Improving Pregnancy Outcomes
Update from MCHB

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Health Resources and Services Administration (HRSA)
Maternal and Child Health Bureau (MCHB)

Grantmakers In Health Meeting on

Improving the Health of Parents, Children, and Families through Public-Private Collaboration

Washington, DC, December 10, 2014
The Good News

• Infant Mortality Rate decreased by 12.2% from 2000 to 2011

• Between 2006 and 2012:
  o Preterm delivery rate decreased by 9.8%
  o Low birth weight rate decreased by 3.3%
The Continuing Challenges

- Persistent health disparities
- Other countries have achieved better outcomes
- Worsening maternal outcomes contribute to poor pregnancy outcomes
Black-White disparities in perinatal outcomes - United States 1980 to 2010

Year

Infant Mortality Rate
Preterm births
Low birthweight
Other Countries Have Done it!

Compared to the United States:

- 27 countries have lower IMRs
- 35 countries have lower PTB Rates, and
- >50 countries have lower MMRs
Contributors to Pregnancy Outcomes

• **Socioeconomic status:** household income, occupational status, or parental educational attainment

• **Risky behaviors:** maternal cigarette smoking, delayed and inadequate utilization of prenatal care, alcohol and drug use

• **Maternal conditions:** psychological stress, stressful life events or perceived stress or anxiety during pregnancy, chronic conditions, perinatal infection
Infant Mortality Rates for the
Five Leading Causes of Death, United States,
2000, 2005, and 2011

Source: CDC/NCHS, Mortality Data. 2011 data are preliminary.
Prepared by MacDorman for SACIM, November 2012.
U.S. Maternal Mortality

Maternal Deaths per 100,000 Live Births

- Total
- White
- Black

Source: Singh GK. Maternal Mortality in the United States. A 75th Anniversary Title V Publication. HRSA 2010
Severe Maternal Morbidity

- Severe maternal morbidity increased by 75% and 114% for delivery and postpartum hospitalizations respectively from 1998-99 to 2008-09

- Rates increased during delivery hospitalizations for:
  - Thrombotic embolism (72%)
  - Respiratory distress syndrome (75%)
  - Cardiac surgery (75%)
  - Acute renal failure (97%)
  - Shock (101%)
  - Blood transfusion (183%)
  - Aneurysms (195%)

Risk factors for adverse pregnancy outcomes among women who recently delivered a live-born baby – PRAMS 2004 – Preconception health conditions and behaviors

<table>
<thead>
<tr>
<th>Behavior /Condition</th>
<th>%</th>
<th>Behavior /Condition</th>
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<tbody>
<tr>
<td>Overweight or obese</td>
<td>35</td>
<td>Previous preterm delivery</td>
<td>11.9</td>
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<tr>
<td>Diabetes</td>
<td>1.8</td>
<td>Tobacco (3 months bef preg)</td>
<td>23.2</td>
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<tr>
<td>Asthma</td>
<td>6.9</td>
<td>Alcohol (3 months bef preg)</td>
<td>50.1</td>
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<tr>
<td>Hypertension</td>
<td>2.2</td>
<td>Multivitamins (&gt;=4/week)</td>
<td>35.1</td>
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<tr>
<td>Heart problems</td>
<td>1.2</td>
<td>No contraception / not planning</td>
<td>53.1</td>
</tr>
<tr>
<td>Anemia</td>
<td>10.2</td>
<td>Pre-pregnancy counseling</td>
<td>30.3</td>
</tr>
<tr>
<td>Previous Low Birth weight</td>
<td>11.6</td>
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We Currently Intervene Too Late

**Critical Periods of Development**

<table>
<thead>
<tr>
<th>Weeks gestation from LMP</th>
<th>Missed Period</th>
<th>Mean Entry into Prenatal Care</th>
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</tbody>
</table>

- Central Nervous System
- Heart
- Arms
- Eyes
- Legs
- Teeth
- Palate
- External genitalia
- Ear

Most susceptible time for major malformation

Mean Entry into Prenatal Care
Early prenatal care is not enough, and in many cases it is too late!
Working smarter

- Implement what we know works
- Work beyond the 9 months of pregnancy:
  - Comprehensive women’s health
  - Preconception / interconception
  - Across the life span - “Life-course approach”
- How we do it:
  - Consider multiple contributing factors
  - COINs
  - Collective impact
The lifecourse approach proposes that disparities in birth outcomes are the consequences of differential developmental trajectories set forth by early life experiences and cumulative allostatic load over the life course.

Lifecourse Perspective to Improve Pregnancy Outcomes

Scientific evidence from two leading longitudinal models:

- **The early programming model** - exposures in early life could influence future reproductive potential

- **The cumulative pathways model** - decline in reproductive health results from cumulative wear and tear to the body’s allostatic systems

- These two models are not mutually exclusive

Key HRSA Improving Pregnancy Outcome Programs

- SACIM
- Women’s Health Preventive Services Clinical Care Guidelines
- The National Maternal Health Initiative
- The Infant Mortality COIIN, and
- Healthy Start
Recommendations for HHS Action and Framework for a National Strategy to Reduce Infant Mortality
SACIM Strategic Directions: 6 Big Ideas (1/2013)

1. Improve the health of women.
2. Ensure access to a continuum of safe and high quality, patient-centered care.
3. Redeploy key evidence-based, highly effective preventive interventions to a new generation.
4. Increase health equity and reduce disparities by targeting social determinants of health through investments in high-risk communities and initiatives to address poverty.
5. Invest in adequate data, monitoring, and surveillance systems to measure access, quality, and outcomes.
6. Maximize the potential of interagency, public-private, and multi-disciplinary collaboration.
Women’s and Maternal Health - HRSA Initiatives
Women’s Health Preventive Services Clinical Visit Guidelines

- Support the development of clinical preventive health guidelines for well woman visit
- Compile the guidelines into a succinct resource
- Disseminate these guidelines and promote their adoption into standard clinical practice among women’s health care providers
Women’s and Maternal Health - HRSA Initiatives
National Maternal Health Initiative

• Promote coordination and collaboration within HRSA, across HHS agencies and with professional and private organizations.

• Five priorities:
  - Improve women’s health before, during, and after pregnancy
  - Improve systems of maternity care including clinical and public health systems
  - Improve public awareness and education
  - Improve research and surveillance
  - Improve the quality and safety of maternity care
Women’s and Maternal Health - HRSA Initiatives
Improving Maternal Health and Safety

• Purpose: reduce the number of maternal deaths and/or preventable severe morbidities

• Goal: engaging health care providers, State leaders, hospitals, payers, and consumers

• Strategies:
  o Promote knowledge of and access to preconception and interconception care through a provider education campaign
  o Engage stakeholders in efforts to reduce primary cesarean delivery
  o Facilitate the adoption of the maternal safety bundle through development of a CoIIN of early adopter states
THE NATIONAL HEALTHY START PROGRAM

History

• Established in 1991 as a presidential initiative

• Provides funding and supports communities with high infant mortality rates and other adverse perinatal outcomes

• Focused on community innovation and creativity and encouraged communities to do what was best for them

• Today, HRSA supports healthy start projects in 196 communities
Main Changes to Healthy Start
Healthy Start Approaches

- Improve Women’s Health
- Promote Quality Services
- Strengthen Family Resilience
- Achieve Collective Impact
- Increase Accountability through Quality Improvement, Performance Monitoring, and Evaluation
Implementing Healthy Start 3.0

- Two new programs are being launched:
  - Supporting Healthy Start Performance Project
  - Healthy Start Information System
Supporting Healthy Start Performance Project

• SHSPP will promote the uniform implementation of Healthy Start by:
  • Ensuring skilled, well qualified workers at all levels of the program
  • Identifying and better defining effective services and interventions
  • Offering mentoring, education, and training to staff delivering these interventions and services
  • Providing shared resources
Healthy Start Information System

- Data Dashboard for real-time monitoring of progress of activities

- Individual client data, program data, and community outcome data for:
  - Continuous quality improvement
  - Provision of targeted technical assistance, and
  - Ongoing local and national evaluations
Healthy Start CAN Drive Collective Impact

Healthy Start programs are uniquely situated to:

- Champion the infant mortality cause in their communities
- Serve as backbone organizations to ensure collective impact
- Implement its six main functions of a backbone organization:
  - Provide overall strategic direction
  - Facilitate dialogue between partners
  - Manage data collection and analysis
  - Handle communications
  - Coordinate community outreach, and
  - Mobilize funding

The Infant Mortality CoILIN
The Collaborative Improvement & Innovation Network to Reduce Infant Mortality

• Designed to help States innovate and improve their approaches to improving birth outcomes

• Initiated March 2012 as a mechanism to support the adoption of collaborative learning and quality improvement principles and practices to reduce infant mortality and improve birth outcomes.
## COIN: Strategies & Structure

### 5 Strategy Teams

1. Reducing early elective deliveries <39 weeks (ED);
2. Enhancing interconception care in Medicaid (ICC);
3. Reducing SIDS/SUID (SS);
4. Increasing smoking cessation among pregnant women (SC);
5. Enhancing perinatal regionalization (RS).

### Teams

- 2-3 Leads (Content Experts);
- Data and/or Method Experts
- Staff support (MCHB & partner organizations)
- State representatives
- Shared Workspace
- Data Dashboard
Non-Medically Indicated Early Term Deliveries Among Singleton, Term Deliveries*

- 29% total decline translating to ~85,000 early elective deliveries averted since 2011 Q1
- 5 states met aim of 33% reduction
- 11 states had declines of 20%+

* Includes provisional birth certificate data
Excludes 1 Region IV State that did not submit 2014 data
Smoking During Pregnancy*

* Includes provisional birth certificate data reflecting smoking in any trimester; Excludes 1 Region IV State that did not submit 2014 data

12% total decline translating to ~17,000 fewer women smoking in pregnancy since 2011 Q1
6 states met aim of 3% reduction
For More Information

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