



Comprehensive UIP Review

A report: August 2018

Table of **CONTENTS**

Abbreviations	i
List of tables	iv
List of figures	v
Executive summary	ix
1. Introduction	1
Background	2
Rationale	2
Aim and objectives	3
2. Methodology	5
Review design	6
Tools used for the review	7
3.1. Programme implementation	9
Programme management	10
Human resource and infrastructure	14
Service delivery	16
AEFI and VPD reporting	19
3.2. Logistics and supply chain	23
Human resource and training	24
Equipment status and storage capacity	24
Storage and temperature monitoring practices	25
Maintenance and repair	25
Stock management	25
Vaccine distribution	26
Vaccine management	27
Waste management	27
Supervision	28
3.3. Data recording and reporting system	29
Data Quality Assessment (DQA)	30
Infrastructure and resources	37

Human resource	37
New vaccines/campaign coverage	38
AEFI and VPD reporting	38
HMIS/PCTS/ RCH portal	38
Coverage Monitoring Chart	38

3.4. Demand generation **39**

Data collection and analysis efforts	40
Communication manpower and training	40
Communication planning	40
Advocacy	41
Media engagement (news media and social media)	42
Social mobilization	42
Monitoring and review	43
Community awareness, knowledge, perception and practices	44

3.5. Urban immunization **49**

Programme implementation	50
Logistics and supply chain	53
Data recording and reporting systems	55
Demand generation	55

4. Issues and challenges **57**

5. Way forward **61**

ABBREVIATIONS

AEFI	Adverse Event Following Immunization
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AV	audio visual
AVD	alternate vaccine delivery
AWW	<i>Anganwadi</i> Worker
BCC	behaviour change communication
BCG	Bacillus Calmette Guerin
BRIDGE	Boosting Routine Immunization Demand Generation
CBO	Community Based Organization
CCE	Cold Chain Equipment
CCH	Cold Chain Handler
CCP	Cold Chain Point
CCT	Cold Chain Technician
CHC	Community Health Centre
CM&HO	Chief Medical & Health Officer
CRF	Case Reporting Form
CT	Census Town
CUG	Closed User Group
DEO	Data Entry Operator
DF	deep freezer
DRCHO	District Reproductive and Child Health Officer
DPT	Diphtheria Pertussis Tetanus
DQA	Data Quality Assessment
DTFI	District Task Force for Immunization
DVS	district vaccine store
EPI	Expanded Program on Immunization
eVIN	Electronic Vaccine Intelligence Network
FCIF	Final Case Investigation Form
FIC	Full Immunization Coverage
FLW	Front Line Worker
GHS	Global Health Strategies
GM	General Manager
GoI	Government of India
HMIS	Health Management Information System
HR	human resource
HRG	High Risk Group
HS	Health Supervisor
ICDS	Integrated Child Development Scheme
iCIP	Immunization Coverage Improvement Plan

IEC	Information, Education and Communication
ILR	ice-lined refrigerator
IMA	Indian Medical Association
IMI	Intensified Mission Indradhanush
IPC	inter personal communication
IT	information technology
ITSU	Immunization Technical Support Unit
JE	Japanese Encephalitis
LHV	Lady Health Visitor
MAS	<i>Mahila Arogya Samiti</i>
MC	Municipal Corporation
MCP	Mother and Child Protection
MCTS	Mother and Child Tracking System
MCV	Measles Containing Vaccine
MD	Mission Director
MI	Mission Indradhanush
MO	medical officer
MoHFW	Ministry of Health and Family Welfare
MPR	monthly progress report
NCC	National Cadet Corps
NCCVMRC	National Cold Chain and Vaccine Management Resource Centre
NFHS	National Family Health Survey
NGO	Non-Governmental Organization
NHM	National Health Mission
NHSRC	National Health Systems Resource Centre
NIHFW	National Institute of Health and Family Welfare
NPSP	National Public Health Surveillance Project
NRHM	National Rural Health Mission
NSS	National Service Scheme
NUHM	National Urban Health Mission
NYK	<i>Nehru Yuva Kendra</i>
OPV	oral polio vaccine
PCIF	Preliminary Case Investigation Form
PCTS	Pregnancy, Child Tracking & Health Services Management System
PCV	Pneumococcal Conjugate Vaccine
PHC	Primary Health Centre
PIP	Programme Implementation Plan
PRAGATI	Pro-Active Governance and Timely Implementation
PRI	<i>Panchayati Raj</i> Institution
PS	Principal Secretary
PU	planning unit
RCH	Reproductive and Child Health

RI	routine immunization
RMNCH+A	Reproductive, Maternal, New-born, Child and Adolescent Health
SBCC	social and behavioural change communication
SDP	Service Delivery Point
SM Net	Social Mobilization Network
SoE	statement of expenditure
STFI	State Task Force for Immunization
ToT	Training of trainers
UHND	Urban Health and Nutrition Day
UIP	Universal Immunization Programme
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VCCH	vaccine cold chain handler
VHND	village health and nutrition day
VPD	vaccine preventable disease
VVM	Vaccine Vial Monitor
WHO	World Health Organization
WIC	Walk-in Cooler
WIF	Walk-in Freezer

List of **TABLES**

Table 1: Scoring system for districts selection	6
Table 2: Analysis of state review platforms	11
Table 3: Immunization partners' support by thematic areas	13
Table 4: Human resource vacancy status	14
Table 5: Status of immunization trainings	16
Table 6: Microplan analysis	16
Table 7: Session site findings on key processes	17
Table 8: Indicators of community assessment	18
Table 9: Trend of silent districts over 3 years	19
Table 10: AEFI surveillance status at the district level	20
Table 11: AEFI surveillance status at planning unit (PU) level	21
Table 12: Description of key indicators of Data Quality Assessment (DQA)	30
Table 13: Overview of Data Quality Assessment (DQA)	30
Table 14: Advocacy with stakeholders	42
Table 15: Social mobilization activities in districts	43
Table 16: Human resource vacancy status	50
Table 17: Microplan analysis	51
Table 18: Session site findings in urban areas	52
Table 19: Indicators of community assessment	53

List of **FIGURES**

Figure 1: State's division into two zones	6
Figure 2: Selection of review area	7
Figure 3: Snapshot of review findings	10
Figure 4: Poor performing blocks based on PCTS coverage data	12
Figure 5: District level programme activities against expected performance	12
Figure 6: Mapping of immunization partners' presence in Rajasthan	14
Figure 7: Vacancy status of regular Medical Officers	15
Figure 8: Vacancy status of regular ANMs	15
Figure 9: Availability of critical components in microplans (in %)	17
Figure 10: Reasons for partially vaccinated or unvaccinated children	19
Figure 11: Districts silent for AEFI cases since last 3 years	20
Figure 12: Snapshot of review findings	24
Figure 13: Logistics availability at session sites	26
Figure 14: Vaccine wastage rate	27
Figure 15: Snapshot of review findings	30
Figure 16: Availability of due Lists	31
Figure 17: Availability of MPR	31
Figure 18: Availability of data in PCTS Portal	32
Figure 19: Availability of data in HMIS Portal	32
Figure 20: Completeness of MPR	33
Figure 21: Consistency between OPV 1 & OPV 3 in MPR	33
Figure 22: Consistency between OPV 1 & OPV 3 & Pentavalent 1 & Pentavalent 3 in PCTS	34
Figure 23: Data flow from session site to planning unit	34
Figure 24: Agreement between MPR & PCTS	35
Figure 25: Antigen wise agreement between MPR & PCTS	35
Figure 26: Agreement between PCTS & HMIS	36
Figure 27: Antigen wise agreement between PCTS & HMIS	36
Figure 28: Agreement between RCH register & MCP cards	37
Figure 29: Antigen wise agreement between RCH register & MCP cards	37
Figure 30: Status of name based registration of children in PCTS portal	38
Figure 31: Snapshot of review findings	40

Figure 32. SBCC strategy on Immunization	40
Figure 33: IEC materials displayed at health facility	41
Figure 34: Hoarding on PCV media workshop	43
Figure 35. Mothers at an urban immunization site	43
Figure 36: IEC materials displayed at session site (n=10)	44
Figure 37: Four key messages given by ANMs at session sites (n=9)	44
Figure 38: Interview with community leaders and ASHA	45
Figure 39: Urban area session site with the presence of all FLWs (ANM, ASHA and AWW)	45
Figure 40: Most convenient place to convey immunization messages by ASHAs (n=29)	47
Figure 41: Snapshot of review findings (Programme implementation)*	50
Figure 42: Snapshot of review findings (Logistics and supply chain)	50
Figure 43: Reason analysis for partially vaccinated and unvaccinated children	53



EXECUTIVE SUMMARY

India's Universal Immunization Programme (UIP) is the largest in the world, catering to an annual birth cohort of 2.6 crore infants and 3 crore pregnant women through around 90 lakh sessions. However, over the past many years, immunization coverage among children aged 12–23 months in the country has increased at a very slow pace of around 1% each year (from 35% in 1992-93 to 62% in 2015-16).

Under its resolve to achieve 90% full immunization coverage (FIC) by December 2020, the Ministry of Health and Family Welfare (MoHFW) launched a massive catch up campaign Mission Indradhanush (MI) in December 2014. After the first phase of MI, FIC was increased by 6.7% point in 1 year, according to the Integrated Child Health and Immunization Survey (INCHIS). Honourable Prime Minister has advanced the timeline for reaching the goal of 90% FIC to 2018 and to achieve this, MoHFW further intensified the MI activities in October 2017.

Rationale

To achieve the ambitious target of 90% FIC by December 2018, it is pertinent for the states to identify bottlenecks and gaps in all programme components through a comprehensive Universal Immunization Programme (UIP) review, assess supply and demand side gaps, plan interventions and measure progress. While different fragmented assessments and reviews are carried out by different agencies driven by their mandate and different data collection methods; for example, AFP surveillance cum UIP review, Data Quality Assessment (DQA), Effective Vaccine Management (EVM) assessment, etc. Hence, there is a growing need of integrating different assessments in the form of a comprehensive review of UIP.

Rajasthan contributes to more than 6.7% (17.86 lakh) of India's annual birth cohort. As per NFHS-4 (2015-16), the FIC in the state among children age 12-23 months was 54.8%, as compared with the national average of

62%. In spite of conducting four phases of MI in the state from 2015 to 2017, 12 (one-third of the districts) out of 33 districts were identified nationally for IMI in Rajasthan. The state lags by 35% percent points (as per NFHS-4) from the set target of 90% FIC.

Hence, there was an urgent need to conduct a comprehensive UIP review in Rajasthan to identify the gaps and formulate strategies to improve immunization coverage.

Aim

Comprehensive assessment of strengths, weaknesses and bottlenecks in the immunization programme; provide recommendations for improvement and assist the state to formulate a plan for improving routine immunization coverage with clearly defined roles, responsibilities and timelines.

Objectives

Supply side

- 🔗 To analyse programme planning and implementation for routine immunization at different levels of the healthcare delivery system
- 🔗 To assess governance, accountability and partnerships for UIP in the state
- 🔗 To assess vaccine and logistics supply chain mechanism in the state
- 🔗 To assess the data recording and reporting system, data quality and the use of data as evidence for action
- 🔗 To assess the knowledge and gaps against reporting and surveillance for adverse event following immunization (AEFIs) and vaccine preventable diseases (VPDs).

Demand side

- 🔗 To assess communication strategies and their implementation, including planning, advocacy, partnerships and social mobilization
- 🔗 To assess community perspective and identify the reasons of low uptake of immunization at the level of beneficiaries

Urban Immunization

- 🔗 To assess supply side and demand side factors affecting immunization service in urban areas

METHODS

Area for review

The state was divided into two zones considering geographic and demographic characteristics. For selection of review districts, they were scored on the following three key indicators from NFHS-4 data:

1. % full immunization coverage (FIC)
2. % drop out for BCG – DPT3
3. % institutional deliveries

Each indicator was given a value ranging from 1 to 5; higher the score, lower the performance of the district for its respective indicator. Total score for each district was calculated by adding the individual values of the three indicators. A good performing and poor performing district was selected from each of the two zones. A district would be randomly selected in case two or more districts scored the same. From each of the selected districts, one good performing and one poor performing block was selected on the basis of full immunization coverage (HMIS data). Further, two subcentres from each block were chosen randomly. In total, four districts and urban planning unit of state capital were chosen for review.

Review approach and tools

For ease of classification, the review was divided into the following four components:



Programme implementation



Vaccine logistics and cold chain



Data recording and reporting system



Demand generation

For quantitative data collection, structured questionnaires were administered to the key respondents to assess programme implementation, vaccine logistics and cold chain, and data recording and reporting systems. Additionally, an excel tool adapted from the World Health Organization (WHO) methodology was used for DQA. For qualitative data collection, semi-structured questionnaires were used under demand generation. A detailed methodology for each component is discussed in different sections of this report. The questionnaires were designed in an android based ODK tool for ease of data collection and analysis. The review was conducted from 14th to 18th May 2018. The data presented in the report pertains to the financial year 2017-18 (April 2017 to March 2018), unless specified otherwise.

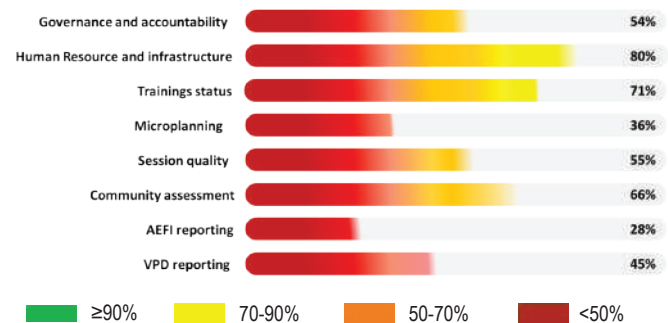
Coordination with technical experts from the government and partners

At each step of shaping the process of review, immunization division and experts from CORE, GHS, JSI, NCCVMRC, NHSRC, NIHFW, UNDP, UNICEF and WHO were consulted through multiple meetings and communication. Experts from partners also participated in the field review.

SNAPSHOT OF FINDINGS

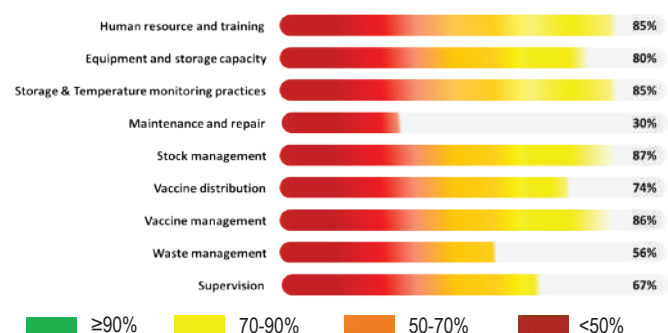
To summarise the findings, a snapshot in the form of tables list the core areas under each thematic area and divide these areas into 4 categories ($\geq 90\%$: good; 70%-90%: fair; 50%-70%: average and $< 50\%$: poor) according to the states performance/status. Low percentage, would indicate lacking performance of the state in the indicator.

Programme implementation



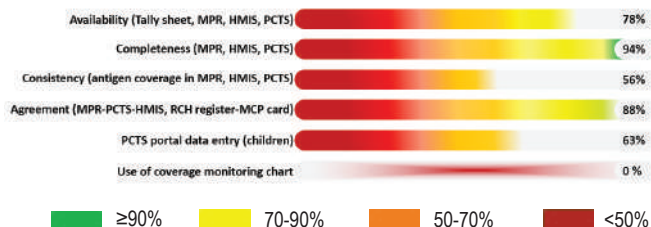
Under the programme implementation domain, the governance and accountability mechanisms were found to be average. Human resource, infrastructure, training and session quality was found to be fair. Poor microplanning, AEFI & VPD knowledge and reporting was found. Overall, an average immunization coverage was found during community assessment.

Vaccine, logistics and cold chain



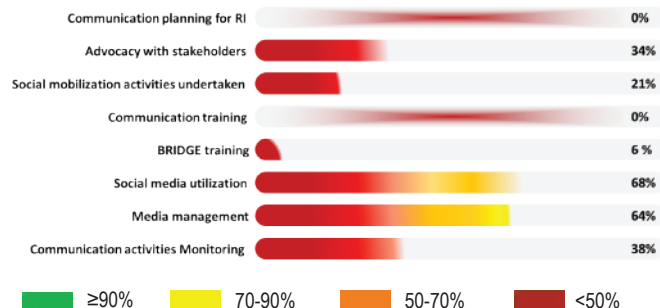
The status of maintenance and repair of cold chain equipment was found to be poor in the state while rest of the components were found to be fair.

Data recording and reporting system



In data recording and reporting, completeness was found to be good, while availability and agreement was fair. State lacked on the mechanism of use of coverage monitoring chart. Rest of the components were found to be in average status.

Demand generation



For demand generation, social media utilization, media management was average while rest of the components were found to be poorly implemented.

Critical gaps in immunization processes identified during the review will help the states to formulate an immunization coverage improvement plan in consultation with the partners. This iCIP will be broadly guided by the “Roadmap for achieving 90% full immunization coverage in India by December 2018 and sustaining thereafter”, envisaged and formulated at the national level by Govt. of India.

A photograph of a woman wearing a red sari with a decorative border, holding a baby in a white outfit with green embroidery. The woman is looking down at the baby. The background shows a window with horizontal bars and a wall with some markings. The overall tone is warm and intimate.

1

INTRODUCTION

Background

Immunization is a proven, cost-effective¹ and the most powerful² public health intervention to prevent morbidity and mortality from vaccine preventable diseases³. According to the World Health Organization (WHO) estimates, immunization averts an estimated 20 lakh to 30 lakh deaths every year from diphtheria, pertussis, tetanus and measles, and an additional 15 lakh deaths can be averted if global vaccination coverage is improved.⁴

India's commitment of improving child health is reflected in its Universal Immunization Program (UIP). It is the largest public health programme in the world, catering to an annual birth cohort of ~2.6 crore and 3 crore pregnant women, through 90 lakh sessions every year.⁵ Despite the strenuous efforts to improve child health, Infant Mortality Rate (IMR) of India is 34 and the under-five mortality rate (U5MR) is 39 per 1000 live births.⁶ Performance of the immunization programme is a key driving force to meet the Sustainable Development Goal-3.

Over the past many years, immunization coverage among children aged 12–23 months in the country has increased at a very slow pace of around 1% each year (from 35% in 1992-93 to 62% in 2015-16)⁷. With the aim to increase full immunization coverage (FIC) to 90% by 2020, Mission Indradhanush (MI) was launched in December 2014 to reach out to unvaccinated and partially vaccinated children through focus on hard-to-reach and high-risk areas.

As per the report of Integrated Child Health & Immunization Survey (INCHIS), first two phases of MI contributed to an increase in FIC by 6.7% point. While acknowledging the impact of MI in improving immunization coverage across the districts over the phases, the Hon'ble Prime Minister emphasized the need to increase the immunization coverage to 90% by December 2018.⁸ To achieve this, the Ministry of Health and Family Welfare (MoHFW) launched Intensified Mission Indradhanush (IMI) in October 2017 in 190 high focus districts of the country. Regular review of this programme is conducted under Pro-Active Governance and Timely Implementation (PRAGATI).

Rationale

It is pertinent for the states to identify bottlenecks and gaps in all programme components through a comprehensive UIP review and to have an updated state-specific coverage improvement plan which can be guided by measurable indicators to assess the progress. Different fragmented assessments and reviews are carried out by different agencies driven by their mandate and different data collection methods, for example, AFP surveillance cum UIP review, DQA, Effective Vaccine Management (EVM) assessment, etc. Hence, there is a growing need of integrating different assessments in the form of comprehensive review for UIP. A comprehensive review will also help in assessing determinants of immunization coverage. Further, to formulate or revise coverage improvement plans, reasons for inequities within the state have to be assessed in detail.

Comprehensive programme assessment promotes consistency across assessments and strengthens advocacy efforts.⁹ Ultimately the coverage improvement plans will guide and strengthen the review mechanism of the state and district task forces and assess the progress made.

Rajasthan contributes to more than 6.7% (17.86 lakh) of India's annual birth cohort of 2.6 crore children.¹⁰ According to National Family Health Survey-4 (NFHS-4), the state has infant mortality (41 deaths per 1,000 live births) and under-five mortality rates (51 death per 1,000 live births) which is almost similar to country average.

As per NFHS 4 survey (2015-16), the state's full immunization coverage (FIC) among children age 12-23 months was 54.8%, as compared with the national average of 62%.¹¹ In spite of conducting four phases of MI in the state from 2015 to 2017, 12 (one-third of the districts) out of 33 districts were identified nationally for IMI in Rajasthan. There is a requirement to identify the problems in the operationalization of the programme, and to address it on an urgent basis.

Inter-district disparities in FIC within Rajasthan are huge, ranging from 35.7% in Jalore to 79.9% in Ganganagar.

¹WHO, UNICEF, World Bank. *State of the world's vaccines and immunization*, 3rd ed. Geneva: World Health Organization, 2009.

²World Health Organization-Regional Office of South-East Asia. 2011. *Protecting people from Vaccine Preventable Diseases*. Geneva: WHO-SEARO. Available @: http://www.searo.who.int/immunization/documents/regional_immunization_strategy_2010-2013.pdf?ua=1

³World Health Organization (WHO). 2017. 10 Facts on Immunization. retrieved from: <http://www.who.int/features/factfiles/immunization/en/>

⁴World Health Organization. 2018. Immunization coverage - Key Facts. Available @: <http://www.who.int/mediacentre/factsheets/fs378/en/>

⁵Ministry of Health and Family Welfare, Government of India. 2013. *Comprehensive Multi Year Plan 2013-2017*. New Delhi: MoHFW.

⁶Office of the Registrar General of India. 2017. *Sample Registration System: Statistical Report 2016*. New Delhi: ORGI.

⁷International Institute for Population Sciences (IIPS) and ICF. 2017. *National Family Health Survey (NFHS-4), 2015-16: India*. Mumbai: IIPS.

⁸Press Information Bureau, Government of India, Ministry of Health and Family Welfare. 2017. retrieved from: <http://pib.nic.in/newsite/printrelease.aspx?relid=171499>

⁹World Health Organization. 2017. *A guide for conducting an Expanded Programme on Immunization (EPI) Review*. Geneva: World Health Organization.

¹⁰Based on estimates received from Immunization Division, MoHFW

¹¹International Institute for Population Sciences (IIPS) and ICF. 2017. *National Family Health Survey (NFHS-4), 2015-16: India*. Mumbai: IIPS.

Keeping state level inequalities in mind, the variations within a district are likely to be wide across socio-economic indicators. Also, interventions may be different for good and poor performing districts.

Rajasthan has 62 cities and with a rapid population growth in urban areas owing to migration along with inadequate infrastructure leads to poor access and utilization of immunization services. Hence, urban immunization requires special emphasis in terms of identifying challenges and making improvement plans.

Aim and objectives

Aim: Comprehensive assessment of strengths, weaknesses and bottlenecks in immunization programme; provide recommendations for improvement and assist the state to formulate a plan for improving routine immunization coverage with clearly defined roles, responsibilities and timelines.

Supply side objectives

- 🔗 To assess and analyze programme planning and implementation for routine immunization at different levels of the health care delivery system

- 🔗 To assess governance, accountability and partnerships for UIP in the state
- 🔗 To assess vaccine and logistics supply chain mechanism in the state
- 🔗 To assess the data recording and reporting system, data quality and the use of data as evidence for action
- 🔗 To assess the knowledge and gaps against reporting and surveillance for adverse event following immunization (AEFIs) and vaccine preventable diseases (VPDs).

Demand side objectives

- 🎯 To assess communication strategies and their implementation, including planning, advocacy, partnerships and social mobilization
- 🎯 To assess community perspective and identify the reasons of low uptake of immunization at the level of beneficiaries.

Urban Immunization

- 🔗 To assess supply side and demand side factors affecting immunization service in urban areas





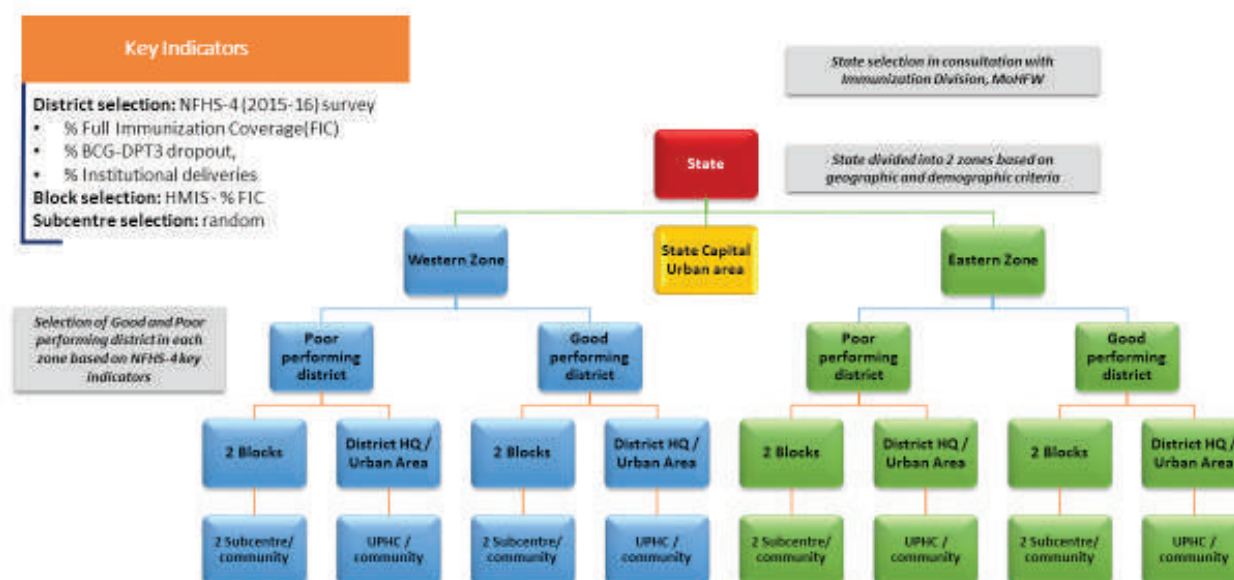
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METHODOLOGY

The total score was calculated for each district by adding the individual score for each of the three indicators. One **good performing** and one **poor performing** district was selected from each of the two zones based on their aggregate scores. If more than one district scored the same, one district was selected randomly. From each

of the selected districts, one good performing and one poor performing block was selected on the basis of full immunization coverage (HMIS data). Subcentres in the selected blocks were chosen randomly. State capital and urban areas in all district Head Quarters (HQ) were selected to assess urban immunization (Fig. 2).

Figure 2: Selection of review area



b. Approach for the review

Both quantitative and qualitative information related to UIP was collected in selected districts on programme implementation, vaccine logistics and cold chain, data recording and reporting system and demand generation. A detailed methodology for each component is discussed in relevant sections of this report. The data reviewed pertains to the period between April 2017 and March 2018.

c. Duration of review

The review was conducted from 14th to 18th May 2018, followed by a debriefing of the state officials on key qualitative findings on the last day.

Tools used for the review

For ease of classification, the review was divided into 4 components, namely 'Programme implementation, Data recording and reporting system, Vaccine logistics and cold chain and Demand generation'.

a. Review questionnaires:

- For quantitative data collection, structured questionnaires were administered to the key respondents. Additionally, an excel tool adapted from WHO methodology was used for Data Quality Assessment (DQA)
- For qualitative data collection, semi-structured questionnaires were used for interviewing key respondents; and
- Additional information and observations, if any, were captured in 'remarks' section

b. Data entry and analysis plan

The questionnaires were designed on an android based ODK tool. A set of indicators was finalized for analysis, based on the requirement and scope of the review. An excel based calculation worksheet was prepared for the agreed indicators for analysis, and a comparative analysis across relevant indicators for districts was done. The findings from qualitative interviews were recorded and analysed manually.

c. Ethical considerations

An ethical approval was sought from JSI-IERB (institutional ethical review board) for this review, for which the study protocol, questionnaires, DQA data entry tool and SOPs on DQA were submitted. After a thorough review, IERB decided to exempt this review from full scrutiny. Moreover, to maintain the regular protocols of ethics, an informed consent was obtained from the respondents and there was no attempt to capture the identity of the interviewees.

d. Quality control

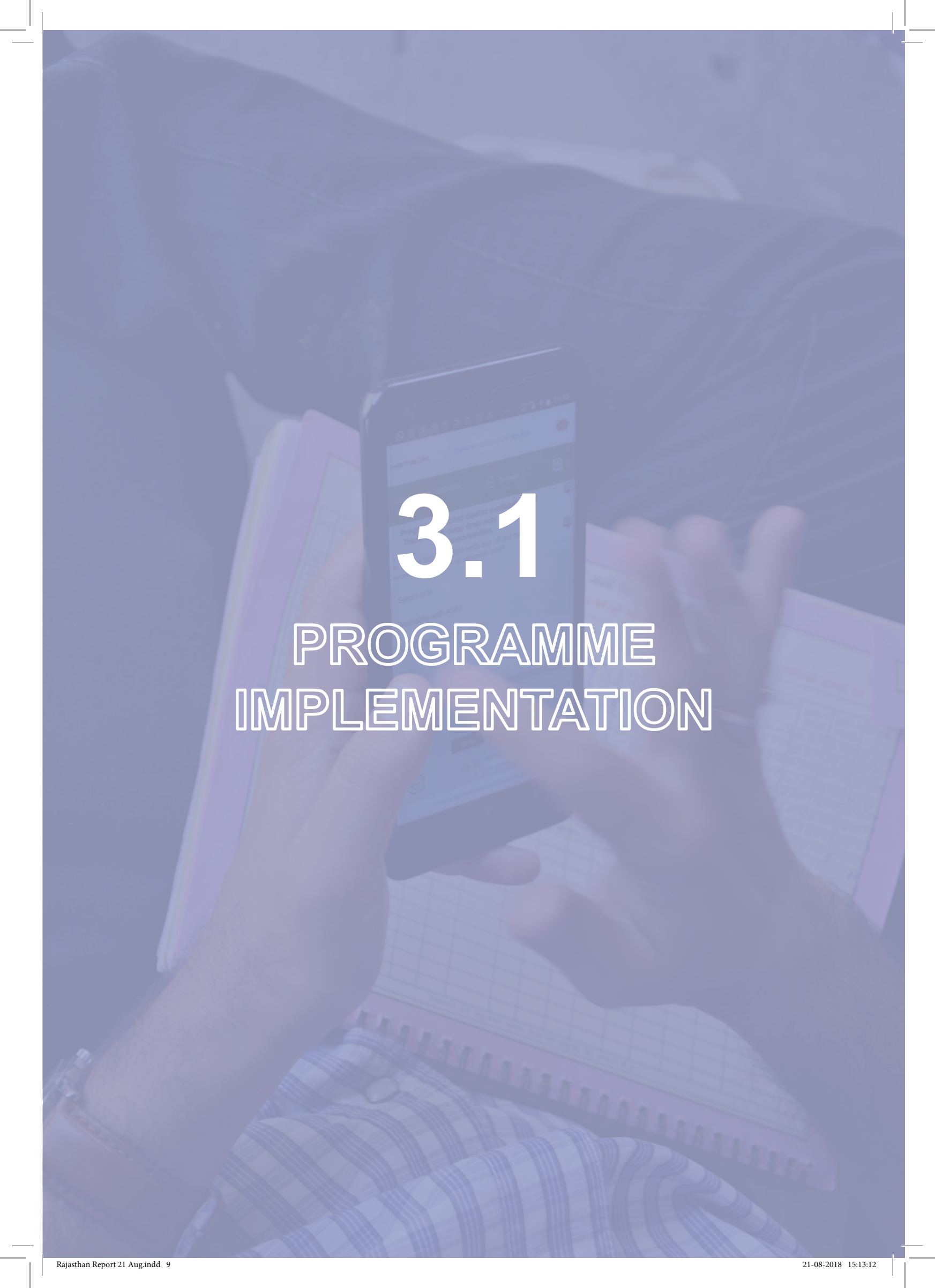
The following steps were taken to ensure the quality of review:

- 🔍 Pretesting of questionnaire and data entry tools
- 🔍 Pre-visit to states for understanding of recording and reporting mechanism

- 🔍 Induction training of all investigators on review questionnaires and ODK tool
- 🔍 Establishment of Control Room to review the daily feedback through conference calls and resolve queries on an immediate basis
- 🔍 Supervisory visits during actual field visits.

e. Coordination with technical experts from the government and partners

At each step of preparation for the review, the immunization division and experts from CORE, GHS, JSI, NCCVMRC, NHSRC, NIHFW, UNDP, UNICEF and WHO were engaged to provide inputs through multiple meetings and communications. Experts from partner agencies also participated as reviewers.

A person is shown from a top-down perspective, using a smartphone. The phone screen displays a form with various input fields and buttons. The person's hands are visible, one holding the phone and the other pointing at the screen. In the background, there is a spiral-bound notebook with a grid pattern. The entire image is overlaid with a semi-transparent blue filter.

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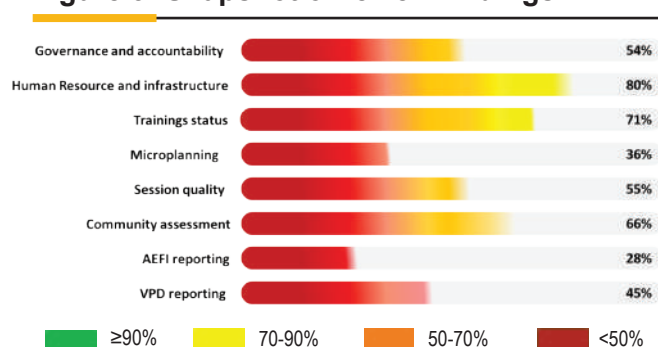
PROGRAMME IMPLEMENTATION

Review approach

The review was conducted at the state level and in 4 districts and capital city (9 rural and 6 urban planning units, 28 session sites and 397 children).

The information collected has been analysed under different sub heads - Programme management, human resource and infrastructure, service delivery and AEFI & VPD reporting. A cumulative score across all the levels was calculated for each sub head as illustrated below in Figure 3.

Figure 3: Snapshot of review findings



Detailed report

Programme management

The findings related to existing governance and accountability mechanism including supportive supervision, fund utilization, inter sectoral coordination are summarised below.

i) Governance and accountability

At the state level, immunization programme is operationalized by Project Director – Immunization also designated as State EPI Officer (Directorate of Family Welfare), under guidance from MD-NHM and PS health.

State has undertaken various initiatives for strengthening immunization programme implementation. For example, under *Mukhyamantri Rajshree Yojana*, a girl child receives a particular sum of money when she completes one year of age with all vaccinations as per schedule. An *e-Janswasthya* android application has been developed to enable real time tracking of beneficiaries like Reproductive and Child Health (RCH) register by ANMs and ASHAs. ‘ONA collect’ application, launched recently, enables supportive supervision in RI and ‘ASHA

Soft’ application enables direct payments to ASHAs from state account.

To review the programme periodically, state has devised various fora as shown in Table 2. Minutes from these meetings have been analysed and detail of the last meeting held under each forum is also included in Table 2.

An analysis of all the available meeting minutes of STFIs indicates that discussions are focussed on planning and findings of campaigns like MI/IMI. Along with this, irrational deployment of ANMs, vacancy of ASHAs, RI microplanning, incorporation of IMI sessions in RI microplans, involvement of WCD, identification of areas of resistance especially in state capital and social mobilization through partners / NGOs is also emphasised upon. Identification of poor performing blocks in IMI and supportive supervision by divisional officers is also discussed.

A total of six state level RI review meetings were conducted with District Reproductive and Child Health Officers (DRCHOs) in 2017-18, out of which minutes were available for four meetings. These meetings had clubbed agenda with IMI however, various critical components of routine immunization like microplanning and its adherence, coverage data from PCTS and linelisting, ASHA vacancy, issues of urban immunization, supportive supervision through ONA collect application, utilization of *Teeka* express, payment of ASHA incentives and identification of poor performing blocks have also been discussed. In 2018, agenda of one state review meeting held in February, was combined with state ToT for PCV introduction.

All health programmes, including routine immunization are being reviewed by Additional Chief Secretary (Health and FW) through video conferences (VC). During these VCs, district wise performance under IMI, identification of poor performing areas for RI and fund utilization for RI are discussed in detail.

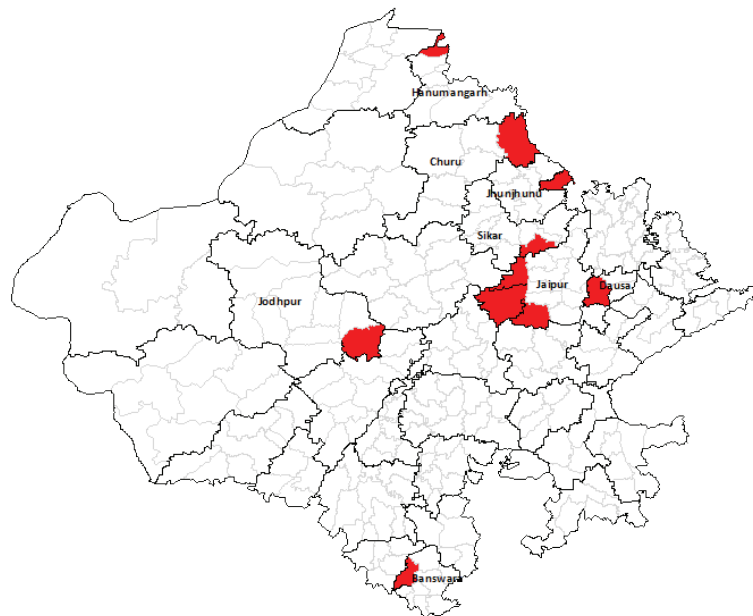
State has identified 11 poor performing blocks (with FIC<70%) belonging to nine districts (Fig. 4) on the basis of PCTS data and within these blocks state has identified poor performing subcentres (with FIC 60-70%, FIC 50-60% and FIC <50%) in January 2018. State has nominated state/divisional level officers for poor performing blocks or districts, but there are no specific plans for their visits.

Table 2: Analysis of state review platforms

Observation from the minutes of the last meeting								
State level fora	No. of meeting held in 2017-18	No of meeting minutes available	Chair-person of meeting	Members/ Dept. participated	Date of Last meeting held	Discussion points (last meeting)	Follow up on previous meeting minutes	Remarks
State Steering Committee	1	1	Chief Secretary	Representative from departments of WCD, Youth & Sports, I&B, Labour, Minority affairs, Immunization partners*, ESI, housing and urban poverty alleviation	25-09-2017	Inter dept. Coordination for improvement of IMI and routine immunization	NA	
State Task Force for Immunization	6	6	Addl. Chief Secretary	Health Department, WCD dept., Panchayati Raj & Rural Development Dept., NYK, Immunization partners*, Minority affairs, I&B dept.	11-05-2018	MI under GSA coverage and monitoring findings	No	
State review with DRCHOs	6	5	Principal Secretary & MD NHM	Project Director – Immunization, Immunization partners*, DRCHO	05-02-2018	Microplan updation timeline, Supervision through ONA Collect App, VPD Surveillance, Support of NYK, Completion of MCP (<i>Marmta</i>) cards, Identification of poor performing subcentres by DRCHOs, review of Penta1-Penta 3 drop-outs	No	
State AEFI Committee	2	2	HOD Paediatric, J K Lon hospital, Jaipur	Microbiologist/Pathologist/ P&SM/Forensic Medicine Dept., PD-Immunization, NO-Immunization, ADC, WHO	24-01-2018	Discussion on 3 AEFI cases and conclusion with most probable reason	NA	No discussion on silent districts or districts not submitted PCIF/FCIF of due cases

*Immunization partners: WHO-NPSP, UNICEF and UNDP, NIPi

Figure 4: Poor performing blocks based on PCTS coverage data (9 districts)



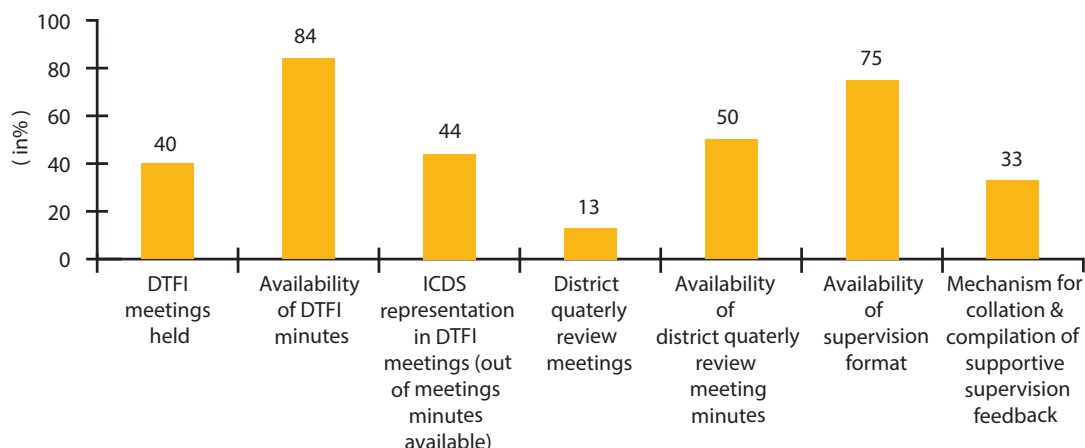
An online supportive supervision tool is used by state and district officials to supervise all health programmes. Recently, the state has developed “ONAcollect” application for supportive supervision in RI. Compiled findings from supervision are shared through letters and review meetings. The state has also hired five Immunization Field Volunteers (IFV) to support supervision in selected districts.

At the district level, District task Force for Immunization (DTFI) has been constituted in all districts under the chairmanship of District Magistrate (DM), and is expected to review programme performance once a month. Further, CMHOs are expected to conduct quarterly reviews for RI with block chief medical officers.

Figure 5 shows that only 40% of the expected DTFI meetings were held, ranging from 25% to 75% across reviewed districts. Minutes of DTFI meetings were available for 84% of the meetings held, with availability ranging from 50% to 100% in the reviewed districts.

Meetings of DTFI are merged with District Health Society (DHS) meetings in all districts. This limits the time and discussion on immunization programme leading to a lack of comprehensive discussions. Brief discussions on FIC as per PCTS, monitoring findings of MI/IMI, pendency in payment of *Rajshree yojana* for immunization incentive and linelisting of beneficiary in PCTS were held in different districts. Furthermore, the state has no mechanism to check the quality and comprehensiveness of discussions and decisions taken in DTFIs.

Figure 5: District level programme activities against expected performance



Source: Analysis of available minutes/attendance records/presentations from reviewed districts

All districts suffer from weak mechanism of quarterly review for RI and poor documentation. Only 13% of the expected quarterly review meetings were held, ranging from no meetings held in two districts to only one meeting held in two districts. However, meeting minutes were available only in one district. Discussions and participation during these reviews cannot be commented upon due to unavailability of any related documentation.

A state/division level official had visited in only 25% of the districts for RI review during the last 3 months. No documentation of such visit was available. Further, 75% of the districts had identified poor performing blocks but no district level officers have been assigned to these blocks by name. Three fourth of districts were using ONA collect application but two-third of them lacked a mechanism of analysis of feedback. One district was also using a self-developed checklist. While half of the districts lacked a mechanism of sharing feedback to blocks, remaining half shared feedback mostly through visits.

Half of the rural planning units were visited by some official from state/ division/district in last three months for supervision of RI activities, while documentation for such visits was found in one planning unit only.

Reviews at planning units was generally in the form of monthly meetings with health workers and supervisors. Quarterly review meetings were held only in 12.5% of the reviewed blocks. No participation from ICDS is seen during such review meetings. Allotment of subcentres to supervisors was seen in only 1 planning unit. Health supervisors did not share any feedback in nearly 63% of planning units.

As also discussed later in the report, the districts had high vacancies of Lady Health Visitor (LHV). Only one-fourth

of the subcentre microplans had any supervisor assigned and supervisory visits at session sites were found to be at only 14% sessions under assessment.

ii) Intersectoral coordination

Inter-department coordination

AAA convergence efforts under the platform of *Rajsangam* between Health and Family Welfare (HFW) and Women and Child Development (WCD) has been closely guided by MD-NHM. State has issued directives, Comic books- *We are AAA* and video films on coordinated planning and mapping of areas with clear demarcation. Orientation of all ANMs, ASHAs and AWWs is conducted in batches by state through video conferences.

Three of the reviewed districts had an established mechanism of AAA convergence, but mechanism for fixed day of AAA meetings was found in one third of the blocks.

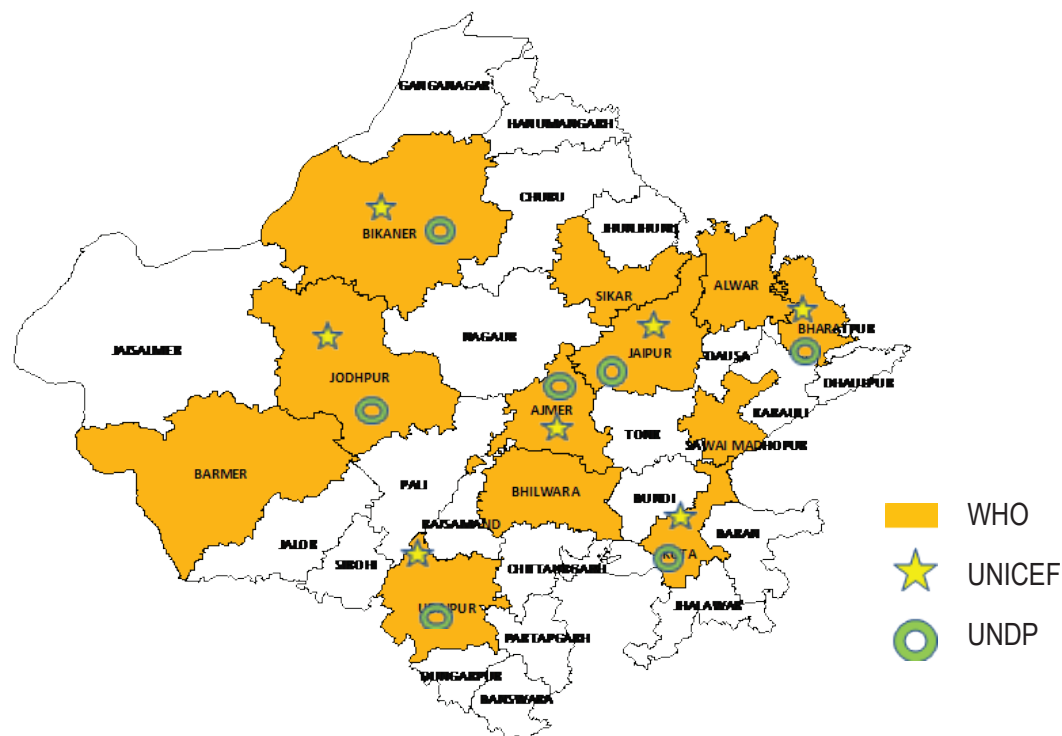
Partner coordination

Development partners work with state government on various areas of immunization programme (Table 3 and Fig. 6). UNICEF has divisional coordinators in 7 divisions supporting social mobilization for polio SIAs and routine immunization. UNICEF has also provided recording and reporting staff at the state level. UNDP supports Electronic Vaccine Intelligence Network (eVIN) implementation and for strengthening supply chain. WHO-NPSP with its state presence and 12 field units covers the entire state and supports in microplanning and monitoring for polio SIAs, measles and AFP surveillance. There is no mechanism of 'joint monitoring' by government and partners for routine immunization in the state.

Table 3: Immunization partners' support by thematic areas

Immunization partners	UNICEF	UNDP	WHO-NPSP
Presence in state	State capital and 7 divisions	State capital and 7 divisions	State capital and 12 field units
Thematic areas	Social mobilization, monitoring for polio SIAs /RI, MI/IMI, Cold Chain	Supply chain management (eVIN)	Microplanning and monitoring of polio SIAs, Measles & AFP surveillance and AEFI surveillance

Figure 6: Mapping of immunization partners' presence in Rajasthan



Human resource and infrastructure

Half of the District RCH Officers (DRCHOs) had additional charges. Further, one position of DRCHO was vacant,

and Dy. CMHO Family Planning was assigned additional charge of DRCHO.

Table 4: Human resource vacancy status

HR Cadre	% Vacancy					
	District A	District B	District C	District D	Average for districts under review (A, B, C & D)	State (33 districts)
MO- Regular	32	12	20	2	21	28
LHV	5	32	83	44	34	31
ANM-Regular	0	11	45	25	16	14
ANM-Contractual	92	0	0	14	55	34
CCT	0	0	0	0	0	7
ASHA	12	7	37	4	12	11
AWW	6	3	9	8	6	5

Source: Recent available data received from establishment section & State/District Programme Management Unit

The state has high vacancy of regular medical officers (28%). Vacancies of regular ANMs and contractual ANMs are 14% and 34% respectively (Table 4). In the districts reviewed, the vacancy of regular ANMs ranges from 0% to 45%. LHV vacancies stand at 31% in the state,

however, in some districts, it is seen to be high at nearly 83%. ASHA and AWW vacancies are low, with a state average of 11% and 5% respectively, but in one district more than one third ASHA positions were vacant. Figure 7 and 8 illustrate district wise MO and ANM vacancies.

Figure 7: Vacancy status of regular Medical Officers

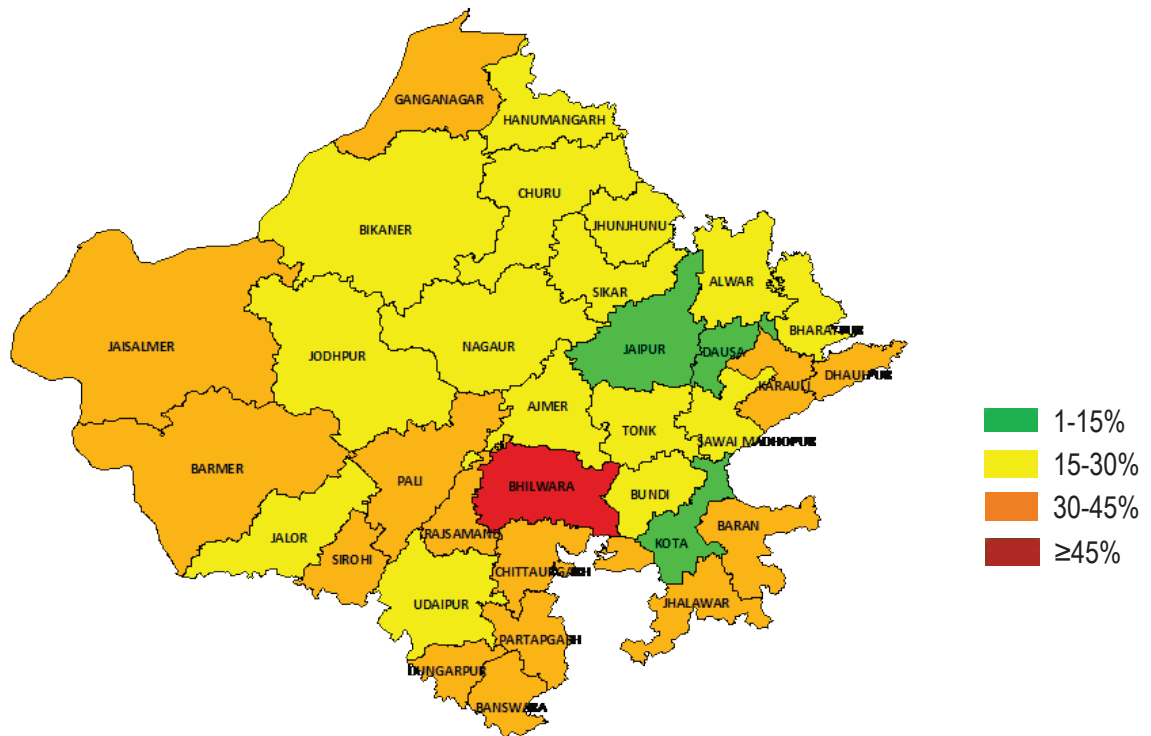
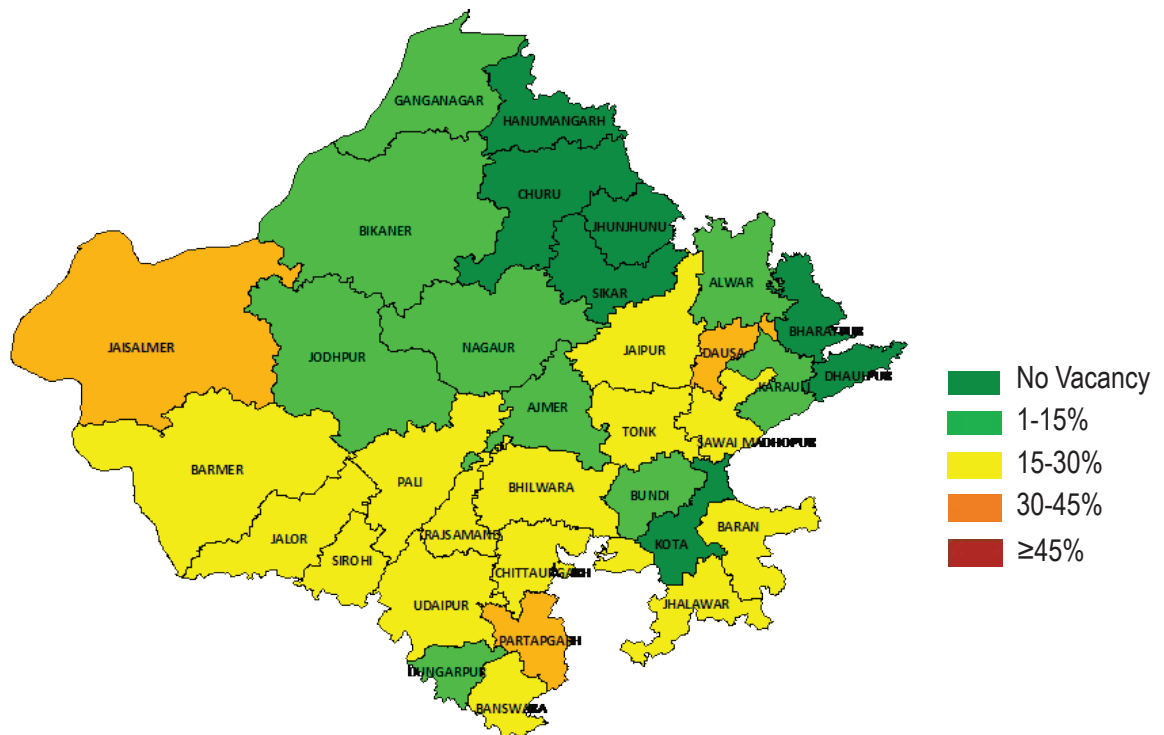


Figure 8: Vacancy status of regular ANMs



Capacity Building

Training of trainers on RI handbook for MOs was

conducted in 2016. Training of MOs is ongoing at SIHFV, the status of which is given in Table 5.

Table 5: Status of immunization trainings

Immunization training	% manpower planned for training	% trained out of planned
Medical Officers 2016-17 & 2017-18	27	71
Health workers	47	65
Cold Chain Handlers (CCH)	34	78

Source: Data as received from state

Training was planned for only 27% of available medical officers during the two years period (2016-17, 2017-18). Furthermore, only 71% of nominated participants had attended their training.

During the two years period (2016-17 & 2017-18), 47% of health workers (ANM) were planned for training, of which, total 65% had received training. Awareness gap was well reflected in the field, when only one-third ANMs were found to provide four key messages, correct injection site and route of administration were not known to 14% and 25% of the ANMs respectively, more than half of ANMs were unaware of the correct sequence of administering multiple antigens at one time and as high as 71% ANMs could not articulate even a single type of serious AEFI. Similarly, nearly 82% of ANMs were not aware of the nearest AEFI management centre. Only 18% ANMs were aware regarding reporting of VPDs in Monthly Progress Report (MPR).

One third of the cold chain handlers were nominated for training in 2017-18, out of which 78% attended the training. Two of the reviewed districts had not conducted any cold chain handler training in 2017-18.

Service delivery

The following components were reviewed to assess immunization service delivery:

- Microplanning
- Session quality
- Community coverage assessment

Microplanning

Desk review of 12 rural and 6 urban microplans was attempted, however, no RI microplan was available at 3 planning units. Twelve microplans were further analysed for updation, coverage of HRGs and alternate planning for vacant subcentres, while remaining three microplans at district level could not be assessed as information on above components required was unavailable.

Only 13% of the microplans were prepared on prescribed formats. One district in spite of having utilized 100% funds under microplanning head of part 'C' in 2017-18, still had all microplans on old formats. More than two third of the microplans lacked critical components like AVD plan and columns on new vaccines (Table 6).

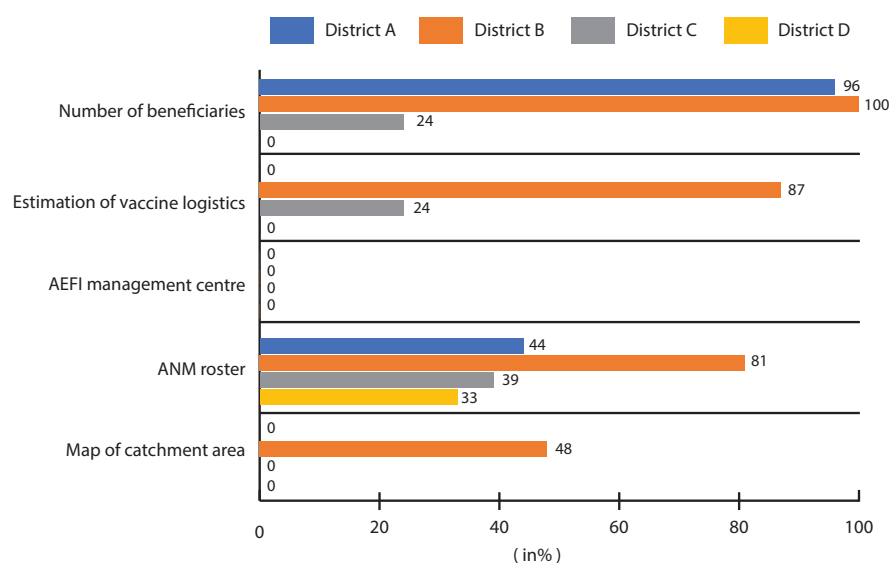
Table 6: Microplan analysis

Indicators	%	
Availability of microplan (n=18)	83	
Availability on prescribed format (n=15)	13	
Updation in last 6 months (n=12)	50	
Availability of AVD plan (n=15)	27	
Columns for new vaccines	fIPV (n=15)	27
	RVV (n=15)	33
Subcentre wise plans with enlisting of villages, hamlets and HRGs (n= 100)	46	
Subcentre wise plans with number of beneficiaries available (n= 100)	65	
Subcentre wise plans with subcentre wise map available (n= 100)	15	
Subcentre wise plans with vaccine & logistic formats available (n= 100)	35	
Subcentre wise plans with details of AEFI management centre (n= 100)	0	
Subcentre wise plans with ANM roster (n= 100)	54	
Subcentre wise plans with supervisor assigned (n=100)	25	
Sessions with mobilizers name mentioned in microplan (n= 366)	78	
Vacant subcentre plan with fixed ANM accountability (n=8)	50	

Of the 100 subcentre plans assessed, none of the plans contained detail of AEFI management centre, whereas almost two third plans lacked logistic planning formats. Supervision plan was missing in 75% plans and nearly

half of the plans lacked prescribed format of ANM roster (Table 8). Detail of district-wise status of microplans reviewed is seen in Figure 9.

Figure 9: Availability of critical components in microplans (in %)



Planning for vacant subcentres was assessed in 8 planning units having such subcentres. Alternate arrangement with fixed accountability to cover such subcentres was found only in half of the microplans.

While HRAs for RI were identified, only 43% of the listed HRAs had been tagged to existing sessions, independent sessions were planned for only 1% of such HRAs. One planning unit had conducted IMI sessions; none of which were included in RI microplan.

Teeka Express was launched in 2013 for distributing vaccines and logistics to session sites as well as holding of mobile vaccination sessions. At present 64 *Teeka* express are in use. *Teeka* Express microplan from one district was also analysed. As per the plan, *Teeka* express covers distances ranging from 350 kms to one km per day.

Session Quality

A total of 28 session sites were assessed in rural and urban areas for critical processes affecting the quality of service delivery. A few key indicators are shown in Table 7:

Table 7: Session site findings on key processes

Indicators	%
Session site as per microplan	89
Session part of VHND/UHND	75
ASHA found as a mobilizer	82
AWW found as a mobilizer	50
Availability of record of updated head count survey	57
Duelist availability	86
Updated duelist availability	39
Preparation and sharing of next month session's duelist by ANM with ASHA at the end of the current session	39
Supervisory visits	14
Knowledge about correct sequence of administering multiple antigens	43
ANM awareness about serious AEFI cases	29
ANM awareness about recording of AEFI cases in register at PHC	25
ANM awareness about designated AEFI management centre	18
ANM delivering four key messages to caregivers (n=21)	29

(a) **Adherence to microplan:** Eighty-nine percent of the observed sessions were conducted at a site as per microplan. One-fourth of the sessions assessed were not part of Village/Urban Health Nutrition Day (VHND/UHND). While ASHAs were found to be present at 82% of session sites, AWW involvement at session site was found to be sub-optimal.

(b) **Headcount survey, due listing and tracking of left outs/drop outs:** Duelist was available at 86% of the session sites, however, updated duelist was available at only 39% of total session sites. Nearly half of the duelists were not made on prescribed format. Active tracking of drop outs and left outs by health workers was assessed by scrutinizing previous duelists and records at the session sites. It was found that health workers at only 46% of the sessions were performing active tracking. Nearly 57% of ANMs were hesitant to vaccinate children with a minor illnesses like mild fever/diarrhoea. At the end of the session, only two-fifth of ANMs prepared and shared the duelist for the next session with ASHAs.

(c) **Immunization safety:** Eight percent of ANMs were seen to re-use the syringe for reconstitution. Nearly 5% of ANMs were seen to be guiding the needle with their finger while vaccinating a child.

(d) **Supervision:** Nearly 86% of the sessions were not visited by any supervisor.

(e) **ASHA incentives:** ASHAs were found to be well aware regarding incentives for full immunization, and

complete immunization and mobilization component. Almost 83% ASHAs had received RI incentives in the last quarter.

(f) **Knowledge of ANMs:** Although the state switched from full dose IPV to fractional IPV, almost one fifth of the ANMs could not tell the correct age/dose & route of fIPV administration. Knowledge on RVV age/dose & route was found to be generally good.

Knowledge of ANMs on VPDs and AEFIs recording and reporting has been dealt with in the next section.

Community Assessment

Caregivers of 397 children in the age group of 0 to 23 months were interviewed to assess the vaccination status of their children. Availability of MCP (*Mamta*) card was 87%. More than 80% of the children born at government facilities had been given Hepatitis B birth dose (Table 8).

Seventy-one percent of children (0-23months) were found to be vaccinated appropriately as per age. ASHAs, were the major source of information and mobilization of beneficiaries. However, only 38% of the names of partially vaccinated or unvaccinated beneficiaries were found in the duelist with ASHA.

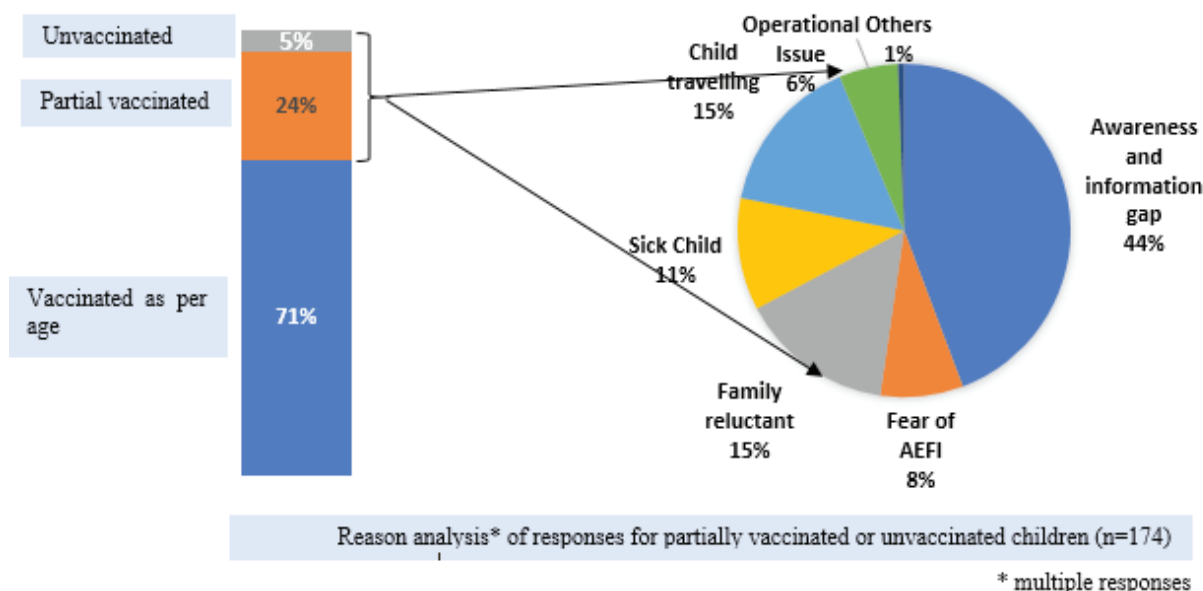
Names of all beneficiaries were also crosschecked for inclusion in ASHA's headcount survey record in order to assess the robustness and completeness of survey. Thirty-six percent of the names were not present in headcount survey.

Table 8: Indicators of community assessment

Indicators	%
MCP (<i>Mamta</i>) card available with household(n=397)	87
Hep B Birth dose given to new born delivered in government health facilities (n= 311)	81
Major source of information on vaccination to caregivers (n=490)	ASHA – 61
	AWW – 32
Mobilization of beneficiaries to session site by ASHA/ AWW (n=460)	ASHA – 67
	AWW - 13
Name of partially vaccinated / unvaccinated beneficiaries in duelist (n=116)	38
Name of children in headcount survey (n=397)	64

Figure 10, illustrates the reasons for children not vaccinated as per age. Awareness and information gap was the most common reason, followed by either 'child was traveling' or 'family reluctant'.

Figure 10: Reasons for partially vaccinated or unvaccinated children



These findings are also substantiated with the findings that the funds have been underutilized especially under 'mobilisation of children through ASHA or other mobiliser' at state, districts and blocks. Along with this, the state has also spent inadequately under 'focus on slums and underserved areas in urban areas/alternate vaccinator for slums'.

AEFI and VPD reporting

All DRCHOs were trained on Operational Guidelines for

AEFI Surveillance in September 2016. Two state-level AEFI committee meetings were held in 2017-18 as against the expected norm of 4 meetings. Available minutes of the last meeting reveal that causality assessment was the main agenda and there was no discussion on the performance of districts, especially in terms of district AEFI committee meetings frequency, on districts silent for case reporting or districts not submitted due PCIF & FCIF of reported cases.

Table 9: Trend of silent districts over 3 years

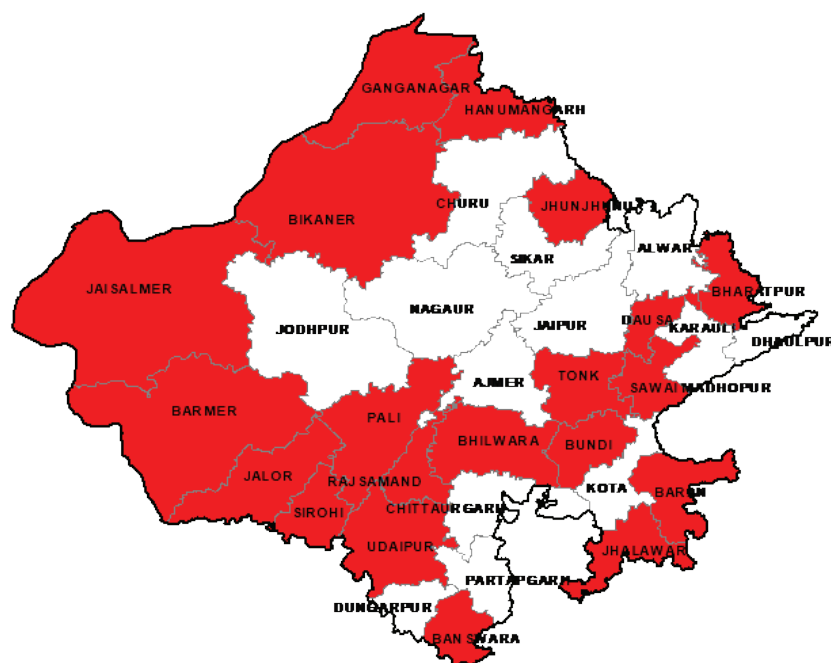
Year (Jan-Dec)	Total no. of districts	No. of Silent districts	% of silent districts
2015	33	28	85
2016	33	28	85
2017	33	28	85

Source: AEFI Secretariat

Table 9 shows year wise number of silent districts for AEFI reporting. Twenty districts (Banswara, Baran, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Dausa, Ganganagar, Hanumangarh, Jaisalmer, Jalor, Jhalawar,

Jhunjhunu, Pali, Rajsamand, Sawai Madhopur, Sirohi, Tonk and Udaipur) have not reported any AEFI case for the period of January 2015 to December 2017 (Fig. 11).

Figure 11: Districts silent for AEFI cases since last 3 years



Source: AEFI Secretariat (as of 31st March 2018)

In regard to the observation at state, line list for AEFI cases was updated as per national level AEFI line list. Out of total three AEFI cases reported in FY 2017-18, PCIF has not been shared for two cases, whereas FCIF has not been shared for one AEFI case.

As per Table 10, district AEFI committee was constituted in all districts assessed however, none of the districts had conducted AEFI meeting and none had reported any case in 2017-18.

Table 10: AEFI surveillance status at the district level

Indicators	Average (for reviewed districts)
AEFI committee constituted	100 %
AEFI committee member list updated in last year	None
Quarterly AEFI committee meeting held	None
Line listing available at district HQ	No case reported

Data as on 31st March 2018

A total of 15 urban and rural planning units were assessed for critical AEFI surveillance related indicators (Table 11). Guidelines from national level were sent to all states including Rajasthan in 2016 for maintenance of block AEFI registers to report and record all types of AEFIs encountered in the field by health workers. Almost two-third planning units lacked these AEFI registers.

While only half of the planning unit nodal officers (MOIC/MO) were trained/sensitized on AEFI surveillance within

last three year, 60% of officers were not aware of any type of serious AEFIs. Blank Case Reporting Formats (CRFs) were not available at any of the PUs. Furthermore, AEFI management kits were unavailable at 80% planning units.

Planning units which were also AFP/VPD/ AEFI surveillance reporting units were assessed for completeness of AEFI reporting. Only one-fifth of these planning units had either reported an AEFI case or were giving 'nil' reports.

Table 11: AEFI surveillance status at planning unit (PU) level

AEFI indicators	Average (for reviewed districts) (%) (n=15)
Unavailability of AEFI reporting register	67
Nodal officers not sensitized/oriented/ trained on AEFI	53
Nodal officers not aware of serious AEFIs	60
Blank CRF not available	100
Unavailability of AEFI management kit	80

Knowledge on AEFI reporting among health workers was found to be generally low. As high as 71% ANMs could not articulate even a single type of serious AEFI. Among those who could articulate, hospitalization was the most common response (42%) while death was mentioned by only 33%. This is, when the state had multiple opportunities to train and re-sensitize health workers regarding types of AEFIs using the platform of new vaccine introduction (Pentavalent and IPV in 2015, RVV in 2016-17) and during orientation for MI and IMI (2015-2018). More than 80% of ANMs were not aware of the nearest AEFI management centre. Only one fourth ANMs were aware regarding reporting of AEFI cases in block/planning unit PHC registers.

Vaccine Preventable Disease (VPD) knowledge and reporting

Only 14% of ANMs could correctly articulate case definitions of diphtheria, pertussis, neonatal tetanus, measles and AFP, whereas only 18% ANMs were aware regarding reporting of VPDs in Monthly Progress Report.

Nearly one-fourth of the reviewed districts had no mechanism of weekly VPD data sharing between District Surveillance Officer (DSO-IDSP) and DRCHO office and mismatch was found in all reviewed districts.





3.2

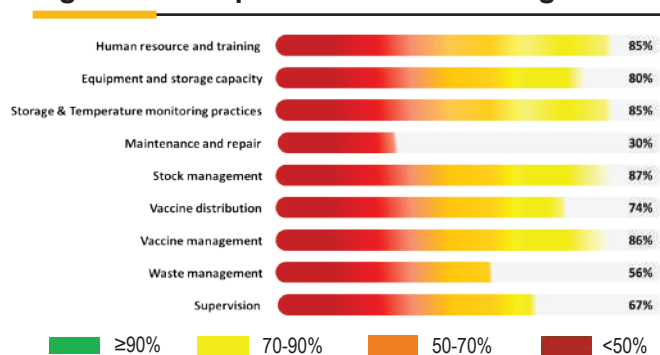
LOGISTICS AND SUPPLY CHAIN

Review approach

Logistics and supply chain data was collected at four levels- Primary Vaccine Store (State Vaccine Store), District Vaccine Store (DVS), Service Delivery Points (last cold chain points) and session sites. Primary Vaccine Store was observed at the state capital. DVS of the districts reviewed were visited. Urban and rural service delivery points in the select districts were observed. Session sites were also visited in rural and urban areas.

The data is analysed into nine thematic areas- human resource and training; equipment status and storage capacity; storage temperature and temperature monitoring practices; maintenance and repair; stock management and vaccines & logistics availability; vaccine distribution; vaccine management practices; waste management; and supervision. The performance of the state, is calculated through a cumulative score across all the levels, for each thematic area (Fig. 12).

Figure 12: Snapshot of review findings



Detailed report

A robust cold chain and vaccine logistics management is pertinent in ensuring uninterrupted availability of quality vaccines from manufacturer to service-delivery levels and beneficiaries, so that opportunities to vaccinate are not missed because of unavailability of vaccines. The role of the supply chain is to ensure effective vaccine storage, handling, and stock management; rigorous temperature control in the cold chain; and maintenance of adequate logistics management information systems.

The key findings for logistics and supply chain can be summarized into following nine thematic areas:

Human resource and training

Adequate and trained human resource are pertinent for

smooth functioning of immunization supply chain system. The findings at various levels were:

- » At the Primary Vaccine Store, Cold Chain Handler (CCH) has been assigned. The Vaccine Logistics Manager position is vacant but has been proposed under programme implementation plan (PIP). At the District Vaccine Stores (DVS), there is at least one CCH assigned and Cold Chain Technician (CCT) is in position.
- » All districts had conducted training on VCCH module 2016, with 88% of CCHs trained for the module. Total 63% of CCH were trained for eVIN application and implementation. Also, 80% of the DRCHOs were trained in VCCH module 2016. All the CCTs have been trained in CCE during the last three years.
- » All service delivery points (SDP) observed, have at least one CCH assigned and alternate CCH was assigned at 70% of SDPs. Amongst these, 56% and 88% of CCH at SDPs were trained in VCCH module 2016 and for eVIN application respectively.

Equipment status and storage capacity

Equipment status

For ensuring a sustainable safety of the vaccines, cold chain equipment (CCE) need to be maintained and upgraded periodically. Following are the findings pertaining to the equipment status:

- » Walk-in freezer (WIF), Walk-in cooler (WIC), ice-lined refrigerator (ILR) and deep freezer (DF) were assessed across different levels.
- » All the cold chain equipment at the Primary Vaccine Store (ILR, DF, WIF, and WIC) were functional, but 14% of the equipment did not have separate stabilizers. At the DVS level, 7% of all CCE functioned without separate stabilizers and 36% of all CCE were found to be functioning without separate stabilizers at service delivery points.
- » The cold chain sickness rate in the state was found to be 9.8 percent during the review period.

Storage capacity:

There should be a dedicated space to keep cold chain equipment and logistics to ensure smooth supply chain management.

There was adequate space for CCE and dry storage at the reviewed Primary Vaccine Store. All DVS have adequate space for CCE but the dry storage space was found to be inadequate at 60% of all DVS reviewed, as the logistics were poorly accessible after stacking.

The cold chain space for vaccines storage (dependent upon number and type of ILR at SDP) was adequate at all service delivery points.

Storage and temperature monitoring practices

Maintaining appropriate temperature is essential to ensure the efficacy and potency of the vaccines. The temperature monitoring practices were found to be good at all levels. The other findings of the review had the following details:

- » At the Primary Vaccine Store Level all the CCE had functional thermometers with temperatures recorded, twice daily, in separate log books for each CCE.
- » At the District Vaccine Store, all functional in use ILRs and 43% of functional in use DFs had functional thermometers. The temperature log book was not available for 21% of CCE.
- » The functional thermometer was available for 90% of ILR and 70% of DFs at the Service Delivery Point. The temperature log book was not available for 16% of CCE. The temperature is recorded on the same day (including holidays) at 85% of SDP.

Maintenance and repair

For ensuring cold chain sickness rate at minimal level, periodic maintenance and repair of equipment should be carried out. It is important to ensure that an arrangement is in place to carry out prompt repairs and preventive maintenance of equipment.

- » At the Primary Vaccine Store, functional power back up was not available for CCE. Similarly,

40% of DVS and 85% of all service delivery points did not have functional power back up for CCE. Total 20% of SDP reported instance in the past 1 month when the continuous 8 hours of power supply was not available.

- » Cold chain technicians were in position at each district and only 20% of them were having complete tool kit.
- » At SDP level, records of defrosting were available for 14% and 39% of ILRs and DFs respectively.
- » State and district committees have been constituted for condemnation of CCE. There was no CCE found pending for condemnation at SVS. However, amongst all the districts reviewed, 40% of the DVS had CCE pending for condemnation, since last 3 years.

Stock management

In order to maintain adequate quantity of vaccines, it is essential to keep complete and accurate records of all stocks and their transactions. Electronic Vaccine Intelligence Network (eVIN) is functional across the state, and stock management practices were found to be good. Records of vaccines (BCG, OPV, MCV and pentavalent vaccine), diluents (BCG and MCV) and logistics (AD 0.1ml, AD 0.5ml and reconstitution syringes) were assessed; and following findings were observed:

- » At the primary vaccine store, standardized stock registers for vaccines, diluents and logistics were available and updated. There was no stock out observed for the reviewed vaccines (BCG, OPV, MCV and pentavalent vaccine) and diluents (BCG and MCV).
- » At the District Vaccine Stores, stock registers were maintained for all vaccines and diluents. However, for logistics (AD 0.1ml syringe, AD 0.5ml syringe and reconstitution syringe) standardized stock registers were available at 80% of the DVS. Updated stock registers for vaccines and diluents were found at 40% of the DVS. Out of the 80% of DVS where stock registers for logistics were available it was updated at 25% of DVS for AD syringes and reconstitution syringes. There was no instance of any stock outs or excess stocks of the reviewed vaccines.

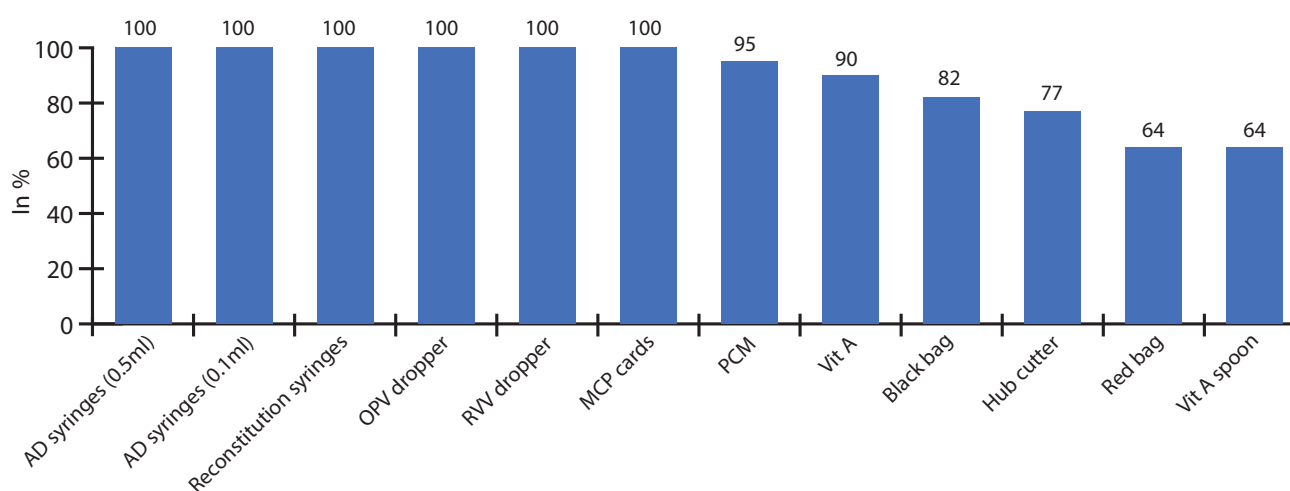
- » All Service Delivery Points (SDP) reviewed had availability of standardized stock registers of vaccine and diluents. Total 60% of SDP maintained standardized stock registers for logistics. Stock registers were updated for BCG at 85%, for OPV and MCV at 70%, and for pentavalent vaccine at 65% at all reviewed service delivery points. Stock register for diluent for BCG was updated at 85% and for MCV at 70% SDPs. Out of 60% SDP where logistics stock registers were available, the registers were updated at 75% SDP for AD 0.1ml and AD 0.5ml syringes and at 67% for reconstitution syringes.
- » The stock registers are usually updated once a month and not with each transaction.
- » No Stock out of any vaccines and syringes were observed in the reviewed facilities.
- » Amongst all the service delivery points, excess stock of BCG and MCV were observed at 5% SDPs. OPV and pentavalent vaccine stock exceeded the maximum level at 10% of SDPs.

Stock availability at session sites

- » Of all the sessions observed OPV, MCV and MCV diluent and TT were available at all the sessions. BCG vaccine and diluent were available at 73% of sessions, RVV at 82% and IPV was available at 95% of sessions.
- » The vaccines were not available as per due list at 55% of sessions.

The availability of logistics at reviewed session sites is depicted in Figure 13.

Figure 13: Logistics availability at session sites



Vaccine distribution

For an effective immunization programme, timely deliveries of the required quantities of vaccines are important. The parameters assessed here ensure the effectiveness of the vaccine distribution between each level of the supply chain.

- » The Primary Vaccine Store distributes vaccines once the demand is raised by DVS.
- » In 60% of DVS, the vaccines were sent to SDP on demand through indent. In 20% of the DVS, it was observed that vaccines are distributed immediately after being received from primary store. In remaining 20% DVS, distribution is done when eVIN reflects minimum stock.
- » Vaccines are distributed monthly from all the DVS observed.
- » The functional vaccine van is available in all 33 districts of the state. All the reviewed DVS have functional vaccine van.
- » At 60% of the reviewed Service Delivery Points, the AVD (includes *Teeka* express) carries and returns the vaccines to the session site.
- » Out of the sessions observed, 54% of sessions received vaccines exclusively through AVD mechanism (including *Teeka* express). The other mechanism found was, ANM collecting vaccine from SDP.
- » At the session sites monitored, it was observed that all vaccines and diluents were received

inside the vaccine carrier with four ice packs.

Vaccine management

This criterion is essentially applied to the service delivery level and session site.

- » Across all levels reviewed, no other vaccine other than in UIP vaccines were found in the ILR.
- » Contingency plan and job aids were displayed at the SVS and all the DVS observed. Only 55% of the service delivery points had contingency plan available, while 80% SDP displayed the job aids.
- » At 80% of the DVS, vaccines were stacked properly. At the service delivery points all the vaccines were stored in ILR and were stacked properly.
- » Open vials were stored in ILR at all service delivery points and none was found beyond 28 days from day of opening.

The average wastage rates for the reviewed vaccines at the service delivery points are given in Figure 14.

Vaccine management at session sites

- » At 73% of reviewed session sites, date and time was mentioned on all open vials. At 9% of the sessions neither date nor time was written on vaccine vials.
- » At 14% of the sessions, open vials of BCG and MCV were found to be used beyond 4 hours.

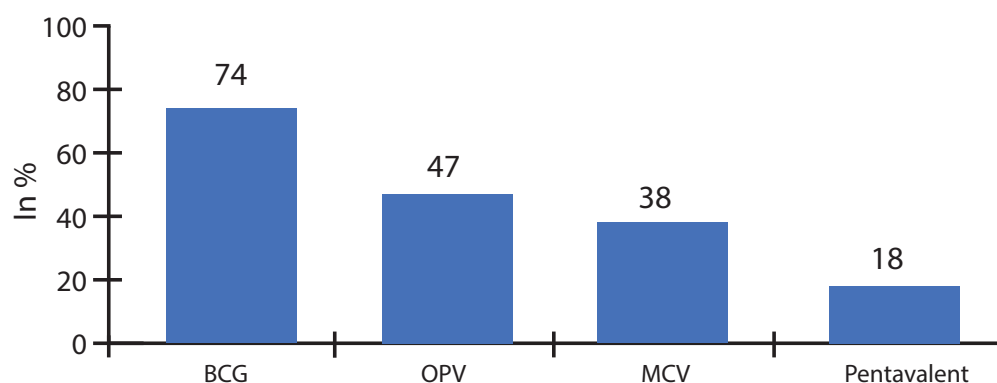
- » At 77% of sessions, opened vials of vaccines were issued and no vaccine was found to be used beyond 28 days of opening.
- » All the vaccines were within usable VVM and had readable labels.
- » At 55% of the sessions reviewed, vaccines were not appropriately placed on/ near the ice packs and non-conditioned ice-packs were found at 14% of sessions reviewed.
- » Vaccines were placed in zipper bag at 77% sessions, and at 36% sessions multiple zipper bags were used to return the vaccines to SDP.
- » At 9% of the sessions, vaccines were found beyond the expiry date.

Waste management

The waste management practices at the service delivery points need more attention.

- » Immunization waste was returned from only 45% of the session sites.
- » Total 50% of the SDPs had safety pit.
- » Regarding the waste disposal practices, at 25% of service delivery points, immunization waste was disposed in the safety pits whereas 30% of the SDPs outsourced it, 20% of the SDPs did not follow any waste management practices whereas the waste was burnt at 25% of the service delivery points.

Figure 14: Vaccine wastage rate



- » At 60% of the health facilities, the CCH interviewed did not have knowledge about shake test. The knowledge of CCH about waste disposal was found to be inadequate. CCH at only 60% of the service delivery points had knowledge about use of red and black bags for waste disposal, and at 55% SDP, CCH had knowledge about disposal of immunization sharps.
- » Hub cutter was found at 77% of the session sites and out of these only 55% of the sessions were using hub cutter. In these 55% sessions, the cut syringes were found to be segregated in red bag at 71% of sessions only.

Supervision

- » At the Primary Vaccine Store, 2 supervisory visits have been made by the state officials in the last three months and the preventive maintenance plan was available with the CCT.
- » At the District Vaccine Stores, an average of 3 supervisory visits were made by DRCHO in all the DVS reviewed. The preventive maintenance plan was available only at 40% of the districts.
- » There were no supervisory visits by the MOs at 30% of the SDPs and only 35% of the CCTs made supervisory visit to the service delivery points in the last one month.

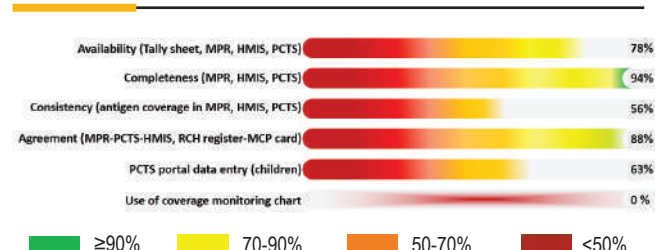
Review approach

Immunization data is recorded in the RCH registers and due lists by the ANMs and consolidated in the form of a monthly report that is submitted to the planning units. Data entry operator uploads the data from the Monthly Progress Report (paper copy) into the PCTS portal, data from PCTS portal is downloaded in HMIS report format and again uploaded in HMIS portal. It is of paramount importance that data is of highest quality, so that it can be used to guide programme actions.

The objective of review was to assess the data recording and reporting system, data quality and the use of data for action. The assessment was done in two parts; system of data recording & reporting and Data Quality Assessment (DQA). An excel tool adapted from WHO methodology was used for DQA while structured questionnaires were used to assess the system of reporting. Pre-visit to the state was done to ensure that the DQA tool was consistent with the data reporting mechanism of the state.

The performance of the state, is calculated through a cumulative score across all the levels, for each thematic area (Fig. 15).

Figure 15: Snapshot of review findings



Data Quality Assessment (DQA)

Six months data from September 2017 to February 2018 was used for DQA in eight rural and two urban planning units. The assessment followed definitions as illustrated in Table 12. For the DQA, six antigen doses (BCG, OPV 1, OPV 3, Pentavalent 1, Pentavalent 3 and MCV 1) were opted for analysis. An overview of the key findings of DQA is illustrated in Table 13.

Table 12: Description of key indicators of Data Quality Assessment (DQA)

Indicator	Description
Availability	Physical availability of records and reports at the assessment site
Completeness	All the specified immunization related data fields filled up
Consistency	Data follows the logic that is expected from immunization system, for example OPV 1 ≥ OPV 3
Agreement	Two documents that are supposed to have the same data are actually identical or not, for example recordings in the tally sheet with reporting in MPR

Table 13: Overview of Data Quality Assessment (DQA)

Indicator	Record/Report	Assessment findings (%)					
		District A	District B	District C	District D	State capital urban area	Average of districts reviewed
Availability	Due list	53.5	100.0	0.0	95.4	100.0	65.1
	MPR	95.8	100.0	87.5	100.0	100.0	96.3
	PCTS	95.8	100.0	100.0	100.0	100.0	99.1
	HMIS	95.8	100.0	100.0	100.0	100.0	99.1
Completeness	MPR	69.6	95.8	100.0	100.0	16.7	82.7
	PCTS report	100.0	100.0	100.0	100.0	100.0	100.0
	HMIS report	100.0	100.0	100.0	100.0	100.0	100.0
Consistency	OPV 1 ≥ OPV 3						
	MPR	100.0	50.0	25.0	75.0	50.0	61.0
	PCTS	100.0	50.0	0.0	50.0	100.0	56.0
	HMIS	100.0	50.0	0.0	50.0	100.0	56.0
	*Penta 1 ≥ Penta 3						
	MPR	100.0	50.0	25.0	75.0	50.0	61.0
	PCTS	100.0	50.0	0.0	50.0	50.0	50.0
HMIS	100.0	50.0	0.0	50.0	50.0	50.0	

Indicator	Record/Report	Assessment findings (%)					
		District A	District B	District C	District D	State capital urban area	Average of districts reviewed
Agreement	RCH Register -> MCP (Mamta) cards	80.2	100.0	92.1	75.5	96.6	87.4
	MPR -> PCTS	92.7	95.1	70.6	93.0	45.8	83.5
	PCTS -> HMIS	98.5	100.0	94.4	97.9	48.6	92.2

*Penta – Pentavalent

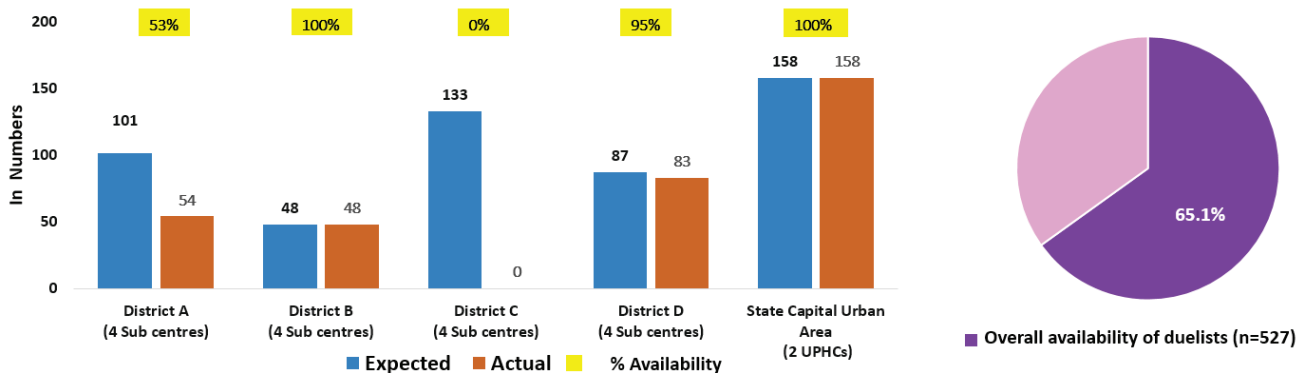
i) Availability:

Figures 16, 17, 18 and 19 give an overview of availability of due lists, MPR, PCTS and HMIS data respectively. Physical availability of records and reports were assessed out of the total expected records/reports. The availability was assessed for due lists at sub centre/UPHC, for

MPR at PHC/CHC, for HMIS report (e-copy) and PCTS (e-copy) for specified six months.

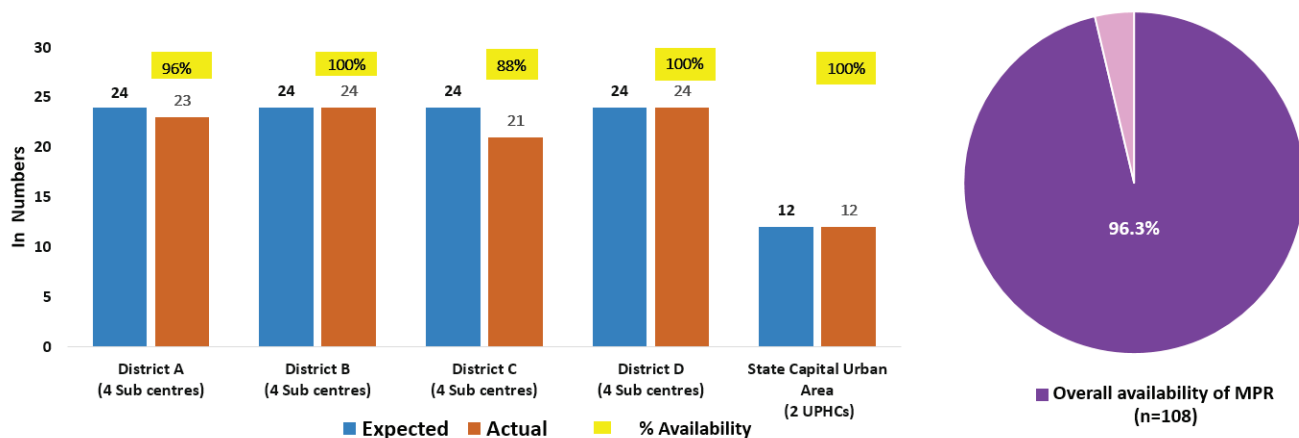
- » **Due lists:** Sixty-five percent of the expected due lists were available at the reviewed subcentres/ UPHCs ranging from 0% to 100% (Fig. 16).

Figure 16: Availability of due Lists



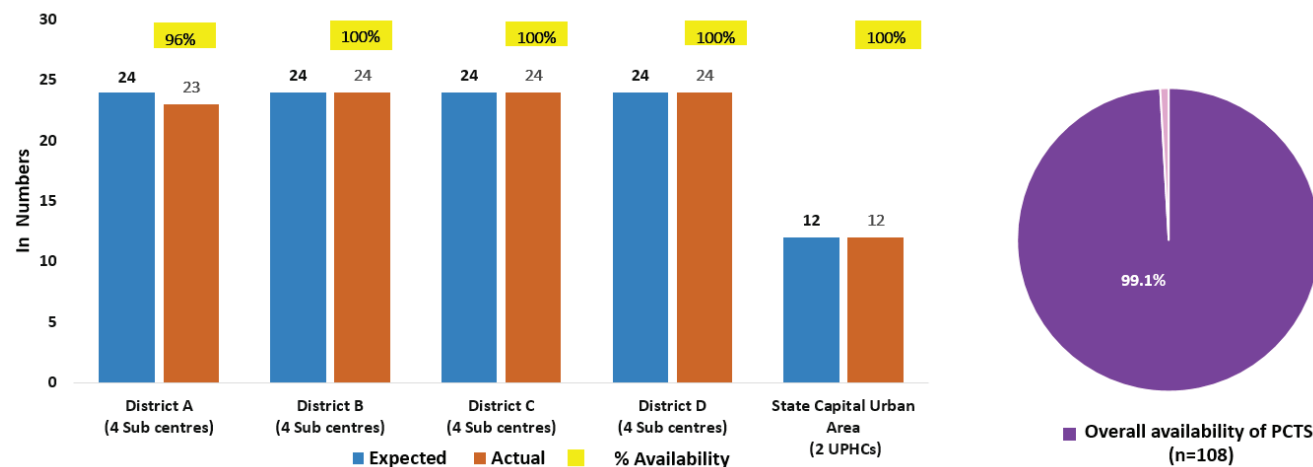
- » **Monthly Progress Report (MPR):** Nearly 96% of expected MPRs were available for the reviewed subcentres/UPHCs (Fig. 17).

Figure 17: Availability of MPR



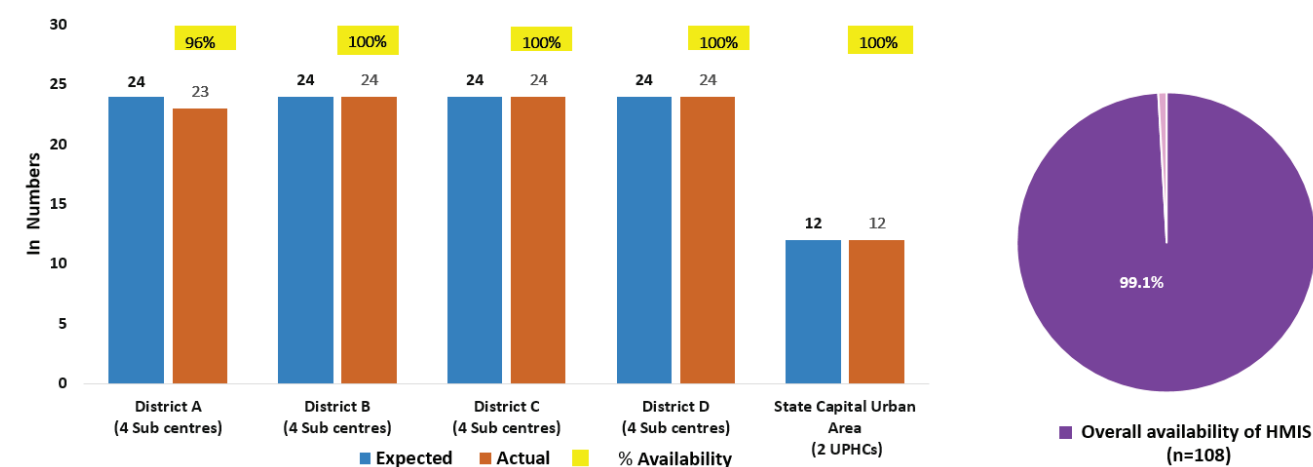
» **PCTS data:** Availability of coverage report of subcentres/ UPHCs in PCTS portal was 99% overall (Fig. 18).

Figure 18: Availability of data in PCTS Portal



» **HMIS data:** Availability of coverage report of subcentres / UPHCs in HMIS portal was 99% in all reviewed planning units (Fig. 19).

Figure 19: Availability of data in HMIS Portal



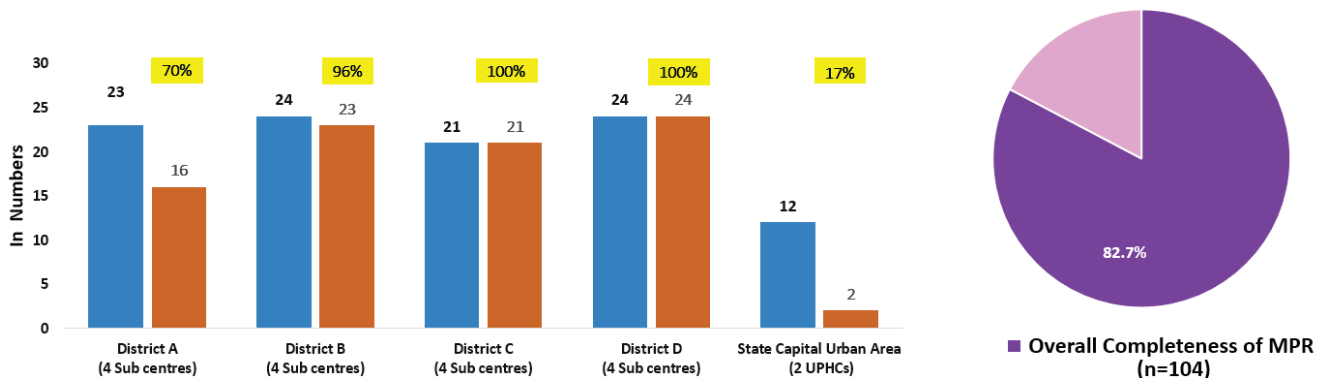
ii) Completeness:

Completeness implies that all immunization related data fields were filled up.

» **Monthly Progress Report (MPR):** During the review it was found that 83% of MPRs

were complete with a range of 17% to 100% among the reviewed subcentres/UPHCs. (Fig. 20).

Figure 20: Completeness of MPR



» **PCTS and HMIS coverage report** completeness was 100% in all the reviewed districts.

iii) Consistency:

Consistency measured if the reported data follows the logic that is expected from an immunization system. For example, coverage of OPV 1 should be either equal or more than the coverage of OPV 3 in a subcentre/UPHC.

Consistency was assessed in MPR, PCTS and HMIS report for

- » OPV1 and OPV3
- » Penta 1 and Penta 3

» **Consistency in MPR:** During the review, it was observed that only 61% of the reviewed subcentres/ UPHCs had consistency in MPRs for OPV1 and OPV3 (Fig. 21). Consistency for Pentavalent 1 and Pentavalent 3 was also found to be the same.

» **Consistency in PCTS reports:** In the PCTS reports, it was found that only 56% of reviewed subcentres/ UPHCs followed a consistent pattern for OPV 1 and OPV 3 while 50% had consistency for Pentavalent 1 and Pentavalent 3 (Fig. 22).

Figure 21: Consistency between OPV 1 & OPV 3 in MPR

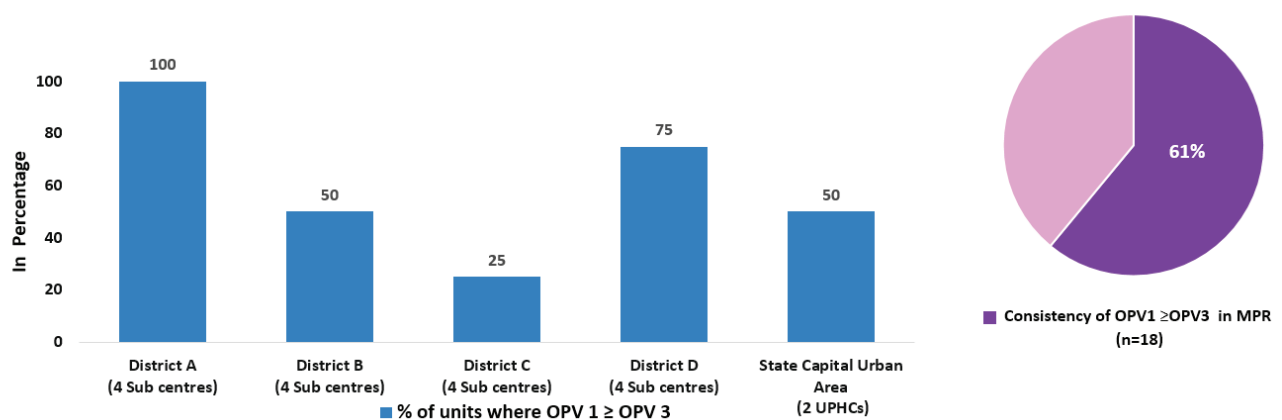
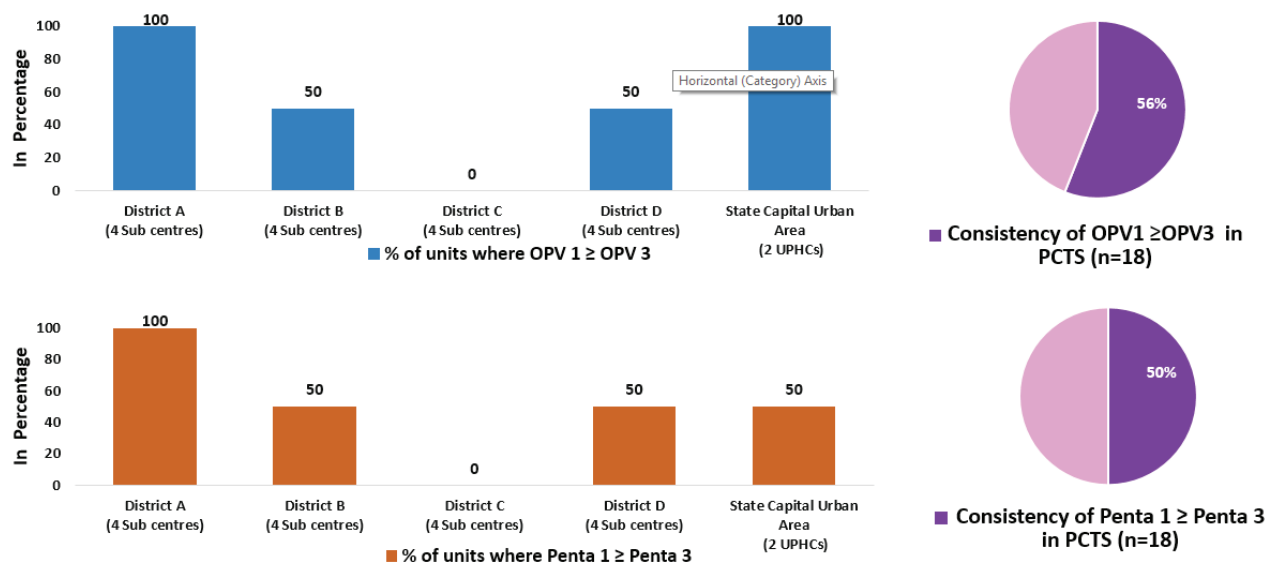


Figure 22: Consistency between OPV 1 & OPV 3 & Pentavalent 1 & Pentavalent 3 in PCTS



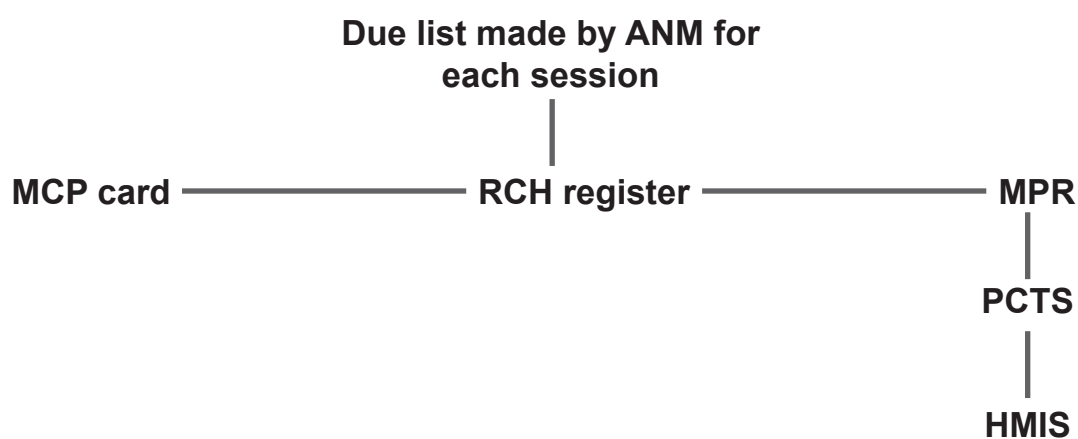
» In HMIS reports, same pattern of consistency was observed for OPV 1 ≥ OPV 3 and Pentavalent 1 ≥ Pentavalent 3 in the reviewed subcentres/UPHCs (56% and 50% respectively).

iv) Agreement:

As data flows from peripheral health centres to the next higher level, different records and reports at each level, must be in agreement with each other to ensure data

accuracy. The flow of data from the session site has been illustrated in Figure 23.

Figure 23: Data flow from session site to planning unit



As a part of DQA, the following agreement analysis was performed for six selected antigen doses:

1. Between MPR (paper copies) and PCTS reports (e-copies)
2. Between MPR (paper copies) and PCTS reports (e-copies), antigen wise
3. Between PCTS reports (e-copies) and HMIS reports (e-copies)
4. Between PCTS (e-copies) and HMIS reports (e-copies), antigen wise

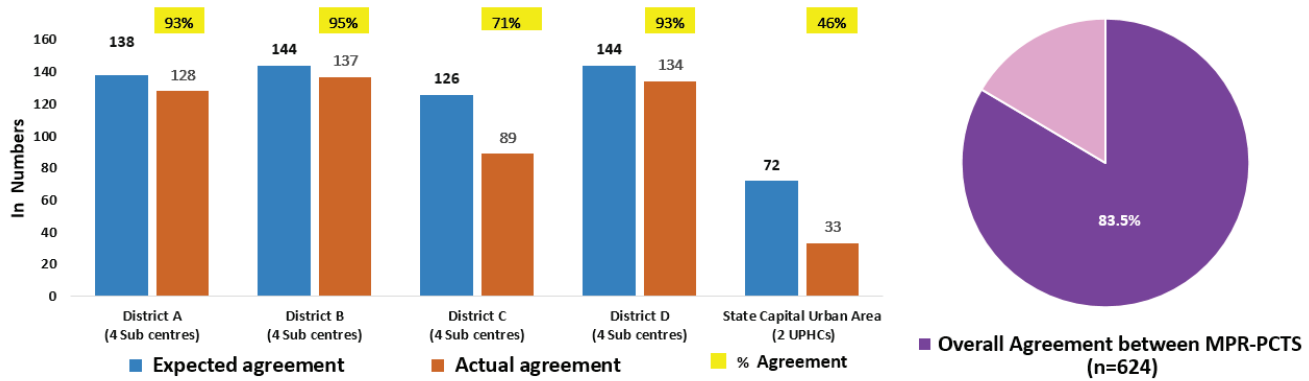
5. Between RCH register and MCP (*Mamta*) card for a selected month

6. Between RCH register and MCP (*Mamta*) card, antigen wise

MPR v/s PCTS: Agreement between available MPRs and PCTS reports was assessed for six selected antigens (BCG, OPV 1, OPV 3, Pentavalent 1, Pentavalent 3 & MCV 1).

84% of the entries done in MPR matched with PCTS, with a range from 46% to 95% (Fig. 24).

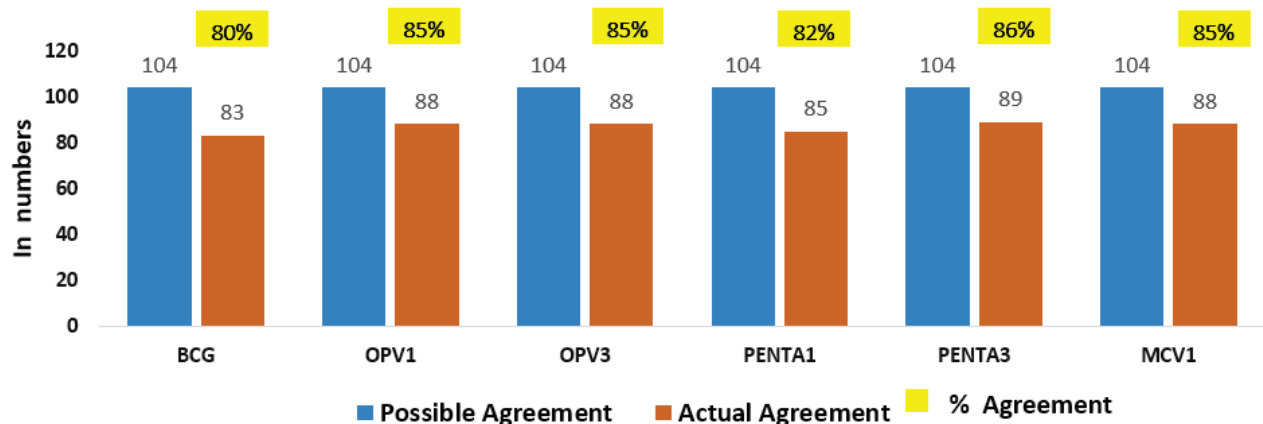
Figure 24: Agreement between MPR & PCTS



Antigen wise agreement analysis between MPR and PCTS: Agreement between available MPRs and PCTS reports was assessed for each of the six selected antigens (BCG, OPV 1, OPV 3, Pentavalent 1, Pentavalent 3 & MCV 1). In this analysis, separate

agreement for every antigen between both the sources was analyzed. Lowest agreement was found for BCG (80%), while nearly 85% agreement was found between MPR & PCTS for OPV 1, OPV 3, Pentavalent 3 & MCV 1 (Fig. 25).

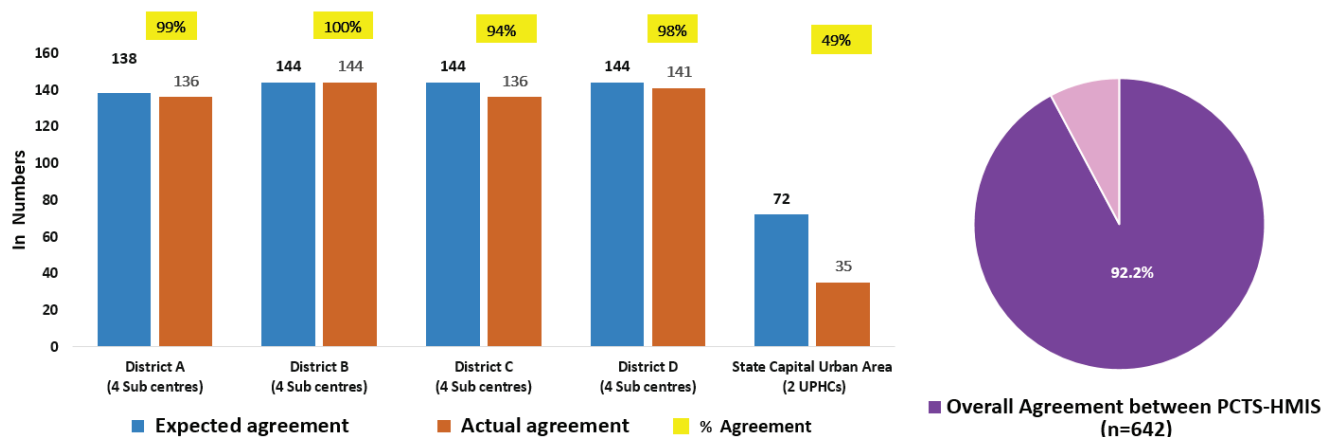
Figure 25: Antigen wise agreement between MPR & PCTS



PCTS v/s HMIS: As data is exported from PCTS to HMIS, agreement between both reports should be 100%. Agreement between available PCTS and HMIS reports was assessed for six selected antigens (BCG, OPV 1,

OPV 3, Pentavalent 1, Pentavalent 3 & MCV 1). 92% of the entries done in PCTS matched with HMIS with a range from 49% to 100% (Fig. 26).

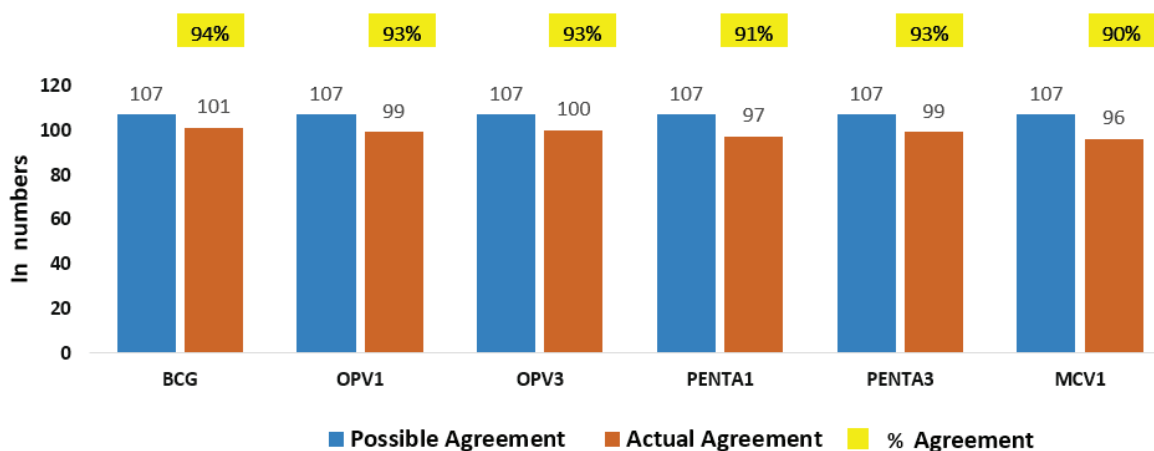
Figure 26: Agreement between PCTS & HMIS



Antigen wise agreement analysis between PCTS and HMIS: Agreement between PCTS and HMIS reports was assessed for six selected antigens (BCG, OPV 1, OPV 3, Pentavalent 1, Pentavalent 3 & MCV 1). In this analysis, separate agreement for every

antigen between both the sources was analyzed (Fig. 27). Agreement for MCV 1 was found to be the least between PCTS and HMIS reports in comparison with other selected antigens.

Figure 27: Antigen wise agreement between PCTS & HMIS

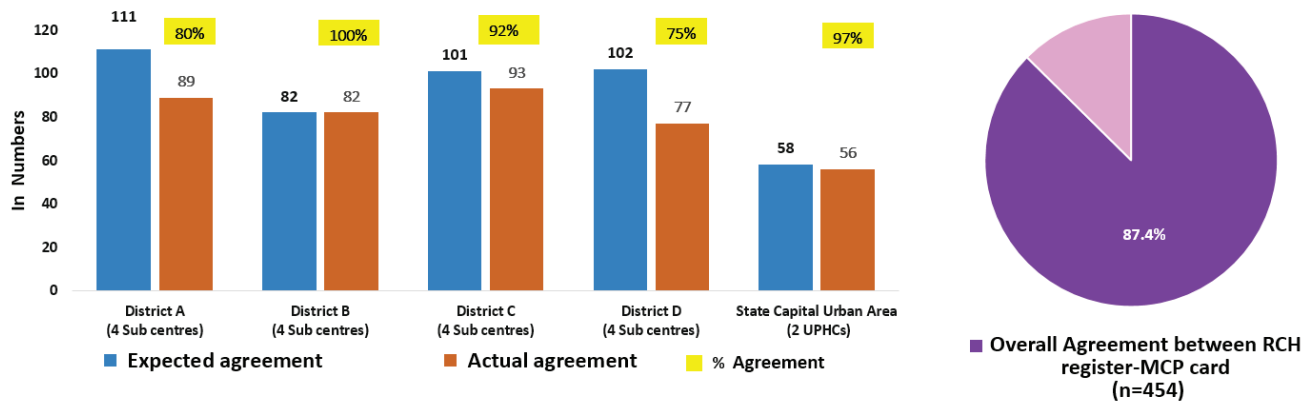


RCH register v/s MCP (Mamta) cards: Agreement was assessed for six selected antigen doses (BCG, OPV 1, OPV 3, Pentavalent 1, Pentavalent 3 & MCV 1) by matching the date of administration recorded in RCH register (available with ANM) and MCP cards

(through community assessment).

Nearly 87% of the entries in RCH register matched with MCP cards, with a range from 75% to 100% in reviewed subcentres/UPHCs (Fig. 28).

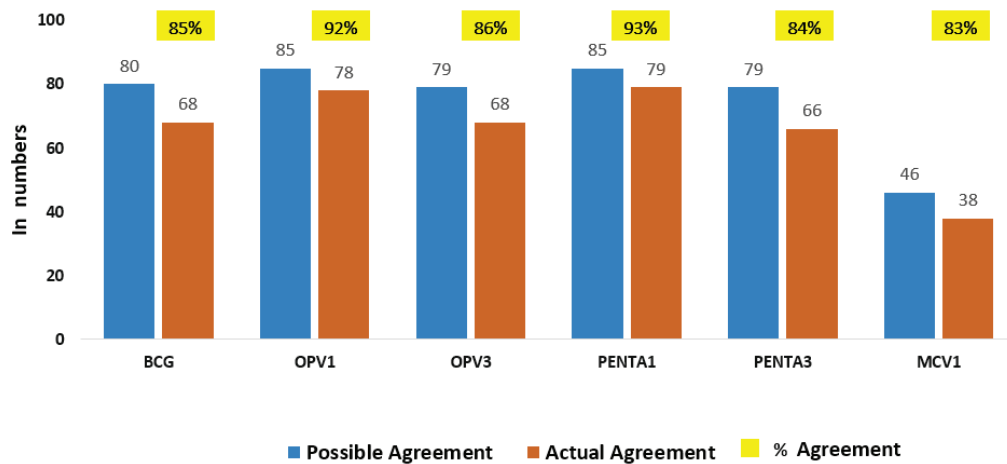
Figure 28: Agreement between RCH Register & MCP Cards



» **Antigen wise agreement analysis between RCH register & MCP card:** Agreement between available data of 4-5 children from RCH register was verified from

MCP card in the community for antigen given. For MCV 1 & Pentavalent 3 minimum agreement was found between RCH register and MCP cards as compared to other antigens (Fig. 29).

Figure 29: Antigen wise agreement between RCH register & MCP cards



Infrastructure and resources

Ninety percent of the reviewed planning units were well equipped with working computers.

Human resource

The Project Director – Immunization at state along with State Nodal Officer (RI) conduct regular review and analysis of immunization related data with support of a computer assistant while the post of Statistical Officer is vacant. Data analysis is also supported by consultant from partner agency. DRCHOs are being supported by

a computer assistant (contractual) in all the assessed districts and by an Assistant Statistical Officer (regular) in half of the assessed districts for review and validation of PCTS/HMIS data, compilation of new vaccine and/or campaign reports. Almost 90% PU are supported by contractual data entry operators. Almost 16% and 22% of the ANMs were unaware about full immunization coverage and complete immunization coverage reporting in MPR respectively.

There was lack of formal training of data handlers on reporting of immunization data.

New vaccines/campaign coverage

HMIS does not have provision for reporting of campaign coverage data (IMI), hence necessitates manual reporting. Reports of new vaccines/campaigns viz. Intensified Mission Indradhanush (IMI) were assessed for availability and completeness at planning unit, district and state levels and agreement was matched with reports submitted to the next level.

At the state level, all the district wise coverage reports of last phase of IMI campaign were available. IMI campaign reports matched accurately with reports available at national level. Copies of coverage report of last phase of IMI campaign were available and complete for all urban PHCs where IMI was conducted.

AEFI and VPD reporting

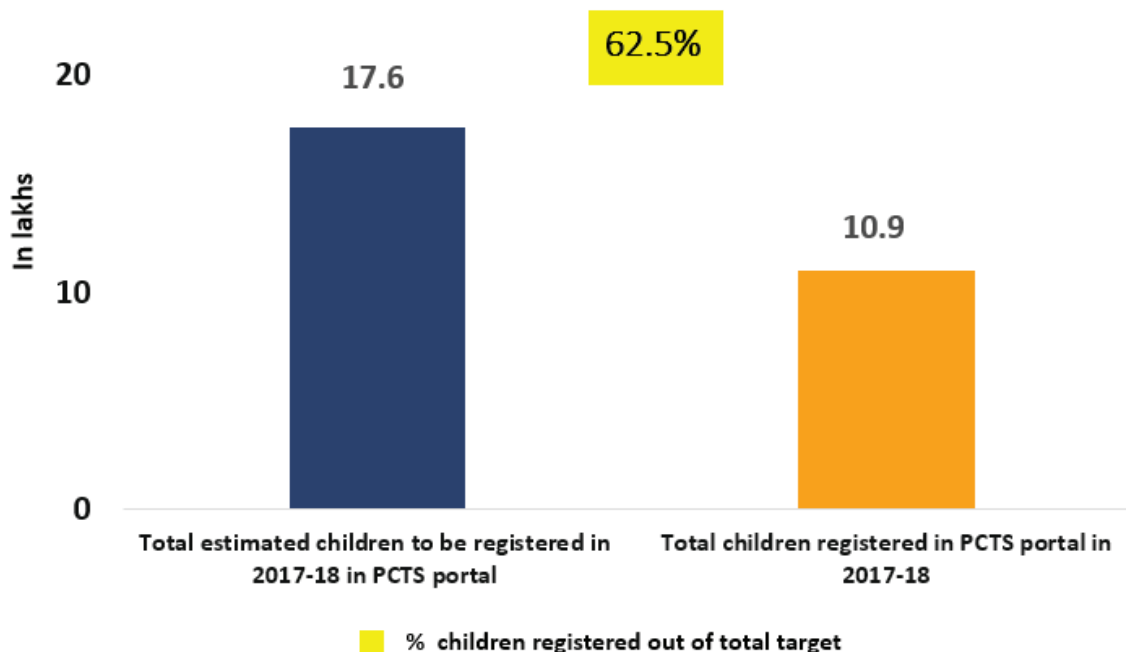
AEFI documents (CRF/PCIF/FCIF) were not available at state level for 67% of AEFI cases reported to national level.

Weekly reports (VPD-H002) were available in 33% of the planning units.

HMIS/PCTS portal

HMIS/PCTS reporting cycle is from 1st to the last day of each month. All districts use PCTS portal for name-based tracking of beneficiaries. Only 62% of target children were registered on the PCTS portal (Fig. 30).

Figure 30: Status of name based registration of children in PCTS portal



The Data entry operators responsible for PCTS portal data entry at planning units were also assigned additional responsibilities like typing official letters, managing files of feedback, reviews and data entry of *Mukhya Mantri Nishulk Dawa Yojna* (MNDY), drug distribution centre and reviews, besides the routine work of managing the PCTS portal. Also, there was no set protocol of sharing PCTS child ID with the ANM for updating in RCH register.

Coverage monitoring chart

None of the reviewed districts were using coverage monitoring chart to visualize immunization coverages. It was displayed prominently at many planning units but MOICs were not aware of its use. This is a training issue and its implementation needs monitoring.



3.4

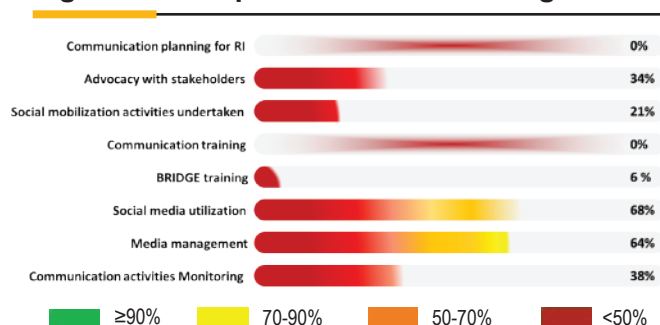
DEMAND GENERATION

Data collection and analysis efforts

Semi structured questionnaires with SOPs were used for each level of interviews with 22 mothers, 29 ASHAs, 25 ANMs, 25 AWWs, 5 community leaders and 3 members of 3 MAS (*Mahila Arogya Samitis*) groups. The information collected has been analysed under different sub-heads:

- » Communication Planning
- » Advocacy
- » Social mobilization
- » Capacity building
- » Monitoring and review
- » Media engagement

Figure 31: Snapshot of review findings



Communication manpower and training

An IEC Cell, exists at state level, led by Director IEC, Additional Director (AD) and Deputy Director IEC. Immunization IEC plan for PIP is prepared by the AD Immunization and the NHM consultant. The NHM IEC Consultant prepares the plan for Mass Media and mid media.

The IEC cell is responsible for printing of IEC materials for all health programs including immunization. Further adoption and sharing of prototypes from the state to the districts is also done by the IEC Cell.

At the district level, District IEC Coordinator is the point person for IEC. Out of the 33 districts, 26 districts have District IEC Coordinators. Most of these IEC Coordinators have a journalism background, have media skills and are pro-actively updating information on news media and social media. The DPRo has media agencies for developing creative materials on immunization.

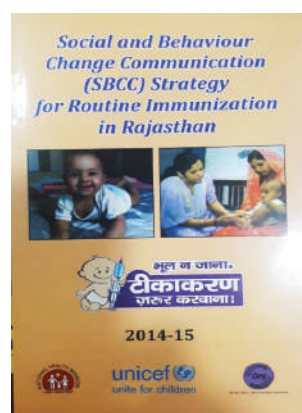
Communication planning

State level

The state has a Social Behaviour Change Communication strategy for Routine Immunization, which was developed in 2014-15 with an effort of over three years by UNICEF along with the Research team and Faculty members of the State Institute of Health and Family Welfare (SIHFW). The SBCC strategy and follow up plan activities were rolled out in 10 high priority districts. As a part of the roll out, the SIHFW team did field level workshops with stakeholders, triple A (AAA), developed IEC materials and job aids for front line workers.

A mass media plan for immunization has been prepared for 2017-18, which includes telecast of TV and radio spots, newspaper advertisements and miking campaign

Figure 32. SBCC strategy on immunization



by tonga/ rickshaw amounting to Rs. 1.5 crores. The state is not aware of the RI communication planning templates which were disseminated to all states in March 2018. The DPRo deals with the development of creatives at the state through creative agencies. Content for the same is provided by the Immunization division and the NHM IEC consultant.

At the state level, the state had made efforts to develop special radio spots through All India Radio on IMI and also had discussion on IMI in the popular Television programme called '*Chaupal*'. Television spots for immunization were planned for popular channels: Zee *Marudhara*, ETV Rajasthan and 7 such popular channels. Further the state planned panel discussion on IMI with religious leaders and IEC officials in a weekly health programme. A database of religious leaders was created

so that active and influential leaders can be used to mobilize left outs and make communities aware of the significance of immunization. Efforts were made to invite religious leaders for inauguration of IMI sessions.

District level

No district communication plan for RI was available in any of the reviewed districts. There was no mechanism for bottom up planning or collection of communication plans from blocks/planning units. Only 25% of the reviewed districts had planned IEC activities for high risk areas (HRA).

Planning unit level

Block level communication plans have not been prepared by any of the 11 planning units visited as a part of the review process.

Training

The State TOT for BRIDGE has been completed. None of

the monitored districts has done ToT for BRIDGE training. At the state capital (which are also bifurcated into two districts), one day BRIDGE training was conducted as a part of the meeting of the FLWs. Also none of the reviewed districts organized IPC training other than BRIDGE training in last one year. ANMs and ASHAs have reportedly been oriented on IPC by UNICEF during 31.10.17 to 4.11.17 in Jalore and Alwar.

Advocacy

State level

There is active participation of key stakeholders in the RI/MI/IMI. In the STFI¹² of 2017 preceding the RI and IMI, discussions were held with the representatives the *Nehru Yuva Kendra* (NYK) and National Cadet Corps (NCC) and on how best the district level officer and the 605 volunteers of NYK can be used for supporting RI and IMI. PRI representatives were directed to mobilize beneficiaries and motivate families for immunization. Minutes of STFI show the commitment of Rotary International in following

Figure 33: IEC materials displayed at health facility



¹²State Task Force For Immunization dated 11.12.17

up with resistant/ refusal communities, counselling them through home visits in *kachi basti* in urban areas.

For IMI a team composed of MOs, religious leaders, PRI representatives, local influencer, ANMs and ASHAs planned for deployment to resistant areas. Further, participation of NYK and NCC and Rotary International representatives were visible in the STFI prior to IMI rounds. For advocacy, meeting were held with the IAP/ IMA members and with the representatives of NYK, NSS and NCC.

District level

In 40% of the districts, communication issues were discussed during the DTFI meetings. For advocacy the districts undertake a range of activities, including meetings with PRI leaders, Government departments, IMA/IAP members, religious leaders and NYK/NSS and NCC. Interactions with PRI leaders and other government departments are the most common (undertaken by 23% of the reviewed districts), followed by meetings with religious leaders and IAP/IMA members (15% of the districts) (Table 14).

media like Facebook and Twitter are actively used for immunization promotion by state. State IEC consultant, NHM anchors the responsibility of developing content (write ups, GIFs, videos, infographics, tweets, posts and blogs etc.). The DRCHOs, IEC officers and programme managers in districts are kept informed and updated through WhatsApp groups about new programmes, activities and plans.

District

As a result of the state’s focus and current Mission Director’s initiative, districts use social media actively for awareness and promotion of health programmes. This is largely handled by the District IEC coordinator. Out of the four reviewed districts, two districts have district specific Facebook and Twitter handles. These social media platforms are used for promotion of all health programmes – immunization has limited presence in these platforms. Of the four districts, two districts have organized meetings with religious leaders while the remaining two have done meetings with elected leaders for advocacy.

In the districts, CM&HO and DRCHO are spokespersons for media. Prior to the MI and IMI rounds, district level media are briefed by the CM&HO and DRCHO.

Table 14: Advocacy with stakeholders

	District A	District B	District C	District D	State HQ
Religious Leaders	N	Y	N	Y	N
Elected Leaders(Panchayat leaders, Ward Members)	Y	Y	Y	N	N
Other Govt Departments	Y	Y	Y	N	N
IAP/IMA /Private Practitioners	N	Y	N	N	Y
NYK/NSS/NCC	N	Y	N	N	Y
Rotary/Lions/Red Cross	N	N	N	N	N
NGO/CBOs	N	N	N	N	N

Media engagement (news media and social media)

State

Although the Mission Director and the Project Director, Immunization are media spokespersons at state level, they are not trained on crisis management. Two media workshops have been conducted in last 1 year, one each prior to the launch of PCV and IMI. Monthly news feed on immunization are given regularly in newspapers (as per the media plan for mass media for 2017-18). Social

Social mobilization

For social mobilization, districts often organize rallies and video shows. Two of the reviewed districts had organized rallies prior to the IMI rounds. One of the districts had also done street plays and set up kiosks during fairs and festivals. In this same district, announcements were done through the *Gurudwaras* in three local languages. The state had directed an NGO for supporting mobilization activities. This was evident in the work of this NGO in the urban slums of Jaipur, where the NGO had done house to house visits, formed peer groups and organized video

shows. The video shows mobilised and motivated the community towards accepting immunization services.

Figure 34: Hoarding on PCV media workshop



Session site

During the review, session sites were visited during the RI day to assess the service provisioning, community's response, providers' and community's behaviour towards immunization. Very few IEC materials were seen at the session site – 30% sites had posters whereas 10% had banners. In 60% of the session sites, no IEC material was visible. The most common reason cited for this was delay in receipt of IEC material. Since the RI materials (*Paanch Saal Saath Baar* campaign) were not available, Mission Indradhanush /Intensified Mission Indradhanush posters and banners were used.

Figure 35. Mothers at an urban immunization site



Table 15: Social mobilization activities in districts

	District A	District B	District C	District D
Rallies	Y	Y	N	N
Skits/street plays in neighbourhoods	N	Y	N	N
Video shows	N	N	Y	N
Kiosks during fairs and festivals	N	Y	N	N
Banners and Posters	N	Y	Y	N

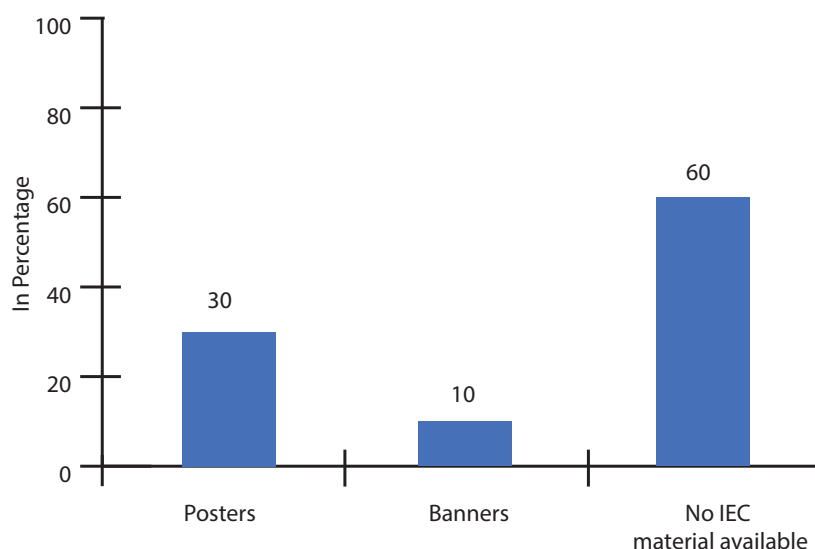
Monitoring and review

The PD Immunization and his team are responsible for monitoring IEC activities for immunization. At the district level, District IEC Coordinators are responsible for monitoring IEC activities. Monitoring of IEC materials is need based. Currently there is no designated officer for this purpose. Programme Officers who are deputed as Supervisors or District Observers in the recent MI and IMI are tasked with the monitoring of IEC activities, and also check availability of IEC materials while visiting the sessions.

Visibility of IEC materials

There was limited presence of IEC materials on immunization in the health facilities, session sites and transit points. Overall visibility of IEC materials was better in the state capital compared to the districts. IEC materials on Mission Indradhanush (MI) and new vaccines were seen in the state Immunization office and also at the session sites. Observation of IEC materials in shows that 30% sites had banners and 10% had posters (Fig. 36). Even though leaflets are a part of the MI and new vaccines package, they were barely seen with the

Figure 36: IEC materials displayed at session site (n=10)



caregivers, except in session site in an urban area. Delay in the receipt of the IEC materials was cited as a reason for this in the districts.

Delivery of four key messages and their completeness by the ANMs was observed in the session sites and it was seen that the four key messages were given to caregivers partially. All ANMs informed caregivers about side effects following immunization and keeping the MCP card safe and bringing in along for next visit (Fig. 37).

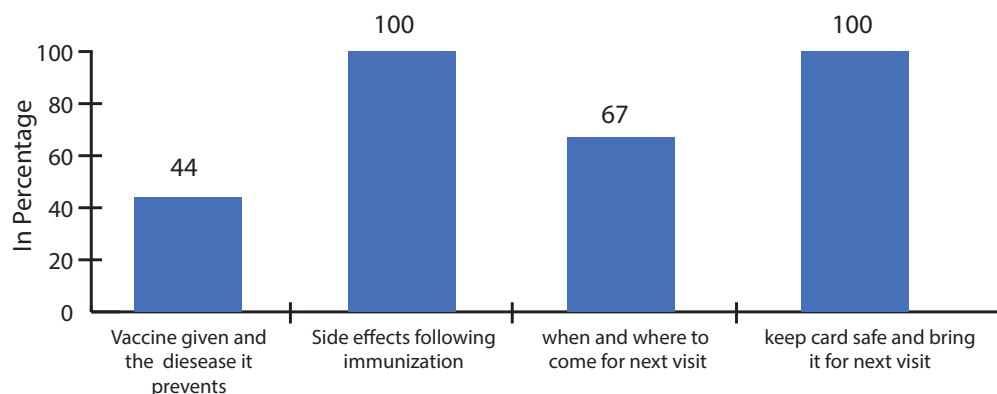
beneficiaries were visited by ASHAs, 13% of the ASHAs interviewed mentioned facing challenges in mobilization of beneficiaries.

Community awareness, knowledge, perception and practices

Community leaders

Interviews with community leaders revealed their minimal

Figure 37: Four key messages given by ANMs at session sites (n=9)



Lack of basic infrastructure in the session site (congested area, lack of water and electricity, ceiling fans) are deterrent to providing good quality services. In the urban areas of the state capital, there is lack of space due to high rent (most *Anganwadis* are operated from one room rented premise in the urban area). In the session site, head count survey list was present with 100% of the ASHAs interviewed. Although 97% households of due

awareness and engagement with the immunization activities. Only two of the five community leaders knew the location of the RI session sites in their areas and had visited the sessions during the last one year. Three of the community leaders had heard of Mission Indradhanush, and only one of them had participated in meetings for MI/ IMI. All of them mentioned that the community of their area is interested in immunization and vouched that

there are no reluctant families in their areas. Two of the respondents mentioned having heard of AEFI related news in their area, but did not play any role in counselling the families or communities. Most of the community leaders are aware of home visits by ASHAs and felt that home visits and community meetings are useful for awareness generation. Two of the respondents recalled having seen IEC materials on immunization in the local area and in the health facility. It seems that due to lack of engagement with the health officials, community leaders were not aware of immunization related news and updates. Only one leader mentioned having heard of new vaccines.

Figure 38: Interview with community leader and ASHA



Mothers

In order to get insights into the awareness and knowledge levels, perceptions and behaviours of the mothers regarding immunization, several mothers / caregivers from the four selected districts were interviewed (mothers' interviews were conducted in session sites as well as in their homes).

- » Of the mothers interviewed, 86% were aware of immunization, 80% were of the belief that vaccines are safe and provide protection. All the mothers interviewed were aware of the place of vaccination.
- » Knowledge of the mothers on the vaccines received, their correct schedule and time line was

Figure 39: Urban area session site with the presence of all FLWs (ANM, ASHA and AWW)



limited, and only one third of the mothers could mention the name of the last vaccine received by their child and the disease/s prevented.

- » Most mothers had received a visit /call from ASHAs reminding them to attend the session. Only 18% mothers had attended a mothers meeting in the last one year. These meetings were focused on nutrition and other issues, and very brief discussion happened on immunization.
- » All the mothers interviewed appear to be aware of the importance of the MCP (*Mamta*) card and carry the same with them during session visits.
- » Mothers had no apprehension about getting multiple vaccines administered to their children. 91% of the mothers interviewed were open to getting more than one vaccine on a single day.

Frontline workers

Frontline workers are the pillars of the immunization programme. In order to understand and assess these providers' perspectives, their role, knowledge and skills levels, in depth interviews were conducted with ANMs, ASHAs and *Anganwadi* workers. Further to understand the community's perspective, mothers / caregivers were interviewed in the districts under review. Insights and inputs obtained from these interviews are summarized below:

ANM

- » Of the ANMs interviewed, 84% were well versed with the 4 Key messages and confirmed that they disseminated the same to the caregivers during sessions.
- » Capacity building of the ANMs is a weak area; 96% ANMs mentioned not receiving any training on communication during the past one year. BRIDGE training is yet to be started in the districts.
- » None of the ANMs interviewed had prepared a sub center level communication plan since they have not been directed to do so.
- » Most of the ANMs had received some form of IEC materials prior to RI/MI rounds; 47% ANMs mentioned receiving posters, 14% received banners. Availability of IPC materials was low: only 17% ANMs mentioned receiving leaflets while 6% had received flip books.
- » 96% of the ANMs were confident and comfortable in multiple vaccines (through injections) on the same day. However a large number of ANMs also mentioned that mothers tend to refuse multiple injections / vaccines on the same day, fearing of side effects and baby's discomfort. Most of the ANMs mentioned that they counsel mothers on the spot for taking all the due vaccines.

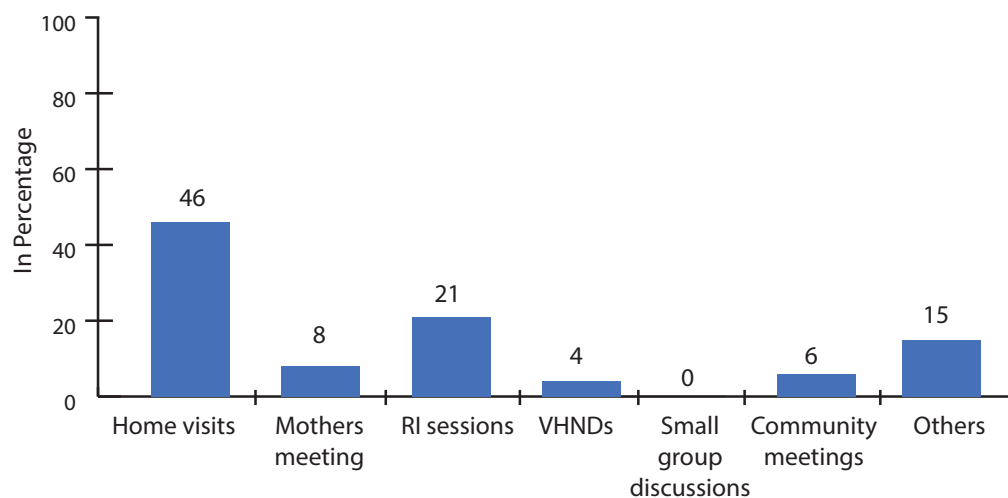
ASHA

- » In Rajasthan, ASHAs are accountable to both the departments – Health and ICDS. This is more so since they get an incentive of Rs. 2500 from the ICDS department to undertake the department activities.
- » The additional work of AWC which related mostly to the maintenance of records and registers (fill database for children, call children, teach them and fill records and registers) leaves the ASHAs with little time for the health activities. ICDS department has fixed the timings for ASHAs to be at the AWCs from 7 a.m. to - 10 a.m., which limits the ASHAs movement for mobilization.
- » ASHAs are actively supporting the ANMs in carrying out the head count survey; 97% of the

ASHAs interviewed mentioned preparing the due list prior to the sessions and providing to the ANMs.

- » For mobilization, home visits and community meetings are the two most common activities undertaken by the ASHAs. Some also use the *Poshan Mah* celebration and the *Amavas* day to plan mothers meetings – though these are far and few.
- » ASHAs have been trained in the ASHA module (as mentioned by the ASHAs for a period of five days) but no separate training and orientation of communication has ever been held for them. BRIDGE district level trainings are yet to be rolled out.
- » 86% of the ASHAs interviewed could tell the names of at least more than one vaccine and the diseases they prevent. Most ASHAs knew about vaccine for measles, Pentavalent and BCG and could relate these with diseases TB, measles, and 5 diseases for Pentavalent.
- » Lack of IEC materials and IPC tools are a limitation for the ASHAs in undertaking IPC activities. Only 31% of the ASHAs interviewed mentioned that they have received IEC materials on immunization.
- » Several ASHAs interviewed in the districts have formal schooling up to 5th standard. Hence they have poor documentation and recording skills. This limits their performance, since they are expected to document data / information for both the ICDS and health departments. Such ASHAs manage the work through the support of the male members (husband, son) of their families.
- » In some of the districts, ASHAs undertake follow up visits post vaccination to check on the wellbeing of the children. The ASHAs in few districts are also supported by the *Sathin* (the worker of the ICDS) in mobilizing children for the sessions.

Others: House to house visits; Phone calls though CUG; MAS meetings; announcements in mosques, rallies; UHND meetings

Figure 40: Most convenient place to convey immunization messages by ASHAs (n=29)

AWW

- » For mobilization of beneficiaries, AWW rely on ASHAs who undertake home visits. Besides this, phone calls to beneficiaries is another way by which the AWWs inform their beneficiaries.
- » AWWs have very little engagement in supporting immunization sessions. They were just present at the session sites, since the sessions were held at the AWW centers.
- » 61% of the AWWs mentioned that mothers meeting are held in the AWW centers
- » The AWWs interviewed as a part of the qualitative interviews appeared to have low knowledge of immunization – they were not aware of the immunization schedule, the vaccines or the diseases they prevent.
- » Interviews revealed that 'Amavasya' is the preferred day for holding mother's meeting, but no evidence of past meetings was available. During such meetings, discussions are focused on 'take-home ration,' non-formal education and very briefly on immunization.



जिला स्वास्थ्य समिति, झाबुआ

टीकाकरण समय-सारणी

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3.5

URBAN IMMUNIZATION

Rajasthan has 62 cities (34 district health headquarters and 28 other cities) under National Urban Health Mission. Activities under NUHM are coordinated by NHM cell in the state, City Programme Management Unit in larger cities and District Programme Management Units in reviewed cities. Urban immunization was assessed in district headquarters of four reviewed districts and planning units in the state capital.

Figure 41: Snapshot of review findings (Programme implementation)*

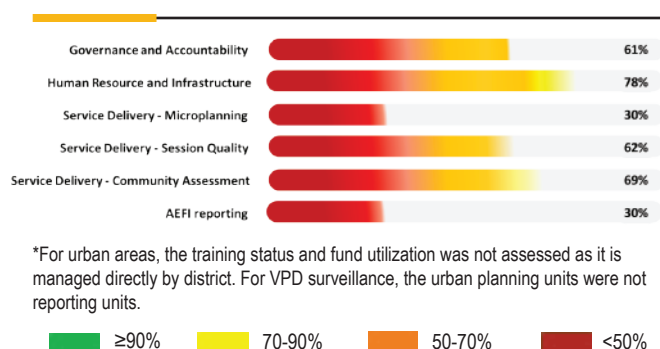
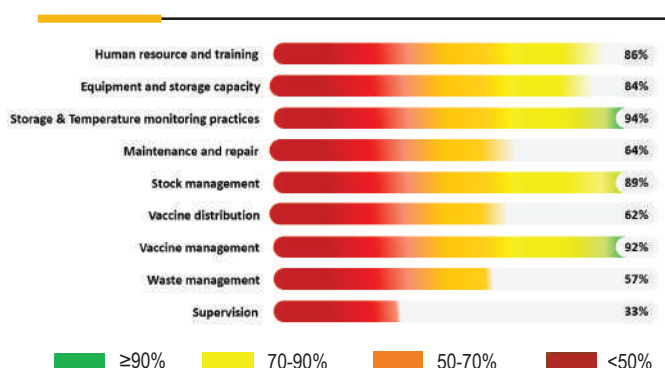


Figure 42: Snapshot of review findings (Logistics and supply chain)



Programme implementation

Review mechanism for UIP in urban areas

The District Task Force for Urban Immunization (DTFUI) was constituted in three of the four reviewed districts. Only one district conducted a meeting for DTFUI, however, no minutes were maintained.

At the urban planning unit level, although monthly RI reviews took place at 80% places but presence of ICDS representative in these review meetings was non-existent, even when both ASHA and AWW belong to ICDS department. Due to absence of health supervisors, supportive supervision is weak. Medical Officers posted at UPHCs are largely engaged with OPD related activities. Only the planning units in state capital were visited by officers from state/ division/ districts in last three months. Urban planning units except in the state capital, lacked any mechanism of 'AAA' convergence.

HR and infrastructure

Health programmes including immunization are run through a network of four urban CHC and 242 functional urban PHC in the state. The state has proposed building of 16 health kiosks (urban subcentres) to provide services especially for slum population.

While Urban Nodal Officers for RI were not in place in 25% of reviewed districts, vacancy of medical officers was 38% in the reviewed districts and 22% in the state. Nearly two third of urban ANM positions are vacant in the state, which ranges from no vacancy to 80% in areas under review (Table 16).

Table 16: Human resource vacancy status

HR Cadre	% Vacancy						
	Urban A	Urban B	Urban C	Urban D	Urban E	Urban Avg.	State (33 districts)
MO	0	0	100	0	39	38	22
Urban Health Coordinator	100	0	0	0	0	25	13
Urban ANM	0	24	80	33	30	30	64
Urban ASHA	5	1	37	8	14	10	12
MAS	0	0	0	0	0	0	0

Source: Recent available data received from NUHM Cell of State and reviewed district

Urban ASHA vacancy is low (12% state average), but it ranges from 1% to 37% in reviewed urban areas. The non-slum urban area is dependent on *Anganwadi Workers* for mobilization to session sites for routine immunization, as ASHA cater to slum population only.

MAS (*Mahila Aarogya Samiti*) is a community group involved in creating awareness, interpersonal communication, and community-based monitoring and linkages with the services and referral. All the sanctioned MAS are functional in the state.

Service delivery

Immunization service delivery in urban areas needs special emphasis due to inability of the infrastructural growth to cope up with rapid population growth. Following components have been assessed:

- i. Microplanning
- ii. Session quality
- iii. Community coverage assessment

Microplanning

Microplans of one UPHC from each of the 4 districts and two UPHCs from state capital, were desk reviewed under various indicators. Findings are indicated in Table 17. It

was found that RI microplans were not available at a third of the UPHCs. Further, none of the available microplans were prepared on prescribed formats and a single page ANM roster was being used as microplan at majority of UPHCs.

Since urban areas do not have subcentres, ANM wise microplans were assessed for inclusion of critical components. Twelve such ANM areas were assessed. Less than half of ANM areas had complete listing of wards, colonies and HRGs (if existing) indicated in the microplan. ANM area wise maps, AVD plans, vaccine & logistics formats and details of AEFI management centres were missing in all reviewed ANM plans. Availability of supervisors name and columns for new vaccines (fIPV, RVV) was also found to be very low, in 8% and 25% of the microplans respectively. Mobilizers were assigned to 93% of sessions in the plans. In half of the urban areas where microplans were available, clear area demarcation between ANMs was not found.

Session quality

A total of 12 urban session sites were assessed for various critical processes affecting quality of service delivery as shown in Table 18.

Table 17: Microplan analysis

Indicators	%	
Availability of microplan at urban planning unit (n=6)	67	
Availability on prescribed formats (n=4)	0	
AVD plan (n=4)	0	
ANM areas with enlisting of wards/mohalla/colonies and HRGs (n=12)	42	
ANM areas with number of beneficiaries mentioned (n=12)	33	
ANM areas wise map available (n=12)	0	
ANM areas with vaccine & logistic formats available (n=12)	0	
ANM areas with details of AEFI management centre (n=12)	0	
ANM areas with ANM roster (n=12)	92	
ANM areas with supervisor assigned (n=12)	8	
Columns for newer vaccines	fIPV (n=4)	25
	RVV (n=4)	25
Sessions with mobilizers name mentioned in microplan (n= 72)	93	

Table 18: Session site findings in urban areas

Indicators	%
Session site as per microplan	83
ASHA found as a mobilizer	92
AWW found as a mobilizer	50
Record of updated head count survey available at session site	58
Due list availability	100
Updated Due list availability	41
Supervisory visit	8
Knowledge about correct sequence of administering multiple antigens	41
ANM awareness about VPD case recording in MPR	8
ANM awareness about serious AEFI cases	42
ANM awareness about designated AEFI management centre	8
Four key messages provided by ANM to caregivers (n=10)	30

(a) **Adherence to microplan:** Eighty three percent of the sessions observed were conducted as per microplan. Non-adherence was mainly due to non-updation of microplan. While ASHAs were found to be present at 92% of session sites, AWWs were present at only half of the sessions, indicating limited opportunity for of beneficiaries outside slum areas.

(b) **Headcount survey, due listing and tracking of left outs/drop outs:** Mobilizers at nearly 25% sessions sites failed to show a record of headcount survey and 58% could show an updated headcount survey. Duelist was available at all of the session sites, while updated duelist was available at only 41% session sites.

(c) **Supervisory visits:** Nearly 92% of sessions were not visited by any supervisor.

(d) **Payment of ASHA incentives:** More than 90% of ASHAs interviewed were aware of incentives for mobilization of beneficiaries and full & complete immunization. Almost 82% ASHAs had received RI incentives in the last quarter.

(e) **Knowledge of ANMs:** Although the state had switched from full to fractional dose IPV, 17% of the ANMs could not tell the correct age, dose & route of fIPV administration. Knowledge on RVV age,

dose & route was found to be generally good. Only 30% ANMs were providing four key messages to caregivers after vaccination. Nearly three fifth of ANMs were unaware of the correct sequence of administering multiple antigens at one time. Only 8% ANMs were aware about reporting of VPDs in MPR.

Community assessment:

Caregivers of 219 children in the age group of 0 to 23 months were interviewed to assess the vaccination status of their children. MCP (*Mamta*) card retention was high at 85%. Almost 88% children born at government health facilities had been given Hepatitis B birth dose (Table 19).

Seventy percent of children (0-23months) were found to be vaccinated appropriately as per age. ASHAs were the major source of information and mobilization of beneficiaries for session sites. However, only 36% of the names of partially vaccinated or unvaccinated beneficiaries were found in the duelist.

Names of all beneficiaries were also crosschecked for inclusion in ASHA's headcount survey record in order to assess the robustness and completeness of survey. Sixty six percent of the names were included in headcount survey, indicating poor quality of the survey.

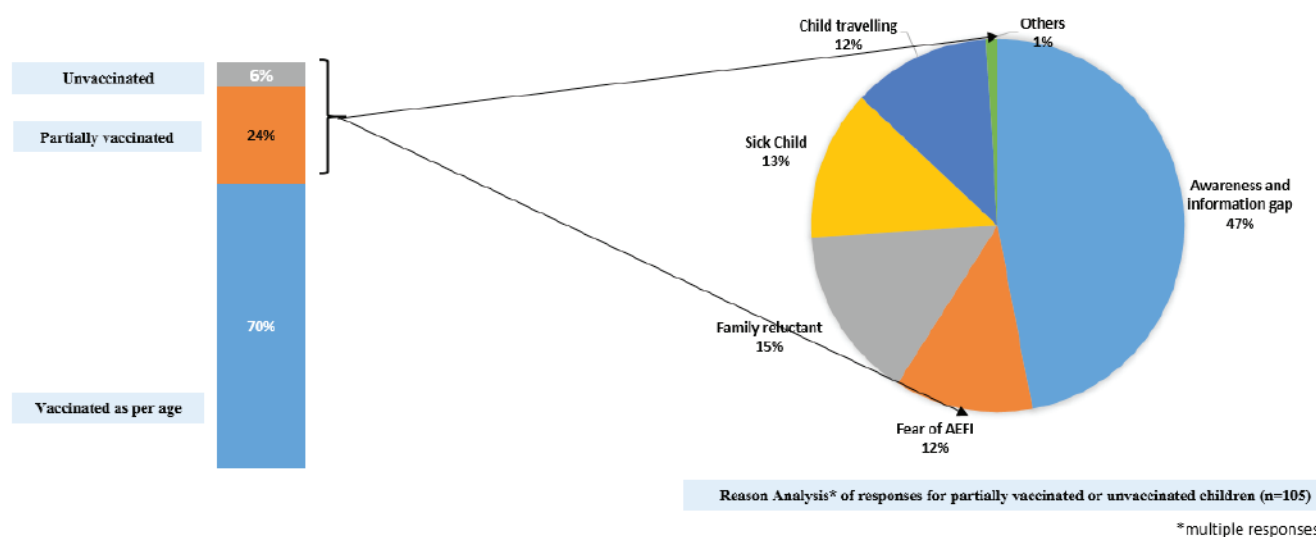
Table 19: Indicators of community assessment

Indicators	%
MCP (<i>Mamta</i>) card available with household (n=219)	85
Hep B birth dose given to children born in government health facilities (n=163)	88
Major source of information on vaccination to caregivers (n=282 responses)	ASHA – 55
	AWW – 38
Mobilization of beneficiaries to session site by ASHA/AWW (n=243 responses)	ASHA – 76
	AWW – 10
Name of partially vaccinated/unvaccinated children in duelist (n=66)	36
Name of children in headcount survey (n=219)	66

Figure 43 illustrates the reasons for children not vaccinated as per age. Awareness and information gap was the most

common reason, followed by ‘family reluctant’ and ‘sick child’.

Figure 43: Reason analysis for partially vaccinated and unvaccinated children



AEFI reporting

Fifty percent MOs posted in urban planning units had not undergone any formal AEFI training, and only 50% could articulate death or hospitalization as serious AEFIs. Blank Case Reporting Formats (CRFs) as well as AEFI recording registers were not available at any of the urban PUs. Furthermore, AEFI management kits were available at only one third of planning units. At the session sites, more than half of the ANMs were not aware of any type of serious AEFI and only 8% ANMs were aware of designated AEFI management centre.

Logistics and supply chain

The key findings for logistics and supply chain in the urban area can be summarized into following nine thematic areas:

Human resource and training

Each of the Service Delivery Point (SDP) reviewed had at least one cold chain handler (CCH) assigned. CCH were found to be inadequately trained, with 42% of them trained on VCCH module and 75% trained on eVIN.

Equipment status and storage capacity

An average of one functional and in use ILR and DF each was present in all the SDPs observed, but only 43% of the CCE had a separate stabilizer. The cold chain sickness rate in urban area was found to be 6.6 percent during the review period. The cold chain space was found to be adequate at all urban SDP.

Storage & temperature monitoring practices

A functional thermometer was available for 86% of ILRs and for all DFs. All CCE with functional thermometer had temperature within the recommended range. The temperature log book was available for all CCE, and at 86% of SDPs, the temperature was recorded twice daily.

Maintenance and repair

Functional power back up was available at 71% of the SDP and no instance of power failure was recorded at any of them for more than 8 hours. The defrosting record was present for 14% ILR and for 71% DF at the reviewed urban SDPs.

Stock management

Standardized stock registers for all vaccines and diluents were available at all SDP, whereas stock registers for logistics (AD 0.1ml, AD 0.5ml and reconstitution syringes) were available at 71% SDP. Updated stock registers were available for BCG vaccine and diluent and MCV diluent at 71% of the facilities; for OPV at 57%, pentavalent at 43% and for MCV at 57% of SDP. Out of 71% SDP, where stock registers for logistics were available, they were updated at 80% of the service delivery points. No stock out of any vaccine or syringe other than OPV was observed. Maximum stock did not exceed beyond 3 months for any of the vaccines reviewed.

At the session sites in urban areas, 100% availability of vaccines and syringes was observed except for BCG vaccine and diluent. Blank MCP (*Mamta*) card, Vitamin A solution and black bags were available at all sessions, whereas hub cutters and red bags were found at 71% and Vitamin A spoon at 43% sessions respectively. Vaccines and diluents as per due list were available at 50% sessions only.

Vaccine distribution

At 57% of the SDPs, the vaccines were distributed and returned exclusively through AVD system. All vaccine carriers were available with four ice packs at all sessions observed. Out of the sessions observed, 57% of sessions received vaccines exclusively through AVD mechanism. The other mechanism found was, ANM collecting vaccine from SDP, which accounts for 43 percent.

Vaccine management

All the vaccines were stored in ILR at service delivery point and no other vaccine/ drug / medicine was found in ILR except UIP vaccines, at all SDP. Open vials were stored in ILR at all urban SDP and none was found beyond 28 days from day of opening. Open vials were issued to sessions at 100% SDP.

The vaccine wastage rate was found to be 89% for BCG, 33% for MCV, 30% for OPV, and 10% for pentavalent vaccine.

Job aids and contingency plan were available at 80% of the facilities.

All vaccines were found with usable VVM and readable labels at all sessions observed. At 86% of sessions, the vaccines were found to be within the expiry date and were found to be appropriately placed on/near ice packs.

Waste management

Complete immunization waste was returned from only 71% of the session sites and partial immunization waste from 14% of the sites to SDP.

Waste disposal practices are mainly outsourced, with 71% of the facilities following this practice. At 14% of the SDP there was no waste management practice followed, whereas the immunization waste was burnt at 14% of SDP.

At 71% of SDPs, CCH had knowledge about immunization sharp disposal; and at 86% of SDPs, CCH had knowledge about use of red and black bags for waste disposal. Only at 29% SDP, CCH had knowledge about shake test.

At the sessions observed, hub cutter was available at 71% of the sessions and was not used at 15% of these sessions. Out of these sessions, cut syringes were segregated in red bags at 50% sessions only.

Supervision

No supervisory visits were made by medical officer in last one month to more than half of SDPs. The CCT visited 57% of SDP in last three months. None of the sessions had any supervisory visits by medical officer.

Data recording and reporting systems

In urban planning units reviewed no regular position was sanctioned for M&E. However, trained contractual data entry operator was available in half of the urban planning units. All copies of the coverage report for the last phase of IMI campaign were available and complete in urban planning units reviewed. In the urban planning units reviewed there was a major gap in PCTS portal updation, as only 9% of children were registered in the PCTS portal. There was no mechanism for reviewing immunization data for action at any of the urban planning units.

All ANMs interviewed were trained within last three years on use of latest recording and reporting formats. In all urban PHCs, blank MCP (*Mamta*) cards were available in sufficient quantity with ANM, whereas due list and tally sheets were available in only half of the urban PHCs. While RCH registers were not found with ANMs in any of the urban PHC, all were maintaining hand written or self-prepared RCH registers. In half of the urban PHCs, due lists were made manually due to absence of format and also older MPR formats were found to be used to record monthly progress report. Tracking of left outs/ drop out beneficiaries was found in all urban PHCs.

Demand generation

Visits to urban planning units and session sites in urban areas under review show non-availability of communication plans.

Mahila Arogya Samitis are mandated under the NUHM for social mobilization. For the purpose of this review, the mechanism of MAS, their role, activities were observed in

urban areas of one district through interviews of the MAS members. These groups in the urban areas were formed with ten members in every group with active support of ASHAs. The group members are not empowered or sensitized about their objective and functions and are mostly driven by the ASHA's motivation. The MAS have limited knowledge of vaccines and diseases prevented by these vaccines. Two-third could tell about measles or polio vaccines only, while remaining one third were not aware about even a single vaccine. Two-third of the MAS were not fully aware of immunization activities. All MAS members claimed to attend immunization session in their areas. They said that all mothers bring MCP cards to session sites in their areas, and there are no vaccine hesitant pockets or any rumours regarding vaccination affecting perception and acceptance of vaccination.

IEC materials are received just before rounds only (posters, banners and leaflets for IMI) - as mentioned by Public Health Manager (PHM).

Mothers meetings are one of the major method of social mobilization, but only half of the planning units in the urban areas utilized this option. Community meetings are used as a platform for social mobilization in half of reviewed planning units.

No communication training including BRIDGE training has been organized in the reviewed urban planning units.

IEC materials in the form of posters were observed in the reviewed health facilities. Availability of IEC materials on RI in the urban areas of the reviewed districts was limited. Only 50 % of planning units used any IEC materials to promote immunization at health facilities. This was also verified during the visits to Urban PHCs and CHCs.

Lack of infrastructure is a motivational barrier for immunization, affecting the providers and the recipients. Outreach sessions in crowded urban areas have no logistic support, and are held in any available space even in open areas such as temple / *dharamshala* compound. Lack of electricity, drinking water, sitting space and limited space in the urban *Anganwadi* centres (session sites) is a deterrent for FLWs as well as the community to access immunization services.





4

ISSUES AND CHALLENGES

This section summarises the key issues identified and discussed in detail in the preceding chapters. While a number of issues were identified, only a few cardinal issues have been mentioned below.

Governance and accountability

- » Poor frequency and quality of DTFIs; DTFIs are merged with DHS, limiting the time of discussion on RI
- » Review of Routine Immunization at district lacks comprehensiveness in terms of discussion during the task forces on components like human resource, cold chain, fund utilization, communication strategies etc.
- » Weak mechanism and documentation of district quarterly RI reviews.
- » Limited supervision from districts to blocks for RI activities
- » Underutilization of funds under Part 'C' at state and district.

Human resource and infrastructure

- » One-fourth districts lack a dedicated DRCHO
- » Acute shortage of supervisory cadre (LHV)
- » Space constraints at cold chain points for dry logistics.
- » Limited availability of power back up for CCE

Training

- » Training for MOs on RI handbook (2016) conducted at state which is not able to cater to the target of positioned MOs in state.
- » Training of HWs on immunization conducted on older module.
- » Poor attendance of CCHs during training on VCCH module 2016. Sub-optimal capacity building of CCH for eVIN application.
- » The stock registers for vaccines, diluents and logistics are usually updated once a month and not with each transaction. Owing to limited capacity building of CCHs, there is poor waste

management (immunization waste burnt at SDP).

Microplanning issues

- » Majority of microplans are not made on prescribed formats.
- » Lack of mechanism of 6 monthly microplan review and updation based on headcount survey
- » Enlisting of all areas and documentation of target beneficiaries is incomplete; plans lack information on vaccines & logistics, AEFI management centres, subcentre wise maps, AVD plan and columns on new vaccines.
- » Tagging of HRGs in RI plans is incomplete.
- » Weak planning and fixing accountability for vacant subcentres coverage
- » Non-availability of communication plans for RI at district and planning units.

Session quality and community assessment

- » Poor availability of updated headcount surveys and updated duelist at session sites
- » Availability of vaccines is not as per duelist. This is also substantiated from the fact that microplans lack information on 'per session target beneficiary load' and 'vaccine and logistics requirement'. Further, only around half the session sites receive vaccines through AVD exclusively up to session site.
- » Weak vaccine management and waste management at sessions observed (inappropriately kept vaccines on/near ice packs, limited use of zipper bags, limited use of hub cutter, no recapping of syringes where hub cutter not available)
- » Poor availability of hub cutter, red and black bags for waste disposal
- » Poor visibility of the Immunization programme at the district level due to non-availability of IEC materials in the field. Minimal engagement of community leaders with health department including lack knowledge of the community leaders.

- » Knowledge gap among ANMs regarding immunization safety, vaccine management, correct sequence of administering multiple antigen, recording and reporting, VPDs and AEFIs, along with poor delivery of 4 key messages
- » 'Awareness and information gap' is the most common reason observed among all drop out and left out households followed by AEFIs apprehension.
- » Poor mechanism of supportive supervision

AEFI and VPD reporting system

- » Regular state AEFI committee meetings not held
- » Twenty districts have not reported any AEFI case since 2015
- » No case reported by any of the assessed districts in 2017-18
- » Poor availability of AEFI recording registers and AEFI management kits at planning units
- » Weekly VPD data is not being shared between IDSP and DRCHO office

Vaccine and logistics

- » Insufficient supply of stabilizers, thermometers and temperature log books for cold chain equipment (CCE)
- » Poor availability of hub cutter, red and black bags for waste disposal
- » Non-availability of spare parts with CCTs is a hindrance in the repair of CCE
- » Preventive maintenance plan not available at majority of cold chain points
- » Contingency plan unavailable at nearly half of service delivery points

Data quality

- » Inadequacy of printed recording and reporting formats like due list and RCH registers in the field
- » Wide variation in availability of due list; completeness of MPR; agreement between due

list & MPR, due list & RCH register and MPR & PCTS

- » Data handlers not trained on recording and reporting of immunization data
- » Additional responsibilities on data entry operator leading to suboptimal registration of target children on PCTS portal
- » Poor mechanism of analysis and review of reported coverage data
- » Coverage monitoring charts not used for programme review in the districts

Urban immunization

- » DTFUI not constituted in some districts.
- » State average of ANM vacancies is high (64%)
- » Microplans in form of one pagers, critical information missing
- » AVD plan, vaccine & logistics formats and AEFI management centre details found in none of the microplans
- » Poor availability of supervisors' plan in microplan
- » Non-existent mechanism of review of programme as well as supportive supervision mechanism
- » ASHAs are sanctioned for slum areas only. Inadequate involvement of AWWs in non-ASHA areas affects the quality of headcount survey and mobilization at session sites.
- » Inadequate demand generation is the major reason for partially vaccinated / unvaccinated children.
- » Absence of AEFI recording registers at UPHCs, negligible knowledge among ANM regarding AEFI management centre.
- » AEFI management kit absent at majority planning units
- » Issue of completeness of MPR, agreement between due list & MPR, and due list & RCH register
- » Poor availability of printed RCH registers with urban ANMs

- » Huge backlog in PCTS portal updation
- » *Mahila Arogya Samitis* are in place in the urban areas, but are not oriented on immunization or communication approaches and hence unable to mobilize beneficiaries for immunization

Coordination

- » Mechanism for fixed day meeting of AAA found in only one third of the blocks
- » Poor involvement of ICDS in block level review meetings
- » Presence of AWWs at session site was lacking in almost half of sessions observed
- » There is no mechanism of 'joint monitoring' by government officials and partners for routine immunization



5

WAY FORWARD

This report is being submitted to the Government of Rajasthan for discussion with reference to the “Roadmap for achieving 90% full immunization coverage in India by December 2018 and sustaining thereafter” to revise the state coverage improvement plan, along with timelines and roles and responsibilities of all stakeholders, including partner agencies.

Further, district reviews will need to be conducted by the state in all districts with <90% FIC to prepare district wise coverage improvement plans.

The Government of India will support the state government to devise a district review checklist and orient key state level officials for conducting the district reviews.

Data analysed and report compiled by ITSU

