



UNCOVERING BARRIERS TO MATERNAL MORTALITY AUDITS: AN UNSEEN CHALLENGE

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ABSTRACT

Indonesia has the third highest maternal mortality rate in ASEAN. The Maternal Perinatal Death Surveillance and Response (MPDSR) program was established to reduce the high maternal mortality rate. However, the effectiveness of maternal audit implementation still faces many obstacles. This study aims to describe the obstacles faced by the MPDSR team in assessing maternal mortality in Lombok Island. We used qualitative study with case study design through in-depth interviews with nine informants from two MPDSR program holders at the Health Offices and one Maternal Perinatal Death Notification (MPDN) coordinator at the West Nusa Tenggara Health Office in 2022. Data were analyzed using the thematic analysis approach. Triangulation were done by method triangulation, triangulation between researchers, triangulation of data sources, and theoretical triangulation. The results showed that the problems faced by the MPDSR team, including ineffective of MPDSR socialization, budget limitations of MPDSR activities, feature issues in the MPDN, the ratio between labor and workload was less than ideal, incomplete and delayed collection of maternal mortality data, lack of communication between MPDSR teams, health workers have not been trained in the data entry process, labor outside of medical supervision, no monitoring of maternal mortality cases in wards other than obgyn, health workers did not understand the ICD-10 code, the assessment was still conducted in a hybrid, not all maternal death cases were assessed, blaming culture, and suboptimal monitoring of the sustainability of MPDSR recommendation. Therefore, it was necessary to establish discussion to find strategies and solutions based on a priority scale.

Keywords: maternal mortality, audit assessment, maternal perinatal death surveillance and response performance, lombok island

Introduction

Maternal mortality is the death of a woman during pregnancy and childbirth or within 42 days after childbirth that is purely due to pregnancy or its management without being caused by other factors, such as accidents, falls, or others.¹ The prevalence of maternal mortality in the world is estimated at 287,000 deaths, with 800 deaths occurring every day due to complications of pregnancy and childbirth, even though these causes of death are preventable.^{2,3,4} Indonesia's maternal mortality rate ranks third in ASEAN (*Association of South East Asia Nations*) with 305 deaths per 100,000 live births, which is still far from the Government and SDGs (*Sustainable Development Goals*) targets of 183 deaths per 100,000 live births by 2024 and 70 deaths per 100,000 live births by 2030.⁵ The Indonesian Government established the Maternal Perinatal Death Surveillance and Response (MPDSR) program, which was adopted from the WHO global guidelines with several revisions.⁶

MPDSR is a program of structured and continuous activities regarding the determination of the diagnosis of the causes of maternal and perinatal deaths in accordance with the ICD code (International Classification of Disease) through an audit assessment based on death documents so that recommendations are obtained to prevent maternal and perinatal deaths in the future. The management of district/municipal MPDSR activities consists of coaches, managers, observers, and community involvement in accordance with the district/municipal decree. The limitation period of maternal mortality is from the first day of the last menstrual period to 42 days after the end of the pregnancy period, regardless of gestational age. MPDSR components, including identification, reporting, assessment, and response to follow-up by applying absolute principles, such as no name, no shame, no blame, and no pro justitia.⁶

West Nusa Tenggara ranked eighth highest in Indonesia with a maternal mortality rate of 257 deaths per 100,000 live births, which is higher than the national maternal mortality rate of 189 deaths per 100,000 live births in 2020. West Nusa Tenggara's population was around 1.97% of Indonesia's population. This research was conducted on Lombok Island because Lombok Island has the most extensive population distribution compared to other islands in the West Nusa Tenggara region.⁷ Describing and mapping the obstacles to the implementation of maternal mortality audits in each region needs to be done to determine the priority scale in handling problems.

The effectiveness of maternal audit implementation is still questionable due to the frequent occurrence of maternal deaths with the exact cause.^{8,9} Constraints experienced in the implementation of MPDSR, not only in Indonesia but also in various countries worldwide.^{10,11} Until now, research on the implementation of MPDSR in several regions in Indonesia and even in other countries has been limited. Several studies conducted previously have found similarities and differences in constraints in the assessment of maternal death audits, such as incomplete information on maternal deaths, unsynchronized information on referral cases, no internal audits by

health workers in hospitals, lack of objectivity in maternal death case assessment, lack of cooperation between hospital teams and health offices, blame culture, lack of training and skills in MPDSR teams, and lack of funding.^{12,13,14,15}

On the other hand, previous research on maternal mortality review conducted in West Lombok District revealed that there were several things that need to be addressed to improve the competence of health workers (midwives and doctors), the availability of blood stocks, the completeness of filling in maternal medical record documents, and the implementation of assessments of all maternal cases.¹⁵ Until now, research on the implementation of maternal mortality audit assessments in the West Nusa Tenggara region is scarce and has not been updated. The difference between this study and previous studies is the review of regional MPDN data (an application that can be accessed through a smartphone to report, review, and analyze maternal and neonatal death cases effectively and efficiently) in West Nusa Tenggara Province to explore information related to maternal mortality data, which is the basis for in-depth interview questions in district health offices in Lombok Island, West Nusa Tenggara.⁶ This study will focus on and specifically assess the MPDSR performance in the assessment of maternal mortality audits in the Lombok Island Region, West Nusa Tenggara in 2022.

Methods

This research used a case study design with qualitative analysis through in-depth interviews and focused data review on the MPDN application.^{16,17} Data collection began in September to October 2023. Purposive sampling was used to select two MPDSR program holders at the Health Offices on Lombok Island and one MPDN application coordinator at the West Nusa Tenggara Provincial Health Office in 2022 who were willing to be an informant, while the exclusion criteria were informants who were sick or not fully conscious. The procedure for data collection in this research began with preparing the research permit files and submitting them to the Health Research Ethics Commission of the Faculty of Medicine, Mataram University to obtain an Ethical Clearance Decision Letter. After the permit was approved, then the researchers would contact a group of people with authority and interest in the MPDSR program in the District/City Health Offices and West Nusa Tenggara Provincial Health Office to send a permit letter and explain the informed consent to the research to be carried out. If the informants are willing, the researchers and informants will agree on a suitable time and place for the interview. The interview, typically lasting about an hour, will start face-to-face with the researchers introducing themselves, followed by the informants' introduction, including their positions, which will be anonymized during data processing. The interview will be guided by the researchers' questions, which will be further developed based on the informants' explanations. The researchers will review MPDN application data under the active supervision of the MPDN application manager, ensuring the accuracy and

relevance of the information obtained. The collected data will be stored on the researchers' devices and analyzed until it is compiled into this research report. Once the data analysis is complete, the records stored on the researchers' devices will be deleted to ensure data security and prevent any potential data leakage.

The topic of the interview, which discusses MPDSR constraints, such as team attention, team commitment, and management of the MPDN application system in the scope of questions, includes: (1)."How is the implementation of MPDSR socialization?"; (2)."How is the implementation of MPDSR activities?"; (3)."How is maternal mortality data reported?"; (4)."How is maternal mortality audit review conducted?". Data will be recorded and transcribed verbatim and then coded using framework analysis^{16,17}. Data validation in this research used several kinds of triangulation, such as method triangulation (comparing information from MPDSR program holders in each district and MPDN coordinators at the provincial level), triangulation between researchers (more than one researcher in data collection and analysis), triangulation of data sources (in-depth interviews and MPDN application data), and theoretical triangulation (comparing information with relevant theoretical perspectives). Data were analyzed using the thematic analysis approach. This research, which has been approved by the Health Research Ethics Commission of the Faculty of Medicine, Mataram University with Number **412/UN18.F8/ETIK/2023**, underscores the research's ethical considerations and compliance, providing reassurance about the research's integrity.

Results

Nine informants were from each Health Office on Lombok Island and the MPDN application coordinator at the West Nusa Tenggara Provincial Health Office in 2022. Data collection at the Central Lombok District Health Office was not included due to lack of permission, which caused the interview process to be unable to continue (**Table 1**).

Table 1. Informants Profile

Code	Age	Gender	Education	Position	Experience
Informant 1	46 years old	Female	Master of midwifery	MPDSR program holder at the East Lombok District Health Office	4 years
Informant 2	37 years old	Male	Medical doctor	MPDSR program holder at the East Lombok District Health Office	3 years
Informant 3	47 years old	Female	Master of public health	MPDSR program holder at the West Lombok District Health Office	5 years
Informant 4	45 years old	Female	Master of midwifery	MPDSR program holder at the West Lombok District Health Office	4 years
Informant 5	30 years old	Female	Master of midwifery	MPDSR program holder at the North Lombok District Health Office	3 years
Informant 6	44 years old	Female	Master of public health	MPDSR program holder at the North Lombok District Health Office	1,5 years
Informant 7	48 years old	Female	Master of public health	MPDSR program holder at the Mataram City Health Office	18 years
Informant 8	43 years old	Female	Diploma of midwifery	MPDSR program holder at the Mataram City Health Office	21 years
Informant 9	34 years old	Male	Bachelor of nursing	MPDN application coordinator at the West Nusa Tenggara Provincial Health Office	2 years

The coding of problems and obstacles experienced by each health office in the framework analysis (**Table 2.**)

Table 2. Data Analysis Framework

Theme	Category	Sub-categories	Code		
Performance of the MPDSR assessment of the MPDSR	MPDSR team's attention	Knowledge understanding and	a. There were still district/city areas that had not implemented the socialization of the MPDSR program.		
			b. Lack of understanding of MPDSR socialization materials by participants.		
			c. Health workers who did not understand the writing and categorization of the causes of maternal death in accordance with the column of the medical certificate of Cause of death based on the ICD-10 code in cases outside the field of obstetrics, so they were included with information as other causes.		
			Timeliness of work	d. Delayed collection and incompleteness of maternal death data, such as maternal verbal autopsies, maternal medical records, and intermediate maternal medical records.	
				Fund allocation	e. Limited funds for the implementation of the MPDSR assessment.
					f. Limited funds for the number of MPDSR review teams.
				g. Limited funds for follow-up of MPDSR recommendations.	
	MPDSR team's commitment	Work quality		h. Health workers have not been trained in the process of inputting maternal death data in the MPDN application.	
				i. Not all death cases will be assessed.	
				j. There was still a culture of blaming each other when the assessment activities took place.	
				k. The review team had difficulty determining the Cause of maternal death due to incomplete maternal death data.	
					l. Suboptimal monitoring of the sustainability of MPDSR recommendation results.
				Work quantity	m. The assessment was still carried out in a hybrid manner due to the review team could not read the documents in the MPDN application or the documents were not inputted in the MPDN application, so the health offices also provided hard files of maternal verbal autopsy, maternal medical records, and intermediate maternal medical records to the review team for assessment.
					Cooperation
	o. Maternal death cases in wards other than obgyn have not been monitored.				
	p. There has not been good communication and cooperation between health offices so maternal medical record documents are often not collected.				
	Responsibility	q. There was a sense of reluctance in the health office towards health workers and hospitals.			
		r. The health offices and health workers were busy with other work activity programs, resulting in a lack of attention to the MPDSR program.			
Management of the MPDN application system	How the MPDN application works	MPDN	s. There was a lack of responsibility for the work obligations so there was one member who completed the duties of other members.		
			t. Maternal death notifications in the MPDN application only appeared for requests to upload maternal verbal autopsy documents, so filling in the intermediate maternal medical records was often missed due to the absence of notifications.		
		App features MPDN	u. The maternal verbal autopsy documents could not be inputted into the MPDN application due to the unclear division of working areas of public health centers.		
			v. The features of inputting maternal medical record documents and intermediate maternal medical records were overlapping, so that only one of the documents could be inputted.		

The effectiveness of the implementation of the MPDSR program socialization on the level of understanding of the material on the participants has not been fully achieved due to several obstacles experienced which are understandable, such as the schedule of socialization activities that conflict with other activities and the limited audience invited.

"...there were people who could attend but could only attend for a short time because they had to leave immediately." (Informant 1)

Moreover, the limited socialization through the distribution of soft files of the MPDSR guidebook online has caused misperceptions of the North Lombok District Health Office by conducting feedback on internal discussions by health workers at the public health center to determine the diagnosis of the cause of maternal death with the expenditure of funds outside the MPDSR activity design so that the visit uses personal funds. To solve this problem, the North Lombok District Health Office discussed with the Head of the Sector Health Office not to return feedback to the public health center in the coming year so that the allocation of funds is focused on implementing MPDSR activities at the district level.

"...in the future we would not do feedback to the health centers, so that the budget was withdrawn all to the district level." (Informant 5)

The topic of budget constraints is the main problem that informants often complain about. This makes them carry out MPDSR activities less optimally and even do not meet the standardization of the MPDSR guidebook.

"...the current budget only allowed for two reviewers, which did not allow us to invite a larger team of reviewers." (Informant 2)

"...the budget provided by the regions was relatively small." (Informant 3)

"Our budget was only enough for once a year." (Informant 7)

The change in the maternal death data reporting system from manual to digital requires health workers to input maternal death data into the MPDN application. However, informants said there were some problems with the way the MPDN application worked, which affected the performance of the MPDSR team.

"The notification only appeared on the request for the maternal verbal autopsy data in the MPDN application, so health workers, especially in private hospitals, often forgot to create intermediary maternal medical record data." (Informant 2)

"...while filling in the maternal medical record and the intermediary maternal medical record were interrelated to each other... (Informant 8)

The Mataram City Health Office has requested assistance from the West Nusa Tenggara Provincial Health Office, which was responded to by creating 17 village midwife accounts. However, the MPDN application system couldn't read the account as the owner of the region

because the account system with ownership of each public health center that oversees one sub-district so the account creation was not successful.

"...MPDN, as the owner of the public health center area, couldn't read, so the maternal verbal autopsy data couldn't be filled in." (Informant 8)

The division and implementation of work programs in the MPDSR team were still not optimal due to the high workload so the focus of health workers was not only on MPDSR activities.

"We did not have time to consult the MPDN application features because the technician was busy as the person in charge of the unit expenditure accountability report." (Respondent 7)

The MPDSR team's busy schedule also contributed to the incomplete and delayed collection of maternal death data beyond the predetermined time limit.

"The filling and collection of maternal mortality data for 2022 was still very messy." (Informant 9)

Efforts were made by the health office team to deal with this by providing time flexibility and reminding by telephone.

"We usually reminded them by phone, but we also had a lot of work here, so we couldn't remind them too often." (Informant 7)

The collection of intermediary maternal medical records was often hampered by cross-border data collection, which required communication between the region where the mother died and the region where the mother was domiciled. Some health offices found it difficult to obtain the medical records of intermediate mothers because there was no bridge that chained the data.

"We asked to be facilitated by the hospital to make the manual maternal medical record for us. However, the Mataram City Health Office stated that they would coordinate directly with the hospital. Would it be ethical for me to ask directly to the city hospital?" (Informant 3)

The response of the Mataram City Health Office was to suggest that health offices communicate directly by sending a request letter to the health officer at the city hospital, similar to the experience of the Mataram City Health Office. The Mataram City Health Office also felt that it had not received requests for intermediary maternal medical records from other health offices.

"For confirmation, we went directly to the hospital because the hospital that filled in the maternal medical record, we did not know if it was outside the region. No one from outside the region called or communicated with us about correspondence." (Informant 8)

Lack of understanding and thoroughness of health workers in filling in data at the finishing stage who thought the data could be inputted automatically, but apparently the notification did not go to the health office, which after further investigation turned out to require the process of clicking the 'save' feature.

"...this happened perhaps due to a lack of socialization, health workers who were not familiar with the long flow of data entry, an application that was in error, and a change in

the rotation of health workers who did not inform the workflow of the MPDN application and password to the next health worker." (Informant 9)

There was still a reluctance from the health office to remind or reprimand health workers to collect and complete maternal death data so that the writing and determination of the disease diagnosis category were in accordance with the column placement in the medical certificate of the cause of death.

"...maybe if it was someone who was more expert, it might not be a problem, but we as a management team felt reluctant with it." (Informant 4)

Births assisted by traditional birth attendants still occur due to various personal reasons of the mother, although the number of cases was small.

"There were still three or four...the mother really wanted to have the delivery assisted by a traditional birth attendant because it might be far to go to the public health center, did not want to leave the livestock." (Informant 5)

Efforts made by the health service team to deal with this are through a family approach and regular monitoring.

"...our follow-up was that first, there was a family relationship between the village midwife and the traditional birth attendant. The second is the duty of the village head, whether through his staff or others, to monitor regularly. If there is a delivery, it is immediately reported to the nearest village midwife". (Informant 1)

Monitoring of maternal death reporting by operators was limited to maternal perinatal wards at the West Lombok District Health Office. However, monitoring in other health offices was already well underway.

"...we were still focusing on the delivery room." (Informant 3)

The percentage of other causes (26.1%) in the diagnosis of causes of maternal death was still high in the MPDN application (**Figure 1.**)

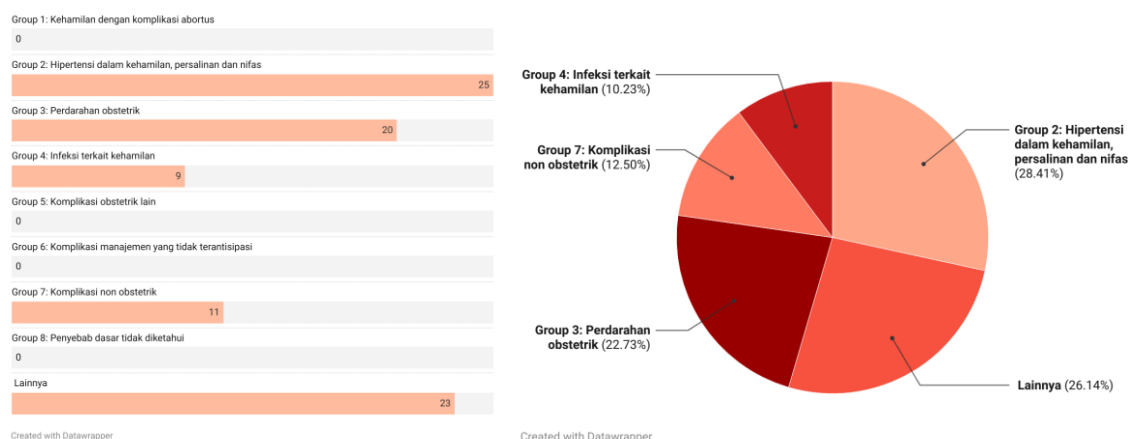


Figure 1. The proportion of Causes of Maternal Mortality in West Nusa Tenggara in 2022 (Source: Secondary Data MPDN Application)

"Health workers at the hospitals filled in the maternal medical records not in accordance with the ICD-10 code, then there were also cases of death outside obstetric cases, and some died on the way. So they were confused to give a diagnosis when the mother died, so they ended up writing something else." (Informant 8)

The maternal mortality audit assessment was conducted in a hybrid manner. Maternal mortality data was directly accessible to the assessment team through the MPDN application but was also available in hard files submitted to the assessment team.

"We tried to go paperless in the hope that the reviewers could read it, but they couldn't. Finally, we combined digital and manual." (Informant 3)

All maternal death cases were assessed without exception. However, some health offices were unable to assess all cases due to constraints (Table 3).

Table 3. Total Maternal Deaths Assessed and Causes of Maternal Death Cases Assessed

District/City Health Offices	Total Maternal Deaths	Total Maternal Deaths Assessed	Causes of Maternal Death Cases Assessed
East Lombok District Health Office	34	6	Bleeding (2), Eclampsia (2), Puerperal Infection (2)
West Lombok District Health Office	10	10	Postpartum Hemorrhage (5), Severe Pre-eclampsia (4), Embolism (1)
North Lombok District Health Office	3	3	Postpartum Hemorrhage (1), Eclampsia (1), Malaria (1)
Mataram City Health Office	6	4	Postpartum Hemorrhage (3), Severe Pre-eclampsia (1)

Source: Secondary Data Local Area Monitoring of Maternal and Child Health Program, 2022.

"We wanted to do it in October. It turned out that near the end of the year, on the 30th and 31st, there were two new death cases. So we didn't have time to assess it because it was at the end of the year and it was unexpected." (Informant 7)

The principles of no name, no shame, and no pro justitia had been well implemented, but the application of no blame had not yet been implemented.

"There was one, actually, because the midwife and doctor were nervous when asked, so their answers often changed when asked again." (Informant 7)

Monitoring the sustainability of recommendations was carried out through monitoring and evaluation along with other health programs; unfortunately, this monitoring was not optimal, and there were still several things that had not been monitored (Table 4).

Table 4. Recommendations of Maternal Death Assessment and Responses

District/City Health Offices	Recommendations	Responses
East Lombok District Health Office	18	16
West Lombok District Health Office	24	23
North Lombok District Health Office	14	10
Mataram City Health Office	7	3

Source: Secondary Data Local Area Monitoring of Maternal and Child Health Program, 2022.

"...maybe we combined it with other activities while we also asked whether the results that we had recommended, had been implemented or not?" (Informant 5)

Discussion

The MPDSR guidebook was socialized at the end of 2020 as a new guide for health offices in implementing maternal perinatal audit activities in Indonesia.⁶ The success of the socialization can be seen from the level of knowledge and understanding of health workers about the structure, objectives, and values of a program, which will undoubtedly have an impact on the performance of implementing MPDSR activities.¹⁸ The accuracy of maternal mortality data is key to the success of audit activities.¹⁹ Unfortunately, incomplete and late collection of forms often occurs due to the busy schedules of health workers, so an evaluation is needed so that health workers only fill in the required information records so that they do not feel burdened. Our results reported that access to intermediary maternal medical record documentation was complicated due to the lack of communication and cooperation between MPDSR teams, similar to other findings.^{12,13} This lack of communication resulted in intermediary maternal medical record data often not being filled in, making it difficult for the review team to determine the cause of maternal death. This requires socialization to gain a good understanding of the reporting flow of cross-border deaths and the rights and obligations of each. In addition, there needs to be a joint meeting that mediates the formation of good communication links to share the problems and obstacles experienced by each health service, which involves coordination and authority from other health services.

The committee members' attention and commitment in developed countries, such as France, are focused on the program with structured coordination with various stakeholders with success rate of data collection using these methods was 97.4%.²⁰ However, the issue of limited funding is often encountered in the implementation of maternal mortality audits, even in developed countries, such as in Europe.²¹ We also found in our research that budget constraints are a major problem in implementing MPDSR activities. These constraints can impact the limited socialization and training activities needed in the transformation process of digitizing reporting in the MPDN application and conducting maternal mortality assessments. The reasons behind this are the same, namely due to the low priority of the MPDSR program and the limited resources required for efficient implementation of MPDSR.²¹ Therefore, the role and authority of the Government of Indonesia is expected to develop and establish policies that adapt the audit flow and consider it with the capacity and resources available for the implementation of maternal mortality audits in Indonesia accompanied by effective socialization activities.

The results of our study and other research finding how that there are still deliveries assisted by traditional birth attendants which was influenced by factors of experience, education, habits, economy, so there is no clear medical record or report regarding the mother's condition.²² These

deliveries do not necessarily meet the standards of tools, materials, or procedures that may indirectly or directly contribute to maternal mortality.²³ In addition, notification or monitoring of maternal deaths in wards other than obgyn is needed to minimize the error between the actual number of maternal deaths and the number of unreported maternal deaths. Besides that, there is a need for attention and coordination of the doctor in charge of the patient in reporting maternal deaths in the MPDSR program, or consideration of the socialization of the MPDSR program to other fields other than obgyn who often intersect with maternal pregnancy and childbirth care because not all other relevant specialists, such as anesthesiologists, internist, cardiologists, surgeons or representatives of other specialists if needed to know about the MPDSR program.

Our results showed a high percentage of other causes. The determination of the underlying cause of death was not in accordance with ICD-10 (*International Classification of Diseases-10*) mortality rules.²⁴ Some reviewers still did not understand the writing and placement of the form's columns.^{11,12,25} This is due to the review team feeling confused by the placement of information outside obstetric cases and cases that died in transit. ICD-10 is used to classify the causes of obstetric death adopted in the MPDSR guidebook.⁵ The development of ICD-10 with some recent revisions into ICD-MM (*International Classification of Diseases Maternal Mortality*) includes guidelines for the classification of primary and secondary causal factors in maternal mortality, as well as guidelines for consistent collection, analysis, and interpretation of maternal mortality data.²⁶ Besides that, ICD-11 will be implemented in France in 2024.²⁰ Determining the use of the right type of form and filling needs to be considered in order to provide accurate information for review. Socialization and training on filling in the cause of maternal death classification may be needed to minimize the writing of other causes.

A culture of blame still prevails during the audit process, as in our findings and other research findings, both domestically and internationally.^{10,27,28} This may be due to a lack of clarity regarding the purpose of the MPDSR program when it was first implemented, so there is a sense of threat or fear in telling the chronology of the causes of maternal death.^{27,28} Therefore, it is necessary to instill a mindset and explain that the purpose of conducting an audit is to reduce maternal mortality, not to be judged. A conducive discussion atmosphere needs to be built with good conversation so as not to offend. Besides that, continuous and improved audit implementation with an emphasis on audit confidentiality can reportedly shift the blame culture.^{19,28}

There are four criteria in writing recommendations, including specific, measurable, achievable, relevant, and time-bound.⁶ Our results show that the realization of most of the recommendations is constrained by budgetary limitations and the contribution and authority of government policymakers, as well as other findings.^{11,12} The results of maternal mortality audit recommendations in developed countries, such as in Europe will be collected and published for researchers, clinicians, and policymakers in an effort to improve health services in the future.²¹ The

audit recommendations from Malaysia focus on improving health services, such as expanding access to skilled birth attendants, ensuring a quick and appropriate referral system, ensuring professional delivery services, ensuring emergency obstetric care, maintaining the quality of care, and providing necessary equipment and medicines for mothers.²⁹ Therefore, the formulation of recommendations first considers all four criteria, especially the 'achievable criteria', so that the resulting recommendations can actually be implemented with an affordable budget and can provide benefits, such as in simulating emergency cases at public health centers.

Problems and constraints in the implementation of maternal death audit assessment, such as the understanding and skills of the MPDSR team in their respective roles in the MPDSR program, optimization of MPDN application performance, communication and cooperation in collecting and completing maternal verbal autopsy data, maternal medical record data, and intermediary maternal medical record data in supporting the diagnosis of the cause of maternal death, as well as the allocation of funds for maternal death audit activities need to be prioritized and addressed first. Studies conducted in other regions in Indonesia are needed to evaluate the realization of the national MPDSR program guidebook to the lower levels. In addition, there is a need for the role of the national MPDSR team in ensuring the smooth and effective implementation of MPDSR at the provincial and district/city levels by providing support and developing strategies and policies to reduce maternal mortality through cooperation between professional and community organizations, across sectors, across programs and others.

The limitation of this study was conducted in 2023, so it is possible that memory bias could affect the answers given by informants. Besides that, some informants' words were cut off in answering the questions simultaneously, as well as the use of local language during the interview was less understood by the researchers as local residents outside the domicile of the research location.

Conclusion

Problems and constraints in the implementation of maternal mortality audit assessments were complex with different variations between district, so it was necessary to establish communication and discussion to find strategies and solutions based on a priority scale. To minimize the limitations of this study, it is recommended that data collection in the following study be carried out immediately after the data discussion in a large meeting of the West Nusa Tenggara Provincial Health Office to minimize recall bias between the assessment in the period of the year under study and the current year. In addition, it is necessary to agree on the use of Indonesian as the national language or immediately to clarify the meaning of truncated words to minimize data interpretation errors. The authors hope that future research can use quantitative methods related to the statistical descriptions to complement the qualitative results in this study. In addition, the author hopes that

future research can widen the topic of discussion on the performance of the MPDSR team at the provincial and national levels in dealing with the MPDSR program implementation policy and responding to the various obstacles experienced by each district/city in the results of previous studies.

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