

Reviewing maternal morbidity

Issue:

Severe maternal morbidity* in the United States continues to occur and, in fact, has increased since the late 1990s. From 2009 to mid-2014, The Joint Commission has received 65 reports of maternal death. Although maternal deaths have been the traditional indicator of maternal health outcomes, these tragic events have been likened to the “tip of the iceberg.” For every death, there are many women who have significant complications of pregnancy, labor and delivery. Moreover, the most severe complications, such as acute renal failure, cardiac events, thromboembolism, and hemorrhage, as indicated by transfusion of blood products, have increased dramatically in recent years.¹ Identifying women who experience severe maternal morbidity and reviewing their care has the potential to influence the delivery of health services by improving the understanding of the primary etiologies and contributing factors of these morbid events.³

The majority of the reports of maternal death to The Joint Commission related to hemorrhage; other reports related to infection and pulmonary embolism. This data is consistent with literature reports of maternal morbidity. A recently published study by the American College of Obstetricians and Gynecologists (ACOG) concluded that severe maternal morbidity occurs in approximately 2.9 per 1,000 births, is most commonly the result of postpartum hemorrhage, and occurs more commonly in association with several identifiable patient characteristics. In addition, postpartum hemorrhage and hypertensive disorders of pregnancies together accounted for more than two-thirds of the primary underlying causes of severe morbidity.¹

ACOG data underscore that the continued pursuit of best-practice care for postpartum hemorrhage and hypertensive disorders of pregnancy may yield substantial benefits in terms of decreasing the most severe maternal outcomes.¹ As part of a national effort to reduce maternal morbidity, ACOG has called for the identification and systematic review of care provided to all pregnant and postpartum women who are admitted to an intensive care unit or who receive four (4) or more units of blood.² Maternal morbidity is not rare; ongoing vigilance to better identify patients at risk, and timely implementation of clinical interventions consistent with evidence-based guidelines (when indicated) are important steps in the ongoing provision of safe and reliable care. Appropriate systems improvements can be informed by identifying occurrences of maternal morbidity, reviewing the cases, and analyzing the findings.

Safety Actions to Consider:

The following strategies identified by ACOG and supported by The Joint Commission may be considered to help determine a maternal morbidity review process.

*To define severe maternal morbidity, the Centers for Disease Control and Prevention (CDC) uses delivery hospitalization data and International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnosis and procedure codes that indicate a potentially life-threatening maternal condition or complication.⁴

Patient characteristics associated with severe maternal morbidity*

Maternal

- Age 35 years or older
- Cigarette use during pregnancy
- Government-assisted insurance
- Obstetric history (prior vaginal delivery only)
 - Nulliparous
 - Prior cesarean delivery only
 - Prior cesarean and vaginal deliveries
- Any hypertension
- Diabetes mellitus (no diabetes mellitus)
 - Gestational
 - Pregestational
- Antenatal anticoagulant use
- Placenta accrete
- Placental abruption

Neonatal

- Gestational age at delivery (39 0/7 – 39 6/7 wk)
 - 23 0/7 – 27 6/7
 - 28 0/7 – 33 6/7
 - 34 0/7 – 36 6/7
 - 37 0/7 – 37 6/7
 - 38 0/7 – 38 6/7
 - 40 0/7 – 40 6/7
 - 41 0/7 – 41 6/7
 - 42 0/7 or greater

*Adjusted odds ratios and 95% confidence intervals.¹ American College of Obstetricians and Gynecologists

(Cont.)

- All hospitals should identify women who are admitted to an intensive care unit or who receive four (4) or more units of blood.² These events are easily identified and have sensitivity and specificity for identifying women with the highest severity of morbidity.³
- Form a multidisciplinary Severe Maternal Morbidity Committee that reflects the professional make-up of clinicians and staff who provide or support maternity services. The committee should include an individual responsible for data management.²
- At a minimum, the Severe Maternal Morbidity committee should review cases of severe maternal morbidity so that lessons (both successes and failures) can be learned, shared, and applied to ongoing quality improvement.²
- Conduct a debriefing with involved care providers for each case of severe maternal morbidity. This debriefing does not replace the standardized review. Ideally, the debriefing should occur soon after the event.²

Resources:

¹ W.A. Grobman, M.D., M.B.A., et al: "Frequency of and Factors Associated With Severe Maternal Morbidity," *Obstetrics & Gynecology*, 2014;123(4)

² S.J. Kilpatrick, M.D., Ph.D., et al: "Standardized Severe Maternal Morbidity Review," *Obstetrics & Gynecology*, 2014;124(2)

³ W.M. Callaghan, M.D., M.P.H., et al: "Facility-Based Identification of Women With Severe Maternal Morbidity," *Obstetrics & Gynecology*, 2014;123(5)

⁴ Centers for Disease Control and Prevention: Severe Maternal Morbidity Among Delivered and Postpartum Patients Hospitalized in the United States, *Obstetrics & Gynecology*, 2012;120(5)1029-1036

Note: This is not an all-inclusive list.



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The information in this publication is derived from actual events that occur in health care.