Public Health Strategies to Prevent Preterm Birth

November 16, 2015
Preterm Birth in the United States

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Director, Division of Reproductive Health
National Center for Chronic Disease Prevention and Health Promotion
A Story of Two Births

Patrick, born 1963

Joseph, born 2001
Key Terms To Understanding Preterm and Term Births

Most pregnancies last around 40 weeks

Preterm births occur before 37 weeks

Early Preterm
Prior to 34 weeks of gestation

Late Preterm
Between 34 and 36 weeks & 6 days gestation

Term births occur after 37 weeks

Early Term
Between 37 weeks and 38 weeks & 6 days

Full Term
Between 39 weeks and 40 weeks & 6 days

Late Term
Between 41 weeks and 41 weeks & 6 days

Postterm
After 42 weeks

The annual societal economic burden of prematurity is $26.2 billion, according to a 2005 estimate from the Institute of Medicine.

Preterm birth is a significant contributor to U.S. health and socioeconomic disparities.

Behrman RE, and Butler, AS. Preterm Birth: Causes, Consequences, and Prevention. 2007
Infant Mortality Rates for Selected OECD Countries, 2010

Infant mortality is defined as the death of a baby before his or her first birthday.

OECD: Organization for Economic Co-operation and Development
NCHS linked birth/infant death data set (U.S. data) and OECD 2014 (all other data) www.oecd.org
Adjusted Infant Mortality Rates for Selected OECD Countries, 2010

- Finland: 2.1
- Sweden: 2.1
- Denmark: 2.2
- Norway: 2.5
- Switzerland: 2.5
- Czech Republic: 2.7
- Austria: 2.8
- England and Wales (UK): 3.2
- Scotland (UK): 3.3
- United States: 4.2
- Poland: 4.5
- Northern Ireland (UK): 4.5

OECD: Organization for Economic Co-operation and Development
NCHS linked birth/infant death data set (U.S. data) and OECD 2014 (all other data) www.oecd.org.
Diminishing Returns: Further Reducing Infant Mortality in the United States


- **In 1990, pulmonary surfactant approved by FDA**
- By 2013, IMR reached 5.96

IMR: Infant mortality rate
Preterm Birth and Infant Mortality

Infant Mortality Rates by Gestational Age, U.S., 2013

Our tiniest babies bear the biggest burden

Preterm-related causes includes a combination of short gestation and maternal complications that lead to preterm birth.
NCHS Linked Birth/Infant Death Data Set, 2010
The Contribution of Preterm Birth to U.S. Infant Mortality


- **LIVE BIRTHS**
  - ≥ 37 Weeks: 90%
  - <37 Weeks: 10%

- **INFANT DEATHS**
  - ≥ 37 Weeks: 67%
  - <37 Weeks: 33%

NCHS Linked Birth/Infant Death Data Set, 2013
Disparities in Preterm Birth in the U.S.


Based on NCHS LMP-based estimates
NCHS Public Use Birth Datasets
Disparities in Causes of Infant Mortality

Infant Mortality Rates for Selected Causes of Death Among Non-Hispanic Black and Non-Hispanic White Mothers, U.S., 2010

- **Preterm-related causes**
  - Non-Hispanic Black: 487
  - Non-Hispanic White: 159

- **Congenital Malformations**
  - Non-Hispanic Black: 156
  - Non-Hispanic White: 118

- **SIDS**
  - Non-Hispanic Black: 98
  - Non-Hispanic White: 50

- **Unintentional Injuries**
  - Non-Hispanic Black: 53
  - Non-Hispanic White: 28

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*Preterm-related causes includes a combination of short gestation and maternal complications that lead to preterm birth*

*SIDS: Sudden infant death syndrome*

*NCHS Linked Birth/Infant Death Data Set, 2010*
Disparities in preterm birth → Disparities in infant mortality → High infant mortality rate in the U.S.

*We must address disparities in preterm birth to reduce preterm birth rates, and to lower infant mortality in the United States*
Preterm Delivery Risk Factors: Social, Behavioral, Clinical, Biological

- Substance abuse
- Low socioeconomic status
- Stress
- Multiple gestation
- Tobacco use
- Bacterial vaginosis infection
- Poor pregnancy weight gain
- Late prenatal care
- Maternal morbidity
- Pre-pregnancy BMI
- Inflammation
- Epigenetics
- Black race
- Congenital anomalies
- Family history
- Periodontal disease
- Unmarried
- Maternal age
- Prior preterm birth
- Incompetent cervix
- Urinary tract infection
- Neighborhood
- Poor maternal education
Opportunities To Prevent Preterm Birth

1. Improve data for surveillance of preterm birth
2. Research etiology and act to prevent
3. Improve quality of care
4. Strengthen partnerships: from science to practice
1. Improve Data for Surveillance

Provide more accurate estimates of preterm birth rates to better target high-burden groups

Utilize and link data to provide much-needed contextual information on women and infants in their communities (e.g., PRAMS)

Measure and target the social determinants of health that drive racial disparities

PRAMS: Pregnancy Risk Assessment Monitoring System
2 Research Etiology and Act to Prevent

Reduce non-medical inductions before 39 weeks

Reduce teen and unintended pregnancies

Reduce known maternal risk factors for preterm birth, including tobacco use, hypertensive disorders, obesity and diabetes

Encourage elective single embryo transfer procedures with assisted reproductive technologies (ART)

Assisted Reproductive Technology Surveillance—United States, 2012
Improve preconception and interconception health

Provide access to appropriate post-partum contraception to assist in birth spacing (i.e., increasing time between births)

Improve access to effective prematurity prevention treatments, such as progesterone and cervical cerclage

Improve clinical practice and public health interventions through better evidence
Strengthen Community Partnerships: Science to Practice

- Build capacity in communities
- Increase intragovernmental and strengthen public-private partnerships
- Support legislation and policies
- Collaborate within states, tribes, territories, and regions
A Story of Two Births

Patrick, born 1963

Joseph, born 2001
Tackling the U.S. Black & White Racial Disparity in Infant Mortality

Arthur James, MD
Associate Clinical Professor,
Department of Obstetrics/Gynecology, & Pediatrics
Ohio State University, Wexner Medical Center
Nationwide Children’s Hospital
Overall U.S. Infant Mortality Rate (IMR) Has Declined

United States Infant Mortality Rate (IMR), 1980–2013

IMR per 1,000 live births

By 2013, IMR reached 5.96

Black Infant Mortality Rates Have Historically Been Twice the Rate for White Infants

Infant Mortality Rate by Race, U.S., 1980–2013

- **RR=2.0**
- In 1980, black IMR was twice the white IMR

IMR per 1,000 live births


<table>
<thead>
<tr>
<th>Year</th>
<th>Black</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>22.2</td>
<td>10.9</td>
</tr>
</tbody>
</table>

RR: Rate ratio
Data are presented here by race only; data on Hispanic origin of mothers were not routinely collected until 1989. www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf. Deaths: Final Data for 2013. TABLE 20
Despite Declines in Rates, Racial Gaps in Infant Mortality Rates Have Not Improved

Infant Mortality Rate by Race, U.S., 1980–2013

In 2013, black IMR was more than twice the white IMR

RR: Rate Ratio
Data are presented here by race only; data on Hispanic origin of mothers were not routinely collected until 1989
24-year gap between reaching 1990 goal for black infants
Reaching 2000 Infant Mortality Goal Also Delayed for Black Infants

Infant Mortality Rate by Race, U.S., 1980-2013

2000 Healthy People IMR Goals
- Overall IMR: 7.0
- Black IMR: 11.0

21-year gap between reaching 2000 goal for Black infants

Data are presented here by race only; data on Hispanic origin of mothers were not routinely collected until 1989
Reaching Black Infant Mortality Rate Goals by 2020 Will Be A Challenge

Infant Mortality Rate by Race, U.S., 1980–2013

2020 Healthy People IMR Goals
- One IMR Goal for All Infants: 6.0

Projected delay

Data are presented here by race only; data on Hispanic origin of mothers were not routinely collected until 1989
Unless We Accelerate Our Efforts, Disparities in Infant Mortality Will Persist for Generations

Infant Mortality Rate by Race, U.S., 1980-2013

Data are presented here by race only; data on Hispanic origin of mothers were not routinely collected until 1989. www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf. Deaths: Final Data for 2013. TABLE 20
Disparities in Preterm Birth Rates by Race

Preterm Birth Rate by Race of Mother, U.S., 1980–2014

Data are presented here by race only; data on Hispanic origin of mothers were not routinely collected until 1990. NCHS Public Use Birth Datasets, Based on NCHS LMP-based Estimates
Declines in Preterm Birth Disproportionately Contribute to Declines in Infant Mortality

Percent Reduction in US Infant Mortality Rate Attributed to Preterm Births by Race/Ethnicity, 2005–2012

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percent Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>31</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>44</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>82</td>
</tr>
</tbody>
</table>

NCHS linked birth/infant dataset
Many Contributing Factors to Preterm Birth among African Americans

- Substance abuse
- Low socioeconomic status
- Stress
- Multiple gestation
- Tobacco use
- Bacterial vaginosis infection
- Poor pregnancy weight gain
- Late prenatal care
- Maternal morbidity
- Pre-pregnancy BMI
- Inflammation
- Black race
- Congenital anomalies
- Epigenetics
- Family history
- Periodontal disease
- Unmarried
- Maternal age
- Incompetent cervix
- Prior preterm birth
- Urinary tract infection
- Neighborhood
- Poor maternal education
African-Americans are exposed to more risk factors over their life; this impacts their health outcomes, including birth outcomes.

Lu MC, Halfon N. Matern Child Health J. 2003
Social determinants of health (SDoH) account for as much as 70% of health disparities (WHO)

- The ways in which social determinants affect health are determined by systems put into place over the past 395 years, and how multiple generations have “internalized” the experiences generated by these systems
- Does AA history contribute to, perhaps account for, the nation’s black/white disparity?

<table>
<thead>
<tr>
<th></th>
<th>Slavery</th>
<th>Jim Crow</th>
<th>Since Civil Rights Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
<td>246</td>
<td>99</td>
<td>51</td>
</tr>
<tr>
<td>%</td>
<td>62%</td>
<td>25%</td>
<td>13%</td>
</tr>
</tbody>
</table>

87% of the AA experience either as Slaves or under Jim Crow
The Legacy of Red-lining of Mortgages

“Particularly disturbing is the relationship between redlined areas and infant health outcomes.”

– Kirwan Institute

Many Contributing Factors to Preterm Birth among African-Americans
Many Contributing Factors to Preterm Birth among African-Americans
Getting to the Root of This Disparity

- **Systemic factors driving health inequities include:**
  - Education
  - Labor and housing markets
  - Government regulation
  - Health care systems

- **Each are powerful social determinants of health**
  - Ones over which individuals have little or no direct control

- **They can only be changed through**
  - Social and economic policies
  - Political processes

Lu MC, Halfon N. Matern Child Health J. 2003
Addressing Social Determinants to Move Forward

- We should adopt a “life course” perspective
  - Assessing early-life and life-long exposures
  - Generational exposures (e.g., epigenetics)
  - Biological, psychological, behavioral or socioeconomic

- Understanding how they accumulate over lifetimes to manifest as disease

- Addressing social determinants broadly can improve health outcomes, including infant mortality

Lu MC, Halfon N. Matern Child Health J. 2003
We Need to Aim for Equity – Not Equality

- We must invest more to shorten the time it will take to reach the same infant mortality rates for Black infants as for White infants

MDCH, Health Equity Learning Labs 2013, provided by Hogan, V., Rowley, D., Berthiaume, R. & Thompson, Y, University of North Carolina at Chapel Hill. Adapted from http://indianfunnypicture.com/search/equality+doesn%27t+mean+justice
Incorporating Social Determinants of Health into Clinical Practice

- Research points to importance of incorporating upstream interventions that address poverty, unemployment, access to care, etc.

- To improve preterm birth rates among African-Americans, we’ll need to figure out how to:
  - Incorporate social determinants of health concepts into our clinical interventions
  - Apply those interventions equitably, effectively providing preferential clinical assistance to traditionally under-resourced and under-served communities

- Simultaneously, we cannot slack off on our efforts to improve the infant mortality rates among whites

WHO Commission on Social Determinants of Health, 2008
Healthy People 2020

A society in which all people live long, healthy lives

Overarching Goals:

- Attain high quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups.
- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development and healthy behaviors across all life stages.
Preventing Preterm Birth One State At A Time: Perinatal Quality Improvement Collaboratives

Zsakeba Henderson, MD
Medical Officer, Division of Reproductive Health
National Center for Chronic Disease Prevention and Health Promotion
Perinatal Quality Collaboratives (PQCs)

- Perinatal care providers and public health professionals working together to improve pregnancy outcomes for women and newborns

- Quality improvement by members of the PQCs
  - Identify care processes that require improvement
  - Use the best available methods to effect change and improve outcomes

- PQCs include key leaders in private, public, and academic health care settings

- Baseline and ongoing collection of data with rapid return to member facilities is imperative
Role of Regional Perinatal Quality Collaboratives (PQCs)

- **Regional PQCs encourage**
  - Taking on the responsibility of improving outcomes for the entire population of the region’s mothers and infants
  - Understanding of one’s regional network of perinatal care
  - Collaborating among teams from both the hospital and the community
  - Comparison of performance to hospitals that are operating within similar demographic, economic, and health services context

- **Members of a regional quality improvement initiative represent a “community of change”**

Gould JB. Clin Perinatol 2010
Improving Perinatal Outcomes By Supporting PQC

- Provide support for states to expand current efforts
- Transfer experiences and knowledge gained from CDC-funded PQC to help other states improve their perinatal outcomes
- Develop a guide for how state-based PQC function
- Support the formation of a network of PQC

PQC: Perinatal Quality Collaboratives
Funded Collaboratives
Reduction of Early Elective Deliveries <39 Weeks

- Reduce scheduled births <39 weeks gestation that are not medically necessary (i.e., early elective deliveries)
- Approaches include
  - “Champion” leaders at member institutions
  - Educational efforts (webinars, conference calls, learning sessions)
  - Improving documentation of gestational age dating criteria
  - Improving documentation of indications for delivery
  - Feedback through review of site-specific and aggregate data
  - Troubleshooting of systemic and local issues
- Data sources include medical records, patient discharge data, vital records
Average Rate of Early Elective Deliveries Has Declined

National Average Rate of Early Elective Deliveries, US, 2010–2014

- 2010: 17
- 2011: 14
- 2012: 11.2
- 2013: 4.6
- 2014: 3.4

Target Rate: 5%

2014 Leapfrog Hospital Survey Results
www.LeapfrogGroup.org/HospitalSurveyReport
Declines in Early Elective Deliveries:
New York State Perinatal Quality Collaborative

Percent of **all scheduled deliveries** at 36 0/7 to 38 6/7 weeks without documented medical or obstetrical indication, June 2012 – November 2014

NYSPQC, unpublished data
PQCs Have Reduced Early Elective Deliveries (EED)

CDC-FUNDED PQCS

CA  NY  OH  IL  MA  NC

EED Rate %

Target Rate: 5%

Year

2012  2013  2014

PQCs: Perinatal Quality Collaboratives
Success Stories: www.cdc.gov/reproductivehealth/MaternalInfantHealth/PQC.htm
Progestosterone for Prevention of Preterm Birth: Ohio Progestosterone Project

- Preterm birth is the #1 cause of newborn death in Ohio
- Progesterone reduces preterm birth by >30%
- OPQC is testing strategies to implement progesterone therapy in 24 obstetric outpatient clinics
- This project aims to reduce preterm births in Ohio by increasing
  - Screening
  - Identification
  - Treatment
Two Clinical Algorithms for Progesterone Therapy

Society for Maternal Fetal Medicine (SMFM)

Starts with Singleton Pregnancies

American College of Obstetricians and Gynecologists (ACOG)

Starts with Short Cervix

Fig. 1. Algorithm for the management of short cervical length in the second trimester. *
Merged Protocol Starts With All Patients at First Prenatal Visit

Initial Prenatal Visit
Comprehensive Obstetrical History
Ultrasound Confirmation of Dates and Plurality

Is There a History of Spontaneous Preterm Birth?
*Defined as a singleton live birth at 16\(^{0/7}\) - 36\(^{6/7}\) weeks or stillbirth before 24 weeks presenting as labor, ruptured membranes, or advanced cervical dilation or effacement*

- Yes
  - Rx 17-OHPC 250 milligrams IM weekly from 16\(^{0/7}\) - 36\(^{6/7}\) weeks of gestation
  - TV CL Q.14 days between 16 - 24 weeks Q.7 days if CL < 30 mm
  - If TV CL ≤ 25 mm before 24 weeks, Consider Cerclage Suture, especially if prior SPTB < 28 weeks or visible membranes and Continue \(^2\) Progesterone Rx

- No
  - Does the patient have Signs + symptoms of parturition: Persistent pelvic pressure, cramps, spotting, &/or vaginal discharge
    - Yes
      - Is this a singleton pregnancy?
        - Yes
          - No
          - No
            - This protocol is not applicable
        - No
          - Transvaginal CL Performed by Credentialed Sonographer
            - Routine Prenatal Care
            - TV CL > 25 mm
            - TV CL 21-25 mm Repeat x 1 in 7-14 days
            - TV CL ≤ 20 mm
              - Rx Vaginal Progesterone daily as 200 milligram capsules or suppositories or 90 milligrams vaginal gel until 36 weeks
      - Suggested Site-specific Screening Algorithms
        - Universal TV CL Screening at 18-24 weeks
        - Universal TA CL Screening at 18-24 \(\rightarrow\) CL ≤ 35 mm
        - Selective TV CL Screening of women w/ \(^4\) Risk Factors
          - Prior PTB < 34 weeks of ? Cause or of Twins; Hx GU Infection; Conception with Fertility Rx; African American race/ethnicity; Cervical surgery; BMI < 19.6 or > 35; Periodontal disease
Progesterone Awareness

Give Your Baby a Healthy Start
How Progesterone Can Help You Prevent an Early Delivery

A medicine called progesterone can help some women

Doing More to Reduce Preterm Birth
Sharpen Focus on Preterm Birth Key to Lowering Ohio’s High Infant Mortality Rate

Did you know that preterm birth is the root cause of more than one third of infant deaths?

Nationally, Ohio ranks near the bottom for Caucasian-African-American
and overall infant mortality in the United States. Looking more closely,
African-American infant mortality is much higher than white infant
mortality, indicating that racial disparities impact infant
death in Ohio.

Preterm, or premature, birth is the
#1 cause of infant death in Ohio.

Early preterm births (before 32 weeks)
account for more than half of nonmortality deaths, totaling 300
nonmortality deaths annually.

How Can You Help?
Now is the time you can take action to address one of Ohio’s biggest
public health challenges. www.ohiopreterm.org

Reducing Preterm Birth
Evidence-Based Strategies to Improve Outcomes

Progesterone treatment and cervical length measurement screening are key tools to lowering Ohio’s high infant mortality rate.

ISSUE
Ohio ranks near the bottom for Caucasian-African-American
and overall infant mortality, reflecting a continuing high infant mortality rate.

RESPONSE
The Pregnancy Project, and ultimately of its Ohio
Progesterone Quality Collaborative (OPQC), is a statewide
multi-stakeholder network that has worked to improve maternal and infant health in Ohio.

The project aims to increase the use of effective treatments to help reduce preterm birth
among women at highest risk.

The OPQC Community Preterm Project.

$30,000
The average cost of a preterm birth in Ohio.

5-10 minutes
The length of time a home screening test takes.

$1,000
The average cost of a progesterone treatment.

Cervical Length Measurement
A Vital Tool in Reducing Preterm Birth in Ohio

Problem
Progesterone treatment with a cervical length measurement
screening tool can help detect and treat preterm labor.

Risk Factors
Highly relevant with a personal or family history of
infant death, low birth weight, or early labor.

Solution
Progesterone treatment with cervical length
measurement and screening tool can help detect and treat
preterm labor.

In summary, the OPQC Community Preterm Project
has successfully worked to improve maternal and infant health in Ohio.

Ohio Department of Health
Prenatal Quality Collaborative
Preterm Birth Rates Reduced in Women with History of Preterm Births

Rates of Preterm Births, Women with PTB History, Preliminary Data
January 2012 – August 2015

OPQC Participating Sites

Less than 37 Weeks

Less than 32 Weeks

All Ohio Hospitals

Less than 37 Weeks

Less than 32 Weeks

OPQC, unpublished data
Increasing Use of ANCS to Improve Outcomes for Preterm Infants

- Antenatal corticosteroids (ANCS) reduce morbidity and mortality for preterm infants
- ANCS administration rates can be optimized to reach >90% eligible pregnant women
- OPQC has improved the percent of women between 24 0/7 weeks and 34 0/7 weeks who receive any ANCS prior to delivery
In Ohio, Identifying Other Ways to Improve Care

- Many women who deliver early are first seen at a smaller hospital before transfer to a larger hospital for delivery
  - 40% of treated women received their first dose of ANCS at a smaller hospital
- OPQC developed ANCS toolkit
  - Disseminated widely
- Important step towards “regionalized care” for preterm births

Optimizing Antenatal Use of Steroids to Improve Outcomes for Preterm Infants
A Labor & Delivery Toolkit from the Ohio Perinatal Quality Collaborative
CDC Resources for PQCs

Reproductive Health

Perinatal Quality Collaboratives

State perinatal quality collaboratives (PQCs) are networks of perinatal care providers and public health professionals working to improve pregnancy outcomes for women and newborns by advancing evidence-based clinical practices and processes through continuous quality improvement. PQC members identify care processes that need to be improved and use the best available methods to make changes and improve outcomes. State PQCs include key leaders in private, public, and academic health care settings with expertise in evidence-based obstetric and neonatal care and quality improvement.

Many states currently have active collaboratives, and others are in development.

CDC currently funds six states for the State-Based PQCs Cooperative Agreement: California, New York, Ohio, Illinois, Massachusetts, and North Carolina. Funding will enhance the capabilities of PQCs to improve the quality of perinatal care in their states, including efforts to reduce maternal morbidity and mortality, reduce scheduled births without a medical indication, improve breastfeeding rates, and reduce hospital-acquired neonatal infections and neonatal morbidity.

Success Stories

www.cdc.gov/reproductivehealth/MaternalInfantHealth/PQC.htm
Future Directions for PQC Support: National Network of State PQCs

- **Purpose:** To increase capacity in states to improve maternal and infant health

- **Goals:**
  - Strengthen existing PQC leadership
  - Identify and disseminate best practices for establishing and sustaining PQCs, including standardization, consistent use of, and sharing of data
  - Identify and develop tools, training, and resources necessary to foster the sharing of best practices to support a sustainable PQC infrastructure
The 2030 Goal: Public-Private Partnerships to Prevent Preterm Birth

Dr. Jennifer L. Howse
President, March of Dimes Foundation
Public-Private Partnerships and Preterm Birth Prevention

- Public-private partnerships are an effective means to catalyze multidisciplinary preterm prevention approaches

- Collaborations with our federal partners
  - CDC, HRSA, NICHD

- Prematurity Campaign
  - 6 Partners: AAP, ACOG, AMCHP, ASTHO, AWHONN, NACCHO
  - 42 Alliance Members – Additional Professional Organizations

HRSA: Health Resources and Services Administration
NICHD: National Institute for Child Health and Development
AAP: American Academy of Pediatrics
ACOG: American Congress of Obstetricians and Gynecologists
AMCHP: Association of Maternal & Child Health Programs
ASTHO: Association of State and Territorial Health Officials
AWHONN: Association of Women’s Health, Obstetric and Neonatal Nurses
NACCHO: National Association of County and City Health Officials
Background: Reached 2020 Goal
We can do better

- The nation has met the March of Dimes goal of a 9.6% U.S. preterm birth rate by 2020 because:
  - Fewer babies are being born preterm
  - Fewer babies are now counted as preterm due to a change in measurement by the CDC’s National Center for Health Statistics

- Progress is not victory

- Despite progress, the U.S. preterm birth rate ranks poorly among Very High Human Development Index (VHHDI) countries

Reset Goals, Maintain Urgency and Track Future Progress

- Preterm birth rate goals for the U.S.
  - 8.1% for 2020
  - 5.5% for 2030

- March of Dimes 2015 Premature Birth Report Cards reset to the 8.1% target from 9.6%

- New focus on high-volume and high-burden areas and populations in Report Cards and the Roadmap

How Do We Reach Our Goals?

☐ Optimize existing interventions
  - Continue Prematurity Campaign
  - Continue activities in all U.S. states and DC

☐ Accelerate change in 16 high-burden areas
  - Launch Roadmap to 2020 and 2030 goals
  - Target geographies and racial or ethnic groups with high rates of preterm birth or high birth volume
Roadmap: Target 15 States and Puerto Rico

- Phase I: States and territories with highest preterm birth rates
  - 5 states and 1 territory in 2017
  - Alabama, Louisiana, Mississippi, Puerto Rico – Highest rates
  - Florida, Texas – Most populous high rate states

- Phase II: Additional states with large burden of births
  - 10 additional states with births >100,000
  - California, Georgia, Illinois, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania and Virginia
Roadmap Interventions: Reduce Modifiable Risk Factors

- Birth spacing and interconception care
- Smoking cessation
- Group prenatal care
  - Patient-centered model of care in a supportive group environment
- Reduce multiple births conceived through ART
- Low-dose aspirin to prevent preeclampsia
- Elimination of non-medically indicated early elective deliveries
- Access to progesterone shots for women with a previous preterm birth
- Vaginal progesterone and cerclage for short cervix

Bundle interventions through the Healthy Babies are Worth the Wait® Community Program

ART: Assisted reproductive technology
Engage Stakeholders to Increase Awareness of Disparities and Evidence-based Practices

- **Premature Birth Report Cards issued annually with emphasis on:**
  - High-volume cities and counties
  - Disparities among ethnic and cultural groups

[Map of the United States showing premature birth rates and grades for national preterm birth rate.

Source: March of Dimes National Center for Preterm Births, April 2015.]

Engaging Stakeholders in Quality Improvement, Evidence and Practice

- Prematurity Prevention Conference: Quality Improvement, Evidence and Practice
  - November 17–18, 2015
  - Dr. Regina Benjamin, former Surgeon General and March of Dimes Trustee, will give Keynote Address
  - Largely funded by grant from the Division of Reproductive Health, NCCDPHP, CDC
Supporting Further Ways to Decrease Preterm Births

- Identify new treatments based on translation of discovery research
  - March of Dimes investment in five Prematurity Research Centers is essential to achieving 5.5% by 2030

![MOD Research Network Map]

Collaborating Universities:
- Columbia
- U. Pittsburgh
- UT Southwestern
- Texas A&M
- Dartmouth
- Vanderbilt
- U. Iowa
- Princeton
- Mt. Sinai
Results: Through Partnerships, Progress Has Been Made

- Prematurity Campaign has already achieved remarkable results
- Preterm birth rate has decreased consistently from the peak of 12.8% in 2006
- This has resulted in 231,000 fewer babies born premature from 2006 through 2013
Results: Impact of Roadmap Activities

- **210,000 fewer babies** will be born preterm from 2014-2020
  - When we meet the 8.1% 2020 goal

- **1.1 million fewer babies** will be born preterm from 2021-2030
  - When we meet the 5.5% 2030 goal

- **1.3 million fewer babies** will be born preterm from 2014-2030
  - In total, when we meet the 5.5% 2030 goal

Gestational age determined using obstetric estimate of gestation
March of Dimes Perinatal Data Center. Projected estimates each year based on 2014 live births and incremental declines between 9.6% in 2014 and 5.5% in 2030
Next Steps

- Planning is under way to activate the Roadmap in 16 high-burden and high-volume states beginning in 2017

- March of Dimes will continue to focus on prevention of prematurity by
  - Implementing what is known and translating discovery research into new interventions
  - Enhancing public-private partnerships
Preterm Birth Rates


National Center for Health Statistics, 1981-2013 final and 2014 preliminary natality data
Thank you!
Public Health Strategies to Prevent Preterm Birth

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