

Situation of labour room documentation at secondary level public health facilities of Cuttack district, Odisha, India – A SWOT analysis

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ABSTRACT

Background: Poor documentation practices in labour rooms have been a challenge especially in resource limited countries. This hinders the efforts towards improving quality of maternal healthcare services. Little effort has been made on this regard in many countries including India. SWOT analysis on labour room documentation would be the first step in understanding the situation, barriers and to formulate strategies for improvement. **Materials and Methods:** Facility based cross-sectional study was carried out in five secondary health facilities of Cuttack district, Odisha, India. A qualitative method using in-depth interviews among 26 healthcare providers was adopted for data collection and inductive content analysis approach for analysis. Strategies like pioneering, positive, conservative and resistive were formulated under each of the three major components identified. **Results:** Three major components emerged were i) Adherence and completeness of labour room records and reports, ii) Status of the monitoring and supervision and iii) Utilization of labour room data. Improving knowledge and skill through training and supportive supervision, adopting computer-based application for data management, better coordination among supervisors and labour room staff, infrastructural strengthening for documentation and its security, making documentation a priority, more accountability would improve the documentation. Ensuring data analysis and interpretation, discussion in review meetings and regular monitoring and supervision will improve performance. **Conclusion:** Ensuring documentation of labour room records, regular quality monitoring and supervision, and analysis and interpretation of data are critical to improve labour room performance. Making it a priority and adopting the strategies will achieve the same, thereby better labour outcome.

Keywords: Documentation, India, labour, Odisha, supervision, SWOT analysis

Introduction

Under Sustainable Development Goal (SDG), India has fixed the target to bring down the maternal mortality ratio (MMR) from 167 per one lakh live births in 2011–13 to less than 70 by 2030.^[1] Odisha, one of the states in eastern part of India having MMR

of 180 per one lakh live birth during 2016, needs multipronged strategies for improving maternal and perinatal health outcomes.^[2] Under National Rural Health Mission (NRHM), initiatives have been undertaken to standardize labor rooms (LR) and improve documentation. Clinical documentation and health information portability pose unique challenges in India.^[3] Quality documentation of patient care is an essential component for health care practices. Poor documentation including incomplete hospital discharge summary leads to difficulty in managing cases during their follow-up.^[4]

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Proper documentation helps in better decision making for patient care and early identification of the risk factors for prompt initiation of appropriate care.^[5] It helps in qualitative assessment of records during medical jurisprudence, death audits, and case review.^[6,7] Availability and maintenance of a good documentation system is also critical for facility level review of records.^[8] However, there exist gaps towards adherence and completeness in LR documentation. Studies have identified that low knowledge,^[9] inadequate skill and practice,^[10] stock out of maternal case sheets, and gaps in the health system such as lack of medical records department and inadequate supply of paper records as reasons for poor and/or improper labor documentation.^[11-13] A study from Odisha has found that while the adherence to partograph is 48.7%, only in 1.03% labor cases, it is completely filled-in.^[14] A study from Ethiopia showed that public health institutions didn't utilize partographs in labor rooms according to WHO recommended standard in spite of its supply.^[15] Quality care during delivery including monitoring of fetal heart rates (FHR) has potential to save newborn lives.^[16]

Exploring the scientific evidence and understanding the underlying basis is important to improve the labor room practices.^[17] Present study was intended to carry out a situational analysis on LR documentation in secondary facilities using SWOT framework and develop strategies to address the existing gaps. The findings of this study will help the primary care physicians and the facility nodal persons to strengthen their labor room facility for better maternal health care.

Material and Methods

Study setting and design

A facility-based cross-sectional study was carried out in five secondary health facilities (one district hospital (DHH), one sub-divisional hospital (SDH) and three community health centres (CHCs)) from Tigriria and Atthagarh blocks of Cuttack district, Odisha, India for a period of six months (April–Sept'2019).

Data collection and analysis

Qualitative method using in-depth interviews (IDI) among the healthcare providers with the help of a questionnaire guide in local language (Odia) was undertaken for data collection. A total of 26 IDIs among health care providers (5 doctors and 21 staff nurses) were carried out. Participants were having work experience in labor room and conducting deliveries. All the interviews were audio recorded with the consent of the participants and transcribed into English. Inductive content analysis method was used to analyze the data and categorize into major themes. The interview transcripts were coded according to the categories of SWOT (strength, weakness, opportunity, and threat). Based on the findings, SWOT strategies were established.

SWOT analysis

The study explored various strengths, weaknesses, opportunities, and threats relating to the documentation process. The data

were analyzed using SWOT framework, focusing on three major components- i) Adherence and completeness of LR records and reports, ii) status of the monitoring and supervision, and iii) utilization of LR data. This was done in three sequential steps a. factor analysis, b. developing the SWOT model, and c. strategy development.^[18]

Strategy development

Strategies were developed as pioneering strategies considering strengths and opportunities (SO), positive strategies considering strengths and threats (ST), conservative strategies considering weaknesses and opportunities (WO), and resistive strategies considering weaknesses and threats (WT).^[18] The SWOT analysis framework and strategy development plan is given in Figure 1.

Ethical consideration

This study was approved by the institutional ethics committee at ICMR-RMRC Bhubaneswar vide letter no. ICMR-RMRCB/IHEC-2019/027. Permission was also obtained from the Chief District Medical Officer (CDMO) of the Cuttack district and in-charges of study facilities. Informed written consent was obtained from all the study participants after appraising them about the purpose and objectives of the study.

Results

The mean years of work experience among the study participants was 10.3 (+/- 5.1) years (SNs 12.8 (+/- 7.4) years and doctors 8.6 (+/- 4.5) years). The SWOT findings under each major component are given below.

A. Adherence and completeness of LR records and reports

LR documentation-related information about maternal case sheets, LR registers, birth registers, and monthly reports was collected.

Strengths

Majority of the healthcare providers told documentation as an important component to strengthen LR services. Many of them mentioned that proper documentation would help them while for developing the monthly reports.

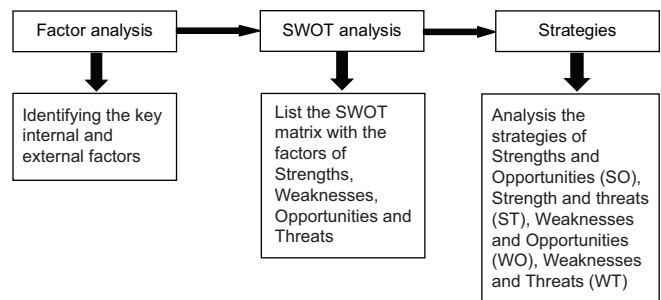


Figure 1: Process followed for the SWOT analysis and Strategy development

One staff nurse (SN) told- *“documentation helps us in aggregating the data for the monthly report and I feel the strength of documentation lies when we know what exactly we want from the data.”* (SN, CHC)

One doctor mentioned- *“Documentation is important, because if that patient comes with any complication later, we could know her history and see what medicines were administered, else managing such cases would be difficult.”* (Doctor, CHC).

All most all the participants opined that supply of logistics like case sheets, registers, and records were not an issue for documentation.

One LR in-charge told- *“We always keep stocks of records and registers at least for 3 months. In 2014, we had faced problem for no supply of the delivery record; since then, we always keep enough number of records in our facility.”* (Sister-in-charge, CHC)

Weakness

Increased workload and staff shortage pose difficulty for documentation. Many of the respondents recounted the issue of inadequate facility for documenting and keeping the records securely, shortage of staff, work overload, and lack of monitoring and supervision as reasons for poor documentation.

One SN mentioned- *“because of the workload and staff shortage, we are unable to completely fill-in every form, even if we want to do so. But yes, for the complicated cases, we do fill up the documents in detail.”* (SN, CHC)

Some participants also highlighted “no formal training on documentation” as a reason for improper documentation. Majority of the respondents stated that there was no regular monitoring and supervision from higher level, while few expressed on occasional visits to their LR by district higher authorities. Some respondents also mentioned lack of provisions to securely keep the documents as a reason for poor documentation.

One SN told- *“We have not received any training on documentation. None visits us to monitor what we have written. How will we know where our mistakes are?”* (SN, CHC)

Another SN mentioned- *“We do not have proper infrastructure where we can safely keep the records. Many times, they go misplaced causing difficulty in documentation.”*

Opportunity

Some participants suggested for having a computer-based documentation process. Many also suggested for handhold support, capacity building on documentation and data management.

One participant told- *“Instead of pen and paper, if government provides us computer, we could keep all the records and documents. We can easily*

search the data that will help us to easily prepare the monthly report as well as in sending the same through e-mail.” (SN, SDH).

Threat

Some SNs expressed the skill inadequacies to operate and manage the computers as threat for computerized documentation.

One of the participants mentioned- *“Even if we are provided with computer, we need training and handhold support to operate that.”* (SN, CHC)

SWOT analysis

The detailed categorization of internal factors (strength and weakness) and external factors (opportunity and threat) are presented in the SWOT model below [Table 1].

B. Monitoring and supervision mechanism for the LR

Monitoring and supervision (M and S) is critical to ensure the LR preparedness, performance, and documentation.

Strengths

Most of the respondents commented that they have in-house experienced senior staffs, which should monitor and supervise the documentation process.

One junior staff nurse told- *“We have four senior didi (SN) in our facility. If they could monitor us during each shift duty, we would probably document everything.”* (Junior SN, SDH)

“If the facility-in-charge could supervise that would be better. Unlike external supervisors, he can interact and discuss in detail.” (SN, CHC)

Weaknesses

The respondents suggested many weaknesses with regard to monitoring and supervision such as lack of capacity, no training, no use of supervision checklist, no priority, no proper documentation of supervision, and no action taken. All these impede the monitoring and supervision process. Lack of time and adverse working environment in the facilities were also noticed as factors for not having proper supervision.

One medical officer mentioned- *“Till date, I have not received any such training or orientation on documentation. So, I may not supervise the other staffs of the LR. I feel documentation process has not been prioritized yet.”* (Doctor, DHH)

None of the LR staffs were held accountable for the improper documentation.

A participant expressed her concern, as- *“If everyone does the documentation, then we will also do. Nobody actually takes the responsibility to fill-in the documents completely. If someone in their shift could not complete, then in my shift, I do not know what to write, hence it remains incomplete. I would suggest giving accountability to someone to maintain the records will ensure the records getting updated.”* (SN, CHC)

Opportunities

Many of the respondents suggested for regular supportive supervision by the district and state health team and strict instructions for accurate and complete documentation.

A SN expressed- *“I would say giving responsibility to facility-in-charge, weekly follow up, discussion in monthly review meetings and hand-holding learning will improve documentation.”* (SN I/C, DHH)

Threats

Busy schedule of supervisors and lack of coordination among supervisors and LR staffs were some of the challenges.

One participant told- *“if the supervisor is busy and could not give time, it is not going to help. Instead he should assign someone else for supervision.”* (SN, SDH)

SWOT analysis

The strengths, weaknesses, opportunities, and threats for monitoring and supervision to ensure documentation are presented in Table 2.

C. Utility of LR data (practice of data analysis, interpretation, and action)

Analyzing and interpreting the LR data is critical to understand the performance and identify the existing gaps, so that necessary action could be undertaken to achieve better labor outcomes.

Strength

Except for sharing the LR data to centre through monthly reports, the data were rarely being used to assess LR performance.

One staff nurse mentioned- *“we do not know about data analysis, its interpretation and how to take action accordingly. We know only the clinical work for mother and child.”* (SN of CHC)

At CHC and higher facilities there are data entry operators (DEO), who can be trained to analyze the data and appraise the LR performance.

Weakness

Inadequate knowledge to analyze and interpret the data, low level of interest on data analysis, busy schedule for providing clinical care, and low felt priority for documentation were the weaknesses for proper data utilization.

Opportunity

According to some of the respondents, imparting training on data management through the existing maternal health trainings could be a better option to educate the health care providers. Automated data analysis using digital platforms would also be useful.

Threat

Staff shortage and work overload act as challenges. Adopting digital platforms for analyzing the data could be threats. The SWOT findings are detailed in Table 3.

Table 1: SWOT model for LR records and reports

<p>Strength:</p> <ul style="list-style-type: none"> Understanding on the importance of documentation Availability of logistics (records, registers and reports) 	<p>Weakness:</p> <ul style="list-style-type: none"> Staff shortage Work overload Inadequate facility to keep documents securely Skill inadequacies Lack of monitoring and supervision No formal training on documentation
<p>Opportunity:</p> <ul style="list-style-type: none"> Computer-based software application for documentation and data analysis Existing maternal health training programs 	<p>Threat:</p> <ul style="list-style-type: none"> Adherence to new policy and guideline Reluctancy towards computer learning (among senior staffs)

Table 2: SWOT model for LR monitoring and supervision

<p>Strength</p> <ul style="list-style-type: none"> Facility-in-charge and senior staffs as supervisors Existing SOPs and tools for monitoring and supervision Ongoing trainings on maternal health (SBA, Dakshyata) 	<p>Weakness</p> <ul style="list-style-type: none"> Inadequate competency for monitoring and supervision No formal training on documentation No priority or action driven initiatives on documentation
<p>Opportunity</p> <ul style="list-style-type: none"> Involvement of district and state program team Involvement of Medical college Monthly review meeting 	<p>Threat</p> <ul style="list-style-type: none"> Supervisors overburden with other priorities Coordination among the supervisors and staffs Resource support to engage external members for M and S

Table 3: SWOT model for utility of LR data

<p>Strength:</p> <ul style="list-style-type: none"> Availability of DEO District/Facility level monthly review meetings 	<p>Weakness:</p> <ul style="list-style-type: none"> Poor knowledge on data handling and interpretation
<p>Opportunity:</p> <ul style="list-style-type: none"> Training related to data management could be integrated in the existing MCH training programs Discussion related to data utility in monthly review meetings 	<p>Threat:</p> <ul style="list-style-type: none"> Work overload HR constraint

Strategy development

Four different strategies (pioneering, positive, conservative, and resistive) under each of the three major components are depicted in Table 4.

Proper and regular documentation in the labor room is critical to achieve quality maternal and neonatal care during delivery. To achieve this, different strategies need to be undertaken for improving a. adherence and completeness of LR records, b. LR monitoring and supportive supervision, and c. Better

Table 4: Strategies for improving LR documentation

Strategies	Improving adherence and completeness of LR records	Improving LR monitoring and supervision	Improving utility of LR data
SO (pioneering strategy)	<ol style="list-style-type: none"> 1. Introducing computer-based software application for LR documentation along with auto analysis of the data 2. Incorporation of training on documentation into the existing maternal health related training program 	<ol style="list-style-type: none"> 1. Regular LR monitoring and handhold support by supervisors 2. Mentoring support on documentation by domain experts of medical college 3. Review of LR documentation in monthly review meetings 	<ol style="list-style-type: none"> 1. Regular LR data analysis by DEO and trained staff 2. Corrective action to improve documentation
ST (positive strategy)	<ol style="list-style-type: none"> 1. Inclusion of documentation process in the existing maternal health guidelines and instruction for its strict implementation 	<ol style="list-style-type: none"> 1. Ensuring better coordination among supervisors and LR staffs 2. Financial provision in the PIP towards external monitoring of LR 3. Including training on M&S in the existing maternal health trainings 	<ol style="list-style-type: none"> 1. Orientation to newly recruited staff on LR documentation and data management
WO (conservative strategy)	<ol style="list-style-type: none"> 1. Recruitment and training of vacant LR staffs (SN, HWF) 2. Provision of infrastructural facilities for documentation and storing of the reports, records. 3. Ensuring LR M&S involving experienced staffs 	<ol style="list-style-type: none"> 1. Fixing accountability for LR documentation and having action-driven regular M and S 	<ol style="list-style-type: none"> 1. Sensitization to LR staff on analyzing the data and interpreting the results
WT (resistive strategies)	<ol style="list-style-type: none"> 1. Training to staffs on computer/application-based documentation 	<ol style="list-style-type: none"> 1. Training on M and S for the facility supervisors 	<ol style="list-style-type: none"> 1. Involving DEO and supervisors for onsite/on job training to LR staff on data analysis, interpretation

utilization of LR data. Under pioneering strategies shortage of (SO), computer-based LR documentation; regular LR monitoring, mentoring support and review; and regular LR data analysis, interpretation, and finding driven action will be helpful. Under positive strategy (ST), inclusion and prioritization to LR documentation in the existing maternal health program; better coordination among supervisors and LR staff; financial provisioning for external monitoring; and orienting the LR staff on data management will be useful. Under conservative strategy (WO), recruitment and training of LR staffs; ensuring infrastructural facilities; assigning accountability on LR staff for documentation; and sensitizing the LR staff on data analysis and interpretation will be helpful. Under the resistive strategies (WT), training the LR staff on computer-based documentation; training the supervisors and monitoring and supportive supervision; and involving the available data entry operators and supervisors for on job training to LR staff will improve the documentation and quality of maternal health care in labor rooms.

Discussion

To our knowledge this is the first ever study to interpret the situation of LR documentation through a SWOT framework using qualitative data and deriving strategies on this important yet neglected component. Understanding the importance of documentation among staff, availability of logistics for documentation, experienced supervisors, standard operating procedures (SOPs), tools for monitoring and supervision, and software platforms for documentation and data analysis were noticed as strengths. In contrast to our findings, a study among

the medical students has found low awareness on the importance of documentation.^[19] Another study from Uganda has noticed non availability of logistics such as blank partograph papers in most of the health facilities.^[20]

The weaknesses elicited from our study were scarcity of healthcare providers, work overload, lack of monitoring and supervision, low priority, and non availability of facility to document and keep the documents. These weaknesses have similarly been highlighted in many other studies.^[21-27] Studies have identified factors such as time constraint, attitude of the midwives, availability of few numbers of midwives in a shift^[5,6], and no emphasis from the administrators^[19] to influence the incomplete LR documentation. A qualitative study on maternity care in secondary level public health facilities of Uttar Pradesh, has highlighted the availability of infrastructure, human resources, supplies, and medicines as critical for quality improvement in service delivery.^[28] A study from Nepal has shown that addressing the facility level gaps through regular monitoring, ensuring availability of adequate staff, proper supply chain management, supervision, and capacity building are important to improve quality care.^[29]

Considering the local scenario and present health system context, the opportunities that could be leveraged include introducing computer-based applications for documentation, incorporation of training on documentation into existing maternal health training programs, involvement of district, state health team and experts of medical college hospitals for supportive supervision, and review of documentation in monthly review meetings. A study in surgical wards has showed that simple

measures help in streamlining medical notes and improve the quality of documentation,^[30] while another study on clinical documentation has suggested the hospital documentation should be electronically retrievable.^[25]

The threats for ensuring LR documentation were identified as the busy schedule and poor coordination among health care providers and supervisors, adherence to new guidelines, reluctance to computer learning among senior staffs, and human resource (HR) constraint. Inappropriate documentation causes a negative spiral resulting severe health complications.^[31] A study on neonatal intensive care unit (NICU) facility level documentation has suggested that electronic health record more effectively improves documentation.^[32]

Introducing computerized software application for documentation and data analysis, incorporation of training on documentation into the existing maternal health related training program, emphasizing documentation process in the existing maternal health guideline and its strict adherence, recruitment of LR staffs and their orientation on documentation, and involving experienced staff for M and S will improve the status of LR documentation. A study on medical documentation has suggested that with the assistance of speech recognition, there is an increase in documentation speed, document length, and participant mood compared to self-documenting.^[33] Another study from Ethiopia has found that training on documentation enhances knowledge and creates awareness on documentation to nursing care.^[34] According to a study from Rajasthan, India, repeated facility visits combined with actions at the level of decision makers can lead to substantial improvements in quality of care.^[35]

Study limitations

Present study has used qualitative data for the SWOT analysis and deriving the strategies. There are studies that have similarly used qualitative study findings for SWOT analysis.^[36,37] Eliciting opportunities and threats from qualitative studies could be a limiting one. Also, the study was limited to findings from only one district of Odisha, which could be greatly influenced by district and state specific practices. So, its results need to be carefully generalized.

Conclusion

Present study is the situational analysis (SWOT analysis) done using the qualitative research findings imbibing the ground level realities. Based on the available strengths and weaknesses and determining the opportunities and threats, four different strategies [Pioneering (SO), Positive (ST), Conservative (WO), and Resistive (WT)] were developed. The findings of this study highlight the importance of labor room documentation, data analysis, and interpretation and evidence-driven action at local facility level to ensure better maternal and neonatal health care in the labor room. Documentation is critical for evidence synthesis, albeit it is less prioritized in current health system scenario. This study was an effort to explore the internal and external factors

and derive strategies for improving adherence and completeness of LR documentation. The strategies emerged from this study will help the policy makers, program officers, and researchers to adopt in context similar situations for improving labor room performance.

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Conflicts of interest

There are no conflicts of interest.

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