

Dissertation

National Health Mission, Gujarat

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Dissertation Title

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)

Research Question

What is the WASH compliance in the Labor Rooms and Maternity OT in the healthcare facilities in State of Gujarat?

Rationale

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.

Objectives

The main objectives of the study are: -

- To assess the provision of WASH services and practices in Labor Rooms and Maternity OT in the State of Gujarat.
- To identify WASH related gaps and key interventions to fill up the gaps identified at the healthcare facilities.

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

Study Design

Cross sectional-Observational study; Quantitative in nature

- 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.

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.

Area & Sample

As per District reporting to the State, deliveries are being conducted in approximately 1609 Labor Rooms and 363 Maternity OTs. 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 and 310 Maternity OTs 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).

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.

Findings and observation

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

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 Complaine	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

Availability of the indicated facilities in the Labor Room and Maternity OT

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%

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- 0.82%	Periodic training of the staff

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
- Almost 1/5th 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.

Thank You