

A Study of Maternal and Newborn Healthcare Services at District Hospital Sitamarhi, Bihar

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ABSTRACT

Background: LaQshya guidelines provided by Government of India are applicable to all Government-run medical colleges, district hospitals, community health centers, sub-district hospitals, and referral units and aims to organize the infrastructure and protocol of labour rooms and maternity operation theatre according to guidelines. The standards are provided in guidelines for the inputs (like space, layout, equipment, consumables, and human resources), process and outcomes.

Objectives: To assess the inputs, processes and outcome of labour room and maternity OT according to LaQshya guidelines. To suggest ways to improve quality of labour room and maternity OT if find any bottlenecks

Methods: The study was conducted in 100 bedded district hospital, Sitamarhi, Bihar. The study is descriptive in nature. The primary data was collected by observation, review of records, interview with staff and patients. The data has been collected with the help of standardized checklists in accordance with LaQshya guidelines.

Results: The results show that in its current state, the inputs, process, and outcomes for both labour room and operation theatre are far behind. Scorecard for labour room was 42% and 54% for Operation Theatre as compare to minimum 70% norms. Lack of human resources, inadequate Standard Operating Procedures for all key processes and support services, and organisational framework for quality improvement were the challenges.

Conclusion: The district hospital, Sitamarhi must improve labour room by 28% points and for operation theatre 16% to achieve 70% LaQshya guidelines.

Key words: Labour room, Operation theatre, LaQshya guideline

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INTRODUCTION

Pregnancy and motherhood are natural processes in the lives of women of reproductive 'age. These processes are generally considered to be positive and fulfilling experiences. However, it is unfortunate that for various reasons, many women and neonates end up dying because of these processes.'

Maternal mortality and infant mortality are sensitive indicators which show evidence for describing the health care system of a country and indicate the prevailing socioeconomic scenario. 'These major health indicators of Bihar are far behind the national targets. As per 2017 SRS (sample registration survey) report maternal mortality rate of Bihar is 165 and infant mortality rate is 38 which are extremely high as compared to national targets.

Recognizing the need to prioritize safe and respectful childbirth practices, the Government of India in March

2018 launched LaQshya- Labour Room Quality Improvement Initiative, to be implemented nation-wide with the objective of reducing maternal and newborn mortality and morbidity, and enhancing the satisfaction of women availing healthcare.'

LaQshya guidelines are applicable to all Government-run medical colleges, district hospitals, community health centers, sub-district hospitals, and referral units. LaQshya aims to organize the infrastructure and protocol of labour rooms and maternity operation theatre according to guidelines. The standards provided in guidelines revolve around the space, layout, equipment, consumables, and human resources [1,2].

Aim of the study

The study aims at improving quality of labour room and maternity OT of district hospital Sitamarhi.

Objective of the study

To assess the inputs, processes and outcome of labour room and maternity OT according to LaQshya guidelines.

To suggest ways to improve quality of labour room and maternity OT if find any bottlenecks.

REVIEW OF LITERATURE

Literature review suggest that implementation of the birth preparedness and complication readiness strategy is very crucial to establish a system where population can receive a good maternal and Newborn healthcare services. ‘According to a study which was published online there are significant barriers affecting the quality and appropriateness of maternal and neonatal health service in the rural ‘communities and the Nadowli district hospital, the obstacles were inadequate medical equipment and essential medicines, infrastructural challenges, shortage of skilled staff, high informal cost of essential medicines and general limited capacities to provide care. ‘Increasing the resources at the health provider level is essential to achieving international targets for maternal and neonatal health outcomes and for bridging inequities in access to essential maternal and newborn healthcare [3].

WHO recommendations Intrapartum care for a positive childbirth experience addresses these issues by identifying the most common practices used throughout labour to establish norms of good practice for the conduct of uncomplicated labour and childbirth. It elevates the concept of experience of care as a critical aspect of ensuring high-quality labour and childbirth care and improved woman-cantered outcomes, and not just complementary to provision of routine clinical practices. It is relevant to all healthy pregnant women and their babies and takes into account that childbirth is a physiological process that can be ‘accomplished without complications for the majority of women and babies. The guideline recognizes a “positive childbirth experience” as a significant end point for all women undergoing labour. It defines a positive childbirth experience as one that fulfils or exceeds a woman’s prior personal and sociocultural beliefs and expectations, including giving birth to a healthy baby [4].

According to an article published in journal of perinatology India has witnessed a significant improvement in neonatal health after the introduction of NRHM. Apart from the JSY, the country has launched several new initiatives to improve neonatal care. Notwithstanding this newfound focus on neonatal health, the annual rate of reduction in NMR and ENMR still lags behind IMR and U5MR. There is an interplay of different demographic, educational, socioeconomic, biological, and care-seeking factors, which are responsible for the disparities and the high burden of neonatal mortality. The country must increase the coverage of key interventions and also improve the quality of care in health facilities on an urgent basis [5].

A study conducted in Uttar Pradesh reveals that challenges experienced regarding provision of care were inadequate physical infrastructure, irregular supply of water, electricity, shortage of medicines, supplies, and gynecologists and anesthetist to manage complications, difficulty in maintaining privacy and lack of skill for post-delivery counselling. However, physical access, cleanliness, interpersonal behavior, information sharing, and out-of-pocket expenditure were concerns for only users. Similarly, providers raised poor management of referral cases, shortage of staff, non-functioning of blood bank, lack of incentives for work as their concerns [6].

A study titled as maternal deaths and denial of maternal care in Barwani district, Madhya Pradesh suggest that there are five direct complication accounts for almost three fourth of all maternal deaths- hemorrhage, sepsis, eclampsia, obstructed labour and unsafe abortion. It is also known that while very often complications cannot be predicted. With adequate care, maternal death can be prevented. It is now well accepted that skilled care ‘at delivery with timely access to emergency obstetric care is one of the key elements to reduce maternal mortality [7].

METHODOLOGY

Study area: 100-bedded District Hospital Sitamarhi, Bihar.

Study duration: Three months (February to April 2019).

Study Respondents: Doctors, nursing staff, women in antenatal, natal and post-natal period.

Study Design: Descriptive and cross sectional.

Sampling and sample size: All the available doctors, nursing staffs, support staffs were interviewed. A total of 14 staffs were interviewed. A total of 22 women who came for availing maternal health services or their attendants were interviewed.

Methods of data collection

Data was collected by using following methods:

Observation.

Record review.

Staff interview.

Patient interview.

Tools of data collection

LaQshya Checklist is the main tool for the assessment. Hence understanding with the tool would be vital (Table 1).

Figure 1: LaQshya checklist.

Ref No	ME statement	Check point	Compliance	Assessment Method	Means of verification
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Area of concern A: Service provision					
Standard A1	The facility provides curative services				
ME A1.14	Services are available for the time as mandated	Labour room service is functional 24 X 7	-	SI/RR	Verify with records that deliveries have been conducted in night on regular basis
Standard A2					
ME A2.1	The facility provides reproductive health services	Availability of post-partum IUD insertion services	-	SI/RR	Verify with records that PPIUD services have been offered in labour room
		Availability of vaginal delivery services	-	SI/RR	Normal vaginal and assisted (Vaccum/forcep) delivery
		Availability of preterm delivery services	-	SI/RR	Check if preterm delivery is being conducted at facility and nt referred to higher centers unnecessarily
ME A2.2	The facility provides Maternal health services	Management of postpartum hemorrhage	-	SI/RR	Check if Medical/surgical management of PPH is being done at labour room

Compliance and scoring system

Departmental scorecard will be generated in percentages automatically (Excel sheet) after scoring all the departmental checklists. All the fields are mandatory to be filled to get overall Quality Scorecard. All the checkpoints have equal weightage to keep scoring simple. Once the scores have been assigned to each checkpoint, score can be calculated for the department and for themes by adding the individual scores for the checkpoints.

Scoring

Full compliance is to be scored as 2, when all the criteria in Quantifiable component are met (100%) and means of verifications are available in checklist as supporting evidence. If the services are Present/Sufficient/functional/being done/being used/ properly displayed/ properly updated will be scored as 2.

Partial compliance is to be scored as 1 when 50%-99.99% of the criteria in Quantifiable component are met and means of verifications are partially available for them. If the services are present but not functional/not sufficient/not done/not being used/not displayed/not updated/not maintained/not proper will be scored as 1.

Non-compliance is to be scored as 0 when the criteria in Quantifiable component are less than 50% (0%-49.99%) and there is no support available as means of verification in checklist. If the services are not Present completely will be scored as 0. Availability of Baby tray – if the Baby tray is having listed items less than 50%, it will be scored as 0.

Data analysis

Both departments cover 8 area of concerns. We filled up the score (0,1,2) in Laqshya checklist (automated Excel sheet). Automated sheet calculated the score.

Criteria for certification and badges of LaQshya certified

- Platinum Badge: Achieving more than 90% core.
- Gold Badge: Achieving More than 80% Score.
- Silver Badge: Achieving more than 70% Score.

RESULTS

There are eight areas of concern for each departments and department have to achieve following criteria:

- Criterion 1: Overall Score of the department (LR/OT) shall be $\geq 70\%$
- Criterion 2: Score of each Area of Concern of department (LR/OT) shall be $\geq 70\%$
- Criterion 3: Individual scores of three core Standards (B3, E18 and E19) shall be $\geq 70\%$
- Criterion 4: Individual Score in each Applicable Quality Standard $> 50\%$
- Criterion 5: Client Satisfaction of the department shall be more $\geq 70\%$

For labor room the results showed that overall score was 42.75 % while minimum scope for improvement was observed in quality (56%) followed by support services (36%) inputs (26%) outcome (25%) infection control (24%) inputs (22%) clinical services (21%) and service provision (8%). Score of B3, E18, E19 is 50%,59.45%& 37.5% respectively. Client satisfaction was not recorded (Table 2).

For operation theatre overall score was 48.5 % while minimum scope for improvement was observed in service provision (48%) followed by inputs (33%) outcome (28%) support services (27%) quality (11%) patient rights (6%) clinical services (6%) and infection control (13%). Score of B3, E18, E19 is 33.3 %,28.57%& 33.3% respectively. Client satisfaction was not recorded (Table 3).

Table 2: Score in eight areas of concern and scope for improvement in labour room (%).

Area of concern	Score obtained (%)	Minimum score for certification (%)	Scope for Improvement
Service provision	62		8
Patient right	48		22
Inputs	44		26
Support services	34		36
Clinical services	49		21
Infection Control	46		24
Quality	14		56
Outcome	45		25
Overall	42.75	70	-

Table 3: Score in eight areas of concern and scope for improvement in OT (%).

Area of concern	Score obtained (%)	Minimum score for certification (%)	Scope for Improvement
Service provision	22		48
Patient right	64		6
Inputs	37		33
Support services	43		27
Clinical services	64		6
Infection Control	57		13
Quality	59		11
Outcome	42		28
Overall	48.5	70	-

DISCUSSION AND CONCLUSION

The district hospital, Sitamarhi has to improve labour room by overall 28% points and for operation theatre by overall 16% to achieve 70% as per LaQshya guidelines. The various phase of the study identified prevalent challenges such as the lack of human resources, standard operating procedure for most of the key processes, organizational quality framework, prolonged stay of patient, non – calibrated instrument and equipment's which adversely affect the outcome of the facility.

According to experts at the national institute of clinical excellence in United Kingdom, once high priority areas have been identified, quality standards must be developed for providing maternal and child health. these quality standards must be customized to the maternal health profile of the catchment area. the main aim of developing these standards is to improve outcomes and to ensure transparency in the provision of maternal and Newborn care [8,9].

RECOMMENDATION

For improving the quality of labour room & Operation theatre quality circle should be form by the hospital management.

Quarterly assessment, gap analysis and action planning.

A précised action plan with SMART objective (Specific, measurable, achievable, realistic, time bound) should be made by Hospital Management.

There is an essential need of improvement in the inputs like human resource, medical supplies, infection prevention programme, bio medical waste management.

Convergence between state, district and hospital level officials and the development partners

Adherence of rapid improvement cycle.

Patient satisfaction survey, analysis and action planning should be done as per LaQshya protocol.

Training/ hand holding on emergency resuscitation, other clinical protocols, quality tool and techniques, biomedical waste management, infection control etc. should be provide to medical officers, nurses, paramedic, and other support staffs.

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