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THE ROLE OF OBSTETRIC NURSING IN THE EARLY IDENTIFICATION OF MATERNAL EMERGENCIES AND MORTALITY REDUCTION

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ABSTRACT

Obstetric nursing plays a central role in reducing maternal mortality and morbidity, particularly through the early identification of emergencies. Obstetric nurses work on the front lines of care, being responsible for identifying risk signs, implementing swift interventions, and coordinating referrals to higher levels of care when needed. Early detection of complications like preeclampsia, severe hemorrhages, and infections can be decisive in saving lives. Well-structured protocols and health education for pregnant women are fundamental to ensuring that warning signs are promptly recognized and treated. The implementation of early warning systems (EWS), as highlighted in studies by Friedman et al. (2018) and Zuckerwise and Lipkind (2017), has shown promising results in reducing maternal complications. These systems allow for the early detection of clinical deterioration and timely intervention, which can significantly reduce mortality rates. The use of protocols, such as the Manchester Protocol, is an example of how structured triage can improve the quality of care in obstetric emergencies. Additionally, continuous training of healthcare teams and the enhancement of professional technical skills are essential to face the challenges of modern obstetrics. Training in critical care, such as point-of-care ultrasonography, and improving communication among multidisciplinary team members are key practices for effective response. Strengthening obstetric care through education and the implementation of innovative technologies leads to better maternal and fetal outcomes and reduces severe complications.

Keywords: Obstetric nursing. Maternal emergencies. Early warning systems. Maternal mortality. Triage protocols.

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INTRODUCTION

The early detection of obstetric emergencies plays a crucial role in reducing maternal morbidity and mortality, with obstetric nurses being central to this process. Positioned on the front lines of maternal care, these professionals are tasked with swiftly identifying risk indicators, implementing immediate interventions, and coordinating the timely referral of patients to higher care levels when necessary. Effective care relies on a blend of up-to-date technical knowledge, refined clinical skills, and ongoing vigilance throughout the stages of prenatal, labor, and postpartum care.

Figure 1: Steps toward diagnostic excellence in obstetrics. EHR = electronic health record, AI = artificial/augmented intelligence.

Source: Krenitsky & Goffman (2024).

Key obstetric emergencies such as preeclampsia, hemorrhages, preterm labor, severe infections, and hypertensive disorders require prompt identification. Obstetric nurses must be attuned to subtle changes in vital signs, patient complaints, and historical risk factors. The implementation of well-defined protocols, such as obstetric triage checklists and risk classification, are essential tools in systematizing care, prioritizing high-risk cases, and minimizing delays in intervention.

Beyond clinical recognition, health education plays an integral role. Obstetric nurses guide pregnant women and their families in recognizing warning signs,

encouraging early symptom identification by patients themselves, and promoting timely medical intervention. Effective communication with multidisciplinary teams, alongside the use of obstetric emergency simulations in practice settings, further strengthens the overall response to critical situations.

The study by Al Khathami et al. (2023) emphasizes the significance of both paramedic and nursing interventions in managing obstetric emergencies during prehospital care. Although maternal mortality rates in the UK have shown only a statistically insignificant decline, conditions like sepsis and severe hemorrhages continue to be pressing concerns. By reviewing existing literature and clinical guidelines, the study stresses the importance of early detection of such conditions, rapid application of the three-hour sepsis bundle, and seamless communication within multidisciplinary teams. Al Khathami et al. (2023) conclude that enhancing the readiness and expertise of paramedic and nursing teams is vital to reduce maternal morbidity and mortality, highlighting the need for continuous training and further research to optimize emergency responses in obstetric settings.

Similarly, Pereira et al. (2025) focus on the rising demand for emergency services and the need for structured triage systems like the Manchester Protocol to ensure equitable, safe care. The study underscores the role of nurses in rapidly and accurately assessing patients' clinical conditions during obstetric emergencies. Effective risk classification is essential in prioritizing high-risk pregnant women and ensuring swift interventions to protect both maternal and fetal health. By reviewing more than 58 articles, the study concludes that nurses are pivotal in applying the Manchester Protocol in obstetric care, leading to early identification of complications and prioritization of care. However, it also acknowledges the need for further research into the complexities of obstetric cases and the development of comprehensive training strategies to continuously improve emergency care practices.

Witcher and Sisson (2015) explore the importance of understanding the underlying causes of maternal deaths during pregnancy, childbirth, or the postpartum period to develop more effective prevention strategies. With the rising rates of severe maternal morbidity and mortality in the United States, there is a strong emphasis on strengthening maternal death reviews and patient safety initiatives. The study highlights that obstetric nurses play a vital role in improving outcomes by anticipating, recognizing, and communicating early warning signs of maternal deterioration. By adopting Stephen

Covey's Circle of Influence as a framework, the study demonstrates how nurses can directly influence maternal outcomes through their practice and indirectly through collaboration with other healthcare providers. Moreover, it emphasizes the importance of advancing nurses' education, knowledge, and technical skills to expand their ability to improve maternal care.

Friedman et al. (2018) investigate the potential of obstetric early warning systems (EWS) in reducing maternal morbidity and mortality. While these systems have proven effective in other medical fields, their implementation in obstetrics remains underdeveloped. The study reviews key findings from the 2017 Society for Maternal-Fetal Medicine (SMFM) Annual Meeting and identifies common themes in the implementation of EWS across hospitals. Successful adoption of these systems requires strong leadership, resource allocation, and coordination among nursing staff, providers, and ancillary personnel. The research highlights the need for an optimized hospital culture, effective training, and decision-making support for healthcare providers. As evidence grows on the efficacy of EWS in reducing maternal risk, the study advocates for systems that capture a wide range of complications, as well as specialized bundles for specific conditions like hemorrhage, thromboembolism, and hypertension.

Padilla et al. (2020) examine the growing rates of maternal morbidity and mortality in the United States, noting that the increasing complexity of obstetric cases plays a significant role in this trend. With an estimated 1% to 3% of obstetric patients requiring intensive care, timely delivery of care and access to critical resources are essential. Many obstetric providers lack sufficient experience in managing critical illness, placing additional strain on healthcare systems. The study suggests that redefining maternal care delivery for high-risk patients could address this gap. Key recommendations include the use of evidence-based tools for risk stratification, prompt referral to hospitals with appropriate resources, and the introduction of critical care consultations during labor and delivery. Training obstetric providers in essential critical care skills, such as point-of-care ultrasonography, is also highlighted as crucial for enhancing care for an increasingly complex patient population.

Lastly, Zuckerwise and Lipkind (2017) examine the persistent challenge of maternal mortality and severe maternal morbidity in the United States. Despite increased awareness of obstetric safety initiatives, a significant portion of maternal

deaths remain preventable. The study advocates for the development and implementation of early warning systems tailored to the obstetric population, which would trigger rapid assessment and intervention to prevent complications. While such systems have proven effective in other fields, their application in obstetrics is complicated by pregnancy-specific physiological changes. The study reviews existing obstetric early warning systems and provides evidence of their role in reducing maternal mortality and morbidity. It further explores the challenges of implementing these systems in clinical practice and suggests strategies to improve acceptance and integration, ultimately aiming to improve patient outcomes through more proactive and responsive care.

Obstetric nursing plays a crucial role in the early identification of maternal emergencies and the implementation of immediate interventions that can save lives. With the constant evolution of the obstetric population, which includes a significant increase in medically complex cases, obstetric nurses are essential for the early detection of signs of complications such as preeclampsia, hemorrhages, and severe infections. The use of well-defined protocols, such as checklists and obstetric risk classification, facilitates the prioritization of care, allowing for swift and effective interventions. In addition, health education plays a key role, empowering pregnant women and their families to recognize warning signs and seek appropriate medical care.

The study of nurse and paramedic interventions in obstetric emergencies, as highlighted by Al Khathami et al. (2023), reinforces the need for continuous training to optimize responses in critical situations. The implementation of early warning systems in healthcare facilities, as discussed by Friedman et al. (2018) and Zuckerwise and Lipkind (2017), has shown effectiveness in reducing maternal mortality and morbidity, making it a promising strategy for managing obstetric complications. Training healthcare teams, improving multidisciplinary communication, and adapting safety protocols to the specific needs of pregnancy are actions that can transform the maternal healthcare landscape.

Finally, enhancing the critical skills of healthcare professionals and adopting evidence-based strategies are fundamental to addressing the challenges posed by the increasing complexity of obstetric cases. Investing in education, effective triage systems, and the integration of care across various levels of assistance is crucial for improving obstetric outcomes. The proactive involvement of nurses, the implementation

of alert systems, and the continuous updating of protocols are essential pillars for reducing maternal mortality and improving maternal and child health.

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