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ENABLERS AND BARRIERS IN ESTABLISHING AN AUDIT SYSTEM FOR STILLBIRTHS AT PALANI HEALTH UNIT DISTRICT, TAMIL NADU, INDIA, 2023-2024

Sridhar Lakshmipathy [(1)], Madhan Raj Kalyanasundaram [(2)], Dilip Kumar Rajendran [(2)], Anitha Rajmohan [(3)], Aravindh Krishnan Mayavel [(4)]

(1) Upgraded primary health centre, Mannavanur, Kodaikanal, Palani Health unit District
(2) ICMR School of Public Health, ICMR-National Institute of Epidemiology, Chennai, Tamil Nadu, India
(3) District Health Officer, Palani Health unit District, Dindigul, Tamil Nadu, India
(4) Block Medical officer, Kodaikanal, Palani Health unit District, Tamil Nadu, India

ABSTRACT

INTRODUCTION : Among the estimated two million stillbirths globally, two thirds happen in Asia and Africa and India alone records one tenth of it. India enacted 'Every Newborn action plan', proposed by 'World Health Organization' to count every newborn and measure cause specific mortality and action in 2014-15. Although states like Tamil Nadu is good in health indicators, it lacks stillbirth auditing. Various stakeholders in Health Unit Districts like Palani wanted to explore the perceived enablers and barriers in establishing stillbirth audit system.

METHODS : We did an exploratory qualitative study in Palani Health Unit District, Dindigul district, Tamil Nadu during January-April, 2024; interviewing various stakeholders in health department and mothers. We did a purposive sampling with analytical framework approach using six steps of the mortality audit cycle developed by World Health Organisation. We did In-Depth Interviews (IDI)s and Focus Group Discussions (FGDs); audio recorded, transcribed and thematic analysis was done to identify the perceived enablers and barriers after obtaining necessary ethical and administrative approval.

RESULTS : We conducted 12 interviews, with 24 participants of median age 39 years. There were 9 IDIs and 3 FGDs. Majority, were women participants. Enablers identified are the availability of established system processes and the availability of a system with audit steering committee and mechanisms which are routinely doing maternal and infant death audits which included established communication mechanisms, emotional connections with families, existing workforce, and supportive web-based systems. Barriers included neglected notifications, cultural impediments, anger from grieving families, information suppression, accusatory attitude, and lack of system commitment. Every stakeholder interviewed wanted stillbirth to be audited.

CONCLUSION : Our study demonstrated the perceived need for stillbirth auditing among stakeholders and highlighted that existing audit mechanisms for maternal and infant mortality can be efficiently utilized to include stillbirth auditing in the district. The study also identified gaps in the existing auditing system, particularly in the approach to conducting audits, and emphasized the need for an attitudinal shift and soft skills training for the authorities conducting the audits.

KEYWORDS : Stillbirth, Death Audit, Grounded theory

INTRODUCTION

A baby who dies after 28 weeks of pregnancy, but before or during birth, is classified as a stillbirth. One stillbirth happens every 16 seconds, amounting to two million every year, with two thirds occurring in Asia and African nations.[1] Ten percent of these are in India.[2] Stillbirth audit system, is one of the established strategy to reduce the burden of stillbirths.[3] Many developed nations adopted stillbirth audit systems, and have demonstrated its impact on reduction of stillbirths[4] and this strategy was successfully implemented in some of the African countries as well.[1]

The WHO's 'Every Newborn Action Plan,'[5] which India embraced in 2014–15 as INAP (Indian Newborn Action Plan),[6] recommends stillbirth auditing as one of the strategies to enhance the health of mothers and children. Although, the Registration of Births and Deaths Act of 1969 mandates stillbirth registration; however, it is not enforced.[7] Even though studies indicate that stillbirth audits are feasible[8] and have the potential to prevent 60% of stillbirths, they are not being implemented in Indian states including Tamil Nadu, which has a well-functioning public health system and the health indicators of the state are comparable to the developed

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Corresponding Author: Sridhar Lakshmipathy
e-mail : Sridhar.1.dr@gmail.com

nations. Tamil Nadu's stillbirth rate (6.1/1000) is lower than the rest of India (10.6/1000) as per Health management information system data (HMIS) and by adopting stillbirth audit, there is further scope to reduce the stillbirth rate in the state.

As part of an academic activity in the Dindigul district, Tamil Nadu, we evaluated the Pregnancy Infant Cohort Monitoring and Evaluation (PICME), Health information system.

During this evaluation, we discovered that while the system documents the number of stillbirths, it does not record their causes also, there were instances where early neonatal deaths might be mistakenly documented knowingly or unknowingly as stillbirths to escape infant death auditing. This gap in information prompted discussions with key stakeholders, during which the need for establishing a stillbirth audit system became apparent.

To address this need, it is crucial to explore in detail the perspectives of stakeholders regarding the enablers and barriers to developing such a system.

We also found that there is an existing auditing mechanism for maternal and infant deaths, somehow, we had a question on why stillbirths are not audited with the same existing mechanisms or system. We conducted this study with the objective to explore the perceived enablers and barriers in establishing an audit system for stillbirths among the stakeholders at Palani health unit district, Tamil Nadu, India, 2023 – 2024.

METHODS

We conducted an exploratory qualitative study in Palani health unit district from January to April 2024. The study participants included key stake holders involved in audit system for infant and maternal deaths of Palani health unit district.

They are district audit chair persons, block administrative persons, block level community health workers and mothers who suffered stillbirths and mothers who suffered infant deaths in the past one year. For the stakeholders, except for the mothers, we included minimum work experience of six months within the health unit district or within the district as the inclusion criteria.

Purposive sampling with maximum variation based on demographic profile and expert sampling as applicable were used for identifying the various key stakeholders involved in the audit process of infant and maternal deaths within the health unit district. (Table 1)

Table 1: Sampling technique used to interview study participants at Palani Health unit District, Tamil Nadu, India

Category of stakeholder	Qualitative method used	Total interviews/ discussions	Sampling technique used
District audit steering committee members	IDI	4	Expert sampling
Block administrators & supervisors	IDI	3	Expert sampling
Mothers	IDI	2	Purposive sampling
Sector health nurses	FGD	1(six participants)	Purposive sampling
Village health nurses	FGD	1(five participants)	Purposive sampling
Urban auxiliary nurse midwives	FGD	1(four participants)	Purposive sampling

We used a framework analysis approach for interviewing the stakeholders involved in the auditing process. The research team adopted six steps involved in verbal autopsy mortality audit cycle for auditing stillbirths and perinatal deaths which was developed by the World Health Organization(WHO) as the operational framework to guide the qualitative interviews and the analysis of the qualitative data.[9]

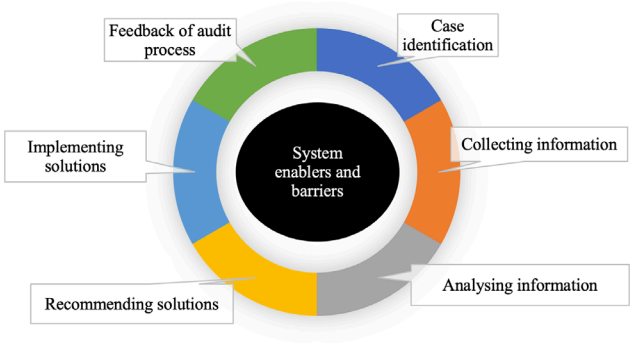

Fig 1. Framework for analysis using the six steps of verbal autopsy mortality audit cycle developed by World Health Organisation (WHO) starting with case identification to feedback of audit process.

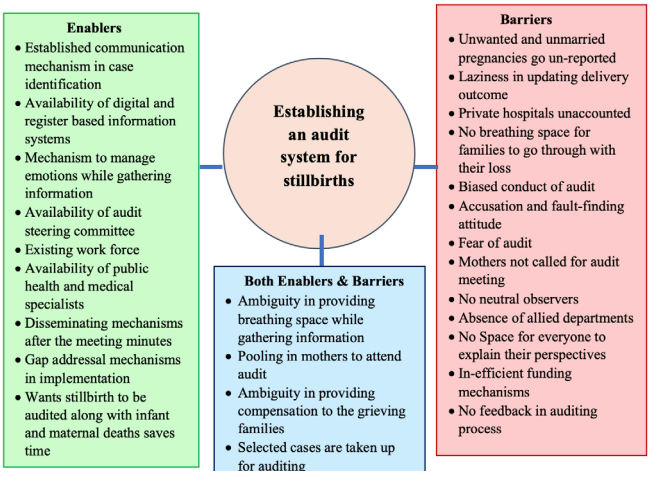

Fig 2: Flow chart describing the enablers and barriers in establishing an audit system for stillbirths at Palani health unit district, Tamil Nadu, India, 2023-24.

Table 2. Thematic analysis on enablers and barriers in establishing a stillbirth audit system, at Palani health unit district, Tamil Nadu, India, 2023-24

S.No.	Theme/ Domain	Sub-themes/ Categories	Codes
1	**Case identification- Enablers**	Established communication mechanisms	Social connectedness between field workers and community; Rapport between field staff and allied departments; Link staffs in government facilities; family will convey to field staff; cross notification system; other district field staff convey; Utilising social media; Digitally updating the delivery outcome
		Emotional Connect	Field staff providing emotional support; Visiting the family at hospital; Explaining it to the family; Emotional connectedness of family with the staff
	Case identification- barriers	Neglected notification	Link staff fail to convey; Delay in updating delivery outcome real time; Some private facilities not communicating; affluent mothers not communicating to the staff; systematic flaw in supervising private facilities;
		Cultural impediments	Unwanted & unmarried pregnancies; Migrant and nomadic communities; Language; affluent families; social values; geographical terrain
		Projected anger towards the system	Anger towards the entire health system
2	**Collecting information- Enablers**	Existing workforce	VHN is the initial inquiry person; on-site support by supervisory staff and medical officers; doing home visits to gather information
		Validation mechanisms for information collected	Multiple cadres involved; co-relating with records; mother's notebook; sending back for corrections
		Sharing sorrow	Visiting at facility and home; being with family; spending more time with family; frequenting visits; Families trust VHN's more
		Utility of web based and register based information systems	Registers are useful & trusted in outreach sites; Registers have flexibility; digital portals promote information transparency; suggested inter-linkage of multiple web portals; suggested VA form to be added in web portals; incorporating stillbirth component with existing infant & under 5 mortality form;
	Collecting information - Barriers	Information suppression	Possibility to hide; if all decided to hide; vacancy; Collective decision to falsify and hiding, fudging case sheets
		emotional road-blocks in gathering information	Mothers scolding due to anger; Angry with whole department due to some fault during management; Greif due to loss and not co-operating; Not interested in auditing; No cooling period to go through loss
		Hurdles in health information systems	Delay in getting case sheets from hospitals; Falsifying information entered in case sheets; In-adequate documentation in private facilities; Limited private facilities are provided with login access; Falsifying information entered; Contradicting guidelines; No real time data entry; Multiple web portals; Overburdened due to repetition; Inadequate information in web portals;
3	**Analysing information- Enablers**	Audit review panel	Chair members in CEMONC audit; Attendees in audit committee; Medical officer presenting the case; Pooling in private facilities for auditing;
		Perceived need for change in audit conduct	Perceived there should be un-prejudiced view; Perceived that relative of deceased to attend audit; Perceived that space for everyone to explain; Perceive that stillbirth to be audited, Mother's perceived that that other's should not be affected in same way; Perceived that soft skill training is needed
	Analysing information- Barriers	Lack of system commitment	No funding mechanism for conduct of audit; Travel & convenience allowance for relatives of the deceased not provided
		Lack of emotional intelligence	No neutral observers in audit meeting; 108 co-ordinators not attending audit meeting; blood bank medical officers not attending audit meeting;Ambiguity to bring relatives to audit; discussion with relatives will lose trust among the community; Staff can't work in that area again; Doctors and staff are made to stand during audit meeting along with mothers; Treating badly at audit meeting; Only select infant deaths are taken up for auditing; Perceive that no soft skill training provided to conduct audit
4	**Recommending solutions- Enablers**	Synergistic approach	Medical specialists; Public health specialists; Perceive that review based on lacunae and deviation from guidelines; Managing conflicts; conducive environment across chair members
		Documenting & disseminating insights	Documenting meeting minutes; disseminating meeting minutes; utilizing social media to disseminate information.
		Loss compensation mechanisms	Perceived that compensation to be given for the loss; suggested that Insurance based mechanisms for compensation
	Recommending solutions-Barriers	Disagreements & insensitivity	Conflicts across directorates; Relatives perspective un-accounted; in-sensitive to a problem
		Accusations and engagement/motivation waning	Blaming; fault finding; biased conduct of audit; Partiality to medical college doctors; crying and emotional because of accusation; losing interest
5	**Implementing solutions - Enablers**	Strategic planning & problem addressal	action plan after audit meeting periodically; addressing ground level difficulties; Addressing case specific issues; Monitoring the implementation; Innovative ideas; Monitoring near miss cases
		Innovative ideas	Introduction of epi-collect application to monitor high risk categories; EDD control room at district level; holistic problem addressal for each case
	Implementing solutions - Barriers	In-efficient funding mechanisms	Timely distribution of funds not done; hindrance in training to address gaps; inadequacy in infra-structure for training
6	**Feedback in audit process - Enablers**	Perceived need for feedback	Perceived that opinions should be obtained periodically
	Feedback in audit process - Barriers	Hierarchical feedback	Hierarchical addressal of the problem; some conflicts hindering scaling up of the problem
		Lack of existing feedback system	No opinions asked like that until now

Data were collected using open-ended interview guide. Topic guides were developed based on the research team's operational framework; with separate guides for various stakeholders. Probing techniques were used to avoid distractions. Participants were assured orally that findings will only be shared in summary form. The primary author, conducted FGDs and IDIs, had a formal training in qualitative research (three-weeks module) as a part of the MPH training program. Interviews and discussions were voice recorded in the local language using an Android device, after getting written informed consent. The topic guide was dynamic and modified based on ongoing interviews and discussions.

The audio files were transcribed in Tamil using verbatim transcript and was translated to English as edited transcript, with care taken to avoid any loss in the context and meaning. Participant confirmation was ensured with the transcribed data, by reading out it to two of the participants to ensure its correctness.

We followed a hybrid approach to qualitative thematic analysis, incorporating both deductive a priori themes derived from the research questions and operational framework (the six steps of the mortality audit cycle, enablers and barriers under each of the steps) and a data-driven inductive approach carried out following data collection. After data collection, we used an inductive approach in data coding and applied the principles of thematic analysis as described by Clark and Braun,[10] which had six stages.

The first stage was data familiarisation, which required us to become familiar with the data through

repeated readings of the interview transcripts. We also began to note our initial observations during this stage.

Next was the process of coding. Three transcripts were initially coded independently by the primary author and it was reviewed by the research team. After independently coding these three transcripts, we created a codebook and added codes that inductively derived from the interviews.

Any differences in coding were discussed and resolved. The remaining transcripts were then coded using this codebook. New issues identified in these interviews relevant to our study were given new codes and added to the codebook, and were organized according to the operational framework.

In the third stage, we examined our coded data, assessing how well they fit and whether they addressed our research questions. In the fourth stage, we began to formalise our sub-themes and categories of analysis, reflecting on whether these sub-themes and categories were convincingly and credibly related to our data.

In the fifth stage, we labelled and defined each sub-theme and category, describing in detail what each signified. In the sixth stage of the analytic process, we brought forth a coherent explanation of our study findings. The perceptions emerged from the different group of stakeholders triangulated to ensure its validity. Finally, we sorted and selected quotes and placed them under the appropriate themes and sub-themes.

The study was conducted after obtaining approval from institutional ethical committee clearance of ICMR-NIE. Participants were provided information in local language about the purpose of the study, confidentiality, and their rights to withdraw at any time. Informed consent was sought from all the study participants.

RESULTS

We conducted 9 in-depth interviews from the block administrators, obstetricians, district second level staff involved in maternal and child health services, and audit steering committee members/district administrators. The 3 focus group discussions were from field staff such as Sector Health Nurses, Village Health Nurses and urban Auxiliary Nurse Midwives. The median age of the 24 study participants is 39 years and inter-quartile range is from 33-49 years. Among the 24 participants, only 2 were men leaving the rest 22 participants were women, as more women are empowered in maternal and child health services. We had a priori themes derived and relevant categories as sub-themes emerged are organized under the priori themes.

Theme/Domain 1: Case Identification

Enablers for case identification:

1.1 Established communication mechanisms: Participants highlighted the availability of established communication mechanism for effective case identification. Case identification was facilitated by good rapport between field personnel and affiliated departments, such as Anganwadi workers. By using social media, link-staff in government facilities maintained smooth information flow. Transparency was increased and fewer cases were overlooked because of digital updates on delivery outcomes.

'People in that area will inform about the incident, when we go there. it may be a boy or a girl or an adolescent girl or any person whom we were interacting earlier' – PKFV1V3, 39Years/F/VHN

'If the patient is gone to some other place, we should give cross notification. That particular village health nurse (from the cross notified area) will call us and inform'. – PKFU2U6, 33Years/F/ANM

1.2 Emotional connectedness: Stakeholders re-iterated the importance about their emotional connection between field staff and the families. They visit the hospital to provide emotional support, they act as a bridge between the hospital and family. This encouraged trust on the field staff, as they are interacting with the families from the ante-natal registration period and following them up.

'If we get the information, we will be visiting the hospital, if it is nearby. We will give a psychological support to the mother. We will visit her daily until she gets discharged from hospital. We will be explaining to the families.'– PKFU1U23,32Years/F/ANM

'We are interacting with the family and the mother right from the date of antenatal registration. So, whatever the outcome of the delivery will be known to us by them. they won't hesitate to inform us' - PKP1V4/31Years/F/VHN

Barriers for case identification

1.3 Neglected Notification: Link-staff failing to communicate, delay in updating delivery outcomes, un-cooperation from private facilities hampers case identification in time. Rich moms frequently kept their delivery status ignoring to inform institutions. Identification of cases was further complicated by systematic shortcomings in private facility supervision.

'There is a systematic flaw in monitoring private facilities, the level of care that they give and un-cooperation in updating us is always there' – PDIDA4,47Years/F/DHO

'At some houses, they will close the gate and they will not let us in. There will be dogs in front of the house. we can't enter those houses. I gave the number and why are you frequently

disturbing us at home' – PTICF6,59Years/F/CHN

1.4 Cultural impediments: The social stigma associated with teenage pregnancies and unplanned or unmarried pregnancies hindered reporting. Communication was hampered in migrant and nomadic populations by language & cultural obstacles. After an incident, wealthy families avoided government employees due to social norms.

'If there is a teenage accidental pregnancy, the family and the girl might hide it. In these circumstances, if they go and reach out to any untrained persons, there is a possibility that stillbirth might go undocumented.'- PKFS2S3,60Years/F/SHN

1.5 Projected anger and frustration: The grieving families were not co-operating to the audit process, as they were not satisfied with the treatment given in hospitals and directed anger towards the health system as a whole.

'If the family finds that the baby died due to some fault in treatment, they will not only be angry with the hospital, they will be angry with the system as a whole. They will scold our field staff also and send them away'- PDIT12, 38Years/M/DMO

Theme/Domain 2: Collecting information

Enablers for collecting information

2.1 Existing work force: Participants stated that existing work force is sufficient to gather information. Village Health Nurses were the first point of contact, supported by medical officer and supervisory staff. They visited mother's house to get information.

'There is an infant death. We will send FIR with in twenty-four hours to the office. Later within seven days we will visit the mother's home; MO, SHN, VHN will go together to visit' – PKF2S4S11,60Years/F/SHN

2.2 Validation mechanisms for information collected: Involvement of multiple staff cadre, medical records, web-portals and mother's treatment note books aid in credibility of information collected. The forms were returned back for corrections if found discrepancies.

'We are writing in a notebook which will be given to the patient about all the visits done at every health facility. So, the date and time of visit at every health facility is documented both in the patient's notebook and in the facility registers' - PDI2B6,47Years/F/DHO

'We have a supervisory tire. We have the VHN who will be supervised by the SHN followed by the CHN and the MO of the PHC. Secondly, we have the DMCHO as the nodal person for this'. – PDI3C14,38Years/M/DMO

2.3 Sharing sorrow: Emphasis was placed on showing empathy by spending time with families in hospitals and in their homes, paying them regular visits, and showing sympathy for their loss.

'If a baby dies, we will be with them until handing over the baby. We will be spending time with the family for another two to three days. So, we will be there with them to support emotionally and psychologically'. – PKF1U1U34, 32Years/F/ANM

2.4 Utility of web based and register based information systems: The benefits of web-based and register-based information systems were emphasised by the participants. In outreach situations with weak signal reception, paper-based registers were flexible, while digital portals provided transparency. Adding verbal autopsy forms and connecting several web portals could increase the effectiveness of data collecting.

'We are maintaining registers. We will fetch reports from those registers only. In the PICME portal, we (ANM) will enter the information about delivery outcome except a few private facilities' – PKF1U1U11, 32Years/F/ANM

'This (verbal autopsy form) shall be added in the PICME portal, so that it is easily retrievable' – PKF2S5S10,60Years/F/SHN

Barriers in collecting information

2.5 Information suppression: Suppression of information was a problem since field employees might collectively conceal information. The accuracy of the data was compromised by staff vacancies and data fabrication, including faking case sheets.

'If that VHN is very close to the supervisor tire, then there is a possibility that they may hide few information. This is going to be a challenge' – PDI3C14,38Years/M/DMO

2.6 Emotional road-blocks in gathering information: Anger with the healthcare system and the lack of a 'cooling period' to allow families to grieve their loss before interacting with the staff acts as a great barrier in gathering information

'If we give a breathing space and it will be nice' - PDI3C16,38Years/M/DMO

2.7 Hurdles in health information systems: On the health information system front, obstacles include incomplete documentation in private clinics, information fabrication, and delays in receiving case sheets from hospitals. They were overburdened due to repetitious data entry across several web portals and a lack of real-time data entry.

'There will be a contradiction within us (paediatrician & obstetrician) in this regard. The baby delivered normal, we saw the baby cry, suddenly there is a desaturation; likewise, we will explain our point. He (paediatrician) will simply say that this is severe birth asphyxia and I could say this is a

stillbirth.'. – DKI7G38,38Years/F/MO

3.3 Theme/Domain 3: Analysing information

Enablers in analysing information

3.1 Audit review panel: The participants identified availability of dedicated audit review committee in place for infant and maternal deaths as an enabler., they also described about all the attendees in the audit committee.

'The district audit team is headed by district collector followed by the DD, JD and Dean. These are the top secretaries for that audit, then the HOD's such as obstetrics and paediatrics will be present. Then at the bottom of stage, which ever facility is involved in that particular incident; then the entire team of doctors and field staff from those facilities will be present'. - PDI3C19,38Years/M/DMO

3.2 Perceived need for change in audit conduct: Participants desired family members of the deceased to attend meetings, and they felt that audit conduct needed to improve. Participants recommended adding stillbirths to the current audits and emphasised the need of allowing everyone to voice their ideas. Mothers were eager to take part in audit sessions in order to shield others from going through similar difficulties. It was also suggested that audit conductors receive soft skills training.

'The persons who are at the top should see it properly on whose fault is this. Either it could be village health nurse, staff nurse or any government hospital.' – PKF1F4F88,32Years/F/ANM

'This is because we are visiting the families in the field. It was known to the patient's family. Since they are not attending the audit meeting, the entire blame is put on the field staff.' - PKF3F2V19,43Years/F/VHN

'I would like to come and attend the meeting, if called by the collector, (with tears in her eyes), no mother should suffer the same fate, it is difficult to explain' – PKI8H9,25Years/F/M

Barriers in collecting information

3.3 Lack of commitment from health system: A major obstacle was the lack of commitment, which was exacerbated by the absence of important stakeholders such as mother's who lost their babies, a lack of a specific financing system and restricted resource allocation. Also, audit meetings were not supervised by impartial observers.

'The family of that deceased person, should be brought to the audit meeting. This is especially for maternal death. So, we have to bear all those expenses. The transportation expenses of the family member, the food expenses.'– PKF3V1V40,38Years/F/VHN

'No such (neutral audience such as NGOs, lawyers) persons.' – PKI1B34/40Years/M/BMO

3.4 Lack of emotional intelligence: Participants were worried that questioning family members in audits in front of staff and doctors might erode public confidence in the medical field. Staff were disrespected during audits and feared returning to work in the area again. Lack of training in soft skills affected auditors' ability to communicate and empathise inter-human respect.

'If the higher officials are questioning in front of the attender, it would create a mindset that this doctor has made some fault. They do not understand our routine discussions. They did some mistake and because of this the baby died. This perception will break the trust of the medical community with the public'- DKI7G28,38Years/F/MO

'Personally, I feel that there should be some soft skill managerial training to be given to all the district administrators and specialists for the way audit has to be conducted' – PDI2B13,47Years/F/DHO

Theme/Domain 4: Recommending solutions

Enablers for recommending solutions

4.1 Synergistic approach: Participants perceived a synergistic approach which emphasizes collaboration between medical specialists and public health specialists. They also perceived that reviewing audits should be based on identified gaps (lacunae) and deviations from established guidelines.

'That is if the Collector, JD, DD and the Dean are in the same frequency; We will be providing a conducive and environment to sort out the MCH indicators' – PDI2B13,47Years/F/DHO

4.2 Documenting and disseminating insights: Participants identified diligently documenting key points from audit meetings through meeting minutes. These meeting minutes will then be disseminated to relevant stakeholders through e-mail and social media, ensuring everyone is informed about the meeting minutes.

'We will be documenting the minutes. For each death, these are the gaps. These are the action to prevent each death will be documented. We will share these minutes; Other than that, we will be discussing it during the monthly review meetings.' - PDD4D27/49Years/F/MCHO

4.3 Loss compensation mechanisms: Participants suggested that, offering some form of compensation to families who experienced deaths; focused on insurance-based mechanisms, potentially offering financial support to go through their difficult times.

'If it is especially maternal death, if some compensation is given, it will be useful for her babies. That should be some kind of insurance that could be managed'. PKF3V1V36/38Years/F/VHN

'If there is a maternal death, her babies may be given some

money through insurance schemes'. - PKF3V3V36,36Years/F/VHN

Barriers for recommending solution

4.4 Disagreements and insensitivity: Participants emphasized disagreements and conflicts between different departments within the healthcare system hindering the audit process. Additionally, the participants said that the perspectives of relatives of the deceased were often disregarded,

'There will be some conflict of interest during the process of audit meeting; if there is a problem with our staffs; we won't allow other directors to put an allegation on them. Also, it is a coordination and teamwork across the directorates.' - PDI2B13,47Years/F/DHO

'We sent the mother in 108 Ambulance. The vehicle stopped after 20 Km. Later the mother died in a medical college. The patient's relatives got suspicious, and they even spoke about it in the audit meeting. No body cared about it and went to the next question'. – PKF1U2U88, 32Years/F/ANM

4.5 Accusations and motivation waning: Participants revealed that blaming and accusation culture within the audit process directed towards field staff served as a significant barrier. Participants also perceived the audit as biased, favouring medical college doctors over others. This accusatory environment led to emotional responses from staff, including crying and a general loss of interest overall towards work.

'In this audit meeting, one thing that has to be changed is find faulting. As she has treated that mother on that particular day, it doesn't mean that she alone is responsible for that'- DKI7G25,38Years/F/MO

'During the last audit meeting; the medical college doctors did not even attend the audit meeting. Even if they come, they are not questioning them' – PKF1F4F70,32Years/F/ANM

Theme/Domain 5: Implementing solutions

Enablers for implementing solution

5.1 Strategic planning and problem addressal: After every audit meeting, action plans were approved and then periodically reviewed. It was crucial to find customised solutions to address both case-specific problems and ground-level challenges in an integrated manner. It was also included to audit "near-miss" incidents in discussions.

'We will take up all the deaths that has happened during the particular period say for example April to December and we will present an action plan. This action plan implementation will be reviewed every month on month' - PDI3C19/38Years/M/DMO

'The JD proposed to discuss the near miss cases also and to address those gaps also' – PDI5E25/47Years/F/DMO

5.2 Innovative ideas: The participants revealed the utility of innovative technological solutions such as introducing 'epi-collect' application; additionally, the establishment of an expected date of delivery (EDD) monitoring control room at the district level was introduced; both were used to monitor high-risk pregnancy categories.

'We have created form in epi-collect application. We have trained all the staff nurses to use. They have to update details about the mothers in this application on a daily basis. We will in-turn ask the VHN to visit the mother and update the situation.'. – PDI5E5,47Years/F/DMO

Barriers for Implementing solutions

5.3 In-efficient funding mechanisms and sequelae: Fund distribution delays made it more difficult to close found gaps. Initiatives to increase capacity were hampered by the lack of timely resources, which also had an impact on infrastructure and targeted training programmes.

'Challenges again will be on funds. If we have to ready the staff nurse quarters; funding is needed. We have to think of their food and other expenses for training them' - PDI3C23,38Years/M/DMO

Theme/Domain 6: Feedback of audit process

Enablers for feedback for audit process

6.1 Perceived need for feedback: Participants suggested that; their opinions and experiences should be solicited periodically to ensure the effectiveness of the audit system.

'It would be nice if there is a periodic feedback opinion obtained across all departments for smoother conduct of audit. A lot of things can be changed, if you ask me about it'- DKI7F34/38Years/F

Barriers for feedback of audit process

6.2 Hierarchical feedback: The hierarchical structure, where feedback goes through a chain of command, was seen as a potential barrier. Participants expressed that conflicts within the hierarchy could hinder the ability to scale up of the issue.

'The VHN should discuss the issue with SHN; if she can't solve that issue; this may proceed to the CHN and so on., If these are not happening due to some personal agendas and egos; then the issue will not get scaled up. There will be a communication gap.' - PDI3C22/38Years/M/DMO

6.3 Lack of existing feedback mechanism: One of the obstacles found in the audit process was the total lack of a structured feedback system.

No, they are not asking us any opinion. No one has ever asked about it until now. – PKF2F3F36,58Years/F/SHN

DISCUSSION

Tamil Nadu is one of the front runner states in maternal and child health care. All stakeholders perceived the need for establishing the audit system for stillbirths as this might enhance the completeness in documenting the infant deaths as well as stillbirths thereby leaving no gaps. If stillbirths are audited there is a potential to reduce 60% stillbirths thereby improving the life expectancy at birth. This is one lacunae which we have identified on discussion with various stakeholders before the start of the study. If stillbirths are audited there is a chance of rationalising the quality of documentation of both stillbirths and early neonatal deaths. Also, there are several studies which shows stillbirth auditing is feasible. Therefore, we intended to explore the perceived enabling factors and barriers in establishing an audit system for stillbirths.

We conducted a qualitative study to explore the stakeholder's perspectives on establishing stillbirth audit system in Palani HUD, Tamil Nadu. The key enablers identified were; the availability of established communication mechanisms aiding in case identification and the presence of social and emotional connect between the field staff and community (community health workers). There were link-staff system and aided by social media and information systems to gather information. The stakeholders perceived that utilizing the existing workforce and adding stillbirths to existing auditing mechanisms for maternal and infant death component saves time and feasible. They also perceived that there is availability of existing disseminating mechanisms after the audit meeting and support monitoring systems for implementing the solution that has been given in the existing audit committee.

The barriers identified were the cultural impediments with Indian societal system, wherein, the families like to hide on instances such as teenage pregnancies and unmarried pregnancies. There were instances where stakeholders perceived the anger and aggression towards health system as a whole, due to mis-happenings in the hospitals which hampered collecting information for audit process. The fault-finding and the accusatory attitude towards obstetricians, primary health centre doctors and field workers with biased conduct favoring doctors in tertiary care by the chair members in the committee shows lack in soft skill managerial training for the members.

The findings align[11] with the emotional connect of the field workers and the community, where the school of thought objectively sees the phenomenon, the need for emotional connect established between the field workers and the mother and her family is crucial for gathering accurate information and managing the emotional perspectives like sharing sorrow and fostering psychological support.

This study is also in line with [12] Cetin.et.al, 2022 wherein participants experienced fear of punishment and blame and the way that audit process is conducted. This attitude makes them feel depressed and prone to escape mechanism to falsify information. There were also some coping strategies such as hiding information about the death of the baby or the events which lead to the death; hampering documenting accuracy.

The participants expressed the perceived need for feedback, periodically on the conduct of audit process, as in line with [13] Gondwe.et.al, 2021, enables scope for improved audit conduct and better reporting. This includes soft skill managerial training for the audit chair members to promote non-accusatory attitude and addressing gaps based on the deviations and lacunae from the existing guidelines.

The participants perceived the need for adding verbal autopsy forms in the digital health information systems which may promote transparency and reducing logistical challenges(14). They also perceived the inadequacy regarding the chain of events leading to death in these systems. This explains the need for updating the health information systems as narrated by Epizitone.et.al, 2023.

LIMITATIONS

Few stakeholders in the Government Medical College Hospitals were not willing to take part in the interviews, which might potentially alter the study findings. Few Participants might have answered against what was in their mind due to fear and anxiety about the system.

CONCLUSION

To conclude, our study demonstrated the perceived need for stillbirth auditing among stakeholders and highlighted that existing audit mechanisms for maternal and infant mortality can be efficiently utilized to include stillbirth auditing in the district. The study also identified gaps in the existing auditing system, particularly in the approach to conducting audits, and emphasized the need for an attitudinal shift and soft skills training for the authorities conducting the audits.

RECOMMENDATIONS

Based on our findings, we recommend that district administrators pilot a stillbirth audit utilizing the existing

infant and maternal mortality audit system. Additionally, a soft- skills training program should be arranged for the audit committee members, emphasizing a problem-solving approach rather than a fault-finding or accusatory approach.

DECLARATION OF INTEREST

The authors declare no conflict of interest

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