Infant Mortality in Indiana: Current Data and MCH Initiatives

Division of Maternal and Child Health

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Indiana State Department of Health
Learning Objectives

- This presentation will detail the latest infant mortality data in Indiana

- This presentation will highlight current strategies at ISDH to address infant mortality
Indiana Infant Mortality

- Indiana’s IMR consistently higher than the U.S. and national goal
  - IN 7.1 per 1,000 (2014)
    - Remained unchanged from 2013
  - U.S. 5.82 per 1,000 (2014)
    - Lowest rate in recorded history
  - Healthy People 2020 Goal = 6.0 per 1,000
- Large disparity among races, with Black infants being 2.5 times more likely to die than White infants
- Rate of SUIDs deaths typically higher than the national rate
Infant Mortality Rates
Indiana, U.S. and Healthy People 2020 Goal
2007 - 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Indiana</th>
<th>U.S.</th>
<th>HP 2020 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>7.5</td>
<td>6.8</td>
<td>6.0</td>
</tr>
<tr>
<td>2008</td>
<td>6.9</td>
<td>6.6</td>
<td>6.0</td>
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<tr>
<td>2009</td>
<td>7.8</td>
<td>6.4</td>
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<tr>
<td>2010</td>
<td>7.5</td>
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<td>2011</td>
<td>7.7</td>
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<tr>
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<td>7.1</td>
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</tr>
<tr>
<td>2014</td>
<td>7.1</td>
<td>5.8</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Source: Indiana State Department of Health, Maternal & Child Health Epidemiology Division [February 23, 2016]
United States Original: Centers for Disease Control and Prevention National Center for Health Statistics
Indiana Original Source: Indiana State Department of Health, PHPC, ERC, Data Analysis Team
Infant Mortality Rates by Hospital District 2014

Indiana IMR = 7.1
N = 597

- < 6.0
- 6.0 - 6.9
- 7.0 - 7.9
- >= 8.0

* Numerator less than 20, the rate is unstable. We do not recommend comparing unstable rates.

Infant Mortality Rates by Race
Indiana
2005 - 2014

Rate per 1,000 live births

Source: Indiana State Department of Health, Maternal & Child Health Epidemiology Division [February 23, 2016]
Indiana Original Source: Indiana State Department of Health, PHPC, ERC, Data Analysis Team
Causes of Infant Mortality
Indiana, 2014

% Distribution of Infant Deaths
N = 597

- Perinatal Risks: 48.1%
- Congenital Malformations: 20.3%
- SUIDs: 14.4%
- Assaults/Accidents: 12.7%
- All Other: 4.5%

Source: Indiana State Department of Health, Division of Maternal and Child Health [August 1, 2016]
Indiana Original Source: Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team
SUIDs Rates by Cause
Indiana, 2009-2014

SUIDS = W75, R95, R99

Source: Indiana State Department of Health, Maternal & Child Epidemiology Division [December 21, 2015]
Indiana Original Source: Indiana State Department of Health, PHPC, ERC, Data Analysis Team
2010 - 2014
SUIDs Rates
by Hospital District

N = 353
IN = 84.5

SUIDs Rates
per 100,000
Live Births

- 40.0 - 59.9
- 60.0 - 79.9
- 80.0 - 99.9
- >= 100.0

*Numerator less than 20, the rate is unstable. We do not recommend comparing unstable rates.

Factors Contributing to Infant Mortality in Indiana

- **Obesity (ISDH #2 Priority)**
  - If woman is obese = 25% chance of delivering premature infant
  - If woman is morbidly obese = 33% chance of delivering premature infant
  - Indiana is *9th most obese state in U.S.*

- **Smoking (ISDH #3 Priority)**
  - 15.1% of mothers smoke during pregnancy (*TWICE the U.S. average*)
  - 25.3% of mothers on Medicaid smoke

- **Limited Prenatal Care**
  - Only *67.5%* of mothers receive prenatal care during the 1st trimester

- **Unsafe Sleep Practices**
  - 14.4% of infant deaths in 2014 can be attributed to *SUIDs*
## Birth Outcome Indicators
### Indiana & United States
#### 2014

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Indiana</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Birthweight</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Preterm (OE)</td>
<td>9.7</td>
<td>9.6</td>
</tr>
<tr>
<td>Early PNC</td>
<td>67.5</td>
<td>76.7</td>
</tr>
<tr>
<td>Smoked During Pregnancy</td>
<td>15.1</td>
<td>8.4</td>
</tr>
<tr>
<td>Breastfeeding at Discharge</td>
<td>79.3</td>
<td>81.0</td>
</tr>
</tbody>
</table>

Source: Indiana State Department of Health, Division of Maternal and Child Health [August 1, 2016]
Indiana Original Source: Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team
United States Original Source: Centers for Disease Control and Prevention, National Center for Health Statistics
Factors Influencing Health & Well-Being

- Social and Economic Factors: 10%
- Health Behaviors: 40%
- Clinical Care: 30%
- Physical Environment: 10%
- Genes and Biology: 10%

Source: Indiana State Department of Health, Maternal & Child Health Epidemiology Division [February 24, 2016]
Indiana Original Source: Indiana State Department of Health, PHPC, ERC, Data Analysis Team
Messages: Focus on the ABCs of Safe Sleep practices recommended by the American Academy of Pediatrics and National Institutes of Health:

✓ Babies should sleep Alone
✓ On their Backs
✓ In a Crib or bassinette

Achievements:

- More than 100 crib distribution partners joined the program since its inception in July 2014
- The program is now accessible in 91 of the 92 counties
- Since July 2014 approximately 6000 cribs went out to families across the state
Baby and Me, Tobacco Free™ (BMTF) is an evidenced-based smoking cessation program for pregnant women, through her child’s first birthday.

- **Program Components**
  - Individualized education from BMTF certified facilitator
  - 4 sessions prior to baby’s birth
  - Monthly postpartum visits until baby turns 1
  - Biochemical testing at every visit
  - Provides up to 12 $25 diaper vouchers

Laurie Adams, CEO/Executive Director Baby and Me Tobacco Free Program, Oct 16, 2013.
Baby and Me, Tobacco Free™

October 2013 – March 2016

1,532 program enrollees*
369 infants born nicotine-free
- 92% born ≥ 37 weeks gestation
- 95% born ≥ 5 lbs. 8 oz.

1,620 vouchers distributed

2014 data
- 15.1% pregnant Hoosiers smoke
- County rates range from 2.7% to 38.5%
- For women on Medicaid, the number jumps to 25.3%

• Includes March of Dimes and Anthem affiliated Indiana sites
• Data Source: 2014 Indiana Natality Report

Source: Indiana State Department of Health, Maternal & Child Health Division [13/6/2014]
Original Source: Indiana State Department of Health, MCHC, DMC, Data Analysis Team
Breastfeeding

If 90% of US families complied with medical recommendations to breastfeed exclusively for 6 months, the United States would save

• $13 billion per year,
• Prevent an excess 911 deaths.

Nearly all lives saved would be infants ($10.5 billion and 741 deaths at 80% compliance).


Launched March 1, 2016!

Provides information, referrals and resources relating to maternal and child health care services.

Connects mothers and pregnant women with a network of prenatal and child health care services within local communities, state agencies and health care organizations around the state.
Women are brought together with other women who are at the same stage of pregnancy or infant care for their billable visit.

Women take their own blood pressure, weigh themselves, set personal goals and have an individual check-up with their clinician.

Then the group along with the clinician engages together in a facilitated discussion around important health topics.
Provided in Indiana by Goodwill Industries, NFP began in Marion County in November 2011 and today serves more than 500 families.

The program has expanded to Lake, Delaware, Madison, Tippecanoe, and White Counties*, with a capacity to serve more than 1,000 families.

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Some key statistics:

- **93%** of children age 24 months were fully immunized.
- **90%** of babies were born full term.
- **90%** were born at a healthy weight (≥ 5.5 lbs.).
- **85%** of mothers initiated breastfeeding.
- **33%** of NFP households had an increase in income and benefits.

Source: goodwillindy.org

*Tippecanoe and White Counties funded by IU Health
Pregnancy Risk Assessment Monitoring System (PRAMS)

Awarded to Indiana in May 2016:

**PRAMS** supplements vital records data by providing data on maternal behaviors and experiences.

**PRAMS** can be used to plan and assess perinatal health programs, thereby reducing infant mortality and morbidity by guiding policies and programming.

**PRAMS** is the only surveillance system that provides this type of data about pregnancy and the first few months after birth.

Source: http://www.cdc.gov/prams/aboutprams.htm
System of designating where infants are born or are transferred based on the amount of care that they need at birth

Existing infrastructure to facilitate early identification and decrease adverse outcomes

Hospitals are currently being reviewed on a voluntary basis

Lasswell SM, Barfield WD, Rochat RR, Blackmon LR. Perinatal Regionalization for Very Low-Birth-Weight and Very Preterm Infants—A Meta-analysis, JAMA 2010; 304.9: 992-1000
Indiana Summary
2014

- **597 infants** in Indiana died before their first birthday
- Black infants in Indiana are **2.5X more likely to die** than white infants
- 14.4% of infant deaths can be attributed to **SUIDs**
- Much **higher percentage** of women **smoking** during pregnancy when compared to the nation
  - (15.1% vs. 8.4%)
- **Lower** percentages of women receiving **early prenatal care** and **breastfeeding** when compared to the U.S.
- **Large disparities** in all indicators make prevention efforts complex
Mark your calendars!

Labor of Love
Infant Mortality Summit

Monday, October 17, 2016

JW Marriott
10 S. West Street
Indianapolis, IN 46204

Labor of Love
Helping Indiana Reduce Infant Death

For registration and additional information, visit: www.infantmortalitysummit-indiana.org
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