Building U.S. Capacity to Review and Prevent Maternal Deaths

Background
The death of a woman during pregnancy, at delivery, or soon after delivery is a tragedy for her family and for society as a whole. Sadly, over 700 women die each year in the United States as a result of pregnancy or delivery complications. CDC is committed to preventing pregnancy-associated deaths and ensuring the best possible birth outcomes. CDC conducts national surveillance through the Pregnancy Mortality Surveillance System and has also been working with Maternal Mortality Review Committees to improve and link data and identify opportunities to prevent future deaths.

Maternal Mortality Review
Maternal Mortality Review is a process by which a multidisciplinary committee at the state or jurisdiction-level identifies and reviews cases of maternal death within one year of pregnancy. Review Committees often include representatives from public health, obstetrics and gynecology, maternal-fetal medicine, nursing, midwifery, forensic pathology, mental health and behavioral health. Review Committees have access to multiple sources of information that provide a deeper understanding of the circumstances surrounding the death and develop action recommendations to prevent future deaths. Currently, at least 28 states have or are forming a Maternal Mortality Review Committee.

Although Maternal Mortality Review Committees have been in place for some time, there has never been a standardized data system available to support essential review functions and to bring together data across jurisdictions. CDC, the Association of Maternal and Child Health Programs, and the CDC Foundation are collaborating to enhance Maternal Mortality Review. These efforts are supported by funding from Merck, through an award agreement with its Merck for Mothers program. The Maternal Mortality Review Information Application (MMRIA) has been developed to support and standardize data abstraction; case summary developments; documentation of committee decisions; and routine analysis.

The Role of CDC
Through this work, CDC is strengthening the work of Maternal Mortality Review Committees by:

- Helping Review Committees establish a process for reviewing pregnancy-associated deaths to
  - Understand the medical and nonmedical contributors to pregnancy-related deaths,
  - Identify gaps in health services, and
  - Make recommendations to prevent future deaths and take appropriate action.
- Creating a uniform set of data elements and linking together Review Committees across jurisdictional lines to group regional or national data for greater impact.
- Providing technical assistance and problem solving for state specific needs, including identifying and sharing best practices; and developing and disseminating tools to strengthen state efforts.

Available Resources

- **Report from Maternal Mortality Review Committees** is a proof of concept paper that presents data from four state-based reviews: Colorado, Delaware, Georgia, and Ohio.
- **Review to Action** will be a website providing tools, resources, and support to establish a review; connect states to share best practices and build capacity; and raise awareness of Review Committees’ ability to effect change and eliminate preventable maternal deaths.
- **Abstractor Manual** provides guidance on comprehensively and efficiently gathering information to accurately document the events of a woman’s life leading up to and including her death.
State Efforts in Action

Florida: Urgent Maternal Mortality Message to Providers
The Florida Pregnancy Associated Mortality Review (PAMR) committee issued an Urgent Maternal Mortality Message about placental disorders in December 2015. The team decided to focus on hemorrhage as related to placenta accreta as Florida’s PAMR data showed that hemorrhage as the leading cause of pregnancy related death in Florida and is considered to be the most preventable cause of maternal mortality. The one-page electronic message summarized clinical guidelines and PAMR recommendations to improve clinical recognition and management, as well as provider awareness, of placenta accreta and subsequent risk of hemorrhage. At the same time, the Florida Perinatal Quality Collaborative (FPQC) was implementing a quality improvement project in 34 Florida birthing hospitals on reduction of obstetric hemorrhage.

Georgia: Case Identification, Data Quality, and the Pregnancy Checkbox
The Georgia Maternal Mortality Review Committee (GA MMRC) is working closely with the Georgia Department of Public Health (GDPH) to improve the reporting and quality of data found in the pregnancy checkbox on the death certificate. GA MMRC brought this issue forward after they found approximately 1 in 4 cases where the pregnancy check box was marked were mistaken and incorrectly indicated that a woman had been pregnant at the time of her death or pregnant within a year of the time of her death when that was not the case.

Michigan: Increasing Access to Substance Use Disorder Treatment for Pregnant Women
The Michigan Maternal Mortality Surveillance (MMMS) Injury Committee identified that Substance Use Disorders (SUD) as the direct cause of death in more than one-third of the injury-related maternal deaths that occurred from 2010-2014. As a result, the MMMS Injury Committee has successfully undertaken action steps to increase knowledge of maternal mortality due to SUDs and begin to address gaps in services regarding women’s health programs, state policies, and systems of care. Medical provider education was developed that focused on the coordination of care with mental health outpatient services and enrollment of pregnant women in the Maternal Infant Health Program (MIHP). MIHP is the largest statewide home visiting program for Medicaid beneficiaries and utilizes evidence-based screening tools and risk identification for substance use disorders.

New Jersey: Public Health Promotion and Pedestrian Safety
The New Jersey Maternal Mortality Review Team received at least two cases where young women died in motor vehicle accidents while crossing a busy county road. Pertinent documents described a common location of death and that the women both lived in a low-income dwelling, had young families, and a store across the street was the closest place to buy food. The Department of Health contacted the Department of Highway and Traffic Safety who responded by placing a traffic light and crosswalk at this point in the road, preventing future deaths in the community.

Ohio: Obstetric Emergency Simulation Trainings
The Ohio Pregnancy Associated Mortality Review (PAMR) surveyed maternity units across the state to uncover training needs and preferences. Based on the results, the Ohio Department of Health contracted with Ohio State University to provide simulation training for obstetric providers in three rural Ohio communities. Three clinical simulations on postpartum hemorrhage, cardiomyopathy, and preeclampsia were developed based on PAMR cases and designed to educate staff within labor and delivery and postpartum units.