# Implementation of Maternal Perinatal Surveillance and Response (AMP-SR) Audit in Indonesia: *Scoping Review*

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***Abstract***

*Surveillance and Response Maternal Perinatal Audit (AMP-SR) is a new guideline that is used as a reference for District/City, Provincial and National Health Offices in improving the quality of Maternal Perinatal Audit (AMP) in Indonesia, but the guideline has not worked well so it has an impact in the increase in cases of maternal mortality in Indonesia over the last three years from 87.93/100,000 Live Births (LB) in 2019 to 166.5/100,000 Live Births in 2021. Objective is to analyze evidence of AMP-SR implementation in districts/cities in Indonesia through scoping review. Articles were selected from six databases: Pubmed, Clinicalkey, Scopus, Springerlink, Science Direct, and Garuda with the inclusion criteria of original articles, full text, 2012-2022, Indonesian and English, research in Indonesia, qualitative, and relevant to research purposes. The keywords used are maternal death, policy, implementation, audit, Indonesia. Article screening was carried out with PRISMA. The SPIDER method was used to construct research questions.Of the 499 articles found, only seven articles met the inclusion criteria with a high eligibility value. Seven articles discuss the implementation of AMP-SR in Regencies/Cities in Indonesia with optimal Identification 57.14%, not optimal 42.86%. Reporting is optimal 28.57%, not optimal. The optimal review is 14.29%, not yet optimal 85.71%. The optimal response is 28.57%, not yet optimal 71.43%. Most of the implementation of AMP-SR in districts/cities in Indonesia is not optimal and is still constrained, so it is necessary to strengthen the role and commitment of health workers in implementing AMP-SR so that it is better and more comprehensive.*

**Keywords:** ***Audit, Implementation, Maternal Death, Policy***

## INTRODUCTION

The World Health Organization (WHO) policy as a global recommendation to reduce maternal mortality in several countries by issuing *Maternal Death Surveillance and Response* (MDSR) in 2013, which is used to determine the status of implementation and policies to reduce preventable maternal deaths by 2030 (WHO, 2016). Maternal Mortality Rate (MMR is still in the range of 305 per 100,000 live births, has not yet reached the set target of 183 per 100,000 KH in 2024 (Arrazy et al., 2022). In several countries, the implementation of maternal mortality studies has not been carried out according to guidelines and has not been followed up; even the implementation practices are not following standards (Kodan, 2021; Smith, 2017a). In some countries, there is also a disparity between the percentage of countries with a national policy to review all maternal deaths (85%). In comparison, countries that have

a national-level maternal death audit committee that conducts a review of death audits twice a year are (46%); this shows gaps between policies and practices in several countries resulting in high maternal mortality rates (MMR) in several countries (WHO, 2016). In Southeast Asia in 2017, the highest was in Myanmar at 250/100,000 Live Births, Laos ranked second at 185/100,000 Live Births, and Indonesia ranked third at 177/100,000 Live Births (WHO, 2020).

In Indonesia, Maternal Perinatal Surveillance and Response Audit (AMP - SR) is a new guideline and form of the Indonesian government's participation in strengthening health governance to improve the quality of AMP. AMP-SR Governance is an intervention cycle as one of the efforts to enhance health which is carried out by 1) Identification and notification, 2) Reporting, 3) Assessment, 4) Response and follow-up, followed by action to address the identified causative factors to avoid further deaths by taking action on gaps identified in the Audit (Kemenkes RI, 2022) (Kinney, 2019; Smith, 2017b). Maternal Perinatal Audit (AMP) in Indonesia has been carried out since 1994, but its implementation in districts/cities in Indonesia is constrained by the availability of the review team, the competence of the assessors, the quality of the assessment and the resulting recommendations, the commitment to follow up, the recommendations and the AMP implementation budget. This has an impact on the MMR trend in Indonesia which has increased over the last three years; in 2019, it was 87.93/100,000 Live Births; in 2020, it was 97.61/100,000 Live Births; in 2021, it was 166.5/100,000 Live Births (Kemenkes RI, 2022).

In Indonesia, health facilities often do not review maternal deaths to find gaps in health services and take corrective actions, even though the Indonesian Ministry of Health has mandated districts/cities to carry out death audits. Still, these are not carried out routinely; even if they are carried out, these activities do not meet national standards (Hyre et al., 2019). Indonesia has not yet disseminated recommendations on the results of maternal audits, which is only done at the health facility level; in Southeast Asia, only Malaysia has dissemination recommendations on the results of maternal death audits at the national level (Bandali et al., 2016). The implementation of maternal death assessment also still faces many challenges and obstacles (Basabih, 2022; Mahudin, 2020). Based on this, researchers consider it essential to analyze the latest evidence of AMP-SR implementation in districts/cities in Indonesia. The purpose of this research is to analyze the performance of AMP-SR in towns/districts in Indonesia *through coping reviews.*

## METHODS

### Draft

This study was designed with a systematic scoping review framework. A systematic scope review is a methodological way to explore and discuss emerging topics (Tricco et al., 2018). The framework used has five main steps: finding research questions, finding relevant study results, selecting studies, mapping data, compiling results, and reporting study results (Bradbury-Jones et al., 2022). *Scoping review* this will discuss the implementation of AMP - SR in Indonesia with research questions using the SPIDER criteria, S: The sample/population used is health workers who carry out AMP - SR in districts/cities and provinces in Indonesia; *Phenomena of interest*, namely the implementation of AMP - SR, *Design* is a case study, descriptive and narrative. *Evaluation* is a supporter and a hindrance. *The research type is* qualitative.

### Search Method

Article identification was carried out in October-December 2022 using six databases, Pubmed, ClinicalKey, Scopus, Springer Link, ScienceDirect and Garuda. The search uses the boolean operator "AND" used as a conjunction to combine or exclude keywords in a database search (Atkinson & Cipriani, 2018). The keyword used is "maternal death", AND "policy", AND "implementation", AND "audit", AND "Indonesian". After the researcher obtained articles based on keywords then, selected articles based on inclusion and exclusion criteria, and then decided based on title and abstract. The next step is to read the full text to determine the article's eligibility by answering ten questions; the feasibility assessment of the article is assessed through the *Critical Appraisal Skills Program* (CASP) (Long et al., 2020).

### Inclusion and exclusion criteria

This review of the literature results is reported using the *Preferred Reporting Items for Systematic Reviews and Meta-analyses* (PRISMA), which identifies various topics of AMP-SR implementation in Indonesia (Figure 1). Articles were selected based on inclusion and exclusion criteria. The inclusion criteria for this study were original articles, open access articles, peer-reviewed, full text, English and Indonesian, published in 2012-2022, research in the Indonesian region, and type of qualitative study.

### Extraction of article data

Articles extracted using manual tables by authors. The table contents include the author, year of publication, research objectives, research location, research design, method of

data collection, number of informants, research results, and supporting and inhibiting factors. Filling in the table is done based on the summary results that the author has discussed.

**Data analysis**

The collected articles were then read in full and analyzed by all authors. After being investigated, the AMP-SR implementation articles were reviewed and classified based on the research variables in the form of identification, reporting, review, and response; then, their implementation was reviewed and assessed.

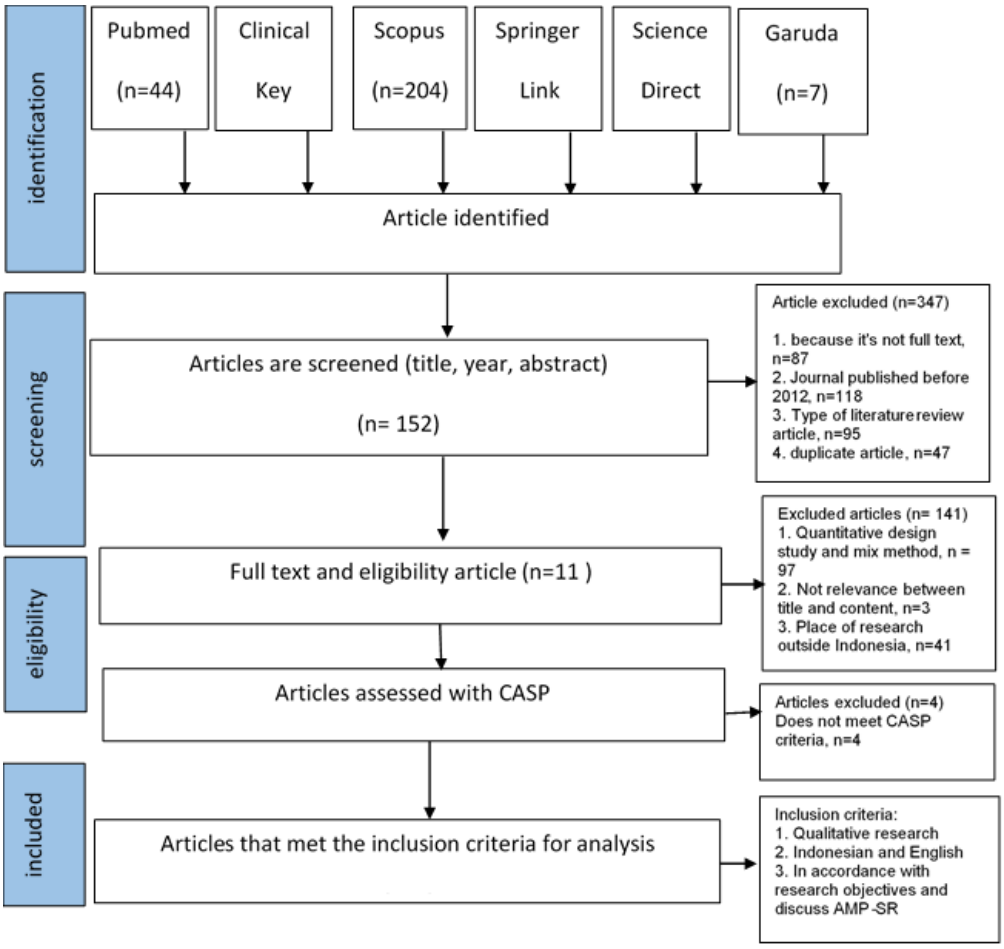


***Figure 1.*** *PRISMA Diagram*

Based on search results from *the database* Pubmed, ClinicalKey, Scopus, Springer Link, ScienceDirect, and Garuda in Figure 1, the PRISMA diagram obtained seven articles that met the inclusion criteria for analysis. Based on the results of the CASP assessment, there are seven articles with high-quality classification in table 1.

**Table 1. Quality of Evidence with Critical Appraisal Skills Program (CASP) criteria**

| No | Researcher | Question | | | | | | | | | | Criteria score | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Research purposes | Appropriate qualitative method | The research design follows the research objectives | Recruitment strategy according to research objectives | Data is collected in a way that addresses research quality issues | The relationship between the researcher and the participants has been considered sufficiently | Ethical issues have been considered | Data analysis is quite thorough | The research results are clear | Important research results | score | Quality Classification |
| 1 | Atiyah et al., 2021 | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | 9 | high |
| 2 | Cahyanti et al. 2021 | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | 9 | high |
| 3 | Mahmood et al., 2018 | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | 9 | high |
| 4 | D'Ambruoso et al. 2013 | Y | Y | Y | N | Y | Y | Y | N | Y | Y | 8 | high |
| 5 | Fahmi, MA, 2017 | Y | Y | N | Y | Y | Y | Y | N | Y | Y | 8 | high |
| 6 | Mardiah et al., 2018 | Y | Y | Y | Y | Y | N | Y | N | Y | Y | 8 | high |
| 7 | Maryati et al. 2019 | Y | Y | Y | Y | N | N | Y | Y | Y | Y | 8 | high |

*Description* : Y=Yes; N = No; Score 1-3 = Low; Score 4-6 = Moderate; Score 7-10 =High

## RESULTS

The number of articles identified from the search was 499. Articles were excluded because they were not full text, journals were published before 2012, 347 papers had been reviewed, and duplicated papers and the results of the first screening phase found 152 articles. In the next stage, 141 papers were issued because of the quantitative research design and mixed methods, incompatibility between the title and the content, and the research location outside Indonesia, so 11 articles were obtained, and four papers were excluded because they did not meet the requirements for CASP. In the next stage, seven articles were assessed for their feasibility using CASP because they fit the inclusion criteria, a qualitative study using Indonesian and English, according to research objectives, and discussing the AMP-SR components.

The results of the research on seven articles showed that the implementation of AMP-SR governance on the maternal death identification component by midwives at Puskesmas was optimal at 57.14% in the study D'Ambruoso (2013), Atiyah (2021) Trisnawati (2018), Mahmood (2018), identification was not optimal at 42.86% in the study Cahyanti (2021), Mardiah (2012), Maryati (2019). Reporting of maternal deaths by health center midwives using the *Maternal Verbal Autopsy* (OVM) form was optimal at 28.57% in research Atiyah (2021),

Mahmood (2018), while reporting of maternal deaths was not optimal at 71.43% in research D'Ambruoso (2013), Cahyanti (2021), Trisnawati (2018), Mardiah (2012) and Maryati (2019). The study of maternal deaths by the AMP Team at the Regency/City level was optimal at 14.29% in research Atiyah (2021), while the assessment was not optimal at 85.71% in research D'Ambruoso (2013), Cahyanti (2021), Trisnawati (2018), Mardiah (2012) and Maryati (2019). In the response component, all implementation is not 100% optimal. The results of the analysis of the implementation of AMP-SR with qualitative methods can be seen in table 2 as follows:

**Table 2. Results of Maternal Perinatal Audit Implementation in Districts/Cities in Indonesia**

| No | Name of Researcher, Title, and Purpose of Research | Location, Method of Data Collection, Informants, Supporting and Obstacle Factors | AMPSR Implementation | | | |
|---|---|---|---|---|---|---|
| | | | Identification | Reporting | Assessment | Response |
| 1 | • Atiyah et al., 2021<br>• *Analyzing of implementation of maternal audit programs in the community health centre: a qualitative study*<br>• Research objective: To analyze the implementation of the maternal death audit program at the health centre level in reducing Maternal Mortality Rate | • Location: Bantul Health Center, Yogyakarta<br>• Data collection: interviews, observations, document searches<br>• Informants: 4 people<br>• Supporters: Political, financial, commitment, applying *a culture of no name, no shame, no blame, no projucticia*.<br>• Inhibitor: Lack of human resources and infrastructure facilities. | • Already optimal: Midwives at the puskesmas carry out identification and notification by chronologicall y tracing the causes of maternal death. Midwives already understand how tracing maternal deaths works. | • Already optimal: Community Health Center midwives understand how to fill out death forms and report deaths using the Verbal Maternal Autopsy (OVM) form. | • Already optimal : The AMP team from the Health Service conducts a study on the causes of maternal death and makes recommendati ons. The implementatio n of the assessment uses the AMP guidelines | • Not Optimal The Health Service AMP team compiled recommendatio ns by classifying the causes of death as preventable or not, compiling agreements for all pregnant women to have *antenatal care* at the health centre, carrying out data collection on pregnant women, early detection and screening of pregnant women, dissemination of study results has not been carried out. |
| 2 | • Cahyanti et al., 2021<br>• Title: *"Sharp downward, blunt upward": district maternal death audits' challenges to formulate evidence-based recommendations* | • Location: Brebes Regency, Pekalongan Regency, Kendal Regency, Grobogan Regency, Central Java Province<br>• Data collection: FGD<br>• Informants: 29 | • Not Optimal : puskesmas midwife has carried out death identification; however, the data is unreliable and does not provide | • Not Optimal : The puskesmas midwife has filled out the reporting form, but the data is in the form of raw data written by the staff under her without being discussed | • Not Optimal : The Health Service AMP TEAM did not have an agreement with the reviewers but used personal opinions, no clinical | • Not Optimal : The AMP team does not believe in the accuracy of the data obtained because it can lead to inaccurate recommendatio ns being issued; |

| No | Name of Researcher, Title, and Purpose of Research | Location, Method of Data Collection, Informants, Supporting and Obstacle Factors | AMPSR Implementation | | | |
|---|---|---|---|---|---|---|
| | | | Identification | Reporting | Assessment | Response |
| | *in Indonesia - a qualitative study*<br>• Purpose of Giving evidence-based audit recommendations for locally adaptive practices in reducing maternal mortality. | people<br>• Supporters: The need for health policy reform<br>• Inhibitor: Lack of budget for deaths outside the region. | precise information because it only records the number of ANC visits. | internally and the boss sign. | standard guidelines, b has not complied with the principle of reviewing maternal deaths, and the review of deaths has not been objective. | they have not yet formulated AMP recommendations. |
| **3** | • Mahmood et al., 2018<br>• Title: *Root-Cause Analysis of Persistently High Maternal Mortality in a Rural District of Indonesia: Role of Clinical Care Quality and Health Services Organizational Factors*<br>• Objectives Identify the root causes of maternal death and determine interventions and recommendations from a team of district health authorities, hospitals, and academics in determining the root causes of maternal death. | • Location: Kutai Kartanegara Regency<br>• Data collection: in-depth interviews.<br>• Informant: 30 people<br>• Support: Budget, support for midwifery care<br>• Obstacles: not optimal competence of health resources, loss of blood product services. | • Optimized: Midwives and puskesmas staff carry out identification through the maternal death notification system and investigate the chronology of all deaths that occur. | • Optimized: Midwives carry out reporting of deaths of women of childbearing age after receiving a report from the puskesmas health team; the report form uses a maternal verbal autopsy. | • Not Optimal: Audit Team Has not yet discussed auditing at the Health Office level but carried out internal hospital audits using data from the pink book and maternal medical records; for those who do not access the hospital, an audit based on information on *antenatal care providers* and the pink book. | • Not Optimal : The AMP team has not carried out the dissemination of the results of the study; the recommendations are in the form of institutionalizing supervision and support in monitoring death review protocols, improving midwifery skills and management, training midwifery supervisors, activating hospital hotlines, strengthening primary and referral services, family planning programs. |
| **4** | • D'Ambruoso et al. 2013<br>• Title: *Maternal mortality and severe morbidity in rural Indonesia Part 2: Implementation of a community audit*<br>• Purpose: explain the implementation of the Audit participatory | • Location: Serang District<br>• Data collection: FGD and interviews.<br>• Informants: 8 people<br>• Supporters:-<br>• Inhibitors:- | • Already Optimum : Midwives, village officials, and family members are involved in identifying and tracing maternal deaths to obtain a | • Not Optimal : Village midwives carry out death reporting, but the form used for death assessment has not been clearly stated. | • Not Optimal : The village midwife carried out the assessment; the death assessment was carried out only at the community level, not yet discussed at the district | • Not Optimal : Not yet discussed in detail about the results of the assessment recommendations, implementation and evaluation of maternal mortality recommendatio |

| No | Name of Researcher, Title, and Purpose of Research | Location, Method of Data Collection, Informants, Supporting and Obstacle Factors | AMPSR Implementation | | | |
|---|---|---|---|---|---|---|
| | | | Identification | Reporting | Assessment | Response |
| | community-based care in emergencies midwifery practice in rural Indonesia | | chronology of the causes of death. | | level; the results of the study found that women giving birth in cases of bleeding were still being handled by traditional birth attendants. | ns are not possible in the short term without a sustainable approach; the potential for impact, sustainability, and empowerment is limited. |
| **5.** | • Fahmi, M.A., 2017<br>• Title: Evaluation of the Maternal Perinatal Audit Program (AMP) in Temanggung Regency<br>• Objective: Evaluating the Maternal Perinatal Audit Program (AMP) in Temanggung Regency | • Location: Temanggung Regency<br>• Data collection<br>• Informants: 24 people<br>• Supporters:-<br>• Inhibitors:- | • Already Optimum : Village midwives are trained in carrying out death identification and chronological tracing of maternal deaths. | • Not Optimal: The village midwife uses the Maternal Verbal Autopsy Form in reporting, but the form is not available at the puskesmas. The maternal medical record form (RMM) at the hospital is not sufficient. | • Not yet optimal : Not all death cases are carried out by AMP; they do not yet have an AMP manual, so it becomes a program without written instructions. | • Not Optimal: It has not yet explained in detail the form of recommendatio ns for the results of the assessment; there is no monitoring and evaluation of the recommendatio ns at the hospital, and monitoring at the health center is only once a year. |
| **6** | • Mardia, 2018<br>• Title: Alternative operational policies for maternal perinatal Audit (AMP) in Barito Kuala District, South Kalimantan<br>• Objective: Handling maternal and perinatal audit activities in Barito Kuala District, South Kalimantan | • Location: Barito Kuala Regency, South Kalimantan<br>• Data collection:<br>• Informants: 10 people<br>• Supporters:-<br>• Obstacles: Lack of human resources, no SOP, no access to land, infrastructure and culture. | • Not optimal : Village midwives and puskesmas midwives carry out identification depending on the data findings, sometimes only coaching. | • Not Optimal : In reporting to the Health Office, Village midwives used a scoring assessment form, but the data had not been completely filled in, so the quality could not be ascertained. | • Not Optimal : Assessment Team has conducted an assessment of maternal mortality, but it has not been carried out according to the guidelines, the AMP has not been well described, and it has not been consistent. | • Not Optimal : The AMP program medical team has not yet explained in detail the recommendatio ns of the assessment results to be followed up. |
| **7** | • Sri Maryati, et.al 2019<br>• Title: Program Analysis (Maternal Perinatal Audit) in Cianjur Regency in 2012 | • Location: Cianjur Regency<br>• Informants: 13.<br>• Data collection: deep interview<br>• Supporters:- | • Not optimal : Midwives identify deaths, but there is something overlooked, | • Not optimal: Midwives carry out reporting using death forms, but the process of filling out forms | • Not optimal : The District AMP Team has been formed but is not yet in place. The | • Not optimal: Recommendatio ns for cross-sectors are not made, monitoring and evaluation are |

| No | Name of Researcher, Title, and Purpose of Research | Location, Method of Data Collection, Informants, Supporting and Obstacle Factors | AMPSR Implementation | | | |
|---|---|---|---|---|---|---|
| | | | Identification | Reporting | Assessment | Response |
| | • Objective: to analyze the implementation of the perinatal maternal audit program in Cianjur Regency | • Inhibitors:- | namely, the many cases of maternal deaths with birth attendants from traditional birth attendants are not reported. | is late and incomplete, and many are blank because midwives forget to fill them out. | Regent signs this. Assessment learning sessions have not been carried out on an ongoing basis. | not comprehensive, and there is no follow-up. |

## DISCUSSION

### 1. Implementation of AMP-SR in Regencies/Cities in Indonesia

### a. Identification

AMP-SR cycle aims to find and notify maternal deaths, stillbirths, and neonatal deaths as early as possible. Most of the research results on implementing AMP-SR identification in districts/cities in Indonesia have been optimal; this shows that village midwives and Puskesmas midwives have found cases of maternal deaths and notified them of fatalities (Kemenkes RI, 2022). Identification of maternal deaths will function as a good tool if carried out according to guidelines, the accuracy of filling and tiered reporting from health cadres and village midwives to puskesmas midwives to identify the chronology of maternal deaths; this is relevant to research Muliarini (2020) that identification analysis must begin with an analysis of all incident cases carried out by qualified health personnel. Identification that is not optimal is primarily due to a lack of competent human resources, delays, and incomplete forms of identification. Inaccurate and incomplete identification records cause the data sent to be incorrect so that accuracy is needed in identifying factors that cause death and factors that can be prevented as a basis for determining appropriate responses and corrective measures to prevent future deaths (Nurlaela et al., 2017).

### b. Reporting

The implementation of reporting of maternal deaths by midwives mainly was not optimal due to delays in filling out, unavailability of the *Maternal Verbal Autopsy* (OVM) and *Maternal Redical record* (RMM) forms; the forms were filled incompletely, resulting in limited information and inaccurate results. Other studies have shown the same thing, not a single Puskesmas has complete data on both *Maternal Verbal Autopsy* (OVM), *Perinatal Verbal*

*Autopsy* (OVP), *Maternal Medical Record* (RMM), or *Perinatal Medical Record* (RMP). Involving village officials and health facilities, there has been no follow-up to handle or prevent maternal and neonatal deaths by the district team. Hence, it is necessary to provide additional guidance to AMP implementing officers (Sukohar et al., 2019). The results of other studies also state that there are obstacles in reporting deaths, such as limited medical record information, which can lead to inaccurate information (Pierre et al., 2011). Optimal implementation of reporting on maternal deaths is supported by competent and trained midwives, filling out reports using the OVM and RMM forms so that they can be used to collect chronological data on death cases. The OVM form can also be used as an alternative to recording mortality in an area that can describe patients' characteristics and contributing factors (Muliarini, 2020).

**c. Assessment**

The implementation of the assessment is mostly not optimal; this is because not all Regencies/Cities have an audit team, the evaluation is not following the guidelines, the audit tools are uninformative and unreliable, not objective and inconsistent so that the audit results are not precise, clinical indicators are not standardized, not yet continuous learning is carried out to compile recommendations, this is relevant to the analysis Bayley (2015) that the determination of the assessment that is not clear leads to fewer quality results. Mortality review in countries low income hard to do Due to the lack of a comprehensive death registration system, deaths occurred outside health facilities none of the evaluations, audits, or hospital-based reviews were carried out due to cost considerations. Optimal assessment results have been supported by the availability of the AMP Team at the District/City level, carried out according to guidelines, and there are follow-up studies on the assessment; this is following research results Smith (2017b) that assessment requires identification and reporting, assessment, data aggregation, interpretation, and follow-up recommendations for better evaluation. A facility-based maternal death audit approach can help the hospital team identify direct and indirect causes of death and causal factors and make recommendations to reduce the risk of morbidity and mortality; maternal death audits with other strategies are also necessary for confidential investigations and near-miss audits so that they can provide information corrective action (Sayinzoga et al., 2016).

**d. Response**

The follow-up response to the results of the study is not optimal; this is due to the dissemination of the results of the study that has not been carried out, efforts to address the

problem according to the recommendations have not been prepared, monitoring and evaluation are not intense, socialization of the latest guidelines for the implementation of AMP-SR in Indonesia will only be socialized in 2021, so it is reasonable if the AMP-SR response in Indonesia is not optimal, this response intervention should be essential because it can be used as early detection of cases that have occurred so that they do not recur again. The study's results Iriani (2021) also showed that the follow-up response in Brebes and Banyumas districts was not optimal. Other research states countries with a Maternal Death Response system (MDR) that are less established also have difficulty implementing the review recommendations even though it has the plan to identify response actions quickly and with wide dissemination (De Brouwere et al., 2014). Some countries still struggle to implement response measures (Smith et al., 2017b). But other studies show that most causes of death can be prevented by implementing interventions at various levels of care (home, primary, and secondary health facilities), periods (pregnancy, labor and delivery, and postpartum), and a strategic population-based approach versus personalized intervention that includes primary, secondary and tertiary prevention to achieve quality emergency obstetric care (Ochejele et al., 2017). The high maternal mortality rate demands specific interventions to address disparities in maternal health to achieve sustainable development goals related to maternal mortality. Still, these findings highlight that improving the quality of maternal health services in the community can reduce maternal mortality (Biswas et al., 2020).

**2. Supporting and Inhibiting Factors for the implementation of AMP-SR**

The success of AMP-SR implementation is due to political support, finances, strong commitment, and implementing a culture of *no name, no shame, no blame*, and *no pro-justicia* (Atiyah et al., 2021). Continuation of the assessment requires the involvement of the POGI professional organization as an association in raising awareness about quality care issues in hospitals (Hyre et al., 2019). To achieve this success, a collaborative network of hospital and health center health workers, affordable referral hospitals, and the availability of skilled and adequate health workers (Sukohar et al., 2019). Another study states that high political commitment can be used to implementAMP-SR to reduce maternal mortality (Abebe et al., 2017).

Implementing AMP-SR still faces many challenges and obstacles (Basabih et al., 2022). Districts/cities in Indonesia have not carried out all AMP-SR implementations. This is due to a lack of external advocacy, inappropriate actions and supervision from the District Health Office, lack of professional interaction between hospitals, limited staff, and no records and

information on managing complications in hospitals in stages (Mahmood et al., 2021). Other studies also mention Mahmood (2021) obstacles in the implementation review of maternal mortality in the form of lack of skills, low quality of service, inadequate infrastructure, lack of coordination and communication between health services and no organizational and management support Esposito (2014), Lewis (2014) and Vargas (2020).

## CONCLUSION

Based on the latest evidence from an analysis of seven literature studies related to the implementation of AMP-SR, it can be concluded that the identification of maternal death cases, notifications, and surveillance carried out by most health workers at District and City Health Centers in Indonesia are optimal. Reporting of deaths in the form of verification of the completeness of the maternal medical record and maternal verbal autopsy, which is recapitulated both monthly and quarterly by health workers in districts and cities in Indonesia, is not optimal; most health centers and hospitals have not filled in the data entirely and do not have a death reporting form. The study of death cases conducted by the audit team at the Health Office level was largely suboptimal because not all districts and cities had an audit team, had not compiled points in recommendations based on aggregated data analyzed, practices were still found to be sharp downwards blunted upwards and a lack of commitment leader. The response to the results of the assessment to support the improvement of the quality of health services has not been optimal because the dissemination of the results of the evaluation has not been carried out, efforts to address the problem according to recommendations have not been followed up, and there has not been intense monitoring and evaluation.

The success of AMP-SR will be realized if there is a strong commitment from all parties; there is a need for continuous intervention to monitor and evaluate the implementation of AMP-SR in stages. The importance of AMP-SR can be used for continuous learning so that there are no repeated maternal deaths with the exact cause. There are limitations in the *scoping of this review because there are not many original article* references discussing the implementation of AMP-SR in Indonesia. Researchers hope that future research will examine the performance of AMP-SR.

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