Assessment of WASH Compliance (Water & Sanitation Hygiene) in Labor Room and Maternity Operation Theatre in the State of Gujarat under Project LaQshya (Labor Room Quality Improvement Initiative)

By

Princey Verma

Dissertation submitted for the partial fulfillment of the
MBA Hospital and Health Management

Academic year, 2016-2018

The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Sanganer, Airport
Jaipur 302029, Rajasthan
Ph: 0141 3924700, Fax: 3924738
Website: **www.iihmr.edu.in**

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Website: **www.iihmr.edu.in**

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr. Princey Verma** student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **National Health Mission, Gujarat** from 5th February to 5th May, 2018.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.
The Internship is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.

(Col.) Dr. Ashok Kaushik
Dean, Academics and Student Affairs
The IIHMR University, Jaipur

for **Dr. Arindam Das**
Professor
The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Near Sanganer Airport, Jaipur- 302029, Rajasthan, India.
Ph.: 0141- 3924700, 2791431- 32, Fax: 0141 3924738, E-mail: iihmr@iihmr.edu.in, Web.: www.iihmr.edu.in

सत्यमेव जयते

Dr J L Meena
State Quality Assurance Medical Officer

No.FW/17-18/SQIP/LaQshya/MAY.2018
Commissionerate of Health, Medical Services and Medical Education (HS),
Block No:5, Dr. Jivraj Mehta Bhavan,
Gandhinagar GUJARAT, INDIA – 382010.
079- 23257356 079 – 23253304
E-mail : sqipgujarat@gmail.com
Date:- 10.05.2018

Certificate of completion of Internship / Dissertation

The certificate is awarded to

Dr. Princey Verma

In recognition of having successfully completed her Internship in the department of

State Quality Assurance Cell

has successfully completed her Project on

Assessment of WASH Compliance (Water & Sanitation Hygiene) in Labor Room and Maternity Operation Theatre in the State of Gujarat under Project LaQshya (Labor Room Quality Improvement Initiative)

5th February to 5th May, 2018

National Health Mission, Gujarat

She comes across as a committed, sincere & diligent person who has a strong drive and zeal for learning

I wish her all the best for future endeavors

State Quality Assurance Medical Officer
Health Medical Service and Medical Education (Health) Gandhinagar

Dr. J.L. Meena
State Quality Assurance
Medical Officer
Gandhinagar

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that all the ethical issues have been considered while collecting data for my dissertation titled **Assessment of WASH Compliance (Water & Sanitation Hygiene) in Labor Room and Maternity Operation Theatre in the State of Gujarat under Project LaQshya (Labor Room Quality Improvement Initiative).**

Princey Verma

Signature

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The opportunity of doing my dissertation Report with **National Health Mission, Gujarat** was a great chance for learning and professional development. Therefore, I consider myself as a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me though this Dissertation period.

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I perceive this opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in the best possible way, and I will continue to work on their improvement, in order to attain desired career objectives.

My sincere gratitude to my respected mentor **Dr. Arindam Das** for his constant support and encouragement throughout my academic period and dissertation. Without his guidance, this work would not have materialized.

Sincerely

Dr. Princey Verma

MBA HM-21

The IIHMR University, Jaipur

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Assessment of WASH Compliance (Water & Sanitation Hygiene) in Labor Room and Maternity Operation Theatre in the State of Gujarat under Project LaQshya (Labor Room Quality Improvement Initiative)** and submitted by **Dr. PrinceyVerma**, Enrollment No. **IIHMR-U/01/2016-18/0470**under the supervision of **Dr. Arindam Das** for award of MBA in Hospital and Health in Health and Hospitals of the University carried out during the period from 5th February to 5th May, 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.

Princey Verma

Signature

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List of Abbreviations: -

NHM	National Health Mission
NUHM	National Urban Health Mission
RCH	Reproductive and Child Health
IMR	Infant Mortality Rate
MMR	Maternal Mortality Ratio
TFR	Total Fertility Rate
MCH	Medical College and Hospital
DH	District Hospital
SDH	Sub-District Hospital
CHC	Community Health Centre
PHC	Primary Health Centre
SC	Sub Centre
SRS	Sample Registration System
ANM	Auxiliary Nurse Midwife
LHV	Lady Health Visitor
SPMU	State Programme Management Unit
SHS	State Health Society
SHM	State Health Mission
FW	Family Welfare
AIDS	Acquired Immunodeficiency Syndrome
MS	Medical Services
ME	Medical Education
ISM	Industrial, Scientific and Medical

CMSU	Centre for medical Services Unit
MD	Mission Director
EC	Executive Committee
SIHFW	State Institute of Health & Family Welfare
NCD	Non Communicable Disease
IPHS	Indian Public Health Standards
CQAC	Centre Quality Assurance Committee
SQAC	State Quality Assurance Committee
DQAC	District Quality Assurance Committee
NABH	National Accreditation Board for Hospitals
NQAS	National Quality Assurance Standards
WASH	Water And Sanitation Hygiene
LaQshya	Labor Room Quality Improvement Initiative
APH	Antepartum Hemorrhage
PPH	Postpartum Hemorrhage
RMC	Respectful Maternity Care
LR	Labor Room
OT	Operation Theatre
UNICEF	United Nations Children's Fund
SQAMO	State Quality Assurance Medical Officer
DQAMO	District Quality Assurance Medical Officer
DPC	District Programme Coordinator
BMW	Biomedical Waste
IEC	Information Education Communication
PO	Project Officer
MO	Medical Officer
ARC	ASHA Resource Centre

1. Executive Summary

Background

Unimproved hygiene, inadequate sanitation and insufficient& unsafe drinking water account for about 7% of the total disease burden and 19% of child mortality worldwide. Globally, around 2.4 million deaths (4.2% of all the deaths) could be prevented annually if everyone practiced appropriate hygiene and had good, reliable sanitation and drinking water.

Objectives

To assess the provision of WASH services and practices in labor room sin the state of Gujarat. To identify WASH related gaps and key interventions to fill up the gaps identified at the healthcare facilities in the State of Gujarat.

Methodology

This study design will be appropriate as this is an observational study that analyses data collected from a population, or a representative subset, at a specific point in time- that is cross sectional data. Government of India has recently launched LaQshya project in the country. In Gujarat, it is in the preparatory phase only where gap assessments of all the labor rooms are conducted hence the size of available data is limited therefore the sample size is approximately equal to entire data available.

The main source of information for this study is based on the secondary data collection from the labor room assessment by the District Quality Assurance Medical Officer of all the districts.The data is taken from various healthcare facilities of State of Gujarat i.e. Medical College & Hospitals, All; District Hospitals, All; Sub- District hospitals, All; Community Health centers, all; Primary Health Centers, All.

As per district reporting to the state, deliveries are being conducted in approximately 1609 facilities. However, the assessment revealed that in reality deliveries were being carried out in less number of facilities. The reasons are various, the main one being shortage of resource and trained HR to conduct deliveries. The baseline assessment was conducted in 1563 delivery points covering all 33 districts of Gujarat and included 15 Medical College and Hospitals (MCH), 22 District Hospitals (DH), 36 Sub-divisional Hospitals (SDH), 366 Community Health Centers (CHC) and 1473 Primary Health Centers (PHC).

Observations

INDICATOR	N (%)
Assigning responsibility amongst staff for Monitoring and supervision	• LR- 93.10% • OT- 81%
Water availability	• LR- 95.34% • OT- 92.84%
Functional toilets	• LR- 84.4%

Handwashing station	• LR- 90.55% • OT- 88.98%
Biomedical Waste management	• LR- 96.77% • OT- 93.66%
Dirty Utility area	• LR-88% • OT- 89.53%
IEC of 6 steps of Handwashing	• LR- 91.42% • OT- 90.63%
Three bucket system	• LR- 78.18% • OT- 83.74%
Elbow operated Tap	• LR- 60.41% • OT- 79.61%
Availability of trained staff	• LR- 90.18% • OT- 94.19%

Table 1.1. Table showing availability of the indicated facilities in the Labor Room and Maternity OT

Conclusion

- Water supply was available in almost all the health centers while regular maintenance of water purifier and water tank need to be viewed and monitored.
- Lack of formal supervision system for the WASH was observed.
- A very few health centers have insufficient number of bags and bins for BMW segregation and disposal due to lack of clarity about local purchasing power and irregular distribution from the stores.
- Good number of the health centers were having functional toilets for Labor Room while maintenance needs to be regularly monitored.
- A quite large number of Labor Rooms and OTs don't have elbow operated taps installed at the hand washing station.
- Most of the health centers have IEC material displayed for handwashing steps above the handwashing station in Labor Rooms and OT but IEC needs to be cleaned properly and rugged IEC needs to replaced as they can be the source of infection in LR and OT.
- Almost $1/5^{th}$ of the facilities don't practice three bucket system or there was unavailability of the same.

Key area of Interventions

- Support and motivation amongst the staff
- Understanding of importance of hygiene amongst the staff
- Rain Waster Harvesting system to be installed to tackle Seasonal water supply problem
- Cleaning schedule to be made available
- Regular purchase of soap or dispensers to be done
- Availability of three bucket system in the facility to be ensured
- Periodic training of the staff

2. DISSERTATION REPORT

Assessment of WASH Compliance (Water & Sanitation Hygiene) in Labor Room and Maternity Operation Theatre in the State of Gujarat under Project LaQshya (Labor Room Quality Improvement Initiative)

Project Guide-

Dr. J.L. Meena, State Quality Assurance Medical Officer

State Quality Assurance Cell, National Health Mission, Gujarat

3.1 BACKGROUND

Introduction to LaQshya

After launch of the National Health Mission (NHM), there has been substantial increase in the number of institutional deliveries. However, this increase in the numbers has not resulted into commensurate improvements in the key maternal and new-born health indicators. It is estimated that approximately 46% maternal deaths, over 40% stillbirths and 40% newborn deaths take place on the day of the delivery.

For improving the quality of care at Public Health Facilities, Quality Assurance Standards for

District Hospitals, Community Health Centers, Primary Health Centre and Urban-Primary Health Centers have been drafted, and their implementation has been operationalized through the National Quality Assurance Programme.

LaQshya Guidelines are intended for achieving improvements in the intra-partum and immediate post-partum care, which are take place in the labor room and maternity operation theatre.

Implementation of these guidelines is expected to result into delivery of respectful and zero-defect care to all pregnant women and newborns, and such improvement is incentivized.

Reduce preventable maternal and newborn mortality, morbidity and stillbirths associated with the care around delivery in Labor room and Maternity OT and ensure respectful maternity care.

Objectives

To reduce maternal and newborn mortality & morbidity due to APH, PPH, retained placenta, preterm, preeclampsia & eclampsia, obstructed labor, puerperal sepsis, newborn asphyxia, and sepsis, etc.

To improve Quality of care during the delivery and immediate post-partum care, stabilization of complications and ensure timely referrals, and enable an effective two-way follow-up system.

To enhance satisfaction of beneficiaries visiting the health facilities and provide Respectful Maternity Care (RMC) to all pregnant women attending the public health facility.

2.1.1 Institutional Arrangement under NQAP & LaQshya

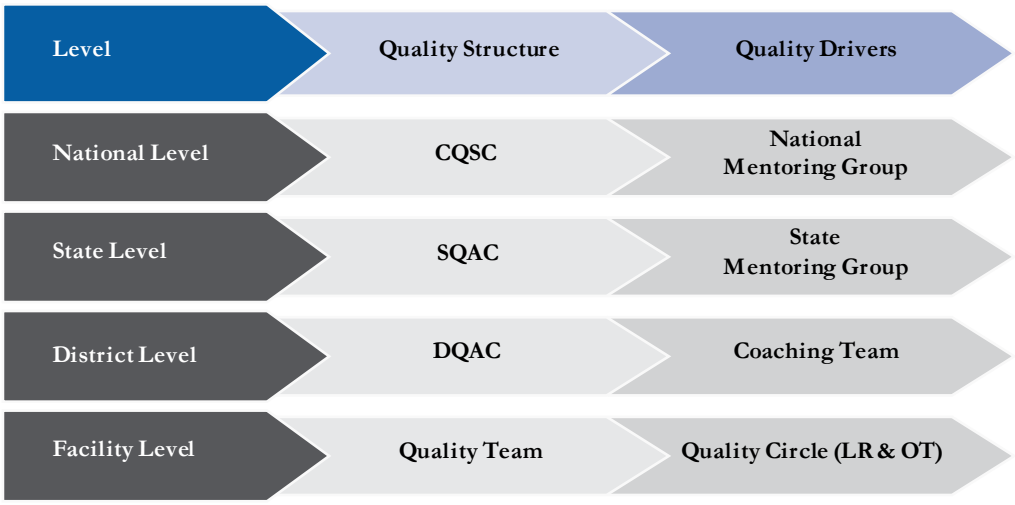


Figure 2.1. Figure showing the Institutional arrangement under National Quality Assurance Program and LaQshya

2.1.2 Summary of Activities

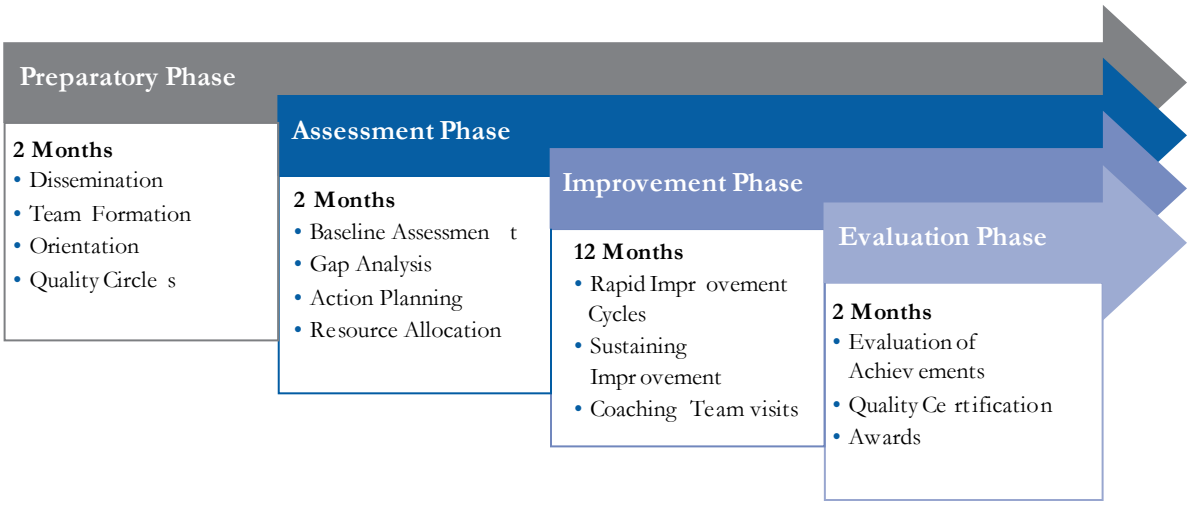


Figure 2.2. Figure showing summary of activities to be undertaken LaQshya

2.2 BACKGROUND- WASH Services

WASH is the collective term for Water, Sanitation and Hygiene. Due to their interdependent nature, these three core issues are grouped together to represent a growing sector. While each a separate field of work, each is dependent on the presence of the other. For example, without toilets, water sources become contaminated; without clean water, basic hygiene practices are not possible.

2.2.1 Water

UNICEF's work in water focuses on the ability for children to access safe water, the quality of the water they can access and the journey they must take to collect it. UNICEF is at the forefront of exploring innovative ways to access water, and building climate resistant infrastructure.

2.2.2 Sanitation

For sanitation, UNICEF works to ensure access and use of basic toilets and ways to separate human waste from contact with people. One important area of work for sanitation is to end the practice of "open defecation," and facilitate community-led initiatives to build, maintain and use basic toilets.

2.2.3 Hygiene

UNICEF's work in hygiene is aimed at nurturing good hygiene practices, especially handwashing with soap. Although it sounds simple, this act is essential to prevent disease and the health of children.

All three areas in WASH support and strengthen one another. If one is missing, the others cannot progress

2.2.4 WASH and Health

Diseases related to water and sanitation are one of the major causes of death in children under five. Without access to clean water and basic toilets, and without good hygiene practices, a child's survival, growth and development are at risk.

Over 800 children under age five die **every day** from preventable diarrhoea-related diseases caused by lack of access to water, sanitation and hygiene. Undernutrition is associated with repeated diarrhoea or intestinal worm infections as a direct result of inadequate WASH conditions. A vicious cycle exists between diarrhoea and undernutrition, especially for children.

Children with diarrhoea eat less and are less able to absorb nutrients from their food; in turn, malnourishment makes them more susceptible to diarrhoea when exposed to human waste. Poor sanitation and hygiene have also been linked to stunting, which causes irreversible physical and cognitive damage. In 2014, 159 million children under five were stunted: **that's 1 in 4 children worldwide.**

Millions of other children are made sick, weakened or are disabled by other water- and sanitation-related diseases and infections including cholera, malaria, trachoma, schistosomiasis, worm infestations and guinea worm disease.

2.3 LITERATURE REVIEW

Global access to safe water, adequate sanitation and proper hygiene education can reduce illness and death from disease leading to improved health, poverty reduction and socio-economic development. Unimproved hygiene, inadequate sanitation and insufficient& unsafe drinking water account for about 7% of the total disease burden and 19% of child mortality worldwide. Globally, around 2.4 million deaths (4.2% of all the deaths) could be prevented annually if everyone practiced appropriate hygiene and had good, reliable sanitation and drinking water. (**Cairncross, S., Bartram, J., Cumming, O., & Brocklehurst, C. (2010). Hygiene, Sanitation and Water: What Needs to be Done? *Plos Med*, 7 (11))**

Globally, 8% of the maternal deaths and in developing countries 10-15% maternal deaths are due to infections that can be directly linked to unhygienic conditions during labor and birth, at home or in facilities, and to poor hygiene practices in the six weeks after the birth. **(Goodburn, E., & Campbell, O. (2001). Reducing maternal mortality in the developing world: Sector wide approaches may be the key. *BMJ*, 322,917-920), (Gravett, C., Gravett, M., Martin, E, et al. (2012). Serious and life threatening pregnancy-related infections: Opportunities to reduce the global burden, *Plos Med*, 9.), (Simavi. (2012). Getting it right: Improving maternal health through water sanitation and hygiene).**

Poor hygiene during and after umbilical cord cutting, such as unclean hands or use of dirty cloth, can produce significantly more cord site infections in newborns. **(WHO.int. (n.d.). Retrieved March 18,2015, from http://www.who.int/pmnch/knowledge/publications/summaries/ks30.pdf)**

Poor WASH provision in labor rooms increases the risk of healthcare acquired infections, and undermines the global and national efforts to improve maternal, neonatal and child health. Healthcare- associated infections cause up to 56% of all the neonatal deaths among hospital-born babies in developing countries.

Around 11% of maternal deaths and 12% of under 5 deaths are due to maternal and neonatal infections respectively. Basic and simple hygiene practices during antenatal care, labor and birth, such as hand-washing by the birth attendant and clean birthing surfaces, can reduce the risk of puerperal as well as neonatal sepsis and death of infants and mothers by up to 25%. **(Improving WASH in healthcare facilities: The Gujarat Experience, Document by UNICEF published under Department of Health and Family Welfare, Government of Gujarat, 2014)**

WASH IMPACT:

(WHO.int.(n.d.).RetrievedMarch18,2015,from http://www.who.int/pmnch/knowledge/publications/summaries/ks30.pdf)

Stage	WASH Interventions	Impact
Child Birth	Implementation of "seven cleans" 1. Clean hands 2. Clean water	Decrease in maternal morbidity and mortality from puerperal sepsis

Post- Natal	3. Clean delivery surface 4. Clean cord cutting 5. Clean cord tying 6. Clean cord care 7. Clean towel	Decrease in neonatal morbidity and mortality, due to tetanus infections and sepsis

Table 2.1. Table showing impact of WASH during child birth and post natal in Labor Room and Maternity OT

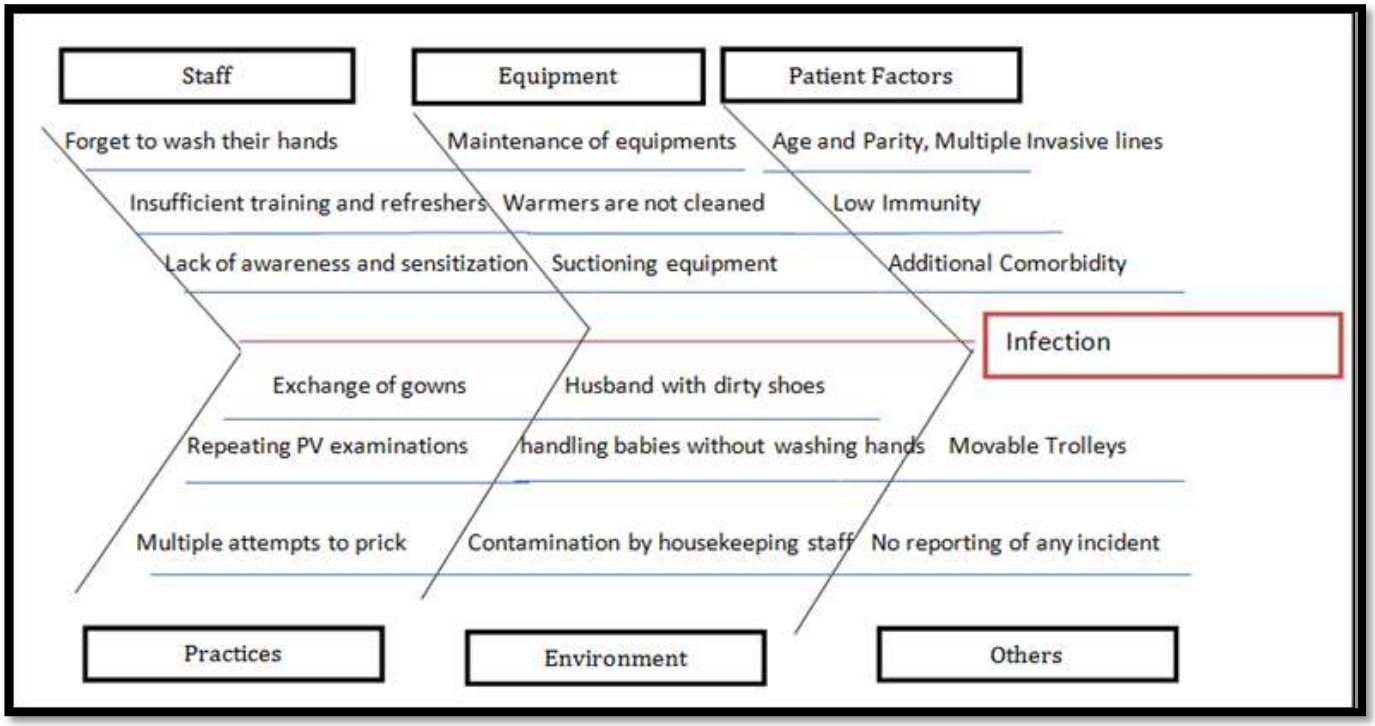


Figure 2.3. Fish Bone Diagram Infection control in labor and delivery room.

2.4 RESEARCH METHODOLOGY

2.4.1 Research Question: What is the WASH compliance in the Labor Rooms and Maternity OT in the healthcare facilities in state of Gujarat?

2.4.2 Rationale for the study: Eighteen percent of the infant deaths and ten to twelve percent of the maternal deaths in the State of Gujarat are due to sepsis in the Labor Room and Maternity OT and poor hygienic condition during labor and chord cutting. Also, if sanitation and care with dignity is not provided in the Labor Rooms, the LaQshya mandate will not be fulfilled. So, there is a need to assess the status of conditions related to WASH in LR and M-OT.

2.4.3 Objectives of the study:

The main objectives of the study are: -

- To assess the provision of WASH services and practices in labor room sin the state of Gujarat.
- To identify WASH related gaps and key interventions to fill up the gaps identified at the healthcare facilities.

2.4.4 Study design:

Cross Sectional Study and Observational study

This study design will be appropriate as this is an observational study that analyses data collected from a population, or a representative subset, at a specific point in time- that is cross sectional data.

The study will be done on the entire data; as a result, the probability of accuracy of study will be more.

Reasons for taking entire data:

Government of India has recently launched LaQshya project in the country. In Gujarat, it is in the preparatory phase only where gap assessments of all the labor rooms are conducted hence the size of available data is limited therefore the sample size is approximately equal to entire data available.

2.4.5 Data collection:

The main source of information for this study is based on the secondary data collection from the labor room assessment by the District Quality Assurance Medical Officer of all the districts.

The data is taken from various healthcare facilities of State of Gujarat i.e. Medical College & Hospitals, All; District Hospitals, All; Sub- District hospitals, All; Community Health centers, all; Primary Health Centers, All.

2.4.7 Area and Sample

As per district reporting to the state, deliveries are being conducted in approximately 1609 facilities. However, the assessment revealed that in reality deliveries were being carried out in less number of facilities. The reasons are various, the main one being shortage of resource and trained HR to conduct deliveries. The baseline assessment was conducted in 1563 delivery points covering all 33 districts of Gujarat and included 15 Medical College and Hospitals (MCH), 22 District Hospitals (DH), 36 Sub-divisional Hospitals (SDH), 366 Community Health Centers (CHC) and 1473 Primary Health Centers (PHC).

The district –wise distribution of the labor rooms and Maternity operation theatres assessed is listed in the table below:-

LABOR ROOM

S.No.	District	Total (Facility)	Functional	Non- Functional
1	AHMEDABAD	49	45	4
2	AMRELI	55	49	6
3	ANAND	61	60	1
4	ARVALLI	39	39	0
5	BANASKANTHA	120	120	0
6	BHARUCH	45	45	0
7	BHAVNAGAR	52	52	0
8	BOTAD	21	19	2
9	CHHOTA UDEPUR	45	45	0
10	DAHOD	104	93	11
11	DANG	13	13	0
12	DEVBHUMI DWARKA	17	16	1
13	GANDHINAGAR	40	38	2
14	GIR SOMNATH	32	32	0
15	JAMNAGAR	59	56	3
16	JUNAGADH	45	45	0
17	KACHCHH	65	60	5
18	KHEDA	59	59	0
19	MAHESANA	71	67	4
20	MAHISAGAR	32	32	0
21	MORBI	26	26	0
22	NARMADA	30	28	2
23	NAVSARI	49	49	0
24	PANCHMAHAL	46	46	0
25	PATAN	60	58	2
26	PORBANDAR	14	14	0
27	RAJKOT	48	47	1

28	SABARKANTHA	52	50	2
29	SURAT	69	69	0
30	SURENDRANGR	52	52	0
31	TAPI (Vyara)	34	34	0
32	VADODARA	51	51	0
33	VALSAD	54	54	0
TOTAL		1609	1563	46

Table 2.2.Table showing District wise distribution of functional and non-functional Labor Rooms

MATERNITY OPERATION THEATRE

S.No.	District	Total (Facility)	Functional	Non- Functional
1	AHMEDABAD	11	11	0
2	AMRELI	17	15	2
3	ANAND	9	8	1
4	ARVALLI	7	7	0
5	BANASKANTHA	60	46	14
6	BHARUCH	8	8	0
7	BHAVNAGAR	10	9	1
8	BOTAD	5	5	0
9	CHHOTA UDEPUR	2	2	0
10	DAHOD	7	6	1
11	DANG	3	2	1
12	DEVBHUMI DWARKA	1	1	0
13	GANDHINAGAR	7	5	2
14	GIR SOMNATH	33	32	1
15	JAMNAGAR	8	8	0
16	JUNAGADH	1	1	0
17	KACHCHH	8	6	2

18	KHEDA	20	19	1
19	MAHESANA	9	7	2
20	MAHISAGAR	2	2	0
21	MORBI	2	2	0
22	NARMADA	1	1	0
23	NAVSARI	24	22	2
24	PANCHMAHAL	8	5	3
25	PATAN	15	8	7
26	PORBANDAR	2	2	0
27	RAJKOT	7	7	0
28	SABARKANTHA	9	9	0
29	SURAT	20	16	4
30	SURENDRANGAR	13	13	0
31	TAPI (Vyara)	6	6	0
32	VADODARA	14	11	3
33	VALSAD	14	8	6
TOTAL		363	310	53

Table 2.3.Table showing District wise distribution of functional and non-functional Maternity Operation Theatres

2.4.8 Compilation of data

The raw data collected was first compiled at the facility level and then sent to DQAMO at the district who compiled it for their respective districts. Finally data compiled at the districts was sent to State level. The State Quality Assurance cell then collated the data made available from DQAMOs to generate a comprehensive state level data sheet. The initial analysis and collation of data at the state level was carried out by the State Quality Assurance Cell. Once compiled, the data sheets were verified through consultation with DQAMOs and DPCs, corrections were made where necessary. Based on the corrected data sheets, a first analysis report and district fact sheets were drafted

2.5 Findings and Observation of Labor Room and Maternity OT- State:-

2.5.1 State Profile of WASH Compliance in Labor room under LaQshya

Sr. No	Name of the Indicator	Number	Percentage
1	No. of total labor rooms in the State	1609	
2	No. of functional labor rooms	1563	97.14
3	No. of Non Functional labor rooms	46	2.85
4	No. of labor room with unavailability of assigned person for monitoring and supervision (i.e. Infection Control Nurse)	1498	93.10
5	No. of labor rooms requiring expansion	545	33.87
6	No. of labor room with availability of water supply	1534	95.34
7	No. of labor rooms with functional toilets	1358	84.40
8	No. of labor rooms with availability of functional hand washing stations	1457	90.55
9	No. of labor rooms with availability of disposal facilities of Bio Medical Waste	1557	96.77
10	No. of labor rooms with availability of dirty utility corner	1416	88
11	No. of cleaning staff	3584	
12	No. of trained persons for WASH Compliance	3232	90.18
13	No. of labor rooms with availability of display of steps of hand washing above hand washing stations	1471	91.42
14	No. of labor rooms with availability of three bucket system for cleaning	1258	78.18
15	No. of labor rooms with availability of elbow tap in hand washing station of labor room	972	60.41

Table 2.4. Table showing the state profile of WASH compliance in Labor Room under LaQshya

2.5.2 State Profile of WASH Compliance at Maternity OT under LaQshya

Sr. No	Name of the Indicator	Number	Percentage
1	No. of total maternity OT in the State	363	
2	No. of Functional Maternity OT	310	85.40
3	No. of Non Functional Maternity OT	53	14.60
4	No. of Maternity OT requiring Expansion	136	37.46
5	No.of maternity OT with availability of assigned responsibilities of monitoring and supervision	294	81
6	No. of maternity OT with availability of water facility	337	92.84
7	No.of maternity OT with availability of functional hand washing station	323	88.98
8	No.of Maternity OT with availability of disposal facilities of BMW	340	93.66
9	No.of Maternity OT with availability of Dirty utility corner	325	89.53
10	No.of cleaning staff	1050	
11	No.of trained staff for WASH Complaicne	989	94.19
12	No.of maternity OT with availability of steps of hand washing above hand washing stations	329	90.63
13	No.of Maternity OT with availability of three bucket system	304	83.74
14	No.of maternity OT with elbow tap in handwashing station	289	79.61

Table 2.5. Table showing the state profile of WASH compliance in Maternity OT under LaQshya

2.6 Findings and Observation of Labor Room and Maternity OT- District wise:-

2.6.1 Functionality of the Infrastructure (LR/M-OT):

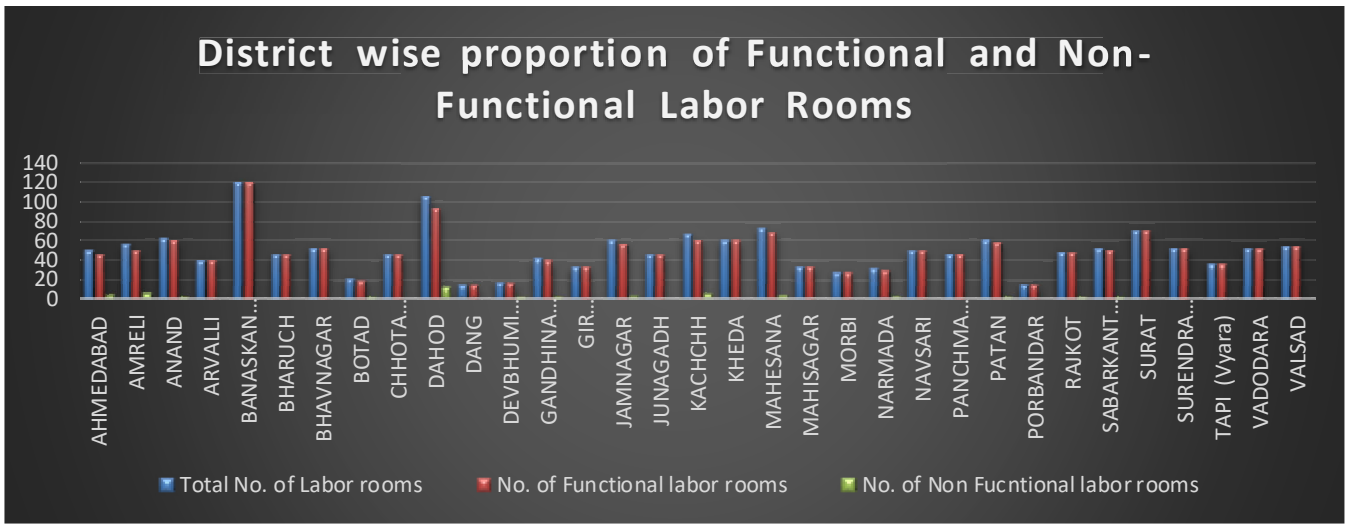
Adequate infrastructure positively affects services and outcomes in a facility. Its maintenance and use can also be a reflection of the mindset of service providers and their capability and intent in delivering quality services. There are total 1609 Labor Rooms and 363 Maternity Operation Theatres in Gujarat.

Functional Labor Room: Room retained for routine deliveries but fully equipped as a back-up OR. There are 1563 (97.14%) in the state of Gujarat.

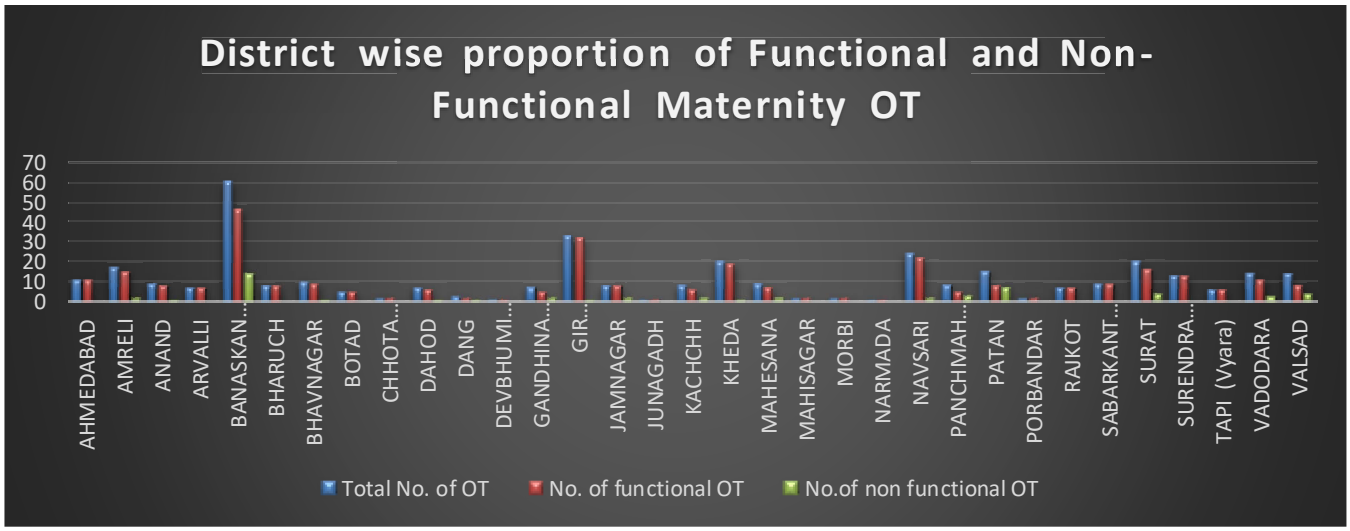
Non Functional Labor Room: Room that is not fully equipped for routine deliveries. There are 46 (2.85%) non-functional Labor Rooms in Gujarat.

Functional Maternity OT: Room that functions solely was a state-of-the-art operating room [OR] for both planned and emergency Caesarean-sections. There are 310 (85.40% functional OT in Gujarat.

Non- Functional Maternity OT: Room that is not in a functional state to conduct operation for planned or emergency Caesarean-sections. There are 53 (14.60%) non-functional maternity OT in Gujarat.



Graph 2.1. Graph showing district wise proportion of functional and non-functional Labor rooms

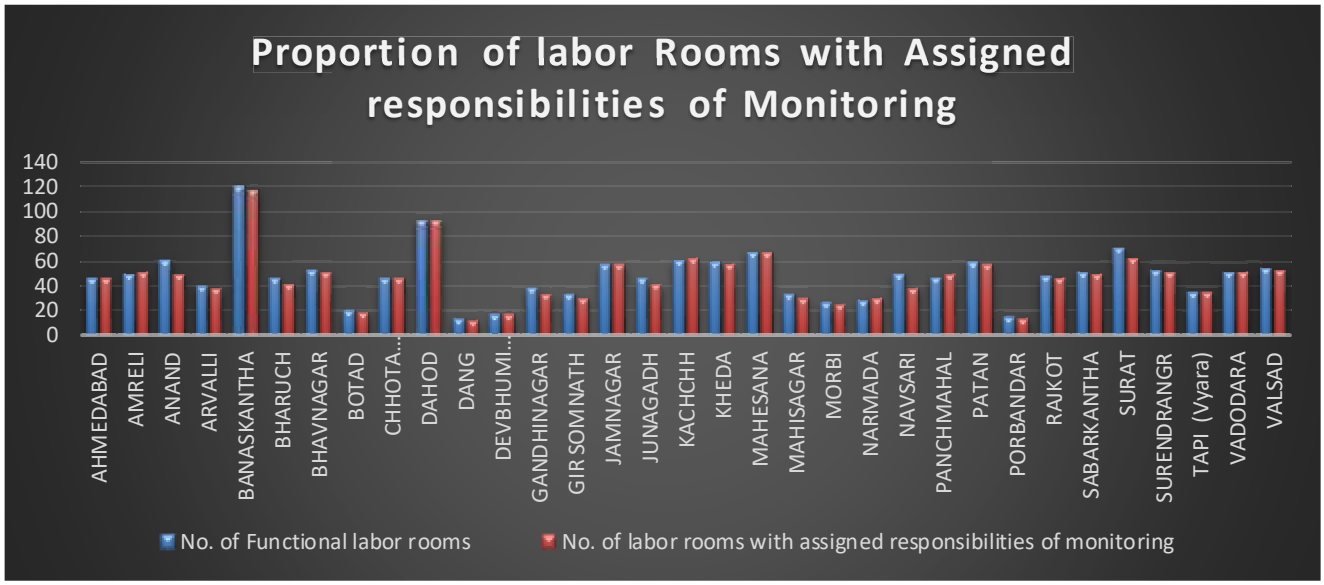


Graph 2.2. Graph showing district wise proportion of functional and non-functional Maternity OT

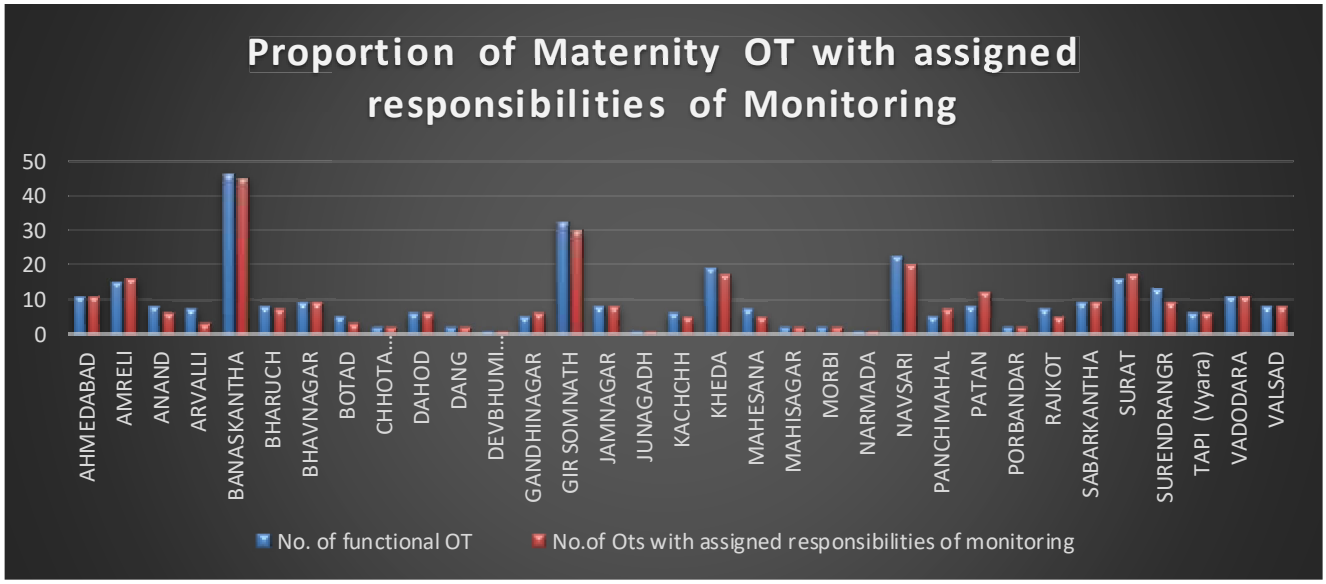
2.6.2 Assigning Responsibility of Monitoring in Labor Room and Maternity OT:

As the hospital staff remains indulged in providing the clinical services in the health care facilities, WASH is generally ignored. Moreover, it is considered to be a responsibility of PIU. So, some of the staff should be assigned responsibility specifically for WASH in Labor Rooms and Maternity Operation Theatre in order to combat the infection in LR & OT. Regular monitoring needs to be done by the staff assigned the responsibility.

In the State of Gujarat, specific staff is assigned responsibility for monitoring in 1498 (93.10%) Labor Rooms and in 294 (81%) of the Maternity OT.



Graph 2.3. Graph showing proportion of Labor rooms with assigned responsibilities of monitoring amongst the staff

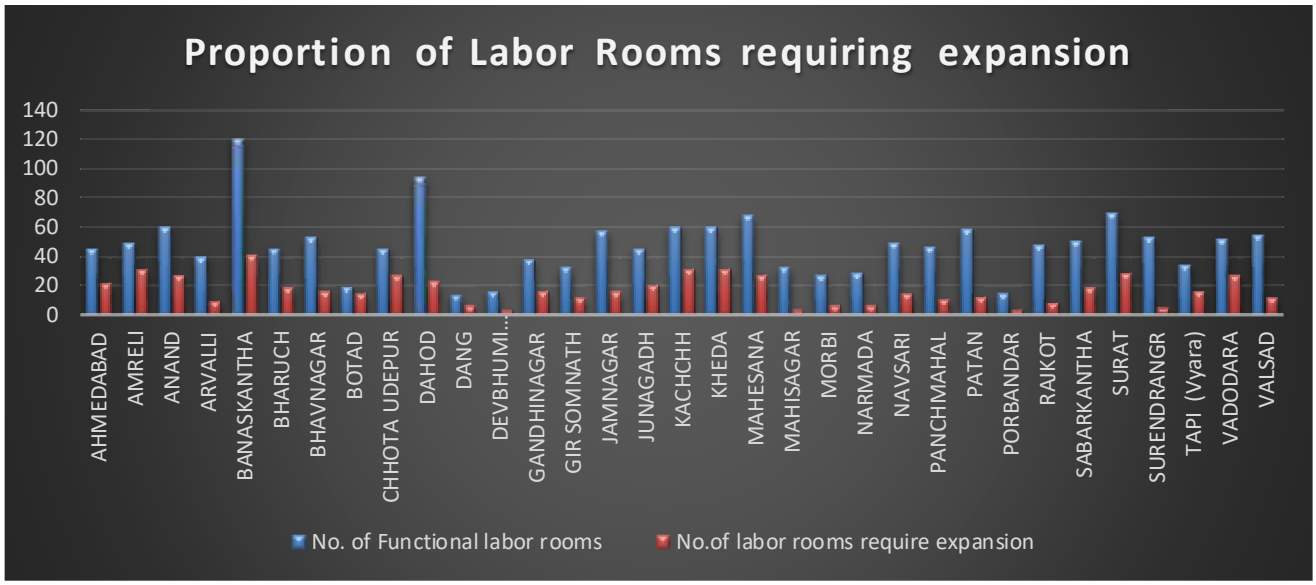


Graph 2.4. Graph showing proportion of Maternity OT with assigned responsibilities of monitoring amongst the staff

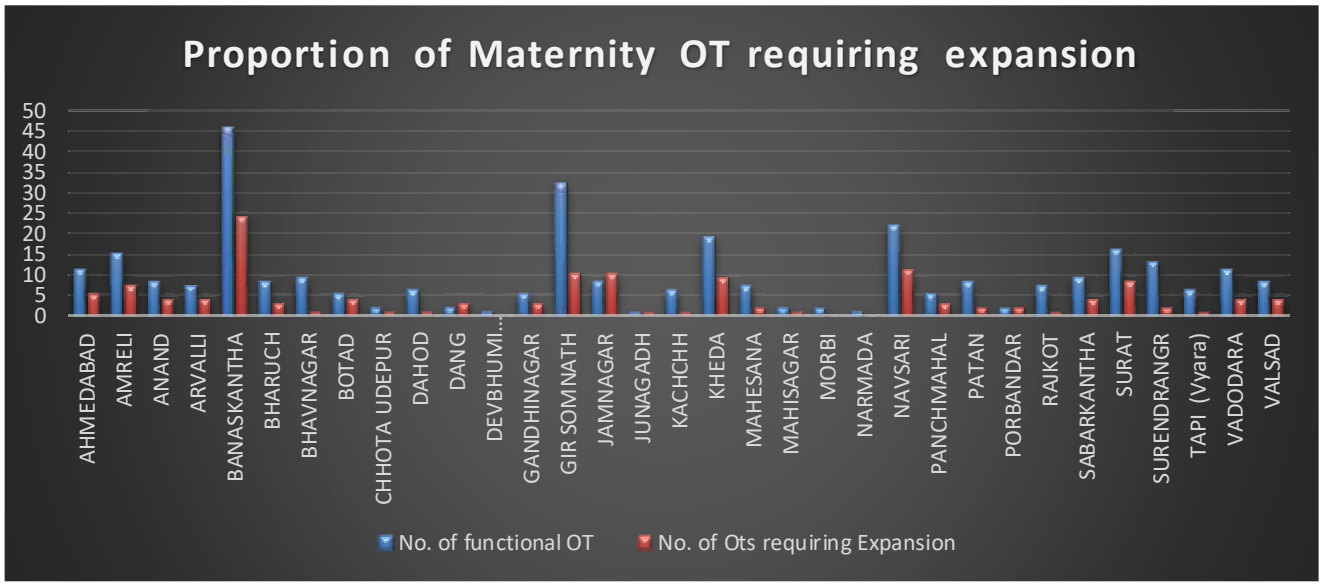
2.6.3 Expansion of existing infrastructure:

The Labor Rooms and the Maternity OT requiring expansion should be consider the WASH standards while expanding to provide quality of care and dignity of care.

In Gujarat, 33.84% (545) Labor Rooms and 37.45% (136) Maternity OT needs expansion from the existing state of infrastructure as per the assessment done.



Graph 2.5. Graph showing proportion of Labor rooms requiring expansion in the infrastructure



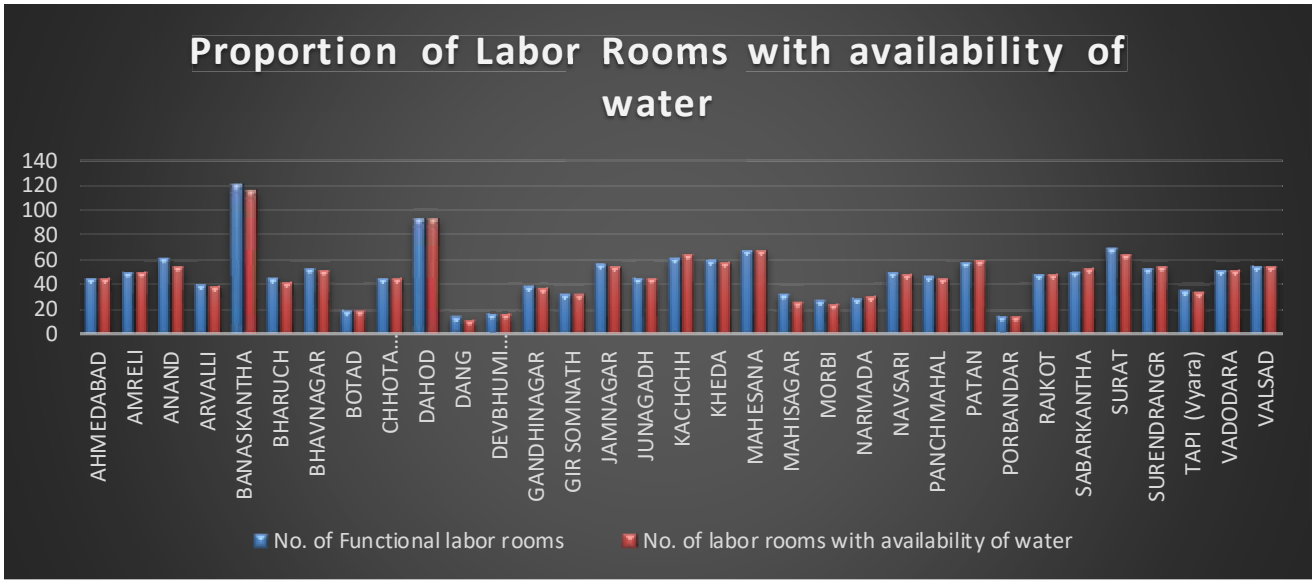
Graph 2.6. Graph showing proportion of Maternity OT requiring expansion in the infrastructure

2.6.4 Water availability in Labor Rooms and Maternity OT:

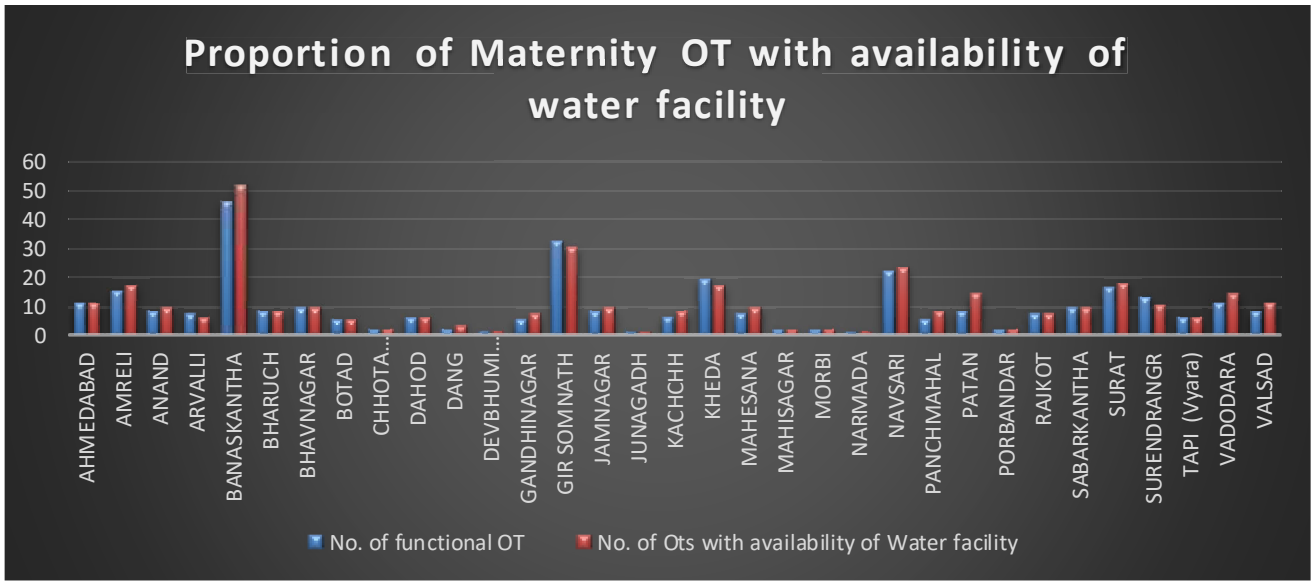
The operating theatres and delivery rooms require more water, so 24*7 availability of clean running water is must. Water is utilized for handwashing and in the birthing process make it essential in LR and OT for infection control.

Rain water harvesting is a common alternative source that can ensure availability of water in healthcare facilities, especially in areas with water scarcity or intermittent water supply. So, this feature can be incorporated while designing the infrastructure plan for the healthcare facilities.

In the state of Gujarat, 1534 (95.34%) of the Labor Rooms and 337 (92.84%) of the Maternity OT have the facility of 24*7 running water at the hand washing station.



Graph 2.7. Graph showing proportion of Labor rooms with availability of 24*7 water supply



Graph 2.8. Graph showing proportion of Labor rooms with availability of 24*7 water supply

2.6.5 Availability of Functional Toilets in Labor Rooms and Maternity

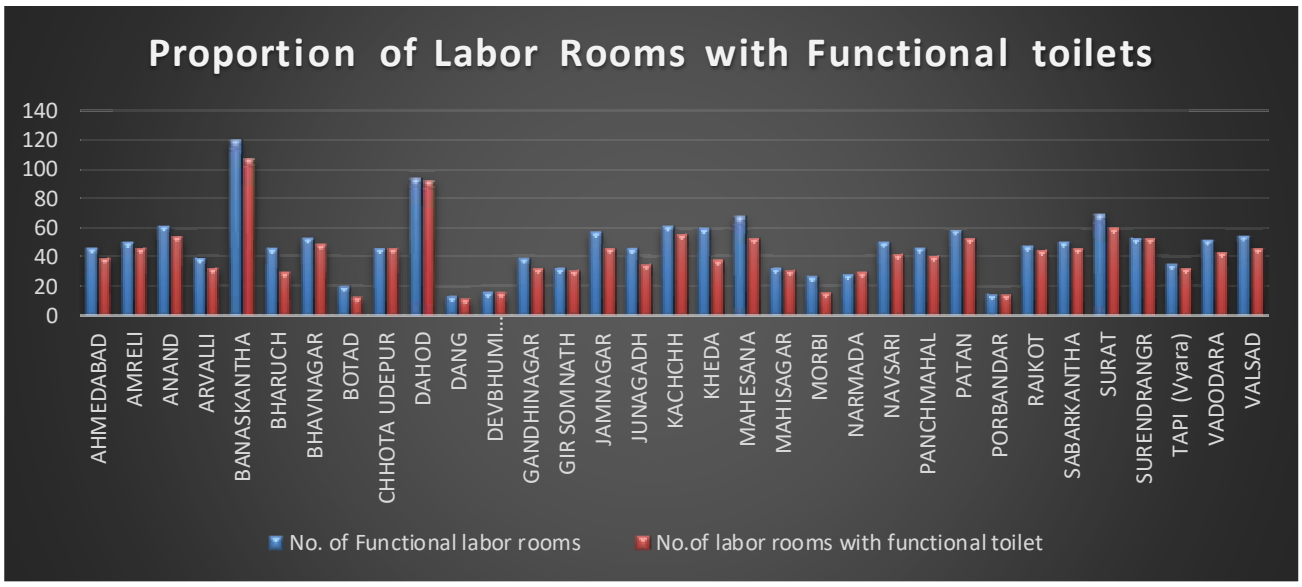
Functional Toilet: Toilet facilities that protect human health by preventing contamination of the environment with human fecal waste. (WHO)

The toilet and bathroom should have the basic fixtures of water closet, lavatory, shower heads, faucets and equipped with sufficient and appropriate grab bars for the patient. Care should be taken that the toilets don't gets choked off due to disposal of sanitary pads if there is no facility of dustbins in the toilets for their disposal.

The availability of toilets in Labor Rooms is essential for promoting the Respectful Maternity Care. In case of woman using the toilet outside the labor room in her soiled clothes, it affects her dignity as well as impact the patient satisfaction.

The toilets need not be there in the Maternity OT as it will increase the risk of infection/ sepsis.

In the state of Gujarat, 84.4% (1358) Labor Rooms have the availability of toilets whereas 13.60% of Labor rooms don't have toilets constructed inside the LR.



Graph 2.9. Graph showing proportion of Labor rooms with functional toilets

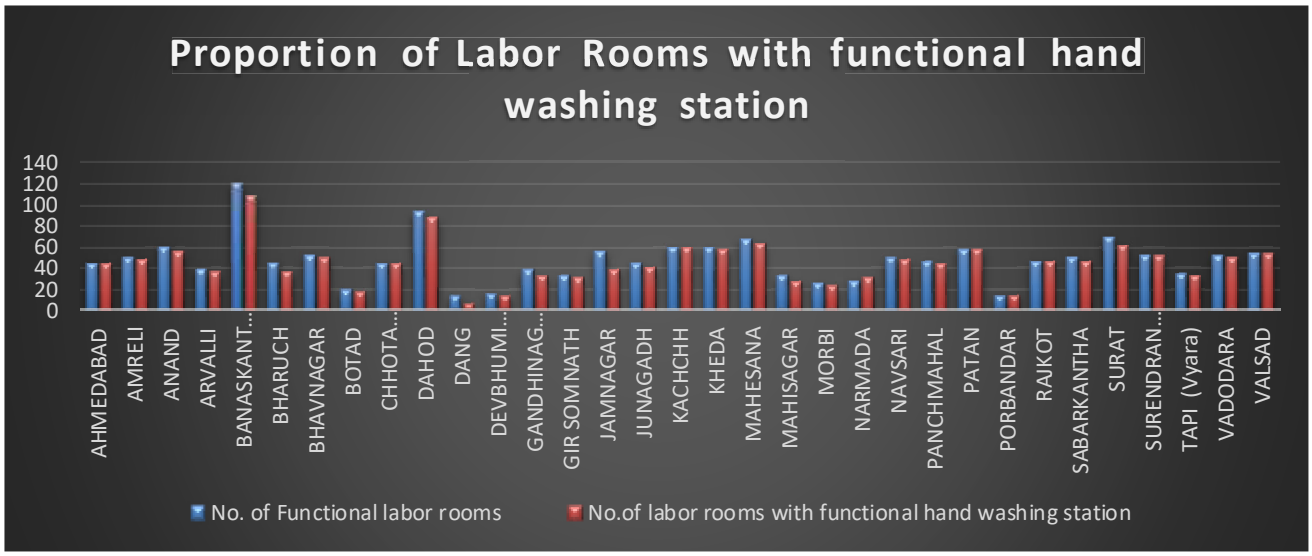
2.6.6 Availability of functional hand washing station in Labor Rooms and Maternity OT:

Hand washing station is necessary for handwashing which is the simplest and most important infection prevention procedure. It removes microorganisms from the skin, which helps to prevent transmission of infections from person to person.

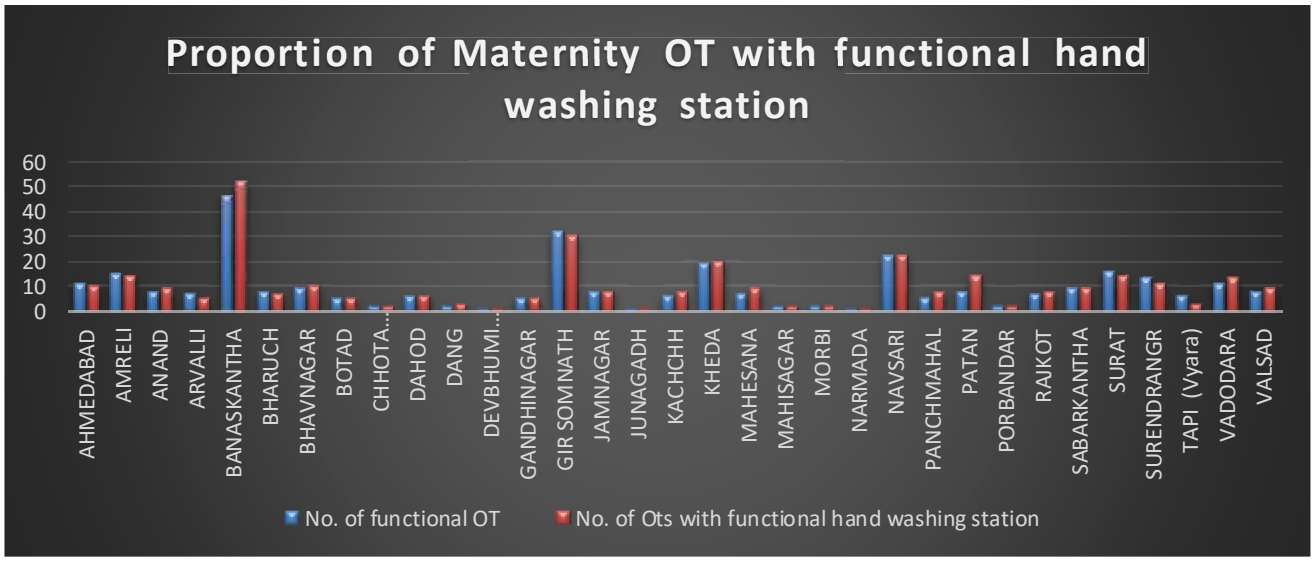
Washing of hands:
- Before and after examining any client (direct contact).
- After removing gloves because gloves may have holes in them.
- After exposure to blood or any body fluids (secretions and excretions), even if gloves were worn.

There should be a hand washing station with the following: •A steel sink of dimension 28"X18"X8". •Two elbow-operated taps with 24x7 running water supply.. •A geyser of at least 10 liter capacity. •Soap dispenser. Hand washing protocol should be mounted on the wall above the hand washing area.

In Gujarat, 90.55% (1457) of Labor Rooms and 88.98% (323) of Maternity OT have functional Hand washing stations.



Graph 2.10. Graph showing proportion of Labor rooms with functional hand washing station

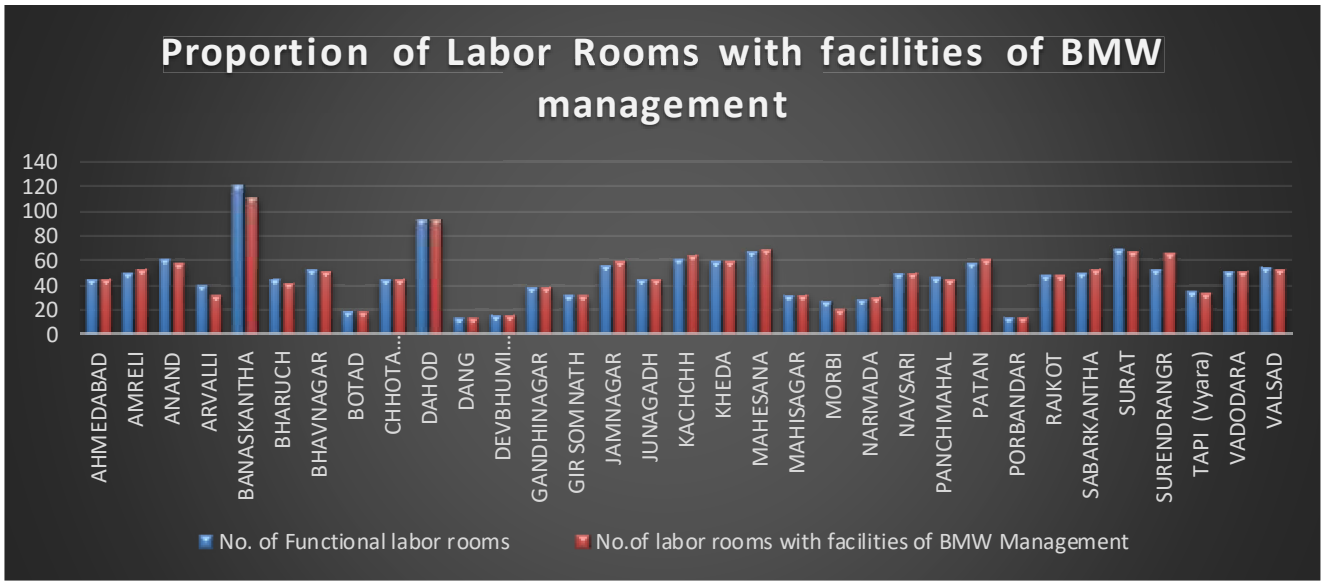


Graph 2.11. Graph showing proportion of Maternity OT with functional hand washing station

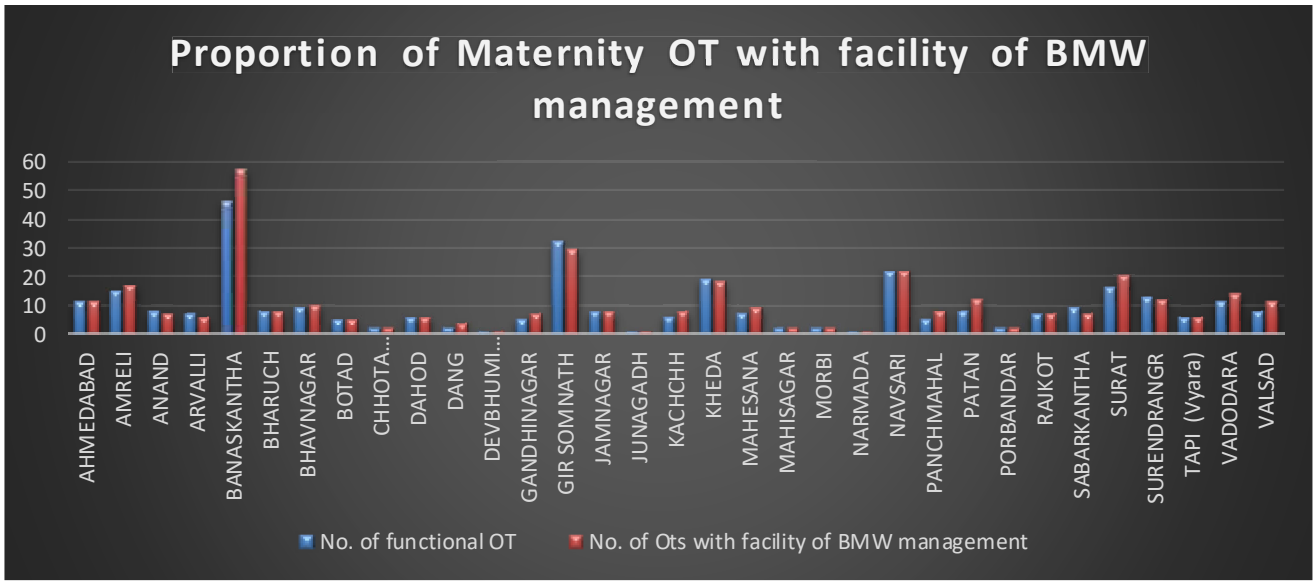
2.6.7 Availability of Facility of BMW management in Labor Rooms and Maternity OT:-

Inadequate bio medical waste management is facility public health concern and detrimental to the environment. This points to significant gaps in relation to infection control in labor rooms. The consequences can be devastating. Indeed, institutional deliveries reduce the risks of infection, however, poor infection control practices in labor and delivery units can lead to puerperal sepsis and other infections of childbirth5. Maternal sepsis is today a growing cause of maternal deaths in the country and this is an indication of poor practice of aseptic techniques in the labor room and poor general hygiene in addition to inadequate treatment approach to infection.

In state of Gujarat, 96.77% (1557) of Labor Rooms and 93.66% (340) Maternity OT have facility of BMW management.



Graph 2.12. Graph showing proportion of Labor rooms with facilities of BMW management

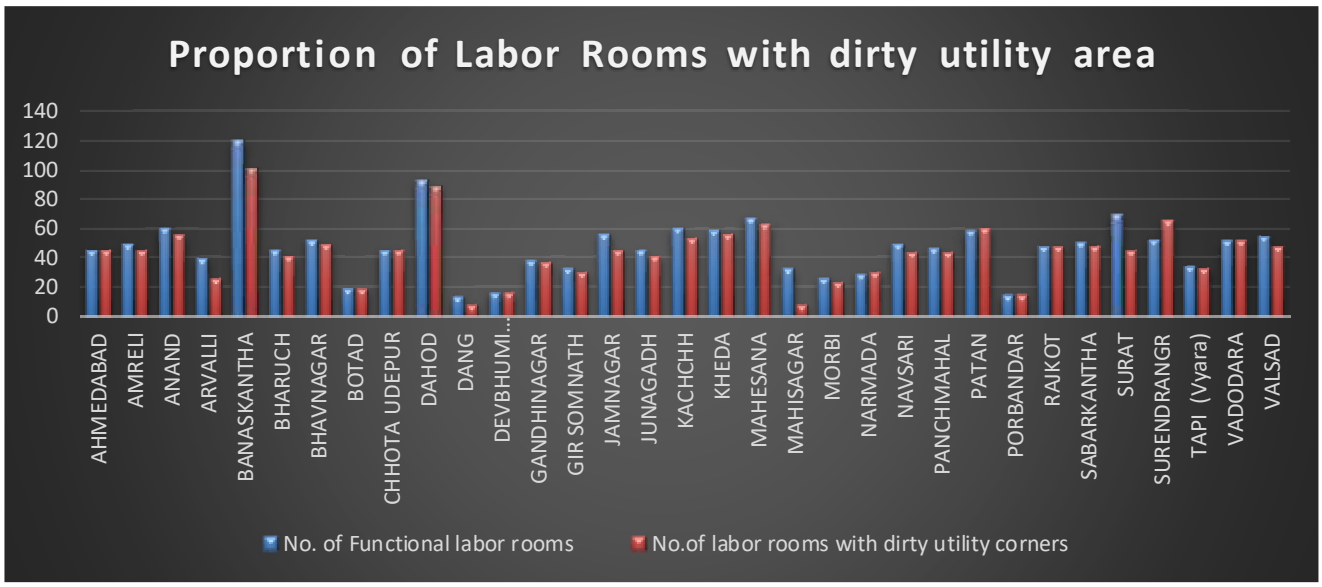


Graph 2.13. Graph showing proportion of Maternity OT with facilities of BMW management

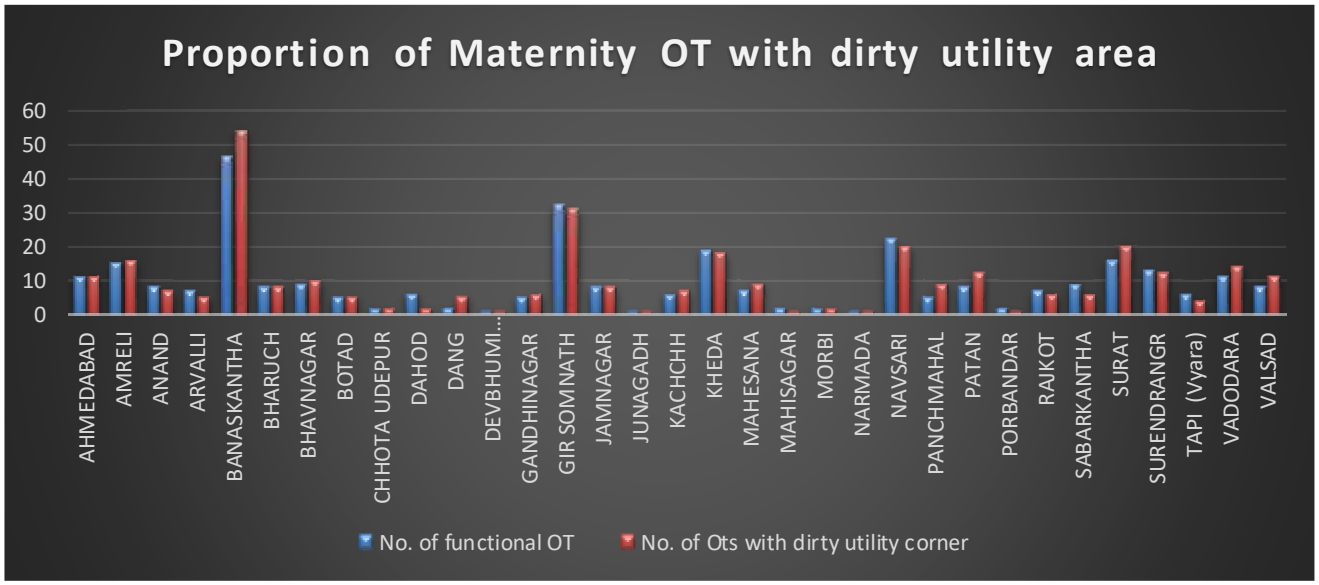
2.6.8 Availability of dirty utility area in Labor Rooms and Maternity OT:

There should be a dirty-utility area in the facility for storing used supplies such as towels, linen, used instruments prior to shifting to the CSSD. This should have tubs for storing used and un-clean re-usable supplies and other items. Dirty equipment is to be taken to the dirty utility room after each patient use and cleaned by designated personnel with a hospital approved disinfectant.

In state of Gujarat, 88% (1416) of labor Rooms and 89.53% (325) of Maternity OT have dirty utility areas in the Labor room and Maternity OTs itself.



Graph 2.14. Graph showing proportion of Labor rooms with dirty utility area



Graph 2.15. Graph showing proportion of Maternity OT with dirty utility area

2.6.9 Availability of IEC of 6 steps of hand washing above the wash basin in Labor Rooms and Maternity OT:

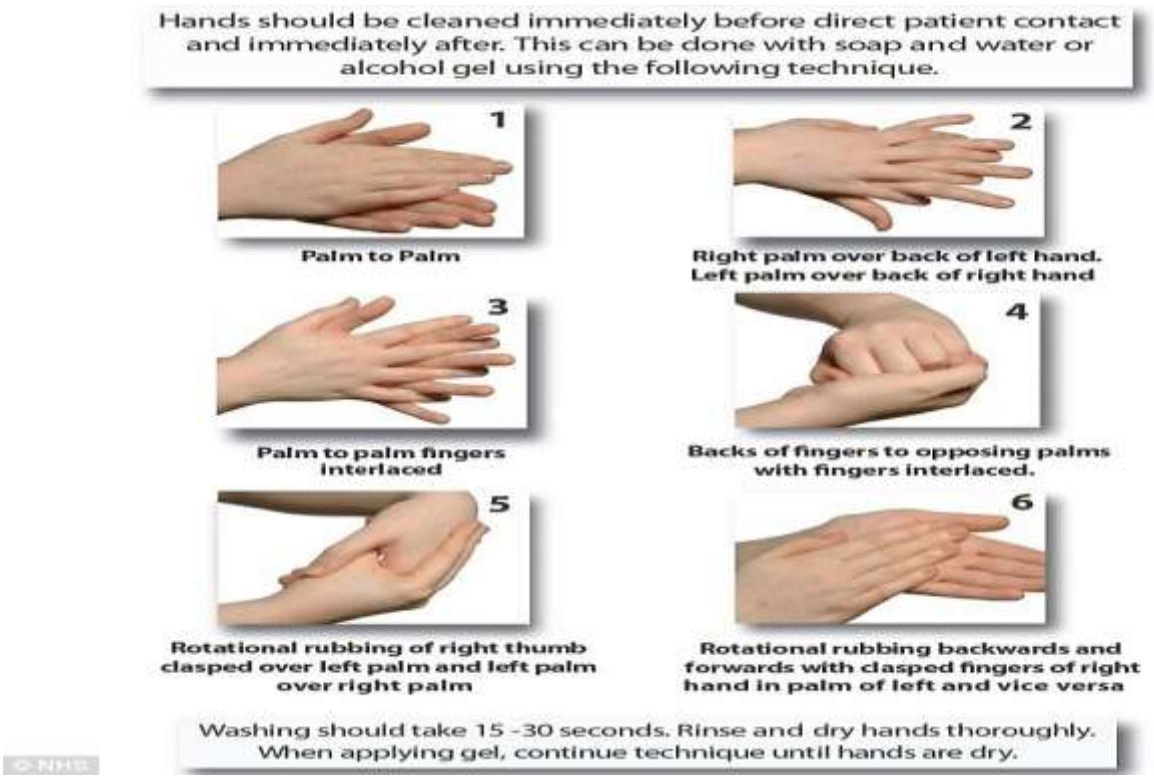


Figure 2.4. Figure showing the IEC of 6 steps of hand washing

Five Moments for Hand Hygiene approach defines the key moments when health-care workers should perform hand hygiene by WHO

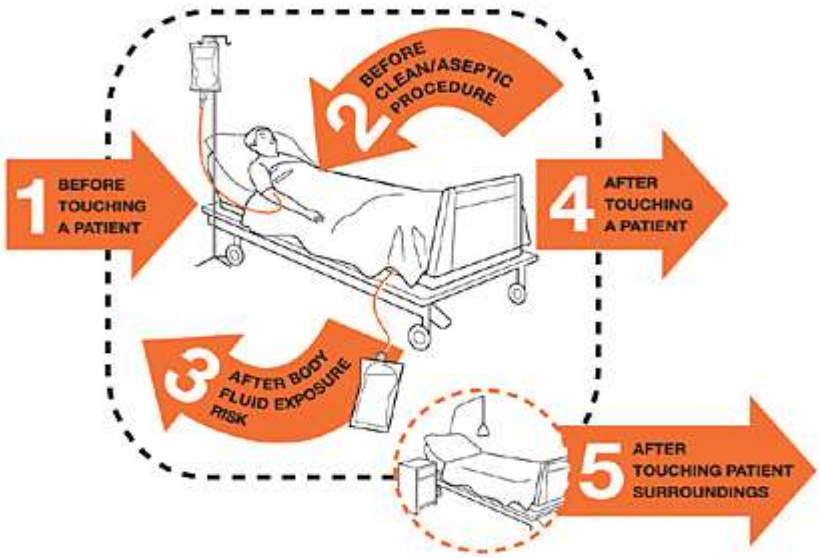
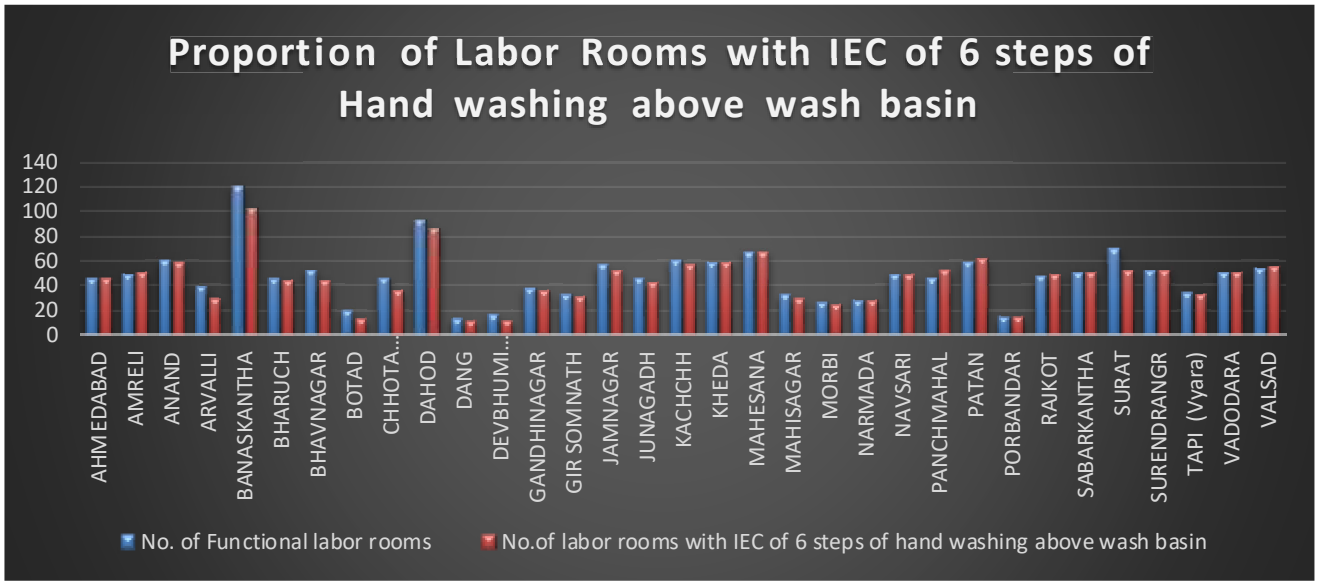
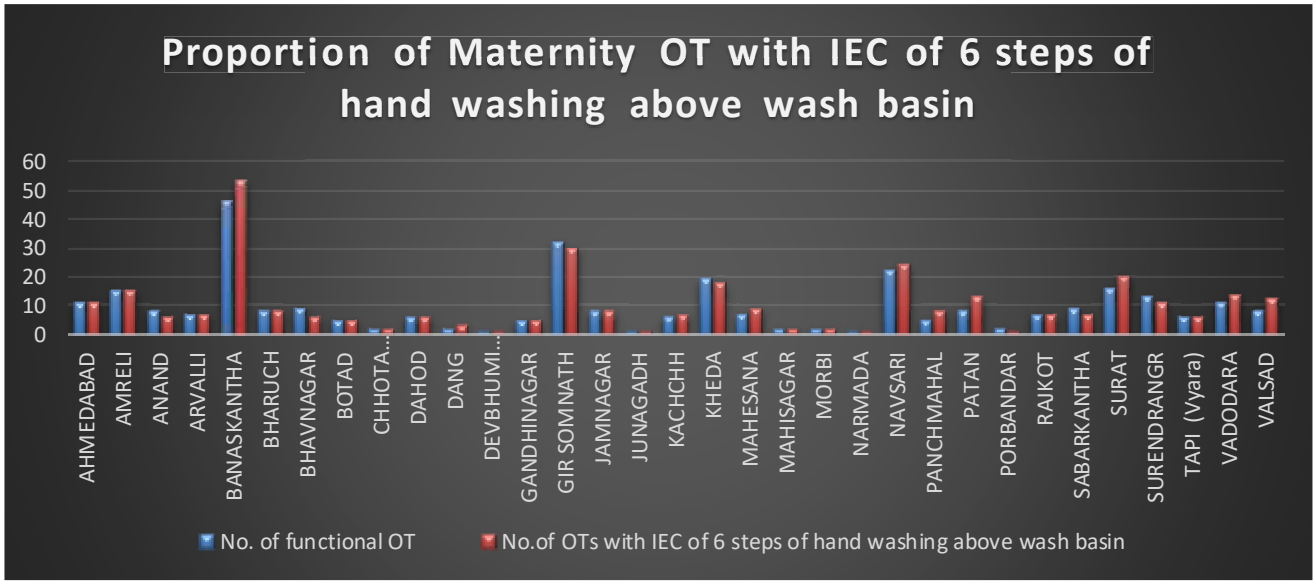


Figure 2.5. Figure showing the 5 moments of hand hygiene by WHO

In the state of Gujarat, 91.42% (1471) of Labor Rooms and 90.63% (329) of Maternity OTs have displayed IEC of 6 steps of handwashing above the wash basin.



Graph 2.16. Graph showing proportion of Labor rooms with IEC of 6 steps of handwashing above wash basin



Graph 2.17. Graph showing proportion of Maternity OT with IEC of 6 steps of handwashing above wash basin

2.6.10 Availability of three bucket system of cleaning in Labor Rooms and Maternity OT:

The **Three bucket system** should be ideally practiced and that the first bucket contains water with detergent used in the beginning. The mop is then rinsed in the second bucket and dipped in the third bucket which can also contain a disinfectant and the mopping done again.

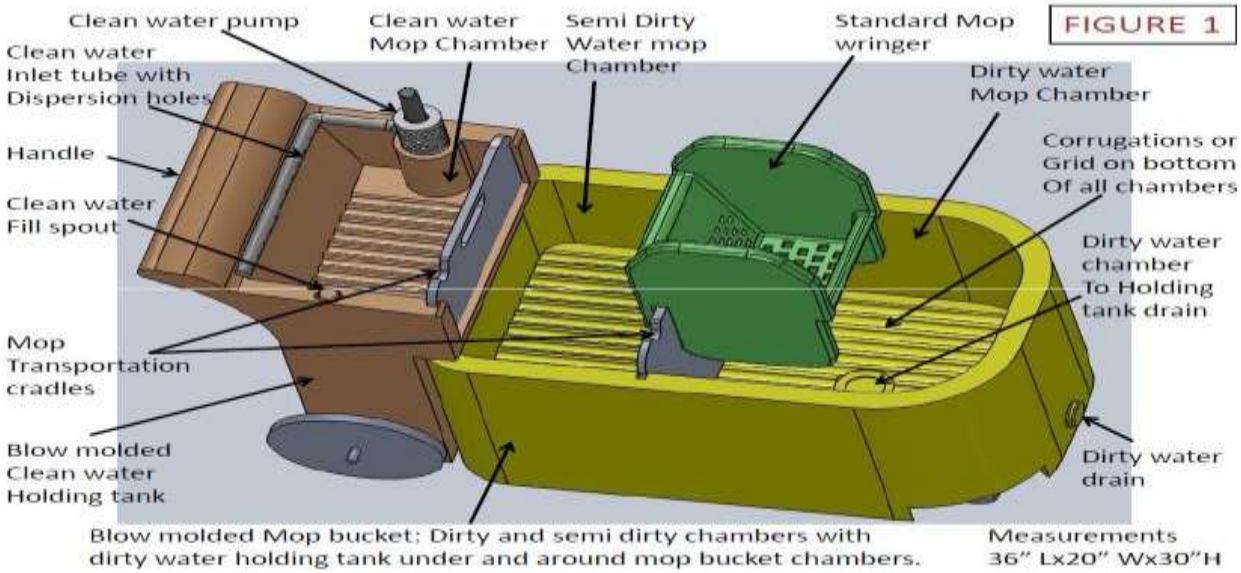


Figure 2.6. Figure showing the 3 bucket system used for cleaning for infection control

Direction of cleaning of OT:

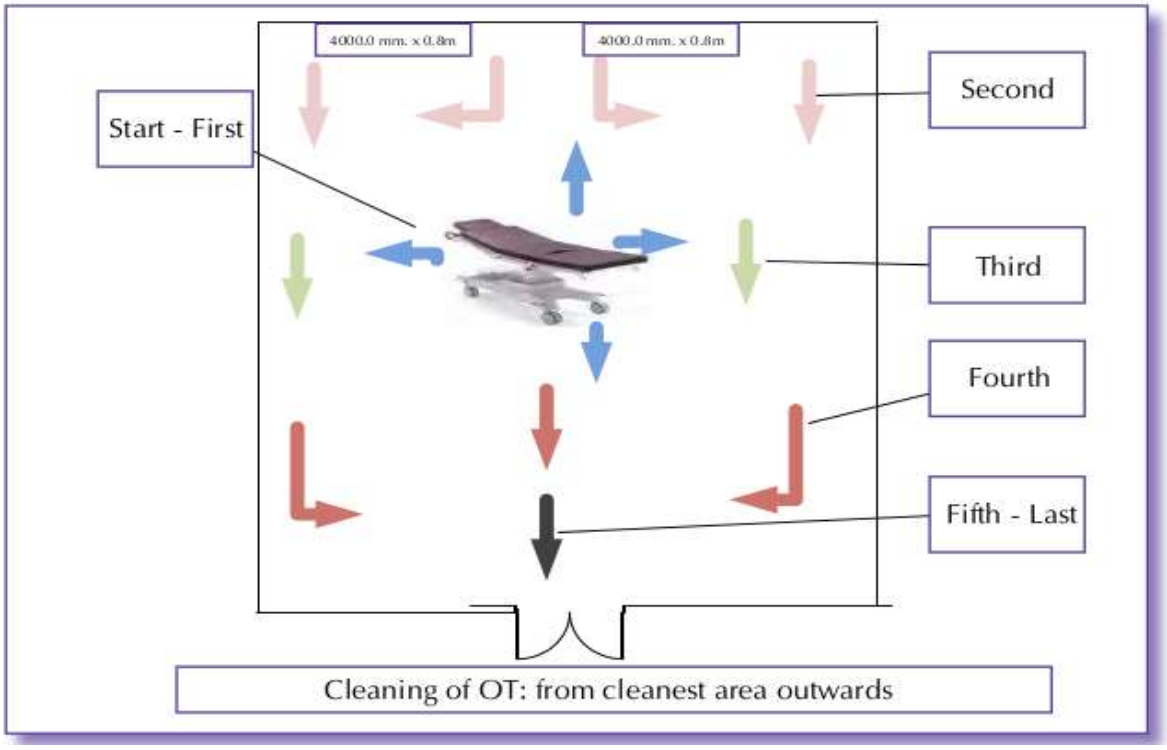
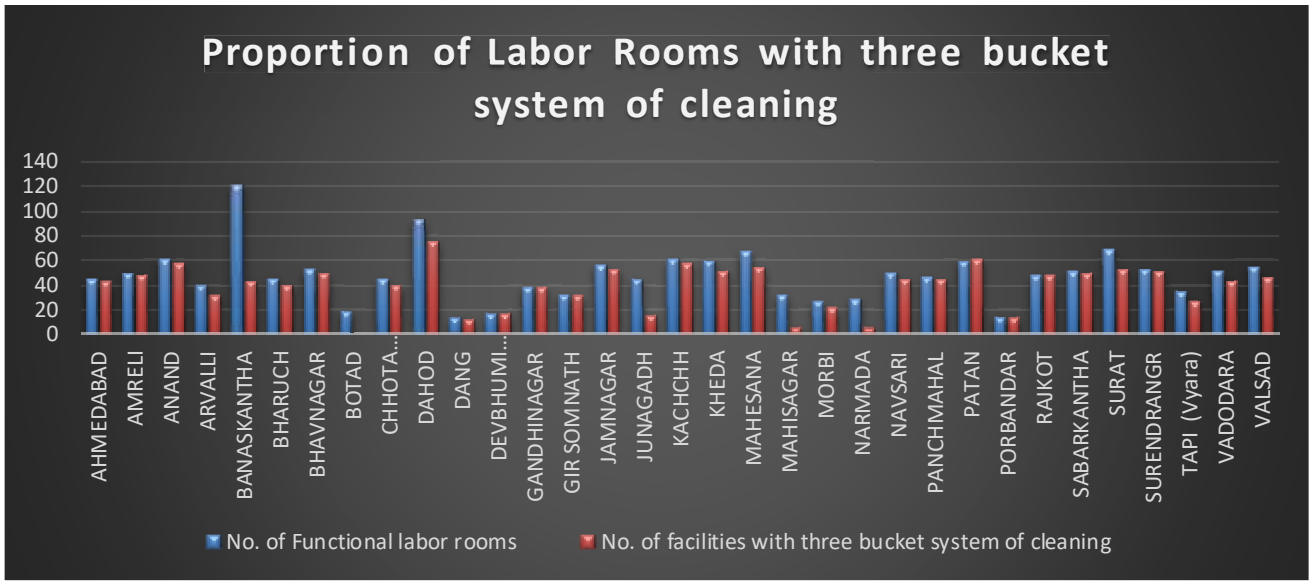
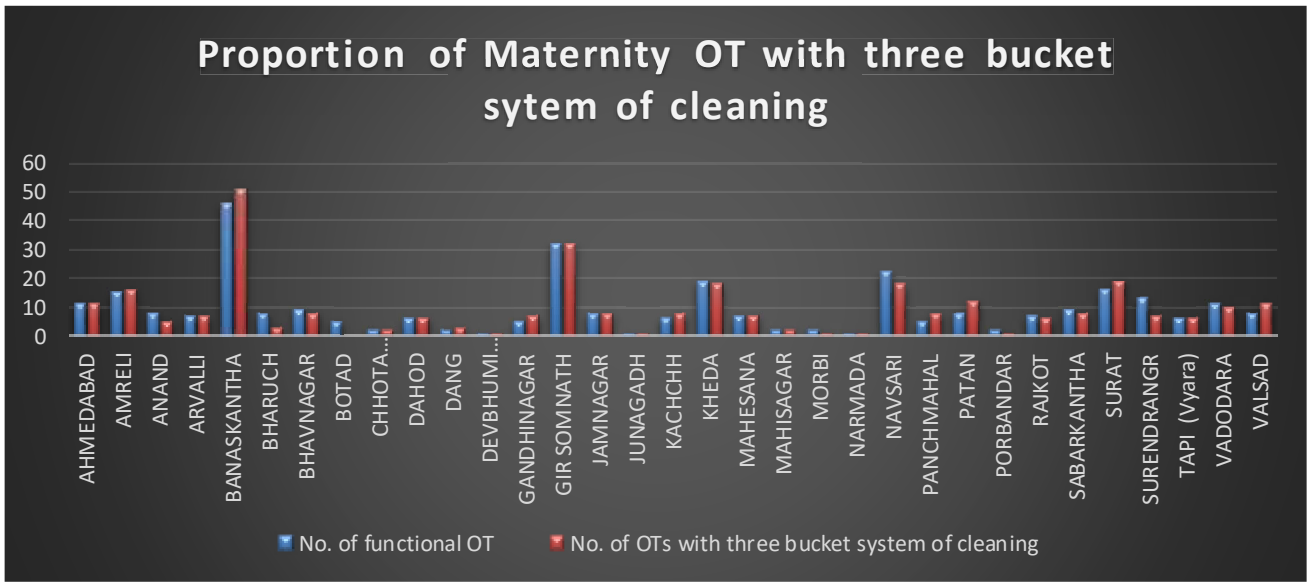


Figure 2.7. Figure showing the direction of cleaning of OT with mop

In the state of Gujarat, 78.18% (1258) of Labor rooms and 83.74% (304) of Maternity OTs have the availability of three bucket system of cleaning in the respective facilities.



Graph 2.18. Graph showing proportion of labor rooms with three bucket system of cleaning



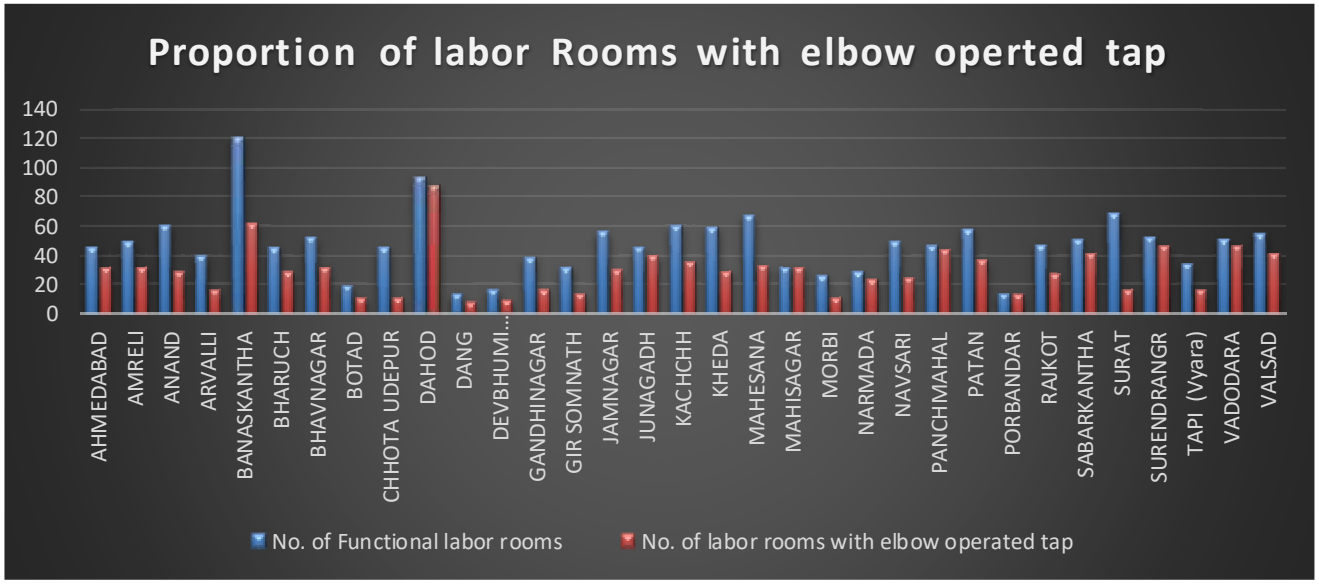
Graph 2.19. Graph showing proportion of Maternity OT with three bucket system of cleaning

2.6.11 Availability of elbow operated taps in Labor Rooms and Maternity OT:

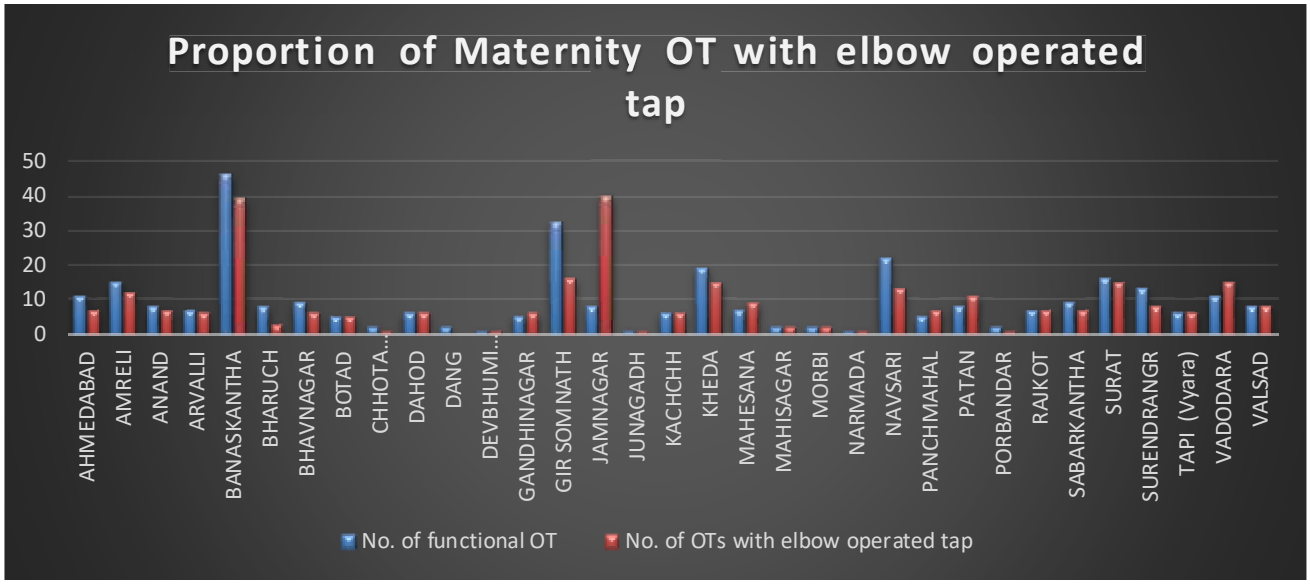
Elbow-operated taps - These are preferred in areas where a large volume of clinical procedures are performed as they permit effective washing up to the elbow. It enables the use of hands free tap system.

Figure 2.8. Figure showing the elbow operated tap used a healthcare personnel

In the state of Gujarat, 60.41% (972) of the Labor Rooms and 79.61% (289) Maternity operation theatres have got elbow operated taps installed there.



Graph 2.20. Graph showing proportion of Labor rooms with elbow operated tap



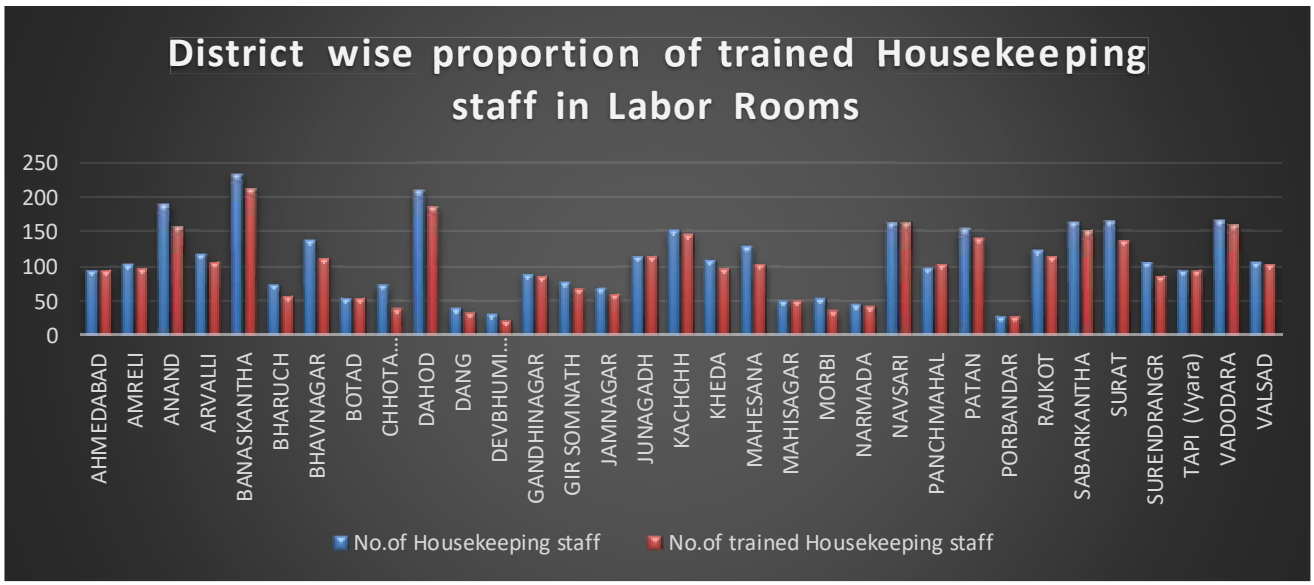
Graph 2.21. Graph showing proportion of Maternity OT with elbow operated tap

2.6.12 Availability of trained housekeeping staff in Labor Rooms and Maternity OT:

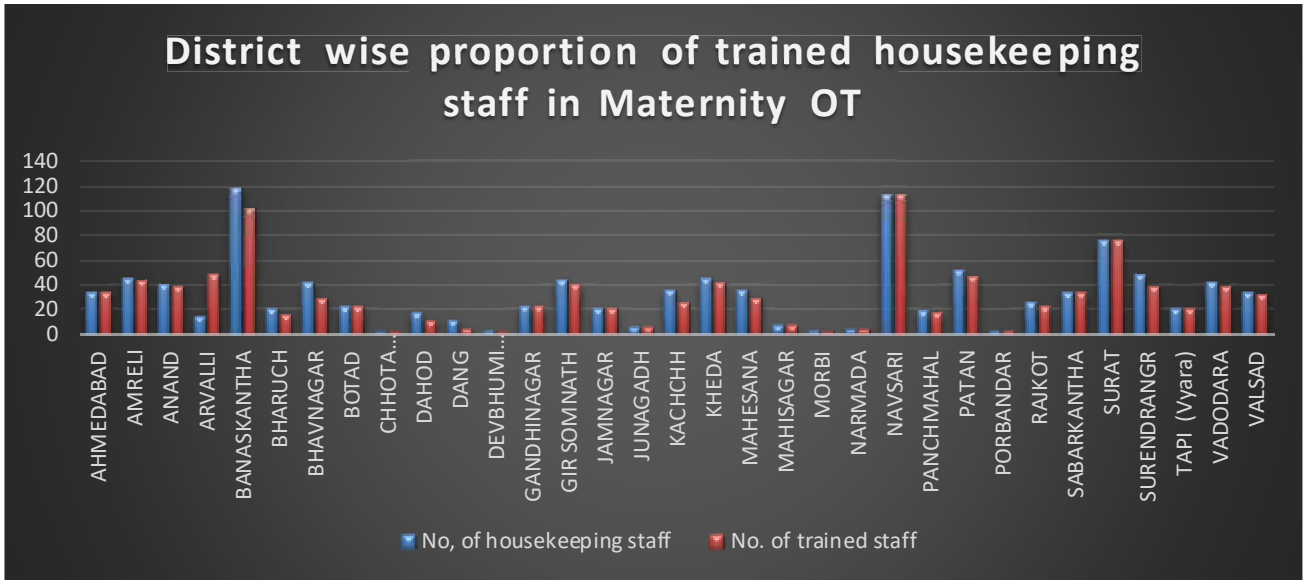
Housekeeping is a support service department in a hospital, which is responsible for cleanliness, maintenance & aesthetic upkeep of patient care areas, public areas and staff areas

As a minimum, training must be given in the performance of cleaning tasks, the use of cleaning equipment, control of infection, manual handling, high touch areas. All aspects of environmental cleaning must be supervised and performed by knowledgeable, trained staff.

In the State of Gujarat, 3584 housekeeping staff is there in Labor rooms and 1050 housekeeping staff in Maternity OT. Out of this, 90.18% (3232) of staff in Labor rooms and 94.19% (989) of staff in Maternity OT are trained to conduct respective procedures in LR and M-OT.



Graph 2.22. Graph showing district wise proportion of trained housekeeping staff in labor rooms



Graph 2.23. Graph showing district wise proportion of trained housekeeping staff in Maternity OT

2.7 Gaps and Key area of Intervention in WASH services in Labor room and Maternity OT

S. No.	INDICATOR	GAPS (Unavailability of facilities in %)	Key area of intervention
1.	Assigning responsibility amongst staff for Monitoring and supervision	• LR- 6.9% • OT- 19%	• Support and motivation amongst the staff • Understanding of importance of hygiene amongst the staff • Increase the sense of ownership • Providing adequate manpower • Class IV workers made to follow the instructions
2.	Water availability	• LR- 4.66% • OT- 7.16%	• Better Operation & Maintenance • Functional water purifier system to be made available in LR and OT • Rain Waster Harvesting system to be installed to tackle Seasonal water supply problem
3.	Functional toilets	• LR- 15.6%	• Increasing understanding of importance of hygiene amongst the staff • Operation & Maintenance of ongoing renovation process • Cleaning schedule to be made available • Managing efficiently high patient overload • Construction of toilet in Labor rooms
4.	Handwashing station	• LR- 9.45% • OT- 11.62%	• Regular purchase of soap or dispensers to be done • Assigning responsibility for this separately • Patient to be made sensible in case of soaps being stolen from LR or OT
5.	Biomedical Waste management	• LR- 3.23% • OT- 6.34%	• Regular supply and availability of bags and bins for proper BMW segregation. • Adequate capacity building of Class IV workers • Increasing knowledge amongst the staff regarding segregation • Any responsible person to be

			assigned for monitoring
6.	Dirty Utility area	• LR-12% • OT- 10.42%	• Availability of dirty utility corners constructed in LR/ OT • Proper maintenance of the already existing dirty utility corners
7.	IEC of 6 steps of Handwashing	• LR- 8.58% • OT- 9.37%	• IEC material to be provided from district/ state • Material to be distributed which are kept in store • Hand washing station to be made available • Belief of importance to be inculcated
8.	Three bucket system	• LR- 21.82% • OT- 16.26%	• Availability of three bucket system in the facility to be ensured • Staff to be trained to practice the three bucket system. • Reluctant staff and belief of non-importance of staff to be dealt
9.	Elbow operated Tap	• LR- 39.59% • OT- 20.39%	• Availability of elbow-operated tap to be ensured • Constructing hand washing station, wherever not present
10.	Availability of trained staff	• LR- 9.82% • OT- 5.81%	• Periodic training of the staff • Regular check on trainings for housekeeping staff

Table 2.6. Table showing the gaps and the key intervention areas related to the various indicators of WASH compliance in LR and OT under LaQshya

2.8 Conclusion

The study found that many of the problems are in local nature which can be addressed by providing technical support locally through effective mentoring. Few of the issues need better coordination with district health and planning implementation unit authorities. Based on the evidence and experience from the study, it is envisaged to provide technical support through technical experts by periodic visits to the centers and districts with the above mentioned objectives. The study came up with the following broad area of the conclusion:-

- Water supply was available in almost all the health centers while regular maintenance of water purifier and water tank need to be viewed and monitored.
- Lack of formal supervision system for the WASH was observed.
- A very few health centers have insufficient number of bags and bins for BMW segregation and disposal due to lack of clarity about local purchasing power and irregular distribution from the stores.
- Good number of the health centers were having functional toilets for Labor Room while maintenance needs to be regularly monitored.
- A quite large number of Labor Rooms and OTs don't have elbow operated taps installed at the hand washing station.
- Most of the health centers have IEC material displayed for handwashing steps above the handwashing station in Labor Rooms and OT but IEC needs to be cleaned properly and rugged IEC needs to replaced as they can be the source of infection in LR and OT.
- Almost $1/5^{th}$ of the facilities don't practice three bucket system or there was unavailability of the same.
- Assigning of the responsibility separately to monitor LR and OT was quite good in number but improvement needs to be made as it is the most important indicator to improve the WASH compliance in healthcare facilities.

2.9 ***References***

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