Implementing Severe Maternal Morbidity Review in Illinois: Challenges and Solutions

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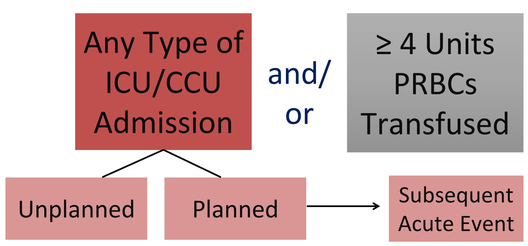
Background

- More than 60,000 American women experience a severe maternal morbidity each year[1]
- The rate of SMM doubled between 1998 and 2010[1]
- SMM occurs at 50-100 times the rate of maternal mortality[2,3]
- CDC and ACOG recommend facility level multidisciplinary review of SMM[4,5]
- In 2016, Illinois implemented SMM review in all obstetric facilities
- Illinois is the first state to launch statewide SMM review

Implementing SMM Review

- 120 obstetric hospitals in 10 Regionalized Perinatal Networks
- SMM form adapted from Council on Patient Safety in Women's Health Care[6] and piloted at Perinatal Networks
- Existing mortality review committees review SMM cases
- Illinois' perinatal data collection system adapted for SMM data

Defining SMM



From conception to 42 days postpartum

Preventability of SMM

- Any action or inaction on the part of the health care provider, system, patient or combination of these factors that may have caused of contributed to the progression to more severe morbidity?[7]
  - Did the women have to get as sick as she did?
- Identification of provider, patient or system factors amendable to clinical, system and/or public health intervention

Challenges

1. Participation and buy in
   a. Participation varies widely across networks
      i. Administrator buy in strongly influences network engagement
   b. Confidentiality concerns
   c. Abstraction and review process is time intensive

2. Preventability of SMM
   a. Very few cases determined potentially preventable
      i. Previous research suggests 30-40% of SMM cases are potentially preventable[8,9]
   b. Cases that found improvement opportunities but were determined not preventable, no improvement
   c. High amount of other cause and missing morbidity

3. Quality of SMM data
   a. Frequency of missing data
   b. Partially uploaded cases
   c. Different procedures for reviewing/uploading cases across networks

Solutions

1. Site visits to networks
   a. 6/10 site visits completed
   b. Presentation includes:
      i. Goals and expectations
      ii. Report back on network and state data

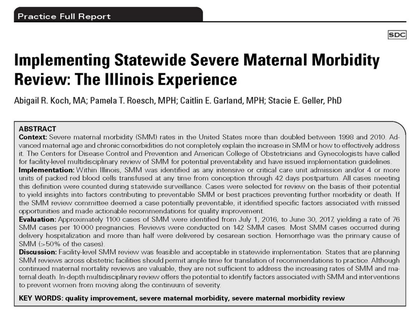
2. Training for review committees
   a. Webinar for committee members
   b. Topics include:
      i. Using the preventability model for morbidity vs mortality
      ii. Determining sequence and primary cause of morbidity
   c. Site visits to observe meetings

3. Ongoing quality improvement activities
   a. Monthly data reports to networks
   b. Monthly data corrections
   c. Biannual reports to IDPH

Conclusion

- Engaging administrators and hospital staff is critical
  - Increase in quality of cases after site visit
  - More responsive to correction requests
- Ongoing Training needs
  - Reviewing SMM cases for preventability is different from reviewing mortality cases
- Continuous quality improvement necessary to maintain data quality

For more information on Illinois' SMM Review Project, see our recent publication in the Journal of Public Health Management and Practice:



Practice Full Report

Implementing Statewide Severe Maternal Morbidity Review: The Illinois Experience

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ABSTRACT

Context: Severe maternal morbidity (SMM) rates in the United States more than doubled between 1998 and 2010. Advanced maternal age and chronic comorbidities do not completely explain the increase in SMM or how to effectively address it. The Centers for Disease Control and Prevention and American College of Obstetricians and Gynecologists have called for facility-level multidisciplinary review of SMM for potential preventability and have issued implementation guidelines.

Implementation: Within Illinois, SMM was identified as any intensive or critical care unit admission and/or 4 or more units of packed red blood cells transfused at any time from conception through 42 days postpartum. All cases meeting this definition were counted during statewide surveillance. Cases were selected for review on the basis of their potential to yield insights into factors contributing to preventable SMM or best practices preventing further morbidity or death. If the SMM review committee deemed a case potentially preventable, it identified specific factors associated with missed opportunities and made actionable recommendations for quality improvement.

Evaluation: Approximately 1900 cases of SMM were identified from July 1, 2016, to June 30, 2017, yielding a rate of 76 SMM cases per 10 000 pregnancies. Reviews were conducted on 142 SMM cases. Most SMM cases occurred during delivery hospitalization and more than half were delivered by cesarean section. Hemorrhage was the primary cause of SMM in 50% of the cases.

Discussion: Facility-level SMM review was feasible and acceptable in statewide implementation. States that are planning SMM reviews across obstetric facilities should permit ample time for translation of recommendations to practice. Although continued maternal mortality reviews are valuable, they are not sufficient to address the increasing rates of SMM and maternal death. In-depth multidisciplinary review offers the potential to identify factors associated with SMM and interventions to prevent women from moving along the continuum of severity.

KEY WORDS: quality improvement, severe maternal morbidity, severe maternal morbidity review

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