Taking Action with State Maternal Mortality Reviews

Florida Pregnancy-Associated Mortality Review (PAMR) Experience

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3 Goals for My Time!

• Quick Glimpse at Pregnancy-Related Deaths that occurred in 2013
• Assessing Preventability of the Death
• Urgent Maternal Mortality Message to Providers
Florida Pregnancy-Associated Mortality Review

- An ongoing surveillance process meeting quarterly.
- Upon full team review, the PAMR committee found 54 (85.7%) deaths to actually be pregnancy-related (PRD).
Pregnancy-Related Mortality Ratio

- **Was in 2013 25.1 per 100,000 live births.** Although the 2013 PRMR ratio was the highest since **2009 (26.2 per 100,000 live births)**, the trend for the period 1999-2013 was **not statistically significant.**
Leading Causes of Death

• Hemorrhage (16.1%) and hypertensive disorders (15.9%).

• Of the 54 PRDs
  -Non-Hispanic Black women PRMR 2 times that of non-Hispanic or Hispanic women.
Figure 3. Pregnancy-Related Mortality Ratios (PRMRs) by Race/Ethnicity
Florida, 1999-2013

PRMR per 100,000 Live Births


Total  Non-Hispanic White  Non-Hispanic Black  Hispanic
Timing

• Of the 54 PRDs, **most** (68.5%) occurred during the **postpartum period**.
  - 40.7% of postpartum PRDs occurred **prior to** hospital discharge
  - 27.8% of postpartum PRDs occurred **after** discharge
Outcome

• PRDs by outcome of pregnancy
  - 44.4% after alive birth delivery
  - 22.2% during or after an emergency delivery
  - 10.5% were planned cesarean deliveries
  - 57.9% were unplanned cesarean deliveries

• 36% or 66.7% of women had an overweight or obese body mass index respectively.
Assessing Preventability of 2013 Maternal Deaths in Florida

Background

• In 2014, the Florida Pregnancy-Associated Mortality Review (PAMR) Committee initiated the assessment of preventability of Pregnancy-Related Deaths that occurred in 2013.
Background

• For each of the 54 cases, the PAMR Committee reached consensus on whether the death appeared to have been preventable and to what degree the death was preventable.

• Also the Committee identified what factors (Individual/Community, System Facility and Clinical) contributed to the death.
Results

• 37% of PRDs had a strong chance to alter the outcome and prevent maternal deaths and nearly 75% had at least a possible chance to alter the outcome.

• Intrauterine hemorrhage and infection both had 50% strong chance to alter the outcome, while hypertensive disorders and thrombotic embolism had 36% and 33%, respectively.
Most Frequent Contributing Factors

• **By individual/community factors** were significant co-morbidity (48%) and personal decisions (35%).

• **By system factors** were lack of care coordination (56%) and lack of standardized policies and procedures (28%).
Most Frequent Contributing Factors

• **By clinical factors** were delay of treatment (23%) and lack of treatment and diagnosis with each one (16%).

• **By cause of death**: 75% of intrauterine hemorrhage, 60% of infection, and 50% of cardiovascular had some contributing factor.
Conclusions

• The assessment of preventability is based on PAMR Committee review and represents the first year of collecting these factors.

• The Florida PAMR Committee members were optimistic that this information would help focus the Committee’s recommendations and have developed an “Urgent Maternal Mortality Message To Providers”...
Hemorrhage is the leading cause of Pregnancy-Related maternal death in Florida. (1)
Placental disorders (including placenta previa, accreta/incrēta/percreta) accounted for 25% of hemorrhage related deaths > 20 weeks gestation. (2)
With the rising cesarean rate, the incidence of placenta accreta has increased. (2)

Urgent Maternal Mortality Message to Providers

Diagnosis is essential before delivery
- If placental disorder suspected, get a Maternal-Fetal Medicine consultation.
- Ultrasonography with supplemental MRI when necessary.
- No imaging modality is perfect. If you suspect an issue—transfer to tertiary facility.

Risk factors
- Discuss pregnancy and delivery risks with patient and family.
- The risk of accreta increases with repeat cesarean sections, myomectomy, presence of placenta previa, multiparity, repetitive dilation and curettages and with advanced maternal age.
- A low lying anterior placenta may be ominous with multiple prior cesarean sections.

Readiness
- Develop and discuss with the patient, family and hospital staff an individual delivery plan.
- Consider early transfer to a tertiary center for access to sufficient blood bank supply and subspecialties.
- Let patients know there is a high risk for bleeding due to placental disorders that can occur after having multiple cesarean sections.
- Contingency plan should be made for emergency delivery.

Implementation of hemorrhage protocols in all Florida delivery hospitals is essential, and should include a massive transfusion protocol, simulation drills and hemorrhage carts. For details on implementing a hemorrhage initiative see Florida Perinatal Quality Collaborative’s Toolkit. (3)

Essential elements of delivery plan
- Preoperative counseling regarding risks.
- Timing of admission and delivery: see ACOG guidelines, may vary if patient unstable.
- Consult with neonatologist regarding corticosteroid administration if applicable.
- Place blood bank on alert for potential massive transfusion protocol.
- When delivery is scheduled, discuss timing with a multispecialty team to optimize expert surgical and anesthesia assistance.
- Do not try to remove the placenta. Hysterectomy is usually the best option.
- If you have called for help and cannot control the bleeding surgically, compress the aorta or uterine vessels while waiting for help to arrive.

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