

MASTER OF PUBLIC HEALTH

**Johns Hopkins Bloomberg School of Public Health
in collaboration with
IIHMR University Jaipur**

PRACTICUM REPORT

By

Lt Col (Dr) Rajnikant Tiwari
Cohort-5
2017- 2019

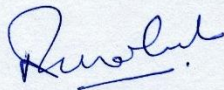
Under the Guidance of

Dr Neetu Purohit PhD
Associate Professor IIHMR University Jaipur

2019

CERTIFICATE BY THE FACULTY ADVISOR**CERTIFICATE BY THE FACULTY ADVISOR****TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Lt Col (Dr) Rajnikant Tiwari, student of Master of Public Health Program offered by Johns Hopkins Bloomberg School of Public Health, Baltimore in collaboration with IIHMR University Jaipur has undergone Practicum Training at IIHMR University Jaipur from date 30th Nov 2018 to 31st Dec 2018. Dr Tiwari has successfully carried out the study designated to him during practicum training and his approach to the study has been sincere, scientific and analytical. The Practicum Training is in fulfillment of the course requirements. I wish him success in all his future endeavors.

**Neetu Purohit, PhD**

Faculty Advisor

CERTIFICATE BY THE SCHOLAR**CERTIFICATE BY THE SCHOLAR**

This is to certify that the Practicum Project title submitted by me, Lt Col (Dr) Rajnikant Tiwari with Enrollment No: IIHMR-U/07/2017-2019/0033 under the supervision of Dr Neetu Purohit (Faculty Advisor) for award of **Master of Public Health** carried out during the period 30th Nov 2018 to 31st Dec 2018 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.



Lt Col (Dr) Rajnikant Tiwari

MPH Cohort 5

2017-2019

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ABBREVIATIONS

AHS Annual Health Survey
BMO Block Medical Officer
CAPT Comprehensive Assessment and Planning Tool
CHC Community Health Centre
CMHO Chief Medical & Health Officer
DLHS District Level Household & Facility Survey
GOI Government of India
HCAI Health Care-Associated Infection
HCF Health Care Facilities
HWWS Hand Washing with Soap
IIHMR Institute of Health Management Research University
IPHS Indian Public Health Standard
MDG Millennium Development Goal
MOIC Medical Officer In-charge
MP Madhya Pradesh
NFHS National Family Health Survey
NRC Nutrition Rehabilitation Centre
NHM National Health Mission
NRHM National Rural Health Mission
OPD Out Patient Department
PHC Primary Health Centre
PIP Program Implementation Plan
RMNCH Reproductive & Maternal, Child health
SDG Sustainable Development Goal
SGT Star Grading Tool
SNCU Specialized Newborn Care Units
SOP Standard Operating Procedure
UNICEF United Nations Children's Emergency Fund
WASH Water Sanitation and Hygiene
WHO World Health Organization
WSP Water and Sanitation Program

ACKNOWLEDGMENT

I take this opportunity to thank Dr Neetu Purohit, Associate Professor IIHMR University (Faculty Advisor) and all Faculty members of the university, Dr Pankaj Gupta, President and Dr S D Gupta, Chairman IIHMR University Jaipur, for their unrelenting support and guidance. I also extend my regards to Dr Goutam Sadhu, Associate Professor for allowing me to work in the project.

STUDENT PROFILE

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PRACTICUM DETAILS

Practicum Title

Practicum Training at IIHMR University, Jaipur

Practicum Goals

To demonstrate the Core Competencies in Public Health

Practicum Objectives

To demonstrate learning and application by working upon a **process documentation** for WASH in Health and devise a plan for WASH interventions to be replicated in different settings.

Important Dates

Start Date: 30th November 2018

End Date: 31st December 2018

Total Hours: 184 hrs.

IIHMR University

IIHMR University, Jaipur is a leading institution in India engaged in academics, research and training in the realms of public health, health and hospital administration, pharmaceutical management and rural management. The institute pioneered health management and is known as an “Institute of Excellence” by the Government of India, Ministry of Health and Family Welfare.

PRACTICUM EXPERIENCE

I have a special affiliation for **strategic planning and management and communication** in healthcare, I joined a project of Dr Goutam Sadhu at IIHMR Jaipur under the overall guidance of my faculty advisor Dr Neetu Purohit as part of my practicum experience. The project was on WASH in Health – a UNICEF project being implemented in 7 high priority districts of Madhya Pradesh under the technical guidance of IIHMR University Jaipur and integrated with National Health Mission – Madhya Pradesh.

During my practicum experience I have worked upon a **process documentation** for WASH in Health for interventions to be replicated in different settings. The process document attempts to capture step by step process of WASH intervention, assessment, planning and handholding initiatives in the healthcare facilities of seven high priority districts of Madhya Pradesh viz Shahdol, Shivpuri, Sheopur, Guna, Umaria, Mandla and Anuppur. It is expected that this document will serve as a roadmap for sustainability, replicability and scalability of WASH initiatives in other districts of Madhya Pradesh and rest of India. **The document has taken the following shape.**

ABOUT THE DOCUMENT

India: A Paradox

IMR and MMR are two key health indicators that has its impact on all other goals and casts a dent in the very being of a family, society, nation and the global community if these two indicators keep on overshadowing our efforts.

India is one of the fastest growing economies in the world and it is quite paradoxical that it has one of the highest rates of maternal and infant mortality rate in the world. As per recent SRS report, the country has **167 maternal deaths per 100000 live births and 28 neo natal deaths per 1000 live births.**

The Whirlpool

India's ranking in the **Human Development Index** though improving but not very promising. Poverty stricken large parts of the society stands caught in the **quagmire of disease and debt trap** that **acts as a quicksand** sucking out the hard-earned savings of the poor due to ill health.

Various studies have pointed out that most of the diseases like diarrhea, hepatitis, typhoid, puerperal sepsis etc. affecting large sections of the community especially the newborn babies and their mothers are preventable by **resorting to basic hygiene and sanitation practices.**

Interventions like **WASH envisages breaking the chain of spread of diseases** through propagation of hygiene and sanitation practices amongst the healthcare providers, recipients and the attendants by bringing in **institutional and behavioral changes** and by advocating policy changes in order to leverage the state's finances and efforts seeking an active involvement of its machinery.

Expectations from the document

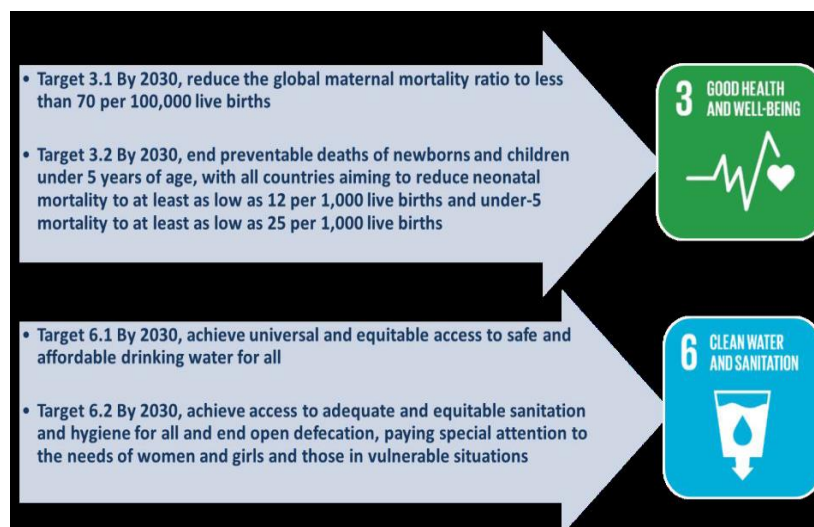
This document attempts to capture **step by step process of WASH intervention**, assessment, planning and handholding initiatives in the healthcare facilities of seven high priority districts of Madhya Pradesh viz Shahdol, Shivpuri, Sheopur, Guna, Umaria, Mandla and Anuppur. The intervention was commissioned by **United Nations Children's Emergency Fund (UNICEF)-MP** in collaboration with **National Health Mission (NHM)-MP** and **Institute of Health Management Research University (IIHMRU)** Jaipur, Rajasthan. It is expected that this document will serve as a roadmap for sustainability, replicability and scalability of WASH initiatives in other districts of Madhya Pradesh and rest of India.

EVOLUTION OF WASH IN HEALTH AND NUTRITIONAL CENTERS

MDGs to SDGs: A Journey

It has been a long and arduous journey for low- and middle-income countries from MDGs to SDGs and the struggle continues in the achievement of the targets set out especially in the areas of **health and sanitation**.

Sustainable Development Goals



The **report published in 2017 by WHO and UNICEF**, on global assessment of the extent to which health care facilities satisfactorily provide essential water, sanitation and hygiene (WASH) services is sobering enough to attract urgent attention and action in the LMICs. The findings from 66,101 health care facilities in 54 low-and middle-income countries, indicated 38% of facilities lacking access to even rudimentary levels of WASH services.

WASH gaining ground:

Improving WASH in health care facilities is now beginning to **attract the attention** of governments, donors and the international public health community. A proposed target of universal basic coverage of WASH in health care facilities by 2030 has been recommended for inclusion in post-2015 UN Sustainable Development Goals.

Director General of the World Health Organization (WHO) has declared that improving WASH in health care facilities is an **urgent priority (WHO, 2013)**. The large number of actors and funds committed to universal health coverage provides an opportunity to highlight the essential role of WASH in achieving this aim (**Action for Global Health and WaterAid, 2014**). According to the **2014 UN-Water Global Analysis and Assessment of Sanitation and Drinking-water (GLAAS) findings**, only one quarter of countries have policies on WASH in health care facilities that are implemented with funding and regular review (WHO, 2014).

The Way Forward

Involves several actions: -

- Strengthening national policies and standards
- Financing and training staff to manage WASH in health care facilities
- Risk-based approaches to prioritize and maintain improvements
- Commitment from partners in both the health and environment sector at every level.

Role of UNICEF

UNICEF is working with a range of government departments in states to provide technical support for programs aimed at improving child survival, growth and development. It is focusing on improving the health and nutrition status of newborns, children, adolescents and women and adequately addressing water, sanitation and hygiene (WASH) issues.

UNICEF has successfully piloted the best practices of Water Sanitation and Hygiene in health care facilities and Nutrition Rehabilitation Centers in selected 7 districts of Madhya Pradesh as a priority agenda of WASH. UNICEF is supporting the states to improve the quality of health care in health institutions by improving Water, Sanitation and Hygiene (WASH) facilities and practices through capacity-building of National Health Mission (NHM) stakeholders.

SCOPE OF INTERVENTIONS

What does the study say?

According to a study led by researchers from **WHO**, **Save the Children** and the **London School of Hygiene and Tropical Medicine** on Neo natal deaths over a period of 20 years:

- New born deaths i.e., deaths in the first four weeks of life (neonatal period) account for 41 percent of all children deaths before the age of five years.
- Almost 99 percent of the new born deaths occur in the developing world, with more than half taking place in the five large countries like India, Nigeria, Pakistan, China and Congo.
- "India alone has more than 900,000 new born deaths per year, which contributes to nearly 28 percent of the global total" caused by pre-term delivery, asphyxia and severe infections, such as sepsis and pneumonia.
- WHO pointed out that two thirds or more of these deaths can be prevented with existing interventions.

DETERMINENTS OF QUALITY OF CARE

The quality of care in infection control at health centers depends on several factors:

- Safe and enough drinking water
- Basic sanitation
- Adequate management of health-care waste
- Key hygiene practices such as hand washing with soap (HWWS)
- Reduction in nosocomial (hospital induced) infections.

WASH & Biomedical Waste Management



Water



Sanitation



Hygiene



BMW

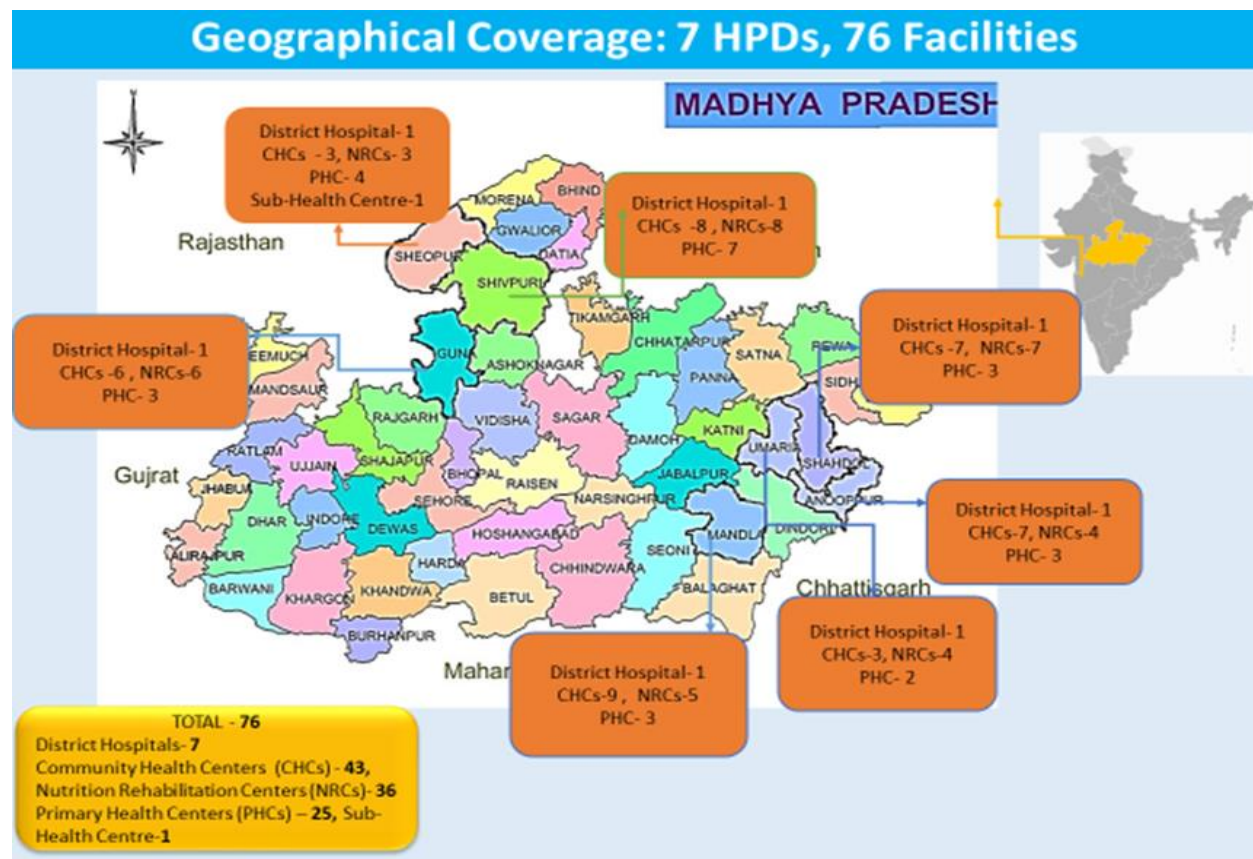
Emphasis from UNICEF, WHO, IPHS

WASH and Infection control are essential steps to quality of care. UNICEF identified HCAI control measures at Health centers as a high impact intervention area. Indian Public Health Standards (IPHS) have defined the guidelines for infection control, WASH in Health care facilities and bio-waste management protocols. WHO has defined key steps for reducing sepsis such as simple behaviors like hand washing which reduces sepsis by more than 60% in health care facilities.

Rajasthan to Madhya Pradesh

After having succeeded in Rajasthan, **UNICEF wished to replicate their WASH strategy** in 7 high priority districts of Madhya Pradesh around key components i.e., focused interventions in high priority districts, identifying gaps and bottlenecks in infection control measures at all levels and building capacity of Medical Officers and health care staff on assessing, planning, improving and monitoring WASH improvements at Health centers.

7 High Priority Districts

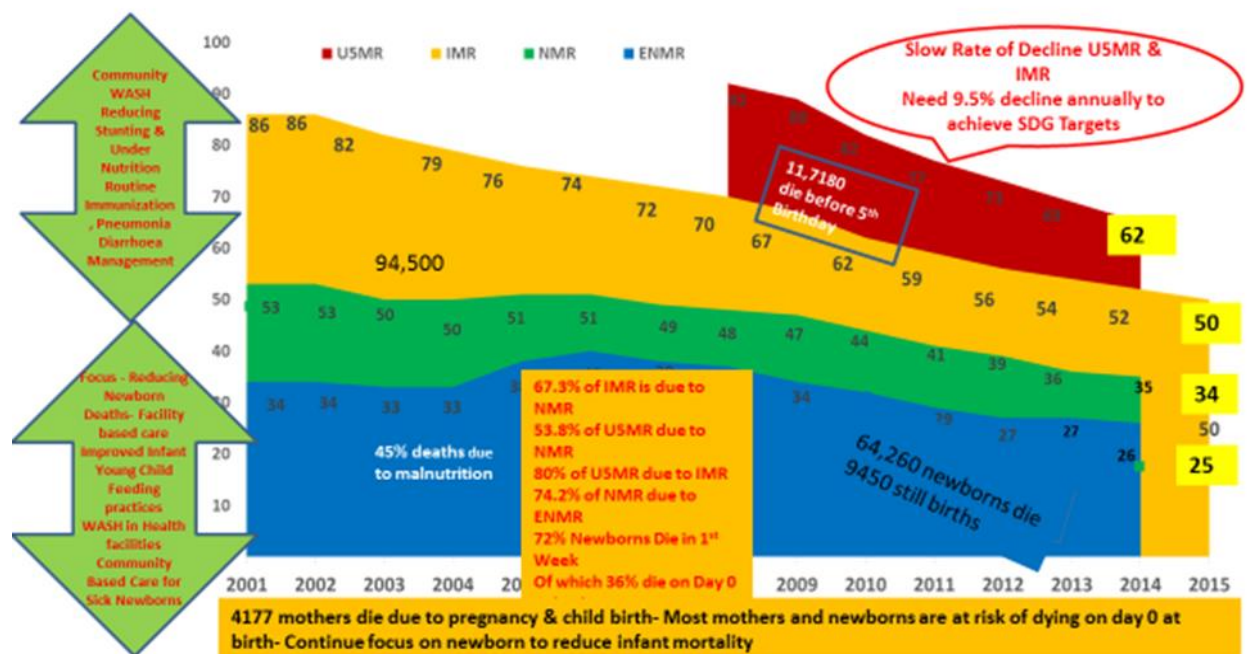


What was there in Madhya Pradesh?

- As per SRS report 2013 published in 2015, MMR, IMR and Neo-natal mortality rate (NNMR) are higher in Madhya Pradesh than the national average.
- As per NFHS 4, MP state still has the highest infant mortality rate of 51 deaths per 1000 live births in India.
- It is also estimated that 68,000 infants die within the first month and about 100,000 die within the first year of birth in MP.
- Among the new born, most of them die within the first seven days and among those who die within first few days, 70 percent die within the first 24 hours of birth.
- It was also learnt that maternal mortality stands at 221 per 1,00,000 live births annually and is a major contributor to new born deaths. If, action is taken at the time of birth, within first 24 hours of intra-partum care & immediate post-natal care, maternal, new born sepsis and linked morbidity can be reduced.
- Data from Specialized Newborn Care Units (SNCUs) of 53 units in MP suggests that 17 percent of the new born deaths are caused because of sepsis.

SRS Report 2013 Published in 2015

Current Trends – MP (per 1000 live births)- Source SRS 2014/15



The seven districts of the Madhya Pradesh state namely *Guna, Sheopur, Shivpuri, Mandla, Anuppur, Shahdol* and *Umaria* are high priority districts for UNICEF as these are tribal districts with high vulnerability in terms of access. NFHS 4 data on RMNCH+A show mid-level indicators for these districts but with high burden of delivery in the state. This raises concern about the quality of care being provided at the health facilities, especially in terms of Health Care Associated Infection (HCAI) control measures, which significantly contributes to early-neonatal diseases, such as sepsis.

Key Indicators from HMIS FY 2015-16 for the selected 7 districts

Name of the district	Number of facilities, where WASH assessment conducted	Number of Child deaths reported in the facilities, where WASH assessment conducted	Number of Child deaths reported in the district	Number of Maternal deaths reported in the facilities, where WASH assessment conducted	Number of Maternal deaths reported in the district	Number of deliveries in the facilities, where WASH assessment conducted	Total number of deliveries in the district
Anuppur	11	6	52	6	17	6773	9566
Umaria	6				15	11392	
Shahdol	11	285	605	29	44	15878	19645
Shivpuri	16	167	221	51	87	18156	29343
Sheopur	9	69	103	103	159	5719	8371
Mandla	13	113	321	7	18	7865	15183
Guna	10					17964	25167
Total	76	640	1302	196	340	83747	97709

APPLICABILITY MATRIX**ACTIVITIES X RESPONSIBILITIES MATRIX FOR THE PROJECT**

Activity/TASK	Sub Activity	RESPONSIBILITY ESCALATION LEVEL					
		Primary Responsibility / Accountability	Supportive Monitoring	Problem Management	Bottleneck Management	Exception Management	To be shared with
PHASE I							
Review of existing WASH Tools and realignment with the existing guidelines		3	4	4	3,4	4	4,2,5
Finalization of CAPT tool		3	4	3,4	3,4	4	4,2,5
Star Grading Tool							
Development of android based real time application on Smartphone		4	3	4	4	4	3,4,2,5
5State Level workshop	Knowledge on WASH in Health	3,4	3,4	3,4	3,4	3,4	5
	Induction on tools						5
	Hands on with tools						5
Appointment of State Nodal Officer		5	5	5	5	5	3,4

District level Workshop	Knowledge on WASH in Health	3	3,4	3	3	3	4,5
	Induction on tools						
	Hands on with tools						
WASH assessment and improvement planning		3	3,4,5	3,4	5	5	4,5
Analysis of Assessment reports and preparation on report with key recommendation and development on rating tool for facility enhancement		3	3	3,4	3,4	4	4,5
WASH assessment findings and improvement plan in District Health Society		3	3	3,4	3,4	4	4,5
Sharing on WASH assessment findings and improvement plan at State level		4	3,4	3,4	3,4	3,4	4,5

Phase II							
Induction of local team of Mentors		4	4,5	4,5	4,5	4,5	5
Hiring of District Coordinators		3	3	3	3	3	4,5
Orientation and training of DCs		3	3,4	3	3	3	4,5
Sharing assessment at HCFs		3	3,4	3	3	3	4,5
Implementation plans to facilities		3	3,4	3	3	3	4,5
Follow up visits		1,3	1,3,4	1,3	1,3	1,3	4,5
Training Mentors and Health Staff on implementation		3	3,4	3	3	3	4,5
Monitoring and reporting improvements		1,3	1,3,4	1,3	1,3	1,3	4
thematic reports (district wise)		3	3,4	3	3	3	4
thematic reports (consolidated)							
State Level Workshop for dissemination		3	3,4	3	3	3	4,5
1. District coordinator (IIHMRU), 2. Research and documentation Officer (IIHMRU) , 3. Project Lead (IIHMRU) 4. UNICEF Bhopal, 5. NHM Bhopal							

SERVICE LINE IMPACTED

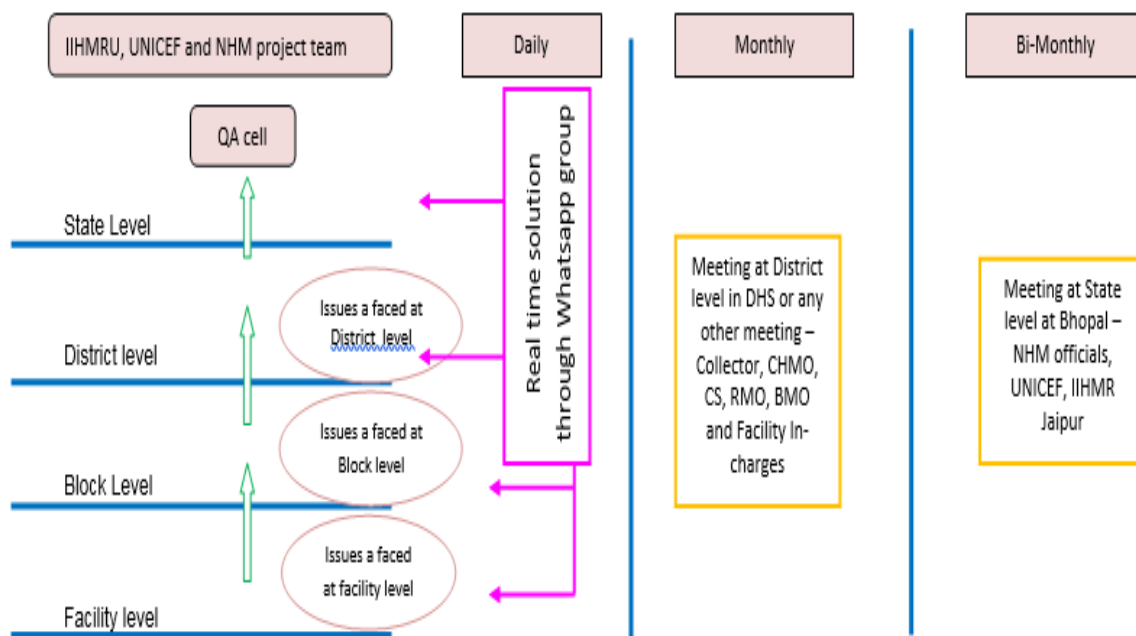
The following service lines are impacted in the healthcare facilities and nutrition rehabilitation centers due to the WASH intervention:

- Safe drinking water
- Sanitation
- Safe hand hygiene practices amongst the providers and the recipients.

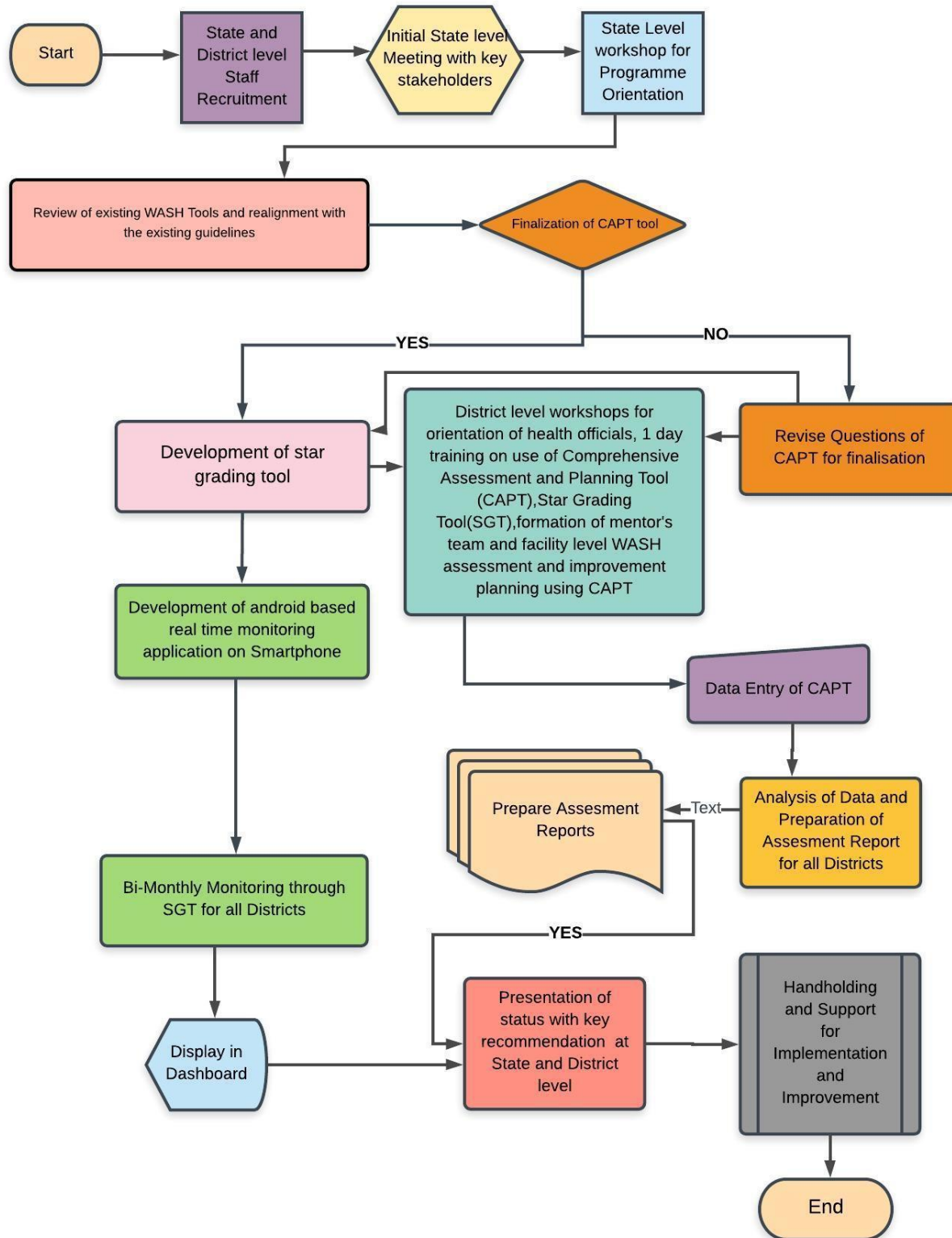
ROLES AND RESPONSIBILITIES

1. **UNICEF Bhopal:** WASH Policy development, Advocacy and Funding of the program.
2. **NHM Bhopal:** Decision making body, Policy development in consultation with UNICEF, Implementation of the WASH interventions, Ensuring sustainability.
3. **IIHMRU Jaipur:** Technical support, Advocacy.

COMMUNICATION FRAMEWORK ACROSS VARIOUS LEVELS



THE PROCESS FLOW CHART



THE PROCESS

1. Planning
2. Resource Mobilization
3. Implementation

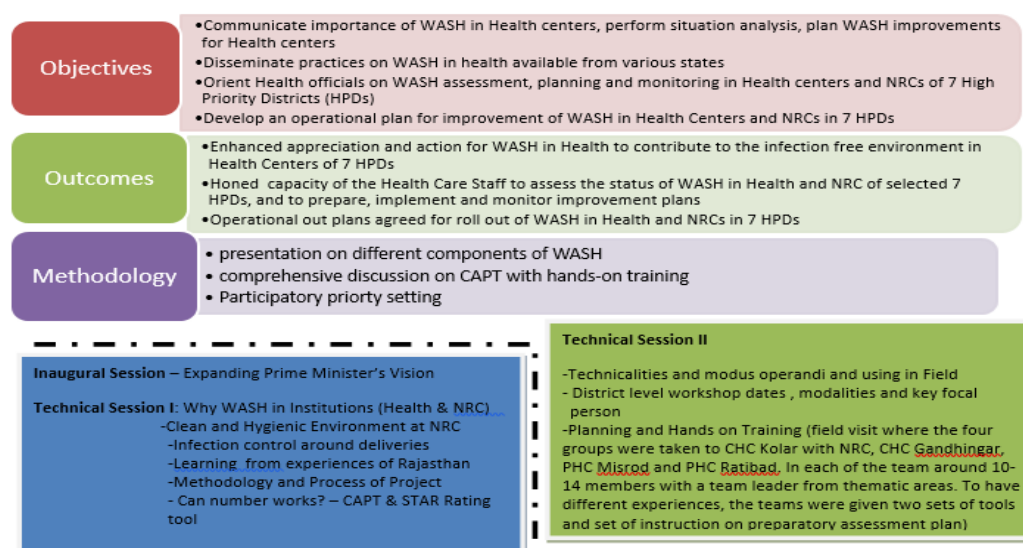
PLANNING

1. **Creating an ownership at the State level:** For the WASH intervention to succeed the State government must own it up and leverage the resources to achieve the aim and objectives for the betterment of its beneficiaries.
2. **Establishing the roles and responsibilities:** Involvement of multifarious organizations makes it imperative to establish various roles and responsibilities along with instilling the sense of accountability amongst all the functionaries.
3. **Establishing the reporting lines:** Clear cut communication line and chain of reporting for various activities is essential to avoid any confusion and to bring in clarity whom to approach.
4. **Review and realignment of WASH tools:** The core team members of IIHMR under the guidance of UNICEF reviewed the existing WASH tools prepared for Rajasthan project including the inputs from the Kayakalp guidelines.
5. **Meeting of UNICEF, NHM, IIHMRU and State level officials:** Meeting of officials from all these organizations and the state officials (Secretary Health, Commissioner Health) were conducted to bring in the convergence of efforts, expertise and resources to achieve the success of intervention.
6. **Inception presentation at State level:** An inception report presentation was done by the IIHMRU on tools and process on implementation on WASH assessment and improvement plan with UNICEF and NHM (MD, Commissioner, Dy Directors, representatives from construction wing of NHM, other concerned officials).
7. **State level workshop:** A one and half day state level workshop was organized at State level so that all the stakeholders could be on the same wavelength. State Level, Division and District Level officials of Medical & Health Department, State and District Consultants and health care staff participated in the workshop.
8. **District level workshop:** One day workshop was organized in all the 7 districts to build the capacities of District and Block MOs (Medical Officers), MOICs (facility in charge), DPM (District Program Manager), BPM (Block Program Manager), Quality Assurance (QA) Cell members and Mentors (5-10 people from each district) on WASH assessment and improvement planning.

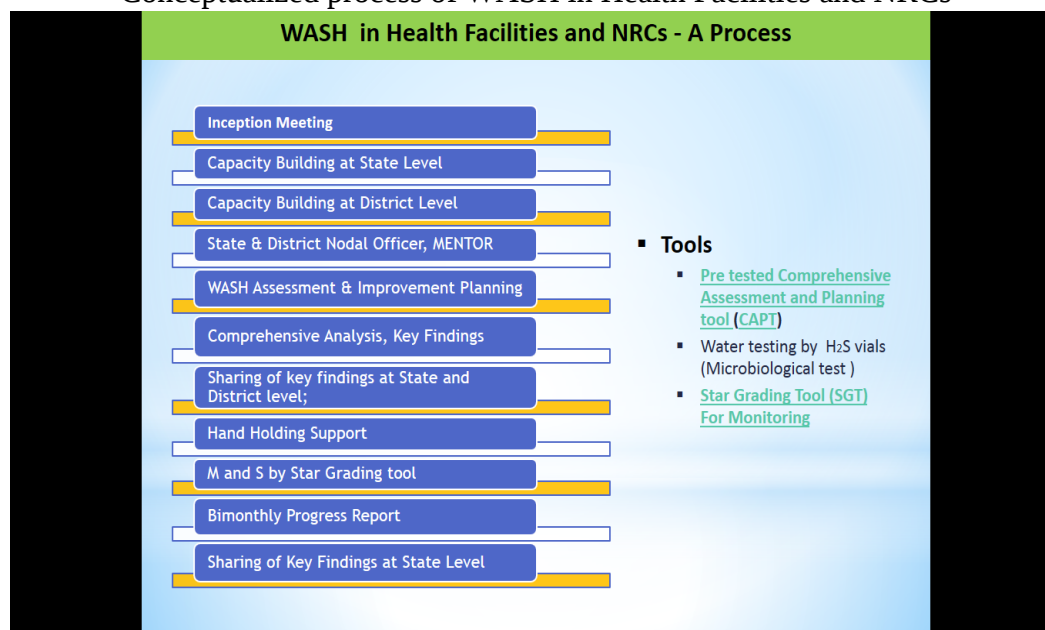
9. **Rolling out facility WASH assessment and improvement planning:** A WASH assessment and improvement planning visit was undertaken by teams in each one of the identified facilities. The WASH facility assessment and improvement plan was developed by the IIHMRU team involving BMOs, MOICs, Mentors and the field research team. The resource agency provided resource person(s) for facilitating the assessment and improvement planning process. The logistic support to districts for the assessment was directly provided through UNICEF. The assessment report and improvement plan were compiled in soft copy by resource agency team for each facility. The improvement plan validated by WASH expert was submitted for all the facilities.

State Workshop

STATE WORKSHOP



Conceptualized process of WASH in Health Facilities and NRCs



RESOURCE MOBILISATION

- **Human Resource**
- **Financial Resource**

HUMAN RESOURCES

The WASH project was launched on 1st July 2016 along with UNICEF Madhya Pradesh (MP) and National Health Mission (NHM), MP followed by an inception meeting i.e. on 4th July 2016, with Mission Director (MD) NHM, Government of Madhya Pradesh. In the meeting it was decided that Deputy Director (DD), Quality assurance cell, NHM will act as the nodal person for the project.

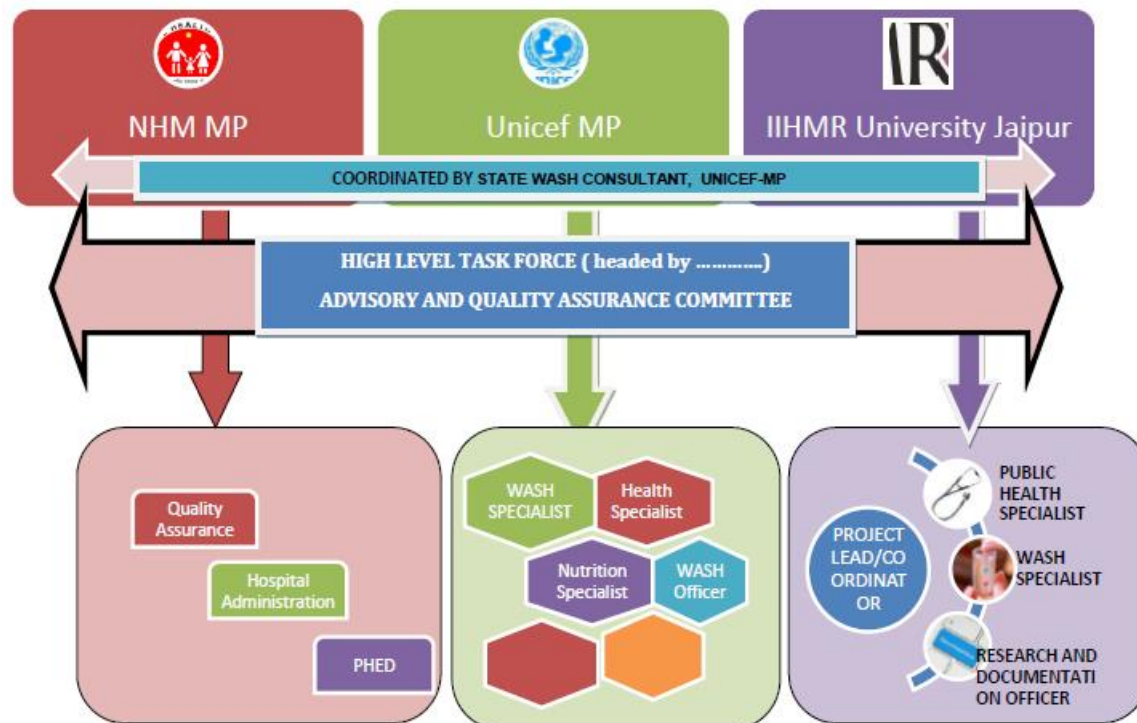
IMPLEMENTATION TEAM

State Level

High level task force named advisory and quality assurance committee was constituted under the chairmanship of MD, UNICEF officials and Project coordinator from IIHMR University, Jaipur. Besides, at state level, to support, WASH and Public Health specialist along with Research & Documentation specialist were posted. On the behalf of UNICEF-MP, state WASH consultant was appointed to act as a coordinator between UNICEF, IIHMRU and NHM, MP.

State Level Implementation Team

State level



District Level

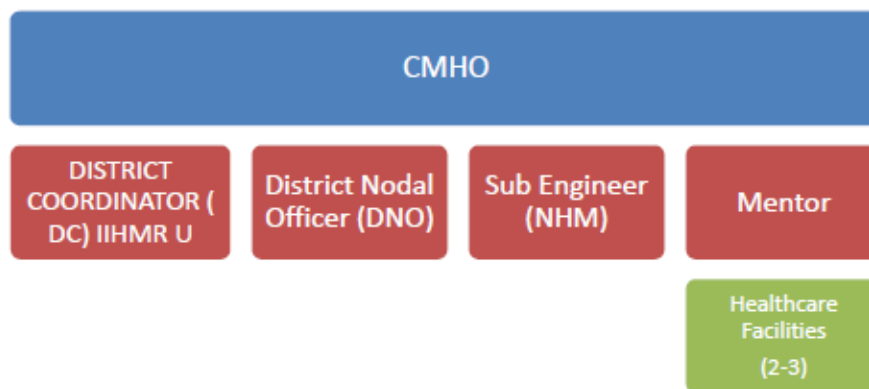
Under the leadership of Chief Health & Medical officer (CHMO), District coordinators along with Sub engineer from NHM, District Nodal officer (DNO) and MENTOR were nominated. Each of the mentors were given 2-3 facilities to bring change by bridging the existing gaps.

Block Level

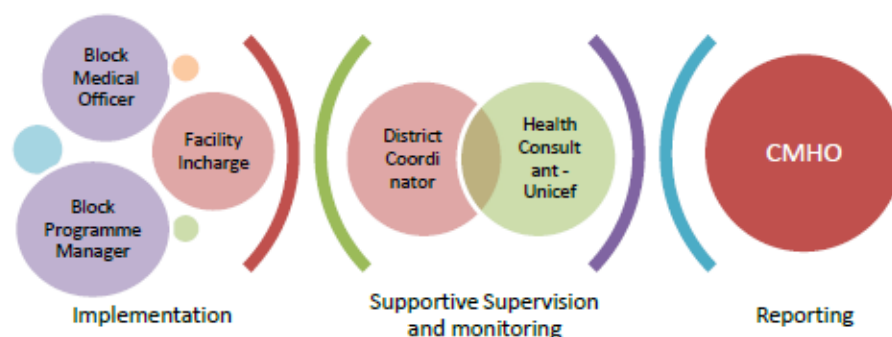
Block Medical officer (BMO) along with Block Program Manager (BPM) and facility in-charges were made responsible to implement the project in the respective facilities and accountability was assigned section wise (of Star Grading Tool) at the facility level. Additionally, Health consultant from UNICEF played a supportive role to implement and monitor the progress.

District and Block Level Implementation Team

District Level



Block level

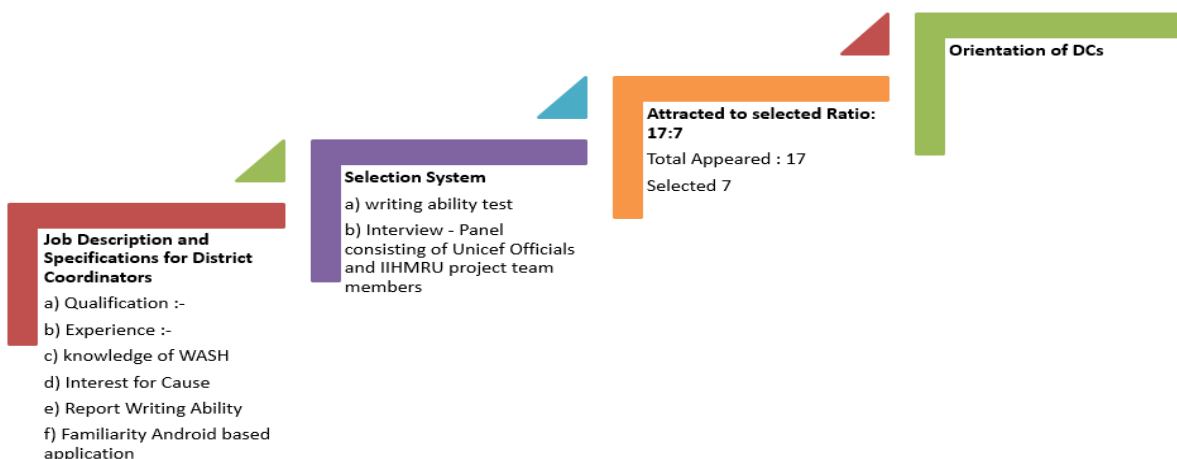


SELECTION AND ORIENTATION OF DISTRICT COORDINATORS

District Coordinators were the key connect between the implementation site and project monitoring office, thus professional approach of hiring district coordinators was practiced starting with suitably defined job description and specifications. Designing a suitable selection process and onboarding them through a well-designed Induction and Orientation program.

Selection Process and Orientation of DCs

Selection process and Orientation of DCs



FINANCIAL RESOURCES

The demands for financial resources were categorized into short, medium- and long-term goals. Short terms and medium terms demands were bridged through the untied or RKS funds available with government whereas long terms demands were proposed in the state PIP seeking fund from the central government. The funds were given from state to district, district to block and block to facilities whereas RKS funds were generated at the facility level as per the permission of the District Collector, the chairperson of District health society.

Details of the Budget proposed for WASH activities in CHCs and PHCs of 7 HPDs:

- Treated Drinking Water:** Installation /repair of RO/UV /water cooler-purchase up to INR 50000.00 and including transportation and installation charges up to INR 90000.00
- Excreta Disposal System:** Toilet repair/maintenance/minor toilet construction/repair up to INR 85000.
- Bio Medical Waste Management & Infection control:** Purchase of 3 bucket cleaning trollies, BMW disposal closed trolley/Purchase of foot operated BMW Bins, construction of BMW central storage facility up to INR 60000.00
- District level Training/orientation and IEC:** WASH orientation/Training on assessment, WASH IEC, and facility-based assessment - INR 100000.00

IMPLEMENTATION

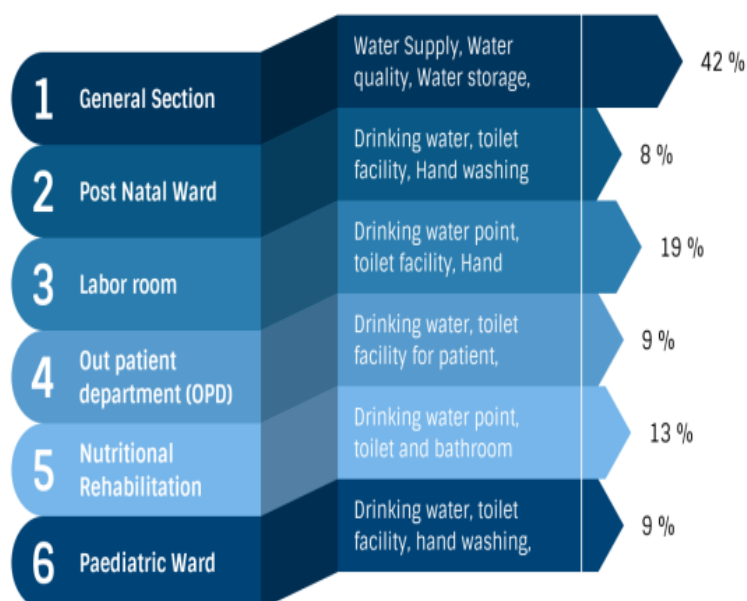
THE ASSESSMENT TOOL

For improving WASH in health facilities and NRCs in selected districts of MP, IIHMR-U, Jaipur along with UNICEF-MP developed a 60-point tool named as “**Star Grading Tool**” (SGT). The tool kept a provision to rate the health facility from **single star to five stars based on 60-point score**.

The **six key areas** where score was given were *facility in general, Outdoor Patient Department (OPD), Post-natal ward, labor room (LR), Nutritional rehabilitation center (NRC) and Pediatric ward*. In each area, system elements such as drinking water – supply, quality, source, operational toilet & its management, infection control and hospital waste management related **questions were framed negatively** to ensure respondents give a pragmatic thought to the questions while giving scores.

SGT Score in percentage for each Section

Score in percentages given to each section in SGT



ASSESSMENT FRAME AND INTERVENTION SAMPLE UNITS

The assessments from seven districts were taken by considering different parameters as below:

- It was decided that those facilities will be selected where more than 70 percent deliveries were conducted in the last financial year 2015-16.
- As a result, all facilities i.e., District Hospital (DH) and Community Health Centre (CHC) were considered for sample.
- Among all the Primary Health Centre (PHC) of the selected districts, 10 to 20 percent of PHCs were selected where delivery loads were higher as compared to the rest and one Sub health center in Sheopur district was selected.
- Additionally, to measure the progress of WASH intervention in NRC and SNCU, altogether 21 SNCUs & NBSUs as well as 37 NRCs were also covered in the study. The table below summarizes the detailed sample covered under project.

Distribution of sample facilities by facility and districts in 7 HPDs of MP

Name of District	DH		CHC		PHC		SC		Total		SNCU		NRC		Paediatric	
	Availa	Selecte	Availa	Selecte	Availa	Selecte	Availa	Selecte	Availa	Selecte	Availa	Selecte	Availa	Selecte	Availa	Selecte
Sheopur	1	1	3	3	14	4	90	1	108	9	2	2	3	3	1	1
Guna	1	1	6	6	15	3	119	0	141	10	5	5	6	6	2	2
Mandla	1	1	9	9	30	3	297	0	337	13	2	2	5	5	1	1
Shahdol	1	1	7	7	30	3	275	0	313	11	2	2	6	6	1	1
Umariya	1	1	3	3	11	2	89	0	104	6	1	1	2	2	1	1
Shivpuri	1	1	8	8	12	7	193	0	214	16	6	6	8	8	1	1
Anuppur	1	1	7	7	16	3	187	0	211	11	3	3	4	4	1	1
Total	7	7	43	43	128	25	1250	1	1428	76	21	21	32	32	8	8

DATA COLLECTION

The data collection was **initially piloted in excel based SGT form** which keeps a provision of **score “1” for “No” and “0” for “Yes” response**. Each area mentioned in the tool was divided as per the importance of WASH system element to balance the deviation. Each section was programmed to auto calculate the percentages and finally, total percentages were calculated by adding up the total score received from the six different sections covering all system elements. Consequently, the facility could be awarded single to five stars according to the percentage gain during the assessment.

These features of the SGT were **later shifted to a Google play store app named ODK collect** for collecting the data online and real time. The important feature of the ODK collect application was to demonstrate the star ranking after collecting or gathering score in the application.

INTERVAL OF DATA COLLECTION

During the whole project period, it was decided that monitoring of the health facilities with hand holding support will be held **bimonthly for six months**. Prior to this, District coordinators (DCs) and mentors under the program were oriented in an orientation workshop at Bhopal, Madhya Pradesh to bring all of them on the same platform.

At district level, **mentors along with the health facility in-charge and facilitators from IIHMRU, Jaipur visited the facilities from time to time** and supported implementation to improve the WASH standards highlighted in the improvement plan. Around 20 percent of the health facilities visited were also **supervised by Health consultant from UNICEF- MP every month** to maintain quality of information and proper implementation. An instruction manual was also prepared on SGT to bring uniform scoring pattern across the districts.

ANALYSIS, INTERPRETATION & PRESENTATION

Analysis and interpretation were made **in excel 2007 version by IIHMRU, Jaipur** and an info linked **Dashboard** was developed on three key important visual boards as follows:

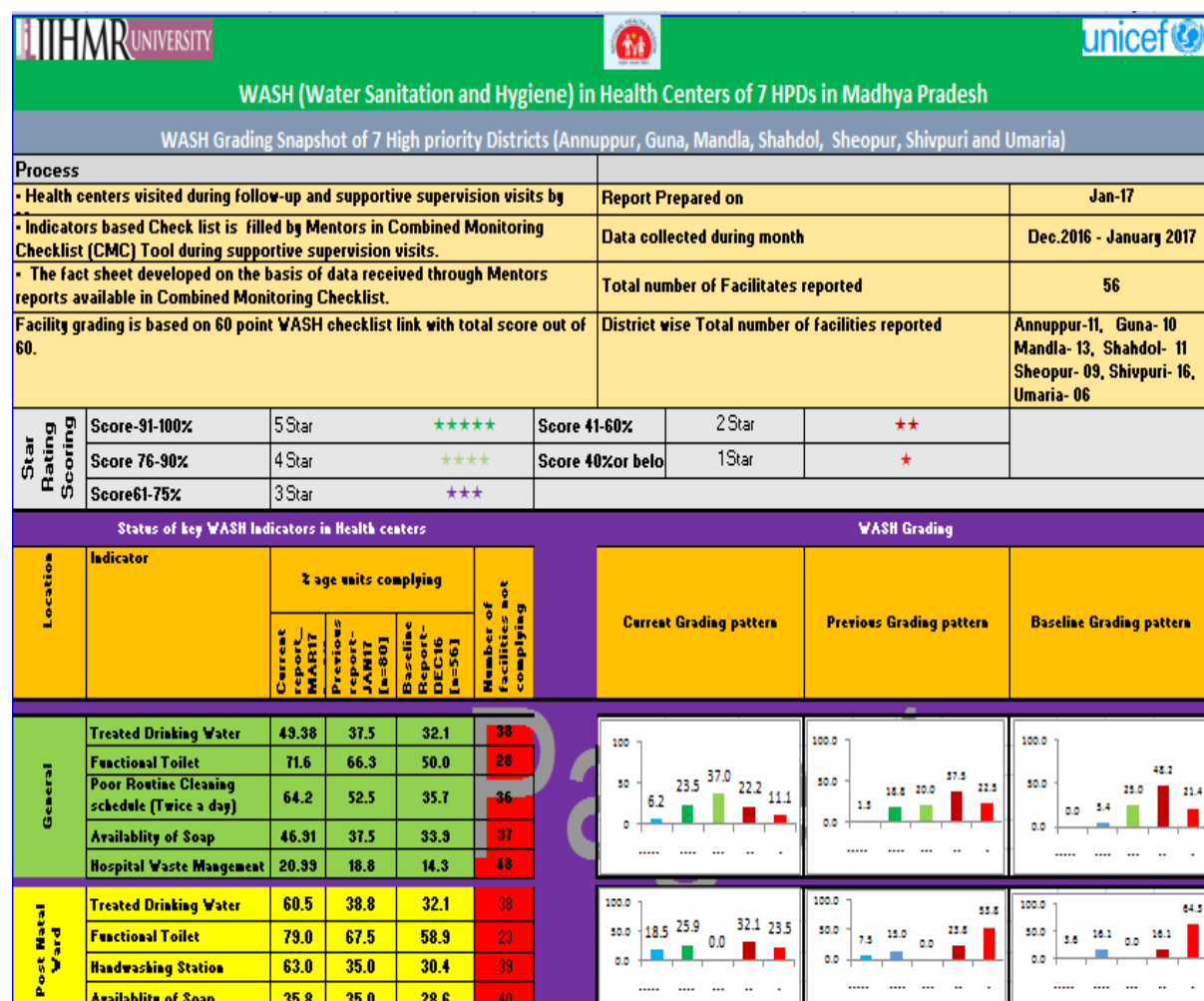
- *State and District wise star grading pattern for baseline, previous and current month,*
- *Percentages of facilities (location wise) complying the WASH standards for baseline, previous and current month; and*
- *Section wise star grading status for baseline, previous and current month.*

The purpose of collecting the three-period bi-monthly data was to obtain the pattern of conversions from lower category stars to higher category stars based on interventions. The results (percentages) were also calculated from the input sheet and graphical presentations were upgraded after every data collection period.

Bimonthly reports were submitted to understand the factors which facilitate to keep hospitals infection free with the available funds. Also, bimonthly presentations based on intervention results for each district was made by district coordinators to the stakeholders group comprising of UNICEF, IIHMRU and NHM officials. The platform was also utilized to address problems, bottlenecks and challenges faced in the field and for seeking ways to overcome the same.

Great coordination and inter dependence were observed at these meetings where every challenge was overcome by making officials accountable for trouble shooting. Escalation levels of trouble shooting were also defined and followed.

Dashboard highlighting trends in the six months



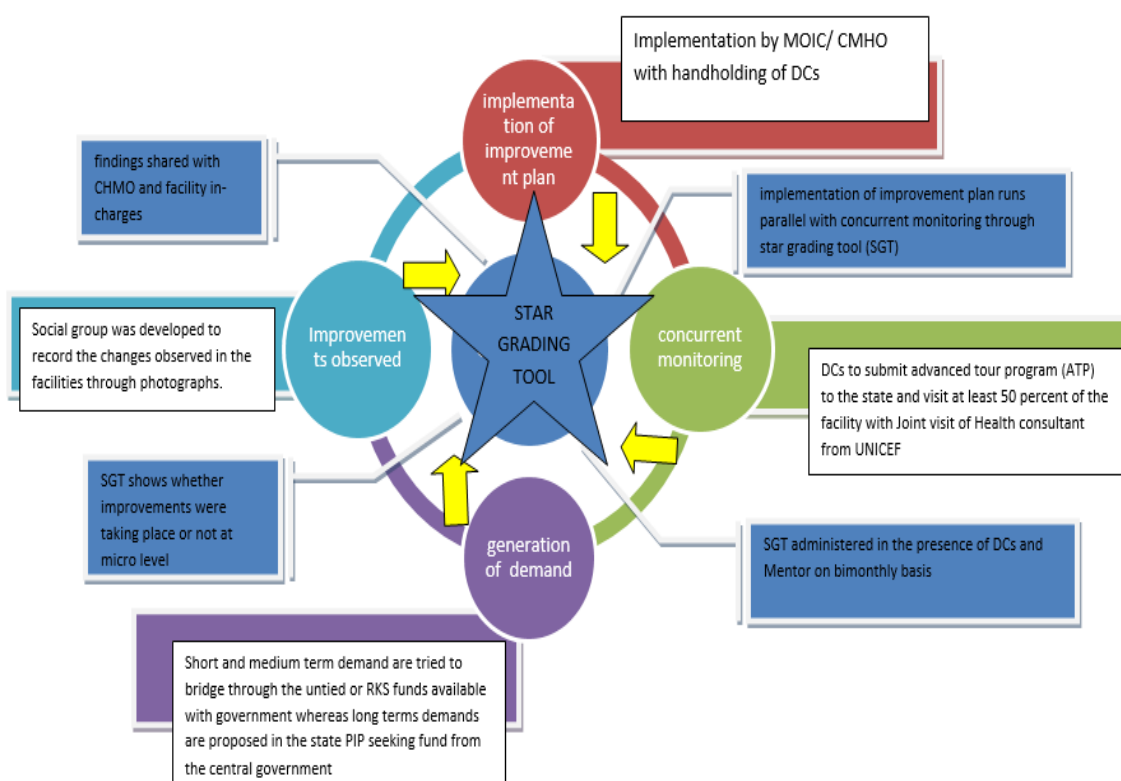
Follow-up and monitoring process at the facility level

It is important to note that the real **implementation of improvement plan runs parallel with concurrent monitoring through star grading tool (SGT)**. On one side the improvement gives ideas to generate demand, whereas SGT shows whether improvements were taking place or not. The demands are categorized into short, medium-and long-term goals. Short- and medium-term goals are bridged through the untied or Rogi Kalyan Samiti funds available with government whereas long terms demands are proposed in the state PIP seeking fund from the central government.

All the DCs were required to submit advanced tour program (ATP) to the state and visit at least 50 percent of the facility jointly with Health consultant from UNICEF. Additionally, state level project team also moved with them to ensure the correct implementation of the project. Social group was developed to record the changes observed in the facilities through photographs.

The SGT was administered in the presence of DCs and Mentors on bimonthly basis and findings were briefed to the CMHO and facility in-charges. Every month, under the chairmanship of WASH specialist from UNICEF along with other officials, the district wise progress was reviewed, and necessary instructions given for further efforts. NHM officials added important notes to bridge the gaps in these meetings.

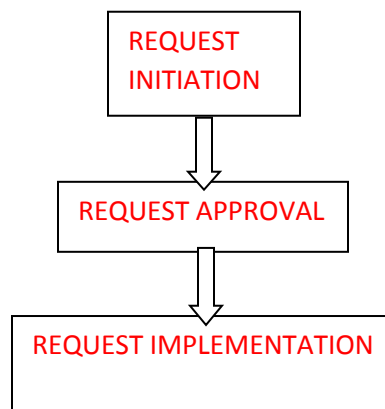
Follow up and Monitoring Process



EXCEPTIONS MANAGEMENT PROCESS

To address exceptions and manage changes on ground based on various parameters like language, legal, cultural and consumer related, following exception management process should be used:

- UNICEF WASH Officials in consultation with IIHMRU will initiate the request for process change.
- NHM MP and UNICEF MP Officials will approve the request.
- District level Officials both administrative and health will implement the request after approval.



Exceptions change request would include:

- Details about the requester
- Reasons for the exception
- Where the exception applies?
- Funding implications
- Implementation requirements

DECISION MATRIX

When problems arise, there must be an established chain of command that approves, fixes, oversees critical issues, and reviews proposed changes or updates. A great tool that helps to easily show process, roles and responsibilities is a decision matrix, as shown below that quickly outlines the roles involved in any given process: who makes decisions, who must review or be consulted about decisions, who must ensure overall usage of and compliance with the process, who implements the process, and who retains overall responsibility for the process.

DECISION MATRIX

<u>DECISION TYPES</u> A=APPROVER E=ENDORSER R=REVIEWER C=CONSULTANT	PROJECT LEADER (UNICEF)	EXECUTIVE (CMHO)	BUSINESS UNIT LEADER (IIHMR)	COUNTRY LEADER (NHM)	PROJECT TEAM LEADER (DISTRICT COLLECTOR)
PROCESS DESIGN	C	R	A	C	C
CONTROL POINTS	C	R	A	C	C
TOOL CHANGES IN SUPPORT OF THE PROCESS	A	E	E	C	C
TOOL CHANGES TO ALTER THE PROCESS	C	E	A	C	C
CHANGES IN ROLE DEFINITION	C	R	A	C	C
TOOL SELECTION	C	A	E	C	C

LEAVERAGING EFFECTS

One of the strategies was to build the capacity of the state and district level officials on WASH compliances in the health facilities that resulted in a well sensitised team of medical officers taking interest to upgrade their health facilities with the available resources to make the ambience in favour of the patient. In this context, the short term and medium-term problems related to WASH compliances were solved through Rogi Kalyan Samiti (RKS) and untied fund. However, long term goals were proposed in the district PIP and submitted to the state and centre for approval. It is worthwhile to notice here that, prior to intervention, nobody took interest in the subject and the issues remained with the facilities. The empowered actions through knowledge made them sensitised and brought significant improvements on WASH compliances due to investments from the existing resources. No extra financial support was taken from outside and all together, Rupees 50,83,150 were invested to upgrade 81 health facilities from single star to higher star grading. Table below reflects the contribution of fund in different districts during the intervention phase.

Amount Leveraged by district for meeting WASH Compliances

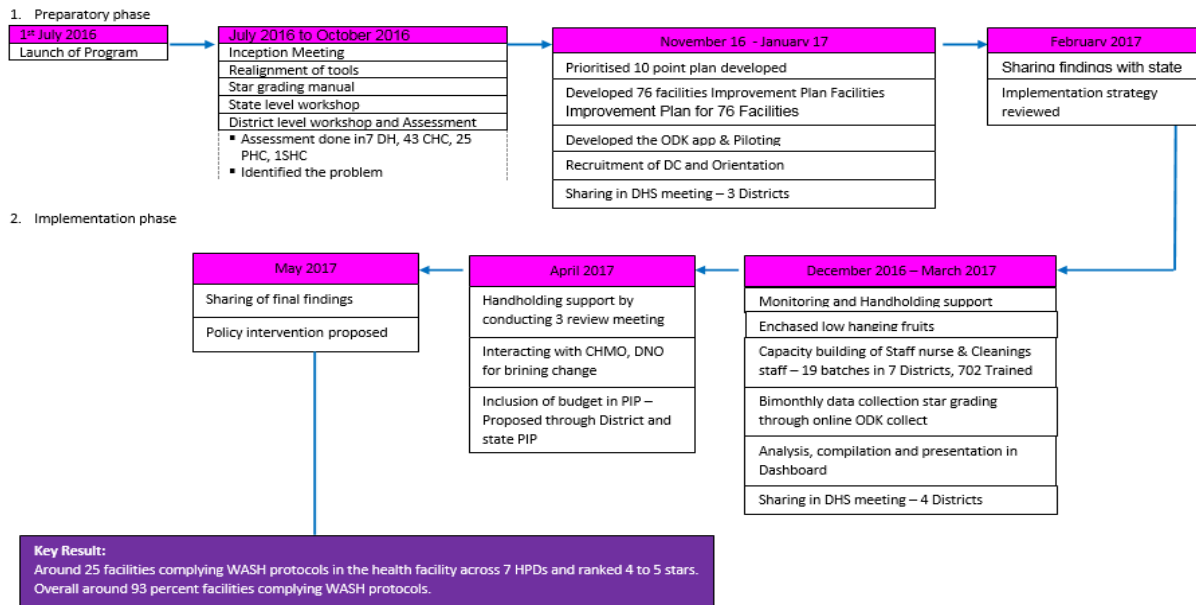
Sr.no	Name of the Districts	No of facilities	Leverage amount
1	Shahdol	11	Rs.6,30,400.00
2	Shivpuri	16	Rs.2,65,400.00
3	Guna	10	Rs. 6,28,630.00
4	Mandla	13	Rs.7,05,050.00
5	Sheopur	14	Rs.14,76,700.00
6	Anuppur	11	Rs.11,00,670.00
7	Umaria	6	Rs.2,76,300.00
Grand Total		81	Rs. 50,83,150.00

Support Provided by the State Program Team**Support provided by the State Program team**

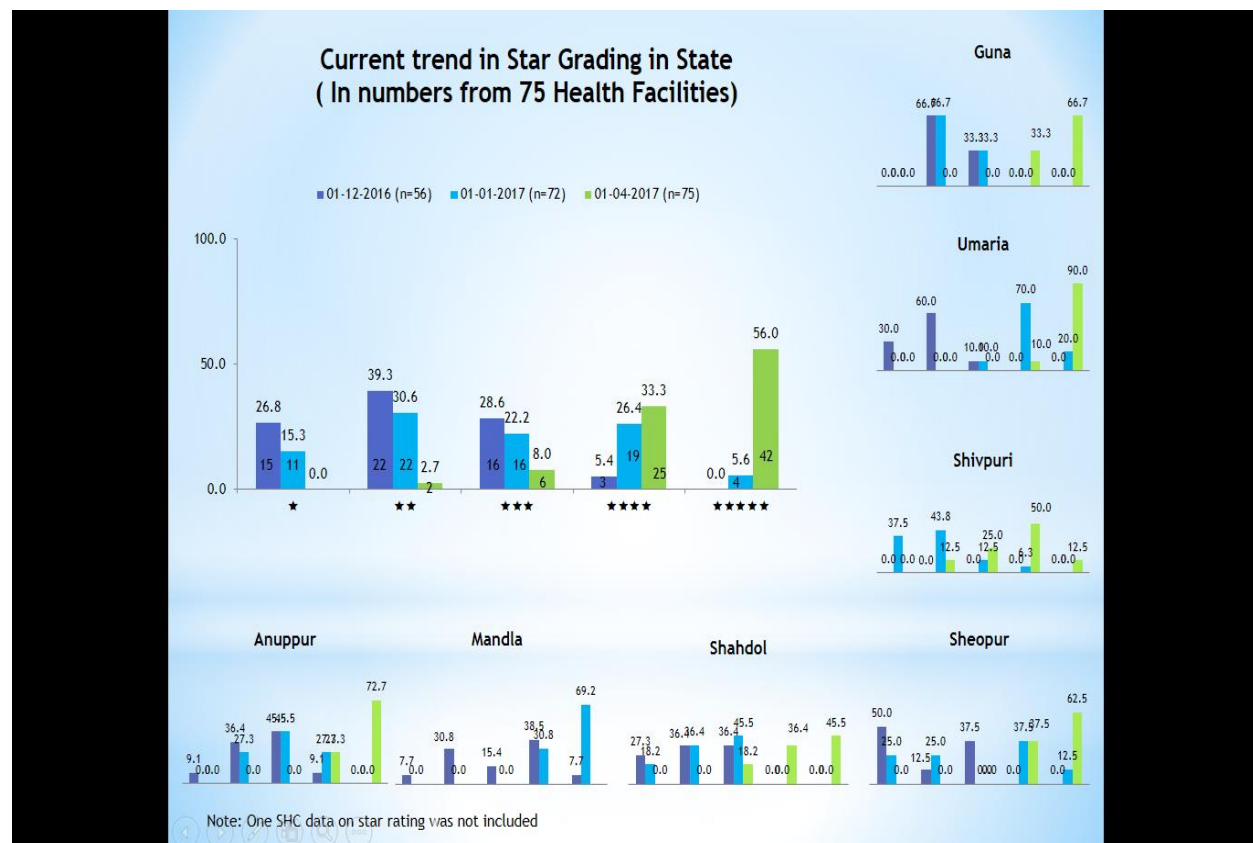
Domain	Activities	Outcome
Demonstrative	One day State level workshop Sharing of Learning experiences	Experimental learning Demand generation at state level
Policy	Star grading tool manual	Sustainable monitoring
Institutional	District level workshop MENTOR formation	Capacity Building Created first level guide to roll on the project
Implementation	Assessment in facilities and developed improvement plan Continuously engaged DC to engage the facility in-charge and MENTOR Consultation in DHS meeting at district level Periodic visit to the facility by District coordinators and specialist <u>Utilised untied and RKS fund to renovate</u>	Reinforces the messages Builds confidence among District level officials & Facility in-charge

KEY RESULT AREAS

Key results are well depicted in the form of SGT gradings achieved by maximum facilities.



Star Grading Trends



INTEGRATION IN KEY FLAGSHIP PROGRAMS

The WASH interventions should be integrated as an essential element in all the national and state level health programs as it is an economically viable option bearing its importance from the famous adage “Prevention is better than cure”.

WASH interventions in the health facilities were prepared by reviewing **three key guidelines namely Kayakalp, Swachha Bharat Mission and Indian Public Health Standards.**

Integration of WASH interventions with continuum of care

WASH interventions along the Continuum of Care

Continuum of Care	Wash Interventions	MNCH Impact
Adolescents and Pre-Pregnancy	▪ Menstrual hygiene management³ ▪ Decreased distance to sanitation and safe water source²⁹	▪ Improved self-esteem, better school attendance and potential decrease in infections^{3,28}
Pregnancy	▪ Improved access and decreased distance to water, sanitation and safe water source²⁹	▪ Improved weight gain during pregnancy, due to fewer worm infections and decreased physical labour²⁹
Child Birth	▪ Implementation of WHO “six cleans”:³² 1. Clean hands 2. Clean perineum 3. Clean delivery surface 4. Clean cord cutting 5. Clean cord tying 6. Clean cord care	▪ Decrease in maternal morbidity and mortality from puerperal sepsis³²
Post Natal		▪ Decrease in neonatal morbidity and mortality, due to tetanus infections and sepsis³²
Infancy and Childhood	▪ Improved access to safe water, sanitation and hygiene, and decreased distance to safe water sources^{14,18} ▪ Improved access to soap and consistency of hand washing with soap^{33,34} ▪ Improved infant excreta disposal and reduction of open defecation^{14,15}	▪ Decrease in diarrhoeal disease, pneumonia and child mortality; reduction in stunting and improved weight gain and growth^{13,18} ▪ Reduction in skin infections, childhood pneumonia and diarrhoea^{33,34} ▪ Reduction in maternal and child trachoma and diarrhoea^{14,15}

REASONS FOR SUCCESS

Success achieved in the WASH interventions can be attributed to:

- **Meticulous Planning and Research**
- **Effective Resource Mobilization**
- **Efficient Teamwork**
- **Proper Implementation**
- **Monitoring and Evaluation**

IIHMRU, Jaipur along with UNICEF-MP commissioned the project named Support to National Health Mission Capacity for improvement of WASH in Health Facilities and NRC in selected districts of MP from 1st July to 31st May 2017 i.e., a period of 11 months. **District coordinators, along with Public Health Specialist, WASH specialist and Research and Documentation Specialist collaboratively implemented the defined strategy in 7 HPDs of the MP state.** As proposed, three bimonthly reports were produced in the tenure of six months of implementation phase to record the progressive trend, and, to note the learning obtained from the field.

SGT was developed for this purpose and implemented in the selected health facilities of the districts through real time based ODK collect application of mobile and health facility in-charge. For the first two months i.e., November & December 2016, data were collected successfully for the 56 numbers of facilities, followed by 81 numbers of facilities in the month of January to June 2017. As per the findings analyzed through dashboard, progressive improvements are seen in WASH compliances in selected health facilities, just after the initiation of the intervention.

BEHAVIOUR CHANGES: PROVIDERS AND RECIPIENTS

The whole intervention has led to a **positive perceptible change** in the behavior of both the providers and the recipients and is evidenced by the success achieved in terms of **increase in the star gradings** of the healthcare facilities and the feedback received from the recipients. This has resulted in **increase in the patient footfall in the health facilities** that signifies the trust reposed and better health outcomes. Earlier WASH intervention was looked upon as an external effort of a UN agency, out of the normal realms of charter of duties of the healthcare providers but now **the essence of the WASH intervention has got engraved in the very routine** of one and all. Dissemination of knowledge regarding WASH has **led to a clear understanding that such very basic steps can have wide ramifications on the health indicators** that otherwise has a very crippling effect on the health status of the society at large.

SUSTAINABILITY

Sustainability of the WASH intervention can be ensured by following measures:

- **Ensuring ownership** of WASH intervention amongst the healthcare providers and the recipients.
- **Perception management** and advocacy to ensure that these interventions are not alien to the healthcare practice but are deeply ingrained within itself.
- **Appropriation of funds** available within the system with no extra burden on the exchequer.
- Incorporation of **WASH strategy** as an integral part into various health programs.
- **Convergence** of efforts of various departments as this is not an exercise in isolation.
- **Incentivization and recognition** of high performers.

CHALLENGES

Coordination with NHM officials at State and District level – Proper coordination should be developed in consultation with NHM officials to ensure its sustainability involving other key stakeholder to have an equal level of understanding.

Accountability & lack of guidance on fund utilization – No project or program will get success until accountability is ensured. In this program, lack of accountability is seen in most of the stakeholders and medical officers in-charge. In spite of boosting up to use Rogi Kalyan Samiti (RKS) or untied fund, reluctance in their behavior was quite evident. This behavior was perhaps was due to lack of knowledge on how to use RKS and untied fund at the facility level.

Unused or Left out fund – WASH problems in the health facilities were neglected areas for the facility in-charges prior to launch of the project. After sensitization and improvement plan, all the fund was utilized for making architectural corrections and procurements. However, it was also found that in many facilities including the block level, unused funds were left behind and would get lapsed.

Ensuring motivation – Motivation for carrying out any assignment is complimentary and necessary for success. In the current project, it was seen that the project was looked as an outside intervention, not as an internal government intervention in the health facilities. Many of the facility in charges and district nodal officers did not show concern over the WASH issue since the beginning considering it as a dual burden or additional burden on their work.

Inclusion of WASH as a regular agenda in DHS meeting – One of the key strategies adopted in the project was to share the findings and seek guidance for compliances on WASH by the DHS

society. DHS society is supposed to be held under the chairmanship of District collector every month at regular intervals. During the project it was observed that DHS meetings are not held regularly thus the issues are not presented in front of the chairperson

Inclusion of WASH indicator in Health Management Information System (HMIS) –As per the current HMIS of the state government, no data pertaining to WASH are collected for the health facilities creating a void.

Improper funding for WASH compliances – Improper and delay in funding caused hindrances in the WASH compliances. Currently funds from Rogi Kalyan Samiti or United fund are being utilized for WASH with resultant resistance from facility in-charges as these are non-plan activities for them.

Need for a specific WASH policy and knowledge center – For, institutions, no specific WASH policy is available with the state, however information for the same is provided in the Kayakalp and Swachhata guidelines.

Convergence – Due to the lack of fund and proper guidance, problems continued in the health centers due to lack of convergence of public health and engineering departments.

Periodical review, monitoring and evaluation – In the absence of regular DHS meeting periodical review, monitoring and evaluation could not be done.

Scaling up strategy – Digital technology and automation are key to scale up any program effectively. Such upgradations are cost intensive.

Evidence based research– Testing the present model on WASH in health center and NRCs through evidence-based research, so that the model can be up-scaled in the country to justify the intervention.

Sustainability – Sustainability of the intervention is a real challenge due to lack of ownership by the institutions or community, lack of managerial skills and advocacy and lack of communication among the stakeholders.

RECOMMENDATIONS

WASH Policy: Specific WASH policy should be developed and integrated with other programs.

Coordination with NHM officials at State and District level – Proper coordination should be developed in consultation with NHM officials to ensure its sustainability involving other key stakeholder to have an equal level of understanding.

Fund allocation: Funds should be allocated under proper WASH category.

DHS meetings: Regular DHS meetings should be held, and WASH interventions be discussed.

Inclusion of WASH indicator in Health Management Information System (HMIS): To be able to get real time data for assessment.

Managing water resources and testing water quality: Identify a potential person for this and the staff should be trained to use water testing kits to assess bacteriological levels and record keeping. Chlorination also needs to be ensured by trained health personnel.

Appointment of Hospital Administrators or Managers: Due to heavy workloads on the doctors or medical officer in-charges, they are not able to manage the health facility in an effective manner. Appointment of Hospital Administrators or Managers will go a long way in ensuring an efficient and effective facility management sparing the doctors to do their professional jobs.

Provisioning of hand washing stations: Facilities must be equipped with functional hand washing stations with soap and water in the patient care areas, OPDs, OTs, labor room, pediatric ward, NRCs, SNCUs and toilets to encourage hand hygiene behavior among health care staff, attendants of the patient, and patient themselves. Additionally, promotional IEC materials on hand washing steps and critical times for hand washing must be displayed in all hand washing stations.

Biomedical Waste Management: Adequate and regular supply of medical waste management material, including color coded bins and polythene, sharp box, chlorinated bags etc. should be ensured along with intermediate storage room, transportation facility and its disposal system.

Hospital development committees: To ensure enough toilets in the health facility, especially in or near the labor room, NRCs, OPDs, etc. and that the toilets are functional well managed and maintained regularly.

Training of hospital staff: Effective and adequate training for all health facility staff on WASH with a stress on the importance of hand washing during patient care. Currently trainings on BMW are held under NHM for medical officers only, it is suggested that training program for paramedical staff, staff nurse, pharmacist and cleaning staff must be organized separately. In this regard a training module should be developed under the project. There should be an integrated feedback and monitoring system to gauge the efficacy of the training.

Convergence: Ensuring convergence of all related departments like the Public Health Engineering and the health department as this is not an exercise in isolation.

Community involvement: Community involvement should be encouraged, roles and responsibility of the village health sanitation and nutrition committees (VHSNC) must be reframed.

Waste Disposal: Establish appropriate guidelines and waste management protocols to ensure better sanitation and hygiene measures at the facility level. Facility wise plans must be prepared to improve solid and liquid waste management. The segregation, storage and final disposal of bio-medical waste requires attention to control the bacteriological contamination and spread of infections.

SUCCESS STORIES

Champions at District level – Case Studies

Success is determined by determination, willingness and sharing responsibility with accountability. **CHC Parasi and CHC Karpa of Anuppur Block of Madhya Pradesh**, have set an example for other facilities to emulate by upgrading its score from two to five stars grading during interventions, that too with sustainability.

The Block Medical Officer (BMO) along with Medical officer (MO) of the facility, who got sensitized in district level workshop on WASH assessment, improvement planning and compliances decided to change the priority about WASH in their facility. The decision of shifting priority from health services and infrastructure development to WASH compliances was not easy at all. Along with sensitization, team work and rigorous technical assistance with handholding support about WASH compliances ensured the change. A follow up appreciation has also ensured to keep the enthusiasm of the facility members who played vital role. These changes were not due to any political commitment, but proper sensitization, timely guidance and smooth funds flow that resulted in changes like provision of treated drinking water in every section of facility, ensuring proper bio-medical management, construction of sharp infectious pit and intermediate storage room and concretization of back view of the facility.

The vision of BMO and his team was very clear and changed behavioral perspective of the staff working at the health facility. The continuous meeting, handholding, training and positive coordination with each other brought good practices among the health care service provider and brought patient satisfaction to access government health facilities. This was ensured by continuous practice of six steps of hand washing, availability of soap and establishment of hand washing stations with practicing infection free protocols in every segment of the health facility.

Coordination with District Administration and Chief Health & Medical Officer was pivotal in bringing support and ensured prioritization to change WASH compliances. Anuppur district sets an example in this regard due to involvement of one and all.

Dr. R K Verma, BMO, Anuppur, is instrumental in bringing change in the health facility from two to five stars by establishing sensitization about WASH compliances, establishing leadership by team work, showing commitment for change, and by providing guidance to its team members along with technical agency's input, who implemented the interventions. He shared in one of the conversations **“we had funds earlier too but triggering through WASH lens makes the difference in prioritization”**. His extraordinary leadership with self-commitment and personal interest helped to undertake the process of assessment, planning and ensured implementation on time. Coordination with higher cadre of officers and timely release of funds helped to make the facility infection free. During intervention, he also coordinated continuously with technical agency team members to bridge gaps. Technical intervention, transparency in system and motivation brought the desired change.

Dr. Marwai, Medical Officer from CHC Parasi an important team member supported the whole “change movement”. He continuously provided solutions to problems and supported the decision of BMO along with providing handholding support and organizing monitoring to his team. At district level obtaining logistic support for WASH compliances was difficult at a point of time. But, Dr. Marwai’s networking with other key stakeholders made the process easy and facilitated targeted change in OPD, labor room, hand washing station, toilet cleaning and ensured infection free protocol at his facility. His active participation, supportive supervision to team, and innovative strategies to address problem was par excellence and catalyzed the movement in the district and health facilities.

CONCLUSION

The practicum experience at IIHMR University allowed me to employ the skills learnt in the MPH program. I tried to contribute positively towards the mission of the IIHMR University. I was able to put in practice the skills to effectively highlight the WASH in Health initiative and was able to communicate the management steps involved in the project through this process document. **The process document attempted to capture step by step processes of WASH intervention, assessment, planning and handholding initiatives in the healthcare facilities** of seven high priority districts of Madhya Pradesh viz Shahdol, Shivpuri, Sheopur, Guna, Umaria, Mandla and Anuppur. It is expected that this document will serve as a roadmap for sustainability, replicability and scalability of WASH initiatives in other districts of Madhya Pradesh and rest of India.