Preventing Maternal Mortality in Texas
A PUBLIC HEALTH COMMITMENT

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Let us have a moment of silence for the families in Texas forever impacted by the loss of a mother
Overview

1) Roles & Responsibilities
2) Maternal Death Data Trends
3) Severe Maternal Morbidity Trends
4) Case Reviews
5) Key Findings to Date
6) Action Plan

- More Accurate Death Data & Maternal Mortality Rate
- New Legislative Charges
- Need for Maternal Safety Bundles
- Texas Maternal Mortality Forum
Roles & Responsibilities

Roles

• Multidisciplinary Task Force was established in 2013 and began its work in late 2014 supported by DSHS

• Task Force studies and reviews cases and data trends, and makes recommendations for prevention

• DSHS provides administrative support:
  • 1 Epidemiologist — surveillance, research, and data analytic expertise, statewide data trends, case review record requests, data collection, analysis
  • 1 Public Health Nurse — case review medical expertise, oversight, quality monitoring, summarizes all cases
  • ½ Program Specialist — coordination of logistics of Task Force, subject matter expertise for implementing recommendations
Roles & Responsibilities (cont’d)

Responsibilities

• Maternal Death Data Trends
• Case Reviews —

to gain a more in-depth picture of causes and risk factors related to maternal death to make recommendations for prevention
Maternal Death Data Trends

Maternal Mortality Rate (MMR)

- Number of maternal deaths occurring within 42 days of the end of pregnancy per 100,000 live births
- Maternal death within 42 days is determined by coding done by CDC
- CDC coding based on pregnancy status information and cause of death description on death certificate certified by physicians, medical examiners, or justices of the peace
Maternal Death Data Trends (cont’d)
Maternal Death Data Trends (cont’d)

More Accurate Texas MMR

• Enhanced method for identifying maternal deaths:
  • Linking death record to birth or fetal death within 42 days
  • Checking medical records for evidence of pregnancy near/at time of death
• Preliminary findings suggest that enhanced method will result in significantly lower 2012 Texas MMR than MMR previously published by other researchers
• Use enhanced method going forward for MMR trends and comparisons
Maternal Death Data Trends (cont’d)

Maternal Mortality Rate and Risk Factors: Texas

Pre-pregnancy obesity increased 25% from 2005 to 2014 ($r = 0.95$)

Hypertension increased 20% from 2005 to 2014 ($r = 0.79$)

Diabetes increased 45% from 2005 to 2014 ($r = 0.91$)
Maternal Death Data Trends (cont’d)

Maternal Mortality Rate by Racial/Ethnic Group: Texas

Prepared by: Office of Program Decision Support, Division for Family and Community Health Services, Texas Department of State Health Services, 08/24/2016
Data Sources: Death and Birth Files, Center for Health Statistics, Texas Department of State Health Services.

Maternal Mortality Rate (per 100,000 live births)

White Black Hispanic Overall

MMWR — computed within 42 days following the end of pregnancy, using ICD-10 codes A34, O00-O05, O98-O99.
Severe Maternal Morbidity Data Trends

Severe Maternal Morbidity in Texas, Top Causes, 2014

Cases per 1,000 obstetric hospitalizations

- Hemorrhage - AIM-Supported*: 10.2
- Cardiac event: 4.2
- DIC: 2.4
- Hysterectomy: 1.5
- Eclampsia AIM-Supported*: 0.7

*Alliance for Innovation on Maternal Health (AIM) Patient Safety Bundle is available for this condition

Data Source: Hospital Inpatient Discharge Public Use Data File, 2014
Prepared by: Office of Program Decision Support
CASE REVIEWS

PROCESS

- MATERNAL DEATHS IDENTIFIED
- MEDICAL RECORDS REQUESTED, SCANNED, & REDACTED
- CASES SUMMARIZED
- CASE SUMMARIES REVIEWED
- CASE DATA ANALYZED & FINDINGS REPORTED

DSHS Data Collection

DSHS

Task Force

DSHS
CASE REVIEWS (cont’d)

PROGRESS

• Late 2014, case reviews began for 2012 (year with highest Texas MMR)
• Approximately 45 of 90 cases for 2012 reviewed

PLAN FOR EXPEDITING

• Automating case record requests
• Adopting and adapting case review data collection system
• Sampling 50 percent of all maternal death cases for Task Force review annually
• Contracting for medical case record redaction and abstraction
Key Findings to Date

• Need for more accurate death data and MMR
• Risk for maternal death highest among Black women
• Behavioral health issues, especially opioid use and postpartum depression often indirectly associated with maternal death
• Obstetric hemorrhage and hypertension/eclampsia among leading direct causes of severe maternal morbidity with greatest preventability of maternal death
Action Plan

More Accurate Death Data & MMR

• Increase accuracy of death certificate data in new vital event registration system to reduce user error for death reporting
• User training of new system encouraged by professional organizations important for preventing user error
• Use enhanced method for identifying maternal deaths for more accurate MMR
Action Plan (cont’d)

New Legislative Charges

• Examine role of postpartum depression and evaluate programs
• Develop best-practice guidelines and protocols for reporting and investigating pregnancy-related deaths
Action Plan (cont’d)

Need for Maternal Safety Bundles

• To address obstetric hemorrhage and severe hypertension/preeclampsia — top causes of maternal death with greatest chances of being prevented
• Best-practice instructions, checklists, and supplies for hospital staff to prepare for, respond to, and prevent obstetric hemorrhage and severe hypertension during pregnancy
• Bundles designed to be implemented by state’s perinatal quality collaborative, who has established relationships with hospitals
• Texas Collaborative for Healthy Mothers and Babies (TCHMB) supported by DSHS-funded contract with University of Texas
Texas Maternal Mortality Forum

• To inform partners on issue of maternal mortality, develop technical planning workgroups and action plans for implementation of evidence-based initiatives

• Three main workgroups:
  • Data Collection and Reporting
  • Systems of Care
  • Public Health Systems
Questions?