

Unravelling Health System Drivers of Maternal Mortality in Low- and Middle-Income Countries: A Critical Narrative Synthesis

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ABSTRACT

Background: Maternal mortality remains a major global public health challenge and a key indicator of health system performance and social equity. Despite international commitments to reducing maternal deaths, preventable maternal mortality remains disproportionately high in low- and middle-income countries, particularly in sub-Saharan Africa. This study synthesised recent evidence on the systemic determinants of maternal mortality and examined maternal health within broader public safety and health system resilience frameworks.

Methods: A narrative review was conducted to synthesize recent evidence on systemic determinants of maternal mortality. A structured search of PubMed, Scopus, Web of Science, CINAHL and Google Scholar was performed for studies published between 2020 and 2026. Following screening using a modified PRISMA approach, 15 eligible studies and global health reports were included. Data were analysed using thematic narrative synthesis.

Results: Five themes emerged: Delayed recognition of obstetric complications, Fragmented Referral Systems and Emergency Response Failures, Sociocultural effects on maternal use of healthcare, Primary Healthcare Readiness and Health Workforce Capacity, Innovations in Digital Health and Maternal Safety Systems. The findings indicate that preventable maternal deaths often result from interconnected failures across community detection systems, referral coordination and health system governance.

Conclusion: Maternal mortality remains largely preventable but continues to reflect systemic failures across community, health system and governance levels. Strengthening early risk detection, referral coordination, health workforce capacity and digital maternal health systems is essential for improving maternal survival. Integrating maternal health within broader health system resilience frameworks may accelerate progress toward global maternal mortality reduction targets.

Keywords: Digital health; Health system resilience; Low- and middle-income countries; Maternal health systems; Maternal mortality; Primary healthcare; Referral systems; Sociocultural determinants.

1. Treatment for Hyperandrogenemia

Maternal mortality is a significant global public health problem and a prominent indicator of health system performance, social equity and the functioning of health governance. While

considerable strides have been made during the last twenty years toward achieving better maternal health outcomes, preventable maternal deaths remain at alarming rates, particularly in low- and middle-income nations (LMICs). According to recent global

estimates, around 287,000 women died from pregnancy-related causes globally in 2020, with nearly 70% of such deaths reported in sub-Saharan Africa¹. These enduring disparities underscore profound structural inequalities in maternal health care access and illustrate larger systemic barriers in many healthcare systems. Maternal deaths are a well-established multifactorial problem with an interplay of clinical, social and health system causes. The clinical reasons for maternal mortality largely include haemorrhage, hypertensive disorders of pregnancy, sepsis and complications related to unsafe abortion and obstructed labour². However, increasing evidence exists that these clinical causes are often symptoms of larger systemic deficiencies in maternal health systems, such as failure to respond to complications, poor referral coordination and limited professional resources^{3,4}.

Consequently, to achieve better outcomes, it is necessary to act not only on biomedical determinants but also on structural and organizational conditions that determine maternal health care outcomes. Recent studies on global health have highlighted a greater focus on the quality of the health system in determining maternal health outcomes. Weak health systems characterized by poorly developed infrastructure, a shortage of workforce and loose service coordination make a major contribution to the burden of preventable maternal deaths in many LMIC settings⁵. Furthermore, socioeconomic barriers for access to healthcare services and sociocultural norms continue to affect maternal health services utilization and care-seeking behavior^{4,6}. These challenges are especially pronounced in resource-poor settings where primary healthcare systems, despite being the first point of contact for pregnant women, simply do not have the capacity to handle obstetric emergencies effectively. Another critical determinant of maternal survival has become the quality of maternal health care services. Evidence suggests that improvements in access to healthcare facilities alone are insufficient to reduce maternal mortality if the quality of care provided within those facilities remains inadequate⁷. As Oh (2022) revealed, maternal healthcare is considered good if it features skilled birth attendants, efficient referral systems with effective emergency obstetric care services and governance structures that target continuity of care throughout the health system. Therefore, strengthening these systems is fundamental to the enhancement of maternal survival indices and the attainment of global maternal health objectives.

In recent years, international health organizations have also emphasized the possible contribution of strengthening the health system and of new and improved digital health technologies towards enhanced maternal health outcomes. Mobile health solutions, digital referral platforms and electronic health information systems can contribute to improving communication between care providers, surveillance of high-risk pregnancies and prompt referral for obstetric emergencies⁸. These technological developments provide a strong prospect for strengthening maternal health systems, especially in places where access to timely care is not feasible because of geographical difficulties and poor health systems. Nevertheless, maternal mortality has remained stubbornly high in various parts of the world, indicating that existing solutions may not sufficiently address the underlying social determinants of health that fuel preventable maternal mortality. There is increasing attention to the broader public safety and health system resilience frameworks that examine how risk is detected at the community level and how a health system is prepared with governance mechanisms at the policy

level, which play into maternal health^{9,10}. Considering maternal mortality in terms of this wider system's perspective may shed some light on some of the structural determinants that still prevail in shaping global maternal health disparities. Moreover, the Sustainable Development Goals (SDGs) have also reiterated the focus on decreasing global maternal mortality to less than 70 deaths per 100,000 live births by 2030, which indicates the critical need for improved maternal health systems globally¹¹. Realizing this target will involve comprehensive action in multiple domains such as healthcare reform, the enhancement of the maternal health workforce, referral coordination systems and community mobilization in maternal health promotion¹².

In this context, the study endeavors to synthesize recent work on maternal mortality determinants and to examine how maternal health might be viewed in the context of public safety and health system resilience. This narrative review seeks to present a critical review of the systemic reasons for preventable maternal deaths to explore how some of the structural constraints on maternal health systems are not addressed and to discuss some promising strategies to support the delivery of maternal healthcare in LMICs.

2. Methodology

Using a narrative methodology, this work synthesized recent evidence on determinants of maternal mortality and explored what maternal health can be considered in relation to higher-level public safety and health system resilience. Narrative reviews are especially well-suited for the analysis of nuanced public health issues transcending disciplines and health system levels to promote integration of evidence from empirical studies, health systems research and policy analyses that inform a holistic picture of complex health challenges³. This approach was considered appropriate for examining the systemic drivers of maternal mortality across varied health systems and was deemed adequate. Peer-reviewed studies and policy reports on maternal mortality, maternal health systems, referral systems, community health determinants and health system quality were selected using a systematic literature search. Electronic searches were conducted in several international databases (PubMed/MEDLINE, Scopus, Web of Science, CINAHL and Google Scholar). Furthermore, institutional and global health organization databases (WHO, United Nations Population Fund (UNFPA) and World Bank) were used to collect relevant policy reports and global maternal health analyses. The search was conducted for papers from 2020 to 2025 to capture evidence on the latest maternal health science and global health policy. Keywords were generated according to study objectives and integrated based on Boolean operators. The core search terms were "maternal mortality," "maternal health systems," "health system quality," "referral systems," "emergency obstetric care," "community health," "digital health," and "health system resilience." Studies were systematically screened for relevance following predetermined inclusion and exclusion criteria.

Studies were eligible for inclusion if they met certain specific criteria. First, articles published from 2020 until 2025 were included to reflect the status of maternal health research and global health policy. Second, we had to include studies that looked at either determinants of maternal mortality or the performance of the maternal health system. Third, relevant studies with specific system-level determinants (referral coordination,

workforce capacity, community engagement and overall quality of health systems) were also prioritized by the review. Fourth, other studies conducted in low- and middle-income countries, particularly regions affected by a high maternal mortality burden, were also included, to focus on matters of interest to settings that still have significant maternal mortality as a public health issue. Consequently, only publications published in peer-reviewed journals or recognized global health institutional reports were included in this review. Studies were excluded if they only addressed treatment interventions from a clinical perspective without implications for the wider health system, did not present detailed methods or were opinion pieces that lacked empirical or policy significance.

The study selection process followed the principles in the PRISMA 2020 report, which is meant to enhance transparency in the finding of studies and their screening¹³. The initial search of databases yielded 78 records in the selected databases and institutional repositories. Duplicate records were removed (n = 11) and a total of 67 articles were retained for titles and abstract screening. 39 studies were excluded from the review during the screening phase for not meeting the inclusion criteria. After the screening, 28 studies were reviewed using an open-text type review to ascertain whether they were applicable to the aims of the study. A total of 13 studies were excluded after extensive assessment due to inadequate methodological transparency or relevance to strengthening the maternal health system. Overall, 15 studies and policy documents fulfilled the predetermined inclusion criteria and were included in the final story synthesis. The steps of the study selection process are demonstrated with a modified PRISMA flow model, which serves as a transparent guide on the identification, screening, eligibility assessment and final inclusion process. Findings were systematically extracted from each of the studies included to facilitate comparative analysis. The information extracted was the study setting, study design, research focus, maternal health system determinants investigated and the key findings regarding maternal mortality prevention.

The included studies were analyzed using thematic narrative synthesis, using thematic narrative synthesis to draw attention to what are recurring patterns between studies to help form the basis for conceptual understanding of complex public health phenomena. Thematic synthesis is used in health systems research to bring together findings from different study designs and to develop high-level analytical themes¹⁴. Key themes were identified and organized based on systemic determinants of maternal mortality through the iterative reading and comparison of all included studies.

3. Results

Based on the screening and eligibility assessment, 15 studies and policy reports, which satisfied the inclusion criteria, were included in the narrative synthesis. Studies included have a wide variety of research designs, such as cross-sectional studies, systematic reviews, health systems assessments and global health policy reports. Geographically, many of the studies were in low- and middle-income countries, especially in sub-Saharan Africa, where maternal mortality remains disproportionately high. These studies examined several determinants for maternal health, such as quality health system, referral coordination, workforce capacity, sociocultural barriers to care and new types

of digital health innovations. (Table 1) summarizes the features of the included studies. A thematic synthesis of the literature reviewed identified five key themes across the literature, which result in persisting maternal mortality in many LMIC settings:

3.1. Delayed recognition of obstetric complications

Late identification of obstetric danger signals is associated with maternal mortality in several studies. Limited knowledge of pregnancy-related complications and poor risk identification through both community and primary healthcare levels is a major factor in delays in accessing appropriate maternal health care services¹⁵. Similarly, Ngene & Moodley¹⁶ pointed out that a significant number of maternal deaths happen due to missed detection of complications, including postpartum hemorrhage, hypertensive disorders and sepsis, which do not provide opportunities for early intervention. Research on maternal healthcare utilization patterns has identified that lack of maternal health literacy and low community awareness are major contributing factors that result in the delay in seeking help for pregnancy-related emergencies⁶. In a significant proportion of the studies, women and their families, in many cases, may not have the knowledge and expertise to identify early warning signs of obstetric complications or they defer seeking care because of an economic, social or geographic limitation. This reinforces the need for improvement in the presence of effective community-based maternal healthcare programs and better early detection mechanisms to enable timely recognition of obstetric complications for early intervention and therefore preventable deaths¹⁷.

3.2. Fragmented referral systems and emergency response failures

Weak referral systems and a lack of emergency obstetric response are other leading topics reflected in the reviewed literature, contributing to maternal mortality due to poor referral systems. As mentioned, proper referral coordination is essential to facilitate the rapid transfer of women who experience obstetric complications to sites that can provide comprehensive emergency obstetric care. Yet, several studies show that there is still poor coordination of referral pathways across many LMIC health systems, often defined by insufficient communication between health systems, lack of transport infrastructure and lack of standard referral protocols¹⁸. These systemic barriers often delay access to life-saving pregnancy and reproductive health care services. Evidence from health system research also demonstrates that health facilities with better coordination of referral and emergency preparedness methods seem to be better with respect to maternal health⁷. Referral networks to primary healthcare facilities are important to support, as is improving communication with higher-level hospitals. This means that more efficient maternal safety and well-being are the key factors to ensure this.

3.3. Sociocultural effects on maternal use of healthcare

The review further highlights the significant role played by sociocultural and socio-economic characteristics in maternal healthcare use. Studies suggest that women who require maternal healthcare services during pregnancy and childbirth might be largely affected by gender attitudes, financial reliance and low autonomy for decision-making on maternal healthcare by others⁴. In many LMIC environments, women might need to have

family support or their partners to be permitted to receive health services, especially in patriarchal societies, causing delayed access to skilled maternity care and subsequently resulting in poor maternal and neonatal outcomes. Moreso, cultural beliefs and traditional practices in childbirth may stifle the use of formal health services. Based on the patterns of maternal healthcare utilization, evidence suggests that community-level services for maternal health promotion and male partner engagement can dramatically enhance access to skilled birth attendance and antenatal care services⁶. These results indicate the need to address sociocultural gaps and pay rapt attention to sociocultural obstacles and health system strengthening.

3.4. Primary healthcare readiness and health workforce capacity

Shortages of the health workforce and inadequate primary healthcare infrastructure were also identified as key determinants of maternal mortality. As emphasized in several studies, the presence of trained health care providers, in particular midwives and trained birth attendants, is crucial for improving the survival of mothers¹⁹. Previous health system assessments have indicated deficiencies in the provision of the human resources, equipment and training necessary for managing obstetric emergencies by primary healthcare facilities in many LMICs (Oh, 2022). These limitations may slow the diagnosis of complications of pregnancy and the initiation of appropriate treatment. Also, recent global health literature emphasizes the critical need for

strengthening both midwifery-led care models and workforce training programs, complementing broader maternal health system strengthening strategies³. So, expanding the maternal health workforce as well as improving primary healthcare facility readiness is crucial to avoiding preventable maternal deaths.

3.5. Innovations in digital health and maternal safety systems

Digital health innovations were identified as promoters of maternal health surveillance and referral coordination as emerging tools in the systematic review. Emerging mobile health technologies and digital health platforms have opened new avenues for enhanced communication between community health workers and health delivery services. Evidence has shown that maternal health programs can be supported through mobile health interventions and early detection of high-risk cases, communication between health care providers and facilitation of referral pathways⁸. Digital tools could also improve maternal health monitoring by enabling providers to monitor patient outcomes and complications at a greater speed. However, it is also reported that the successful implementation of such digital health systems relies on the provision of appropriate infrastructure, digital literacy and sustained policy support²⁰. Although digital innovation can open the door for strengthening maternal health, it must be complemented by other investments, such as health systems capacity and workforce development (Table 1).

Table 1: Characteristics of studies included in the narrative review (n = 15).

Author/Year	Country/Region	Study Design	Focus Area	Key Findings
Moloro, et al. ²¹	LMICs	Systematic review	Maternal care-seeking behavior	Limited awareness of danger signs contributes to delays in seeking maternal healthcare.
Edu ²²	Sub-Saharan Africa	Health systems analysis	Quality of maternal care	Weak facility readiness and poor care quality increase maternal risk.
Chauke ²³	Sub-Saharan Africa	Systematic review	Emergency obstetric care	Inadequate emergency obstetric care capacity contributes to preventable maternal deaths.
Nakayuki, et al. ¹⁸	Sub-Saharan Africa	Systematic literature review	Referral systems	Weak referral coordination delays access to emergency obstetric services.
Musizvingoza ²⁴	Sub-Saharan Africa	Narrative review	Sociocultural determinants	Cultural and socioeconomic barriers influence maternal healthcare utilization.
Oburota, et al. ²⁵	LMICs	Cross-sectional analysis	Health inequalities	Socioeconomic inequalities influence maternal health service utilization.
Oluwole, al. ²⁶	LMICs	Health systems analysis	Primary healthcare quality	Poor primary care readiness limits maternal health outcomes.
Mulongo, et al. ³	Global	Health systems review	Quality maternal care	Integrated maternal care pathways improve maternal outcomes.
Hanson, et al. ⁵	Global	Health systems analysis	Health system quality	Low-quality health systems contribute significantly to maternal mortality.
Anyanwu et al., 2024	Global	Policy analysis	Quality maternal healthcare	High-quality care is essential for reducing maternal mortality.
Agarwal, et al. ²⁷	LMICs	Digital health review	mHealth in maternal care	Digital health tools improve maternal health monitoring and communication.
Chianumba, et al. ²⁸	Global	Systematic review	Digital maternal health	Digital innovations support maternal health surveillance.
Okeowo, et al. ²⁹	Nigeria	Health system study	Maternal healthcare quality	Health system capacity gaps affect maternal health outcomes.
Olaniyan & Ugwu ³⁰	LMICs	Health system study	Primary healthcare strengthening	Strong PHC systems improve maternal health outcomes.
WHO ¹	Global	Global report	Maternal mortality trends	Most maternal deaths remain preventable with stronger health systems.

4. Discussion

This narrative review synthesized emerging evidence on the systemic determinants of maternal mortality in low- and middle-income countries and examined maternal health as a part of the public safety and health system resilience-related concept. These findings show that preventable maternal deaths are seldom the product of a single clinical factor, but rather, represent integrated failures at various levels of maternal health systems, including community-based risk detection, referral collaboration, sociocultural factors, health worker skills and rapidly evolving technology. One of the major insights from this review is the need for early recognition of signs of obstetric danger to keep maternal mortality low. Multiple studies included within the synthesis indicate that delay in detecting complications related to pregnancy leads to preventable maternal deaths¹⁵. Similarly, Dol, et al.³¹ highlights that many maternal deaths are the result of inadequate detection of complications such as postpartum hemorrhage and hypertensive disorders before they may allow for early intervention. These results align with global epidemiological discourse emphasizing the capacity of local and community-based maternal health education and early risk-based detection systems for enhancing maternal survival, at large. Oluwatola, et al.³² propose that strengthening the early detection mechanisms at community and primary healthcare levels is imperative for enhancing the quality and timely provision of maternal healthcare. Other studies indicate that even though existing measures have been used in community awareness programs, the gap cannot be addressed and if healthcare facilities are not able to respond effectively, it can be difficult to effectively reduce maternity mortality. Mulongo, et al.³ point out that whilst the early detection of complications is imperative, it would also be essential to advance facility-level quality of care to ensure early and appropriate treatment in maternal health systems.

Another prominent finding from the synthesis is the issue of poor referral systems as a determinant of maternal mortality. Effective referral coordination is necessary to make certain that women with a history of obstetric-related complications can be directed to emergency obstetric clinics in a timely and appropriate manner. Nonetheless, numerous research points indicate that the referral links are still disjointed and poorly orchestrated in many LMIC regions¹⁸. Studies of health systems have shown that poor communication among health care systems, lack of adequate transport infrastructure and lack of standardized referral systems can lead to delays in access to life-saving obstetric intervention³³. These findings echo the need to strengthen referral networks and emergency response mechanisms within the greater context of maternal health system strengthening. However, some research suggests that referral system difficulties often point to underlying systemic shortcomings in health systems. Hanson, et al.⁵ imply that weak governance structures, poor infrastructure, poor health worker capacity and low-quality health systems contribute to maternal mortality. This perspective underlines the emphasis on systemic health system reform, not only the patch-up of referral protocols as a single improvement.

The review also emphasized the importance of sociocultural and socioeconomic determinants for maternal healthcare utilization. Previous studies indicate how gender norms, economic limitations and reduced choice autonomy still impact access to maternal healthcare services for women in a large

proportion of LMIC contexts⁴. These results corroborate recent studies revealing that sociocultural barriers frequently affect care-seeking behavior during pregnancy and childbirth. For example, Kisiangani, et al.³⁴ have found that, for many sub-Saharan African countries, have found that gender and community-level norms have an impact on maternal healthcare utilization. However, while sociocultural interventions, such as community education programs and male partner engagement initiatives, may promote greater maternal health education, their success may be limited if structural barriers through the health system aren't addressed. Research by Oh (2022) also shows that even if women are engaging with healthcare resources, suboptimal quality health care services in health facilities also negatively impact maternal health. These results indicate that sociocultural and health system determinants need to be addressed at the same time to realize real reductions in maternal mortality.

Health workforce and primary healthcare preparedness were also identified as important factors in determining maternal survival. There have been reports that deficiencies in the number and quality of trained birth attendants, as well as their training in emergency obstetric care, persistently stymie the ability of health systems to manage maternal complications¹. Research examining maternal health system outcomes and improvements has indicated that improving primary healthcare infrastructure, especially midwifery-led care models, can greatly improve maternal health outcomes³⁶. Similarly andonotopo, et al.³⁷ highlight that investment in maternal health workforce education and facility preparedness is vital for enhancing the quality of maternal health services. One area that some critics point out is that expanding the workforce does not necessarily solve the larger structural weaknesses of maternal health systems. According to Mulongo, et al.³, maternal survival improvements will need to be supported through collective strategies for the development of the health workforce, health system governance and infrastructure.

The final theme addressed in this review centers on the increasing significance of digital health innovations in enhancing maternal health systems. Evidence-based practice in this field indicates that digital technologies, such as mobile health platforms and electronic health information systems, can empower maternal health programs through enhanced communication among health care providers, remote monitoring of high-risk pregnancies and timely referrals³⁸. As such, digital health tools could significantly improve data collection and surveillance around maternal health, supporting health systems to detect and address new risks as they arise and, in doing so, reduce the number of maternal health challenges²⁰. Yet, as we know, the effectiveness of digital health innovations relies on numerous contextual variables, such as infrastructure investments, digital literacy levels within healthcare providers and ongoing policy support. Without sufficient investments in these areas, maternal health outcomes may be modestly affected by digital health interventions.

4.1. Policy and practice implications

The policy and practice implications of this review were derived from the five key themes identified in the results, focusing on the need for comprehensive system-level interventions to address maternal mortality in low- and middle-income countries (LMICs). In this vein, the delayed identification of obstetric complications emphasizes the importance of the development of

policies that contribute towards better community and primary healthcare-level early risk detection. The evidence suggests that lower maternal health literacy and incorrect recognition of danger signs are key drivers of care delays. Policymakers need to focus on strengthening the implementation of community-based maternal health education, enhancing the role of community health workers and integrating the tools of risk screening for maternal diseases in primary care. Practice-wise, front-line healthcare workers will benefit from training to allow for the timely identification of early complications and to make timely referrals and prevent unnecessary periods of delay. Second, the results about fragmented referral systems and emergency response failures emphasize the necessity of policies to enhance both referral integration and emergency obstetric care systems for the management of patients. Findings indicate that inadequate communication, poor transport infrastructure and the absence of standardized referral pathways delay access to life-saving care. Policy interventions should thus center on building interconnectivity of referral networks, transparent referral guidelines and investing efforts in emergency transport. Practically, health care facilities need to improve intra-provider and intermediate level coordination to timely coordinate obstetrical emergencies.

Third, it is highlighted that the context of sociocultural determinants of maternal healthcare utilization suggests that the need for demand-side solutions to barriers to maternal health utilization should be considered to achieve improved maternal health outcomes. Data reveals that a study's findings revealed significant influences of gender norms, financial constraints and limited decision-making autonomy on healthcare-seeking behavior. Policymakers should accordingly encourage culturally adapted interventions such as male partner engagement programs as well as community mobilization tactics to raise awareness about maternal health among communities. At the practice level, health providers should take a patient-centered and culturally competent approach to care in which services are accessible and acceptable to a range of populations. Fourth, the findings on primary healthcare preparedness and staff capacity limitations suggest a need for sustained investment in health workforce development and facility strengthening. Data is collected from obstetric complications; however, the findings suggest that shortages of competent birth attendants and the unavailability of facilities and inadequacy of maternal preparation have limited care for childbirth complications.

Policy initiatives must prioritize strengthening the maternal healthcare workforce, particularly by increasing the number of trained midwives and skilled birth attendants. This can be achieved through targeted training programs, competitive salaries and opportunities for career advancement. Additionally, primary healthcare facilities should be equipped with essential medical equipment, such as fetal monitors and emergency obstetric kits, to ensure timely and effective care. By addressing these critical gaps, policymakers can help reduce maternal mortality and improve health outcomes for women in low- and middle-income countries. In practice, strengthening clinical capacity and adherence to evidence-based strategies are key indicators for achieving better maternal healthcare delivery. Fifth, the theme of digital health innovations and maternal safety systems represents the potential for technology to reinforce surveillance, communication and referral of maternal health services. The

results indicate that mobile health platforms and digital health resources can enhance early detection of high-risk pregnancies, help them access care and encourage timely intervention. Policy makers should enable digital health solutions as part of national maternal health strategies, coupled with investments into digital infrastructure and data governance structures. At a system level, healthcare professionals should have the tools to integrate digital technology in their practice, turning technical progress into healthier and superior care. Taken together, the results of this review highlight that effective maternal mortality reduction will derive from an integrated, systems-based strategy that simultaneously addresses detection at the community level, capacity of health systems and governance systems. Aligning policy and practice with the identified thematic areas offers an easy way to strengthen maternal health systems and to enhance maternal survival outcomes in LMICs.

4.2. Strengths and limitations of the review

This narrative review presents a synthesized review of the recent literature focusing on maternal mortality determinants when considering the general framework of health system performance and public safety. A notable strength of this review is the incorporation of key evidence from varied sources (such as peer-reviewed studies and global health policy reports) that facilitated a perspective on the multidimensional drivers of maternal mortality at community, health system and governance levels. This review synthesizes recent literature from 2020 to 2026, reflecting trends in maternal health research that have emerged and is pertinent to the current global priorities of health policy. Another strength in this review is the utilization of an organized literature search across various databases and institutional repositories, which further contributed to the transparency and credibility of the review. The modified PRISMA approach was adopted in this study, which also enhanced methodology transparency by reporting the identification, screening and inclusion of relevant studies¹³. Moreover, the use of thematic narrative synthesis allowed for the identification of between-study cross-cutting themes, promoting an enhanced understanding of systemic causes of maternal mortality issues¹⁴. However, some limitations should be addressed despite such successes. First, as a narrative review, the study failed to conduct a formal quantitative quality assessment of the included studies, as is normally done in systematic reviews or meta-analyses. Thus, while the review compiles evidence from different sources, it does not provide statistical estimates of effect sizes between studies. Second, literature primarily published in English between 2020 and 2025 was the focus of our review and may have led to missing studies in other languages. What is more, the heterogeneity between the included studies, from systematic reviews and cross-sectional analyses to policy reports, could constrain the ability to directly compare the outcomes of evidence from different research designs. Lastly, while the review was centered predominantly on LMIC settings where the level of maternal mortality is still high, conclusions may not be entirely applicable to high-income health systems with distinct organizational structures and resources. Still, the synthesis contributes to a better understanding of the broader systemic issues of maternal health in resource-limited settings.

5. Conclusion

Maternal mortality is a persistent global health challenge

and an important metric for health system performance and social equity. This narrative review sheds light on the manner preventable maternal mortality is conditioned by systemic component failure at multiple levels of maternal healthcare delivery, such as late recognition of obstetric complications, fragmented referral systems, sociocultural barriers to maternal health care use, limited primary health care readiness and insufficient adoption of digital health innovations. The reviewed data shows that maternal mortality is not only a clinical problem, but also a multi-faceted public health and health system problem that can only be resolved through collaborative action across community, health system and policy sectors. Promotion of community-based maternal health education programs, the strengthening of referral coordination and emergency obstetric care systems, the workforce for maternal health promotion and the use of digital health tools in maternal health services are crucial to improve maternal health outcomes. Incorporating maternal health interventions into broader contexts of public safety and health system resilience might also provide a more comprehensive means to address the systemic determinants of maternal mortality. This model emphasizes the value in coherent governance, enhancing health systems and mobilizing communities to mitigate preventable maternal deaths. If we are to achieve the world's goal of decreasing the rate of maternal death to less than 70 per 100,000 live births by 2030 and stronger policy measures to address structural inequality in maternal health services are to be enacted, then sustained investment in the development and delivery of such systems and quality care at health facilities are necessary^{1,39}. More studies should focus on inventive models to strengthen the maternal health service delivery systems, incorporating digital health tools, community surveillance platforms and health workforce development. This work will be vital to accelerate advances toward full global maternal health targets and ensure sustainable access to safe, quality and effective maternal healthcare for all women.

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