Overview of Maternal Health Issues

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Objectives

Statewide Data Trends
1. Challenges and barriers related to maternal mortality and morbidity
2. Population health disparities in maternal health

Public Health Initiatives
3. Evidence-based quality initiatives for improving maternal health
4. State agency resources for accessing care
5. Client service programs for substance use
Let us have a moment of silence for the families in Texas forever impacted by the loss of a mother
Statewide Data Trends
## Confirmed Maternal Deaths by Timing and Cause of Death, 2012-2015

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>While Pregnant</th>
<th>0-7 Days Post-partum</th>
<th>8-42 Days Post-partum</th>
<th>43-60 Days Post-partum</th>
<th>61+ Days Post-partum</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amniotic Embolism</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Cardiac Event</td>
<td>2</td>
<td>12</td>
<td>9</td>
<td>5</td>
<td>27</td>
<td>55</td>
</tr>
<tr>
<td>Cerebrovascular Event</td>
<td>0</td>
<td>8</td>
<td>9</td>
<td>1</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Drug Overdose</td>
<td>0</td>
<td>3</td>
<td>7</td>
<td>5</td>
<td>49</td>
<td>64</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>3</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Homicide</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>32</td>
<td>42</td>
</tr>
<tr>
<td>Hypertension/Eclampsia</td>
<td>0</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Infection/Sepsis</td>
<td>1</td>
<td>3</td>
<td>14</td>
<td>3</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>Pulmonary Embolism</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Substance Use Sequelae (e.g., liver cirrhosis)</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Suicide</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>44</td>
<td>63</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>64</strong></td>
<td><strong>64</strong></td>
<td><strong>23</strong></td>
<td><strong>215</strong></td>
<td><strong>382</strong></td>
</tr>
</tbody>
</table>
Role of Opioid Overdoses in Maternal Deaths, 2012-2015

• Drug overdose leading cause of maternal death, mostly occurring after 60 days postpartum
  ➢ Combination of drugs involved in 77%
  ➢ Opioids detected in 58%

• Demographic groups at higher risk:
  ➢ White women
  ➢ Ages 40+
  ➢ Medicaid at delivery (low socioeconomic status)
  ➢ Urban counties
  ➢ Region 2/3 (includes Dallas-Forth-Worth) and Region 1 (Panhandle)


Highest Maternal Death Rate (per 100,000 live births) in each Category

- Obesity: 29.2
- Diabetes: 39.9
- Hypertension: 56.3
- Smoking During Pregnancy: 86.0
- Late Entry into Prenatal Care: 26.8
- Cesarean Delivery: 33.3

Pre-pregnancy Obesity by Race/Ethnicity, 2007-2016

*2016 Texas data are preliminary
Source: 2007-2016 Birth Files
Prepared by: Maternal & Child Health Epidemiology Unit
Oct 2017
Maternal Diabetes and Hypertension by Race/Ethnicity, 2007-2016

**MATERNAL DIABETES**

**MATERNAL HYPERTENSION**
Smoking during Pregnancy by Race/Ethnicity, 2007-2016

*2016 Texas data are preliminary
Source: 2007-2016 Birth Files
Prepared by: Maternal & Child Health Epidemiology Unit
Oct. 2017
However, among those not receiving care in first trimester, 51.5% still reported receiving prenatal care as early as they wanted (Texas Pregnancy Risk Assessment Monitoring System, 2015)
Early Non-medically Indicated Elective Cesarean Delivery by Race/Ethnicity, 2007-2016

*2016 Texas data are preliminary.
The IM Collin method was used to identify early NMI elective cesarean deliveries.
Source: 2007-2016 Birth Files
Prepared by: Maternal & Child Health Epidemiology Unit
Oct 2017
Depression during Pregnancy-related hospitalization by race/ethnicity, 2014

Source: Center for Health Statistics, Hospital Inpatient Discharge File, 2014
Percent of Postpartum Depression Reported by Recent Texas Mothers by Race/Ethnicity, 2012-2015

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percent of Women (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>13.8</td>
</tr>
<tr>
<td>White</td>
<td>12.0</td>
</tr>
<tr>
<td>Black</td>
<td>19.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>13.7</td>
</tr>
<tr>
<td>Other</td>
<td>15.2</td>
</tr>
</tbody>
</table>

Error Bars: 95% Confidence Interval
Source: Texas PRAMS, Combined 2012-2015
Severe Maternal Morbidity

• Unexpected outcomes of labor and delivery resulting in significant short- or long-term consequences to a woman’s health

• Identified using specific ICD codes for delivery hospitalizations

• Examples include:
  ➢ Hemorrhage
  ➢ Eclampsia
  ➢ Emergency hysterectomy
  ➢ Thrombotic embolism
Severe Maternal Morbidity, Overall and Top Causes, 2014

*AIM Patient Safety Bundle is available for this condition.

Data Source: Hospital Inpatient Discharge Public Use Data File, 2014
Prepared by: Maternal & Child Health Epidemiology
Obstetric Hemorrhage Rates by Race/Ethnicity, 2005-2014

ICD-9 procedure code 99.0x (Blood and Blood Component Transfusion) was used to estimate/calculate rates of severe maternal morbidity due to hemorrhage in obstetric hospitalizations.

Data Source: Hospital Inpatient Discharge Public Use Data File, 2005-2014
Prepared by: Maternal & Child Health Epidemiology
Obstetric Hemorrhage Rates by County of Residence, 2010-2014

Legend
- Rate per 10,000 delivery hospitalizations
- 0.1 - 118.7 (at or below state average)
- 118.8 - 202.4 (+1 SD)
- 202.5 - 286.1 (+2 SD)
- 286.2 - 369.8 (+3 SD)
- 369.9 and above
- 0 cases or <100 deliveries

Source: Texas Hospital Inpatient Discharge Public Use Data File (PI-DP), 2010-2014. ICDA Procedure Code 956d (Bleed and Blood Component Transfusion) was used to calculate rates of hemorrhage in delivery hospitalizations. Prepared by Office of Program Decision Support, 10/4/2017.
Percent of Hospitalizations due to Obstetric Hypertension by Race/Ethnicity, 2005-2014

ICD-9 diagnosis code 642.xx was used to calculate proportions of hypertensive disorders in delivery hospitalizations.

Data Source: Hospital Inpatient Discharge Public Use Data File, 2005-2014
Prepared by: Office of Program Decision Support
Percent of Hospitalizations due to Obstetric Hypertension by County of Residence, 2010-2014

Legend
Proportion of deliveries
- 0.1 - 10.2% (at or below state average)
- 10.3 - 14.4% (+1 SD)
- 14.5 - 18.5% (+2 SD)
- 18.6 - 22.7% (+3 SD)
- 22.8% and above
- 0 cases or <100 deliveries

Source: Texas Hospital Inpatient Discharge Public Use Data File (PHIDF), 2010-2014
ICD-9 Diagnosis Code 642.2 (Hypertension Complicating Pregnancy, Childbirth, and the Puerperium) was used to calculate proportions of hypertensive disorder in delivery hospitalizations.
Prepared by: Office of Program Division Support, 911/2017, (Gd)
Maternal Mortality and Morbidity are Preventable

From: Main et al. Obstet Gynecol 2015;125(4):938-947
AIM Maternal Safety Bundles

• Instructions, checklists, and supplies for health care staff to effectively prepare, identify, and prevent severe maternal morbidity due to specific causes

• Evidence-based best-practices for maternity care endorsed by many national organizations, including ACOG
Severe Morbidity Reduction - Hemorrhage

- Hospitals that implemented hemorrhage safety bundle had 11.7% decrease in severe maternal morbidity among all obstetric patients (compared to baseline)

Severe Morbidity Reduction

• The four initial AIM states submitted baseline data for three years prior to joining the initiative.

• Each state’s baseline data indicated a severe maternal morbidity rate between 1.9% to 2.1%.

• Data from AIM participating hospitals in those same states for the second to fourth quarter of 2016 (collectively representing 266,717 births) showed a reduction in the severe maternal morbidity rate to 1.5% to 1.9% — an overall 20% decrease.

ACOG Press Release, January 2018
Public Health Initiatives
Increase Death Certificate Accuracy

• To more efficiently identify maternal deaths from pregnancy status and cause of death as intended, consistent with Rider 36 (85th Texas Legislature)

• Action plan calls for:
  ➢ Focused outreach
  ➢ Best-practice guidelines (Senate Bill 1599, 85th Texas Legislature)
  ➢ Training and education
  ➢ Texas Electronic Vital Events Registrar (TxEVER)
Healthy Texas Mothers and Babies

<table>
<thead>
<tr>
<th>Individual and Public Awareness and Knowledge</th>
<th>Professional Education</th>
<th>Community Empowerment</th>
<th>Community Improvement</th>
<th>Perinatal Quality Improvement Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase Knowledge to Change Attitudes and Behaviors for Improved Maternal and Infant Health Outcomes</td>
<td>Strengthen Competencies and Prepare Professionals to Optimize Clinical Outcomes</td>
<td>Engage Community Partners to Strengthen Networks for Collaboration, Innovation, and Collective Impact</td>
<td>Foster Development of Environments that Reduce Barriers, Promote Healthy Lifestyle Choices, and Optimize Maternal and Infant Health Outcomes</td>
<td>Drive System Changes to Support Adoption and Diffusion of Quality Improvements for Maternal and Infant Health and Safety</td>
</tr>
</tbody>
</table>

- **Someday Starts Now**
  - Preconception Peer Education Program
  - Peer Dads Program
  - One Key Question
  - Support from Day One
  - Information for Parents of Newborn Children

- **Online Provider Education**
  - HTMB Life Course Conferences
  - DSHS Grand Rounds
  - Lactation Management Trainings and Skills

- **HTMB Community Coalitions**
  - Collaborative Improvement and Innovation Networks
  - State and National Networks
  - Community Forums

- **Texas Mother-Friendly Worksite Program**
  - Child Care
  - Health Care
  - Public Spaces

- **Maternal Mortality & Morbidity Task Force**
- Texas Collaborative for Healthy Mothers and Babies
- Texas Ten Step Star Achiever Initiative
- Maternal Safety Initiatives
- Special Forums
- Strategic Planning

DSHS Maternal and Child Health Epidemiology, Surveillance, Research, and Analytics
Individual and Public Awareness and Knowledge

• To emphasize importance of:
  ➢ Healthy living
  ➢ Timely prenatal care
  ➢ Role of health disparities
  ➢ Chronic disease risk factors

• Key initiatives:
  ➢ Someday Starts Now
  ➢ Preconception Peer Education
  ➢ One Key Question
Perinatal Quality Improvement Network

• To drive adoption and diffusion of quality improvements for maternal and infant health and safety

• Key initiatives:
  ➢ Risk appropriate maternal care
  ➢ AIM maternal safety bundles
Risk Appropriate Maternal Care

• To ensure pregnant women at high risk receive care in facilities prepared to provide required level of specialized care

• DSHS is responsible for establishing rules for maternal level of care designation

• DSHS will also be calculating maternal health outcome measures for ongoing monitoring and re-designation
Sec. 241.183. LEVEL OF CARE DESIGNATION RULES.
(a) The executive commissioner, in consultation with the department, shall adopt rules:
(1) establishing the levels of care for neonatal and maternal care to be assigned to hospitals;
(2) prescribing criteria for designating levels of neonatal and maternal care, respectively, including specifying the minimum requirements to qualify for each level designation;
TexasAIM Maternal Safety Bundles

• To reduce severe maternal morbidity using evidence-based systems to enhance maternal care

• Implementing AIM bundles for:
  ➢ Obstetric hemorrhage
  ➢ Severe hypertension in pregnancy
  ➢ Obstetric care for women with opioid use disorder

• Next steps:
  ➢ Enrolling hospitals on a voluntary basis
  ➢ DSHS AIM information webinar (March 28th)
  ➢ Maternal Safety Needs Assessment Survey

• For more information, email TexasAIM@dshs.texas.gov or visit www.dshs.texas.gov/mch/TexasAIM.aspx
Sec. 34.0156. MATERNAL HEALTH AND SAFETY INITIATIVE.

(a) Using existing resources, the department, in collaboration with the task force, shall promote and facilitate the use among health care providers in this state of maternal health and safety informational materials, including tools and procedures related to best practices in maternal health and safety.
Inter-Agency Policy Workgroup

• To ensure coordinated policy for maternal health issues, including prenatal and postpartum care for chronic disease and behavioral health

• HHSC client programs:
  ➢ Women’s Health Services
  ➢ Behavioral Health Services
  ➢ Medicaid Services
Thank you