Definitions and Trends in Preterm Birth

Thursday, January 9, 2020

Connect via telephone: Dial 1-888-450-5996
Pass code 195129#

For Assistance:
Please contact Bejan Foretia at bforetia@amchp.org
Brief Notes about Technology

Mute your line by using the mute function on your phone or by using *6 to mute/un-mute

Asking a Question

You can type your questions into the chat box (shown right)

Raise your hand. Using the icon at the top of your screen (example shown right)

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Brief Notes about Technology

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1. Open the Download Files keypad.
2. Click on the file to be downloaded.
3. Click on the "Download File(s)" button.
4. Click on "Save to My Computer" and select the location to save the file.

File List:
- Participant Homework.docx, 1019 KB

Chat (Everyone)
Brief Notes about Technology

Today’s webinar will be recorded.

The recording will be distributed via email, with the session slides, within 48 hours of the event.

Please complete the evaluation included at the end of the webinar and in the email with the recording and session slides.
Learning Objectives

Learn about current trends in preterm birth, its relationship with infant mortality, and disparities in preterm birth outcomes

Develop an understanding of current trends in preterm birth, the methodologies and processes behind the March of Dimes Report Cards, and how these impact state Title V programs
Featuring

Lisa Waddell, MD, MPH: Deputy Medical and Health Officer, Senior Vice President, Maternal and Child Health/NICU Innovation, March of Dimes

Roland Estrella, MS, MBA: Senior Director, Science, Data Evaluation, and Innovation, March of Dimes
HEALTHY MOMS
STRONG BABIES

TOOLS FOR MCH PROFESSIONALS TO ADDRESS PREMATURITY

Lisa F. Waddell, MD, MPH
Deputy Chief Medical and Health Officer
Senior Vice President, MCH Impact

Roland Estrella, MBA
Senior Director, Data Science and Mission Strategy
OBJECTIVES

1. Highlight March of Dimes as a resource to Title V Directors and their teams

2. Describe current trends in preterm birth, its relationships with infant mortality, and disparities in birth outcomes

3. Describe March of Dimes Report Card and Peristats as tools
OUR MISSION

MARCH OF DIMES LEADS THE FIGHT FOR THE HEALTH OF ALL MOMS AND BABIES.
A BOLD VISION FOR MOMS AND BABIES

HEALTHY MOMS.
End Preventable Maternal Morbidity and Mortality

STRONG BABIES.
End Preventable Prematurity and Infant Mortality

End the Health Equity Gap
U.S. MATERNAL AND INFANT HEALTH CRISIS

It’s One Crisis. Not Two.

This crisis is about moms and babies. It’s about those we’ve lost, including the moms who died and those who face serious health challenges before, during and after pregnancy.

- 22,000+ infants die in one year
- Preterm birth rate is on the rise
- 1 in 10 babies is born preterm
- A woman dies every 12 hours as a result of childbirth
- U.S. is among the most dangerous developed nations for childbirth
- Black women are 3 to 4 times more likely to die from pregnancy

MATERNAL MORTALITY IS RISING IN THE U.S.¹

**Graph: Trends in pregnancy-related mortality in the United States: 1987-2016**


THE U.S. PRETERM BIRTH RATE INCREASED IN 2018, FOR THE FOURTH YEAR IN A ROW²

**Graph: Preterm birth rates per 100 live births**

- **Source:** ²National Center for Health Statistics, natality 2007-2018
### Babies Born Preterm

- **380,000**

### Babies Born with a Birth Defect

- **116,830**

### Societal Cost of Preterm Birth

- **$26.2 BILLION**

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**Source:** National Center for Health Statistics, natality data 2018.

INFANT DEATH IN THE UNITED STATES, 2016

- **Infant death** occurs within the first year of life.
- When causes of death related to preterm birth are grouped together, preterm-related causes account for more than one third (34.9%) of infant deaths.
- As a single cause, prematurity/low birthweight was the 2nd leading cause of infant death. Birth defects was the leading cause of infant death.

INFANT MORTALITY BY GESTATIONAL AGE, 2017

Infant mortality and gestational age are inversely proportional.

Source: National Center for Health Statistics, period linked birth/death records, 2017
A HIGH HUMAN COST OF PREMATURITY

Low birth weight

Underdeveloped organs or organ systems

Increased morbidity
  • Breathing problems, including respiratory distress syndrome
  • Life-threatening infections

Increased disability
  • Cerebral palsy, blindness, and deafness
  • Chronic lung disease

Learning and developmental disabilities

Increased mortality
  • Premature birth is the number one killer of newborns
  • Increased early childhood and late childhood mortality

Significant impact on family
UNDERSTANDING PRETERM BIRTH
DEFINING PRETERM BIRTH

- **Preterm birth** is defined as birth before 37 weeks gestation.
- **Late preterm birth** is defined as birth between 34 and 36 weeks gestation.
- **Early preterm** is defined as birth before 32 weeks of gestation.

Source: Stewart DL, Barfield WD, AAP COMMITTEE ON FETUS AND NEWBORN. Updates on an At-Risk Population: Late Preterm and Early-Term Infants. Pediatrics. 2019;144(5)
The preterm birth rate increased in 2018, for the fourth year in a row.
The majority of preterm births are late preterm births or 34 to 36 weeks of gestational age.
Overall preterm birth has increased by 2% between 2016 and 2018. The increase is driven by a statistically significant increase in late preterm birth.

Women of color are up to 50 percent more likely to give birth prematurely.

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Preterm Birth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian / Pacific Islander</td>
<td>8.7</td>
</tr>
<tr>
<td>White</td>
<td>9.1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9.6</td>
</tr>
<tr>
<td>American Indian / Alaska Native</td>
<td>11.6</td>
</tr>
<tr>
<td>Black</td>
<td>13.8</td>
</tr>
</tbody>
</table>

Preterm birth rates by maternal race/ethnicity, U.S.

Preterm/preterm is less than 37 weeks of gestation. Preterm birth rate is defined as the percentage of live births born preterm. Maternal rate based on "bridged" race; race categories exclude Hispanics. Source: National Center for Health Statistics, 2016-2018 natality data. Prepared by March of Dimes Perinatal Data Center, January, 2020.
INCREASING PREMATURITY & DISPARITY

Preterm birth rates are increasing for all women and slightly decreased among Asian/Pacific Islander women.

Preterm birth rates by maternal race/ethnicity, U.S.

- White: 9.1% (0.6% increase)
- Black: 14% (3% increase)
- Hispanic: 9.7% (3% increase)
- Asian / Pacific Islander: 8.7% (0.6% decrease)
- American Indian / Alaska Native: 11.6% (3% increase)

Percent change between 2016 & 2018

Premature/preterm is less than 37 weeks of gestation. Preterm birth rate is defined as the percentage of live births born preterm.
Maternal rate based on "bridged" race; race categories exclude Hispanics.
Source: National Center for Health Statistics, 2016 and 2018 natality data
2019 MARCH OF DIMES REPORT CARD
MARCH OF DIMES REPORT CARDS

Highlight the rising preterm birth rate, maternal and infant health

Raise awareness for the disproportionate rise in preterm birth and maternal mortality/morbidity for women and babies of color.

Underscore the interventions, campaigns and programs that are in place to combat these issues.

Help motivate and activate public engagement and advocacy.
Hispanic preterm birth rates and grades by state

Preterm is less than 37 weeks gestation based on obstetric estimate.
Source: National Center for Health Statistics, 2018 final natality data.
2019 MARCH OF DIMES UNITED STATES REPORT CARD

UNITED STATES

PREMATURE GRADE C

PRETERM BIRTH RATE 10.0%

PRETERM BIRTH RATES AND GRADES BY STATE

UNITED STATES MATERNAL AND INFANT HEALTH: CONTEXT AND ACTIONS

SELECTED SOCIAL DETERMINANTS OF HEALTH

The original, one-for-one, tax-deductible contributions to health benefits such as those related to reducing infant mortality, are particularly effective in improving health and saving lives. For example, reducing the infant mortality rate by just 1% would save more lives than increasing the median household income by $5000. This would result in a 0.2% reduction in the overall rate of preterm birth. The reduction in preterm birth rates is estimated to save $65 thousand and $21.1 billion, respectively, for premature birth and low birth weight. The report also highlights the importance of early childhood education and the need for improved access to health care.

AVERAGE COST OF A PRETERM BIRTH

Maternal and child health block grant is a core service of federal assistance to states to improve the health and well-being of children and low-income women. The block grant provides funding to support the delivery of high-quality, comprehensive, and coordinated health care services to low-income women and infants. It also includes funding for programs that support the health and well-being of pregnant women and infants.

MEDICAID EXPANSION

Medicaid expansion has been shown to improve maternal and child health outcomes. The expansion of Medicaid has been shown to improve maternal and child health outcomes and has been associated with a reduction in infant mortality. The program also provides funding for other programs, including early childhood education and family support services.

OTHER RECOMMENDED ACTIONS

- Increased funding for maternal and infant health programs
- Improved access to health care for low-income women and children
- Strengthened early childhood education programs
- Improved public health interventions to reduce preterm birth rates
- Increased research on the social determinants of health

The report concludes with a call to action, urging policymakers to take immediate steps to improve maternal and infant health outcomes.
2019 MARCH OF Dimes REPORT CARD

OHIO MATERNAL AND INFANT HEALTH: CONTEXT AND ACTIONS

SELECTED SOCIAL DETERMINANTS OF HEALTH

| Social Determinant | Score | Percentage in Ohio | Percentage in US
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td></td>
<td>23.2</td>
<td>50.0</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td>44.3</td>
<td>70.0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td>98.4</td>
<td>97.8</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td>96.9</td>
<td>97.8</td>
</tr>
</tbody>
</table>

| Income            |       | 22.5               | 50.0            |
| Education         |       | 16.0               | 70.0            |
| Gender            |       | 98.4               | 97.8            |
| Race              |       | 96.9               | 97.8            |

PRETERM BIRTH RATE BY RACE AND ETHNICITY

The 2019 March of Dimes report card highlights that Ohio's preterm birth rate is higher than the rate among all other states. The report card also notes that Ohio's preterm birth rate among black infants is 50% higher than the rate among all other states.

PRETERM BIRTH RATES BY COUNTIES AND CITY

<table>
<thead>
<tr>
<th>County</th>
<th>Preterm Birth Rate</th>
<th>Change Rate From Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleveland</td>
<td>12.2%</td>
<td>Improved</td>
</tr>
<tr>
<td>Franklin</td>
<td>10.5%</td>
<td>Improved</td>
</tr>
<tr>
<td>Hamilton</td>
<td>11.7%</td>
<td>Improved</td>
</tr>
<tr>
<td>Lucas</td>
<td>11.8%</td>
<td>Improved</td>
</tr>
<tr>
<td>Montgomery</td>
<td>11.7%</td>
<td>Improved</td>
</tr>
<tr>
<td>Summit</td>
<td>10.0%</td>
<td>Improved</td>
</tr>
<tr>
<td>Cuyahoga</td>
<td>10.9%</td>
<td>Improved</td>
</tr>
</tbody>
</table>

OHIO MARCH OF Dimes REPORT CARD

2019 MARCH OF Dimes REPORT CARD

PREMATUREITY GRADE C-

PRETERM BIRTH RATE 10.3%

In Ohio, the preterm birth rate among black infants is 50% higher than the rate among all other states.

AVERAGE COST OF A PRETERM BIRTH

$62 THOUSAND

MATERIAL AND CHILD HEALTH BLOCK GRANT

$21.96 MILLION

ADOPTED

MEDICAID EXPANSION

The Medicaid expansion plan increases Medicaid enrollment by 78% of the federal poverty level (FPL), or on average, more than 17 million people in the United States. This expansion plan reduces the number of uninsured and provides essential care to children, families, seniors, and people with disabilities.

OTHER RECOMMENDED STATE ACTIONS

March of Dimes recommends key policy actions to improve maternal and infant health in all states. Puerto Rico, the Virgin Islands, and the District of Columbia are not included in the report card. The report card highlights the importance of collaborative efforts between states and localities to improve maternal and infant health outcomes.

For more information, visit marchofdimes.org/reportcard.
• **COMPREHENSIVE MEDICAID COVERAGE EXTENSION FOR ALL WOMEN TO AT LEAST ONE YEAR POSTPARTUM**  In too many states, Medicaid maternity coverage ends 60 days after giving birth, ending access to care at a time when risks of maternal complications and death persist.

• **GROUP PRENATAL CARE ENHANCED REIMBURSEMENT**  Group prenatal care has shown significant benefits to maternal health, increases healthy behaviors and reduces adverse birth outcomes. Increased benefits were seen in Black women who participated in group prenatal care. Enhanced reimbursement models, including delivery and outcomes-based incentives, can encourage providers to offer it.

• **MATERNAL MORTALITY REVIEW COMMITTEES**  Establishment, funding and reporting of state data to CDC through Maternal Mortality Review Committees is essential to understanding and addressing the causes of maternal death.
**INCREMENTAL GRADING STRATEGY**

- The whole grade parameters remain the same (A and A- are still equal to or less than the MOD goal of 8.1)
- The scores for the whole grade remain the same, but for incremental grades are divided into tertiles (thirds).
- The rates and the data utilized to calculate the rates have **NOT** changed – this change in grading in no way changes the quality of data that has been consistent for all of the previous report cards.

<table>
<thead>
<tr>
<th>GRADE</th>
<th>PRETERM BIRTH RATE RANGE SCORING CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Preterm birth rate less than or equal to 7.7 percent.</td>
</tr>
<tr>
<td>A-</td>
<td>Preterm birth rate of 7.8 percent to 8.1 percent.</td>
</tr>
<tr>
<td>B+</td>
<td>Preterm birth rate of 8.2 percent to 8.5 percent.</td>
</tr>
<tr>
<td>B</td>
<td>Preterm birth rate of 8.6 percent to 8.9 percent.</td>
</tr>
<tr>
<td>B-</td>
<td>Preterm birth rate of 9.0 percent to 9.2 percent.</td>
</tr>
<tr>
<td>C+</td>
<td>Preterm birth rate of 9.3 percent to 9.6 percent.</td>
</tr>
<tr>
<td>C</td>
<td>Preterm birth rate of 9.7 percent to 10.0 percent.</td>
</tr>
<tr>
<td>C-</td>
<td>Preterm birth rate of 10.1 percent to 10.3 percent.</td>
</tr>
<tr>
<td>D+</td>
<td>Preterm birth rate of 10.4 percent to 10.7 percent.</td>
</tr>
<tr>
<td>D</td>
<td>Preterm birth rate of 10.8 percent to 11.1 percent.</td>
</tr>
<tr>
<td>D-</td>
<td>Preterm birth rate of 11.2 percent to 11.4 percent.</td>
</tr>
<tr>
<td>F</td>
<td>Preterm birth rate greater than or equal to 11.5 percent.</td>
</tr>
</tbody>
</table>
PeriStats provides access to data on birth outcomes by state.

- Births
- Preterm births
- Birthweight
- Prenatal Care
- Birth Defects

Several of the community level risk factors are also represented on PeriStats.

- Smoking and Alcohol use
- Poverty
- Health Insurance

Access PeriStats at:
https://www.marchofdimes.org/peristats/Peristats.aspx
Four reports are available through PeriStats. These state specific resources include:

- March of Dimes Report Card
- Prematurity Profile
- Birth Defect Profile
- Healthy Moms. Strong Babies.
DATA TO ACTION
SUMMARY

• We have an urgent maternal and infant health crisis in the U.S.
• Preterm birth rates are rising.
• Disparities persist and far too many infants still do not survive to see their first birthday.
• March of Dimes has tools to assist Title V Directors and their teams to address preterm birth in states and communities.
THANK YOU

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Senior Vice President, MCH Impact

Roland Estrella, MBA
Senior Director, Data Science and Mission Strategy

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Website: Marchofdimes.org
Join the Collaborative: Marchofdimes.org/collaborative
Facebook: Facebook.com/marchofdimes
Prematurity and its complications are the leading contributors to infant death

Preterm is less than 37 weeks gestation. Gestational age based on obstetric estimate. Preterm-related is a grouping of causes of death each determined to be a direct consequence of preterm birth (44 ICD-10 codes).

National Center for Health Statistics (NCHS) researchers developed this list of causes to more fully assess the impact of preterm birth on infant mortality in the US.

Preterm-related, 36.3%
All other causes, 31.8%
Accidents, 4.9%
SIDS, 6.7%
Birth defects, 20.4%

Source: National Center for Health Statistics, 2013 period linked birth/infant death data

Prepared by March of Dimes Perinatal Data Center, July 2015
Thank you!
Coming next...
Emerging Research in Preterm Birth

Dr. Monica McLemore from the University of California-San Francisco Preterm Birth Initiative (UCSF PTBi) will discuss research findings elucidating the root causes of preterm birth. This session will focus on the necessity of digging deeper to explore the disproportionate distribution of risk factors across communities and social and cultural contexts. Dr. McLemore will focus on research about toxic stress and resilience.

When: Tuesday, February 4, 2020 from 12:30-1:30 EST

Registration coming soon!
Webinar Evaluation

Please take a few moments to provide feedback:

CLICK HERE FOR WEBINAR EVALUATION