significant improvements in the health system brought about by NHM. We suggest creating an efficient HRH cell at the state level with professionally trained HR personnel with authority to recruit, train and deploy HR for various cadres of health department.

HRH as an integral part of HMIS

Implementation of uniform and standard HRH platform should be an integral part of HMIS. The HRH system should enable tracking and mapping of HRH across the state. Recruitment, training, performance evaluation, transfers and other HR subsystems need to be managed through HMIS

Uniform HR policy

Uniformity in implementation of HR policies is an important aspect of good governance. NHM should ensure uniform policies across states such as for recruitment and regularization of NHM staff.

Rationalization of compensation

To ensure equity of pay NHM should ensure rationalization of compensation to decrease the gap between the pay for similar work and similar cadres.

Objective performance monitoring

One of the important feedbacks that we gathered across states was a need to develop and implement an objective performance measurement system for different cadres of HRH.

ASHA

ASHA Recruitment and role

Entry qualification criteria into the ASHA program should be standardised. In urban centres, the entry qualifications for ASHAs could be increased, especially in non-slum areas.

Compensation and recognition

The fixed honorarium amount should not be increased. Performance awards like "ASHA of the month” could be put in place at the block level to introduce a competitive spirit.

Training and knowledge enhancement

Training modules for ASHAs may be re-examined for contemporary challenges like NCDs, infections like COVID-19 and skills related to behavioural aspects of the community.

Monitoring

ASHAs should be monitored regularly by the ANM or the CHO, and mechanisms should be put in place to remove non-performing or inactive workers within 3 months.

Career Progression

In long-term open schooling through NIOS should be facilitated to enable ASHAs to pursue higher level education. Further, few seats for eligible well-performing ASHAs can be reserved in nursing courses and some relaxations should be given.

Conclusion:

One of the recent events that has overwhelmed the health system in India is COVID-19. The outcome of the pandemic, among other factors such as virulence, temperature and climate etc, depends on the strength and effectiveness of the health system. And a defining characteristic of a strong and effective health system is resilience. Three interconnected factors capture health system resilience - awareness, adaptiveness, and integration.

NHM with its mission mode of structure and operation has contributed significantly to strengthen the resilience of the health system in India. The focus on decentralization and empowerment of the frontline and developing a community connection through an effective cadre of ASHA workers has been vital for awareness and adaptiveness in the system. NHM has also focused on integration of subsystems by bringing diverse programs under single umbrella and by instituting mechanisms such as PIP and enhancing managerial capabilities.

The above study reiterates the need of continuing NHM in the mission mode, albeit with increase in funding. Further, the study highlights some of the issues that require cognizance and makes recommendations to address the same. The emphasis on three key aspects- structures and coordination mechanisms between NHM and the directorates, data based planning and execution. and the focus on further improvements in HRH can further contribute to building resilient health systems and also enhance the capabilities to deal with sudden shocks such as COVID-19.

INTRODUCTION

At the start of the second millennium, India occupied a unique position on the global health map. The country was witnessing a demographic shift with a decrease in both mortality and fertility rates. Simultaneously, an epidemiological transition occurred from morbidities associated with poor nutrition and communicable disease, towards non-communicable, lifestyle diseases, reflective of the economic growth in the country, as a result of economic liberalisation in the 90s (Peters et al., 2003). Despite this, as the Millennium Development Goals were being set, India was still grappling with 23% of all childhood deaths in the world, and a quarter of all maternal deaths (Peters et al., 2003).

The Indian public health system has been made on the foundation of PHC, and CHC, staffed by health workers including ANM, MHW, and Health Assistants (Kapil, 2006). The *Bhore* Commission Report of 1946 can be considered to be the first comprehensive document which focused on the health of the Indian population, described its problems and suggested a system for health care services and public health in India (Peters et al., 2003). This was followed by the *Srivastava* Committee of 1975 (Purohit and Siddiqui, 1994) which sought to reorganise medical and health education to bring about reforms that were suited to the health needs of the country at the time (Sharma, 2014). This committee also led to the creation of the cadres of multipurpose health workers and health assistants (Sharma, 2014). The Constitution of India has laid out the various services associated with public health in lists that were divided between the central and state governments (Gupta and Rani, 2004). In the early post-independence period, policy making and fiscal control was traditionally the realm of the central government, whereas the implementation of these same policies was to be decentralised, to the state and local governments (Gupta and Rani, 2004). This meant that health agendas and resultant policies were often not customised to the requirements of states that were as divergent in their population and health profiles as they were in geography and culture.

The National Health Policy (NHP) of 1983 aimed to correct the previous problems by emphasising a needs based approach to health services and a long term focus on providing customised, comprehensive primary health care at an affordable cost to communities (Ministry of Health and Family Welfare, Government of India, 1983). Guidelines under this policy also highlighted prevention and health promotion within primary healthcare. From a governance perspective, the policy underscored the importance of and need for decentralising services, and planning the location of health facilities in a manner that was considerate of topography, population density and disease burden, and connectivity (Purohit and Siddiqui, 1994). The 1983 policy also recognised the value and aimed to revive traditional Indian systems of medicine that had been previously side-lined (Ministry of Health and Family Welfare, Government of India, 1983). The Revised 20-Point Program put forth by the NHP also recognised the importance of tribal health, infant and maternal

mortality, malnutrition, and the control of communicable diseases such as Tuberculosis and Leprosy. It further sought to create an integrated referral system of healthcare services in order to provide a complete package of services, rather than a mixture of disparate interventions (Ministry of Health and Family Welfare, Government of India, 1983). It can be said that with these features, the first attempts at a systems approach to the Indian health system had been taken, which were then put into practice with the NHM.

The NRHM was thus launched in 2005 with the following goals:- (i) to reduce IMR and MMR, (ii) to create a comprehensive primary healthcare system, (iii) improve child health by focussing on Water, Sanitation and Health (WASH) in communities, (iv) to prevent and control communicable diseases, (v) to stabilise the population, (vi) to invigorate local medical practices, and (vii) to promote healthful lifestyles in the population (Kapil, 2005).

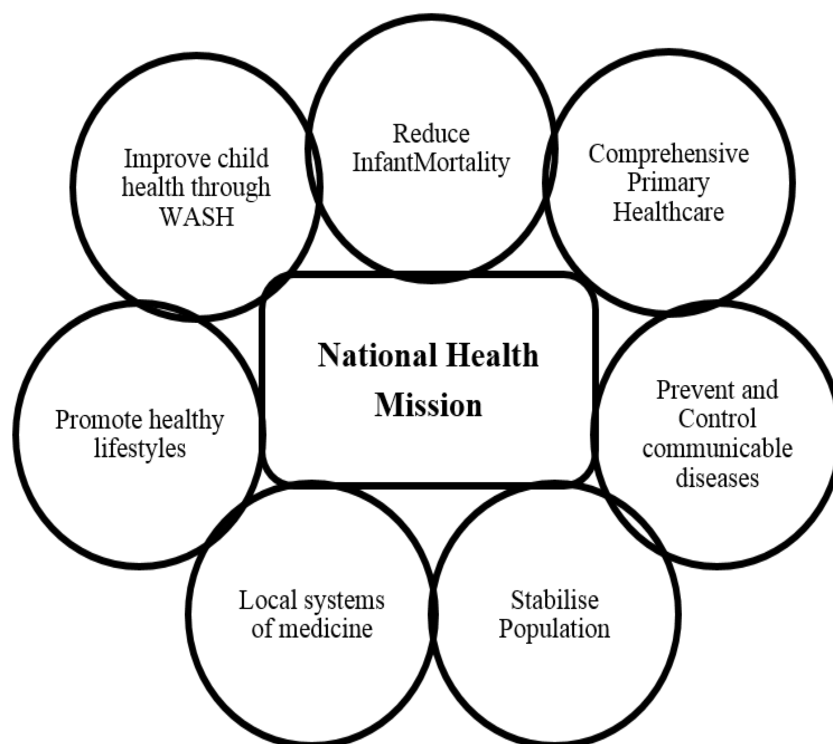


Figure 1 Objectives of the National Health Mission

The NHM also laid down strategies to achieve these goals, including the training of *Panchayati Raj* Institutions (PRI) for the management and creation of health in their communities Bringing *Ayurveda, Yoga & Naturopathy, Unani, Siddha* (AYUSH) health personnel into mainstream care was done so that the system may provide 24 hour services in at least 50% of PHCs (Kapil, 2005). The health system would be strengthened at all levels through inter-sectoral District Health Plans encompassing health, sanitation, and nutrition. Finally existing vertical programs that addressed specific health issues would be integrated into the mission at all levels from the centre to the district (Kapil, 2005).

The NRHM was launched with a view to shift the focus of public health in the country from a vertical, disease focussed, and programmatic approach towards one that recognises the complex adaptive nature of the health system. Various schemes and programs were launched under the NHM in order to improve health outcomes, and enhance access and interaction with the healthcare system. These include, the *Janani Suraksha Yojana* (JSY), a conditional cash transfer program that incentivises rural women for preferring institutional deliveries.

Human resources for health include health workers of all cadres functioning at all levels of the health system. The Indian Public Health Standards (IPHS) which were created in 2007 under the NHM made way for the provision of funds to hire contractual health staff including ANMs, nurses, and additional doctors, all at the level of the PHC (Sundaraman *et al.*, 2011). As of 2018, this has led to the appointment of 195, 959 ANMs at the sub-centre level, 84, 567 nursing professionals at the PHCs and CHCs, 27, 567 physicians at the PHC level, and 867 surgeons at CHCs (Rural Health Statistics, 2018).

By creating a corps of technical and managerial staff at the block, district, and state levels, the mission significantly improved management across the public health sector. This has led to a streamlining of operations, fund allocation and expenditure, and decision making throughout the Indian health system (Department of Health and Family Welfare, 2017).

The rationale for the NHM was to provide India with a systematic and robust nation-wide program that would enable the country to achieve the MDGs. One of the NHM's principal governance related aims was the decentralisation of health system governance to as local a level as possible. This has been put into practice through the formation of RKS at the PHC, CHC, and SC levels, Village Health Sanitation and Nutrition Committees (VHSNC) also known as *Gaon Kalyan Samitis* (GKS) at the village level, and the involvement of PRIs in health governance. In addition to this, several measures of accountability have been put into place by the NHM at different levels of the health system, such as *Jan Sunwai* and *Jan Samvad*, public hearings that allow community members an opportunity to voice their individual concerns (Department of Health and Family Welfare, 2017).

Decentralising the health system also led to the communitisation of healthcare services, and health decision making and planning. This is reflected in the VHSNCs which work in lock-step with PRIs and mandatorily include representatives from disadvantaged members of each community, including women (Department of Health and Family Welfare, 2017). Moreover, a cadre of community health workers was created to improve access and interaction with the health system in rural India known as ASHA. These household level activists serve as a well-regarded and trustworthy interface between the healthcare system and the communities it serves.

OBJECTIVES

This study was commissioned by the NITI *Aayog* to be carried out in 6 predetermined states. Its primary objective was to evaluate the impact of the NHM on human resources for health, governance in the Indian health system and the impact of the NHM on the overall health system.

A To analyse the strengths and weaknesses of the governance setup of the NHM, identify best practices going forward in context to the framework of *Ayushmaan Bharat Pradhan Mantri Jan Arogya Yojana* (AB-PMJAY), SDGs, UHC and health equity

i. To analyse the technical capacities and decision making at the central and state levels

ii. To analyse the effectiveness of district and hospital societies in terms of improved and need based planning and accountability to committed outcomes

iii. To analyse the effectiveness of untied funds in improving quality of medical care and access to the same

iv. To analyse the effectiveness of investment in the ASHA component of NHM and suggest solutions for enhancing the effectiveness of this investment

B To analyse the systematic, technical capacity and decision making at the national, state-level in carrying out the NHM, and study the HR Capacities across difference states

v. Analyse the existing processes of district and city plan preparation and their aggregation into state PIPs and identify areas of improvement, if any. Suggest solutions to strengthen the existing systems and processes

vi. Analyse the existing systems and processes of budget preparation and funds allocation to districts and city annual plans

vii. Analyse the existing monitoring systems and their effectiveness in implementation of district and city plans and how these are contributing to accountability in terms of their respective annual plans

viii. Analyse the processes of preparation of capacity development plans and their implementation with special focus on quality of training and skills developed

ix. Analyse the procurement and logistics management systems at state, district and city levels to identify bottlenecks, if any and suggest solutions for strengthened and more accountable procurement & logistic management systems

C To study human resource gaps by looking at the requirements *vis-a-vis* actual officers posted as a way of understanding the state capacities to carry out the mission. To analyse the State strategies, plans and actions taken to bridge the evident gaps in human resources and the effectiveness of such actions

METHODOLOGY

The study was executed in three phases: -

(i) Document and literature review

(ii) Development of a qualitative tool for key informant interviews and focus group discussions

(iii) Data analysis and report writing

A mixed-methods approach was used where, published reports and other government documents were reviewed, and the experiences of health officials at the central, state and district levels of the health system, including policy makers and care providers provided primary qualitative data. Field visits were also carried out to complement the document reviews and official interviews, and help researchers develop independent impressions. In addition, quantitative secondary data from the National Family Health Services and SRS were analysed for trends in mortality and fertility indicators.

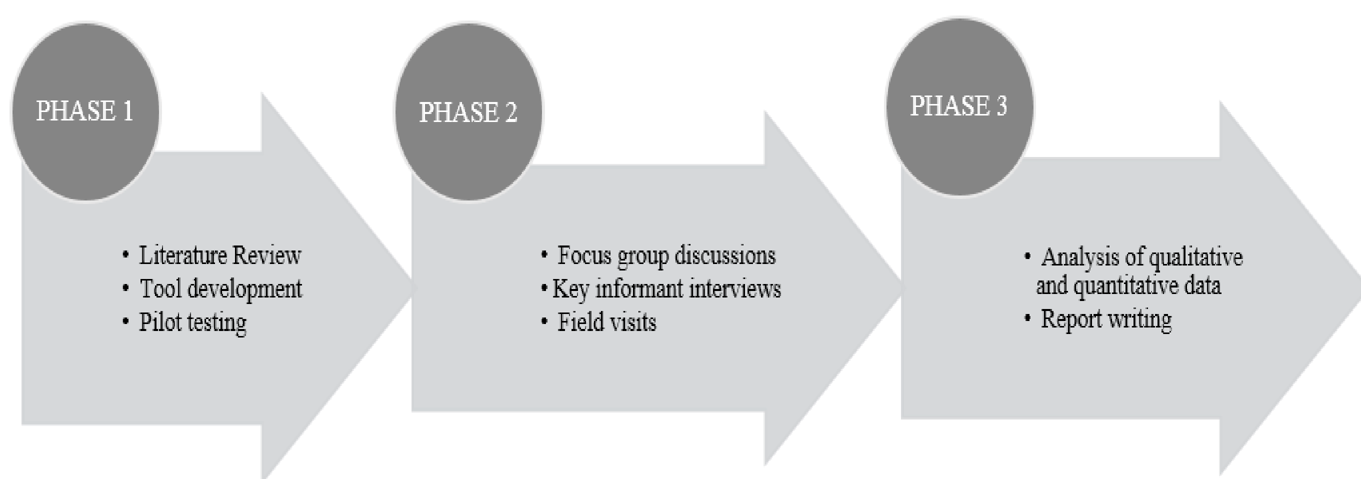


Figure 1 Various Phases of the Study

Study Setting

The study was carried out in 6 states namely, Gujarat, Rajasthan, Uttar Pradesh, Andhra Pradesh, Chhattisgarh, and Karnataka. These states were chosen in order to get a sample representative of population, and economic diversity.

The choice of these states is further substantiated by the trends in key health indicators such as IMR, MMR, and TFR, which present a kaleidoscope of performance across the country. Since the impact

of the NHM on human resources is one of the primary objectives of this study, the choice of these states is unique in that the health system in each follows a different organisational structure, allowing the researchers to reflect upon the comparative impact as well.

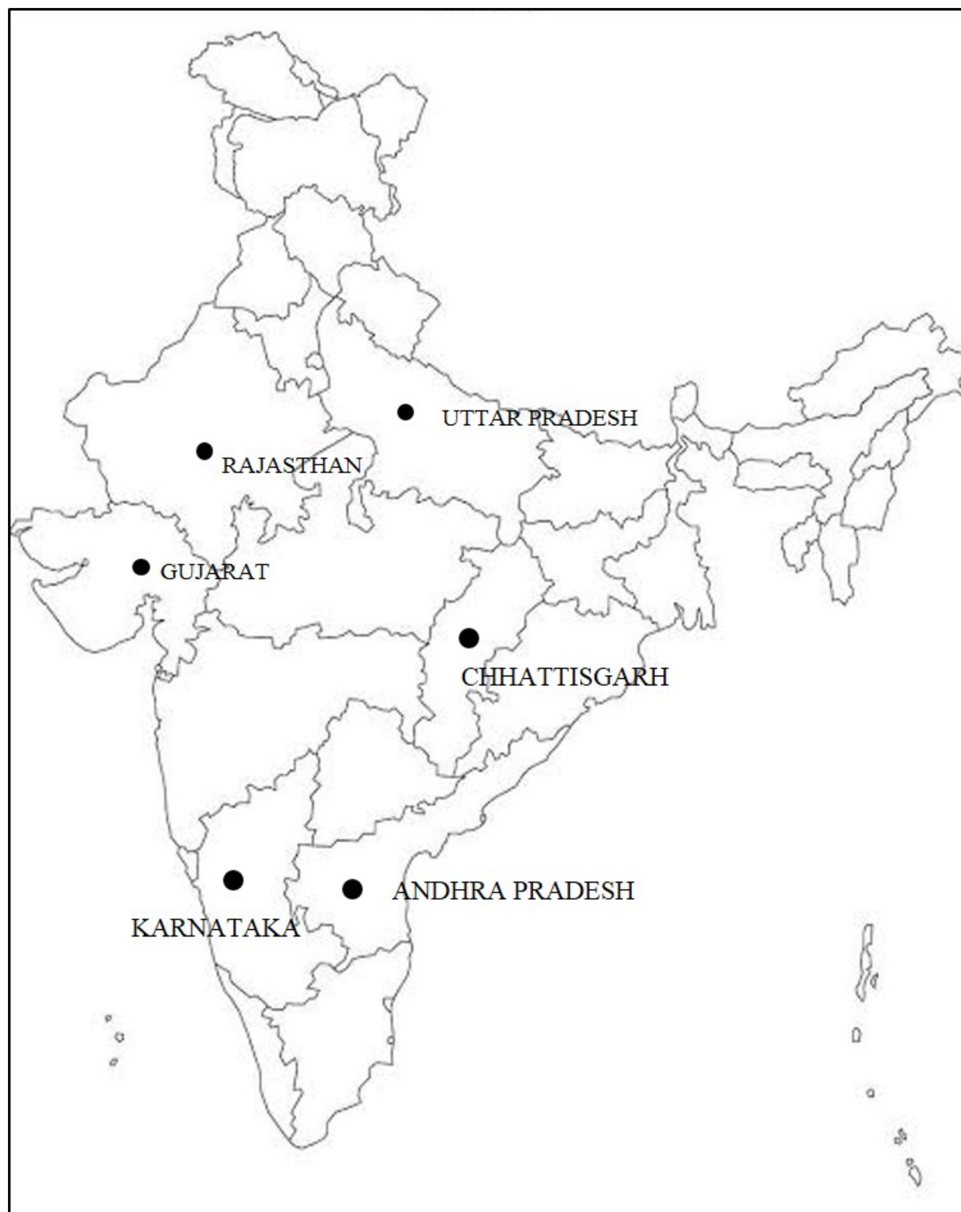


Figure 2 Map of India with study states

3 districts in Gujarat, Gandhinagar, Rajkot, and Sabarkantha, and 3 in Uttar Pradesh, namely, Barabanki, Kasganj, and Lucknow were studied. In Rajasthan, Andhra Pradesh, Chhattisgarh, and Karnataka only one district per state was studied—Dausa, West Godavari, Durg, and Mysuru, respectively.

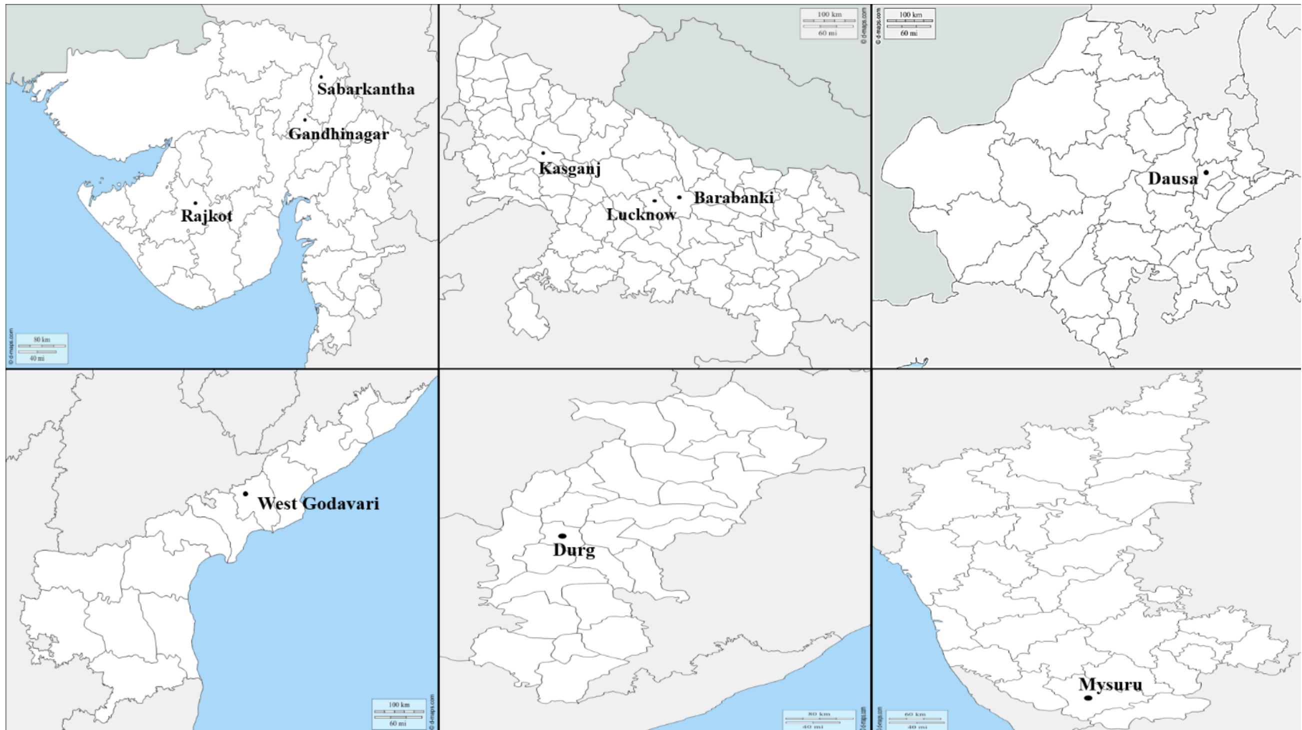


Figure 3 Study states with districts

Tool Development

We began with a desk review of documents including various reports of the NHM and the CRM. Terms of reference delineated in the CRM reports helped to identify broad areas for measuring the performance of the NHM on human resources and governance. In addition, peer-reviewed scientific literature; white papers and reports; Common Review Mission reports, National Health Mission Annual Reports and publications, and other relevant documents were reviewed to understand the National Health Mission and for developing various tools for this study (Abejirinde *et al.*, 2018; Programme Evaluation Organistion, 2011; Common Review Mission, National Health Mission, Government of India). We also took into account the WHO Health Systems Strengthening building blocks framework (World Health Organization, 2010). This allowed us to include important questions related to the determinants of governance such as decentralisation, the participation of various stakeholders at each level of the Indian health system, and to incorporate contextual factors unique to the Indian setting. It also led to the inclusion of items for assessing governance performance at the district level and coordination with the higher levels. The determinants of human resources for health included sufficiency, rational allocation, and remuneration for employed personnel, and the integration of various programs to ensure optimal utilisation of the health workforce engaged in both healthcare provision and management. The health system in turn is characterised by the performance of each sub-system (state, district, block, and individual health

facility) within the country, evaluated by the performance of indicators pertaining to each building block.

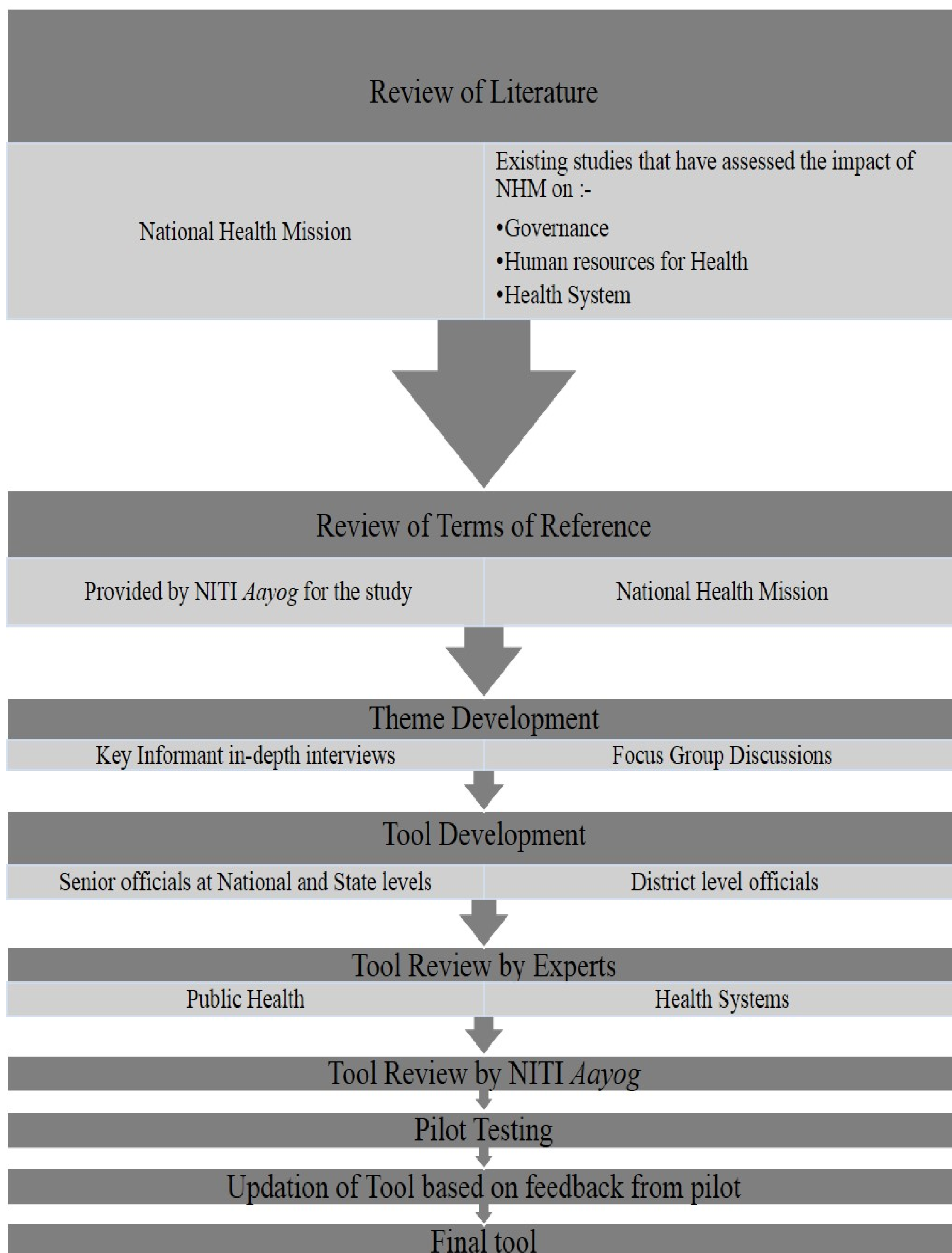


Figure 5 Tool Development Process

Tool development was an iterative process starting with the appraisal of available tools for the assessment of human resource and governance impact in the health system. In order to adapt the tools to the Indian context, an exhaustive review of all CRM reports was carried out to identify themes. These included 11 items of which 'Community Processes and Convergence', 'Human Resources for Health', and 'Governance, Accountability, and Healthcare Financing' were of prime importance for the purposes of this study. These were then aligned with the objectives of the study through a review of the terms of reference provided by the NITI *Aayog*.

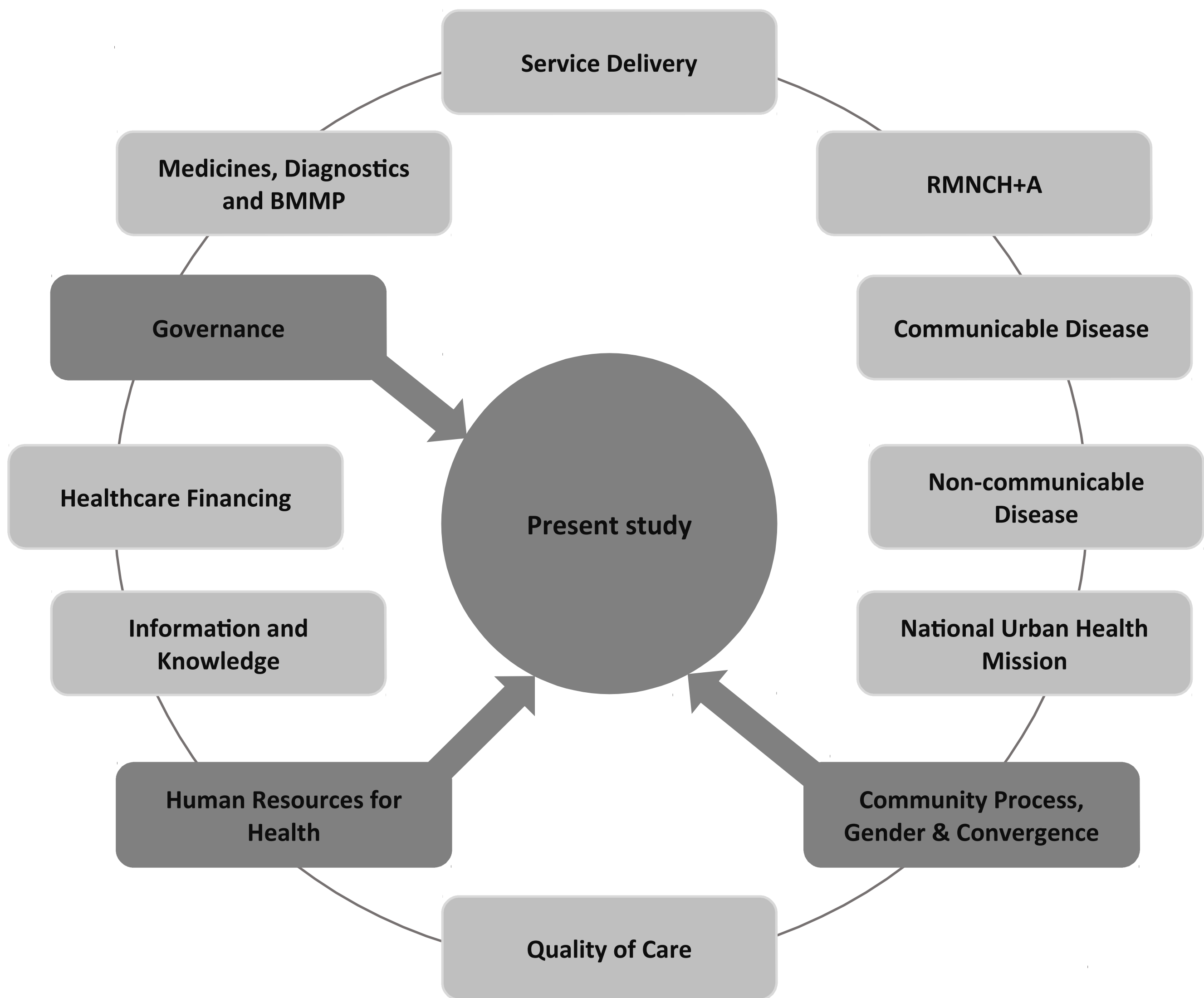


Figure 6 Terms of reference of the Common Review Missions

Based on these, schedules for structured and semi-structured interviews were developed with themes and sub-themes relevant to each key informant's position, role, and responsibilities. As a result, the question guides for senior officials of the central and state governments had items pertaining to policies and the high level functioning of the mission and individual program components, including inter-sectoral coordination with other ministries and departments.

On the other hand, the interview and focus group discussion guides for district level officials were more granular. They included items about resource availability at district and lower levels, creation and approval of PIPs and to what extent they were representative of local needs post approval, the use of untied funds by the RKS and VHSNC, the recruitment, training and investment on ASHA and their interaction with the frontline workers of other programs such as the Indian Child Development Services (ICDS).

In order to assess and enhance the validity of the tools, they were reviewed by experts in health systems research and public health. All study instruments were then discussed with officials from the NITI *Aayog*, and their inputs on the same were incorporated before pilot testing was carried out with functionaries of the health department in Gujarat. This enabled the researchers to introduce a higher level of precision, especially for the district level instrument, by removing items which were not relevant to their roles and responsibilities, rather including items focusing on the ease of use of PIPs and specific human resource gaps at the CHC, PHC, and SC levels. Since qualitative research allows a researcher to investigate the process and rationale of a particular event that has occurred or not as the result of a program, questions in a qualitative instrument are posed in a manner as to allow for sub-questions that can reveal effects that may appear to be secondary but are nonetheless important and reveal relevant findings (Rapport *et al.*, 2018) from a program such as the NHM. Table 1 provides an example of the questions under each research objective.

Tools for key informant interviews and focus group discussions were developed in English, and were verbally translated by the interviewer into the local languages where necessary to facilitate discussion and allow the respondent to provide detailed responses.

Table 1 Examples of qualitative research aims, objectives and questions in the interview tool for key informants

Research Topic	Study Objective	Research Question
The impact of NHM on Governance	To analyse the effectiveness of district and hospital societies in terms of improved and need based planning and accountability to committed outcomes.	*What is your opinion about availability of various resources at district health society (probe; financial, managerial capacity, human resources, infrastructure etc.)*
The impact of NHM on Human Resources for Health	To study human resource gaps by looking at the requirements vis-a-vis actual officers posted as a way of understanding the state capacities to carry out the mission. To analyse the State strategies, plans and actions taken to bridge the evident gaps in human resources and the effectiveness of such actions.	*Briefly tell us about human resources at various levels* *(probe- appointment at various levels through NHM- Managerial, technical)* *Does state have any plan to sustain human resources recruited under NHM?* (tool for senior level officials)
The impact of NHM on the Health System	To study the impact of the NHM on the Health System	*What is your opinion about role of NHM in health system strengthening?* *(probe: improvement in human resources, better managerial approach, impact on WHO health systems building blocks, quality of care, access to health services, more finance for health)*

Data Collection

Participants were selected in a purposive manner based on their position and knowledge of the health system, health governance, and human resources for health. They were chosen from different institutions and levels in order to obtain a complete picture of the health system hierarchy. The availability and consent of the persons concerned was also taken into account.

At the central level, in-depth interviews were conducted with the managing director of the NHM (MD-NHM), the Additional and Joint secretaries (AS) (JS), and senior managers in the NHM in the areas of policy, planning, quality, and monitoring among others. State level health officials included the Principal Secretary for Health and Family Welfare (PS- HFW), the state MD-NHM, the Additional Mission Director of the NHM (Ad. MD-NHM); both incumbent and retired, the MD of

the MSCL and the Directors of Public Health. Program Managers and coordinators for NHM at state level were also interviewed in addition to representatives from non-governmental and civil society organisations. At the district level, key informants included the Chief Medical and Health Officer (CMHO), District level health functionaries, the District Program Coordinator (DPC) for the NHM and Logistics Management, the ASHA Coordinator for each district, and representatives from local non-governmental organisations (NGO).

Focus group discussion participants included Medical Officers (MO) posted in various districts including tribal areas and urban centres. Interviews were also conducted with *Taluka*/Block Health Officers (THO / BHO) to gain perspective from below the district level. Focus group discussions were also conducted with ASHA supervisors and ASHAs themselves.

The researchers obtained informed verbal consent which was preferred over written consent, as the key informants, being government employees were reluctant to sign consent forms. This apprehension can be attributed to a fear of lack of confidentiality, which would subsequently affect the quality of the research conducted.

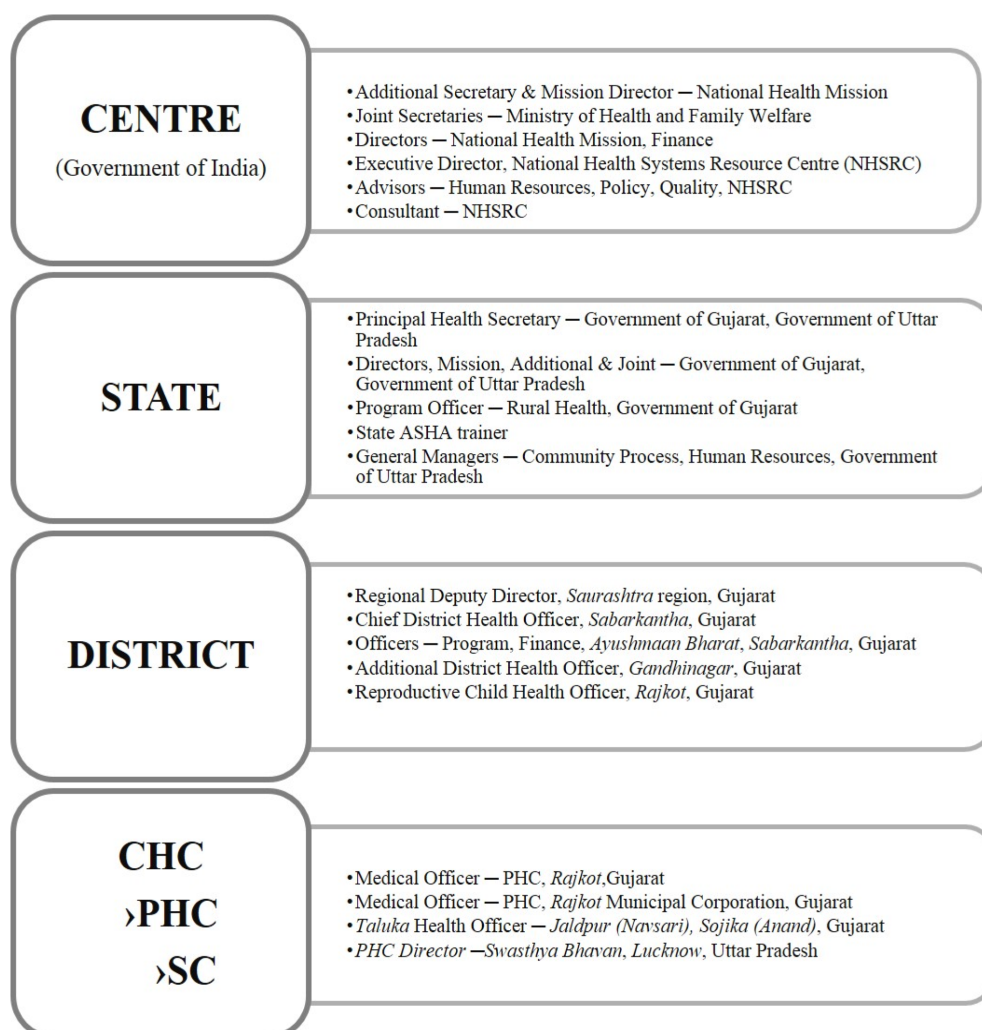


Figure 7 Health functionaries interviewed (Various Levels)

Data Analysis

In a qualitative approach, respondents' rapport and faith in the interviewer are of primary importance in ensuring that research questions are transparently answered (Sharma et al., 2014). Written notes were taken during the interview by the researcher, which were then transcribed verbatim, translating from local languages to English where necessary. The translations were carried out by research staff fluent in both languages. Notes were taken during the focus group discussions and these were transcribed into a document showcasing a logical flow of ideas from the discussion.

A coding framework was created in accordance with the theoretical constructs in the terms of reference provided by the NITI *Aayog* in the objectives of the study. The transcripts of in-depth interviews were coded individually at first using Microsoft Excel to prevent coding bias. An inductive approach was used in order to manually derive codes from the transcript of each respondent. These codes were then aggregated and aligned with the study objectives (Thomas, 2006). This allowed the study to evaluate actual program effects of the NHM, in juxtaposition with its expected impact. It resulted in the emergence of themes representing important patterns in the responses and meaningful in context to the study objectives (Ganle *et al.*, 2014). The coding of data in this manner was carried till the researchers felt that theoretical saturation had been achieved.

A thematic analysis was then applied to the coded data (Attride-Stirling, 2001). This consisted of a three level network with basic, organising, and global themes. Thematic networks allow for a high level of rigour in qualitative research by providing a hierarchical structure to themes that emerge from the text, which in this case is the interview or the discussion transcript (Attride-Stirling, 2001). The lowest level is called a basic theme which simply characterises the data. This is then followed by the organising theme which is a cluster of basic themes that are similar in nature. In this way, organising themes reveal a clearer and more connected picture of the text. Finally, organising themes are then condensed into global themes that deliver an interpretation of the text, and answer the research question(s) (Attride-Stirling, 2001). Table 4 presents an example of the thematic analysis for a focus group discussion conducted in Gandhinagar with MOs from various districts in Gujarat. Analyses of all other key informant interviews and discussions are detailed in the results section.

In the human resource area these included subjects like shortages and mismanagement of the administrative staff in health facilities, the differential treatment of state appointees versus contractual NHM workers, incentives and benefits offered to medical professionals in rural areas, and remuneration and opportunities for growth and development. Under governance, the major themes were, handling of local priorities in the PIP during the various stages of its approval process,

coordination with representatives from other departments, the functioning and fund management of the RKS, the event calendar, and allocation of funds, and existing monitoring mechanisms.

Table 2 Sample of Thematic Network Analysis framework - From global to basic themes

Basic themes identified	Organising themes	Global Themes
Recruitment of ASHA can be influenced by local politicians and even members of the state Legislative Assembly	Political interference still exists at various levels	Governance in health has improved
Fund flexibility may cause a lack of transparency		
Digital reporting has improved decision making	Technology has reduced ambiguity and made monitoring easier	
Ease of auditing		
ASHAs have made the health system more accessible to rural communities	The ASHA program added much needed support to the grassroots level, but the role and remuneration need a fresh look	There is an expansion of the health workforce. However, adequacy in human resources for health is still distant
There is dissatisfaction about the payment received by the ASHA worker		
Appropriate deployment of data entry operators and finance assistants is needed	Distribution and compensation of both health and administrative professionals needs to streamlined	
Nexus between contractual NHM staff and state officials		

***Mamata Divas* is observed regularly**	State of the health system and healthcare facilities is better	The NHM has improved overall health system performance, but this is an ongoing process
RKS funds allow for timely infrastructural maintenance and repairs		
Procurement is complex	Gaps exist in logistics	
Drug distribution system needs to be more rational		

FINDINGS

1. Governance

1.1 Background

The NRHM was launched in 2005 by the Government of India with the aim of improving health services in rural areas by subsuming existing vertical programs and creating a more decentralised structure for health governance with additional funding by GOI (Pal, 2012). This was essentially done to decrease the distance between health decision making and the communities and people it affected, and ensure transparent and customised utilisation of funds allocated to health.

The initial focus states of the NRHM consisted of the Empowered Action Group (EAG), including Rajasthan, Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Odisha, Himachal Pradesh, Jammu and Kashmir, and the eight North-eastern states (Pandav, 2006). The NRHM also wished to achieve MDG-4 and 5 (improve child health and Maternal Health) and improve the epidemiological profile of the country in terms of infectious disease, which was earlier handled by non-interacting silos of vertical programs, an ineffective legacy of international donors and development agencies funded programming (Bachani, 2006). One of the principal objectives of the government at the time was also increasing health expenditure to at least 2%-3% of the gross domestic product (Chatterjee, 2006). As a result, the value of funds allocated to the Departments of Health and Family Welfare was increased from INR 8, 420 crores in 2005, to INR 10, 280 in 2006. The NRHM was meant to reduce the deep chasm in the availability of qualified medical professionals and care providers, and remedy the crumbling infrastructure of healthcare at the grassroots level (Pandav, 2006). A lesson that the NRHM aimed to implement from previous initiatives in health was that coordination with other sectors such as education, nutrition, and sanitation was essential to ensuring good health. To this end, organisational structures were revamped, and following decentralisation, management of health programs was given to the district levels, mimicking the *Sarva Shiksha Abhiyan* (Pandav, 2006).

Governance Structure of National Health Mission has following major components:

- Mission Steering Group (MSG)
- Empowered Program Committee (EPC)
- Central NHM Secretariat
- NHSRC- Technical Support Unit
- State Health Mission and State Health Society
- State NHM and State Program Management Unit
- District Health Mission and District Health Society
- District Programme Management Unit

Some of the governance strategies applied for achieving the goals of the NHM include: -

- Training and capacity building of PRIs to own, control and manage public health services
- Creation of health plans for each village through the Village Health Committees of the *Panchayat*
- Preparation and implementation of an inter-sectoral District Health Plan prepared by the DHM and DHS, including WASH and nutrition
- Integrating vertical health and family welfare programs at national, state, and district levels

The NHM was an important milestone in strengthening primary health care. The NHM has improved overall capacity in management, finance, and data by creating the space for contractual, temporary program management staff, such as the State Program Management (SPMU) and the District Program Management Unit (DPMU). Various new positions and cadres have also been created at the facility level, such as managers, counsellors, data entry operators, laboratory technicians, technical consultants, and subject matter experts. Many of these positions did not exist in the regular state cadre of health department prior to the NHM. Another manner in which the NHM has helped to build in-house technical capacities is through the hiring specialist consultants as employees of the National Health Systems Resource Centre (NHSRC) and SHSRC. Dependence on donor partner supported consultants was high before the NHM, due to which decision making was often influenced by the aims of their parent donor organisations.

It should be noted that the improvement of technical capacities has been achieved by the NHM not only by adding cadres and personnel to the existing system, but also by creating a dynamic and action oriented health system culture through induction of young professionals. The consolidation of vertical programs under the NHM umbrella has brought significant benefits to the way these programs are managed and implemented. The state health department and SPMU officials mentioned that the integration of various program under NHM has improved the management and efficiency. The integration has also reduced the human resources requirement and duplication of efforts been prevented.

Qualitative studies conducted on the Revised National Tuberculosis Control Program (RNTCP) and the National Vector Borne Disease Control Program (NVBDCP) have found that administrative co-location of these programs within the Department of Health and Family Welfare brought about more interaction between the managerial officials of the programs, and the general health system (Rao *et al.*, 2014). This is true even at the state level, as all program implementation now passes through the NHM Mission Director. It was also noted that various program officers such as the District TB Officer, District Malaria Officer etc. all serve under the Chief Medical Officer (CMO)/ Chief District Health Officer (CDHO). This restructuring of reporting hierarchies has improved technical capacities both for the individual programs, and the health system, at the district level (Rao *et al.*, 2014).

Another advantage of the NHM is the administration of program by health system managers at the PMU at all levels. This has allowed for the rational and effective use of technical personnel such as laboratory technicians at the facility level. Program managers and supervisors experienced that sharing resources helped achieve program goals while providing a comprehensive picture of the state of health in the community (Rao *et al.*, 2014).

While integration has been seen with RNTCP and NVBDCP, the National AIDS Control Program (NACP) is still structured like a separate program, mostly outside the jurisdiction of the NHM. The NACP is running as a separate program. Hence, the NACP needs to be integrated within the NHM umbrella. The published literature also reports health systems managers citing a lack of stewardship in programs where integration is weak or absent (Rao *et al.*, 2014).

In order to improve governance and technical capacities under NHM, the National Health Authority (NHA) released Capacity Building Guidelines which were shared with all State Health Agencies (SHA), in order to integrate the new structures envisioned under the AB-PMJAY with the NHM (Ministry of Health and Family Welfare Government of India and National Health Authority, 2019). The NHA will work in tandem with the NHM, and supplement it in terms of technical and operational input at all levels of the health system. These would include but not be limited to standard guidelines, standard operating procedures (SOP), various training and knowledge sharing initiatives, and research and evaluation (Ministry of Health and Family Welfare, Government of India, 2019). In these guideline the development of technical capacities envisaged as follows:

<u>Policy</u> – Ministers, Additional and Joint Secretaries, Director of National Institute of Health and Family Welfare (NIHFW), Executive Director of NHSRC

<u>Planning and Monitoring</u> – Mission Directors of the NHM at state level, Chief Medical and Health Officers at the district level

<u>Program Management Officials</u> – Consultants from the MoHFW, NHSRC, and NIHFW at the national level, Program Officers, and State Nodal Officers, and District Nodal Officers

<u>Service Delivery</u> – MOs, Public Health Managers, staff nurses, ANM, laboratory technicians and pharmacists at the district level and below

Ayushmaan Bharat launched in March, 2018, is the latest addition to pantheon of nationwide public health improvement initiatives. One of its principal aims is to achieve Universal Health Coverage through the Prime Minister's *Jan Arogya Yojana* (PMJAY). The PMJAY is a nationwide health insurance initiative, aimed at reducing out of pocket expenditure on secondary and tertiary care and providing financial protection. Both initiatives are meant to supplement NHM efforts in bringing about Universal Health Coverage in the country (BJ *et al.*, 2019). The other component of AB—the

transformation of 1.5 lakh existing SCs, rural and urban PHCs, CHCs across the country to Health and Wellness Centres will help accomplish the vision of UHC from within the framework of the NHM (National Health Portal, Government of India, 2019).

1.2 Findings

Technical Capacities of the NHM-Central Structure of the NHM

The development of technical capacities is a fundamental requirement in health systems strengthening. It requires taking stock of existing institutional structures, human resources and governance mechanisms, and harnessing these to provide the best possible health to its users. In low resource settings, it also includes building capacities by creating and training new cadres of healthcare and techno-managerial officials to deliver and manage public healthcare.

At the centre, the NHM is composed of the Empowered Program Committee (EPC) and The Mission Steering Group (MSG). They have delegated powers from the union cabinet – which is the most innovative reform done under NHM. This allows the NHM programs to bypass the regular process of approval by the cabinet and the Planning commission then and NITI *Aayog* now which otherwise applies to other sectors/ministry programs. The MSG conducts annual meetings, where the authority rests between the ministers and the secretaries. This allows for more innovations to be made. Due to this structure of the highest echelons of the NHM, it is able to function in "mission mode" and allows decisions to be made in a timely manner. So much so that this 'mission' structure has been adopted by nearly 10 other ministries, as reported by the current AS-MD of the NHM. Programs such as the JSY, the RBSK, the *Janani Shishu Suraksha Karyakaram* (JSSK), and the vaccination program for viral Hepatitis B could be launched quickly because of mission mode governance structure of NHM.

The MSG and EPC meet regularly once and twice a year respectively. These committees decide upon new health programs, changes to existing programs and financial allocation. The EPC discussions tend to be technical, while the MSG also has a political agenda due to the presence of several ministers. Since both these committees are very high up in the NHM hierarchy, decision making tends to be more priority setting and financial than strategic or technical. Items on the agenda of the EPC and MSG range in value from INR 1 crore to INR 2,500 crore – this is a great variation. They include financial approvals of incentives, honoraria, and program expenditure revisions adjusted for inflation. In cases where financial norms have not undergone change to the tune of more than 15 years, proposals are made to triple the expenditure.

While represented in the structure, no role or inputs given by the secretaries from departments other than health were observed in the minutes of the meetings we reviewed. This indicates that intersect oral coordination is not occurring at the highest levels of the NHM. Researchers also observed that

evidence based public health was not reflected in discussion of these meetings, and decision making seems to be many a times carried out on the basis of limited field observations, or instructions given from the highest echelons. On the other hand, it was also seen that some grassroots level issues such as the appointment of additional Medical Officers at health facilities was being discussed in these meetings.

Table 3 Members and Structure of the Empowered Program Committee and the Mission Steering Group of the NHM (National Health Mission, 2020a, 2020b)

<table>
<tr><th>EMPOWERED PROGRAM COMMITTEE</th><th>MISSION STEERING GROUP</th></tr>
<tr><td>Secretary of Health and Family Welfare – Chair</td><td>Union Minister for Health and Family Welfare – Chair</td></tr>
<tr><td rowspan="9"></td><td>Union Minister of Drinking Water & Sanitation</td></tr>
<tr><td>Union Minister of Social Justice & Empowerment</td></tr>
<tr><td>Union Minister of Women & Child Development</td></tr>
<tr><td>Union Minister of Housing and Urban Affairs</td></tr>
<tr><td>Minister of Rural Development</td></tr>
<tr><td>Minister of Human Resource Development</td></tr>
<tr><td>Minister of State for Health & Family Welfare</td></tr>
<tr><td>Minister of Panchayati Raj</td></tr>
<tr><td>Vice Chairman NITI Aayog</td></tr>
<tr><td colspan="2">CEO – NITI Aayog</td></tr>
<tr><td colspan="2">Secretary of School Education & Literacy</td></tr>
<tr><td colspan="2">Secretary of Higher Education</td></tr>
<tr><td colspan="2">Secretary of Women and Child Development</td></tr>
<tr><td colspan="2">Secretary of Panchayati Raj</td></tr>
<tr><td colspan="2">Secretary of Rural Development</td></tr>
<tr><td colspan="2">Secretary of Development of NE Region</td></tr>
<tr><td colspan="2">Secretary of Social Justice & Empowerment</td></tr>
<tr><td colspan="2">Secretary of Drinking Water & Sanitation</td></tr>
<tr><td colspan="2">Secretary of Housing and Urban Affairs</td></tr>
<tr><td colspan="2">Secretary of Tribal Affairs</td></tr>
<tr><td colspan="2">Secretary of AYUSH</td></tr>
<tr><td colspan="2">Secretary of Expenditure</td></tr>
<tr><td colspan="2">Members of the Directorate General of Health Services</td></tr>
<tr><td colspan="2">Additional Secretary Financial Advisor</td></tr>
<tr><td>Additional Secretary Health & Family Welfare</td><td>Secretary Health & Family Welfare</td></tr>
<tr><td colspan="2">Additional Secretary & Mission Director NHM – Convener</td></tr>
<tr><td>2 Public Health Professionals for 2 years</td><td>4 Secretaries of Health and Family Welfare of High Focus States for 1 year</td></tr>
<tr><td></td><td>9 Public Health Professionals for 2 years</td></tr>
</table>

The senior officials of Central NHM mentioned that one of the important governance feature of central NHM is preparing Annual Report and sending note to the cabinet. This annual report comprises of various progress made for various programme under NHM. This report also detailed

out improvement in health indicators across various states. This is a welcome initiative for justifying the investment country is making in health through NHM.

The state health department and SPMU officials mentioned that fund allocation was found to be arbitrary and occurring at a flat rate. For instance, the SHSRC budget for larger states is valued at INR 2.5 crores and INR 1 crore for smaller states. This does not align with the populations of these states (UP population of 20 Crores while Kerala population of 3 Crore), leading to tighter budgets in more populated states, and large unspent funds in smaller states. The financing pattern of NHM is largely based on incremental model rather than need-based allocation model.

The importance of the NHM remaining in mission mode was stressed by a number of health functionaries. They stated that in the absence of the NHM, all money would be spent as per state norms which would take away the flexibility currently present in both fund allocation, and in the recruitment of human resources. It was pointed out that the stringency of state norms led to significant delays in recruitment and fund availability. The NHM has also allowed for various initiatives to be executed in training, capacity building, and innovations in healthcare service delivery. A significant reduction in local and state level political interference has also been observed, as guidelines from the central government are binding. There is also central monitoring of the program, hence local political interference is under check.

Our interviews clearly showed that the Mission structure is efficient and effective. This has also served many purposes to strengthen the health system. Hence, we recommend that the mission structure should continue.

1.2.2 State level Governance Structure of the NHM

At the state level, the NHM functions through the State Health Mission and a State Health Society (National Health Mission, 2020b). The former is more of a guiding body, whereas functions are mainly carried out by the latter. The SHS consists of a governing body and an executive committee. It was constituted by merging the health societies for leprosy, tuberculosis, blindness control, and the Integrated Disease Surveillance Program (IDSP), except for the State AIDS Control Society (SACS). The State Health Mission is headed by the Chief Minister and the Health Minister is the Member Secretary. The SHM has representation from various line departments. The state health mission has been conceptualised for bringing an inter-sectoral approach in health. However, as mentioned by senior officials of health department, in most of the states the State Health Mission's meetings are not happening regularly and even if these are happening on paper only without any concrete discussion or decisions. Please see below table for number of State Health Mission meetings held year wise.

Year	India	High Focus- Non NE (10)	High Focus NE (8)	Non High Focus- Large (11)	Non High Focus- Small & UT (7)
2014-15	39	3	12	13	11
2015-16	34	3	9	10	12
2016-17	31	1	8	12	10
2017-18	33	0	7	19	7
2018-19	33	1	11	10	11
2019-20	14	2	5	1	6
Total	**184**	**10**	**52**	**65**	**57**

Table 4 Year Wise number of meetings of State Health Mission Held

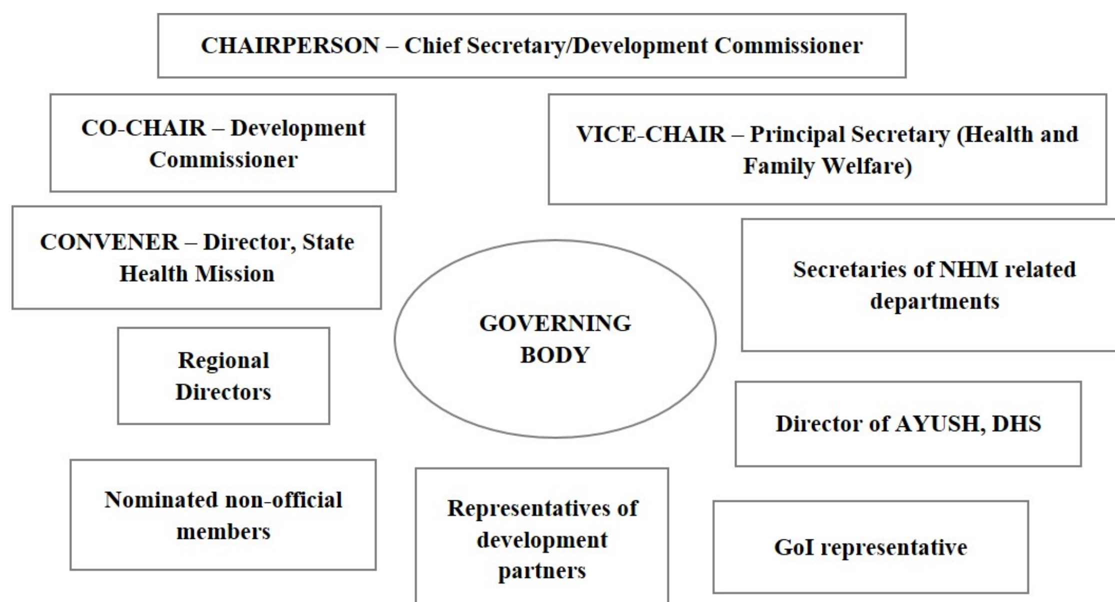


Figure 8 Structure of the Governing body of the SHS **(National Health Mission, 2020b)**

The State Health Society is one of the important institutional mechanism for efficient administration and supervising various program under NHM. The SHS has governing body and executive body. As stipulated by the NHM, the governing body of SHS is required to meet every six months and carry out the following activities: -

- Approval / endorsement of Annual State Action Plan for the NHM
- Consideration of proposals for institutional reforms in the Health & Family Welfare sector
- Review of implementation of the Annual Action Plan
- Inter-sectoral co-ordination with all NHM related sectors and beyond (e.g. administrative reforms across the state)

- Status of follow up action on decisions of the SHM
- Co-ordination with NGOs/donors/other agencies/organisations

The Executive Committee is tasked with monthly meetings and is required to focus on the following areas: -

- Detailed expenditure and implementation review
- Approval of proposals from districts and other implementing agencies/District Action Plans
- Execution of the approved State Action Plan, including release of funds for programs at State level as per Annual Action Plan
- Release of funds to the DHS
- Finalization of working arrangements for intra-sectoral and inter-sectoral co-ordination
- Follow up action on decisions of the Governing Body

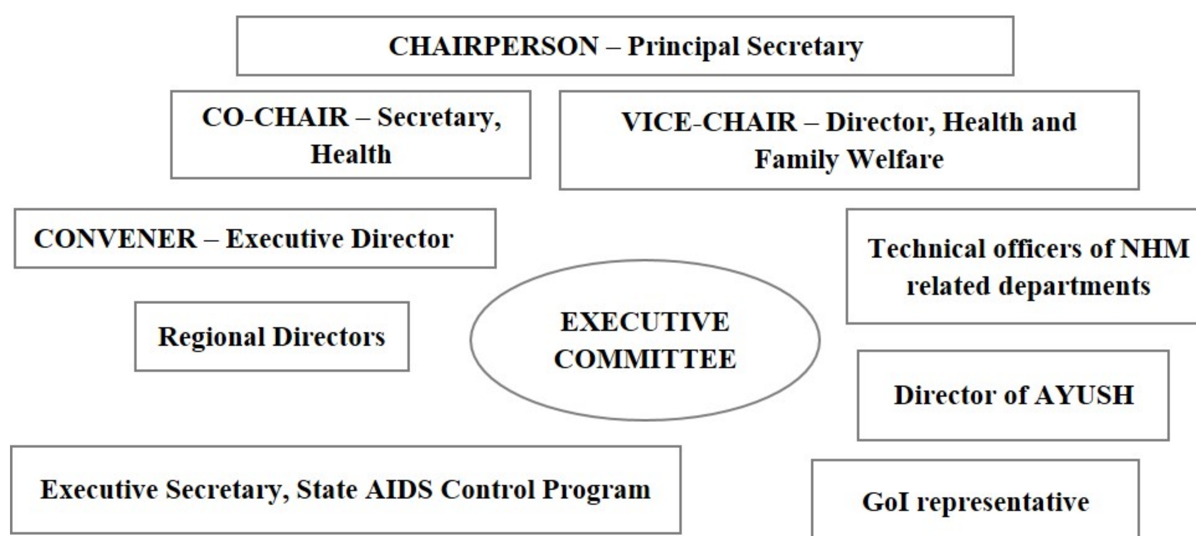


Figure 9 Structure of Executive Committee of the SHS (National Health Mission, 2020b)

The SHS is the nodal institution for guiding its functionaries towards receiving NHM funds. The SHS established under the Department of Health & Family Planning. Functions of the SHS include performance monitoring, inter-sectoral coordination, advocacy, and accountability to the NHM for funds received from the MoHFW, Government of India.

The SHS is supported by SPMU, managed mostly by contractual employees, and acts as a technical support unit for the NHM. The SHS is also technically supported by other organizations such as the State Institute of Heath & Family Welfare (SIHFW), the State Health System Resource Centre (SHSRC) and technical agencies of the health systems development projects. The SHS is responsible for the implementation of vertical programs such as the RNTCP, NVBDCP (Rao *et al.*, 2014). There are reports in the literature that the SHS model, and the integration of vertical programs therein may have led to delays in sanctioning funds (Rao *et al.*, 2014). While this could be seen as a performance

issue, it can be argued that the decentralisation in decision making afforded by the SHS model has increased program responsiveness to local needs rather than vertical objectives. This should be seen as a positive change brought by the NHM, as states are now able to allocate funds and resources to various verticals in accordance with their demographic and epidemiological profiles.

In the state officials were found to be in favour of the NHM, and insisted that it should continue to work in mission mode, following the model of the SHS. They added that the society model affords them flexibility in decision making as well as fund management. In most states though, SHM meetings were not observed to be regular and were ill planned.

The State Health Department is headed by Principal Secretary-Health, who is also chairperson of the State Health Society. The Mission Director-National Health Mission is administrative head of NHM and also member secretary of the SHS. The State Program Management Unit (SPMU) is headed by State Program Manager (SPM). The various programs are headed by State Nodal Officer (SNO) in Rajasthan or General Manager (GM) in Uttar Pradesh.

Gujarat:

Gujarat health department is headed by Principal Secretary. The commissioner of health is next level health functionary followed by Mission Director, NHM. The Directorate of Health Services has several Additional Directors, with AD—Public Health usually being the senior most. There are several Joint and Deputy Director for handling various programs. There is a State Program Manager (SPM) for the administration of State Program Management Unit-SPMU, NHM. The SPMU in

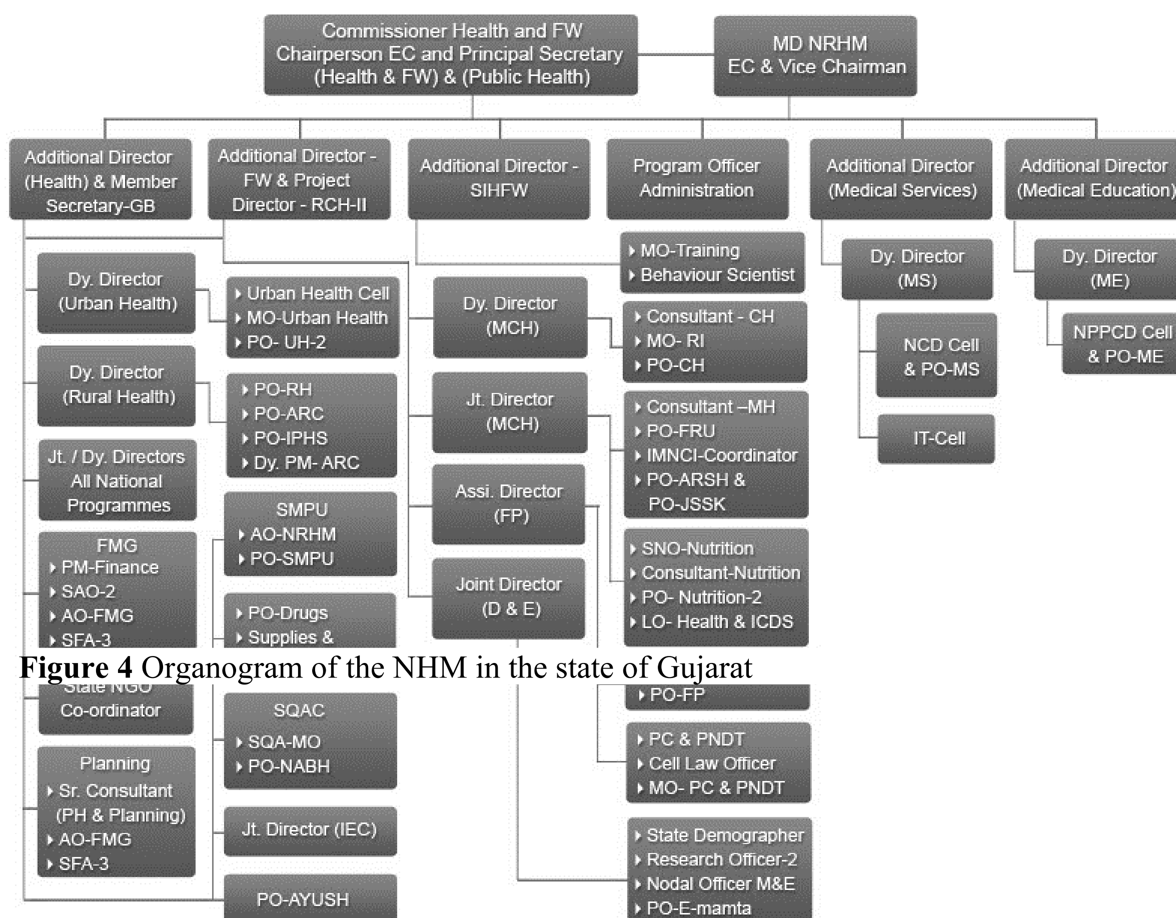


Figure 4 Organogram of the NHM in the state of Gujarat

Gujarat was found to report directly to the MD-NHM and also provided the latter with managerial support in PIP making, and monitoring and supervision.

The NHM is well integrated with state health department in Gujarat. Various senior program officials have suggested improvement in NHM governance. One of the senior director of the state proposed a restructuring of the NHM organogram in the state, where one of the senior director would serve as the MD-NHM. This was suggested due to the technical nature of health programs. This will help integrate the NHM with other health programs.

District officials from *Sabarkantha* reported that while the NHM had greatly enhanced technical capacity by allowing for flexibility in the recruitment of human resources, this was sometimes ill-used at times, such as in the case of separate laboratory technicians and data entry operators for each vertical program, at the district level. This was seen as wasteful duplication. Inconsistencies were also pointed out in the district level PIP which was disproportionately focused on Reproductive, Maternal, New-born, Child, and Adolescent Health (RMNCH+A), to the neglect of other disease programs including non-communicable diseases. The Chief District Health Officer (CDHO), under whom the PIP is prepared was found to be unaware of the program activities and respective budgets in non-RMNCH areas. Lack of coordination was also reported between the CDHO and the Chief District Medical Officer (CDMO). It was suggested that a platform should be created for the two officers to deliberate over the various public health issues of the district. In lieu of the DHM with separate governing and executive bodies, officials in *Sabarkantha* felt that a single committee headed by the District Development Officer (DDO) would be more effective and work faster.

The *Rajkot* municipal corporation was found to have contractual NHM staff at a majority of public health facilities in urban areas. The state hired less than 5% staff in these areas, in both clinical and managerial capacities. As a result, shortages were reported in monitoring and evaluation, data entry, and financial management.

Rajasthan:

The Rajasthan Health and Family Welfare Department is headed by Principal Secretary of Health, followed by the Mission Director of the NHM who is also a special secretary to the health and family welfare department. On the other hand, the state cadre of health officials is headed by Director of Public Health. Both the MD, NHM and Director, Public Health report to Principal Secretary. It should be noted that there is no position of a Commissioner of Health in the state, and this was seen as an advantage by health functionaries as it shortened the chain of reporting. The NHM in Rajasthan also has a unique structure where every program under the mission has a Program Director, senior level officer and a State Nodal Officer, relatively junior, both of them are officials of the regular state

health services cadre. This has resulted in better coordination between the NHM and the directorate in the state. It was also reported that there were no management cadre official's vacancies in the state under the NHM. However, since officials of the state health services cadre tend to be senior physicians, their recruitment into non-clinical managerial roles would reduce availability of clinical staff at health facilities. Therefore, the state should take a call whether it is essential to have medically trained staff in managerial positions at SPMU.

Interdepartmental coordination with the ICDS was also seen to be good in Rajasthan, and regular meetings occurred between senior executives from both programs, to ensure accelerated health-nutrition integration. The other states such coordination is weak.

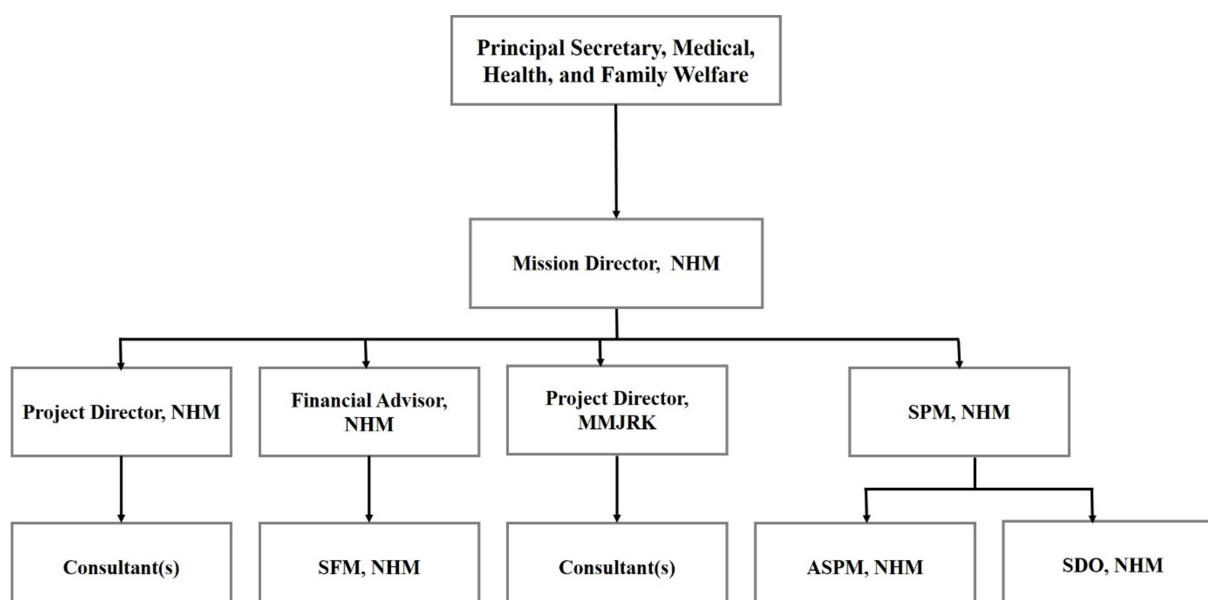


Figure 5 Organogram of the NHM in the State of Rajasthan (National Health Mission, Rajasthan, 2020)

Uttar Pradesh:

Uttar Pradesh was one of the states included in the EAG at the time of launch of the NRHM, due to its poverty levels and high population (Gill, 2009). It was also among the states included in an early evaluation of the NRHM by the then Planning Commission (Gill, 2009). The governance structure of the NHM in UP consists of the Department of Health and Family Welfare, the Program Management Units at state, division, district, and block levels (State Programme Management Unit, NHM, 2019), and the Uttar Pradesh Medical Supplies Corporation Limited. The UPMSCL is composed of representatives from the NHM (Mission Director-NHM UP), the Department of Health and Family Welfare (Principal Secretary and Secretary), and the Directorate General of Health Services in the state (Uttar Pradesh Medical Supplies Corporation, Government of Uttar Pradesh, 2020).

Recent research has also found that the state has significant internal inequalities in health outcomes and in medical human resources (Singh, 2019), and that despite NHM norms for free maternity and

post-natal care in the public healthcare system, the state is plagued by high levels of out of-pocket expenditures (State Programme Management Unit, NHM, 2019) (Landrian *et al.*, 2020). In our findings, it was pointed out that states had not taken initiatives to separate clinical and administrative streams, due to which clinical talent was burdened with administrative duties, even when health facilities faced a shortage of qualified doctors. On the other hand, notable improvements were seen in infrastructure and in technical capacity. The State Innovations in Family Planning Services Project Agency (SIFSPA) has been established with the help of USAID. In Uttar Pradesh there are several large project been created and are managed by their own agencies- World Bank Health System Project, BMGF funded TSU etc. They have varying role and lack of coordination between the agencies. This is negatively affecting the overall governance.

There are 2 Directorate of Health Service in Uttar Pradesh- Medical and Health, and Family Welfare. The SPMU in Uttar Pradesh was seen to be staffed with general managers in the areas of policy, planning, human resources, monitoring and evaluation, and community processes. These general managers' report to the state program manager and were often deputed from the regular staff of the DGHS. However, the 12th CRM has reported that the positions of Senior Manager, District Account Managers (DAM), and Block Account Managers (BAM) were still vacant, indicative of lacunae in the managerial cadre in the state (Common Review Mission, National Health Mission, 2020).

In every district in UP, a District Program Officer is appointed by the NHM below the CMO. Further, the NHM has also created Block Program Management Unit (BPMU) in the state, with a Block Program Manager. Moreover, a large number of Additional CMOs were seen, who were put into managerial roles despite being specialist medical doctors. In UP, this is a huge disadvantage since the state faces a shortage of specialist doctors in public health facilities and the state government has no good mechanism for the recruitment of the same.

It was pointed out that in some states initiatives had not been taken to separate clinical and administrative streams and due to this clinical talent was mired in administrative duties and unable to actually deliver healthcare services. A feasibility study conducted in Uttar Pradesh found that this was a context where data driven frameworks had the potential to be implemented (Avan *et al.*, 2016).

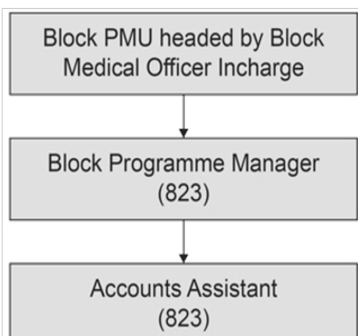


Figure 6 Organogram of the NHM in Uttar Pradesh (State Programme Management Unit, NHM, 2019)

Tamil Nadu has shown incredible progress in public health management with the establishment of a separate state level Directorate of Public Health and Preventive Medicine (Gupta *et al.*, 2010). This organisation, in addition to having a dedicated budget of its own, and significant power and operational authority, is staffed by a techno-managerial cadre trained and experienced specifically in public health. Doctors and other health professionals are not absorbed solely on the basis of their education and clinical experience, rather a specialised training in public health is imparted to them for a period of three months. Further, employees of the public health cadre enjoy considerable authority over their medical counterparts, and have fast tracked promotions (Gupta *et al.*, 2010), thereby making public health government service a lucrative career path in the state.

District level governance structure of the NHM

The structure of the NHM at the state level is replicated at the district level with a DHM and a DHS (National Health Mission, 2020a). The DHS is the primary body at the district level which is responsible for the planning and management of all programs related to health, in both urban and rural areas of a district (National Health Mission, 2020a). All vertical programs for individual disease conditions, and health initiatives were merged into the DHS with the introduction of the NHM. Due to these structural modifications and increased responsibility, the jurisdiction of the DHS increased beyond that of the existing *Zilla Parishad* and Urban Local Bodies (ULB) (Urban Development & Urban Housing Department, Government of Gujarat, 2016). As a result, this body is required to maintain a record of all funding received, including the state treasury and other sources.

The District Health Mission is extremely important institute established under NHM for improving decentralisation and also for bottom-up planning. Across the study states we have observed that District Health Mission meetings are happening and this institute is also helping the mission in coordination with other departments.

Table 5 Year Wise number of meetings of District Health Mission Held

Year	India	High Focus- Non NE (10)	High Focus NE (8)	Non High Focus- Large (11)	Non High Focus- Small & UT (7)
2014-15	1142	432	127	551	32
2015-16	1035	533	135	345	22
2016-17	1343	570	130	609	34
2017-18	1184	285	64	806	29
2018-19	1265	291	74	873	27
2019-20	1060	231	67	744	18
Total	**7029**	**2342**	**597**	**3928**	**162**

Source: Executive Summary, National Health Mission, Ministry of Health and Family Welfare, Government of India (2019).

The role created for the DHS accomplishes the decentralisation of decision making to the district level. This is achieved through inter-sectoral convergence with other related departments such as education and sanitation, and by creating integrated plans with these departments. This is reflected in the membership of the governing body and executive committee of the DHS. In Urban areas-Municipality, an urban health society was formed at the level of the municipal corporation and this body was responsible for the implementation of NHM programs.

The NHM lists the following functions for the DHS: -

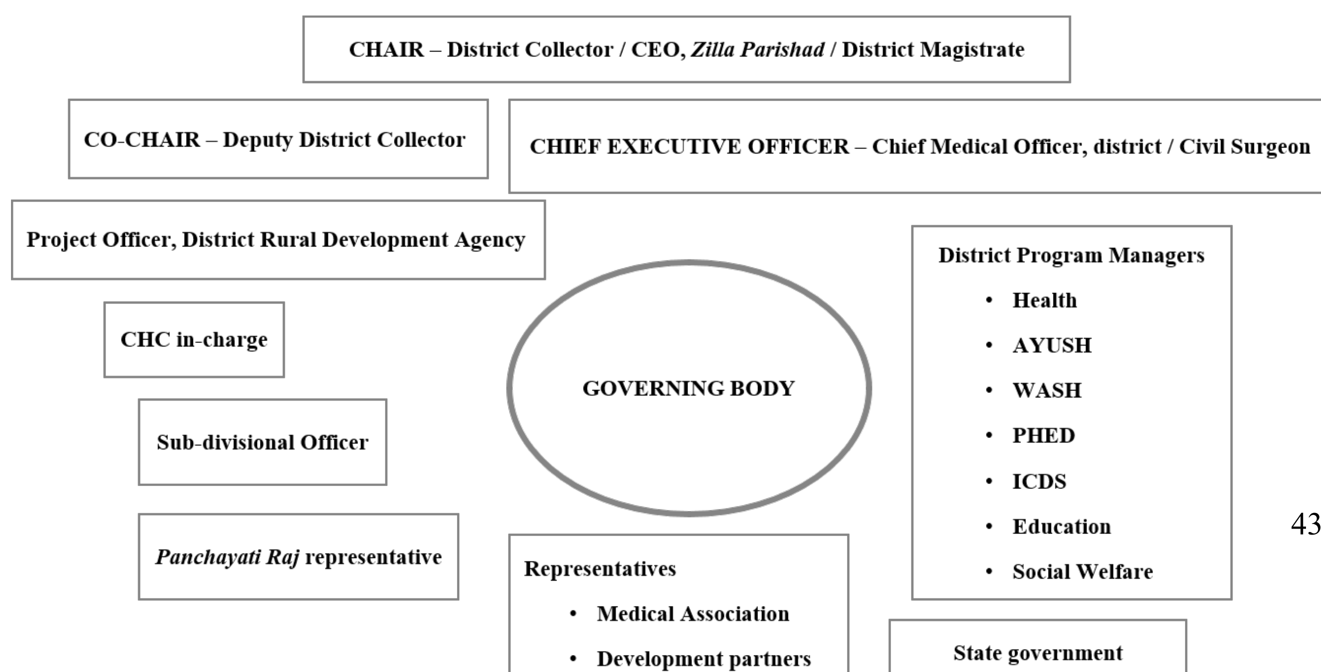
- To act as the nodal forum for all stake holders line departments, PRI and NGOs, to participate in planning, implementation and monitoring of the various health and family welfare programs and projects in the district
- To receive, manage, and account for the funds received from the state government (including state level societies in the health sector) for implementation of centrally sponsored schemes in the district
- To strengthen the technical / management capacity of the District Health Administration through recruitment of individual / institutional experts from the open market
- To facilitate preparation of integrated district health development plans, for health and its various determinants like sanitation, nutrition, and safe drinking water, etc.
- To guide the functions related to Total Sanitation Campaign at the district level
- To mobilise financial and non-financial resources for complementing/supplementing the health and family welfare activities in the district
- To assist hospital management societies in the district
- To undertake such other activities for strengthening health and family welfare activities in the district as may be identified from time to time, including mechanisms for intra and inter-sectoral convergence of inputs and structures

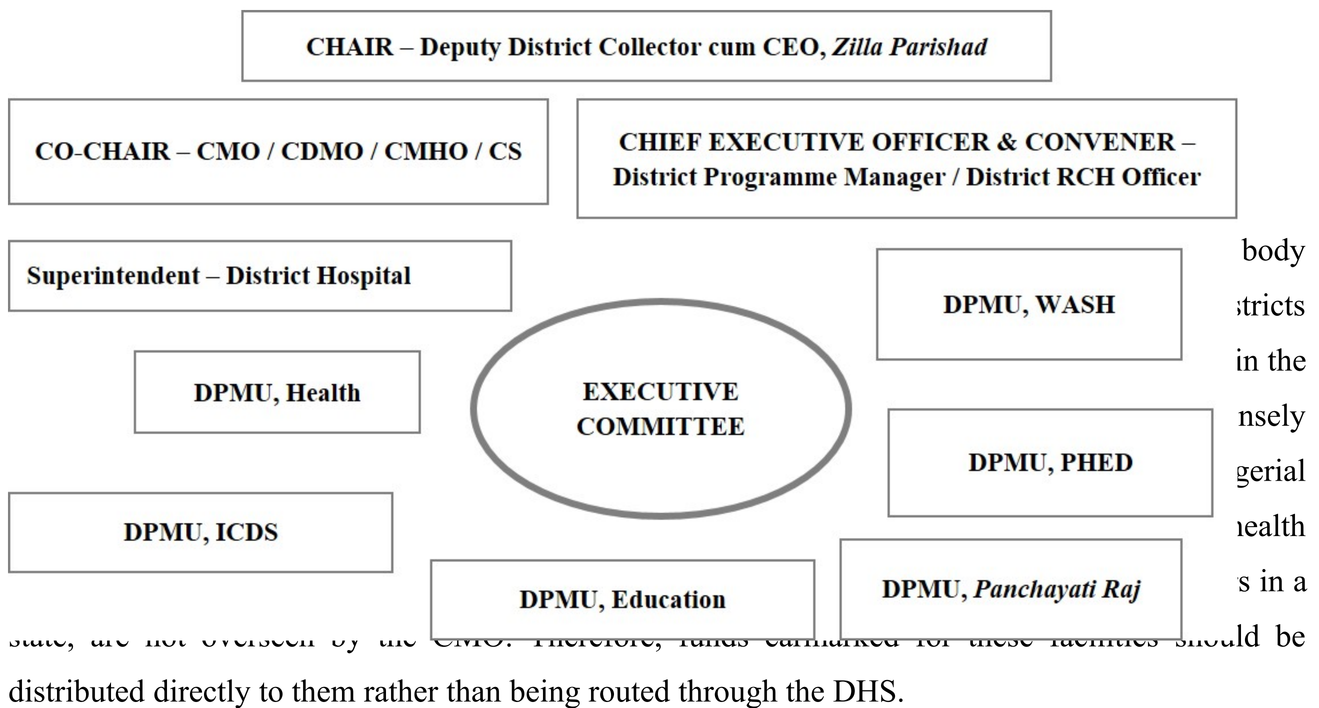
The DHS is also responsible for preparation of District Health Action Plan.

Table 6 Year wise Number of Districts prepared annual District Health Action Plan (DHAP) under NHM

Year	India	High Focus- Non NE (10)	High Focus NE (8)	Non High Focus- Large (11)	Non High Focus- Small & UT (7)
2014-15	670	325	92	233	20
2015-16	674	325	95	233	21
2016-17	678	326	96	234	22
2017-18	676	326	96	234	20
2018-19	672	326	96	229	21
2019-20	673	326	96	230	21

Source: Executive Summary, National Health Mission, Ministry of Health and Family Welfare, Government of India (2019).





state, are not overseen by the CMO. Therefore, funds earmarked for these facilities should be distributed directly to them rather than being routed through the DHS.

Governance Issues related to Finance

The SPMU and Health Department Officials across various states also highlighted that while the

Figure 7 Structure of the Governing Body and Executive Committee of the District Health Society

state government was working towards integrated financial management through a dedicated software, there was a need to streamline financial processes under the NHM. For instance, there is a delay of 3-4 months in obtaining the Financial Management Reporting (FMR) codes from Central NHM, which are codes assigned to each operation which needs to be carried out as part of the state health plan, and to which a budget fund value is assigned. Ideally, these should be available at the same time as the approved NHM budget is received by the SHS.

The Commissioner of Health in Gujarat stated that the member secretary of the SHS also served as the Additional Director of the State Health Department for ensuring better integration and coordination with the directorate. The state achieved higher efficiency and effectiveness in the delivery of health services due to there being seamless integration between the State Health Department and the NHM. The executive committee of the SHS is the developer and the implementer of the state level PIP, while approval for the same was given by the governing body and the state government itself. During implementation of the state PIP, the governing body and the SHM served as overseers to ensure appropriate governance standards were being followed.

State level health functionaries in Rajasthan also reiterated that the necessity of the mission mode for the NHM. They insisted that finances remain under the centre’s control rather than being handed over to the state government. One point of contention that was highlighted by officials in Rajasthan was the change in receipt of funds. They cited that earlier funds were transferred directly into the account of the SHS, whereas after 2014 they are being rerouted through the state treasury. This has

led to a delay of 70-80 days in the SHS receiving funds from treasury after the funds were transferred from central government to the state treasury. This model needs to be changed back to direct receipt by the SHS, as delays from state treasuries were observed in the pre-NRHM era as well (Sinha, 2009). Further, since the SHS is subject to audits similar to the state treasury, in addition to the Comptroller and Auditor General's (CAG) audit under the NHM, issues of transparency and graft are also addressed (Sinha, 2009). Respondents noted that due to this insertion of the state treasury in the fund flow, health societies were now dependent on the state government for 100% of the NHM fund amount, whereas earlier their dependence was closer to 20-40%. Moreover, 21 separate bank accounts were reported under the NHM at the state level, all of which were routed through the state treasury.

Another example cited was that of the loyalty bonus for contractual NHM staff. While this was approved in 2017, due to delays by the state finance department, these bonuses had still not been disbursed. Further, because the state finance department lacked a mechanism to recall unutilised funds from lower levels, nearly INR. 1, 200 crore remained unused at the district level in UP.

Respondents said that since the SHS has its own governing body, there was no need to loop in the state finance department. It was recommended that all NHM funds from the centre be brought into a single bank account, which would not only reduce duplication of effort and delays, but also make it easier to disburse the funds to the district societies.

Directorate of Health Services at Central Level

The Director General of Health Services at the centre functions under Ministry of Health and Family Welfare. The Directorate is headed by Director General of Health Services.

The role of DGHS is to provide evidence based technical support for policy formulation and programme implementation in matters of Public Health, Healthcare, and Medical Education to the Government for achieving an acceptable standard of health for the people of India.

The DGHS is a core agency and contribute in developing the health system with quality, excellence, equity, and righteousness with participation of the people, communities, and all stakeholders for health and wellbeing of all. The DGHS is supported by several Deputy Director General, Additional Deputy Director General and Director rank officials.

Senior DGHS officials mentioned that after introduction of NHM, the DGHS office role is diminishing and most of our administrative powers are taken over by NHM bureaucrats. Although, we are involved in PIP process and NPCC. However, our role is just to provide technical inputs and these inputs are not binding on NHM officials. Most programs are looked after by Joint Secretary rank officials.

Central DGHS officials pointed out that the appointment of officials at directorate is in the hands of bureaucrats and they were found to deliberately appoint senior officials on the verge of superannuation, which led to very short tenures and hence insufficient time for planning for future long-term actions or taking up new strategic directions in technical programs.

The Central DGHS officials feel that technical work should only be done by DGHS officials and the NHM bureaucrat officials should only look after administration and timely disbursement of finance.

Directorate officials stressed that there is an urgent need to reflect and act upon the major constraints and weaknesses of the DGHS in the public health management system. There is a need to understand why the directorate has weakened and become dysfunctional.

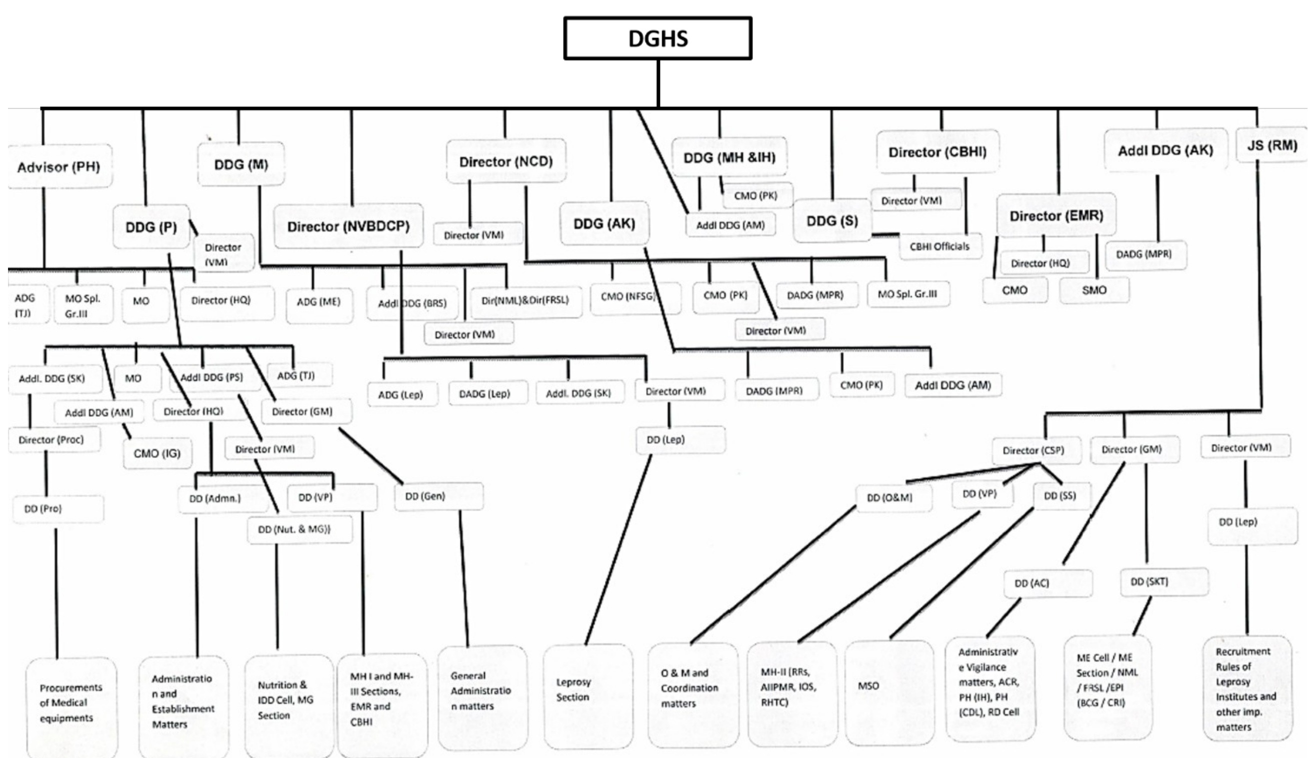


Figure 8 Organogram of the Directorate General of Health Services (2020) at National Level, Government of India

Directorate of Health Services at State Level

In our study states Directorate of Health Services are functional in Rajasthan and Uttar Pradesh. However, in Gujarat the post of Director of Health Services is abolished. The additional director of public health is senior most official in directorate.

The DHS is manned by regular state government employees. The directorate has been traditionally responsible for the planning and delivery of public health services. The directorate receives funds for the implementation and monitoring of disease control and eradication programs.

As reported by Directorate officials of Uttar Pradesh and Rajasthan, one of the key areas of concern was the disconnection and lack of integration between the SHS and the directorate. Respondents from the latter felt that after the introduction of NHM, the role of the directorate had decreased and it now functions merely as a signatory for the SHS on PIPs. It was also observed that the directorate played no role in various administrative and financial functions and that all power resided with the SHS. This led to a lack of ownership and horizontal integration resulting in inefficient delivery of public health services over a period of time. A clear disconnect between the SHS and the directorate was also revealed at the state level. In the state each public health management Institute-State Institute of Health and Family Welfare (SIHFW) functions as separate establishments with no communication among them. Each establishment was found to have a different institutional structure, technical, and managerial competencies. Since all major vertical programs were brought under the umbrella of the NHM, they are now implemented by the SHS. The directorate is responsible for the implementation of state funded diseases control and disease eradication programs, family welfare, school health and universal immunization programs. Serious concerns were expressed about the lack of coordination in the planning, execution and management of programs. In this regard, the SPMU was seen as a parallel structure created by the NHM which was given control over technical aspects of the management of various programs, which had earlier been the ambit of the directorate. In an ideal scenario, the SHS should oversee financial and administrative aspects of planning and fund disbursement, while the directorate should be responsible for the technical implementation of health programs. This was observed in Gujarat, where the directorate was well integrated with the SHS, which led to the effective and efficient delivery of public healthcare services.

The directorate's lack of say in the flow of funds into the SHS is often seen as its inability to exercise control over programs. Due to this there is limited capacity and willingness to manage new programs, especially those that are not related to clinical care provision. It was also pointed out that the central NHM did not give any importance to the directorate and only interacted with the SHS.

Further the directorate and the section teams under each of its various divisions were seen to be inadequate and inappropriately staffed. They were able to respond only to immediate necessities of running the programs. They lacked the public health, long term planning and managerial capacity to deal with multi-dimensional programs under the NHM. Health functionaries also lamented that there

were no efforts from the NHM to build such human resource and technical capacity within the directorate. This has led to dysfunction, inefficiencies, and redundancies in the system.

On the other hand, SPMU officials identified a lack of qualifications, expertise, and necessary experience in public health among the key functionaries of directorates. Many directors in the state do not have to have public health qualification. They can be basic doctor or specialist doctors and by seniority become directors looking after particular technical programs. Further, the short tenure of key functionaries at all levels on account of superannuation, late promotions, and arbitrary transfers and postings were seen to be the major issues affecting the performance and efficiency of the directorate.

1.3 Recommendations

1.3.1 Redesigning the MSG and EPC and their functions

The EPC and MSG should also review the overall strategy of the NHM and national programs, in addition to the micro-level within program fund allocation issues. A mechanism should also be created for an annual financial report of the entire NHM to be discussed and approved by the MSG and EPC, including the overall budget and this should be reflected in the minutes of the meetings. There is a need for monitoring and evaluation at this level, wherein the achievements of various individual programs and the NHM as a whole are brought under the lens, and thoroughly discussed before approvals are given.

The number of departments represented in the MSG should be re-evaluated in terms of their contribution to NHM. Observations have shown only some discussion on nutrition programming has happened in MSG/EPC. Moving forward with the NHM, it will be essential to ensure the involvement of all departments, especially sanitation, women and child development, and rural development. In addition to inter-departmental coordination, the inclusion of scientific evidence, the results of monitoring and evaluation programs, and national level data collection initiatives should be thoroughly integrated into governance mechanisms at this level. The restructuring of the committees should also include retired public health directors from high performing states like Kerala and Tamil Nadu. This will not only bring tested and much needed expertise to the highest levels of the NHM,

but also ensure that opinions are shared without fear of repercussions as retired officers cannot be targeted by the system for their frank opinions. In order to enhance the level of technical, management, and medical expertise at this level, directors from the Indian Institutes of Technology, Indian Institutes of Management, and All Indian Institutes of Medical Sciences can be appointed to the EPC and MSG. this should also include the Registrar General and Census Commissioner of India, the Secretary, Ministry of Statistics and Programme Implementation, representatives from the Auditor General's office and other such government officials.

Moreover, all strategic choices should be justified by both committees, and sufficient proof of alternatives being considered should be made available in the relevant domain before decisions are made on program strategy and funding. Furthermore, performance of the previously sanctioned programs should be presented with dispassionate and objective review or progress. Based on this course corrective measures should be discussed in the EPC and MSG, and should be forwarded to lower levels, in order to prevent undesirable results from programs and schemes.

While some issues are in the ambit of states, decision making is still highly centralised in NHM. Fund allocations should take into account various issues like level of urbanisation, differences in standards and cost of living across states, in order to ensure flexibility and smoothness in program implementation. Further, financial norms, for the mission as a whole and for individual states should be derived on the basis of costing analyses, and work and time motion studies and not arbitrary judgements of key people.

Directorate General of Health Services The involvement of technical personnel of the Ministry of Health and Family Welfare should be a routine in proposal preparation and discussion. In addition, due inputs should be taken from officials at the Directorate General of Health Services.

Time and agenda allocation of the meetings of the MSG and EPC should be divided into three categories. (i) 30% time for program review, (ii) 60%-time proposal making—in order of expense (budget – large budget items first) and importance of public health issue, and (iii) 10% time for urgent and miscellaneous issues. Items for the meeting agenda should be set by asking members 2 months in advance for their suggestions, besides the government driven agenda. In addition, non-member technical experts should be included in proposal discussions, and well researched background documents for each issue should be prepared and circulated to the members of both bodies in advance for them to read and come prepared. Each annual meeting of MSG should include the full narrative, statistical, and financial reporting of the previous year. This report should also be shared publicly on the NHM website. The same should be done by each state.

The EPC should undertake component wise discussions of the NHM, and each program should be studied by rotation – starting first with the most fund consuming program. For national level programs that require specialised expertise and specialised technology, such as peritoneal dialysis program, thorough research should be conducted before being brought to the EPC. The issue must first undergo examination by a committee of public and private experts and an exhaustive report on health technology assessment should be done including cost. Such report should be presented by the technical professionals and it should be discussed by the members before approval. This should be made a norm for all proposals exceeding INR. 300 crores in value (indicative value – government could set it higher to 500 Cr or lower to 100 Cr). The principle is before approving large projects there should be proper technical and cost effectiveness analysis.

Research and Evaluation: In addition, the NHM could benefit from a research and evaluation inputs from well qualified and independent individuals or groups/ institutions. The MSG and EPC should recommend and commission independent analyses of data from expert independent individual or institutions on various key programs and NHM components. This exercise should be conducted periodically every 3-4 years. In order to facilitate an environment of transparency and progress, special attention should be paid to research/evaluation highlighting the limitations or failures of certain programs.

All the document, like minutes of meetings of MSG, EPC and annual report of NHM should be made public. These document can be published on NHM website. Further, a standardised format for Annual Report should be design for state to report progress made under various NHM programme. It should be made mandatory for the state to publish annual report.

1.3.2 Integration of SHS-NHM and Directorate of Health Services

Effective integration and revitalisation of key public health function for improved health status of states is required. The central NHM should work towards necessary architectural correction in public health care delivery system and administrative reform for increasing the absorption of funds. The central NHM should come up with strategies, guidelines, and frameworks for integration of NHM organization and directorate. There should be a defined role of both the MD-NHM and directorate officials in the implementation of various program under NHM.

The SHM and SHS should be integrated with the directorate through deputation of appropriate regular employees to SPMU and SHS. The directive for this should originate from the central NHM, where appropriate representation of DGHS in MSG and other decision making body is also required. In addition, the State and District Health Societies should focus on including local patient representative groups, and civil society. Generating localised funding sources is also essential for

ensuring involvement from all sections of the community including those individuals and organisations capable of philanthropic endeavours. This will be important for drawing attention to lacunae in the social aspects of public healthcare, such as facilitating food and shelter for the family of care seekers, engaging social workers for follow-up community based care, and supporting local blood banks.

Under Central NHM guidelines various measures should be taken for enhancing coordination and integration. States should have strategies to build joint ownership for directorate and NHM. Further, there is an urgent need to ensure proactive engagement and involvement of the directorate officials in planning and execution and review of the NHM. The NHM should conduct joint reviews with the directorate and some programs should be monitored by the latter. The strengthening of directorate is also requiring for long-term sustainable system of proper program planning and effective implementation.

1.3.3 Strengthening and Capacity Building of Directorate of Health Services

Adequate technical, financial, and human resources, and infrastructure should be provided to the directorate for proper functioning and supporting the SHS. Senior officials of directorate of health services should be given continuous exposure to short course trainings on various aspects of public health management- epidemiology, health care financing, hospital management, community process, human resource management, quality of care, HMIS, and communication etc.

For strengthening of existing directorate a well-designed HR strategy is required. Well trained, technically competent consultants and officials of the SHS may be deputed in the directorate as lateral entry officers, and regular cadre officials of the directorate can be placed in the SHS. This strategy will facilitate instilling work-culture in directorates through development of skilled health workforce thereby gradually building the ownership of NHM in the directorate.

There is great need to expand the positions in the directorates in various states and at central level. Currently very few technical officers are looking after many programs. So each major program should have 3-7 technical officers (directors) in each state depending on the population size of the state. For example, major program is maternal health, child health, immunization, TB, Malaria/vector borne diseases, Family planning and reproductive health etc. Smaller programs should have 2-3 technical program officers in each state. All the program officers should be trained in their technical area and in public health. Expanding the directorate will yield much more returns in terms of improve technical directions and improved efficiency of the field program implementation.

On the same lines the district health officers should also be strengthened by having public health management trained officers in the regular cadre and under NHM for specific programs.

Other states could benefit by following the example of Gujarat, where the directorate is well integrated with the SHM and the SHS. This would allow for a convergence of techno-managerial talent where directorate officials with significant experience could work in tandem with Indian Administrative Services (IAS) officers in the NHM who have the necessary qualifications for program administration. Tamil Nadu also has an excellent model. While the State Health Department is led by an IAS officer with high managerial and administrative acumen, the Director of Public Health, an independent and authoritative position is responsible for advising the Health and Secretary and Health Ministry on technical issues. All IAS appointees to public health services are trained and made aware of the technical issues and basics of public health management and preventive measures, and are acculturated to work in lock-step with the State Public Health Directorate from the beginning of their careers.

Further, senior officials at the directorate should be appointed for at least 3 years in the same post. Promotion criteria need to be made more transparent for selection of the key positions in the directorate. A major restructuring of the directorate is required in many states.

1.3.4 Enhancing Technical Capacities in states

In Uttar Pradesh, the state government should create a specialist cadre to hire medical specialists at the district hospital, sub-district hospital, and community health centres. Overall HR rationalisation should also be conducted to remove additional program managers, data entry operators, and financial assistants from the district level and prevent verticality and duplication. Moreover, in areas where healthcare professionals are already low in number, physicians should be removed from administrative positions and posted to facilities for clinical work – but those who want to do admin work should be allowed to continue.

A similar approach as taken by Tamil Nadu, should be taken by other states as well, in order to strengthen the public health cadre and capacities of the state level apparatus. The advantage of implementing the Tamil Nadu model would be the development of a cadre of workers on equal footing with those in Medical services and education, with a streamlined career path, growth opportunities, and commensurate incentives. Another aspect of the Tamil Nadu model that could be positively adopted by other states is the high level of involvement and accountability of the state government. However, authority resting with the Department of Health and Family Welfare which in turn delegates to the various Directorates (Chandran, 2016). It is these directorates which help implement programs under the NHM.

Strengthening the public health cadre should not be limited to technical and management staff, rather it should include rigorous programmatic and public health training for physicians employed with the

public healthcare system as well. States should recruit doctors, nurses and others with experience and qualifications in public health, at the same time upgrade their existing clinicians with training programs dedicated to developing public health management skills. In the longer term, graduate level qualifications in public health should be mandated for clinicians recruited into the government health system who are looking after public health functions.

2. Human Resources for Health

2.1 Background

The National Health Mission has created several institutions for enhancing HRH capacities at various levels. At National level, Mission is headed by a Mission Director, of the rank of Additional Secretary, supported by a team of Joint Secretaries. The Mission handles not just the day-to-day administrative affairs of the Mission but is also responsible for planning, implementing, and monitoring mission activities.

Joint secretaries are leading various programs under the NHM and are supported by technical consultants. Up to 0.5% of NHM Outlay is earmarked for programme management and activities for policy support at the national level through a National Programme Management Unit (NPMU).

The National Health Systems Resource Centre (NHSRC) created as the apex body for technical support to the Centre and states. The NHSRC is also helping central NHM in National Program Coordination Committee meetings and also providing technical support to state NHM in preparing PIP. Technical support focuses on problem identification, analysis, and problem solving in the process of implementation. It also includes capacity building for district/city planning, organization of community processes and over all dimensions of institutional capacity, of which skills is only a part.

The NHSRC has various divisions HRH, Health Financing, Quality Assurance, Health Technology etc. The NHSRC is headed by Executive Director and each division is staffed with Senior Advisor, Advisor, Senior Consultant, Consultant, and other research staff.

At state level similar model of technical support been created in the form of SHSRC. However, in most of the study state it is not functional.

Under NHM Program Management Unit have been established at various levels:

- State Level – SPMU
- Regional Level –RPMU
- District Level – DPMU
- Corporation Level – CPMU
- Block Level – BPMU

The State Programme Management Unit has been established at state level for providing technical support to State Health Society for implementation of NHM. The SPMU is headed by State Programme Manager-SPM, who is overall in-charge of NHM and reports to Mission Director-NHM. There are various divisions in SPMU for rolling out various program under the umbrella of NHM and also managing the mission. The important divisions of SPMU are HR, M & E,

Community Processes, and Finance etc. There are state nodal officers for various programs including RCH, TB, Community Processes, and M&E etc.

Similarly, at regional level Regional Program Management Unit has been created under Regional Deputy Director/ Deputy Director of Health Services. The Regional Program Coordinator is In-charge of RPMU and he/she has been supported by Regional Finance officer, M & E Assistant and Data Entry Operator. The RPMU is responsible for supporting district in PIP preparation and technical support for implementation of various programs.

At District Level, District Program Management Unit has been created for management of NHM. The DPMU is headed by District Programme Coordinator (DPC), who reports to Chief Medical and Health Officer at district level and SPM at state level. He is overall in-charge of various program under NHM at district level. The District Program Coordinator is seen as the key player not only in setting up and operationalising the DHS secretariat, but also in arranging managerial and supportive assistance to the district health administration, including general management and logistic support.

There are some additional positions at district level- DPC- NUHM for urban health, Coordinator-Community Processes, District Finance Officer, Finance Assistant, M&E Assistant, Data Entry Operator, and several coordinators for various program- PCPNDT, Tobacco, NCD, Mental Health, TB etc. At Block Level, Block Program Management Unit has been created for management of NHM at block level. Block Program Manager heads the BPMU and he/she is supported by Finance Officer and data entry operator. The below figure depict various institutional mechanisms under NHM.

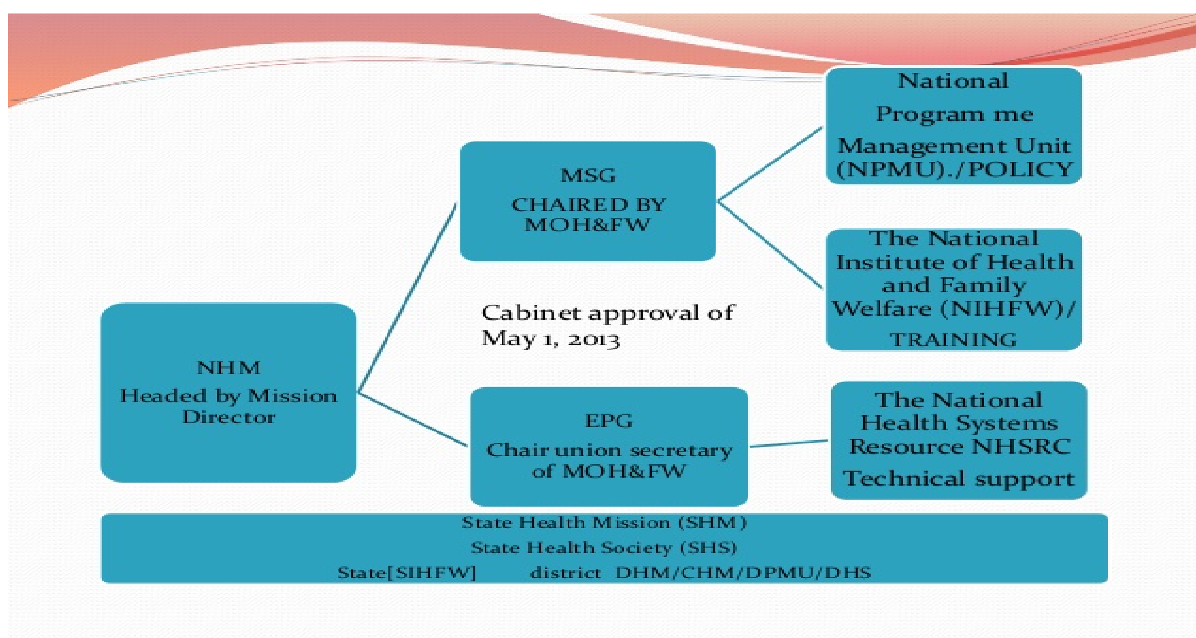


Figure 9 Institutional Mechanisms under National Health Mission

NHM's major contribution towards health system strengthening is towards the HRM. NHM does not depend on state public service commission exams for recruitment, therefore it is able to exercise flexibility. Walk-in interviews and entrance examinations against posts were publicly advertised for contractual recruitment in administrative positions. Laboratory technicians, pharmacists, and ANMs are hired at the district level while specialist doctors and MOs are recruited at the divisional level through monthly walk-in interviews. Initiatives such as interviews on fixed days every week for specialists and MOs have been taken in certain states, including Gujarat. HR officials stated that this would now change and only two recruitment cycles (January and July) could be conducted annually. It was also observed that for the CHO positions at HWCs, there are transfer camps. This is a platform which allows this cadre of workers to choose positions of their convenience.

However, in spite of the improvement in HR availability, there is a ubiquitous scarcity of skilled HR in the healthcare sector in India. While the international norm is a minimum of 25 skilled health workers per 10,000 populations (doctors, nurses and midwives), in India the density of health workers is shockingly low—only a little over 8 per 10,000 populations. Of these, 3.8 are allopathic physicians, 2.4 are nurses or nurse-midwives, and the rest are AYUSH practitioners which are widely prevalent and recognized by the government (Panda *et al.*, 2016; Adsul, 2016). The availability of doctor is in the ratio 1:1500 in urban areas and one doctor for 2500 people in rural areas which is quite low as compared to USA where they have 1 doctor for 250 people (Panda et al., 2016). Vacancies were seen in the regular cadre at various levels—Medical Officers at PHCs, mostly in tribal and desert districts, specialist at CHC, SDH and DH. Human resources for health have increased significantly across the states through NHM. However, still lots of vacancies and scarcity of human resources exists.

Table 7 Human Resources under National Health Mission

Type of HRH	India	High Focus-Non NE (10)	High Focus NE (8)	Non High Focus-Large (11)	Non High Focus-Small & UT (7)
Medical Officers at PHC	8590	1808	1278	5167	337
Medical Officers at UPHC	2113	654	73	1298	88
Medical Officers at UCHC	64	17	0	41	6
Specialists	2889	557	209	2021	102
ANM at PHC	71560	30738	7177	32618	1027
ANM at UPHC	12517	4572	326	7502	117
District Programme Manager	638	285	98	246	9
District Accounts Manager	649	292	107	242	8
Block Programme Manager	3725	2503	467	755	0

Accountant at facility level	5928	2961	561	2368	38
Pharmacists	13215	5576	1177	6295	167
Lab Technician	10659	5175	1121	3954	409

Source: Executive Summary, National Health Mission, Ministry of Health and Family Welfare, Government of India (2019).

2.2 Findings

Shortage of manpower and vacancies

In Gujarat, there are several vacancies across the health workers cadres including that in the category of specialist doctors. Almost 73 % paediatricians, 65% speech therapists, 69% Optometrists, and 69% Dental technician positions, vacant at District Early Intervention Centres (DEIC) posts are vacant. Under the NUHM, 71% staff nurses, 92% specialist doctors, and 70% MOs positions were observed vacant. 55% pharmacist positions were vacant in the RBSK program. The aspects related to vacancies were specific to cadres, especially that in the specialist category. Please see below tables for current status of Human Resources of Health across study states.

Table 8 Status of Non-Technical Human Resources for Health in Gujarat NHM

Non- technical Positions at state level			
Category/ Type of personnel	**Sanctioned**	**Filled**	**Vacant**
Staff On deputation	3	2	1
state Programme Managers	21	21	0
Consultants/ Programme Officers	42	41	1
Staff for civil / infrastructure work	2	2	0
Programme Assistants	35	31	4
Programme Coordinators	14	9	5
MIS/ IT Staff	5	4	1
Accounts Staff	21	21	0
Administrative Staff	3	2	1
Data Entry Operators	448	412	36
consultant/Programme Officers	14	9	5
Accountant	6	6	0
Administrative	3	1	2
Total	**617**	**561**	**56**

Source: State Health Profile, National Health Mission, Gujarat.

Table 9 Status of Technical Human Resources for Health in Gujarat NHM

Category/ Type of personnel	Sanctioned	filled	vacant
Nurses and paramedical staff	1731	1400	331
Laboratory Technicians	569	519	50
Pharmacists	214	135	79
Specialist doctors	239	172	67

occupational therapist	22	18	4
Community health workers/ PMW	130	122	8
NPPCDCS/RNTCP/NPCC Medical officers	80	68	12
AYUSH medical officers (RCH)	919	819	100
AYUSH medical officers (RBSK)	1984	1718	266
ANMS- RBSK	992	760	232
Pharmacists- RBSK	992	441	551
DEIC health professionals	296	159	137
Staff for NRC	565	483	82
Staff for SNCU/ NBSU	660	518	142
Staff for Obstetric ICUs/HDUs	168	97	71
Staff for health and wellness centres	2303	781	1522
Counsellors	508	477	31
Blood Bank/ BSU/Mobile Blood Vehicle staff	90	77	13
Administrative staff	88	76	12
NUHM staff	3423	2840	583
Total technical staff	**16678**	**12271**	**4407**

Source: State Health Profile, National Health Mission, Gujarat.

Table 10 Status of Human Resources for Health in Uttar Pradesh

Health cadre	Sanctioned	filled	Vacant	% Vacant post
Medical officer	18382	12461	5921	32
Staff nurse	7770	4578	3192	41
Pharmacists	7939	7756	183	2.3
X-ray technicians	1008	934	74	7.34
Lab technicians	3003	1846	1157	38
ANMs	23656	15264	8392	35

Source: (http://up-health.in/en/) Uttar Pradesh Health Department Website

Table 11 Status of Human Resources for Health in Rajasthan Department of Health

Name of Post	Sanctioned	Filled	Vacant	% Vacant Post
Senior Medical Officer/Medical Officer	6630	5202	1428	22%
Senior Specialist	382	290	92	24%
Junior Specialist	3911	2114	1797	46%
Gynaecologists out of total specialist	406	282	124	31%
Anaesthetist out of total specialist	242	174	68	28%
Paediatrician out of total specialist	346	265	81	23%
Staff Nurse (including MN-I & MN-II and GNM)	23329	18653	4676	20%
Lady Health Visitor (LHV)	2697	1597	1100	41%
Female Health Worker (FHW/ANM)	22451	16213	6238	28%
Pharmacist	4201	2257	1944	46%
Lab technician	5215	2676	2539	49%

Source: State Health Profile, National Health Mission, Rajasthan

Table 12 Status of Human Resources for Health in National Health Mission Rajasthan at State Level

Name of Post	Sanctioned	Presently Working	Vacant status	% Vacant Post
State Programme Manager	1	1	0	0%
State Finance Manager	1	1	0	0%
State Accounts Manager	1	1	0	0%
State Data Manager	1	1	0	0%
ASPM	1	1	0	0%
Consultants	42	39	3	7%
Health Manager PCPNDT	1	1	0	0%
Legal Advisor PCPNDT	1	1	0	0%
State Coordinator PCPNDT	2	1	1	50%
Accounts Manager	1	1	0	0%
Programme Officer (HR-2,SPMU,IMEP,RTI,PLAN)RO SHSRC PO, ARC, VHSC,ASHA,IEC-03)	14	12	2	14%
Data Assistant/Data Officer (Including IMEP Cell)	6	6	0	0%
Health Manager	4	4	0	0%
Statistical Data Assistant (ASHA)	1	1	0	0%
Programme Officer cum Data Manager (QA)	1	0	1	100%
Programme Coordinator (Nursing)	1	1	0	0%
Accounts Clerk	2	2	0	0%
Accounts Cum Tally Operator	4	4	0	0%
Administrative Assistant cum Data Entry Operator (Clinical Establishment Cell)	2	2	0	0%
Helper (Clinical Establishment Cell)	2	2	0	0%
Senior Programme Assistant	1	1	0	0%
Programme Assistant	14	14	0	0%
Executive Assistant Cum Data Entry Operator	66	66	0	0%
Support Staff	50	50	0	0%
Drivers	6	6	1	13%
Security Guard	8	7	0	0%

Source: State Health Profile, National Health Mission, Rajasthan

Table 13 Status of Human Resources for Health in National Health Mission Rajasthan at Districts Level

Name of Post	Sanctioned	Presently Working	Vacant status	% Vacant Post
District Programme Manager	34	34	0	0%
District Accounts Manager	34	34	0	0%
District Nodal Officer (M&E)	34	34	0	0%
District ASHA Coordinator	34	30	4	12%
District IEC Coordinator	34	32	2	6%
District PCPNDT Coordinator	34	33	1	3%
Ayush Chikitsak/Ayush MO	1013	910	103	10%
Ayush Compounder	401	257	144	36%
Data Entry Operators at District H.Q.	68	63	5	7%
Health Manager at District Hospital (State & District Level) (23 + 3)	22	18	4	18%
Block Programme Managers	249	205	44	18%
Accountants (Block/CHC/PHC)	1098	950	148	13%
Data Entry Operators at Block H.Q.	249	218	31	12%
Block ASHA Facilitators	249	174	75	30%
PHC ASHA Supervisors	1528	1226	302	20%
Nurse Grade-II/GNM	4850	1359	3491	72%
Pharmacist	186	141	45	24%
Lab Technician	158	81	77	49%
PHN (Public Health Nurse)	158	99	59	37%
ANM	2550	2159	391	15%
Computer Operator (Drugware House)	328	231	97	30%
34 District Coordinator / 34 Administrative Assistant cum Data Entry Operator (Clinical Establisment Cell)	68	0	68	100%
512 Pharmacist (Mobile Team under RBSK)	512	501	11	2%
512 ANM (Mobile Team under RBSK)	512	400	112	22%
1024 MO Ayush (Mobile Team under RBSK)	1024	927	97	9%
Staff for District Early Intervention Center (DEIC)	120	39	81	68%
RKSK Coordinator	10	10	0	0%
Specialists forFRU	122	0	122	100%
Adolescent Health Counsellors New Positions for RKSK)	141	68	73	52%
Field Monitor in 10 Selected Districts (Routine Immunization Programme)	10	7	3	30%
RMNCH/ FP Counsellors	52	25	27	52%
eVIN PO IT (Zone)	7	0	7	100%
VCCM	44	0	44	100%
Counselor Blood Bank	30	30	0	0%
LT Blood Bank	72	70	2	3%

Dakashta Mentor	18	12	6	33%
Data Entry Operator (Immunization)	34	34	0	0%
Nursing Superindentent (ANMTC)	5	1	4	80%
Nursing Tutor (ANMTC)	60	31	29	48%
PHN (ANMTC)	98	45	53	54%
Sr. Sanitary Inspector (ANMTC)	33	33	0	0%
Nursing Tutor (college of nursing Kota)	9	9	0	0%
Programme Assistant (ANMTC-GNMTC)	48	33	15	31%
	16407	**10605**	**5802**	**35%**

Source: State Health Profile, National Health Mission, Rajasthan (2019)

Specialist cadre issues

In all the 3 states, there are a large number of specialist positions seen vacant at various levels of health systems. This is a long term problem which has not been solved even though NHM provided flexibility of hiring and salaries. Hence, more detailed work needs to be done in this area of specialist vacancies.

States lacked a specialist cadre for medical professionals and doctors with postgraduate degrees also had to join the system at the Medical Officer level and wait for many years to rise in the hierarchy. Some of this was attributed to the long term rift between the medical officers and the specialists. Protests by general duty medical officers in senior positions in Uttar Pradesh, exerted pressure to abolish the recruitment of specialist doctors. As a result, the state now has no mechanism for the recruitment of specialists in CHCs. This has affected the quality of services being delivered by the public healthcare system. Two significant human resource problems were identified (i) state policies are restrictive and specialist doctors from other states, who are not registered in the UP system, were unable to join public health facilities in the state, (ii) and the Provincial Medical Services is badly structured with long waiting times in the recruitment process and no waitlists, which leads to a large number of vacant specialty positions, especially at the CHC level (Kumar, Bothra and Mairembam, 2016). It was also seen that because both specialists and non-specialists were being hired at the entry level position of MO, there was no incentive for candidates interested in public service to pursue post-graduate medical education. This further aggravated the problem of specialist shortages in the state.

Gujarat had initiated special mechanisms for recruiting specialists including flexible duty hours, additional pay etc. However, similar vacancies were seen in the states of Rajasthan and Gujarat.

Other health professional shortages

In case of non-technical staff at various levels, the highest numbers of vacant positions were observed among data entry operators. Moreover, at health worker level such as FHWs, ANMs, vacant positions were observed at the district level due to shift/ transfer from contractual to regular positions among health workers. This happens through the *Zilla Panchayat* exam, in which contractual FHWs are absorbed into the regular cadre. The same has been reported in case of lab technicians, staff nurses, and pharmacists at the PHC/CHC levels. Sometimes staff takes internal transfer to nearer location to their residence, which leads to vacant positions. However, maximum vacancies were seen in remote rural and tribal districts. Medical Officers of the regular cadre expressed disinterest in working in desert and tribal districts. They were of the opinion that they may not get an opportunity to return from such hardship postings. Further, no clear policy for promotion was observed in the regular cadre.

The Rajasthan state has initiated training of Mid-Level Health Provider (MLHP) for the management of HWCs, however this was stopped due to court litigation. Under the NUHM in Rajasthan, out of 140 UPHCs 70 were found to be without doctors. Among health professionals, nursing staff was especially low in HWCs (67% vacant), and in geriatric care at NPCC (64%). In Gujarat, vacancies of medical officers have been observed at various levels. Vacancies are more at primary care level. The state Public Service Commission examination (GPSC) played a large role in determining the recruitment of personnel.

HRM policy inconsistencies and HRMIS implementation

There is little consistency amongst states in terms of implementing HR policies as mentioned in the NHM manual. Most of it relates to recruitment, compensation, and cadre management. One of the major findings across the three states was inconsistency in HRM structure, systems, and processes. Senior health officials in UP posited that even after the completion of two phases of NHM, there is no standardised HR policy from the central NHM. Rules changed frequently and there was significant state to state variation. It was also noticed that within NHM itself, there is a significant difference between the job description and compensation of various personnel working at similar levels across different vertical programs.

HR function which is very vital to a well-functioning health system has not been paid attention at central as well as state level. Many of these issues are arising because HR management units are inadequate in staff, skills, and competency. Generally, senior govt. officials look after this including generalist state cadre officers. The three states significantly lacked a cohesive and comprehensive structure such as an HR cell manned by HR professionals. Uttar Pradesh reported the existence of an HR Management Cell with an HR General Manager, but there were integration issues as there were several simultaneous initiatives without proper integration mechanisms. It was reported that BMGF

supported TSU is developing a new system of HR management in UP under its HR *Sampada* initiative.

We also observed significant inconsistencies in policy implementation. In Rajasthan, State Health Department and SPMU officials reported that all NHM staff was reported to have received a 5% increment, which was not uniform earlier. Salary increases have varied from a reasonable 10% to even 90% in some areas, under the name of flexibility. Consistent policy implementation has provided results whenever attempted. In the state of Rajasthan, initially, the managerial cadre used to get 12.5 % increment every year whereas there was no increment for service delivery cadre. In an attempt to rationalize and enhance consistency, 5 % increments have been proposed for each cadre across the state. Service delivery staff is satisfied after this change.

While the NHM blueprint provides for the implementation of HRMIS, and the mission is also providing incentives to states that have designed and implemented HRMIS, it was reported that so far, the software has been put into use only in few states such as Haryana, Karnataka, and Chhattisgarh. The three states that we studied had yet to implement a HRMIS. While the HRMIS is a step in the right direction, it would be important to integrate it with various HR functions such as planning, recruitment performance monitoring, and payment of staff salaries to ensure its effectiveness.

HR Rationalization and planning

Duplications, disconnect between job description and tasks allocated, and poor HR planning was evident across the three states. According to one NHM official, designations have been created in the NHM without much thought, and all of these personnel are receiving salaries for which the rationale is difficult to find. In Maharashtra for instance, it was observed that 800 levels of salaries were being paid to NHM staff. On the other hand, there are sharp imbalances in human resources between rural and urban areas. It was also observed that with new programs or with increased workload on staff due to new programs, the states resorted to new hiring and creating a new vertical, which may not be required and rather distribution of responsibilities would have been a more rational course of action. For example, Rajasthan has given additional responsibility of data entry for new programs to existing data entry operators with an additional incentive for the same. It was pointed out that in urban areas in particular, where only a few public healthcare facilities were present, separate DPMs were not required. In some of the districts in Rajasthan where there is only 1 or 2 Urban PHC, there were separate DPMs for Urban areas under NUHM.

State officials from all the states said that contractual management staff is adequate but the organizational structure has evolved in such a way that it has brought about verticality rather than

decentralization. It was observed that there is a duplication of certain categories of staff under various programs. For instance, laboratory technicians appointed under multiple programs were found to be working only for a single program. There were also issues of implementing proper structure. For example, in the state of Gujarat, most NHM staff report to CDHO, but the NCD staff was the only Programme Officer found reporting to the CDMO, affecting convergence. While decentralization is beneficial to the health system, one of its disadvantages includes the duplication of personnel. At some places it was also observed that at the PHC level, whenever new program initiatives are launched, the facility exhausts the sanctioned limit of human resources. This was seen to occur due to a perception that the number of personnel approved by central NHM would be much less than their actual requirement. As a result, they tend to over-quote the number of human resources required. Further, block level decision making authorities were reported to lack adequate HR planning which led to random and irrational HR requirements being generated.

District Program Coordinators were found to be improperly allocated. It was pointed out that there is an urgent need to carry out HR rationalization and redefine the terms of reference for various positions at the DPMU. At the district and block levels, the same is required for program coordinators, data entry operators, counsellors, laboratory technicians, and accountants of various vertical programs.

Regular versus contractual NHM staff

As per senior state officials of all the states, NHM staff was observed to be more competent, efficient, and displayed a positive attitude toward the work, compared to regular staff of the state health department. Their contractual arrangement served as stricture to ensure high quality performance and better control by the CDHO/CMHO. This HR provision under the NHM helped achieved staffing adequacy at public healthcare facilities which in turn has led to better quality of services at the primary healthcare level. However, in all the three states, the morale of the contractual level staff was significantly lower. Nursing staff hired on a contractual basis was found to perform better due to the threat of removal. The contractual staff always had fear of non-renewal of the contract or sudden termination. This is largely based on likes and dislikes of the supervisor rather than performance.

In Uttar Pradesh it was observed that contractual workers in health facilities were often discriminated against and given odd and longer duty hours, compared to the regular cadre. The same findings were also echoed by central government NHM consultants. There have been extreme cases of abuse of flexibility on rare occasions. Further, senior officials at the NHSRC reported that two to three fold differences were observed in the compensation between regular and contractual ANMs at senior level or after some years. A district official in Gujarat pointed out that contractual staffs are more

efficient and effective compared to regular cadre staff yet there is a huge difference in salary and benefits for the same position. The apathy extended to the staff in implementing processes. For example, in Rajasthan, contractual staff complained that while the central NHM had approved a loyalty bonus in 2017, there was no mechanism for its disbursement from the state government. The NHM finance team sent the bonus proposal to the finance department of the state government, although approval was already given by the State Health Society. Moreover, there is no provision of social security or other benefits like health and accidental insurance, due to which dissatisfaction, and even strikes have been reported.

While the NHM provided gradual regularization of the staff for eventual strengthening of the directorate, a framework for regularizing contractual staff was absent in most of the states. While the NHM has mandated that 15% of contractually recruited staff be regularized, Tamil Nadu is the only state where this policy is being implemented. In Tamil Nadu, the state's system for absorbing contractual workers is robust, wherein permanent positions are created first, which are staffed with NHM hired staff for a period of 2-5 years, and then the same are absorbed into regular state services.

In the states that we studied, the state policies were reported to be unfavourable to the absorption of contractual NHM staff into permanent positions. Contractual NHM employees who had significant experience in a department were not selected for regular appointments because of various reasons, non-fulfilment of eligibility criteria, low marks in the exams. The NHM contractual staff stressed that relaxation in the eligibility criteria such as age, additional weightage in the exam because of their work experience. This was echoed by officials from the NHSRC and SPMU of various states.

These aspects have led to significant deterioration of the morale of many contractual frontline health workers.

Recruitment

Senior officials of the Department of Health mentioned that the recruitment process for human resources in health is very vague and not standard across states. Recruitment cycles were found to be out of sync with requirement. In Uttar Pradesh, district officials reported that the recruitment of NHM staff is decided by the state headquarters, due to which sometimes the staff does not respond to them. Significant delays were also observed in the recruitment of NHM staff at the district level. HR officials cited that late (July/August) PIP approvals in previous years led to delays in the recruitment process. While the PIP for 2019 was approved in April, such delays in approval can actually be attributed to the absence of a systematic Human Resource Planning (HRP) process in states. Currently, a bottom up approach is followed wherein PHCs and CHCs pass on their HR requirements

to the state authority. These requirement figures are often generated without appropriate analysis of human resource processes using the required tools.

Career planning, training and capacity building

Another aspect that was highlighted was the lack of need-based training to different categories of staff, and their apathetic attitude. Apart from the inadequate training mechanism, the issues were raised about infrastructure, absence of induction training, and duplication of efforts by different agencies without much integration. Besides, there are other issues related to training like the lack of a mechanism for follow-up after training, mismatch between training and job profile, and lack of a system for training related performance monitoring.

Gujarat has built a training infrastructure with an apex training institute as SIHFW, 4 Divisional training institutes and 1 Health and Family Welfare Training Centre. There are 6 skill labs established where 32 skills are demonstrated. Most of these training facilities are focused on technical cadres to strengthen their service delivery competency. However, gaps were observed in behavioural, leadership and management training for NHM staff. The state of UP has initiated a training program module for various cadres of health personnel, including the focus on soft skills.

Interviewed officials at the state, district, and block levels remarked that the quality of managerial staff is not good, as most of them were MBA or MSW and lacking the public health qualifications. There is no public health managerial cadre within state structures and the posted managers have little knowledge, skills and aptitude for working in the public health sphere. Gujarat has attempted to mitigate this issue by initiating a training and capacity building of mid-level service providers-CHO in special arrangement with IIPH Gandhinagar and more than 3000 CHOs have been trained and deployed.

Compensation and performance appraisal

Many senior state officials said that the NHM does not have a robust performance appraisal system in place. There is no uniform process of measurement of performance across various cadres such as MOs, ANMs, and managerial staff. Increment and promotion decisions were found to be arbitrary and not linked to the results of performance appraisal. Some of the HR officials of Rajasthan NHM mentioned that there is no provision of experience bonus. This tips the ratio of applicants in favour of newcomers. Sometimes experienced professionals may be offered even less than their previous compensation. There are no policies to protect and attract experienced staff. For female staff, maternity and child leaves, and subsequent workload redistribution are not clearly defined. The lack of proper incentive design can be seen as a major demotivating factor, in addition to the lack of financial and non-financial incentives, especially for rural postings. Further, the public health system

is still unable to offer competitive remuneration that would prevent specialists from preferring the private healthcare system (Kumar et al., 2016).

2.3 Recommendations

2.3.1 Online information system for HRH and HMIS data

An integrated HRIS and HMIS system need to be designed and implemented to provide data on (lack of) availability of different cadres of health workers. HIMS data entry and reporting can be made decentralized by making it attractive to the peripheral health workers and block health officers by creating user-friendly dashboard.

2.3.2 Uniform policies across states such as for recruitment, regularization

Health professionals need to be hired only from colleges/ institutes with high repute, in order to maintain quality. (For example, Tamil Nadu hires only from government medical colleges). The NHSRC can help in developing standard policies for a uniform system across the country. States should also be mandated to convert a certain percentage of contractual staff in every position to permanent, every year.

2.3.3 Rationalization of compensation

Systemic rationalization in compensation needs to be implemented to curb the huge gap between contractual and regular employees. This should come from the central NHM so as to ensure that it is uniformly implemented. The state of Tamil Nadu presents a model for the regularisation of contractual employees, especially staff nurses and Medical Officers assigned to Mobile Medical Units. Remuneration for these employees is routed through the state with the central government contributing a significant share. Nurses under NHM contracts are made regular employees when vacancies arise in the system. This practice allows for a suitable probation period, at the same time preventing pay discrimination.

2.3.4 Building a Public Health Cadre

The public health cadre should be specially trained with multi-disciplinary and multilevel skills including doctors, social scientists, nursing, management, and statisticians, as in Tamil Nadu and Odisha. The cadre can be designed similar to the central and state administrative services. The services should have adequate budget, power, operational authority, and a separate state level Directorate of Public Health and Preventive Medicine. Further, employees of the public health cadre should be given authority over their medical counterparts, with fast tracked promotions, making public health government service a lucrative career path in the state. All IAS appointees to public

health services should be trained and made aware of the technical issues in public health management and preventive measures, and should work in lock-step with the State Public Health Directorate.

2.3.5 HR mapping and Audit, training and performance monitoring

A robust HR mapping, rationalization, HR audit exercise should be done by third party or independent academic institute/ organization to ensure that the number of human resources allotted to a particular program, activity, or health facility is optimal.

2.3.6 Collaborating with academia for enhancing quality of HRH

Respective state councils should be strengthened and given the stewardship of monitoring the quality of training for various technical positions. Strengthening should consist of an assessment of the existing knowledge capacities of the faculty at these councils, and extensive training of trainer programs to ensure high quality training down the pipeline

2.3.7 Need based training programs with special focus on soft skills

Apart from technical and skill-based training, behavioural training should be designed for managerial and support staff. Orientation training should be strengthened where attrition is high, at the DPC level for instance. For ANMs posted to rural sub-centres, regular refresher training should be conducted so as to provide a periodic assessment and update of their skills. The effectiveness of these training programs needs to be assessed and monitored with course corrections suggested as and when required

Strategies should also be put in place to monitor the skills and knowledge of the health workforce from time to time. This should be accompanied by gap assessment exercises and customised refresher training for different cadres of workers, including techno-managerial staff. Efforts should also be made to bring in international best practices, and include these in the training of personnel.

2.3.8 Objective performance appraisal mechanism

Performance appraisal mechanisms should be objectively linked to job-specific indicators and the appraisal process should be linked with contract renewal and the award of performance-based incentives. There should be a band system in compensation to accommodate candidates with all levels of experience.

3 Impact of the National Health Mission on Health Systems

3.1 Background

Health systems and polices have a critical role in determining the manner in which health services are delivered, utilized and affect health outcomes. The National Health Mission (NHM) encompasses its two Sub-Missions-the NRHM and the National Urban Health Mission (NUHM). The main programmatic components include Health System Strengthening, Reproductive-Maternal- Neonatal-Child and Adolescent Health (RMNCH+A), and Communicable and Non-Communicable Diseases. The NHM envisages achievement of universal access to equitable, affordable, and quality health care services that are accountable and responsive to people's needs.

The National Health Mission impact on the health system is enormous and the mission has improved quality of care, made the health system better funded, more responsive and accountable; improved the health indicators and increased the involvement of communities in public health service delivery.

The National Health Mission aimed at increased public expenditure on health care, decreased inequity, decentralisation, and community participation in operationalization of health-care facilities based on IPHS norms. It was also an articulation of the commitment of the government to raise public spending on health from 0.9% to 2-3% of GDP. Major initiatives have been undertaken under NRHM for architectural correction of the rural health system-in terms of availability of human resources, program management, physical infrastructure, community participation, financing health care and use of information technology (Chokshi *et al.*, 2016). Under, the NHM physical infrastructure has been increased by creating more health centres, new born care units and renovating existing centres. The NHM has also enhanced the health system's capacity to treat more mothers and children aimed at reducing IMR and MMR. Special efforts were made to strengthen community participation through the formation of health committees at the village level and patient welfare committees at public health-care facilities. Information technology-HMIS and MCTS were used to track delivery of services to the mother and child.

3.2 Findings

Senior officials of the Department of Health mentioned that due to NHM, quality of data recording and reporting improved drastically and it has helped us to plan better and also developed micro-plans to reach the unreached. It is only because of NHM, that the health system has become more functional, community engagement and empowerment has increased. Faith in the public healthcare delivery system has increased significantly. Senior State Level Officials opined that "NHM is the backbone of our health system and it is only because of NHM we have achieved success in reducing IMR, MMR and improving other health indicators of our state. It would not be possible to run the health system in the state without NHM, we cannot think of public health service delivery without NHM."

Health Indicators have improved drastically, access and utilisation has also increased. Figures below show the improvement in various indicators in the three states in comparison to the country. One of the reasons quoted for improvement in MMR and IMR was emergency transportation services across states (108 and 102). State Health Department and SPMU officials said, "due to 108 and 102 under NHM quality of care has also improved, especially reduction in IMR, MMR and the number of institutional deliveries. There are adequate 108 ambulances available in the district and the state has a plan to replace the old 108. We are getting new ambulances every year. The state policy is there for replacing the old ambulances."

Please see below table for information about increase in number of ERS vehicles across the country.

Table 14 Number of ERS vehicles operational in the States/UTs under NHM

Type of Vehicle	India	High Focus-Non NE (10)	High Focus NE (8)	Non High Focus-Large (11)	Non High Focus- Small & UT (7)
102	10017	5467	650	3652	248
104	605	604	1	0	0
108	9344	4246	438	4636	24
Others	5484	2106	235	3143	0
Total	**25450**	**12423**	**1324**	**11431**	**272**
Number of Ambulances functioning in the State/UTs other than NHM (At PHC/CHC/SDH/DH)					
	11096	2467	273	8189	167

Source: Executive Summary, National Health Mission, Ministry of Health and Family Welfare, Government of India.

Reforms in infrastructure reforms, service delivery, and human resources such as ASHA were reported as the determinant of improvement in IMR and MMR. District officials said that quality of

care also improved, along with beneficiary targeting. For example, institution delivery incentives and free treatment can be easily monitored, thereby motivating the community to access services at public health facilities.

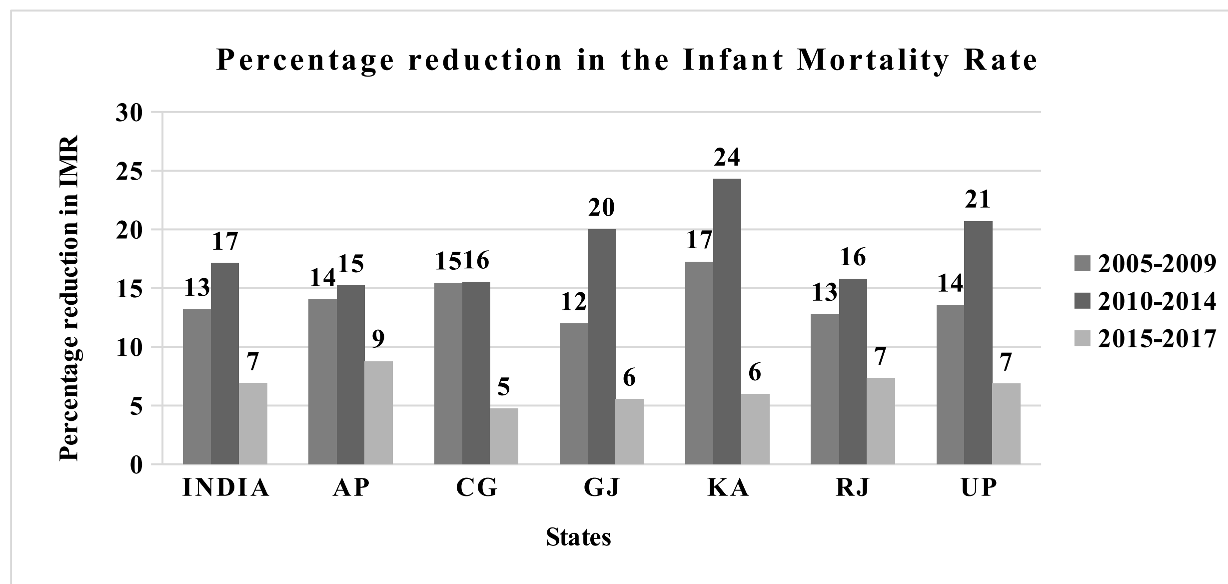


Figure 10 Percentage reduction in the Infant Mortality Rate in India, Gujarat, Rajasthan, and Uttar Pradesh (Sample Registration Survey data from 2005-2017) *2015-2017 data is for 2-year interval

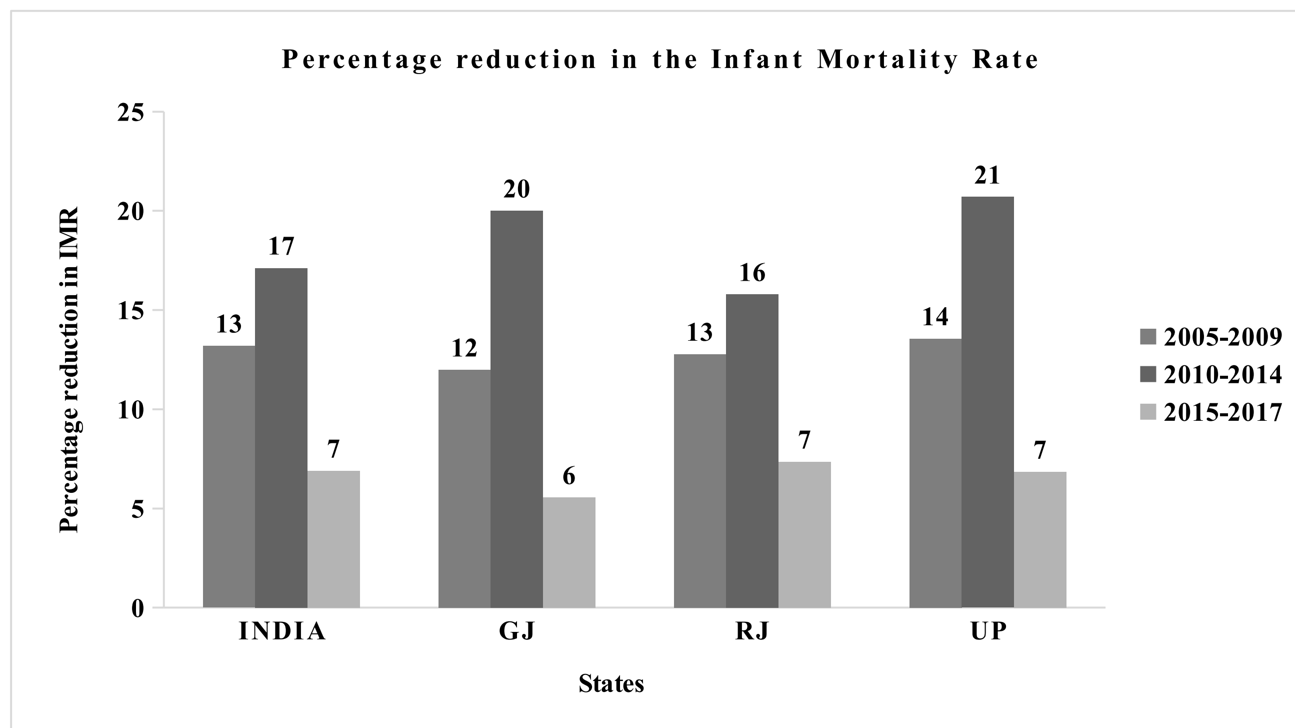


Figure 17 Percentage reduction in the Infant Mortality Rate in India, Gujarat, Rajasthan, and Uttar Pradesh (Sample Registration Survey data from 2005-2017)

***The 2015-2017 data is for 2-year interval**

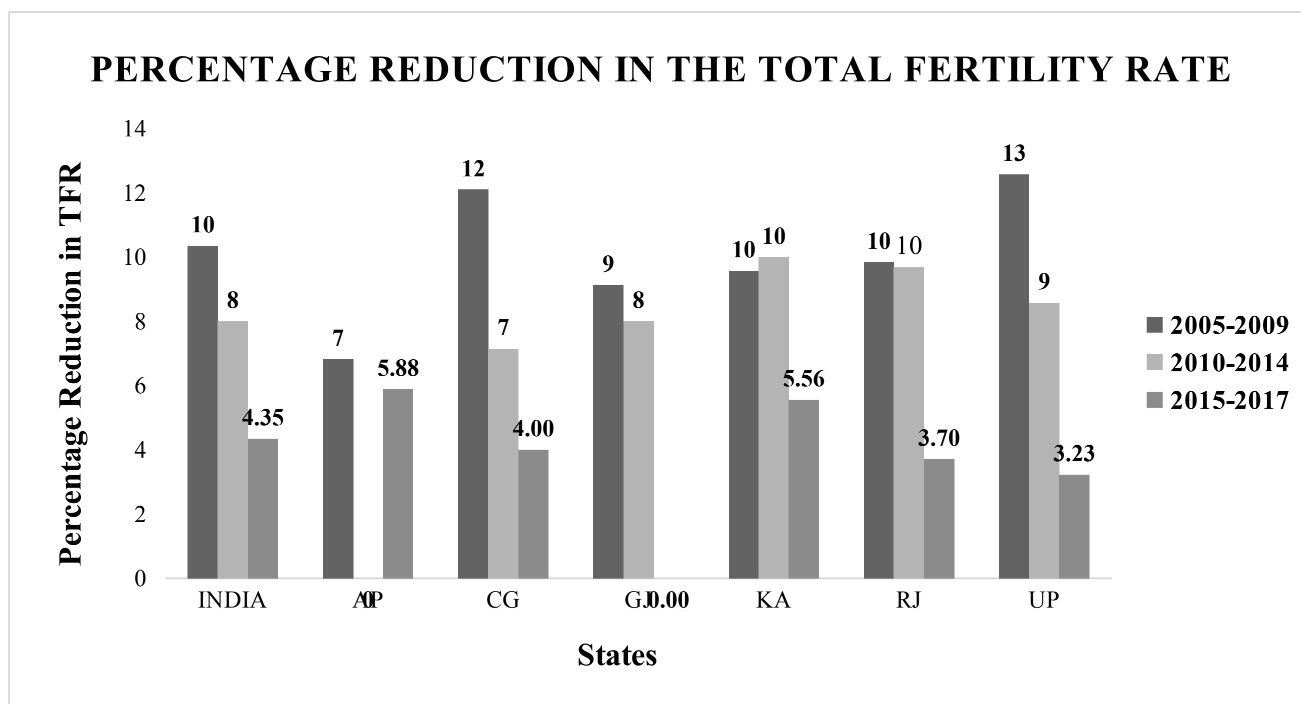


Figure 11 Percentage reduction in the Total Fertility Rate in India, Gujarat, Rajasthan, and Uttar Pradesh (Sample Registration Survey data from 2005-2017)

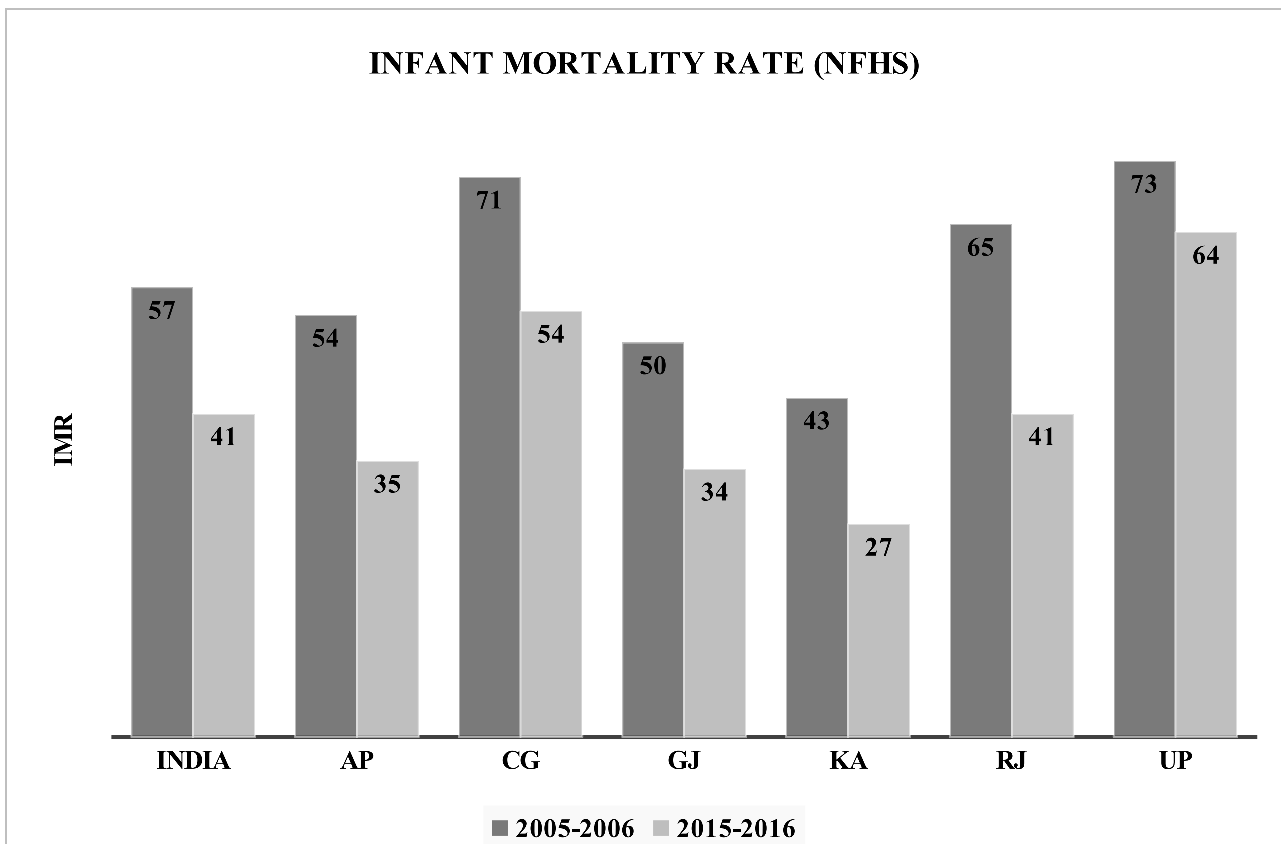


Figure 19 Infant Mortality Rate in India and the study states (NFHS - 2005-2006 & 2015-2016)

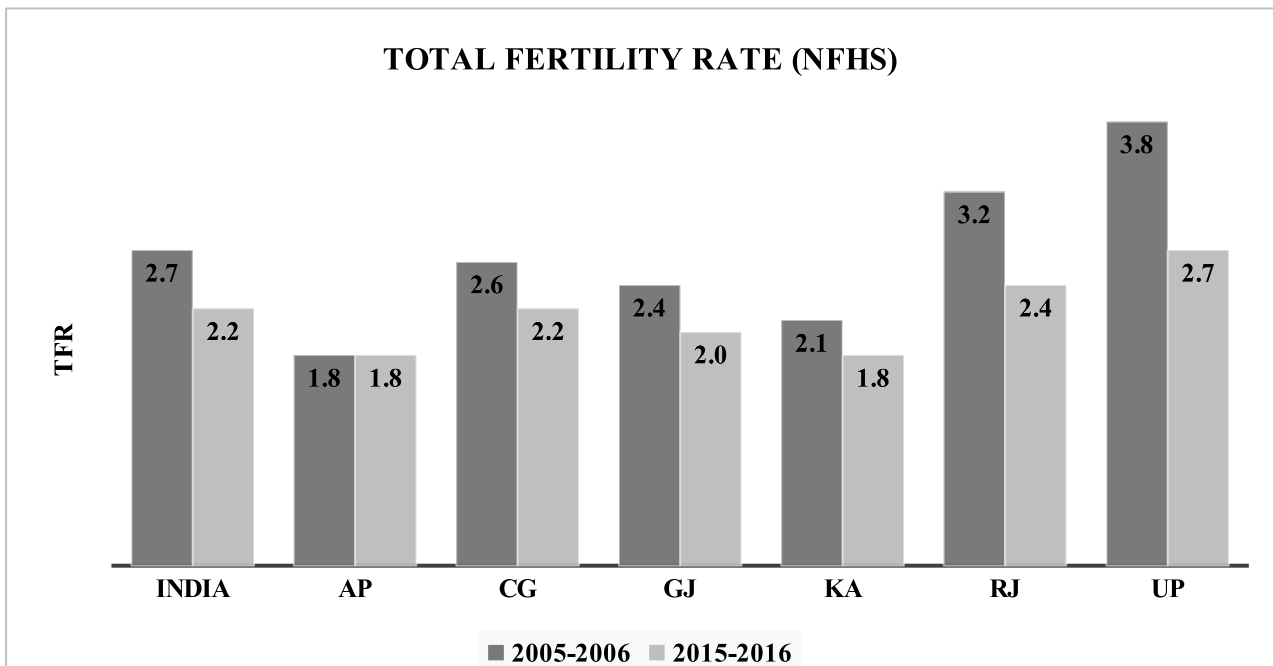


Figure 12 Total fertility rate in India and the study states (NFHS 2005-2006, 2015-2016)

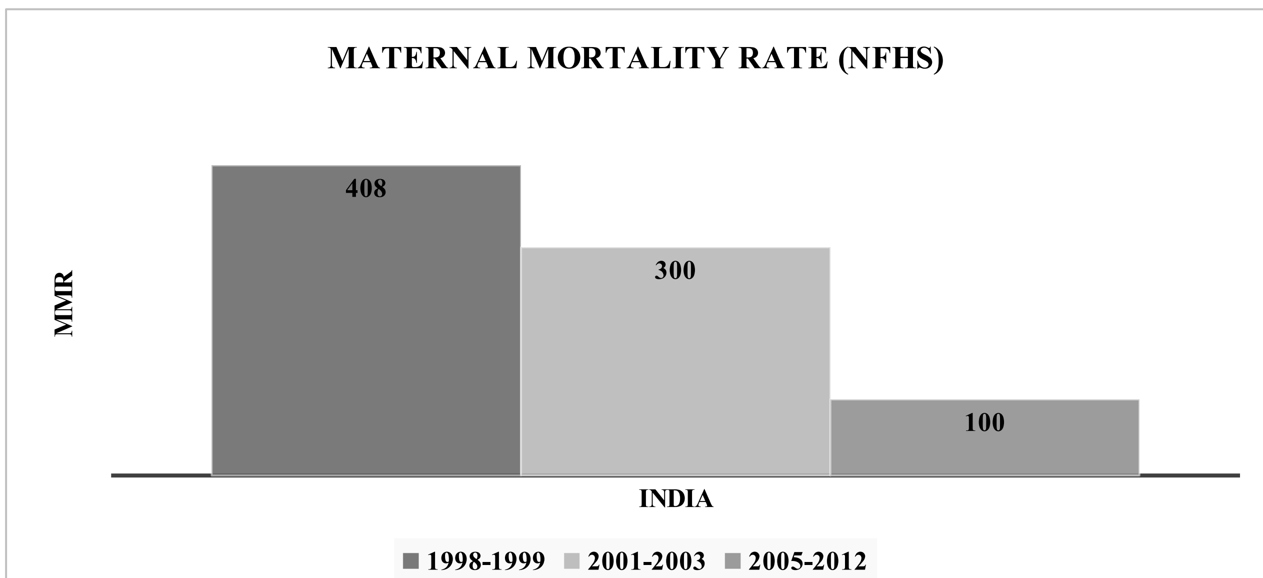


Figure 13 Maternal Mortality Rate for India (1998-2012) (NFHS)

Senior Officials of Ministry of Health and Family Welfare, Government of India mentioned that the Institutional structure of NHM is very effective and decentralised. Due to Mission at the top and its delegated powers of cabinet. Therefore, NHM programs do not have to go to the Cabinet and Planning commission/ NITI Aayog for approval as was earlier needed before NHM. The Mission Steering Group (MSG) has delegated powers of the union cabinet. The NHM Mission is very successful and highly recognised at various platforms. Due to its success now 10-11 ministries also formed and started NHM like missions.

Senior Officials of SHS-NHM stressed that the NHM has made planning more comprehensive and extensive. Due to NHM, the budget for service delivery, and programs has increased tremendously. Figure below highlights the increasing contribution of NHM towards investment on health in the country.

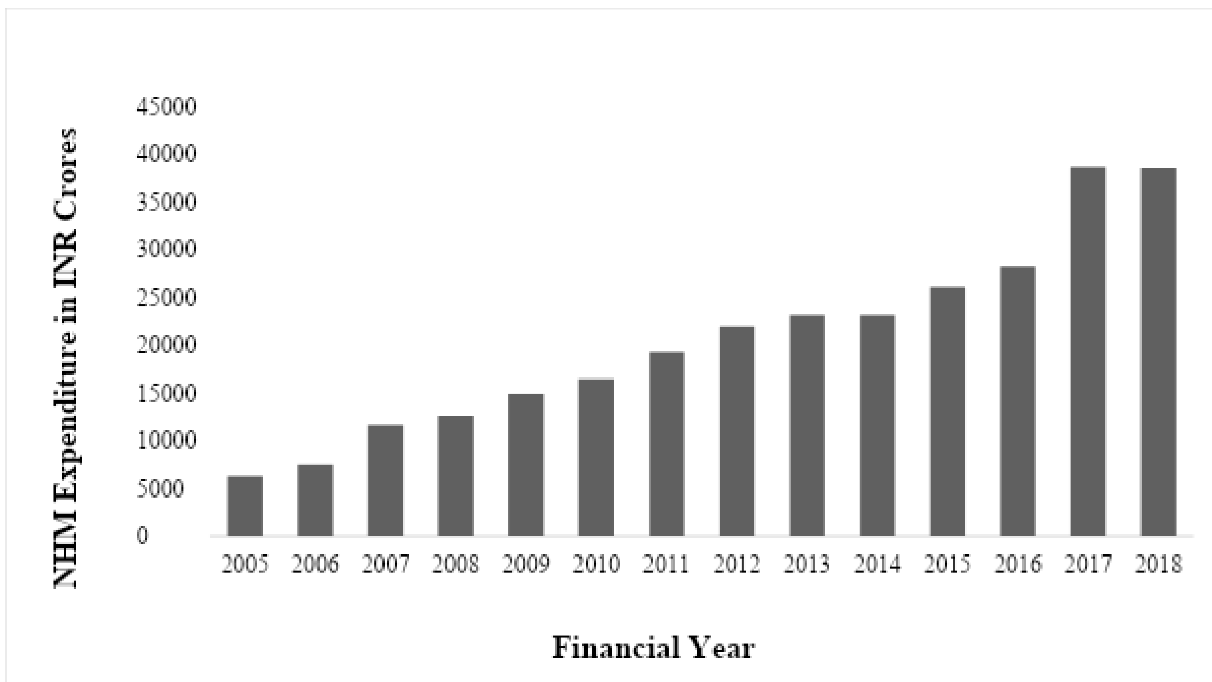


Figure 14 Expenditure of NHM from 2005-2018 in crores of rupees

While it was expected that the increase in number of public health facilities would lead to a subsequent increase in the utilisation of public healthcare, this has not been the case. People continue to prefer private care providers in large numbers. But there is some increase in the use of public facilities over time.

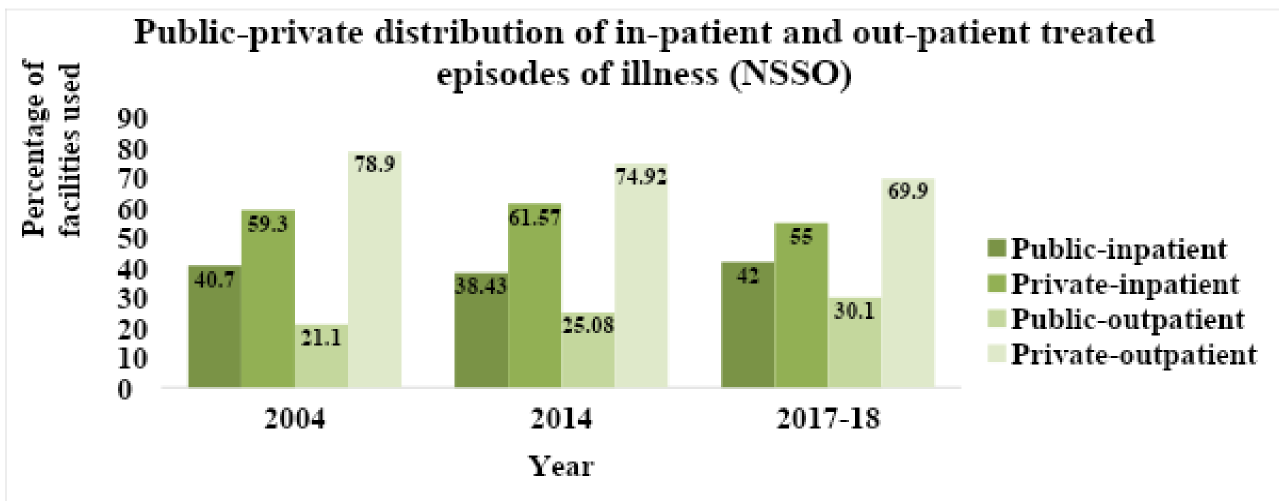


Figure 15 Public-private distribution of in-patient and out-patient treated episodes of illness from the National Sample Survey Organisation (NSSO)

Advantages of the mission mode

Both state as well as the NHM officials across the states opined that NHM should remain in mission mode and central control from the Government of India is very necessary. They asserted that if the funds are dispersed without any mission guidelines, then the money will be spent as per state norms,

which entails that there will be no flexibility in various aspects and which is very essential for the efficient and effective functioning of the health system. State Government rules are very stringent and many times it takes so much time for processes such as recruitment, procurement etc. "That's why we need NHM, we can recruit Human Resources for health, and also we can do many more things- training, capacity building, and innovative things, which are very difficult to carry out with the State budget", one state official remarked. In Mission mode, State Government interference is minimal. Another state official corroborated. "On the Governance side now political interference is not there, as far NHM is concerned, we can even say no to MLA, Ministers, and even Health Minister that under NHM recruitment/programme we have to follow Central Government guidelines." Another official from NHM noted, "NHM has played a very important role in filling the gaps in service delivery via providing flexibility in all resources— human, financial, material, and to carry out innovations. There is no scarcity of money for improving service delivery and beneficiaries."

However, with increasing financial and managerial contribution from the centre, there was a perception about over centralization of the system. Senior Officials of NHSRC pointed out that "policies should be made citizen focused rather than system focused. NHM leads to more centralization of all the power and decision making rather than decentralization. All the top managerial personnel focus on their respective programs. There has been observed a lack of capacity and understanding at all levels, especially at the state and district levels. No person is willing to take ownership and accountability and there has been a lack of drive and enthusiasm to bring out an improvement at personal levels."

Managerial capabilities

NHM brought the managerial skills and capabilities to the existing health systems which, potentially, could improve the effectiveness and efficiency of the system. This was done by inducting managers and consultant at various levels—district, state, and national. As one senior official of the Department of Health pointed out, "the health system was there, doctors, nurses, infrastructure and drugs were also available. But NHM has provided managerial, technical support for the system to work". Managerial inputs brought various standard operating procedures, guidelines, and frameworks for ensuring proper recording and reporting of data. In other words, NHM filled the managerial gaps that existed in the public health service delivery. Few changes which were related to the increased managerial capacity in health system are highlighted below. The State Health Department officials mentioned that the NHM has not only improved the availability of managerial human resources but the number of doctors and nurses have also increased in public health systems.

The figure below provides the details of year-wise increase in number of doctor and nurses in the country.

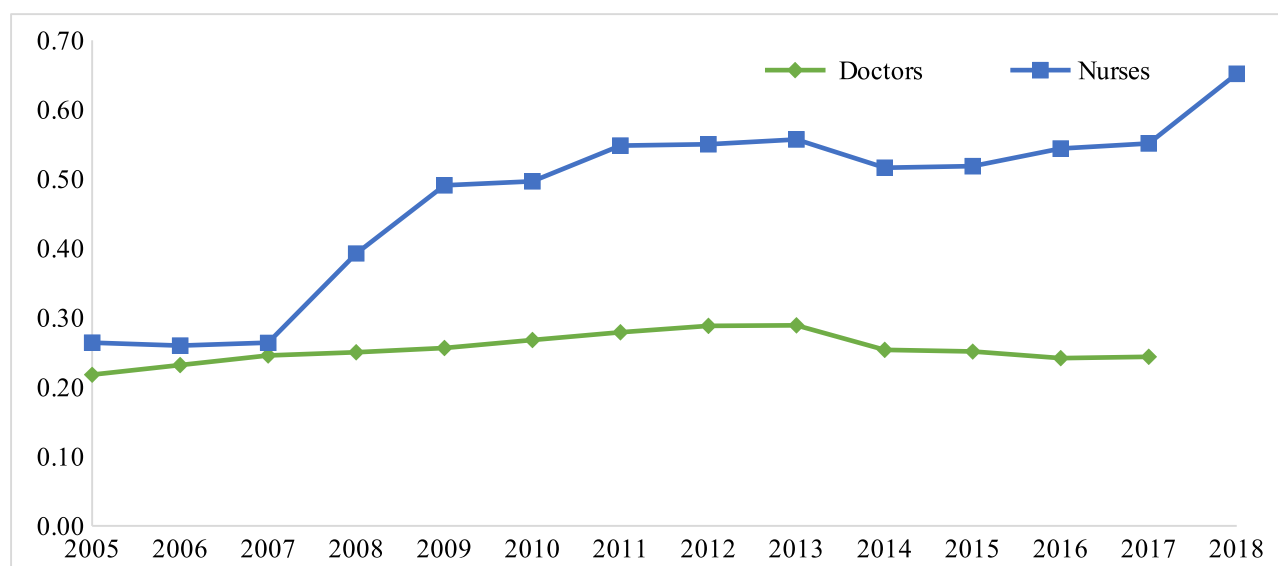


Figure 16 Doctors and nursing staff per 10,000 populations in PHCs and CHCs (2005-2018) (Rural Health Statistics, 2018)

Integration of several vertical programs

Previously, most programs were running independently. The NHM has integrated most vertical programs under its umbrella. The management of public health facilities and service delivery has also improved significantly.

Improved focus on monitoring

Earlier, there was less focus on monitoring and evaluation. NHM put major emphasis on strengthening capacities for data collection, assessment and review for evidence based planning, monitoring and supervision for achieving its goals. NHM framework proposed accountability by a three pronged approach of internal monitoring through MIS, community based monitoring and external surveys like the SRS, DLHS, and household surveys. Officials at the MoHFW mentioned that the NHM is following a Logical Framework Approach (LFA) in which output and outcome indicators have been spelled out on the lines of the national PIP.

However, concerns were raised about the integration at the ground level- distribution of work and rationalization of HR. Officials across the state remarked that "there is duplication of some categories of staff. For example, a lab technician is hired for a specific task only by each vertical disease control program like TB, Malaria etc. Single laboratory technician can check samples for various diseases easily. No need for having different personnel at service delivery level". The rationalization was required at all levels including that of doctors, "If a doctor is recruited for NCD diseases, he denies to perform OPD." As one senior official of Directorate of Health Services

mentioned, “There is an urgent need to carry out Human Resource Rationalization and Justification exercise. Under NHM at district level we have too many program coordinators, for instance NHM Program Coordinator, Urban Health Mission Program Coordinator, RBSK Program Coordinator, NCD Program Coordinator, NMHP Coordinator etc. We have to seriously think- do we really need so many staff members? There should be a strategy of integration of various HR functions. In some of the districts we have only 1 or 2 Urban Public Health facilities and we have a District Urban Health Mission program coordinator.” Thus while there was a definite attempt at integration at program level, there was substantial need to focus on integration at the implementation level.

Decentralization

NHM significantly increased the focus on decentralization. The local communities and entities were involved in health expenditure planning through PIP and empowered to take care of the local issues and challenges through untied funds. District Health Official pointed out that it is only because of NHM, that the health system has become functional as a decentralized system with increased community engagement and empowerment. These aspects have enhanced faith in the public healthcare delivery system has increased significantly.

Increased funding

According to most of the state health officials, the state budget for health services was very limited. As discussed above, the increasing financial contribution from NHM has filled the gap and provided more funds for quality improvement, for carrying out various programs, and also improving infrastructure, data management and monitoring. PHC Medical Officer mentioned that the NHM has contributed significantly in improving access to health services, given benefits to beneficiaries in many ways, helping the state government in having more Human Resources for health thus supplementing the state health efforts.

Innovation

Senior Officials of SPMU mentioned that the NHM has also provided opportunity to carry out innovative activities for better service delivery. He explained, “We had taken many innovative steps for improving access to health services. For example, Obstetric ICU, District Early Intervention Centre, Child Malnutrition Treatment Centre. “There are also funds for innovation, we can propose new proposals for our local problems and funding can be got from NHM.” In Uttar Pradesh, the PCPNDT Act has also been implemented in the state. The *Mukhbir Yojana* has been implemented successfully in two cases in *Agra* and *Meerut* to monitor sex selection.

Senior Officials from the Department of Health mentioned that one of the important achievements and innovation of NHM/NRHM is creation of cadre for community health worker-ASHAs. ASHAs

are the true assets and the achievements we have in our state due to NHM is mainly contributed to ASHAs.

Focus on chronic diseases

Another aspect was the focus on chronic diseases and addition of new services such as dialysis. A senior advisor of NHSRC also mentioned that the chronic disease program also got focus and has been streamlined within the health system. The National Dialysis Program has been started and also being scaled up. "In the first stage only, haemodialysis support was provided, now we were able to reach close to 500 districts. Recently the Government has come up with peritoneal dialysis. This was launched in October only and has reduced Out of Pocket Expenditure in a fair amount."

Interstate knowledge sharing

One of the major positive impacts of NHM is potential for knowledge transfer amongst states. Senior Officials of SPMU pointed out that NHM has indeed resulted in transfer of good replicable practices across states in some cases. However, much needs to be done to enhance this learning process.

Lack of strengthening of directorates

Senior Officials of Directorate of Health Services stressed that the basic idea of NHM was to support the directorate general of health services, but that purpose has been defeated and NHM has established a parallel structure to the directorate. In some states, directorate and NHM are well integrated and their performance is also good, but in some states, both are independent of each other and there is limited coordination and interaction.

3.3 Recommendations

3.3.1 Continuation of NHM

The impact of NHM on India's Public Health System is huge and health indicators have also improved. The NHM should continue for next phase. State does not have capacity to carry out various program without NHM. The various resources provided NHM- Finance, Human Resources, Infrastructure, managerial expertise are essential for the health system to perform efficiently for achieving SDGs and Universal Health Coverage. Without NHM entire health system will be derailed, and progress achieved so far may be reversed.

3.3.2 NHM under Mission Mode

The NHM should continue in Mission mode only. Due to Mission mode flexibilities are available and various decision can be taken in time bound manner. The MSG at central level and the SHS at state level are empowered under mission mode. Under Mission mode the state interference is minimal and there is no need to follow state norms for various processes of NHM which are very

cumbersome, restrictive, and slow. The SHS can take up various decision regarding NHM without taking into consideration state government norms.

3.3.3 Independent Evaluation of NHM at central and State levels

The common review mission carried out by the Central NHM is one of mechanisms for evaluation of NHM functioning at state level. However, this is rapid assessment and only carried out in pre decided districts and limited to 2 districts in each state. Therefore, there is an urgent need to formulate a policy for independent evaluation of NHM and which should also look into governance, management, HR, and impact. The independent evaluation can be carried out by reputed academic institution or third party and there should be a handholding after evaluation.

Similar to CRM by Central NHM, the state can also introduce Review Mission on its own, whereas officials of one district can go to other district or call officials from well performing states to come and review the program in the state.

3.3.4 Results Based Financing (RBF)

Results-Based Financing (RBF) is an instrument that links financing to pre-determined results, with payment made only upon verification that the agreed-upon results have actually been delivered. RBF can help improve both supply and demand side performance of health systems striving for responsive and effective public health service delivery. In an RBF program finance are made based on the quantity and quality of health services delivered after verification. Presently, the financing under NHM given to states is largely based on activities- number of institutional delivery, and inputs like ASHA, HR appointed etc. However, this should be based on performance and outcome- like reduction in IMR, MMR, number of safe deliveries, reduction in malnutrition, number of people put on treatment for NCDs etc. Results based financing for health, like the *Plan Nacer* in Argentina would be a good fit for India. The evidence from a series of countries in Africa (Zambia, Zimbabwe, Rwanda, and Burundi) also indicates that RBF can strengthen core health system functions, increasing the efficiency and accountability of the health system. Under NHM, the Central NHM can formulate a strategy for giving finance to states after pre-agreed results have been achieved and independently verified. This may not be easy to implement in the short run, but we have to move in that direction to improve the performance.

4. Procurement and Logistics

4.1 Background

An effective and efficient procurement and logistic planning is necessary for maintaining a steady supply of pharmaceuticals and supplies to health facilities where they are needed, while ensuring that resources are being used in the most effective way. Distribution costs, which include costs related to storage and transportation, are a significant component of the expense of running a public health supply system. Effective pharmaceutical procurement and logistics planning relies on good system design and good management.

The Government of India, under the National Health Mission, the Ministry is supplementing the efforts of the States to improve access to free/affordable and quality healthcare. The Government of India has developed a comprehensive guideline for free drug service initiative and it includes technical guidelines for various components of initiating free drug schemes in the states (Ministry of Health and Family Welfare, Government of India, 2015). There are standard operating procedures for establishing Centralized Procurement Body (CPB) at State Level, tendering and procurement of drugs, District Drug Warehouses, Storage, Logistic Management Information systems, quality assurance, and M&E (Ministry of Health and Family Welfare, Government of India, 2015).

NHM supports states for the provision for strengthening/setting up robust systems of procurement, quality assurance, IT enabled systems like Drugs, and Vaccines Distribution Management Systems (DVDMS), prescription audit and grievance redress. Senior Advisor of NHSRC mentioned that the overall accessibility and availability of essential medicines across various levels of the health system has improved significantly after the introduction of the NHM. Several studies have also suggested improvement in access to services due to free medicine initiatives (Selvaraj *et al.*, 2014; Chokshi *et al.*, 2016). Some of the states, like Rajasthan, have done extremely well in this area and availability of essential medicines at public health facilities is increasing every year. The NHM continues to provide incentives to those States that notify a policy to provide free essential drugs in public health facilities. States are free to select those essential drugs that they would wish to provide in their states. However, some of the states lacked the technical capacity for effective implementation for free drug service initiative resulting in uneven status of availability of drugs across the nation.

Key Initiatives under NHM

Free Drugs Service Initiative

Under the NHM-Free Drug Service Initiative, substantial funding is being given to States for provision of free drugs and setting up of systems for drugs procurement, quality assurance, IT based

supply chain management systems, training, and grievance redressal etc. subject to States/UTs meeting certain specified conditions. Detailed Operational Guidelines for NHM- Free Drugs Service Initiative have also been released to the States on 2nd July 2015. Model IT application Drugs and Vaccines Distribution Management Systems (DVDMS), has been developed by CDAC and shared with States. 17 States are implementing DVDMS application. All 36 States / UTs have notified policy to provide essential drugs free of cost in public health facilities.

Free Diagnostics Service Initiative

Under the National Health Mission Free Diagnostics Service Initiative, substantial funding is provided to States within their resource envelope to provide free essential diagnostic services at public health facilities. The Operational Guidelines on Free Diagnostics Service Initiative have been developed and shared with the States on 2nd July, 2015. These guidelines also contain model RFP documents for a range of PPPs such as Tele radiology, hub and spoke model for lab diagnostics and CT scan facilities in District Hospitals. Further, to ensure functionality of equipment, comprehensive biomedical equipment maintenance programme has been shared with States along with model RFP.

Structure of Procurement and logistics systems

The procurement and logistics under the NHM are carried out by the Medical Services Corporation at state level. Medical services corporations are managed by bureaucrats as an administrative head and medical officers of regular cadre as a head of various wings, procurement, logistics, supply, quality assurance, IT etc. However, there are no or very few well trained experts- such as health economist, logistics planning, procurement, and M & E at medical services corporations. State officials and senior officials from all the three states mentioned the need to appoint various specialists for better management of medical services corporations. The lack of specialists was responsible for inefficient functioning of technical committees- EDL, Procurement etc. Further the officials stressed that the committees meet once or twice in a year. It was suggested that a committee composed of technical experts from various streams should be constituted and should meet regularly- at least quarterly.

4.2 Findings

Rajasthan

Rajasthan had the better functioning drug logistics structure of the three states, as described below. The technical capacity of Medical Services Corporation in Rajasthan is adequate, and appropriate resources and infrastructure are available to carry out various tasks effectively and efficiently. Senior Officials of Rajasthan Medical Services Corporation mentioned that the state has started the Free Drug Initiative as per NHM guideline in 2011 and they are following technical guidelines provided

by the central NHM. "Due to centralized procurement and decentralized distribution model economy of scale has been achieved and our procurement is highly cost-effective" an official explained. Senior officials of the SHS reported that the basket of essential medicines across various levels of health systems-primary, secondary, and tertiary has increased tremendously. Nearly 90% of essential medicines are available to users at the public health facility where they seek treatment.

They also mentioned that due to the Free Medicine Initiative in the state, access to health services has increased with almost 100% increase in OPDs and study done by Selvaraj et al also found that the access to health services and availability of medicines has increased substantially after free medicine scheme (Selvaraj *et al.*, 2014). Faith in public health facilities has also increased leading to increased utilisation. There is a need to carry out a robust scientific study to assess the impact of free drug initiative in reducing inequity and poverty, as out of pocket expenditure has reduced significantly.

However, the officials from Rajasthan pointed out that the procurement related to NHM programs is sometimes delayed due to delay in getting funds from SHS to Medical Services Corporation. They were of the opinion that funds should be released on time for the timely procurement and supply of drugs and equipment. They also stressed further need of capabilities reiterating that under NHM various types of technical human resources were provided to the SPMU. However, they do not have technical experts in the area of procurement and logistics management. "*They should have procurement specialists for helping us in streamlining various procurement related to the NHM program and this will reduce our burden"*.

Uttar Pradesh

The Uttar Pradesh Medical Services Corporation Limited (UPMSCL) has come up as an organization for the centralized and transparent procurement and distribution of drugs, equipment's and other consumables. UPMSCL ensures availability of quality drugs, medical equipment's at lowest costs at various warehouses across the state under the charge of UPMSCL.

The UPMSCL is headed by Managing Director, who is overall in-charge of medical corporation administration. The UPMSCL function under the board of director and chairperson of Board of Director is Principal Secretary, Medical Health & Family Welfare and other members are Mission Director, NHM, MD, UPMSCL and other senior officials.

The MD, UPMSCL is supported by executive director and several general managers, managers, quality assurance officials, finance officials, company secretary and several executives. There are 75 district level warehouse under Chief Medical Officers.

In the state of Uttar Pradesh, senior officials of SPMU mentioned that they have a General Manager and other technical experts for procurement, and they are also carrying out NHM program related procurement. Procurement technical wing within SPMU is present in UP which also supports the UP Medical Service Corporation for NHM programs related procurement. Senior officials of the Medical Services Corporation informed that as the number of medicines and procurement increased, associated litigation on tendering and selection process also increased. Until all the litigations are cleared, we cannot procure particular drugs. Due to this many times the entire process of procurement is delayed and we are not being able to supply some essential medicines to public health facilities on time. District level health officials from Uttar Pradesh-Barabanki district reported that there are significant delays in receiving essential medicines from the MSC and many a times medicine which were not indented were delivered to them. There were stock-outs of many essential medicines and at any given point of time, at least 30-35 essential medicines were reported to be out of stock.

Senior Officials of SHS-NHM mentioned that Standard Treatment Guidelines (STGs) are available and circulated across all the facilities. Procurement is also based on STGs. However, there is no mechanism to monitor whether public health facilities and medical officers are following STGs. Officials of Ministry of Health and Family Welfare pointed out that most of the state does not have any mechanism for prescription audit and it is a very essential mechanism for improving the quality of care provided by the health facilities. Functionaries of the Medical Service Corporation reported that prescription audit is very good system for assessing rational use of drugs at public health facilities. But the scarcity of human resources was reported as the main reason for not implementing this practice. This also indicates that there is no priority to prescription audit.

Gujarat

The Central Medical Stores Organization (C.M.S.O) was established in 1978 under Health and Family Welfare Department and was entrusted with the functions of procurement, storage, distribution of medicines surgical goods medical equipment / instrument and insecticides for the public health facilities at various levels. With the view to match the changing demands and pace of development in the sector, CMSO was transformed into "Gujarat Medical Services Corporation Limited" (GMSCL) as an autonomous body and was incorporated under companies' act, for systematic procurement, inventory management, Management information system and to infuse professional management with establishment, development and strengthening the use of information technology in medical store organization.

The GMSCL is headed by Chairman and day to day administration is managed by Managing Director. The managing director is supported by key General Managers- Human Resources,

Logistics, Drug Procurement, Quality Control and Equipment, Diagnostic and Services. Each General Manager is supported by several deputy managers, managers, and executives. Senior officials of Medical Services Corporation told that the GMSCL is also a nodal agency for free diagnostic scheme and entrusted with Establishment of Diagnostic Medical Service Centre for early diagnosis & ease of treatment for beneficiaries.

Senior officials of Gujarat Medical Services Corporation mentioned that the GMSCL is competent authority and all required resources are available. They also highlighted that many times there are delays in procurement due to court litigation. Some procurement files go up to Minister level as well and that has led to delays. They feel that GMSCL should be given more authority for efficient and effective functioning. Senior SPMU officials told that although procurement is competitive through GMSCL, however, significant delays in procurement affect the delivery of services. The SPMU officials also mentioned that SPMU should also have procurement specialist to help GMSCL in NHM related procurement like in Uttar Pradesh.

The health department officials mentioned that due to improvement in availability of drugs at public health facilities, the access to public health services has increased significantly in the state.

They also mentioned that the state has also implemented the free diagnostic scheme and free medicine and diagnostic services will lead to reduction in out of pocket expenditure on health services. An issue which was highlighted in our visits to states was the lack of possibility of procurement in between the year. District health officials mentioned that there is no system for indenting in between the year and sometimes essential medicines which were not indented earlier are needed urgently. The medical service corporation asks for indents only once in a year. This should be at least twice in a year.

Another issue was related to the fund flows. Senior officials from Directorate of Health Services told that most of the procurement done by medical service corporation is under state government budget (70-80%). Regarding products procured under NHM for various programs, the central NHM can do the rate contract nationally. The State Government can procure through central contract done by NHM at national level. Recently, the central government has mandated that all government procurement should be through GEM- Government E- marketplace. As per health department procurement is concerned, most products are not listed in GEM. "*The central procurement department should ensure that health department products should be listed in GEM. If it happens then we can make it mandatory for the state government to procure NHM drugs and other products through GEM*."

Further, issues were reported about the lack of supporting infrastructure. In Uttar Pradesh, District Drug Warehouses (DDWs) are not yet functional and operated in rental buildings. There are issues with maintaining quality of drugs and also it is not possible to stock more medicines in rented premises. Some states also want the Central NHM to support in maintenance and renovation of DDWs. In Gujarat, DDWs are at regional level- 1 Regional Warehouse for 4-5 districts. The officials insisted that for better management there should be a DDW at every district head quarter.

Issues in quality checks were present in many states such as Gujarat. Rajasthan, on the other hand, had an effective quality check mechanism. Senior Officials of Rajasthan Medical Service Corporation mentioned that quality assurance of drugs is on priority for the state and said that they are following a scientific system for assuring quality of drugs we procure for public health facilities. When drugs are received in DDWs, drugs are quarantined in clearly demarcated & segregated areas. Then samples are drawn for testing from randomly selected cartons, containers, packing from the supplies of each batch. These should then be sent to the Quality Control wing of the corporation. The sample is then sent to an empanelled laboratory for testing and once we receive a quality check report from the laboratory, the quarantined drugs are allowed to be dispatched. If they find a failed quality check report, immediately information communicated to the pharmaceutical company for removing the stock and based on committee recommendation action will be taken". In Gujarat, quarantined stock is allowed to be used before getting the quality check report. Sometimes after getting a failure report, public health facilities are informed for not using the drugs from the supply batch for which failed test report is received, but the drug stocks are not recalled. This is a major quality issue which needs to be addressed.

Capabilities at the periphery

District Health Officials and PHC Medical Officers mentioned that *E-Aushadhi* is not functional up-to primary level. Indenting is largely done at district level and district decides the priority drugs. However, the drugs district gets is not per indenting and it is based on priority and procurement of medical service corporation. Further, there is lack of capacity of district level officials, primary care medical officers, and pharmacist for carrying out quantification exercise for deciding the exact requirements. Most E-*Aushadhi* training is for pharmacist and largely on topics related to functioning of software. In some state E-*Aushadhi* training are not conducted at primary level. Most officials pointed out that Logistics Management and Drug Distribution training should be organised for officials at various levels- State, district, and PHCs. It will improve the drug management systems and quality of care.

Awareness about drugs availability and quality

Central NHM officials also mentioned that the state should take efforts in increasing community awareness about generic drugs, rational use of drugs, and the dangers of unnecessary and excessive use of drugs. They emphasized that a well-planned communication strategy with targeted IEC using interpersonal communication, social media and mass media need to be implemented at various levels for promotion of generics. Further, states should also notify the policy for essential drugs with wider dissemination through posters, wall writing, and hoardings in all public health facilities.

In UP, the PHC Medical Officer stressed that the community has low trust on the medicine given at PHC. The community members feel that the Government is procuring substandard drugs and generic drugs are not effective. Therefore, we need to sensitize the public about generic drugs and the misperception about the efficacy of generic drugs/or those provided in government facilities. District health officials reported that among medical officers' awareness about rational use of drugs, standard treatment guidelines, and antimicrobial resistance is poor. *"Orientation and training workshops for doctors should be organised to strengthen their technical capacity*", they emphasized.

District Health Officials mentioned that comparing the current usage of drugs with the standard treatment guidelines will enhance the efficacy of treatment and improve cost-effectiveness. District Health Officials also told that we do not have any system of monitoring of adverse drug event-pharmacovigilance. It is very essential to have such system for improving quality of care. However, in some states the above practice is not been followed and without getting quality check report ok, the quarantined stock is being dispatched to public health facilities.

4.3 Recommendations

4.3.1 Strengthening Technical Capacity of Medical Services Corporations

The technical capacity of Medical Service Corporation requires strengthening and training of existing personnel in the area of Logistic Planning and Drug Distribution is necessary. Further, restructuring of medical service corporation is also required, in which technical experts- Health Economist, Procurement Specialist, Logistics Planning Specialist, IT-Expert and M&E expert should be appointed at medical service corporation. This will improve the functioning and efficiency of corporations.

4.3.2 Strengthening Quality Assurance System

Ensuing quality of drugs is very essential for patient safety and responsive health systems. The quality assurance practices should be in accordance with the operation guideline of the Ministry of Health and Family Welfare, Government of India. Planned and regular monitoring from Central NHM is necessary for ensuring adoption of efficient quality assurance systems.

4.3.3 Implementing bottom up planning

The *E-Aushadhi* and IT-backed Logistic Management Information System like Drugs and Vaccines Distribution Management Systems (DVDMS) have been implemented in most of the states. However, it is not fully functional at the peripheral level that is hampering the bottom-up planning. The ground level functionaries- Primary Health Centres and Community Health Centres have not been able to carry out indenting and planning. The bottom-up planning should be implemented with requisite technological changes and capability building initiatives.

4.3.4 Group Procurement

Drugs such as antibiotics should be procured as a basket of similar products. This will be essential in order to make drug procurement more efficient and reduce unnecessary paperwork. Group procurement will also have the advantage of making vendors more amenable to supplying to the government as the order values will be much higher. For example, if a state is procuring 600 different drugs and formulations – if each drug is procured individually they have to do 600 procurements. But if they make bundles of 10 drugs each then they have to procured only 60 bundles, thus reducing the paperwork very much.

4.3.5 Training and Capacity Building

Training of officials at various levels for implementing *E-Aushadhi* and carrying out various logistic activities- forecasting, quantification and inventory management is required for making Logistics Planning and Drug Distribution system more efficient and effective. Standard training manual and workshop material along with case studies for training and capacity building can be designed and implemented. The training of medical officers for rational use of medicine, and managing drugs is essential.

4.3.6 Community Awareness

The awareness about generic medicine and rational use of medicine among communities is required. A communication strategy and IEC material can be developed in the local language for wider awareness. Use of social media, mass media, and electronic media will help in larger awareness.

4.3.7 Implementing Standard Treatment Guidelines and Prescription Audit

The state should implement STGs across all levels of health systems and prescription audit practices should be initiated for improving quality of care. At least 2% of the annual procurement budget should be devoted to STG implementation and prescription audit. This will have the advantage of preventing unnecessary drug consumption, reduce costs and its side effects. 1-3% of prescriptions made in each facility should be audited periodically to study prescription patterns. The results can be then used to address supply chain issues and physician strategies can be revised.

5 Rogi Kalyan Samitis (RKS) and Untied Funds

5.1 Background

Rogi Kalyan Samiti (RKS) or Patient Welfare Societies or Hospital Management Committees are one of the most important features of the NHM. It aims to increase community involvement in healthcare service delivery. The RKS were set up at medical facilities as part of restructuring in line with the IPHS for improving quality of services and better management of public health facilities.

The suggested composition of RKS is as follows:

RKS / HMS would be a registered society set up in all District Hospitals / Sub District Hospitals / CHCs / FRUs/PHCs. It may consist of the following members: -

- Peoples representatives MLA / MP
- Health officials (including an AYUSH doctor)
- Local district officials
- Leading members of the community
- Local CHC/ FRU in-charge
- Representatives of the Indian Medical Association
- Members of the local bodies and Panchayati Raj representative
- Leading donors
- Associated members: An individual who makes a onetime donation of INR. 100,000 for District Hospital, INR. 50,000 for a Sub-district hospital/CHC or INR. 25,000 to PHC shall be offered an associated membership for period of two years. State could adapt the donation amount appropriate to their context

RKS strengthens the decentralisation of the healthcare system by ensuring that both authority and resources are transferred from the central government to local governments that are more aware of the needs of their communities (Singh, 2019). Decentralisation is an important feature of strengthening a country's health system. Moreover, the NHM's focus on decentralisation of healthcare decision making follows a trend in governance changes, set by the 73rd and 74th amendments to the Indian Constitution in 1992, which granted power to *Gram Panchayats* and municipalities in urban areas (Singh, 2019). Further, the untied funds given to these facilities have allowed local facilities like SC/HWCs and PHCs greater freedom to fulfil their necessities in a timely manner, make improvements, and even innovate to provide better healthcare. Figure below depicts the constitution of RKS at various levels. The RKS consists of a governing body and an executive

body (Landrian *et al.*, 2020), although structures may differ across states. It is supported by the DPMU in its activities (Landrian *et al.*, 2020).

The RKS/HMS will not function as a Government agency, but as an NGO as far as functioning is concerned. Participation of local staff along with representatives of local population is considered of prime importance to improve accountability and keep pace with rapidly growing service requirements. The RKS consists of Governing Body and Executive body.

The meetings of the Governing Body shall be held at least once in every quarter. The Governing Body will have full control of the affairs of the Society and will have authority to the exercise and perform all the powers, acts, and deeds of the Society consistent with the aims and objects of the Society.

The meetings of executive committee shall be held at least once in a month. The executive committee largely review the service delivery aspects of the health facilities, including review of the OPD and IPD service performance, service delivery targets, and review of outreach activities. The minutes of executive committee meetings will be placed before the governing committee.

The account of the Society shall be opened in a bank approved by the Governing Body. The District Health Society shall review, monitor, and evaluate the performance of the *Rogi Kalyan Samiti* at the District/Sub District levels.

Monitoring Committee: A Quality Monitoring and Assessment Committee may be constituted by the Governing Body. The Committee should have representation of non-official members also. These committees will be trained in monitoring and conducting assessments, conduct exit interviews of a predefined sample of Out-patients and Inpatients, collect patient feedback on a fixed day of the month. The Committee would send a monthly monitoring report to the District Magistrate with copy to Superintendent.

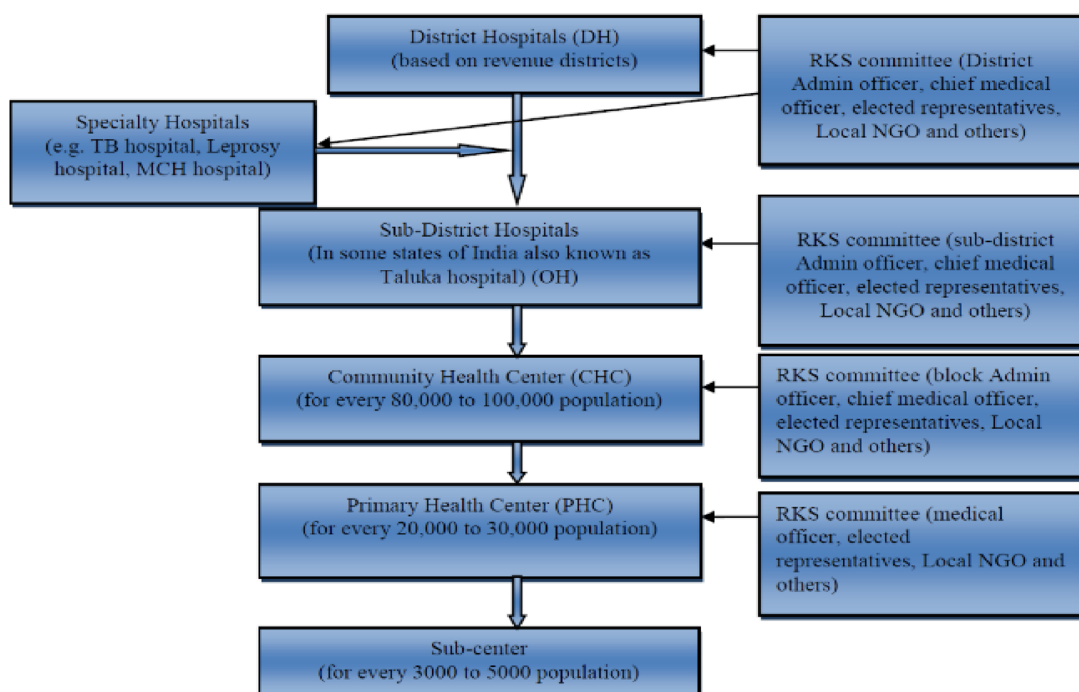


Figure 17 Structure of RKS at various levels of health system

Table 15 Number of Rogi Kalyan Samitis registered across various levels of healthcare in the country

Level of Healthcare	India	High Focus- Non NE (10)	High Focus NE (8)	Non High Focus- Large (11)	Non High Focus- Small & UT (7)
District Hospitals (DHs)	795	416	92	251	36
CHCs	5812	2910	347	2540	15
UCHCs	94	18	2	65	9
Above block level but below District Level facilities	1091	290	29	766	6
PHCs	20125	7272	1606	11178	69
UPHCs	3151	1062	80	2007	2
Other health facilities above SC but below block	2310	1538	4	768	0
Total	**33378**	**13506**	**2160**	**17575**	**137**

Source: Executive summary, National Health Mission, Ministry of Health and Family Welfare, Government of India (2019).

5.2 Findings

Flexibility through untied funds

One of the most effective aspects of RKS was flexibility to spend the 'untied' funds according to the needs of the concerned facility. RKS members are proactive involved in management of facilities for the health benefits of their entire community. A large majority of the respondents from all levels of the health system and across states were of the opinion that untied funds had played a crucial role in improving the quality of services. In their absence, healthcare facilities would be dependent upon state health department budget approval, even for minor expenditures such as small structural repairs, procurement of diagnostic instruments, and often medical supplies. They reported that these funds and the flexibility they provided had greatly improved the efficiency of the healthcare system, owing to their decentralised nature.

For example, as shared by some officials of the NHSRC, "prior to the introduction of the NHM, some healthcare facilities lacked basic items like prescription pads etc. Patients seeking treatment at PHCs were asked to provide the paper for their own prescriptions. The untied funds now available to the RKS at every PHC and their ease of use has ameliorated such problems to the extent that even generators can be purchased to provide electricity at health facilities in areas where power outages are a common feature." The usefulness of untied funds was also stressed by senior officials of the central NHM. In some states, RKS members have also taken the responsibility and ownership to resolve critical issues faced by the facility.

The district level officials in Uttar Pradesh were of the opinion that the RKS has improved quality of care through better hygiene, management of hospital waste and cleanliness at public health facilities. Most of the RKS fund is used for upgrading facilities, initiating patient friendly initiative-construction of waiting areas, improving infrastructure, and ensuring availability of essential medicines. Due to RKS, the image of public health facilities has changed as now their appearance is much better and they look much cleaner and patient friendly.

Respondents revealed that untied funds helped health facilities carry out minor renovations, ensure an uninterrupted supply of utilities, create small-scale infrastructural improvements to increase the attractiveness of the facility to users, and also purchase stocked out medicines, all of which could not be done previously as monies for such purposes could not be obtained from the regular state budget. This has led to an improvement in service utilisation, as well as quality of care. This is in line with the findings of the 10th CRM. Gujarat was among the 95% of states that reached their targets for constituting VHSNCs, and receiving funds in a timely manner.

Empowerment and accountability

The constitution of RKS intended to bring empowerment as well as accountability to the grassroots level. In the state of Gujarat, it was found that the RKS was functioning smoothly and had greatly improved accountability in healthcare governance. PHC-MOs are member secretaries of the RKS in Gujarat. These bodies, at various levels of the state healthcare system are reviewed regularly by the DHS, which provides them with untied funds. Respondents revealed that these committees included members of PRIs, and conducted regular meetings. This finding is corroborated by research conducted on RKS in other states as well. A study in Odisha found that the decision making capacities of the RKS had brought about improvements across various service delivery parameters and decreased facility staff truancy (Sinha, 2009).

Issues in fund allocation

The officials across the states explained a major issue in allocation of funds to the facilities. The funds are disbursed in two instalments whereby the first instalment is given to every RKS, and the amount for the second instalment is variable, based on the performance of the respective health facility. It was observed that PHCs that performed very well were given larger amounts in the second instalment which was often not appropriate as they had access to funds from many other schemes due to their good performance. On the other hand, newly established PHCs received a smaller value of funds because of low utilisation when their requirements would be more in order to attract more users and set a standard for services. Further, in urban areas, untied funds for urban PHCs are not performance linked with each UPHC receiving a flat sum of INR 50,000. (In addition to this amount, the Gujarat Urban Health Board also grants funds to PHCs in urban areas.)

In addition to the RKS, there are other local level bodies like the *Gram Sanjeevni Samiti* (GSS) and *Mahila Arogya Samiti* in Gujarat. The signatories for these bodies are the ASHA and AWW. It was pointed out that often lack of coordination between these two functionaries resulted in low utilisation of untied funds.

Issues in fund flow processes

While the purpose of RKS was decentralization and empowerment, however, due to some procedure like signing authority there are issues in fund flow and utilisation. Across states, at the village level, untied funds were under the authorisation of the village head, the *Sarpanch/Pradhan* who was often found to ignore these funds due to their small amount and the availability of a large number of other funding sources. Due to the recent investigations about fund abuse, some village heads were also found to be fearful of using these funds. At the village level, untied funds were also made available to VHSNCs, the signatories to which were the village head and the ASHA. Here again, due to the

Sarpanch/Pradhan's scope of duties, this body does not receive the attention it requires, and the allotted untied funds remain underutilised. This finding was also seconded by the results of the 12th CRM.

In the state of Uttar Pradesh, the purpose of decentralisation behind the RKS model, and the NHM at large was defeated, as funds earmarked for these bodies were given to block superintendents by the DHS, rather than directly to the PHC. This led to delays in fund disbursement which in turn hampered planning. Uttar Pradesh was the only study state where this phenomenon was observed.

Issues in capacity building and monitoring of RKS

In some states the capacity building and training of RKS members is lacking as per various provisions of RKS functioning. RKS members regardless of their committee type identify lack of adequate training on operations and functioning as a major issue. Further, there were issues with accountability as the monitoring mechanism for the RKS performance is weak and review by DHS was ad hoc or only based on financial expenditure. Innovation in RKS system is seen in Uttar Pradesh in the form of RKS register, a comprehensive document containing guidelines for the RKS, expenditure protocols and a structure to record the minutes of the committee's meetings. This has led to improved functioning of the RKS.

One of the good practices was capacity building of RKS members in three districts in Maharashtra to improve the utilisation of untied funds, and align the same with community priorities. It was found that as a result of the training workshops, the functioning of the RKS had regularised and they had increasingly used participatory processes to decide areas of expenditure for the untied funds (National Health Mission *et al.*, 2020a). It should be noted though that such programs for the RKS are effective only when the facility in question already has basic functionality (National Health Mission *et al.*, 2020a).

Expanding the scope and role of RKS

The role of the RKS was seen to be limited to government provided untied funds. Very few RKS were able to generate additional funds. Further, the RKS objectives of civil engagement and community inclusion were lost due to the lack of authority and responsibility afforded to this body. They have limited say in grievance redress mechanisms.

The constituency of RKS was also not aligned with the need for representation from all sections of the society, especially the women. Even though NHM is largely focussed on RCH, however, participation of women in RKS was very minimal.

5.3 Recommendations

5.3.1 Capacity building and training of Rogi Kalyan Samiti Members

There is an urgent need to build capacity of RKS members in structural, operational, functional and finance related areas. There should be a training module for RKS members in the expenditure and reporting on untied funds. The RKS processes should be carefully monitored and ensured (for example RKS register made by Uttar Pradesh).

5.3.2 Representation of local communities

The State and District Health Societies should focus on including local patient representative groups, CSR organizations in the area and civil society. Generating localised funding sources is also essential for ensuring involvement from all sections of the community including those individuals and organisations capable of philanthropic endeavours. This will be important for drawing attention to lacunae in the social aspects of public healthcare, such as facilitating food and shelter for the family of care seekers, engaging social workers for follow-up community based care, and supplementing local blood banks via promotion of voluntary blood donation etc.

5.3.3 Participation of Women

A guideline or regulation can be made for increasing participation of women as RKS members. This will also ensure gender sensitive services at public health facilities.

5.3.4 Proper monitoring of RKS

There should be a monitoring committee at district level for regularly reviewing the performance, and governance of RKS. The monitoring process needs to be governed by standards and should look into various structural, operational, functional, and financial aspects of RKS. Scores/points could be awarded for overall improvement of healthcare facility, conduction of meetings, governance aspects, RKS membership structure, functionality, fund utilisation, and innovation. The top-ranking RKS could be rewarded monetarily. Likewise, *Swachh* School or *Kayakalp*, award mechanisms should be set up for RKS. An annual award to all high ranking RKS could act as further motivation. A detailed analysis of the RKS and the untied funds should also be conducted to understand its functioning and impact on service delivery and community health improvement.

5.3.5 Communicating membership clearly to local community

The details RKS members the names, phone numbers should be clearly laid out every facility. This would help patients to know about the committee. RKS has the potential of becoming a strong patient welfare body and a feedback collection and issue resolving committee.

6 Monitoring and Evaluation (M&E)

6.1 Background

Monitoring is a systematic way of collecting and analyzing the data for reviewing the progress of a project or program over time. It involves a continuous process of data gathering and analysis that allows adjustments to be made in the objectives and mid-course correction. On the other hand, Evaluation is a systematic periodic collection and analysis of data about the progress of a project or program. An evaluation provides credible and useful information to policy-makers, donors and stakeholders for identifying the barriers and facilitators.

An increasing number of stakeholders, including global health partnerships, bilateral donors, UN agencies, and academic institutions are involved in health-related monitoring and evaluation (M&E). Strategic planning and program implementation should be based on strong monitoring, evaluation and review of progress and performance as the basis for information, results and accountability (World Health Organization, 2011).

NHM put major emphasis on strengthening capacities for data collection, assessment and review for evidence based planning, monitoring and supervision for achieving its goals. NHM framework proposed accountability by a three pronged approach of internal monitoring through MIS, community based monitoring and external surveys like the SRS, DLHS, and household surveys. Officials at the MoHFW mentioned that the NHM is following a Logical Framework Approach (LFA) in which output and outcome indicators have been spelled out on the lines of the national PIP. The NHM envisages robust monitoring and evaluation mechanisms, ranging from regular reviews by Central NHM, State NHM, and District Level institutions. Senior officials of MoHFW highlighted that M&E is a key component of the NHM and various M&E systems helped in identifying and developing mid-course corrections so that the goals of the NHM and the SDGs could be achieved. The Monitoring and Evaluation mechanisms under NHM comprise the following initiatives- HMIS, IDSP, earlier Joint Review Mission and now Common Review Mission and through various routine information systems, such as SRS, NFHS, DLHS etc.

Common Review Mission (Common Review Mission, National Health Mission, 2020)

Annual Common Review Mission has been one of the important monitoring mechanisms under NHM. Thirteen CRMs have been undertaken so far and have provided valuable understanding of the strategies and programs. The focus of the CRM was to undertake a rapid assessment of the implementation status of NHM and its key strategies and priority areas, analyze strengths and challenges with respect to strengthening health systems, identify trends in progress of key indicators, particularly relating to coverage, equity and affordability. The CRM also document innovations and

best practices, evaluate the readiness of the state to undertake implementation of new initiatives, and review the progress and coordination mechanisms with various partners having focus on aspirational and NCD districts. This CRM had a different focus where teams assessed the implementation of the programs from the citizen perspective.

Health Management Information System (HMIS)

Health Management Information System (HMIS) was started by Ministry of Health and Family Welfare, Govt. of India by 2009 under National Rural Health Mission (NRHM). It is aimed for assessing the progress, quantifying output as well as outcome of interventions and decision making as well. It provides how and what health care services delivery is required, availability of man power as well as beneficiaries at all level of Health institutions as well as in the community. Monthly reporting is being done from all Health institutions by using software called HMIS Ministry web portal.

Integrated Disease Surveillance Program (IDSP)

IDSP is one of the major National Health Program under National Health Mission for all States and UTs. The key objective of the program is to strengthen/maintain decentralized laboratory based IT enabled disease surveillance system. The IDSP aim is to strengthen the disease surveillance in the country by establishing a decentralized State based surveillance system for epidemic prone diseases to detect the early warning signals, so that timely and effective public health actions can be initiated in response to health challenges in the country at the Districts, State and National level. Under the project weekly disease surveillance data on epidemic prone disease are being collected from reporting units such as sub centres, primary health centres, community health centres, hospitals including government and private sector hospitals and medical colleges.

Mother and Child Tracking System (MCTS)

The MCTS is dedicated portal for Mother and Child Tracking for tracking all pregnant women and children up to five years of age for appropriate care and immunization / nutrition with special emphasis on those at high risk.

6.2 Findings

A senior advisor at NHSRC reiterated that under the NHM various mechanisms are available for M&E, like the annual CRM, periodic field visits, quarterly progress reports, financial monitoring reports, HMIS, state specific systems, and reviews conducted by the NHSRC itself. The CRM is an annual exercise by the central NHM for assessing performance of NHM in various states. It includes senior officials of MoHFW, Public Health experts from civil society and experts from academic institutes, development partners and officials from related development sectors of the government.

Senior officials of health department cited that for routine evaluation a robust HMIS has been developed under NHM which focuses on NHM priority areas like institutional delivery and maternal care, routine immunization breast feeding, neo-natal care, Pre-natal Diagnostics Techniques (PNDT) related issues, and adolescent health.

M&E is also an integral component of national PIP and State PIPs. Senior officials of SPMU mentioned that the state carries out a regular review of common process, outcome and output indicators based on the levels of achievements set by state government. State PIPs have well defined quantifiable physical indicators and efforts are in place for continuous monitoring and reviews. In the same line district specific objectives and goals are within district plans.

Senior officials of the central NHM mentioned that there is a wide variation between and within state implementation of various M&E systems under the NHM and the use of data for planning. This may be due to the lack of capacity and awareness about M&E systems. They also pointed out that capacity and technical competencies are lacking at various levels for monitoring and evaluation efforts. M&E was largely limited to data collection and data reporting.

One of the issues that cropped up was too much data, duplication of processes and multiple applications. Senior officials of the three states health department echoed that there are too many frameworks, guidelines and data recordings and reporting for various programs under NHM. Collecting data individually from each program at separate instances from the district level, and then compiling the same and submitting at the national level was found to be very cumbersome. Officials commented that different apps and systems for different programs under NHM were redundant. The issue of overburdening the frontline healthcare workers with data collection responsibility extended till the village level (ASHA) and district. District health officials stressed that they are overburdened due to lots of data recording and reporting. They stated "various programs are having their own M&E systems and there is lack of integration and coordination between various programs".

The officials in the three states furthered that the M&E is limited largely to monitoring functions, and very little emphasis is given to evaluation. For example, they exemplified the IPHS norms monitoring, "though we 'measure' the compliance to IPHS norms, what are the key gaps, how to overcome those gaps, resource requirement and utilization, etc all these aspects are missing." Very few special studies are commissioned to understand performance gaps, impact of various interventions and reasons for success. Further, they emphasized that though there is some documentation effort towards good innovative practices, the same is limited to oral presentations in national summits. (These summits have started over the last few years) They highlighted the need to extend it further in a more formalised form such as case studies, research papers in reputed journals etc.

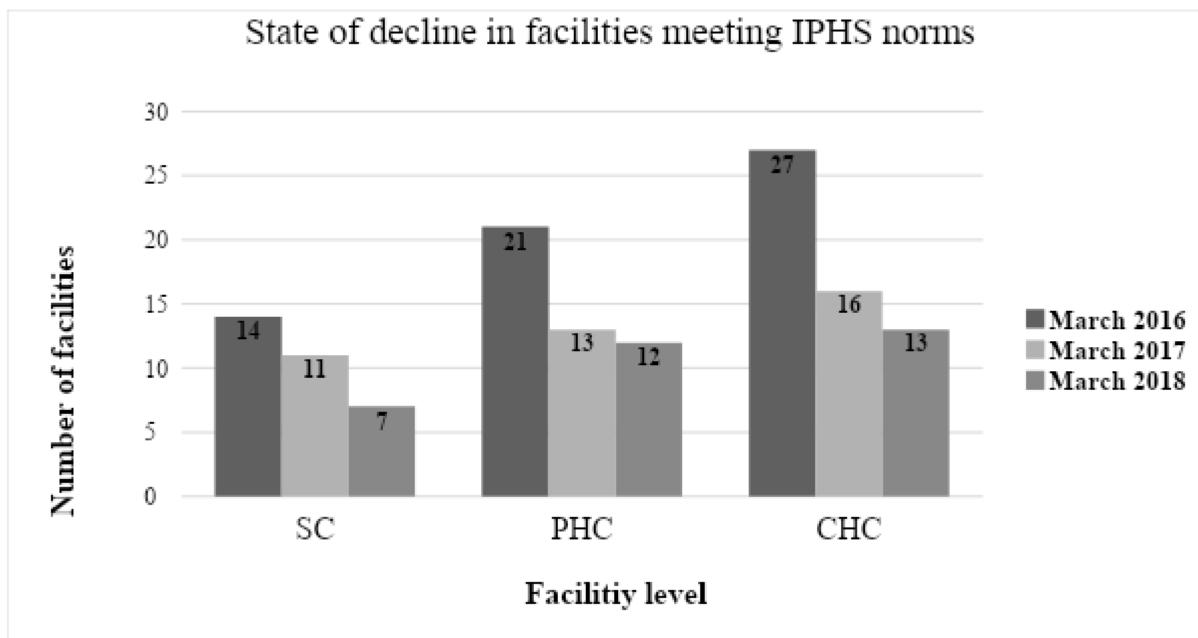


Figure 18 Decreasing number of public health facilities meeting IPHS norms

Senior officials of SPMU highlighted that the M&E has played in significant role in identifying number of facilities meeting IPHS norms. This has helped the states in understanding their performance and taking timely decisions for improvements. There was considerable variation amongst the three states regarding the perception about M&E. SPMU officials in Uttar Pradesh mentioned that various innovative initiatives were taken for strengthening and streamlining M&E Mechanisms-District Level Vigilance and Monitoring Committee (DLVMC) and regular supportive supervision visits by the state level team. These initiatives were cited as important for improving the recording and reporting of data. The minutes of these meetings are also put on the website to ensure transparency and accountability. The regular review by the Principal Secretary and MD-NHM were cited as very important for mid-term corrections.

However, there was a palpable lack of coordination between NHM and directorate staff in the state of Uttar Pradesh. Senior officials of state DGHS-Uttar Pradesh stressed that there is no role for the directorate in M&E activities of various programs under NHM. The SHS does not involve directorate officials in monitoring and supervision of NHM programs. The entire M&E systems are carried out by the contractual workforce of the SPMU, DPMU, and BPMU. Directorate officials, on the other hand, pointed out that the monitoring from the higher levels is not adequate and primarily consists of inadequate field visits, follow-ups and analysis of data uploaded by the district. They further mentioned that the quality and reliability of data is poor and the state is not utilising the potential of available data for making the health system more efficient and responsive. There are

several staff at the state level for M&E activities, but they end up in follow-up and coordinating with the district for data reporting. Not much analysis and systematic preparation of annual reports have been done.

The state of Gujarat has established the Performance Monitoring and Control Centre (PMCC) under the Commissioner of Health for integrating medical data analysis with real-time performance monitoring and reporting, advanced data warehousing, and customizable executive and information dashboards. The PMCC is equipped with adequate and competent human resources for carrying out various M&E tasks. It has become the central hub of the department for monitoring prioritized health indicators from a single point and providing feedback as well. The creation of the PMCC also led to improved coordination between various program units under the NHM. This unit provides data and insights to the commissioner office and the directorates whenever they request. However, senior officials emphasized that their analytical capacity, documentation skills need much improvement. This unit is largely composed of medical officers and young health management graduates and their statistical, demographic, public health and data analytics expertise is minimal. They also don't produce annual monitoring reports.

Senior SHS officials pointed out that most M&E mechanisms were carried out by health department officials at the SPMU, DPMU, and the BPMU. Thus, unlike the state of UP, the M&E process involves officers from state regular cadre, such as state D & E officers. Further there is an involvement of the Additional Director of Vital Statistics who comes from the department of economics and statistics of the state government. While they might have understanding of statistics, the knowledge about public health aspects is limited.

The Government of Gujarat has also implemented an innovative program Innovative Mobile-phone Technology for Community Health Operations (ImTeCHO) for real time monitoring of MNCH services and improving the coverage of community-based maternal, neonatal, and child health (MNCH) services. This mobile-phone–and web-based application, also helping Accredited Social Health Activists (ASHAs) and Primary Health Center (PHC) staff. Mobile-phone-technology–based health (mHealth) solutions are promising, innovative strategies with the potential to improve performance of frontline health workers in controlled settings.

The study by Modi et al., also found effectiveness of "ImTeCHO" to improve delivery of maternal, neonatal, and child care services. We found that coverage and quality of most of the MNCH services were significantly higher among PHCs that were served by ASHAs who used mHealth as a job aid compared to those who did not. The coverage of at least two home visits within first week of birth was 32.4% in the mHealth intervention group, compared to 22.9% in the control group. A composite index, which was calculated based on coverage of multiple key MNCH services, was 43.0% in the

mHealth intervention group compared to 38.5% in the nonintervention (Modi *et al.*, 2019). This initiative successfully piloted by SEWA Rural in partnership with the Department of Health and Family Welfare, Govt. of Gujarat since May 2013 in 22 PHCs (700 villages) in high focus tribal talukas of Bharuch, Valsad and Narmada districts.

After success of ImTeCHO, an advanced version of it, TeCHO+ Project was launched by the Hon. Prime Minister on 8th October, 2017 for scaling up in entire state. TeCHO+ has been implemented as a job-aid for health workers and administrators for improving coverage and quality of health services related to reproductive and child health, non-communicable diseases, communicable diseases, mental health. TeCHO+ application provides name based tracking of pregnant women, children and entire population using mobile phones along AAA (convergence of ANM, ASHA and Anganwadi) and linkage with health facilities.

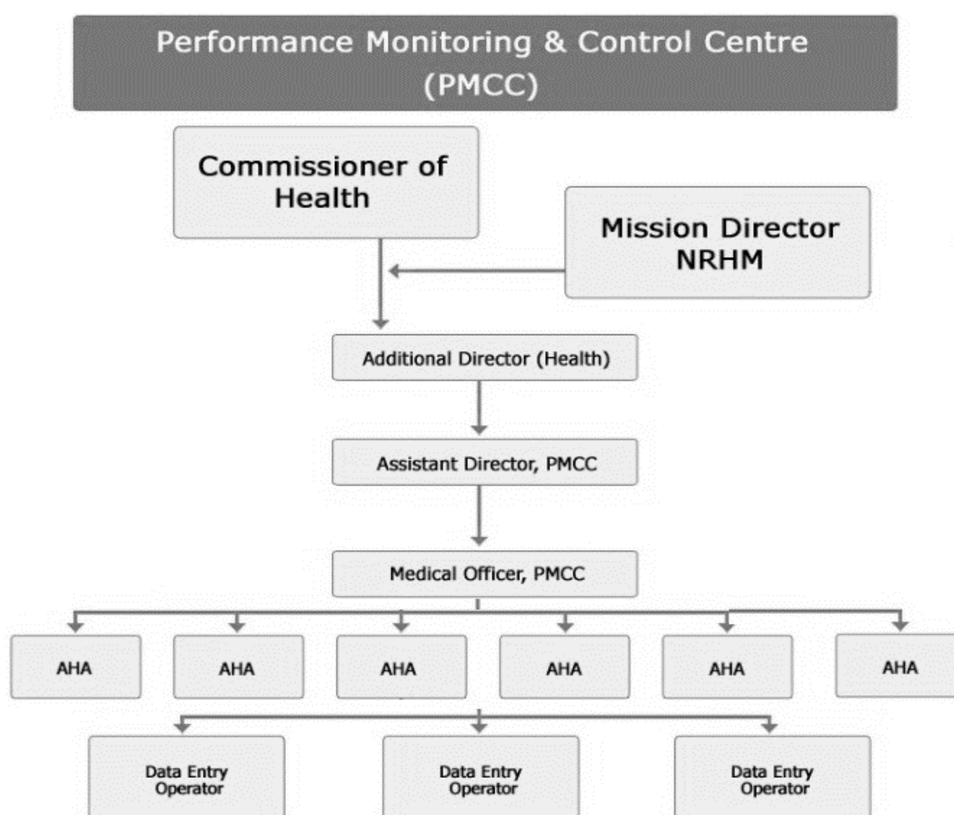


Figure 27 Structure of the Performance Monitoring and Control Centre in Gujarat

In the state of Rajasthan, the two major issues highlighted were lack of capabilities and high attrition amongst the DPMU. District health functionaries mentioned that dedicated human resources are not available for M&E activities and the capacity of available human resources is also inadequate.

Further, due to higher turnover of DPMU staff, continuous monitoring and supervision could not be carried out. They also highlighted the lack of analytical abilities stating that "most of the officials know only basis statistical tools and not adequately capacitated for data triangulation and visualization. District unit also lacks demographic, statistical, and epidemiological and data analytics expertise."

DPMU officials of Rajasthan however, pointed out the issues related to data duplication and over work: "our responsibility is to carry out M&E activities. However, most of our time goes to clerical work and we are not getting any time for M&E. We are overburdened with the various program and also doing some of work of regular cadre district health officials." Senior Officials of SPMU pointed out about the limitation of the M&E process, emphasizing the lack of integration of HMIS data with financial data. They said "M&E is largely limited to various indicators of NHM programs and presently the physical and financial data is collected and reported separately. There is a lack of integration between the two datasets. Physical and financial performance is inter-related and for better insight integration is necessary."

In summary, M&E functions are scattered under various programs and systems. At times ad hoc systems are also developed without adequate technical skills. There is no annual report (Statistical or narrative published by the state). Further, DPMU capacity is carrying out M&E is weak. The M&E is generally happening program wise and input oriented. Survey data is available, coverage is measured. However, there is no third party evaluation and evaluation by independent agency.

6.3 Recommendations

6.3.1 Regular Annual Performance Report

Under the NHM enormous funds have been made available to the states. A portion of these funds should mandatorily be dedicated to the creation of a detailed annual report by each state, submitted to the central government, and made available to the public. This report should be standardised by the central NHM so that there is uniformity in reporting structure across states. There should also be some budget for carrying out research studies on situational analysis, diagnosis of the public health system, documenting best practices under NHM, cost-effectiveness of innovative interventions. This initiative will help in enhancing the effectiveness of M&E systems and also result in high quality evidence generation which can be applied to the development of health research capacity in states. Facility, block, and district wise targets should be set for continuous monitoring.

6.3.2 Independent Evaluation

Every 3 years, 1% of the annual budget of NHM should be spent towards independent evaluation studies of the mission, and various programs under it. A technical panel compromising multi-

disciplinary experts from public health, health policy, health systems, epidemiology, health financing, and M&E should be constituted by central and state NHM for regular independent review and evaluation. This will also increase reliability and validity of evaluation. The panel should also be responsible for developing the study proposal, its design, methodology, and tools for the evaluation for ensuring uniformity across the states. Academic and public health institutes can also be enshrined with this responsibility. A well designed centralised strategy should be put in place to ensure uniformity in the independent evaluations conducted by different states.

6.3.3 Capacity Building and Training

Capacity Building of staff at all levels from facility, district, and state levels is critical for proper recording and reporting of data. HR should also be trained for utilising strategic data generated in registers, reports, and HMIS. This will also help in better interpretation of collected data for micro-planning and initiating actions at local levels in a timely manner. Program managers at all levels need to be acquainted with the power and features of the HMIS portal and also triangulating various data. There should also be a clear cut role for carrying out M&E. District health officials should lead the M&E efforts. The vast potential of academic institute and public health institute needs to be utilised for quality trainings and they can be developed as a nodal training centre for the states. Trainings on basic research methodology, analysis tools, and HMIS use may be provided so that key facility staffs will have the ability to access pertinent data needed to make quality decisions based upon actual service and performance trends and conditions. All project management should undergo a week long training program at a regional, national, or international institute of repute.

6.3.4 Involvement of Directorate of Health Services Officials in M&E

Directorate officials and regular state cadre employees should be involved in M&E activities for better implementation of NHM programs. Regular personnel have a better understanding of health system and various procedural aspects of programs. Their involvement will improve the effectiveness of M&E systems and also the ownership by the directorate for NHM programs will increase. A directorate with its own director should be created for M&E, staffed with demographers, epidemiologists, and experts in public health, evaluation, and data analysis. The function of this directorate would be to generate M&E plans and implement the same.

6.3.5 Utilization of existing data from various surveys

A unified system for data reporting should be created under the NHM for all programs. This will reduce the burden on frontline health workers, and allow for streamlined health system data reporting. Data should be utilised for micro planning, increasing the reach of services, improving

quality of care, and increasing access to healthcare services. Data triangulation efforts are required to realise the full potential of data recording and reporting under the NHM.

AHS and DLHS could be considered as third party source of information to provide the baseline, midline and end-line surveys for assessing the impact of the health interventions on the community. Based on these and other data, a District Health Profile of each district can be prepared. These data could be used as an input for policy initiatives, making mid-course correction, decision making and for review of policy planning. Consequently, district and block level rankings can be assigned based on the District Health Profile and issues related to public health service delivery can be identified.

6.3.6 Integration of physical and financial data

Presently, HMIS web portal captures the physical (health indicators) and financial data (FMR reports). The MoHFW should formulate a strategy for integration of the physical and financial reports and performance. As physical and financial performances are inter-related and inter-linked and the integration will help in getting better insight on what should be precisely tracked, documented, and analysed. The integration will also help in carrying out cost benefit or cost effective analysis for different program heads. Further, the central NHM should also review the financial component of the NHM with state representatives from finance divisions, Mission Directors of NHM and Health Secretary. It may be undertaken regularly on a six monthly basis.

6.3.7 Expansion and improvement of health indicator data

Efforts should be put towards improving the civil registration of births, deaths, and cause of death. The NHM should invest in the expansion of the SRS sample to ten times its current size, by paying funds to the RBI. Every state should be tasked with selecting at least 3 districts with the aim of improving the Census Registration System (CRS) on a pilot basis, in the coming two years. This would lead to reliable estimates of IMR, MMR, and CBR. The vision for the next decade should be to improve the CRS to such an extent that the SRS is made redundant.

7 ASHA

7.1 Background

Accredited social health activists (ASHAs) are community health workers introduced under National Health Mission for increasing community connect with the health system. The MoHFW describes them as “health activist(s) in the community who will create awareness on health and its social determinants and mobilize the community towards local health planning and increased utilization and accountability of the existing health services”. ASHA are married women, who have experienced both pregnancy and motherhood, and the challenges associated with them. This characteristic allows them to share increased empathy with women in their communities, thus leading to empathy-altruism behaviour (Gupta *et al.*, 2009), which makes them influential figures in the community. The number of ASHAs across various states has increased significantly, currently approximately 9,75,697 ASHAs in rural areas and 61,822 are appointed in urban areas (as on June, 2019) (Chandran, 2016) representing an enormous pool of personnel warranting proper human resources management systems and processes to work effectively and efficiently (Please see below table). As activists, ASHAs are proactively involved in counselling, preventive health education and health promotion, responding correctly to illness. They are also trained in diagnosing certain common conditions and providing appropriate care – referral, drugs, home remedies, or counselling.

Training for ASHAs

Senior Officials of Central NHM and NHSRC mentioned that training and capacity building of ASHAs is adequate and the same has also improved the quality of ASHAs. Up to 2010, ASHAs received training on five modules, in which modules 1-4 focused on program management and basic health knowledge. The module 1 is on basics of NRHM, ASHAs tasks, health services, and health education. The module 2 focuses maternal and child health, module 3 is dealing with Family Planning, RTI/STIs & HIV/AIDS and ARSH and module 4 is on National Health Programmes, AYUSH &Management of Minor Ailments. The Module 5 is focused on life skills such as leadership and community relation building. 2011 onward, module 6 and 7 were also introduced in their training to impart additional skills such as Home Based New-born Care (HBNC) under skills that saves lives.

Table 16 Year wise number of ASHAs selected across the country

Year	India	High Focus-Non NE (10)	High Focus NE (8)	Non High Focus-Large (11)	Non High Focus- Small & UT (7)
2014-15	42021	9414	243	31643	721
2015-16	34593	25208	590	8480	315
2016-17	33197	28472	191	4527	7
2017-18	15931	10705	127	4977	122
2018-19	10844	6355	343	4100	46
2019-20	2441	670	0	1771	0
Total	975697	585043	56522	333016	1116
Number of ASHAs in position in Urban Areas- USHAs					
	61822	20445	2135	33147	6095
Status of ASHAs in Study States					
Number of ASHAs in Uttar Pradesh			1,36,094		
Number of ASHAs in Gujarat			42,271		
Number of ASHAs in Rajasthan			51,743		

Source: Executive summary, National Health Mission, Ministry of Health and Family Welfare, Government of India (2019).

The impact of ASHAs on health indicators has been substantial as indicted by various studies. A research study conducted by Wagner et al., 2018, has comprehensively evaluated impact of increased ASHA placement on changes in communities' access to health services. In 218 districts from 21 states, the average proportion of villages with an ASHA increased from 39.1 to 76.2%, unmet need for family planning was fulfilled from 14.7 to 22.4% (ASHA has played an important role in reducing unmet need of the population), institutional delivery increased from 61.6 to 82.5%, and full immunization coverage increased from 71.2 to 65.1%, between 2007-08 to 2012-13 (Urban Development & Urban Housing Department, Government of Gujarat, 2016).

For ASHA program, there was a National ASHA mentoring group was formed. In this group very well-known NGOs were members. This group guided the development of ASHA program. Later on this group became inactive and hence the national mentoring of the ASHA program weakened.

At state level there was on organization or division created to manage this program. One director level officer has additional charge to look after ASHA program. There is state level Asha coordinator and Asha training officer. The whole ASHA program runs on very small central and state level management staff. This is a major issue. At national level NHSRC provides inputs in to the ASHA program via Community Processes division.

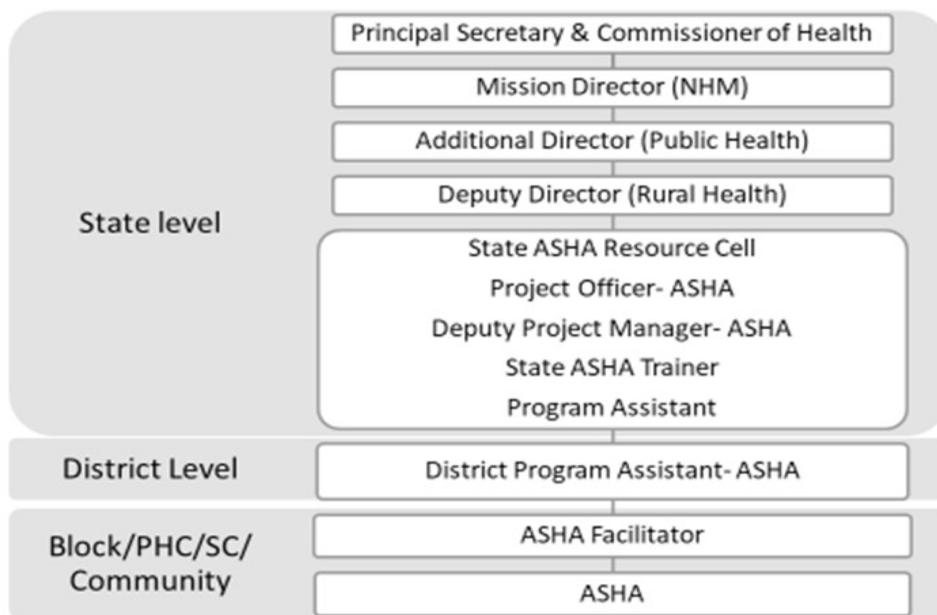


Figure 19 Structure of ASHA supervision and management at state level

Over the years, the role of ASHAs has been increased and their involvement in several other programs has drastically increased. Each new program has added various responsibilities to ASHAs as they are the real ground level functionaries of the health department and live in the village.

ASHAs were trained in a modular fashion with 7 training modules. These modules were prepared at national level and then translated in regional languages at state level. Each state had its own training mechanism at district and taluka level to train the ASHAs. ASHAs are paid on an incentive for work basis. So for each activity she does she is paid fixed amount. Some state has also added a fixed amount to ASHA as honorarium for some minimum activities. Generally, ASHA earns about INR 3, 000 to 8,000 but some ASHAs have also earned up to INR 15,000 per month.

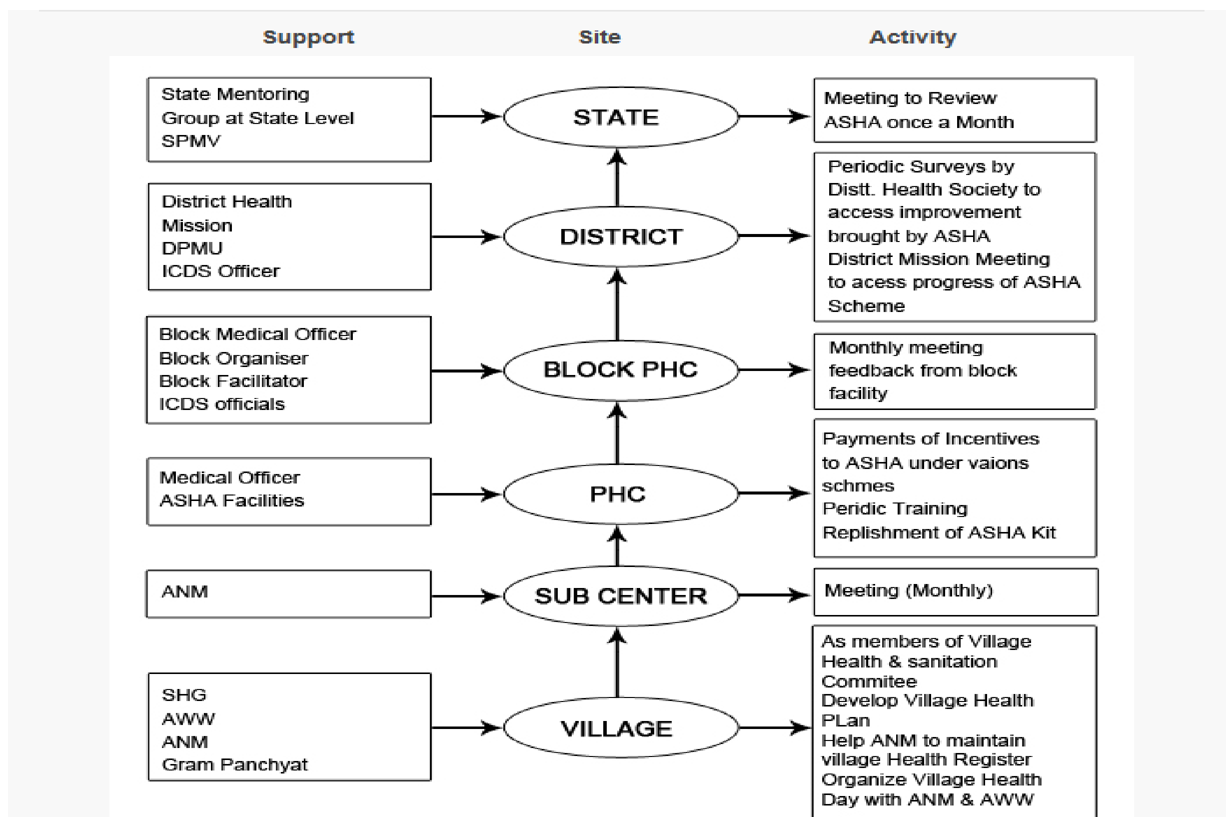


Figure 29 Key support systems and activities for ASHA at various levels

Training for ASHAs

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The work of ASHAs is not merely mechanical, but a lot of soft skills along with the individual aptitude and helping attitude are required which must be factored in. Apart from regular and refresher trainings, each program under the NHM has special training for ASHAs. Initiatives like the ASHA *Sammelan* model of Gujarat has acted not only as a knowledge sharing platform for them but also can be leveraged for replication of innovative practices.

Table 17 Program wise training duration for ASHA

Program	Days
Malaria	2
Leprosy	2
Tuberculosis	2
Yoga	5
Non-communicable disease	5
Home Based care for Young Children	5

7.2 Findings

Impact of the ASHA program on health systems

Many Central and State NHM Officials we interviewed acknowledged and appreciated the important role of ASHA in health system strengthening. The ASHA has been most effective in the following areas.

Community focused healthcare

State Health Department Officials are of the opinion that ASHAs are seen as a part of the community instead of someone from the government health department. This leads to a higher level of trust, engagement, and support from the community. Women empowerment has been fostered with the introduction of the ASHA program. The overall social status of ASHAs among the community is seen more favourable which motivates them to perform better. Apart from the duties of a community health worker, it has been observed that ASHAs are involved in various activities, besides routine MCH, Immunization, etc such as helping elderly people, spreading awareness related to general health, domestic-violence, and child labour on a discretionary basis – for which they are not paid. ASHAs represent a very capable human resource whose presence at the village level is harnessed to achieve many goals encompassing healthcare and other domains. They are instrumental in collecting primary level data from households which can be used for service delivery, program monitoring and policy formulation, such as TECHO in Gujarat.

State Health Department officials reported that the ASHA program is *"a game changer in the health system"*. They emphasized that in last few years it has increased community outreach and also accessibility of services. ASHAs played a crucial role in securing entitlements, promoting collective preventive action, and increasing access to services for the most marginalised sections, all of which come under the activist role. The workload of ANMs and FHWs has reduced as it is shared by the ASHA. With the introduction of the NHM, the former cadre of healthcare workers has been able to

focus on service delivery while awareness generation, community outreach, and mobilization are done by ASHA. It was also mentioned that at many places medical officers and even ANMs get transferred frequently but ASHA remain the same, hence provides continuity of community linkage. In this manner they have become an asset for the health system, as they have a greater awareness about the needs of communities, which they can communicate to the higher ups. ASHAs Encourage community members to use a public health facility or attend Village Health and Nutrition Days. In this manner, ASHAs also play a significant role in identifying individual and community level issues like malnutrition and disease outbreaks. ASHAs played a crucial role in tracking cases of malnutrition.

Most of the officials revealed that the ASHA program is functioning well as a community-health system interface. The ASHAs also have a good assessment of the needs of their communities, and have actually been instrumental in mobilising the population towards an increased utilisation of public health services. ASHAs also provide important information to the higher levels. Service delivery numbers have increased due to the ASHA program.

Interviews with ASHAs and ASHA facilitators, and focus group discussions with ASHAs revealed that they are playing their activist role well, by bringing voice to their communities' health concerns and issues. However, they also pointed out several issues in the program, as listed below.

Issues in implementation of ASHA model

Too much focus on 'incentivised tasks'

The study shows that the vast majority of ASHAs are functional irrespective of several constraints, and contextual factors. It was also found that certain Medical Officers and ANMs had become quite responsive because they now know that ASHAs will not take things easily like, waiting period, higher absenteeism, shortage of medicine, or any other facilities at health centres. However, this does not appear to be the norm, and most ASHAs serve merely as subordinates of the MO/ ANM. In many areas they are called ASHA "worker" implying that they are paid staff of the health department and not community volunteers or activists. Hence, they don't raise the concerns of community people, instead they only do the activities which are largely health system support roles and not activists roles. It has been observed that ASHAs perform only those activities which generate more incentives and activities that require more of an activist role and are not incentivised are abandoned by them. Thus ASHAs have practically become like agents of health department.

In Uttar Pradesh, it was observed that some ASHAs were mobilizing patients to private health facilities, as they were receiving more incentives compared to public health facilities. However, it was also highlighted that the reason may not only be incentives; many times during high risk

pregnancy/ emergency situations, private health facilities are more reliable and there are assured services available, while in the government facilities are dysfunctional.

The focus on incentives may be one of the reasons for the wide variation in the exact set of tasks an ASHA carries out, the percentage of potential users of these services, and the effectiveness with which this task is done, in terms of several outcomes such as achieving desired behaviour changes, or recovering from an illness, or access to a service provided by the facility. Such a variation in functionality occurs within and between districts and states and makes generalisation of any sort difficult. This variation is largely due to the fact that though the ASHA is tasked with many functions in theory, in practice she is supported, incentivised, and monitored on very few tasks.

Training for ASHAs and Cross Learning

Senior Officials of Central NHM and NHSRC mentioned that training and capacity building of ASHAs is adequate and the same has also improved the quality of ASHAs. The work of ASHAs is not merely mechanical, but a lot of soft skills along with the individual aptitude and helping attitude are required which must be factored in. Apart from regular and refresher trainings, each program under the NHM has special training for ASHAs. However, most of training are largely related to incentive based programme, to make ASHAs as a social change agent, Behavioural Change Communication training are requiring. The ASHAs role is increasing day by day and however, capacities are not increasing.

The senior officials of SPMU and Health Department of Gujarat mentioned about innovative initiatives-ASHA *Sammelan*. ASHA Resource Centre facilitates planning and organizing these *Sammelans* at all three Levels-State, District and Taluka. The ASHA Sammelan has helped the state of Gujarat in motivating ASHAs in fulfilling their role and also bringing various issues at higher level. Through this platform, ASHAs are sharing the experiences and cross learning is essentially required to effectively build the reputation and to generate the feeling of belongingness.

This platform has also provided opportunity to District/Taluka authorities to interact with ASHAs and learn the issues they face at field level and suggested possible solutions as well. The *Sammelans* can be utilized to appraise their work and appreciate/award the well performers.

Work overload

Over the years, ASHAs have become the major stakeholders for implementing multiple health interventions, including data entry and reporting. Although, ASHAs are not support to do data entry, however, ANM and other senior functionaries passing their work on ASHAs. In Gujarat, ASHAs are formally involved in data collection under web based TECHO program. The role and workload of the ASHA has changed significantly over time and in different parts of India. The expectations of

healthcare providers have also increased from these workers. In states like UP, Bihar, Rajasthan, and MP where the birth rate is high, MCH and FP take up the bulk of the ASHA's responsibilities. In these areas, NCD and infectious disease control tend to be neglected. In our interaction with them many complained of too much workload. They said, "Male health workers only work for malaria; they don't get involved in any other program. Whenever other programs come, they divert it to ASHAs".

Lack of role clarity

There is role overlap amongst ASHAs, Anganwadis and ANMs – the so called "AAA". Some ASHAs claimed that they collect all the data from the field, and FHWs carry out data entry and take the claim for data collection as well. There is role overlap among FHW, ANM ASHAs, and MHWs, which leads to ambiguity of responsibility. Thus, ASHA being on the lowest rung tends to become overburdened as ANMs pass on many of the non-technical roles of community contact and mobilization to ASHAs. In order to have a clearly defined role, AAA+ training was proposed but it has not been implemented widely. There is a need to redefine the role of ASHA and similarly role of ANM, AWW and Male worker and now newly appointed Community Health Officers (CHO).

The support provided by family members of ASHA in terms of sharing family responsibilities, and thereby enabling the ASHA to perform her job outside home, acts as a catalyst for fulfilling their job demands, and enriching their work lives. Moreover, dual reporting authorities, the ASHA facilitator and the ANM, leads to conflicting expectations and other issues.

Recruitment related issues

Political interference in ASHA appointments, and the removal of non-performing ASHAs are a big issue. Currently the MO, ANM, or the CHO don't have any say in the ASHA selection process. Although the minimum qualification for ASHA workers is class 8, literacy and numeracy were found to be inadequate. Among educated urban populations, such as in Punjab and Kerala, a secondary school graduate ASHA is not seen as an acceptable health care provider. Such variations exist even within states, between districts, especially while comparing tribal and urban areas.

Recruitment is done through the *Gram Sabha* and sometimes, politically backed candidates are appointed to the ASHA position without regard to their qualifications, community connect, or experience. ASHAs in difficult geographies are required to exert physical effort because of the terrain and distribution of the population in villages. Therefore, physical fitness becomes an important parameter in their selection.

Compensation

Innovative ways of processing payments have solved one of the major issues faced by ASHAs- delays in payment. In Rajasthan, for example, the ASHA receives incentives from 2 departments, INR. 2, 700 from ICDS as *Sahyogini* plus incentives from the health department as well. Rajasthan has initiated online payment of ASHAs through ASHA soft-online payment system. This change has increased the motivation among ASHAs, as they receive their payment on time every month.

However, most ASHAs also expressed dissatisfaction with their remuneration and the contractual nature of their employment. Demands for a fixed salary by ASHAs were also noted, especially as they tend to compare themselves with the *Anganwadi* workers of the ICDS who are fixed salaried employees at the village level. This dissatisfaction among ASHAs has led to significant attrition (Scott, George and Ved, 2019) Our study also revealed issues with ASHAs' motivation and enthusiasm to attend their prescribed training sessions.

7.3 Recommendations

7.3.1 ASHA Recruitment, role and future direction

ASHA is very useful system and it must be continued in the present form. There could be minor changes to the ASHA system to address some of the issues raised above.

Entry qualification criteria into the ASHA program should be standardised – but there should be some flexibility at local level. The Medical Officer, ANM, or CHO should be given a say in ASHA appointment in rural areas in order to control the influence of political actors.

In urban centres, the entry qualifications for ASHAs could be increased to 10th or 12th Passed with science subjects preferably, especially in non-slum areas. The role of the ASHA could also be restructured for these areas enhance the acceptance of this cadre of community health workers in the educated urban middle class population.

While ensuring that the ASHA is a local community resident, other recruitment criteria can be made flexible across regions considering their socio-geographical complexity and the availability of suitable candidates. In the long run it is suggested to replace the ASHA with a community health nurse who would be a high school graduate with 6-12 months of training in community health and outreach work. In the long run country should plan for one community health nurse per village. The current ASHA can also gradually be trained to become rural community health nurse and then should be employed full time at say INR 15,000 per month. The salary burden of these community health nurses could be divided between centre and states.

7.3.2 Compensation and recognition

The fixed honorarium amount should not be increased. As the ASHA model is performance-based and incentive driven, there should be a balance between the two components, fixed and variable. This will enhance the motivation and performance of ASHAs. A mixed incentive structure with checks for complacency will serve a dual purpose—the fixed component ensuring their financial safety thereby preventing attrition, and the variable component serving to motivate and consequently maintain the quality of their work.

Performance awards like "ASHA of the month" could be put in place at the block level to introduce a competitive spirit among these workers. A provision could be made for an increase in the incentive amount for ASHAs with consistent performance over a period of time, but reasonable caps should be in place.

7.3.3 Training and knowledge enhancement

While there are standardized training modules for ASHAs, the same may be re-examined for contemporary challenges like NCDs, and skills related to behavioural aspects of the community. Further, cross learning and knowledge sharing amongst ASHAs can be promoted by adopting structural interventions (Such as ASHA *Sammelans* in Gujarat)

The ASHA *Sammelan* model of Gujarat could be adopted by other states to facilitate knowledge sharing among ASHAs of various regions within a state. This would serve as a confidence building exercise for all ASHAs, and help document best practices at the field level, which could then be taken up the chain to policymakers. Other replicable features from Gujarat include the ASHA Resource Centre can plan and organises these *Sammelan*s at the state, district and taluka levels, and a State ASHA Mentoring Group.

Further, ASHAs could benefit from specialised training in managing the emotional needs of individuals and communities, and conveying health information in an accurate yet understandable manner. Integrating good local health practices, and AYUSH remedies into the training curriculum would increase the ASHA's community connect, and aid her in providing timely and inexpensive treatments for common ailments. This would also increase communities' overall acceptance of the public healthcare system. Trainer shortfalls can be addressed by either outsourcing the training or building capacity for MOs to train ASHAs.

7.3.4 Monitoring

ASHAs should be monitored regularly by the ANM or the CHO, and mechanisms should be put in place to remove non-performing or inactive workers within 3 months. The activities for which ASHA are incentivised should also be revisited, and the focus should shift in accordance with the changes in the epidemiological profile of the community they serve. The NRHM's focus on

reproductive and child health has limited the ASHA's scope of work with increasing focus on select services. The activist role of this cadre of workers needs to be highlighted more going forward, especially health promotion activities.

There should be a dedicated full-fledged division for managing ASHA at the Government of India level. This would aid in the solving of all ASHA related issues and monitoring of performance of ASHAs. This would lead to more efficiency and accountability in the system. The National ASHA mentoring group should conduct periodic evaluations and performance measurement uniformly across all states. There should be a well-staffed division for ASHA Management at state level to recruit, train and monitor ASHAs.

7.3.5 Career Progression

Open schooling through NIOS should be facilitated to enable ASHAs to pursue university level education. This is a long term recommendation that will help increase ASHA confidence, and performance, in the country.

Mechanisms should be put in place to allow ASHAs to progress to ASHA facilitators and ASHA coordinators as well as if well-educated then to ANM and Nursing. Specialisations like mental health, family planning, yoga etc. could be offered to ASHAs with aptitude and measurable good performance in these particular areas. Further, district wise reservations could be made for high performing ASHAs for admission into ANM/GNM and nursing degree programs where qualifications are appropriate.

For ASHAs who have served for a long period and are unable to carry out their duties due to age, a dignified exit or "golden handshake" mechanism with some lump sum payment could be put in place with due performance monitoring.

8 Process Implementation Plans and Budget

8.1 Background

India is the second most populous country in the world characterized by regional imbalances like a large north–south divide in health and development. The focus on community's needs and service delivery requires need based planning rather than top down approach. Hence, the National Population Policy, 2000 focused on 'Decentralised Planning and Program Implementation'. The Government of India has adopted decentralization/devolution as a vehicle for promoting greater equity and supporting people-centric, responsive health systems. The 73rd Constitutional Amendment Act, 1992, made health, family welfare, and education a responsibility of village panchayats. The PRIs are an important means of furthering decentralized planning and program implementation.

One of the main approaches of NHM is to reach communities, which will entail transfer of funds, functions, and functionaries to Panchayati Raj Institutions (PRIs) and also greater engagement of Rogi Kalyan Samiti (RKS). For this bottom up approach of planning the health system, the National Rural Health Mission (NRHM) proposed the decentralisation of health planning so that the state health plan represents the needs and priorities of respective blocks and districts in the state.

Program Implementation Plans (PIPs), the DNA of decentralized planning, are the most crucial documents in NHM through which the States/UTs plan, prioritize, and propose strategies and activities to address the challenges in public health. Based on the plan and the budget proposed, the appraisals and discussions are carried out which culminate in a National Program Coordination Committee (NPCC) meeting and approvals are accorded through the Record of Proceedings (RoP) (Gupta *et al.*, 2019). The NPCC then proposes the release of the budget. Figure 20 below provides the allocation of budget under NHM for last 7 years. This show some periods of stagnation in the budget and some periods of increase.

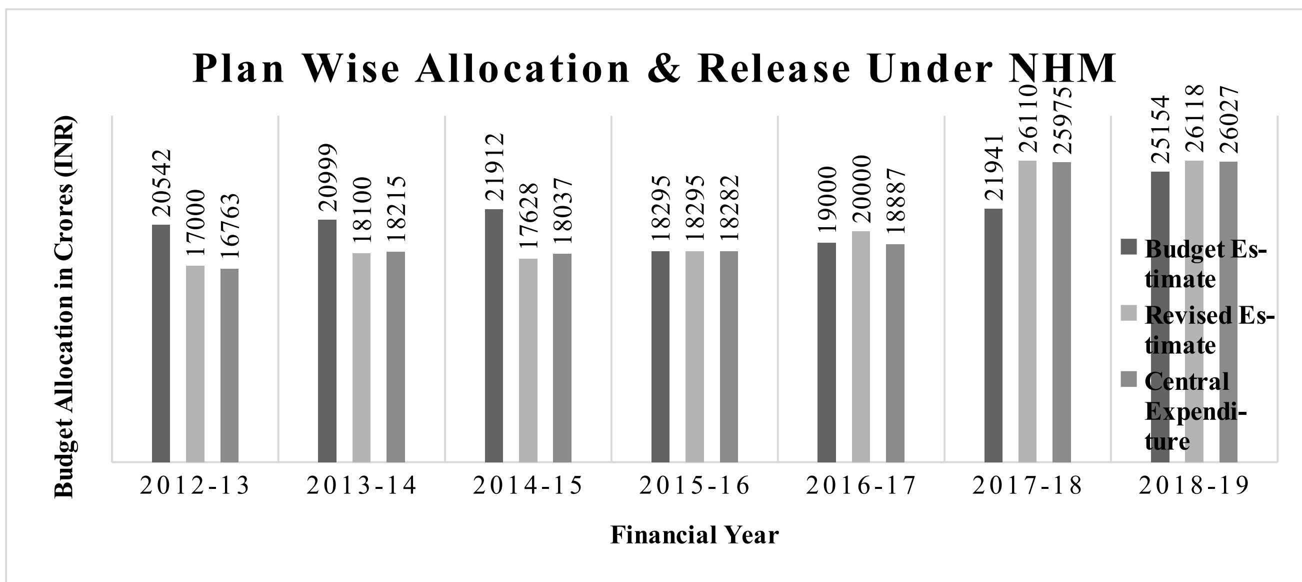

Figure 20 Allocation and Release of funds under NHM

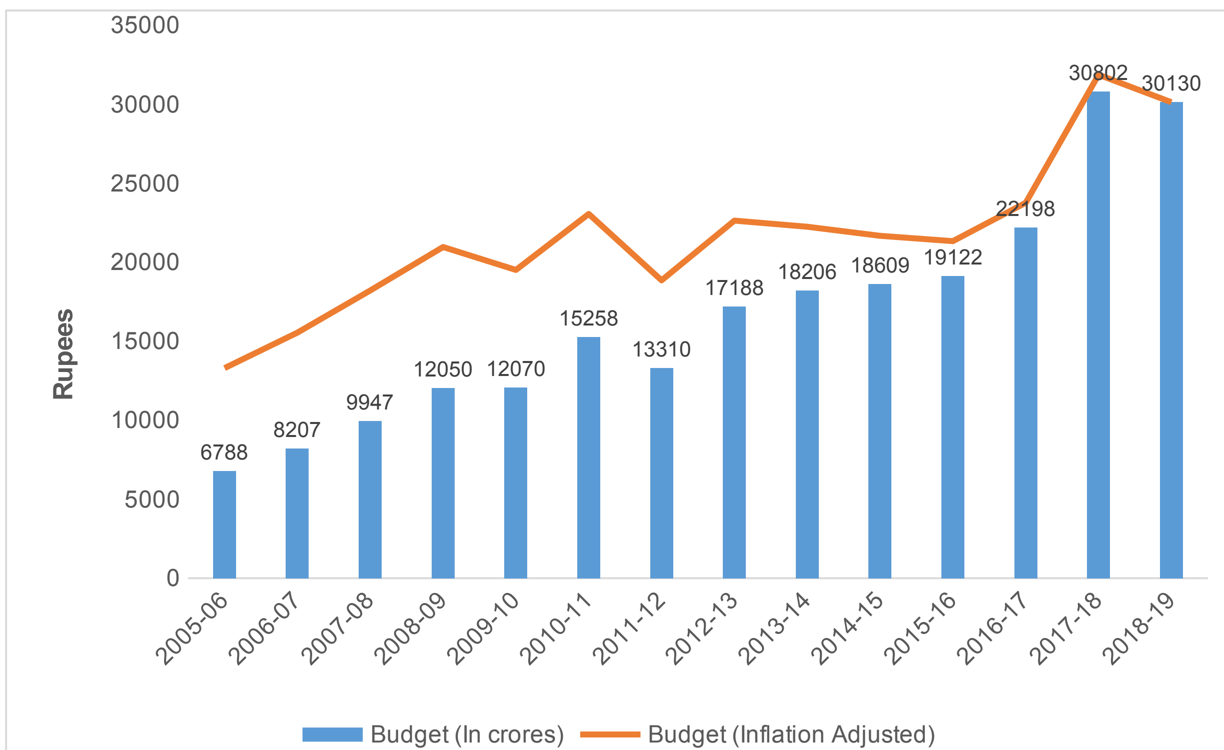

Figure 21 Fund Allocation under National Health Mission

Data source: India Expenditure Budget, Volume 2, Ministry of Health and Family Welfare; Union Budget, Government of India

Process of Decentralised Planning

As per various NHM documents, the following is the process of the PIP making. The planning is divided into two phases, (i) Preparation of program implementation plan (PIP) and, (ii) Re-planning after approval of the PIP. The consultative process is conceptualized in a way that grassroots level

health workers – ANMs, ASHAs, MPWs along with VHSNC develop the village plan and the sub-centre plan. This accounts for the need of the community in the area covered by that particular sub-centre. These plans are shared with the concerned PHC for incorporating the plan into PHC level plan documentation.

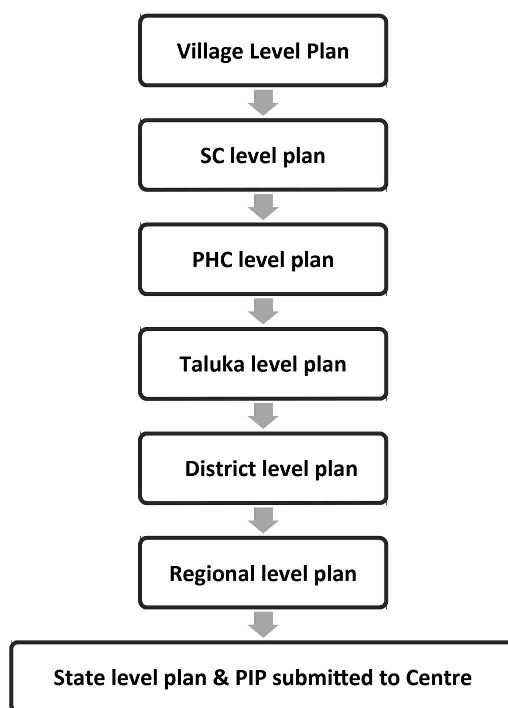

Figure 22 Stages of development of the Program Implementation Plan

As shown in the figure, the process is taken from the village level to the higher level. The regional team plays a dual role in the process of PIP planning. First, they review and compile the district and corporation plans. Secondly, they also prepare the regional health plan reflecting planning of CHCs, SDHs, DHs, and Medical colleges in the region. The team at the regional level also helps in pre-screening the action plans, improvising the plans and final submission to the state team. The state level planning unit reviews the regional, district and corporation plans and based on them prepares the state level PIP and action plan. Action plans from all levels are essentially inter-linked and therefore, inputs from respective state divisions become essential for successful program implementation. In 2017-18, three health systems components, namely, human resources, service delivery, drugs, and IEC were aggregated and approved at one place. Taking the same approach further, in 2018-19, all existing PIP budget lines of the preceding year (FY 2017-18) have been broadly categorized under the following 18 heads to bring in more flexibility in the planning process and to provide a summarized view of the State PIP for the program planners, program implementers, decision makers and other stakeholders.

Table 18 Budget Heads of the PIP

1	**Service Delivery – Facility based**
2	Service Delivery – Community based
3	Community Interventions
4	Untied Funds
5	Infrastructure
6	Procurement
7	Referral transport
8	Service Delivery – Human Resource
9	Training & Capacity Building
10	Review, Research, Surveillance & Surveys
11	IEC/ BCC
12	Printing
13	Quality Assurance
14	Drug Warehousing & Logistics
15	PPP
16	Program Management
17	IT initiatives for strengthening Service Delivery
18	Innovations

8.2 Findings

Capacity issues, especially at lower levels

Government health facilities at the level of blocks and below can become more responsive to population needs if funds are devolved to the Panchayati Raj Institutions (Village Council or its equivalent in the Scheduled Areas), and these institutions made responsible for improving public health outcomes in their area. This was done in Kerala some years ago and it had shown good results. However, a major issue that came to the light in most of the states is that proper PIP planning and budgeting process really starts only at the district level and not at the taluka or village level. Levels below that do send in their action plans based on the incremental target derived from last year's achievement. The fact that the lower level institutions were not effective in planning and budgeting, itself defeats the purpose of PIP which was a tool for decentralized decision making. The officials mentioned an urgent need to formalise the roles and authority of Local Self-Government bodies in securing convergence so that these bodies become stakeholders for sustainable improvements in health standards (Avan *et al.*, 2016).

Incremental budgeting

The preparation of the annual budget for NHM requirement is intertwined with the PIP preparation process. As unit costs are given to lower level facilities, Sub Centers and PHCs may not play any active role in budgeting. Based on the target they propose, the total amount for the respective facility is derived. However, while district level PIP is prepared, based on the priority some of the facility

specific items may or may not get reflected in the district PIP. This happens due to the incremental planning from the last year. This may directly hamper the funds proposed under certain heads like "Innovation", "IT support for strengthened service delivery". This is because these heads do not directly get reflected in the performance criteria that are based on outcome variables like maternal and child health indicators or NCD related indicators. Overall it seems that the PIP budgeting is just incremental over last year without much new strategies or new thinking from district or PHC level. It is largely an exercise of filling up the table provided from higher levels. The senior officials of MoHFW and NHM mentioned that in order to incentivise better performance by States, the Mission Steering Group of NHM had decided that 10% of the total allocation under flexi pools would be kept apart at the national level as an incentive pool which was subsequently increased to 20% for 2018-19. It is a step towards promoting performance based disbursement of funds, which the Expenditure Management Commission too had advocated. This sent a clear message to all the States that good performance would be monitored, acknowledged, and rewarded. This meant that while 80% of the resource envelope earmarked for the State would be assuredly available, 20% of the resource envelope would depend on State's performance on agreed conditions.

Issues related to flexibility

The common theme, that came out of discussions with different levels of officials involved in the PIP and budgeting and also those who supervise the process, is flexibility brought by NHM in health planning. NHM brings funds to the grassroots facility level and allows facilities to decide how the money should be spent. This financial power is limited but it is better than having nothing in hand when each and every facility may have different needs and priorities based on the need of the community being served.

State level officials revealed that as of now, from the village level SC and PHC facilities, an action plan is proposed. They may identify the various activities to be undertaken and the unit of resources required for achieving the proposed target for each line item in the Annexures of action plan. There are Annexures for each of the 18 heads of NHM PIP. However, the unit resource cost is decided by the higher levels- state level. So, in that sense, the facility may propose to undertake activities that may address community specific needs but do not have power to propose financial requirements for the same of modify the unit costs decided by the state level. However, under NHM there is provision of untied funds that may devolve this financial power to the facility level decision maker to a certain extent. This untied fund is an extra fund available to facilities over and above approved budget through PIP. But untied funds are very small proportion of the total budget of the facility. However, the flexibility lies in the planning and budgeting part and not in the implementation part once the plan (PIP) is approved for the year. So once the PIP is approved no changes are possible in it during

the year. State can send supplementary PIP, but in that also no new line item can be added if it was not originally budgeted.

Highly cumbersome and complex process

The SPMU and District Level Officials from all the states told that the PIP process has become cumbersome due to micro-budgeting of 1800 line-items under 18 different heads. The line-item budgeting and the minute level at which the planning and budgeting has to be done and the approval process is cumbersome. This affects the efficiency of the PIP process itself. Budget lines increased from very few initially in 2006 to 600, then to 1800. This was perhaps due to scams related to NHM funds in UP and other states. Majority of the officials were of the opinion that 1800 line-items are too many and requires a relook to be reduced drastically in number. However, some officials opined that this is required in public services to avoid scams like one happened in the state of Uttar Pradesh. This view of having detailed line item budgeting also advocated due to no monitoring system at the level of facilities below the block level. It allows flexibility in planning but rigidity in expending post approval. The tedious process affected the flexibility and utilization adversely, as explained by some officials.

Flexibility in re-appropriation of funds across various heads of approved budget has very limited scope. There is limited flexibility to re-appropriate amongst different 18 heads listed above. Some of the officials suggested to cut down on the number of heads from 18 to 5 by clubbing some of the heads together and bringing more flexibility. The line-item budgeting process also makes it a cumbersome process to get approvals for the re-appropriation even within the same head. Moreover, if more flexibility is provided then a system of monitoring to keep a check on the usage of the flexibility and funds has to be in place.

Underutilization

The state government officials explained that there was significant underutilization of funds released under NHM, though the scenario varied across states. There were several reasons for underutilization.

It may stem from the inflationary tendency while planning and budgeting based on last year's achievements. At times there is a tendency to over budget due to incremental targets. Additionally, the underutilization may also be attributed to the huge fund releases in the last quarter of the financial year. This may not leave enough time for implementing planned actions for what the funds are budgeted.

The SPMU and NHM Finance Department Senior Officials stressed that the issue of micro-budgeting of around 1800 line-items has also resulted in some underutilization of funds as well. This

is somewhat taken care of with minimal flexibility allowed within a head but due process of approval of re-appropriation is cumbersome (Das Gupta *et al.*, 2009). The system of not allowing funds to be used across pools/heads sometimes limits the expenditure made by the facility as they may not see any extra utility by spending for the activity for the specific activity and limited scope of transfer of funds for other desired activities.

Routing of funds through treasury leading to delays

The State health department and SPMU officials revealed that initially under NHM, the funds were transferred directly to SHS from central government. However, this route was changed in 2014 and now the funds from centre come to state treasury and then devolved to SHS for better monitoring of the fund utilization. However, this may be a cause of delay in fund transfer. State treasuries have been asked to transfer these funds to SHS within 15 days of receipt of funds from the centre, but same is not happening. In the state of Rajasthan, the average time for receiving fund from treasury to the SHS is 70-80 days, as reported by NHM finance officials. Sometimes, state may not transfer their share to SHS in stipulated time, or do it partially. On many occasions, funds are transferred to SHS accounts without any intimation about the budget items for which the funds can be utilised. In this case, even though SHS may have received funds, it may not get devolved to lower levels as authority may not know the purpose for which funds can be transferred to facilities. For instance, in Uttar Pradesh, in the year 2017-18 and 2018-19, on average it took 2-3 months for fund to reach from state treasury to SHS.

NHM Fund Flow in Uttar Pradesh

- On average, in, time taken to release funds from state treasury to SHS was about 2-3 months.
- In both the years, the SHS received almost all funds from the state treasury in the 4th quarter.
- More than 50 per cent of NHM expenditure was incurred in the last quarter in 2017-18.
- In 2017-18, more than 85 per cent of funds received were credited in the last 2 months of the FY (February and March). Similarly, in 2018-19, around a quarter of the funds received by SHS was credited in the last 2 months (February and March)
- In both 2017-18 and 2018-19, all funds released to state treasury by GoI could not be credited to SHS bank account within the financial year (FY). In 2018-19, around a quarter of the funds released to state treasury by GoI could not be released to SHS within the FY. In 2017-18, this was about 14 per cent.
- In 2018-19, nearly 50 per cent of the state share due was not released to SHS.

Table 19 Number of days taken to credit Central Share in SHS account of Uttar Pradesh

Between issue of SO by GoI and receipt of funds in the State treasury				Between receipt of funds in State treasury and credit to SHS Account		
# days	Amount credited (Rs. Crore)	Distribution (%)	Average days	Amount credited (Rs. Crore)	Distribution (per cent)	Average days
			2017-18			
0-7	810.62	45.90	4	156.52	-	1
8-15	-	-	-	-	-	-
16-30	955.58	54.10	20	157.05	8.89	22
31-90	-	-	-	297.38	16.84	83
90-180	-	-	-	1155.25	65.41	113
180+	-	-	-	-	-	-
Total	**1766.20**	**100**	**-**	**1766.20**	**100**	**-**
			2018-19			
0-7	1624.98	100	1	-	-	-
8-15	0.01	0	12	-	-	-
16-30	-	-	-	-	-	-
31-90	-	-	-	1319.98	81.23	65
90-180	-	-	-	305.01	18.77	113
180+	-	-	-	-	-	-
Total	**1624.99**	**100**	**-**	**1624.99**	**100**	**-**

Source: The data on the date of receipt of funds in the State treasury is sourced from Finance Department, Uttar Pradesh. Data on the date of credit of funds to SHS account and date of SO are collected from SHS, Uttar Pradesh. The dates of SO were also cross-checked with the list of SO provided by the Ministry of Health and Family Welfare.

Note: *In 2017-18, Rs. 286.15 Crore received in the State treasury could not be credited to the bank account of SHS by the end of the financial year. It was adjusted in the next financial year. In 2018-19, the amount was about Rs. 574.55 Crore.

Courtesy: Dr. Mita Chaudhry, NIPFP.

8.3 Recommendations

8.3.1 Incremental budgeting to performance based long-term budgeting

Line item budgets were (and in a number of countries still are) associated with an "input-oriented" budget preparation with detailed ex-ante controls and/or rigid appropriation rules. However, NHM and health systems across India should be governed towards realization of health indicators in alignment with the SDGs. So rather than opting for input-based budgeting, we need to move towards performance-based budgeting. The current system of PIP/budgeting takes care of inputs proposed vis-à-vis the inputs last year. Whereas, performance budgeting stems from the objective and purpose of the health system and vision of achieving certain benchmark indicators. It is in alignment with

what it ought to be instead of what it was last year. It is a future-looking method of budgeting. All programs, initiatives and inputs are planned according to what we intend to achieve in the long run. The core in this process is outcomes and not the inputs. In a performance based budgeting process, the focus is on target parameters for example reducing the maternal mortality to 50 per 1000 live births: what all initiatives/activities/ resources will be required and correspondingly how the expenditure needs to be planned.

8.3.2 Longer term PIPs

PIP action plans need to be forward looking for five or at least three years. Every year, 20 % of the plan can be modified and approved separately, whereas 80% would remain constant for a period of 3 years and would not require annual re-approvals. This would provide a longer tenure to contractual staff, thereby alleviating their job security woes. The same would enhance the motivation and commitment of the staff which is a challenge as described in the section below. It would also help reduce a lot of planning and paper work which is currently carried out on a yearly basis. Further, it will also decrease the drastic changes that are often seen in the PIP when senior functionaries change. Many activities such as construction, training, staffing, system development, take long time to complete so assured 3-5 year plans will help take up such activities. The vision of the health system may be defined by top authorities at central level in consonance with all related departments involved in SDG achievements, as described above. This vision may be devolved and communicated to the states and then grassroots level. Once this is done, decentralised planning under PIP may start at village level and gets integrated into higher-level action plans at state and district levels. A 3-5-year PIP will help in maintaining continuity of such grassroots level planning.

8.3.3 Reducing the number of budget heads

Line item budgets have many advantages like easy to make, easy to monitor and analyse. It is also efficient in maintaining a track of expenses, even the minute ones as health PIP/Budget has numerous line-items. However, it brings the culture of non-fluid and short-term planning. It does not allow any deviation from the approved budget. The clubbing of heads as suggested above may work to bring some flexibility, albeit limited only. Reduction in the number of heads in PIP/Budgeting is strongly recommended. This is to bring more flexibility. As of now the re-appropriation is not allowed across the major heads. However, if the number of heads is reduced the flexibility may increase. The budget heads related to service delivery may be clubbed and sub-heads of ICT, HR and innovation may be continued. In a nutshell, from 18 heads, the number of heads should be brought down to 5 or 6. For instance, under JSSK, there are 13 budget lines which can be merged into one. Under maternal health equipment, there are 11 budget lines that can be merged. By merging these line-items, flexibility under a sub-head may increase. This provides the opportunity for ground-level

authorities to take decisions as required at their own level. The idea is that beneficiaries should not suffer from service denial, especially when funds are available, but under other budget heads, and unutilised. The road map for reduction of 1800 line items could be to bring it down to 1000 in the first year and in 2-3 years make it about 500 under 5-6 major heads. The fraud and deviance detections should be done through financial audit and control rather than through budgeting.

8.3.4 Software based planning

PIP/ Budgeting should become online where most of the aggregation and duplication work may be done by backend software. Program Management Unit may invest their energy in more productive work. Even monitoring the utilisation of funds post-approval may also be possible real-time. Many new data variables may be captured that may enhance the efficiency of the process and system.

8.3.5 Restructuring of PIP and Budget to enhance utilization

This is an innovative suggestion. The budget should be split into two main components: first regular budget of 100% say part A and additional budget of about 30% as part B. Both budgets should be approved via the regular NHM process. In December total expenditure should be reviewed to see if Part A will be spent to 100% by March end. If it is not likely then during January-March period Part B can be activated which should have such items that can be quickly implemented. So that finally with A and B put together 100% can be spent by March end. Part B could be put to use towards the procurement of long term assets, large medical equipment, vehicles, and medical supplies including drugs, which can be used in the next year and year after year.

8.3.6 Allowing space for innovation

NHM allows to propose activities under "Innovation" head but largely this is limited to address day-to-day operational issues like extra transportation required by patients – this is not innovations. This fund is meant to be invested in some community needs-based innovation like new forms of outreach activities, child health, or handling socioeconomic or behavioural issues that directly impact health. For this health department should involve NGOs, universities and community based organizations. Especially in difficult areas such as forests, tribal area, deserts etc government health system is not able to reach effectively. There the funds can be given to NGOs and CBOs to provide basic health care services.

8.3.7 Exigency funds

There may be some additional fund available at the district or block (*taluka*) level, or even at the directorate level to be used in case of exigencies where a facility or group of facilities may want extra funds for some activities relevant to community needs, and they have utilised their 100% of budgeted funds. It would be better if a particular amount is sanctioned/entered into PIP budgeting that allows for this fund at State level with Health Directorate to be used when needed. For example,

for some sudden epidemic like COVID-19, or some emergency like floods or cyclone etc. such fund may be very useful.

8.3.8 Rethinking the distribution of untied funds

It was proposed that the quantity of untied funds should be increased. The overall value of untied funds needs to be increased in accordance with the number of programs, activities, and the rapidly growing numbers of beneficiaries. Funding sources and utilisation of high performing PHCs should be reviewed and the excess funds should be diverted to those centres that are actually in need, though they might be poor performing facilities and specifically for newly established facilities. It was put forward that a formula could be worked out to assess fund utilisation and facility performance, in addition to placing caps on the total amount a single facility could receive in a given time period. This could then streamline future disbursement to maximise the effectiveness of untied funds. Moreover, the development of health facilities and the technical and decision making capacities of their respective RKSs should proceed hand in hand. Different norms for fund disbursement to UPHCs should be put in place. At the very least, the fund value should be equivalent to that of rural PHCs. Changing the signatory for untied funds at the village level from the *Sarpanch/Pradhan* to the MO of the PHC would ensure their allocation to SC/HWC in need and proper utilisation. Lastly, 5%-10% of the untied funds should be earmarked for emergency management, innovations, and health system strengthening.

8.3.9 Funds for external monitoring and evaluation

One to three percent of PIP funds should be earmarked for external monitoring and evaluation. This can be done by local universities, national institutes, NGOs or an expert team constituted by the govt. Special focused studies and surveys can also be commissioned by the state to assess the progress. These funds can be also used by state to pay to SRS system to double or triple the SRS sample in the state so that maternal mortality, sex ratio, child mortality etc estimates can be obtained with a larger sample and more detailed analysis.

9 Key issues and recommendations

9.1 Governance and structural aspects at central and state levels

9.1.1 Issues

- Lack of coordination between the directorate and NHM
    - (Exception few states such as TN, Odisha and Gujarat)
- Some of the directorates, indeed, weakened after implementation of NHM
    - Capacities of directorates in different states is highly variable
    - No HR planning for future even for the top leadership roles
    - High turnover at the top due to the structural legacies including pension determination
    - Lack of proper career planning and related interventions
- Uneven adherence to the proposed frameworks under the blueprint of NHM

9.1.2 Recommendations

Coordination and integration mechanisms between NHM and Directorate of Health Services

NHM implementation should aim towards strengthening the public health care delivery system including through administrative reforms. The implementation plan should incorporate strategies, guidelines, and frameworks for integration.

Role clarity

There should be a defined role of both the MD-NHM and directorate officials in the implementation of various programs in the state. The technical and administrative capabilities of the two stakeholders can be enhanced with clearly documented roles of respective representatives with no role ambiguity.

Structures for coordination at central and state levels

MGS structure is useful and should be continued. Appropriate representation of DGHS in MSG and other decision making bodies is essential and the same may be initiated through structural and process interventions such as adequate representations in committees, MSG also can be expanded to include adequate representation of "Management and social science expertise" from relevant academic institutions.

State Health Mission should be structured as a multi-sectoral entity and the meetings should be regularized and should follow proper planned processes. The SHM and SHS should have adequate representation of directorate officials. The SPMU should also have representation through deputation of appropriate regular employees of directorate. Further, adequate representation of experts from academic institutes and public health experts should be ensured in SHM and SHS.

Design of cooperative processes

Under Central NHM guidelines various measures should be taken for enhancing coordination and integration. States should have strategies to build joint ownership for directorate and NHM with proactive engagement and involvement of the directorate officials in planning and execution/review as per official protocols. The NHM should conduct joint reviews with the directorate and some programs should be monitored by the latter. The joint review can be done every six months. The strengthening of directorate is also required for a long-term sustainable system of proper program planning and effective implementation. This is discussed further in the section below.

Capacity Building of Directorate of Health Services

HR Audit of the directorates

Directorates need to plan for adequate technical, financial, human resources and infrastructure. The directorates should initiate a detailed HR audit in terms of manpower requirement for the next three to four years, leadership pipeline and career planning mechanisms. The HR audit document then can serve as a guide for designing systems and processes; and also plan the use of funds and mechanisms enabled in NHM. These audits need to be carried out by a third party, preferably an academic institute.

Career planning and capacity building

Senior officials of directorate of health services should be given periodic well-planned exposure to short course training on various aspects of public health management- epidemiology, health care financing, hospital management, community process, human resource management, quality of care, HMIS, and communication etc. For strengthening of directorate a well-designed HR strategy is required. Well trained, technically competent consultants and officials of the SHS may be deputed in the directorate and regular cadre officials of the directorate can be placed in the SPMU. This strategy will facilitate instilling work-culture in directorates through development of skilled health workforce thereby gradually building the ownership of NHM (Rajasthan has appointed). Ideally capable directorate officials, who are the technical experts should be owning and driving the programs while NHM will provide administrative and financial support. Further, senior officials at the directorate should be appointed for at least 3 years. Promotion criteria need to be made more transparent, and a major restructuring of the directorate is required. At certain level mid-career positions in the directorate through lateral entry can be considered (faculty from medical colleges, public health institutes, and management institutes). Even short term additional senior advisor positions can be created for specialized roles such as logistics and procurement and other program specific roles such as immunization, MCH, health communications, health systems, vaccination etc. Even we can

envisage some experts from International organisations, international institutes, and experts from different countries can be deputed in the directorate.

9.2 Human Resource for Health

9.2.1 Issues

- Limited focus on long term planning for HRH
- Uneven distribution of manpower across levels and programs resulting in duplication
- Motivational issues amongst contractual staff
    - Significant variation in salary of contractual versus regular staff
    - Substantial difference in work allocation with most of the work being done by contractual staff
    - Prestige issues associated with contractual staff
- Processes defined in the blueprint not being followed (Regularization)
- Lack of uniform HR policies across states

9.2.2 Recommendations

Online information system for HRH and HMIS data

An integrated HRIS and HMIS system need to be designed and implemented to provide data on (lack of) availability of different cadres of health workers. HIMS data entry and reporting can be made decentralized by making it attractive to the peripheral health workers and block health officers by creating user-friendly dashboard.

Uniform policies across states such as for recruitment, regularization

Health professionals need to be hired only from colleges/ institutes with high repute, in order to maintain quality. (For example, Tamil Nadu hires only from government medical colleges). The NHSRC can help in developing standard policies for a uniform system across the country. States should also be mandated to convert a certain percentage of contractual staff in every position to permanent, every year.

Rationalization of compensation

Systemic rationalization in compensation needs to be implemented to curb the huge gap between contractual and regular employees. This should come from NHM guidelines so as to ensure that it is uniformly implemented, and the central NHM can be in a position to exert pressure on states. For example, nurses under NHM contracts can be made regular employees when vacancies arise in the system. This practice allows for a suitable probation period, at the same time nurses do not feel that they are discriminated against in terms of pay. The process can be made fair for example by providing additional weightage to these employees while being considered for regular employment.

HR mapping and Audit, training and performance monitoring

A robust HR mapping, rationalization, HR audit exercise should be done by third party or independent academic institute/ organization to ensure that the number of human resources allotted to a particular program, activity, or health facility is optimal.

Collaborating with academia for enhancing quality of HRH

Respective state councils should be strengthened and given the stewardship of monitoring the quality of training for various technical positions. Strengthening should consist of an assessment of the existing knowledge capacities of the faculty at these councils, and extensive training of trainer programs to ensure high quality training down the pipeline

Need based training programs with special focus on soft skills

Apart from technical and skill-based training, behavioural training should be designed for managerial and support staff. Orientation training should be strengthened where attrition is high, at the DPC level for instance. For ANMs posted to rural sub-centres, regular refresher training should be conducted so as to provide a periodic assessment and update of their skills. The effectiveness of these training programs need to be assessed and monitored with course corrections suggested as and when required

Strategies should also be put in place to monitor the skills and knowledge of the health workforce from time to time. This should be accompanied by gap assessment exercises and customised refresher training for different cadres of workers, including techno-managerial staff. Efforts should also be made to bring in international best practices, and include these in the training of personnel.

Objective performance appraisal mechanism

Performance appraisal mechanisms should be objectively linked to job-specific indicators and the appraisal process should be linked with contract renewal and the award of performance-based incentives. There should be a band system in compensation to accommodate candidates with all levels of experience.

Building a cadre of Public Health

While the directorates have technical knowhow and the SPMUs have administrative competencies, there is a need for developing and nurturing public health cadre. For example, it is done in Tamil Nadu and is being planned in Odisha. The public health cadre should be designed and developed as a multi-disciplinary and multilevel including doctors, social scientists, nursing, management, statistics etc. The cadre can be designed similar to the central and state administrative services. The services should have adequate power, prestige and processes, the establishment of a separate state level

Directorate of Public Health and Preventive Medicine. This organisation, in addition to having a dedicated budget of its own, and significant power and operational authority, is staffed by a techno-managerial cadre trained and experienced specifically in public health.

9.3 Preparing a strategic plan for healthcare delivery systems in the states

9.3.1 Issues

- Lack of roadmaps for planning and monitoring
- Lack of awareness about the health goals and related HR requirements
- Issues in work allocation
    - Specialists put in administrative role
    - Technical staff not trained in administrative and managerial capabilities
- Motivational concerns amongst the frontline staff (Contractual staff in NHM)

9.3.2 Recommendations

Preparing a strategic plan

The states need to prepare a strategic plan (Three years at least) based on the current public health circumstances, the health burden, infrastructure and human resources aspects. The plan can incorporate the current socio-economic and geographical circumstances of the state. This document can be then used in designing structures, systems and processes for implementation. The strategic health plan needs to be in tune with state development plan and SDGs. The health plan should also be in sync with other similar departments with overlapping goals such as women and child development, social justice etc. The same plan can be used for budgeting, implementation, monitoring and evaluation, and course corrections if required.

Systematic HR planning

States should have a dedicated division with adequate staff for HR planning, especially forecasting requirements for different types and specialisations among healthcare workers, and considering the changing disease profile and dynamics of the population. The cell should not limit itself to public systems only but also monitor HR available in private sector so that a more holistic view can be undertaken

It is suggested that nurses and doctors can be distributed across the country from high supply regions to high demand regions without the need of opening institutes all over India. Provisions should also be made to ease international hires in areas where the demand for health workforce is very high. On

the other hand, available human resources, especially laboratory technicians and physicians should be utilised to their full potential without creating duplicate positions across vertical programs.

HR Rationalization

The above detailed document can pave the way for overall HR rationalisation. To remove excess manpower such as additional program managers, data entry operators, and financial assistants. Moreover, in areas where healthcare professionals are already low in number, physicians should be removed from administrative positions and posted to facilities for clinical work.

Creation of specialist cadre and role rationalization

State may consider creating a specialist cadre to enhance the recruitment possibilities. There can be a separate promotion and transfer system for the specialists for example providing a place of choice after a posting of three years in a remote/ difficult area.

9.4 Technological challenges in HMIS

9.4.1 Issues

- Use of multiple parallel systems
    - Duplication of work- Manual and IT
    - Lack of Data availability
    - Poor interoperability
- Challenges of data based decision making
    - Authenticity of data collected
    - Data analysis capabilities and communicated

9.4.2 Recommendations

Single standardized system for data collection and reporting

A unified standardized system for data reporting should be created for all processes. The system design should ensure ease of use as these systems will be used by the frontline workers. The HMIS design should value the actual situation rather than the desired goals. The same requires a cultural change and a top down approach. Private sector must be mandated to provide at least minimal data on a periodic basis on priority health care conditions and outcomes. The state health report should include private sector data also.

Ensuring quality of data

Data triangulation and verification mechanisms should be designed and implemented to ensure the quality of data. AHS, NFHS and DLHS could be considered as third party source of periodic information for assessing the impact of the health interventions on the community. Based on these

and other data, a District Health Profile of each district can be prepared. These data could be used as an input for policy initiatives, making mid-course correction, decision making and for review of policy planning.

Integration of physical and financial data

Presently, HMIS web portal captures the physical (health indicators) and financial data (FMR reports). The MoHFW should formulate a strategy for integration of the physical and financial reports and performance. This will help in getting better insight on what should be precisely tracked, documented, and analysed. The integration will also help in carrying out cost benefit or cost effective analysis for different programme heads. Each level of public service delivery should calculate the cost of various services, so as to develop cost effectiveness culture within the system.

Expansion and improvement of health indicator data

Efforts should be put towards improving the civil registration of births, deaths, and cause of death. The Government should invest in the expansion of the SRS sample to ten times its current size, by paying funds to the Registrar General of India. Every state should be tasked with selecting at least 3 districts with the aim of improving the Civil Registration System (CRS) on a pilot basis, in the coming two years. This would lead to reliable estimates of IMR, MMR, and CBR. This system will also generate independent data on hospital deliveries, home based deliveries, life expectancy, sex ratio at birth etc. The vision for the next decade should be to improve the CRS to such an extent that the SRS is made redundant. The SRS should also collect data on additional variables such as age at marriage and details of hospitalizations.

Capacity Building and Training

Capacity Building of staff at all levels from facility, district, and state levels is critical for proper recording, reporting, and analysis of data. This will also help in better interpretation of collected data for micro-planning and initiating actions at local levels in a timely manner. Programme managers at all levels need to be acquainted with the power and features of the HMIS portal and also triangulating various data. The vast potential of academic institutions and universities and public health institutes needs to be utilised for training on basic research methodology and analysis tools.

9.5 Enhancing the effectiveness of PIP process

9.5.1 Issues

- PIP process is largely based on incremental planning based on last year's performance
- Long term orientation missing
- Phase wise release of funds causes significant underutilization

- Too much micromanagement by the 1800 line items
- Lack of provisioning for mid-term corrections
- Limited scope for innovation and community based initiatives

9.5.2 Recommendations

Incremental budgeting to performance based long-term budgeting

Line item budgets were (and in a number of countries still are) associated with an "input-oriented" budget preparation with detailed ex-ante controls and/or rigid appropriation rules. However, NHM and health systems across India should be governed towards realization of health indicators in alignment with the SDGs. So rather than opting for input-based budgeting, we need to move towards performance-based budgeting. The current system of PIP/budgeting takes care of performance vis-à-vis what was achieved last year. In that sense, it motivates the improvement in outcomes. But it is not enough.

Whereas, performance budgeting stems from the objective and purpose of the health system and vision of achieving certain benchmark indicators. It is in alignment with what it ought to be instead of what it was last year. It is a future-looking method of budgeting. All programs, initiatives and inputs are planned according to what we intend to achieve in the long run. The core in this process is outcomes and not the inputs.

Longer term PIPs

PIP action plans need to be forward looking for five or at least three years. Every year, 20 % of the plan can be modified and approved separately, whereas 80% would remain constant for a period of 3 years and would not require annual re-approvals. This would provide a longer tenure to contractual staff, thereby alleviating their job security woes. The same would enhance the motivation and commitment of the staff which is a challenge as described in the section below. It would also help reduce a lot of planning and paper work which is currently carried out on a yearly basis. Further, it will also decrease the drastic changes that are often seen in the PIP when senior functionaries change.

The vision of the health system may be defined by top authorities at central level in consonance with all related departments involved in SDG achievements, as described above. This vision may be devolved and communicated to the states and then grassroots level. Once this is done, decentralised planning under PIP may start at village level and gets integrated into higher-level action plans at state and district levels.

Reducing the number of budget heads

Line item budgets have many advantages like easy to make, easy to monitor and analyse. It is also efficient in maintaining a track of expenses, even the minute ones as health PIP/Budget has numerous line-items. However, it brings the culture of non-fluid and short-term planning. It does not allow any deviation from the approved budget. The clubbing of heads as suggested above may work to bring some flexibility, albeit limited only. Reduction in the number of heads in PIP/Budgeting is strongly recommended. This is to bring more flexibility. As of now the re-appropriation is not allowed across the major heads. However, if the number of heads is reduced the flexibility may increase.

The road map for reduction of 1800 line items could be to bring it down to 1000 in the first year and in 2-3 years make it about 500 under 5-6 major heads. The fraud and deviance detections should be done through financial audit and control rather than through budgeting.

Software based planning

PIP/ Budgeting should become online where most of the aggregation and duplication work may be done by backend software. Program Management Unit may invest their energy in more productive work. Even monitoring the utilisation of funds post-approval may also be possible real-time. Many new data variables may be captured that may enhance the efficiency of the process and system.

Restructuring of PIP and Budget to enhance utilization

The budget should be split into two main components: first regular budget of 100% say part A and additional budget of about 30% as part B. Both budgets should be approved via the regular process. In December total expenditure to be reviewed to see if Part A will be sent to 100% by march end. If it is not likely then during January-March period Part B can be activated which should be such that can be quickly implemented. So that finally with A and B put together 100% can be spent by March end. Part B could be put to use towards the procurement of long term assets, large medical equipment, vehicles, and medical supplies including drugs.

Allowing space for innovation

NHM allows to propose activities under "Innovation" head but largely this is limited to address day-to-day operational issues like extra transportation required by patients. This fund is meant to be invested in some community needs-based innovation like outreach activities, child health, or handling socioeconomic or behavioural issues that directly impact health.

Exigency funds

There may be some additional fund available at the district or block (*taluka*) level, or even at the directorate level to be used in case of exigencies where a facility or group of facilities may want extra funds for some activities relevant to community needs, and they have utilised their 100% of budgeted funds. It would be better if a particular amount is sanctioned/entered into PIP budgeting that allows for this fund at State level with Health Directorate.

Rethinking the distribution of untied funds

It was suggested that funds should be linked to each healthcare facility in order to be productive. It was also proposed that the quantity of untied funds should be increased. The overall value of untied funds needs to be increased in accordance with the number of programs, activities, and the rapidly growing numbers of beneficiaries.

Funding sources and utilisation of high performing PHCs should be reviewed and the excess funds should be diverted to those centres that are actually in need, though they might be poor performing facilities and specifically for newly established facilities. Different norms for fund disbursement to UPHCs should be put in place. At the very least, the fund value should be equivalent to that of rural PHCs. Changing the signatory for untied funds at the village level from the *Sarpanch/Pradhan* to the MO of the PHC would ensure their allocation to SC/HWC in need and proper utilisation. Lastly, 5%-10% of the untied funds should be earmarked for emergency management, innovations, and health system strengthening.

9.6 Monitoring and evaluation mechanisms in the state

9.6.1 Issues

- Based on the lack of a strategic health plan, there is a lack of monitoring and evaluation of the work done in the state
- No uniform structure for monitoring and evaluation
- Less room for mid-level course correction

9.6.2 Recommendations

Regular Annual Performance Report

A portion of NHM funds should mandatorily be dedicated to the creation of a detailed annual report by each state, submitted to the central government, and made available to the public. This report should be standardised by the central NHM so that there is uniformity in reporting structure across states. There should also be some budget for carrying out research studies on situational analysis, diagnosis of the public health system, documenting best practices under NHM, cost-effectiveness of innovative interventions. This initiative will help in enhancing the effectiveness of M&E systems and

also result in high quality evidence generation which can be applied to the development of health research capacity in states. Facility, block, and district wise targets should be set for continuous monitoring.

Independent Evaluation

Every 3 years, 1% of the annual budget of NHM should be spent towards independent evaluation studies of the mission, and various programs under it. A technical panel compromising multi-disciplinary experts from public health, health policy, health systems, epidemiology, health financing, and M&E should be constituted by central and state NHM for regular independent review and evaluation. Academic and public health institutes can also be enshrined with this responsibility. A well designed centralised strategy should be put in place to ensure uniformity in the independent evaluations conducted at national and state levels.

Involvement of Directorate of Health Services Officials in M&E

Directorate officials and regular state cadre employees should be involved in M&E. This would also enhance their understanding of the health system and various procedural aspects of programs. This would also improve the ownership of the programs by the directorate. Involvement of directorate in M&E can enhance the quality of recommendations and justifications for mid course corrections.

Creating a separate department for M&E

A directorate with its own director should be created for M&E, staffed with demographers, epidemiologists, and experts in public health, evaluation, and data analysis. The function of this directorate would be to integrate the current fragmented M&E processes of various divisions and NHM within the state including SPMUs. The directorate should be tasked with developing the annual M&E report within two months of the year end. Such reports should also include data from PPP arrangements and the private sector as much as possible, especially for notifiable diseases, services provided for health insurance/ *Ayushman Bharat* schemes, etc.

9.7 Procurement and logistics systems

9.7.1 Issues

- Lack of capabilities in the area of procurement and logistics
- Poor awareness about the use of generic drugs
- Limited adherence to STGs

9.7.2 Recommendations

Strengthening Technical Capacity of Medical Services Corporations

The technical capacity of Medical Service Corporation requires strengthening and training of existing personnel in the area of Logistic Planning and Drug Distribution is necessary. Further, restructuring of medical service corporation is also required, in which technical experts- Health Economist, Procurement Specialist, Logistics Planning Specialist, IT-Expert and M&E expert should be appointed at medical service corporation. This will improve the functioning and efficiency of corporations.

Strengthening Quality Assurance System

Ensuing quality of drugs is very essential for patient safety and responsive health systems. The quality assurance practices should be in accordance with the operation guideline of the Ministry of Health and Family Welfare, Government of India. Planned and regular monitoring from Central NHM is necessary for ensuring adoption of efficient quality assurance systems.

Implementing Bottom-up planning

The E-Aushadhi and IT-backed Logistic Management Information System like Drugs and Vaccines Distribution Management Systems (DVDMS) have been implemented in most of the states. However, it is not fully functional at the peripheral level that is hampering the bottom-up planning. The ground level functionaries- Primary Health Centres and Community Health Centres have not been able to carry out indenting and planning. The bottom-up planning should be implemented with requisite technological changes and capability building initiatives.

Group Procurement

Drugs such as antibiotics should be procured as a basket of similar products. This will be essential in order to make drug procurement more efficient and reduce unnecessary paperwork. This would further reduce the wastage/ unutilized drugs. Group procurement will also have the advantage of making vendors more amenable to supplying to the government as the order values will be much higher.

Training and Capacity Building

Training of officials at various levels for implementing E-Aushadhi and carrying out various logistic activities- forecasting, quantification and inventory management is required for making Logistics Planning and Drug Distribution system more efficient and effective. Standard training manual and workshop material along with case studies for training and capacity building can be designed and implemented. The training of medical officers for rational use of medicine, prescription audit and managing drugs is essential.

Community Awareness

The awareness about generic medicine and rational use of medicine among communities is required. A communication strategy and IEC material can be developed in the local language for wider awareness. Use of social media, mass media, and electronic media will help in larger awareness.

Implementing Standard Treatment Guidelines and Prescription Audit

The state should implement STGs across all levels of health systems and prescription audit practices should be initiated for improving quality of care. At least 2% of the annual procurement budget should be devoted to STG implementation and prescription audit. This will have the advantage of preventing unnecessary drug consumption and its side effects. 1% of prescriptions made in each facility should be audited periodically to study prescription patterns. Tee results can be then used to address supply chain issues and physician strategies can be revised.

9.8 ASHA workers

9.8.1 Issues

- ASHAs are becoming healthcare delivery personnel rather than the envisaged activist role
- Too much workload and duplication of data entry tasks
- Recruitment criteria needs to be revisited, especially in urban areas
- Lack of career path for ASHAs
- Limited supervision and support structure for ASHAs

9.8.2 Recommendations

ASHA Recruitment and role

Entry qualification criteria into the ASHA program should be standardised. The Medical Officer, ANM, or CHO should be given a say in ASHA appointment in rural areas in order to control the influence of political actors. In urban centres, the entry qualifications for ASHAs could be increased, especially in non-slum areas. While ensuring that the ASHA is a local community resident, other recruitment criteria can be made flexible across regions considering their socio-geographical complexity and the availability of suitable candidates. In the long run it is suggested to replace the ASHA with a community health nurse who would be a high school graduate with 6-12 months of training in community health and outreach work.

Compensation and recognition

The fixed honorarium amount should not be increased. As the ASHA model is performance-based and incentive driven, there should be a balance between the two components, fixed and variable. This will enhance the motivation and performance of ASHAs. A mixed incentive structure with checks for complacency will serve a dual purpose-the fixed component ensuring their financial

safety thereby preventing attrition, and the variable component serving to motivate and consequently maintain the quality of their work. Performance awards like "ASHA of the month" could be put in place at the block level to introduce a competitive spirit among these workers. A provision could be made for an increase in the incentive amount for ASHAs with consistent performance over a period of time, but reasonable caps should be in place.

Training and knowledge enhancement

While there are standardized training modules for ASHAs, the same may be reexamined for contemporary challenges like NCDs, and skills related to behavioral aspects of the community. Further, cross learning and knowledge sharing amongst ASHAs can be promoted by adopting structural interventions (Such as ASHA *Sammelan*s in Gujarat). The ASHA *Sammelan* model of Gujarat could be adopted by other states to facilitate knowledge sharing among ASHAs of various regions within a state. This would serve as a confidence building exercise for all ASHAs, and help document best practices at the field level, which could then be taken up the chain to policymakers. Other replicable features from Gujarat include the ASHA Resource Centre plans and organises these *Sammelan*s at the state, district and taluka levels, and a State ASHA Mentoring Group.

Monitoring

ASHAs should be monitored regularly by the ANM or the CHO, and mechanisms should be put in place to remove non-performing or inactive workers within 3 months. The activities for which ASHA are incentivized should also be revisited, and the focus should shift in accordance with the changes in the epidemiological profile of the community they serve. The NRHM's focus on reproductive and child health has limited the ASHA's scope of work with increasing focus on select services. The activist role of this cadre of workers needs to be highlighted more going forward, especially health promotion activities.

There should be a dedicated cell for ASHA at the Government of India level. This would aid in the consolidation of all ASHA related issues and monitoring would become efficient. The National ASHA mentoring group should conduct periodic evaluations and performance measurement uniformly across all states.

Career Progression

Open schooling through NIOS should be facilitated to enable ASHAs to pursue university level education. This is a long term recommendation that will help increase female literacy in the country, as well as improve ASHA performance.

Mechanisms should be put in place to allow ASHAs to progress to ASHA facilitators and ASHA coordinators. Specialisations like mental health, family planning, yoga etc. could be offered to

ASHAs with aptitude and measurable good performance in these particular areas. Further, district wise reservations could be made for high performing ASHAs for admission into ANM/GNM and nursing degree programs where qualifications are appropriate.

For ASHAs who have served for a long period and are unable to carry out their duties due to age, a dignified exit or "golden handshake" mechanism with some lump sum payment could be put in place with due performance monitoring.

9.9 Strengthening local governance and capabilities

9.9.1 Issues

- Local governance structures such as RKS are present but the capabilities are lacking
- Accountability mechanisms are limited
- Poor representation of patients/ women and patient support groups in local governance

9.9.2 Recommendations

Capacity building and training of Rogi Kalyan Samiti Members

There is an urgent need to build capacity of RKS members in structural, operational, functional, and finance related areas. There should be a training module for RKS members in the expenditure and reporting on untied funds. Training should also be linked to membership by ensuring that only trained members are eligible for RKS membership. The RKS processes should be carefully monitored and ensured (for example RKS register made by Uttar Pradesh).

Representation of local communities

The State and District Health Societies should focus on including local patient representative groups, and civil society. Generating localised funding sources is also essential for ensuring involvement from all sections of the community including those individuals and organisations capable of philanthropic endeavours. This will be important for drawing attention to lacunae in the social aspects of public healthcare, such as facilitating food and shelter for the family of care seekers, engaging social workers for follow-up community based care, and supplementing local blood banks.

Participation of Women

A guideline or regulation can be made for increasing participation of women as RKS members. This will also ensure gender sensitive services at public health facilities.

Proper monitoring of RKS

There should be a monitoring committee at district level for regularly reviewing the performance, and governance of RKS. The monitoring process needs to be governed by standards and should look

into various structural, operational, functional, and financial aspects of RKS. Scores/points could be awarded for overall improvement of healthcare facility, conduction of meetings, governance aspects, RKS membership structure, functionality, fund utilisation, and innovation. The top-ranking RKS could be rewarded monetarily. Likewise, *Swachh* School or *Kayakalp*, award mechanisms should be set up for RKS. An annual award to all high ranking RKS could act as further motivation. A detailed analysis of the RKS and the untied funds should also be conducted to understand its functioning and impact on service delivery and community health improvement

Communicating membership clearly

The details RKS members the names, phone numbers should be clearly laid out every facility. This would help patients to know about the committee. RKS has the potential of becoming a strong patient welfare body and a feedback collection and issue resolving committee.

Conclusion:

The NRHM, launched in 2005, was a watershed for the health sector in India. With its core focus to reduce maternal and child mortality, it aimed at increased public expenditure on health care, decreased inequity, decentralization and community participation in operationalization of health-care facilities based on IPHS norms. Gradually the NHM has emerged as a major financing and health sector reform strategy to strengthen the state health systems in India. The NHM has played a crucial role in health system strengthening through architectural correction of the rural health system-in terms of availability of human resources, program management, physical infrastructure, community participation, financing health care and use of information technology.

The NHM is largely focused on providing comprehensive care to mother and child. It has framed policies that allow the design and implementation of programs on newborn care in an inclusive manner. However, considering increasing burden of Non-Communicable Diseases, Climate Sensitive Disease and emerging infectious diseases. The NHM should also put emphasis on NCDs, Climate Change and Health, Health System Research, building capacity of public health system and on framing policies in terms of building capacity of existing human resources, enhancing further allocation of finances to emerging areas, identifying areas through operational research, which can enhance quantity and quality. The present report has provided recommendation and set the path for future National Health Mission and we need to operationalize and move forward.

The focus on decentralization and empowerment of the frontline and developing a community connection through an effective cadre of ASHA workers has been vital for awareness and adaptiveness in the system. The present study reiterates the need of continuing NHM in the mission mode, albeit with increase in funding. The emphasis on three key aspects- structures and

coordination mechanisms between NHM and the directorates, data based planning and execution. and the focus on further improvements in HRH can further contribute to building resilient health systems.

REFERENCES

Abejirinde, I.-O. *et al.* (2018) ‘Qualitative analysis of the health system effects of a community-based malaria elimination program in Rwanda’, *Research and Reports in Tropical Medicine*. Dove Medical Press Ltd., Volume 9, pp. 63–75. doi: 10.2147/rrtm.s158131.

Adsul, N. (2016) ‘Understanding the district planning process from the perceptions of stakeholders in the district health system under the national rural health mission’, *BMJ Global Health*, p. 2. doi: 10.1017/CBO9781107415324.004.

Attride-Stirling, J. (2001) ‘Thematic networks: An analytic tool for qualitative research’, *Qualitative Research*, 1(3), pp. 385–405. doi: 10.1177/146879410100100307.

Avan, B. I. *et al.* (2016) ‘District decision-making for health in low-income settings: a feasibility study of a data-informed platform for health in India, Nigeria and Ethiopia’, *Health Policy and Planning*, 31(suppl 2), pp. ii3–ii11. doi: 10.1093/heapol/czw082.

Bachani, D. (2006) ‘Integration of disease surveillance in India: current scenario and future perspective.’, *Indian journal of public health*, 50(1), pp. 7–10.

BJ, A. *et al.* (2019) ‘The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana and the path to universal health coverage in India: Overcoming the challenges of stewardship and governance.’, *PLoS medicine*. United States: Public Library of Science, 16(3), p. 6. doi: 10.1371/journal.pmed.1002759.

Chandran, S. (2016) ‘Public Health and Governance in Tamil Nadu: An Overview’, *SSRN Electronic Journal*, pp. 1–12. doi: 10.2139/ssrn.2739516.

Chatterjee, P. (2006) ‘India’s government aims to improve rural health’, *Lancet*, 368(9546), pp. 1483–1484. doi: 10.1016/S0140-6736(06)69620-7.

Chokshi, M. *et al.* (2016) ‘Health systems in India’, *Journal of Perinatology*. Nature Publishing Group, pp. S9–S12. doi: 10.1038/jp.2016.184.

Department of Health and Family Welfare (2017) *National Health Mission (NHM) Manual for District- Level Functionaries*, *Government of India*. New Delhi. Available at:

https://darpg.gov.in/sites/default/files/National Health Mission.pdf.

Director General of Health Services, Ministry of Health and Family Welfare, Government of India (2020). Available at https://dghs.gov.in/content/256_1_OrganisationChart.aspx (Accessed: 20th May, 2020)

Executive Summary, National Health Mission, Ministry of Health and Family Welfare, Government of India (2019).

Ganle, K. K. *et al.* (2014) 'A qualitative study of health system barriers to accessibility and utilization of maternal and newborn healthcare services in Ghana after user-fee abolition', *BMC Pregnancy and Childbirth*. BioMed Central Ltd., 14(1). doi: 10.1186/s12884-014-0425-8.

Gill, K. (2009) *A Primary Evaluation of Service Delivery under the National Rural Health Mission (NRHM): Findings from a Study in Andhra Pradesh, Uttar Pradesh, Bihar and Rajasthan*, *2009 - PEO*. 1.

Gupta, M. Das *et al.* (2010) 'How might India's public health systems be strengthened? Lessons from Tamil Nadu', *Economic and Political Weekly*, 45(10), pp. 46–60.

Gupta, M. Das and Rani, M. (2004) 'India's Public Health System -How Well Does It Function at the National Level ?', *Public Health*, p. Working Paper 3447.

India Expenditure Budget, , Ministry of Health and Family Welfare; Union Budget, Government of India (2019) Available at https://www.indiabudget.gov.in/doc/eb/sbe42.pdf (Accessed: 8th March, 2020).

Kapil, U. (2005) 'National Rural Health Mission (NRHM): Will it make a Difference?', *Indian Paediatrics*, 42, pp. 783–786. Available at: https://indianpediatrics.net/aug2005/aug-783-786.htm (Accessed: 16 December 2019).

Kapil, U. (2006) 'National rural health mission: training of health functionaries.', *Indian journal of pediatrics*. India, 73(3), p. 248. doi: 10.1007/bf02825494.

Kumar, S., Bothra, V. and Mairembam, D. (2016) 'A dedicated public health cadre: Urgent and critical to improve health in India', *Indian Journal of Community Medicine*, 41(4), pp. 253–255. doi: 10.4103/0970-0218.193336.

Landrian, A. *et al.* (2020) 'Do you need to pay for quality care? Associations between bribes and out-of-pocket expenditures on quality of care during childbirth in India', *Health Policy and Planning*, 0(0), pp. 1–9. doi: 10.1093/heapol/czaa008.

Ministry of Health and Family Welfare, Government of India (1983) *National Health Policy*. New

Delhi.

National Family Health Survey, International Institute of Population Sciences, Mumbai, India. Available at http://rchiips.org/nfhs/about.shtml (Accessed: 10th November, 2019)

Common Review Mission, National Health Mission, Ministry of Health and Family Welfare, Government of India. https://nhm.gov.in/index1.php?lang=1&level=1&sublinkid=795&lid=195 (Accessed on 5th May, 2020)

Ministry of Health and Family Welfare, Government of India (2015) *Operational Guidelines Free Drugs Service Initiative*. New Delhi.

National Health Authority, Ministry of Health and Family Welfare, Government of India (2019) *Capacity Building Guidelines*. New Delhi.

Modi, D. *et al.* (2019) 'MHealth intervention "ImTeCHO" to improve delivery of maternal, neonatal, and child care services-A cluster-randomized trial in tribal areas of Gujarat, India', *PLoS Medicine*. Public Library of Science, 16(10). doi: 10.1371/journal.pmed.1002939.

National Health Mission. (2020a) *Composition of DHM & DHS : National Health Mission*, *National Health Mission, Ministry of Health and Family Welfare, Government of India*. Available at: https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=1136&lid=144 (Accessed: 14th January 2020).

National Health Mission. (2020b) *Composition of SHM & SHS: National Health Mission*, *National Health Mission, Ministry of Health and Family Welfare, Government of India*. Available at: https://nhm.gov.in/index1.php?lang=1&level=3&sublinkid=1137&lid=143 (Accessed: 14th January 2020).

National Health Mission, Rajasthan (2020) *Organogram NRHM*, *National Health Mission*. Available at: http://nrhmrajasthan.nic.in/Organogram NRHM.pdf. (Accessed: 14th May 2020).

National Health Portal, Ministry of Health and Family Welfare, Government of India (2019) *Ayushman Bharat - Health and Wellness Centre*, *Ministry of Health and Family Welfare, Government of India*. Available at: https://ab-hwc.nhp.gov.in/ (Accessed: 3rd April 2020).

State Health Profile, National Health Mission, Gujarat (2019).

State Health Profile, National Health Mission, Rajatshan (2019).

State Programme Management Unit, NHM, Uttar Pradesh. (2019) *Organogram For NRHM Implementation At State Level*, *National Health Mission, Department of Health and Family Welfare, Uttar Pradesh*. Available at: http://upnrhm.gov.in/Home/OrgChart (Accessed: 6th April 2020).

Sample Registration System Statistical Report, Office of the Registrar General and Census Commissioner, Ministry of Home Affairs, Government of India. Available at https://censusindia.gov.in/vital_statistics/SRS_Statistical_Report.html (Accessed: 5th December, 2019)

Pal, B. (2012) Strategies for Revamping of National Rural Health Mission in India. Developing Country Studies 2; 2224–607.

Panda, B. *et al.* (2016) Local self governance in health - a study of it's functioning in Odisha, India. *BMC health services research* 16(Suppl 6), p. 554. doi: 10.1186/s12913-016-1785-8.

Panda, B., Thakur, H. P. and Zodpey, S. P. (2016) 'Does decentralization influence efficiency of health units? A study of opinion and perception of health workers in Odisha', *BMC health services research* 16(Suppl 6), pp. 29–41. doi: 10.1186/s12913-016-1786-7.

Pandav, C. S. (2006) 'National rural health mission: an opportunity to bridge the chasm between prescription, practice & perception of medical education in India', *Indian journal of public health*, 50(3), pp. 153–159.

Peters, D. H., Rao, K. S. and Fryatt, R. (2003) 'Lumping and splitting: The health policy agenda in India', *Health Policy and Planning*, 18(3), pp. 249–260. doi: 10.1093/heapol/czg031.

Programme Evaluation Organistion, Planning Commission, Governemnt of India (2011) *Evaluation Study on National Rural Health Mission (NRHM) in seven states Volume I*. New Delhi. https://nhm.gov.in/images/pdf/publication/Evaluation_study_of_NHM_in_7_States.pdf (Accessed: 10th March, 2020)

Purohit, B. C. and Siddiqui, T. A. (1994) 'Utilisation of Health Services in India', *Source: Economic and Political Weekly*, 29(18), pp. 1071–1080. Available at: http://www.jstor.org/stable/4401139.

Rao, K. D. *et al.* (2014) 'When do vertical programmes strengthen health systems? A comparative assessment of disease-specific interventions in India', *Health Policy and Planning*, 29(4), pp. 495–505. doi: 10.1093/heapol/czt035.

Rapport, F. *et al.* (2018) *Qualitative Research in Healthcare Modern Methods, Clear Translation*. Sydney: School of Behavioural Sciences, Macquarie University.

Selvaraj, S. *et al.* (2014) 'Universal access to medicines: evidence from Rajasthan, India', *WHO South-East Asia Journal of Public Health*. Medknow, 3(3), p. 289. doi: 10.4103/2224-3151.206752.

Sharma, A. K. (2014) 'The National Rural Health Mission: A critique', *Sociological Bulletin*, 62(2), pp. 287–301.

Sharma, R., Webster, P. and Bhattacharyya, S. (2014) 'Factors affecting the performance of community health workers in India: A multi-stakeholder perspective', *Global Health Action*. Taylor & Francis, 7(1), p. 25352. doi: 10.3402/gha.v7.25352.

Singh, A. (2019) 'Shortage and inequalities in the distribution of specialists across community health centres in Uttar Pradesh, 2002-2012', *BMC Health Services Research*. 19(331), p. 16. doi: 10.1186/s12913-019-4134-x.

Sinha, A. (2009) 'In defence of the national rural health mission', *Economic and Political Weekly*, 44(14), pp. 72–75.

Rural Health Statistics, Ministry of Health and Family Welfare Statistics Division, Government of India (2018). Available at: https://nrhm-mis.nic.in/Pages/RHS2018.aspx (Accessed: 15th December, 2019)

Sundaraman, T. *et al.* (2011) 'Indian approaches to retaining skilled health workers in rural areas', *Bulletin of the World Health Organization*, 89(1), pp. 73–77. doi: 10.2471/BLT.09.070862.

Thomas, D. R. (2006) 'A General Inductive Approach for Analyzing Qualitative Evaluation Data', *American Journal of Evaluation*. Sage Publications Sage CA: Thousand Oaks, CA, 27(2), pp. 237–246. doi: 10.1177/1098214005283748.

Urban Development & Urban Housing Department, Government of Gujarat (2016) *State Annual Action Plan (SAAP) (2016-2017) for Gujarat*. Gandhinagar. Available at http://amrut.gov.in/upload/uploadfiles/files/34Final_Gujarat_SAAP_29_09_2015(1).pdf (Accessed: 12th March, 2020)

Uttar Pradesh Medical Supplies Corporation, Government of Uttar Pradesh (2020) *About UPMSCL | Board of Directors*, *Uttar Pradesh Medical Supplies Corporation*. http://www.upmsc.in/ (Accessed: 12th March, 2020)

World Health Organization (2010) *Monitoring the Building Blocks of Health Systems: a Handbook of Indicators and Their Measurement Strategies*, *World Health Organzation*. doi: 10.1146/annurev.ecolsys.35.021103.105711.

World Health Organization (2011) *Monitoring, evaluation and review of national health strategies: A country-led platform for information and accountability*. Available at: http://www.who.int/healthinfo/country_monitoring_evaluation/1085_IER_131011_web.pdf?ua=1&ua=1.

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ANNEXURE

Annexure A: Terms of Reference – NITI *Aayog* [Annexure]

A. To analyse the strengths and weaknesses of the governance setup of the NHM, identify best practices going forward in context to the framework of *Aayushmaan Bharat*, SDG, UHC, and health equity.	
I.	i. To analyse the technical capacities and decision making at the central level.
II.	iii. To analyse the effectiveness of district and hospital societies in terms of improved and need based planning and accountability to committed outcomes.
IV.	v. To analyse the effectiveness of untied funds in improving quality of medical care and access to the same.
VI.	vii. To analyse the effectiveness of investment in the ASHA component of NHM and suggest solutions for enhancing the effectiveness of this investment.
B. To analyse the systematic, technical capacity and decision making at the national, state-level in carrying out the NHM, and study the HR capacities across difference states	
I.	ii. Analyse the existing processes of district and city plan preparation and their aggregation into State PIPs and identify areas of improvement, if any. Suggest solutions to strengthen the existing systems and processes.
III.	iv. Analyse the existing systems and processes of budget preparation and funds allocation to districts and city annual plans.
V.	vi. Analyse the existing monitoring systems and their effectiveness in implementation of district and city plans and how these are contributing to accountability in terms of their respective annual plans.
VII.	viii. Analyse the processes of preparation of capacity development plans and their implementation with special focus on quality of training and skills developed.
IX.	x. Analyse the procurement and logistics management systems at State, District, and City Levels to identify bottlenecks, if any and suggest solutions for strengthened and more accountable procurement & logistic management systems.
C. To study human resource gaps by looking at the requirements vis-a-vis actual officers posted as a way of understanding the state capacities to carry out the mission. To analyse the state strategies, plans and actions taken to bridge the evident gaps in human resources and the effectiveness of such actions.	

Annexure B:

#	Interviewee
1.	Additional Secretary and Mission Director, National Health Mission, GoI
2.	Joint Secretary, Ministry of Health, GoI
3.	Joint Secretary, RCH, Ministry of Health, GoI
4.	Director, NHM, Ministry of Health, GoI
5.	Director, NHM, Ministry of Health, GoI
6.	Director, Finance, Ministry of Health, GoI
7.	ED, NHSRC, National Health Mission, GoI
8.	Advisor, HR, NHSRC, National Health Mission, GoI
9.	Advisor, Policy, Community Processes, NHSRC, National Health Mission, GoI
10.	Advisor, Quality, NHSRC, National Health Mission, GoI
11.	Consultant, NHSRC, National Health Mission, GoI
12.	Principal Secretary- Health- GoG
13.	Commissioner of Health- GoG
14.	Additional Director- Health Department, GoG
15.	Joint Director- Health Department, GoG
16.	Programme Officer, Rural Health, GoG
17.	Programme Monitoring Unit, Health Department, GoG
18.	Senior Consultant, SPMU, National Health Mission, GoG
19.	Consultant, Policy Planning, National Health Mission, GoG
20.	HR Officer, National Health Mission, GoG
21.	Project Officer, SPMU, National Health Mission, GoG
22.	Finance Officer, National Health Mission, GoG
23.	Chief District Health Officer, Sabarkantha District Gujarat
24.	District Programme Officer, Sabarkantha District Gujarat
25.	District Finance Officer, Sabarkantha District Gujarat
26.	District Programme Officer, *Ayushmaan Bharat* Sabarkantha District Gujarat
27.	Chief District Health Officer, Gandhinagar District Gujarat
28.	District Programme Officer, Gandhinagar District Gujarat
29.	District Finance Officer, Gandhinagar District Gujarat
30.	Additional District Health Officer, Gandhinagar District Gujarat

31.	Reproductive Child Health Officer, Rajkot District Gujarat
32.	District Programme Officer, Rajkot District Gujarat
33.	District Finance Officer, Rajkot District Gujarat
34.	Regional Deputy Director, Saurashtra Region, Health Department, GoG
35.	Regional Finance Officer, RDD Office, Health Department, GoG
36.	Primary Health Centre, Medical Officer, Rajkot District
37.	Medical Officer of Health, Rajkot Municipal Corporation
38.	Corporation Programme Officer, National Health Mission, Rajkot
39.	Medical Officer, Urban Health Centre, Rajkot
40.	Medical Officer of Health, Ahmedabad Municipal Corporation
41.	Corporation Programme Officer, National Health Mission, Ahmedabad
42.	State Project Officer, ASHA Resource Cell, Health Department, GoG
43.	State ASHA Trainer, Health Department, GoG
44.	District Level ASHA Resource Cell Officer, Sabarkantha District
45.	Medical Officer, Kathwad, Sabarkantha District
46.	Focussed Group Discussion with ASHAs of Kathwad, Sabarkantha District
47.	Taluka Health Officer, Jaldpur, Navsari District, GoG
48.	Taluka Health Officer, Sojika, Anand District, GoG
49.	Focussed Group Discussion, Medical Officer, Various PHC, Gujarat
50.	Former Director, State Institute of Family and Health Welfare, Uttar Pradesh
51.	Research Associate at International Health, Health Systems Division, John Hopkins Bloomberg School of Public Health, Uttar Pradesh
52.	Director, NHM Office, Lucknow, Uttar Pradesh
53.	Principal Health Secretary, Secretariat of Uttar Pradesh
54.	Mission Director, National Health Mission, Uttar Pradesh
55.	General Manager, HR, National Health Mission, Uttar Pradesh
56.	Director General, Medical and Health, Uttar Pradesh
57.	PHC Director, Health (Swasthya Bhawan), Lucknow, Uttar Pradesh
58.	Advisor, SPMU, National Health Mission, GoUP
59.	Director, Family Welfare, GoUP
60.	Joint Director, MCH, Directorate of Family Welfare, GoUP
61.	Joint Director, FP, Directorate of Family Welfare, GoUP

62. Joint Director, Training & RBSK-RKSK, Directorate of Family Welfare, GoUP
63. Joint Director, Coordination, Directorate of Family Welfare, GoUP
64. Joint Director, MCH & Administration, Directorate of Family Welfare, GoUP
65. Disbursement Officer, Directorate of Family Welfare, GoUP
66. General Manager, Policy-Planning, SPMU, National Health Mission, GoUP
67. General Manager, Community Process, SPMU, National Health Mission, GoUP
68. General Manager, M&E, SPMU, National Health Mission, GoUP
69. General Manager, Human Resources, SPMU, National Health Mission, GoUP
70. Deputy General Manager, M&E, SPMU, National Health Mission, GoUP
71. CMO, Barabanki District, Uttar Pradesh
72. ACMO, Immunization, Barabanki District, Uttar Pradesh
73. ACMO, NUHM, Barabanki District, Uttar Pradesh
74. ACMO, Food and Drug, Barabanki District, Uttar Pradesh
75. ACMO, Family Planning, Barabanki District, Uttar Pradesh
76. ACMO, Store, Barabanki District, Uttar Pradesh
77. ACMO, Protocol, Barabanki District, Uttar Pradesh
78. District Leprosy Officer, Barabanki District, Uttar Pradesh
79. Deputy CMO, RBSK-RKSK, Barabanki District, Uttar Pradesh
80. Representative from District Hospital, Barabanki District, Uttar Pradesh
81. District Programme Manager, NHM, Barabanki District, Uttar Pradesh
82. District Community Process Manager, NHM, Barabanki District, Uttar Pradesh
83. District Account Manager, NHM, Barabanki District, Uttar Pradesh
84. Quality Assurance Consultant, Barabanki District, Uttar Pradesh
85. CMO, Lucknow District, Uttar Pradesh
86. ACMO, RCH, Lucknow District, Uttar Pradesh
87. ACMO, NUHM, Lucknow District, Uttar Pradesh
88. ACMO, VBD, Lucknow District, Uttar Pradesh
89. Deputy CMO, Lucknow District, Uttar Pradesh
90. District Programme Manager, NHM, Lucknow District, Uttar Pradesh
91. District Community Process Manager, NHM, Lucknow District, Uttar Pradesh
92. District Account Manager, NHM, Lucknow District, Uttar Pradesh

93. *Nagar Swasthya Adhikari*, Municipal Health Officer, Lucknow Municipal Corporation, Lucknow

94. Executive Director, Lucknow District, Uttar Pradesh

95. Consultant-2, Lucknow District, Uttar Pradesh

96. Finance Controller, SPMU, NHM Uttar Pradesh

97. Senior Manager, Finance, SPMU, NHM Uttar Pradesh

98. MD- National Health Mission, GoR

99. Former, MD, National Health Mission, GoR

100. MD- Rajasthan Medical Services Corporation, GoR

101. Director- Public Health, Health Services, GoR

102. Director, RCH, Health Services, GoR

103. OSD, National Health Mission, GoR

104. Programme Officer, National Urban Health Mission, GoR

105. Assistant State Programme Manager, National Health Mission, GoR

106. State Data Manager, National Health Mission, GoR

107. ED- Logistics, Rajasthan Medical Services Corporation, GoR

108. Director, Finance, National Health Mission, GoR

109. Joint Director, Finance, National Health Mission, GoR

110. State Programme Officer, Finance, National Health Mission, GoR

111. State Nodal Officer, ASHA Cell, National Health Mission, GoR

112. Programme Officer, ASHA Cell, National Health Mission, GoR

113. Senior Consultant, Policy Planning, National Health Mission, GoR

114. PMO, District Hospital, Dausa, GoR

115. Health Manager, NHM, District Hospital, Dausa, GoR

116. Chief Medical and Health Officer, Dausa, GoR

117. District RCHO, Dausa, GoR

118. District Programme Manager, Dausa, National Health Mission, GoR

119. District Nodal Officer, Dausa, National Health Mission, GoR

Annexure C: Findings of the States visited by NITI Aayog Officials

Provided by Dr. K Madan Gopal

Written by Dr. Mahaveer Golechha

Andhra Pradesh:

The team has visited state HQ and District West Godavari

The state health department officials mentioned that they are happy with National Health Mission and its structure. The NHM has helped them in improving access and quality of services.

The important distinction of AP is key personnel working at State Program Management Unit of NHM are regular cadre staff and other consultants are contractual.

Having regular cadre staff at SPMU helped them in establishing better coordination with directorate of health officials and CDHO at district head quarter.

However, Directorate of Health Service is not integrated with SPMU-SHS. It would have been better if both unit are integrated. There is lack of communication and coordination between both.

Appointment of State Program Manager-SPM of SPMU is politically driven and there is no clear cut guidelines available from central NHM for appointment of SPM.

In AP health department is headed by Principal Secretary Health and below him/her commissioner of health.

The NHM is headed by MD-NHM, who is most of time very junior to Commissioner of health. This leads to lack of coordination and communication between MD-NHM and CoH.

There are many issued related to contractual staff of NHM- disparities of salary between regular and contractual staff is big issues and affecting performance and motivation of contractual staff.

Further, there is no strategy for absorbing contractual staff in health system. The contractual staff reported lack of grievance redressal system, inefficient performance appraisal mechanisms, heavy work load etc.

ASHA model is good and working well in the state; also led to improvement in access to health services and health indicators.

Replacing 108 needs more capital fund. The NHM should provide more fund under capital.

Procurement and Logistics: The Medical Service Corporation been established in the state. The procurement process is inefficient and delayed. The officials lack the capacity and training in the area of logistic planning and drug distribution.

Frequent stock out of essential medicines; forced Rogi Kalyan Samiti to arrange medicines from untied fund.

PIP process require modifications; the process is cumbersome.

More flexibility is requiring, there are more than 1800 budget line items, in some program more than 20 budget line item. Rather than too much line items, each program should be considering as single budget line item and in program we should have flexibility to spend, for example in some program we need more IEC fund or in some program service delivery is important. Therefore, state should be given more flexibility.

Recently, Health and Wellness Centres established in the state, Mid-Level Health Provider (MLHP) Training has also been done. However, monitoring of MLHPs performance is challenging.

Most of the Sub Centers are in rented building, lack of proper space for examination and treatment.

HWC requires highly trained people and HWC cost should be based on the location rather than same cost of all HWC.

Untied fund is just name, its always with guidelines, therefore it is tied fund.

Conversion of district hospital in medical college has been initiated.

In urban health under PPP model- E-UPHC- tele medicine started, this has been outsourced to the private partner. The cost effectiveness analysis of this initiative is require.

There are vacancies of specialists at various level, The HR recruitment process is very much delayed.

The MD-NHM has joined recently- 3 months back. Frequent transfer is also a big issues.

The incentives to the health facilities should stopped. Indicator based award to district collector is also not good, as they only working or more focus on indicator based work and low or no focus on other indicators.

There is an urgent need to have uniform HR policy of NHM staff.

Trainings are not based on need, follow-up and mentorship is absent in all training program.

Trainings are not effective and efficient without follow up and mentorship.

Monitoring is largely done by Monitoring and Evaluation team based at SPMU. State level monitoring done at State Health Society EB meeting by Principal Secretary Health.

Regular monitoring by MD- NHM and SPMU team.

Less focus on field visit, more focus on data recording and reporting. Use of data for decision making is missing.

ASHA is doing good work and are effective. Increasing honorarium will hamper entire process.

West Godavari District:

District Program unit is headed by CMHO and managed by District program coordinator.

Lots of meetings, data review, less focus on field visit and innovations, discussion etc.

Self reporting of data should be stopped.

District officials also highlighted lack of proper monitoring system for MLHPs.

State do not have any plan or strategy for absorption of NHM staff. Lack of motivation among NHM contractual staff.

Recruitment power of NHM is at district level.

DPM is also from regular cadre, it is good and receptivity is more.

Frequent stock out of essential medicine, lack of proper indenting mechanisms, delayed procurement process.

E-ausahdhi is available. Lack of capacity and training at district level for pharmaceutical management.

Regional warehouses, ideally each district should have one ware house.

There is lack of coordination between CDMO and CMHO.

At District level HRS is adequate.

Chhattisgarh: CG: State HQ and Durg District

In Chhattisgarh state health department is headed by Principal Secretary health and below commissioner of health. The NHM is headed by MD-NHM.

MD-NHM is always junior to commissioner of health, due to this there is lack of coordination and communication between both.

There are frequent changes-transfer in MD-NHM.

Director-Public Health is IAS officer.

HR recruitment is very slow process and the process is delayed and leads to many vacancies at various levels. Retention is also very poor.

Comprehensive Rural Medical Plan- incentive based.

State is working on Medical Service Recruitment Board.

SPMU staff and NHM staffs at district and field are contractual, there is no career progression opportunity, no state plan for absorption of NHM staff in regular cadre.

NHM contractual staff lacks motivation and reported heavy work load.

108- Govt. is not procuring any vehicle.

HRH- Hardship allowances for personnel working in remote areas. Performance based incentives, KPIs.

Sukma- Bijapur: The state has plan to give more incentives to the specialists working in hard to reach areas through District Mineral Fund.

For retaining Human Resources for Health- Transit Hostel Model started in CG. A well planned accommodation with necessary amenities provided at district HQs.

District Administration is taking personal interest in talent hunting;

Specialist are requested to bring new personal for replacing his/her before they leave the job.

Appointment order issued very rapidly.

There is need for innovation fund under NHM for carrying out more innovative activities.

PIP process is find and state don't have much issues. However, the process is little bit cumbersome and lack of flexibility. It should be made more flexible and budget line items needs to be relooked.

CG Rural Service Corporation. Orientation Training not happening.

Hat Bazar Clinic for improving access to services.

Training: Less focus on training, routing training under NHM program is happening, training is not need based, no post evaluation for impact of training, lack of follow up and mentoring.

Monitoring and Evaluation: As per NHM M & E is happening, however, more focus on review and data recording. Proper evaluation is missing. Lack of capacity of staff members in M & E.

District Health Score started for motivating districts.

Procurement:

CG Medical Service Corporation is responsible for procurement of drugs and other logistics.

The process is inefficient and ineffective, there are issues with indenting, frequent stock outs.

Lack of coordination between NHM and Medical Service Corporation officials.

The state is planning to pay fix honorarium to ASHAs, State Health department officials are not in favour of this decision, as this will reduce their performance and ultimately hampering health systems.

The State also reported NHM contractual staff issues- no career progression, no policy for absorption, lack of motivation, lack of proper annual performance appraisal system.

Contractual staff are doing more administrative work than technical; they are also doing work of CMHO officials.

SHRC is involved in technical aspects of NHM and working well. The SPMU officials reported that SHRC is bypassing NHM and directly dealing with PS-Health.

The HWC are managed by trained ANMs and MLHPs training been given to them.

In ASHA- association, groupism started and it negatively affecting health systems, more grievances, more demanding, the empowerment should be in right direction.

The PIP is top up approach, mostly done at district level, lack of capacity at bottom level for preparing PIPs.

Ground level capacity building is requiring for making PIP truly bottom up approach.

Promotion avenues for regular cadre staffs are also missing.

SIHFW is doing only NHM program trainings.

SHRC is not function as think tank.

Karnataka: State HQ and Mysore district

The Karnataka Health Department structure is also similar to Andhra Pradesh and Chhattisgarh. The state health department is headed by Principal Secretary- Health. Commissioner of Health is responsible for health department program and activities across the state. The national health mission is headed by MD-NHM. There is a directorate of health services headed by Director.

The state officials reported issues of NHM contractual staff and one of them is pay disparity between regular cadre and contractual staff.

The contractual staff are not motivated, as they are waiting regularisation since last 10 years.

The regularisation of NHM contractual worker is not possible due to lack of HR policy and state strategy.

The HR scarcity is affecting the health system negatively. There are huge vacancies of specialist across various tier of health system.

The integration of NHM with directorate of health services is good and it has improved coordination, communication and cooperation between both.

The state has taken initiative for data integration between RCH and WCD for better evidenced based decision making.

The state has taken extra efforts and innovation for RBSK program- App based monitoring of service delivery and data triangulation- integration.

The state has also initiated Village Health Survey, its joint survey of the department.

Digitalisation of various data and record has started.

In the payment provide mechanisms, state has initiated several mechanisms for enhancing efficiency- case based payment, uniform rates (committee has been constituted for deciding the rates).

Special salary provisions for high priority districts. On call recruitment for specialists.

Tele radiology initiative for improving access to radio diagnosis services at grass root level.

Karnataka Public Service Commission announced 25% waiting list.

HR rationalisation of NHM staff is necessary- salary disparity between NHM staff is also a issues- lab technician of various program getting different salary.

There too many unnecessary posts been created- separate program coordinator for small programs.

Although PIP process is fine, but more flexibility is requiring. There are too many budget line items and many times it leads to low fund utilisation. We are always busy with finding a way for spending.

The state has taken initiative for ASHAs career progression through NIOS certification.

Aayogya Bandhu Scheme has been launched by State.

Nutrition Rehabilitation Centres- NRC: 32 require, presently 20 NRCs are functioning.

SNCU- Specialist been trained, however, some specialist been shifted to other places for different tasks.

Dental Services only reaches upto district level. Ayush doctors are not motivated, due to low salary and heavy workload.

State has initiated dialysis program under PPP mode. The program is running well.

More number of data entry operators are requires.

Immunisation: some issues with shortage of vaccines. Policy direction is needed for rare diseases.

Procurement of drugs and logistics is efficient and there is less shortage compared to other states.

In urban areas ASHAs access to gated community is poor and acceptability of ASHAs is also low.

The Digital PHC concept is started and needs to be evaluated for cost effectiveness of such initiative before rolling out across the state.

ASHA honorarium is fixed, monitoring and mentoring of ASHA is poor.

Incentive should be linked with outcome.