Reducing Maternal Mortality & Morbidity Surveillance & Action

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Presentation Overview

• **Surveillance**
  – Maternal Mortality Review (MMR) in New York State (NYS)
    • Maternal mortality
    • Severe maternal morbidity
    • Disparities
    • MMR Board

• **Action**
  – Guideline summary and resource development
  – New York State Perinatal Quality Collaborative (NYSPQC)
  – Promoting well woman care
    • Partnership for Maternal Health (PMH) Campaign
    • NYS Infant Mortality Collaborative Improvement & Innovation Network
  – Perinatal regionalization
Surveillance
Maternal Mortality in New York

• Measured as maternal deaths per 100,000 live births

• 2010: NY ranks 46th among 50 states with a rate of 18.9


• 2016: NY ranks 30th with a rate of 20.9

Trends in Maternal Mortality as Reported in Vital Records*

*Causes of death from death records A34, O00-O95,O98-O99.
National maternal mortality trends derived from CDC Wonder Database available at https://wonder.cdc.gov/
Trends in Maternal Mortality as Reported in Vital Records* by Race

*Causes of death from death records A34, O00-O95, O98-O99.
National maternal mortality trends derived from CDC Wonder Database available at https://wonder.cdc.gov/
Maternal Mortality Disparities in NYS

Racial disparities in maternal deaths are significant
• The Black to White mortality ratio peaked in 2006 at 6 to 1
• Decreased to 5 to 1 in 2009
• Continued to decrease to reach 3.4 to 1 in 2013
Maternal Mortality Review Initiative

• Convened a multidisciplinary committee in 2010

• Comprehensive population based examination of maternal mortality

• Recommendations for focus and participation in education, developing materials, and quality improvement
MMR Case Identification

Standard surveillance
- Review of female deaths linked to a live birth with a year or less between the two events

Enhanced surveillance
- Examination of female death records not linked to a live birth certificate
  - That occurred within a year after a hospitalization with an indication of pregnancy
  - OR with an obstetric cause of death or pregnancy indicated on death certificate
# Prenatally-Identified Risk Factors
## Pregnancy-related Deaths

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>Percent of women with the risk factor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006-2008</td>
</tr>
<tr>
<td>Hematologic</td>
<td>19%</td>
</tr>
<tr>
<td>Cardiac</td>
<td>13%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>17%</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>9%</td>
</tr>
<tr>
<td>Endocrine</td>
<td>8%</td>
</tr>
<tr>
<td>Psychiatric disorder</td>
<td>5%</td>
</tr>
</tbody>
</table>

Increase over time in identified risk factors

Data source: NYS Maternal Mortality Review
Causes of Death Over Time: Pregnancy-related Deaths

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>2006-2008</th>
<th>2012-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemorrhage</td>
<td>23% (n=29)</td>
<td>18% (n=11)</td>
</tr>
<tr>
<td>Hypertensive disorders</td>
<td>23% (n=29)</td>
<td>10% (n=6)</td>
</tr>
<tr>
<td>Embolism</td>
<td>17% (n=21)</td>
<td>30% (n=18)</td>
</tr>
<tr>
<td>Cardiovascular problems</td>
<td>10% (n=12)</td>
<td>5% (n=3)</td>
</tr>
<tr>
<td>Infection</td>
<td>3% (n=4)</td>
<td>15% (n=9)</td>
</tr>
<tr>
<td>Cardiomyopathy</td>
<td>2% (n=2)</td>
<td>10% (n=6)</td>
</tr>
</tbody>
</table>

Data source: NYS Maternal Mortality Review
# Maternal Deaths: MMR vs Vital Statistics - 2013

<table>
<thead>
<tr>
<th>MMR</th>
<th>Vital Statistics</th>
<th>Maternal Mortality Rate comparison</th>
<th>Black to White ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>23 Unknown: 6</td>
<td>42</td>
<td>9.8 vs 17.9</td>
</tr>
<tr>
<td><strong>Black mothers</strong></td>
<td>8 Unknown: 4</td>
<td>19</td>
<td>19.6 vs 46.6</td>
</tr>
<tr>
<td><strong>White mothers</strong></td>
<td>11 Unknown: 2</td>
<td>20</td>
<td>7.6 vs 13.9</td>
</tr>
</tbody>
</table>

2.6 vs 3.4
Maternal Mortality in New York

2006-2008 vs 2012-2013

What changed over time in the MMR cohorts:

• Black and White mothers contribute equally to the pregnancy-related cohort
  – 15% of live births are born to Black, non-Hispanic mothers
• Majority of pregnancy-related deaths were covered by Medicaid
• Fewer pregnancy-related deaths due to hypertensive disorders
• Injury (substance abuse and suicide) is the leading cause of death among pregnancy-associated not related deaths
Severe Maternal Morbidity (SMM)

“Severe maternal morbidity can be thought of as unintended outcomes of the process of labor and delivery that result in significant short-term or long-term consequences to a woman’s health.”

SMM by Method of Delivery, 2008-2014

SMM by Race/Ethnicity, 2008-2014

Action
NYS MMR Translation to Action

- Hypertensive Disorders in Pregnancy Guideline Summary released in 2013

- Posted on NYSDOH and NYSPQC websites and widely disseminated to hospitals across state

http://www.health.ny.gov/professionals/patients/women.htm
Resources Developed from Guidelines

Blood Pressure Measuring Technique

**CONSIDERATIONS**
- Cuff size: Cuff band for seven (7) to 85% of the arm circumference
- Posture: Sitting with feet flat on floor back supported
- Degree of stimulation: Avoid hypertensive for 30 minutes undressed and at rest for 5 minutes
- Talking: Silence during measurement

**New York State Department of Health**

**Preeclampsia Early Recognition Tool (PERT)**

**What Is It?**
- Preeclampsia is a serious disease related to high blood pressure.
  - It can happen to any pregnant woman during the second half of her pregnancy or up to 5 weeks after delivery.

**Risks to You**
- Seizures
- Stroke
- Organ damage
- Death

**Risks to Your Baby**
- Premature birth
- Death

**Signs of Preeclampsia**

- Stomach pain
- Headaches
- Feeling nauseous
- Seeing spots
- Swelling in your hands and feet

**What Should You Do?**
- Call your doctor or midwife right away. Finding preeclampsia early is important for you and your baby.
New York State Perinatal Quality Collaborative (NYSPQC)

The NYSPQC aims to provide the best and safest care for women and infants in NYS by collaborating with birthing hospitals, perinatal care providers, professional organizations and other key stakeholders to prevent and minimize harm through the translation of evidence-based guidelines to clinical practice.
Promoting Well Woman Care

• Certain medical conditions, personal behaviors, psychosocial risks, and environmental exposures associated with negative pregnancy outcomes can be identified and modified before conception through clinical interventions.

• Chronic conditions contribute to increased maternal mortality rates in NYS

• Every Woman, Every Time.
  • Discuss reproductive plans
  •Prescribe contraception, if appropriate
  • Address risk factors and chronic conditions that could compromise maternal health
Partnership for Maternal Health

- **Goal:** promote equity in maternal health outcomes within at-risk populations, to reduce ethnic and economic disparities, and preventable maternal mortality and morbidity in NYS.

- Collaboration among public health organizations, professional societies, hospital associations, and providers
DOH Commissioner, Dr. Howard Zucker sent a “Dear Colleague” letter recognizing well woman care as key to improving maternal health:

- Recognized the formation of the New York State Partnership for Maternal Health
- Asked all clinicians to initiate conversations with all female patients of reproductive age: “Would you like to become pregnant within the next year?”
- Identified resources to support their practice- “Before and Beyond” CME-accredited educational modules developed by the National Preconception Health and Health Care Initiative

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Partnership for Maternal Health

• Currently developing a multi-pronged provider education campaign
  – Creating webinar for continuing education credits on well woman care targeting all health care providers
    • Available for CMEs in Summer 2018
  – Develop educational pieces for email lists/newsletters
  – Design material for offices on pregnancy intendedness and contraception
Through NYS’s work on the national CoIIN to reduce infant mortality (IM CoIIN), the NYSDOH facilitated three initiatives, which have:

- Engaged six MICHCs and three FQHCs across the state to work collaboratively on goals such as:
  - Improving birth spacing/intention by increasing adherence to the post-partum visit, and increasing selection and use of an effective contraceptive method; and
  - Improving the integration of evidence-based preconception messages into routine preventive care services.

- Would you like to become pregnant in the next year?
Long Acting Reversible Contraception (LARC) Initiatives

CDC 6/18 Initiative
- The 2016-17 NYS Executive Budget included an initiative for the comprehensive coverage and promotion of LARC

ACOG LARC Taskforce
- Develop a provider “bundle” with patient counseling scripts and algorithms, including guidance on how to alleviate patient concerns and dispel myths on LARC

ASTHO Learning Community
- Expand focus on implementing LARC broadly through state level policy changes and operationalizing the logistics associated with access to LARC
Perinatal Regionalization

A comprehensive, coordinated geographically structured system of care organized around a series of Regional Perinatal Centers (RPCs), each supporting and providing clinical expertise, education and quality improvement to a group of affiliate hospitals.
Perinatal Regionalization

• To ensure that women and their babies will have ready access to the services they need through:
  • Ensuring access to an expert health care team
  • Ensuring high quality, comprehensive care for women and babies
  • Maximizing resources of the various facilities across the state – centralizes technology
  • Allows for ongoing quality improvement to better ensure quality services across all levels of perinatal care
Maternal Mortality Review Board

• Priority of the Council on Women and Girls
• A multidisciplinary review of each maternal death
• A more complete assessment of:
  – Causes of death
  – Factors leading to death
  – Preventability
  – Opportunities for intervention
• Translate trends and issues to action
  – Collaborate to develop Issue Briefs, Grand Rounds
  – Quality improvement projects
    • Working collaboratively with partners (NYSDOH, ACOG, GNYHA, HANYS, RPCs)
  – Issue maternal mortality report
Maternal Mortality in New York

New York State
Maternal Mortality Review Report
2006-2008


New York State
Maternal Mortality Review Report
2012-2013

August 2017