Division of Congenital and Developmental Disorders
Efforts to Reduce Infant Mortality

Cheryl S. Broussard, PhD
Associate Director for Science, Division of Congenital and Developmental Disorders
National Center on Birth Defects and Developmental Disabilities (NCBDDD)
Centers for Disease Control and Prevention

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Highlights from the National Center on Birth Defects and Developmental Disabilities
Babies are born healthy. Children reach their full potential. And everyone thrives.
Thematic Areas

SAVING BABIES
HELPING CHILDREN
PROTECTING PEOPLE
IMPROVING HEALTH
What is DCDD Doing to Address Infant Mortality?

• Preventing birth defects
• Reducing use of alcohol, other substances, and teratogenic medications during pregnancy
• Monitoring emerging threats and their impact on infants
• Monitoring and understanding risk factors for fetal death
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SAVING BABIES
Through Birth Defects Prevention and Research

1 in 33 Babies are born with a birth defect
Impact of Birth Defects on Infant Mortality

Birth defects cause 1 in every 5 deaths during the first year of life.
Infant Mortality Attributable to Birth Defects, 2011–2013

- About 12 infant deaths due to birth defects per 10,000 babies born in the United States during 2011–2013
- Rates differ by race/ethnicity, gestational age, and age group at death
- Figure shows differences by payment source for delivery

Preventing Birth Defects

Through surveillance and case-control studies, CDC works to identify causes of birth defects and find opportunities to prevent them.
State-based Birth Defects Tracking

- 43 states have birth defects tracking programs; among these, CDC funds 14 population-based state programs

- Information from birth defects tracking systems is used to
  - Understand if birth defects are increasing or decreasing over time
  - Plan and evaluate prevention activities
  - Refer babies and families affected by birth defects to services
  - Help allocate resources and services for affected babies and their families
Identifying Causes of Birth Defects

- CDC coordinates multisite case-control studies to identify causes and risk factors

- Findings from this research are used to
  - Inform clinical practice
  - Confirm previously observed associations
  - Generate hypotheses for future study
  - Identify areas for prevention
  - Provide information to the public

Births from 1997-2011

Births from 2014 to present
Preventing Birth Defects: Spina Bifida


- Improvements in survival varied by race/ethnicity:
  - Black and Hispanic infants had poorer survival compared with white infants.

- CDC activities:
  - Continued promotion of folic acid use among all women who can get pregnant to prevent spina bifida.
  - Public health research to decrease mortality and improve the health of those with spina bifida.
Preventing Birth Defects: Congenital Heart Defects

- Survival of infants born with critical congenital heart defects improved between 1979 and 2005
- Newborn screening for critical congenital heart defects can identify affected infants before leaving the hospital
  - Nationwide implementation
- CDC activities
  - Public health research to improve health and reduce mortality of individuals living with congenital heart defects
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Reducing Alcohol Use during Pregnancy

- **Promoting Alcohol Screening & Brief Intervention (SBI)**
  - Alcohol SBI is recommended for all adults, including pregnant women
  - CDC promotes the implementation of alcohol SBI
    - In health systems providing women’s health services to reduce risky alcohol use among women of reproductive age
    - By collaborating with SAMHSA and NCQA on a quality improvement learning collaborative to promote HEDIS measure, *Unhealthy Alcohol Use Screening and Follow-Up*
    - By targeting five healthcare disciplines to engage providers in alcohol SBI and message delivery to patients
Reducing Use of Teratogenic Medications during Pregnancy

- Mobile App Development for Safer Medication Use in Pregnancy: SBIR Phase I and II grants
- www.cdc.gov/treatingfortwo
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Impact of Zika Virus on Infant Mortality

- Preliminary data from Brazil:
  - About 10% of infants impacted by congenital Zika infection may die during infancy
Longitudinal Surveillance of Pregnant Women and Infants

- **CDC activities**
  - CDC-wide working group on longitudinal surveillance of pregnant women-infant dyads
  - Public Health Grand Rounds held September 18, 2018
    - Highlighted opportunities for public health surveillance to address health threats that can impact infant mortality
Maternal Immunization Workgroup

- CDC cross-center workgroup to collaborate on promoting maternal immunization for infant benefits
  - ACIP recommends
    - Influenza vaccine before or anytime during pregnancy
    - Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine during each pregnancy, preferably from 27 through 36 weeks’ gestation
  - Yet coverage among pregnant women is suboptimal
- Maternal immunization will also be considered for other current and emerging vaccines, including for Ebola and Zika viruses
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• **Monitoring and understanding risk factors for fetal death**
Monitoring and Understanding Risk Factors for Fetal Death

- Annual number of fetal deaths in the US approximately equal to annual number of infant deaths
- CDC activities
  - Monitor fetal deaths in the US
  - Use data to better understand the causes and opportunities for intervention to prevent fetal deaths
The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.