

Improving Obstetric Outcomes

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Maternal morbidity and mortality have been rising in the United States, pointing to an ongoing critical need to implement changes in the delivery of care to improve obstetric outcomes.

According to the Centers for Disease Control and Prevention (CDC), 1,205 U.S. women died of maternal causes in 2021, compared with 861 in 2020 and 754 in 2019. The U.S. rate for 2021 was 32.9 maternal deaths per 100,000 live births, which is more than 10 times the estimated rates of some other high-income countries.²

Further, Maternal Mortality Review Committees found that an estimated 84 percent of pregnancy-related deaths in 36 states between 2017 and 2019 were preventable.³ According to this analysis, the leading cause of pregnancy-related deaths varied by race and ethnicity, and these deaths occurred during pregnancy, delivery, and up to a year postpartum. Some of the underlying causes included mental health conditions, hemorrhage, cardiac and coronary conditions, infection, embolism/thrombosis, cardiomyopathy, hypertensive disorders of pregnancy, and more.⁴

In addition to these underlying medical conditions contributing to maternal mortality, racial and ethnic disparities also can result in poor maternal outcomes. For example, 69.9 deaths per 100,000 live births occurred among Black women in the United States in 2021, which is 2.6 times higher than the rate for White women.⁵ Generally, Black women are three times more likely to die from a pregnancy-related cause than White women because of variations in the quality of healthcare, underlying chronic conditions, structural racism, and implicit bias.⁶

For a global level perspective, the World Health Organization reported that every day in 2020, almost 800 women died from preventable causes related to pregnancy and childbirth, and a maternal death occurred almost every 2 minutes in 2020.⁷

These statistics and more demonstrate that obstetrics (OB) is a high-risk service. Delivery of care is complicated by the fact that providers must consider the health of two patients: the

mother and fetus/neonate. Further, multiple potential failure points exist related to process factors, systems issues, human factors, environment, equipment, and more.

Obstetric Malpractice Claims

MedPro Group claims data indicate that the major allegation categories in OB-related cases include delay in treatment of fetal distress, improper management of pregnancy, and improper performance of vaginal delivery. The most common contributing factors in all OB cases are clinical judgment, communication, and technical skill.⁸ Some of the conditions and situations that drive OB malpractice claims nationwide include the following:

- Maternal complications and injuries, such as:
 - Preeclampsia/eclampsia
 - Maternal sepsis
 - Postpartum hemorrhage
 - Uterine rupture
- Neonatal complications and injuries, such as:
 - Fetal distress
 - Shoulder dystocia
 - Cord prolapse
 - Placental abruption
 - Group B strep newborn management
- Management and treatment concerns, such as:
 - Inadequate informed consent
 - Trial of labor after cesarean (TOLAC)/vaginal birth after cesarean (VBAC)
 - Management of premature onset of labor
 - Active management of the first and second stages of labor
 - Emergency cesarean sections

- Oxytocin administration
- Lack of rapid response/modified early warning score (MEWS)

Analyzing and Managing Risks

Identifying and addressing contributing factors to poor outcomes will help improve and strengthen your processes. When analyzing your organization's risk factors, be sure to examine human factors (including organizational culture); processes and systems; environment; and equipment, technology, and device factors. It's advantageous to consider both active and latent failures when reviewing your organization's risk factors.

Focused Efforts to Improve Maternal Safety

Many professional associations and government agencies are highly committed to improving obstetric outcomes through their quality improvement initiatives, maternal patient safety bundles, and best practice compilations. Following are general approaches your healthcare organization can undertake to mitigate risks associated with maternal safety:

- Conduct an appropriate and thorough assessment of each patient that includes screening
 for risk factors and incorporating patient and family medical history. Carefully consider
 repeated patient complaints or concerns when making clinical decisions about patient
 care and additional diagnostic testing.
- Develop structured communication processes to improve and enhance communication among team members. Team members should use communication techniques such as call-out, check-back, I-PASS, I PASS THE BATON, and SBAR.
- Recognize that inexperience with high-severity situations can be mitigated with situationspecific drills, simulation training, and team training. Routine and ongoing evaluation of procedural skills and competency with equipment also is critical.
- Develop tools to support high-reliability processes that reflect current evidence-based standards, including SBAR, STAR, and Brief, Execute, and Debrief.
- Be aware of the potential impact to patient care during off-shift times, including evenings/nights, weekends, and holidays, as there may be an increased risk of adverse outcomes.

- Ensure that documentation accounts for all clinically significant information, including the
 clinical rationale for the method of delivery. Be aware that lack of access to outpatient
 prenatal records containing information about maternal risk factors (e.g., obesity and
 preeclampsia) and test results for congenital fetal conditions can significantly affect the
 decision-making of the inpatient team during labor and delivery (L&D).
- Promote a culture in which chain-of-command policies are routinely followed in both the L&D unit and in the operating room, and they are acted on in the event of delayed response from the managing physician/surgeon. Focus on repetitive drills for managing fetal distress so that next steps in escalation of care are well established.

Strategies to Mitigate High-Risk Conditions

As noted earlier, numerous factors can drive poor obstetric outcomes and increase liability exposure. Recommendations to mitigate risks associated with four of these conditions — fetal distress, TOLAC, postpartum hemorrhage, and preeclampsia/eclampsia — follow.

Fetal distress

- Conduct standardized electronic fetal monitoring (EFM) interpretation training, and train physicians and nurses together so they use the same terminology.
- Make sure providers maintain certification in EFM interpretation.
- Identify potential underlying causes of fetal intolerance to labor. Labor is taxing to a fetus already compromised by other factors, such as infection or prematurity.
- Establish an oxytocin administration protocol.
- Adopt an active management of labor protocol.
- Implement internal monitoring if external monitoring is difficult.

TOLAC

- Establish risk-in and risk-out criteria for TOLAC for patients and facilities.
- Carefully conduct and document the TOLAC informed consent discussion.
- Establish clear procedures for use of vacuum extractors and forceps.

- Adopt an active management of labor protocol. Create evidence-based criteria for failure to progress, and develop a care plan to include movement toward repeat cesarean section if criteria are met.
- Establish an appropriate chain of command, and drill chain-of-command scenarios.
- Collaborate with the neonatal intensive care unit/pediatrics department to create consultation criteria for deliveries.

Postpartum hemorrhage

- Adopt an active management of labor protocol for the third stage of labor.
- Establish a consistent process to quantify estimation of blood loss (EBL). Use calibrated delivery table drape, and compare weight of materials (dry vs. wet).
- Evaluate postpartum hemorrhage using a 4-T analysis: tone (uterine atony), trauma (lacerations, hematomas, inversion, rupture), tissue (retained tissue, invasive placenta), and thrombin (coagulopathies).
- Implement a multidisciplinary obstetric hemorrhage protocol and toolkit that includes ACOG recommended medications.
- Assess blood bank capacity and response.

Preeclampsia/eclampsia

- Assess for gestational hypertension risk early, and increase prenatal oversight.
- Evaluate for chronic hypertension vs. gestational hypertension.
- Engage the patient to self-monitor and report changes in condition.
- Establish a gestational hypertension management protocol.
- Educate staff on warning signs of worsening gestational hypertension.

In Summary

Maternal morbidity and mortality continue to represent a significant public health threat in the United States and abroad. Addressing these issues at the institutional level requires effective leadership to establish standards and expectations and to measure performance designed to

meet those goals. Further, excellence in patient care is dependent on clinicians who have the education, training, and experience to exercise reasoned judgment and provide the appropriate care necessary to meet patient needs.

For more information on this topic, see MedPro's *Risk Resources: Maternal Morbidity and Mortality*.

Endnotes

This document does not constitute legal or medical advice and should not be construed as rules or establishing a standard of care. Because the facts applicable to your situation may vary, or the laws applicable in your jurisdiction may differ, please contact your attorney or other professional advisors if you have any questions related to your legal or medical obligations or rights, state or federal laws, contract interpretation, or other legal questions.

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¹ Hoyert, D. L. (n.d.). *Maternal mortality rates in the United States, 2021*. Centers for Disease Control and Prevention, National Center for Health Statistics. Retrieved from www.cdc.gov/nchs/data/hestat/maternal-mortality/2021/maternal-mortality-rates-2021.htm

² Simmons-Duffin, S., & Wroth, C. (2023, March 16). *Maternal deaths in the U.S. spiked in 2021, CDC reports*. NPR. Retrieved from www.npr.org/sections/health-shots/2023/03/16/1163786037/maternal-deaths-in-the-u-s-spiked-in-2021-cdc-reports

³ Trost, S., Beauregard, J., Chandra, G., Njie, F., Berry, J., Harvey, A., & Goodman, D. A. (2022). *Pregnancy-related deaths: Data from maternal mortality review committees in 36 US states, 2017-2019*. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Retrieved from www.cdc.gov/reproductivehealth/maternal-mortality/erase-mm/data-mmrc.html

⁴ Ibid.

⁵ Hoyert, *Maternal mortality rates in the United States, 2021.*

⁶ Centers for Disease Control and Prevention. (2023, April 3). *Working together to reduce black maternal mortality*. Retrieved from www.cdc.gov/healthequity/features/maternal-mortality/index.html

⁷ World Health Organization. (2023, February 22). *Maternal mortality*. Retrieved from www.who.int/news-room/fact-sheets/detail/maternal-mortality

⁸ MedPro Group. (2023). Claims data snapshot: Obstetrics. Retrieved from www.medpro.com/documents/10502/5086243/Obstetrics.pdf