Sudden Unexpected Infant Deaths (SUIDs)
Indiana, 2014

Division of Maternal and Child Health
Indiana State Department of Health
Infant Mortality Rates
Indiana, U.S. and Healthy People 2020 Goal
2007 - 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate per 1,000 live births</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>7.5</td>
</tr>
<tr>
<td>2008</td>
<td>6.9</td>
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<tr>
<td>2009</td>
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<tr>
<td>2010</td>
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<tr>
<td>2011</td>
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<td>2012</td>
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<tr>
<td>2013</td>
<td>7.1</td>
</tr>
<tr>
<td>2014</td>
<td>7.1</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 Race
Indiana
2005 - 2014

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
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 Distribution by Cause
Indiana
2014

% Distribution of Infant Deaths
N = 597

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

Cause Specific Mortality Rates*
Per 1,000 Live Births

- 3.4
- 1.4
- 1.0
- 0.9
- 0.3

*Note: Cause specific mortality rates may not exactly equal the overall infant mortality rate due to rounding.
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
Sudden Unexpected Infant Deaths

- **SUIDs** = Sudden Unexpected Infant Death

- According to the Centers for Disease Control and Prevention (CDC), nearly 3,500 infants die suddenly and unexpectedly in the U.S. annually.
  - While most of these deaths can’t be explained, they often happen while the infant is sleeping (sometimes in unsafe sleep environments).

- **A grouping for 3 causes of death:**
  - SIDS - Sudden Infant Death Syndrome
    - (ICD 10 - R95)
  - Accidental Suffocation/Strangulation in Bed
    - (ICD 10 - W75)
  - Unknown
    - (ICD - R99)

Source: Indiana State Department of Health, Maternal & Child Epidemiology Division
Original Source: Centers for Disease Control and Prevention (CDC), Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion
SIDS vs. Unknown

SIDS / R95

- SIDS is defined as the sudden death of an infant less than 1 year of age that cannot be explained after a thorough investigation is conducted, including:
  - Complete autopsy
  - Examination of the death scene
  - Review of the clinical history

Unknown / R99

- The sudden death of an infant less than 1 year of age that cannot be explained because a thorough investigation was not conducted and the cause of death could not be determined.

Source: Indiana State Department of Health, Maternal & Child Epidemiology Division [February 11, 2016]
Original Source: Centers for Disease Control and Prevention (CDC), Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion
Accidental Suffocation / Strangulation in Bed (W75)

- Mechanisms that lead to accidental suffocation include:
  - **Suffocation by soft bedding**
    - Pillow covers an infant’s nose and mouth
  - **Overlay**
    - A person rolls on top of or against the infant while sleeping
  - **Wedging or entrapment**
    - An infant is wedged between two objects such as a mattress and wall
  - **Strangulation**
    - An infant’s head and neck become caught between crib railings

Source: Indiana State Department of Health, Maternal & Child Epidemiology Division [February 11, 2016]
Original Source: Centers for Disease Control and Prevention (CDC), Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion
Data Collection for SUIDs

- Can’t be sure how often these deaths happen - often no one sees these deaths, and there are no tests to tell SIDS apart from suffocation

- People who investigate SUIDs may report cause of death in different ways and may not include enough information about the circumstances of the event from the death scene

- Missing a large portion of these deaths that do not occur in the bed (suffocations on couches, swings, etc.)

- Problems with coding and classification that creates an underestimation of the burden of SUIDs in our State

Source: Indiana State Department of Health, Maternal & Child Epidemiology Division [February 11, 2016]
Original Source: Centers for Disease Control and Prevention (CDC), Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion
SUIDs Rates by Cause
Indiana, 2009-2014

Combined SUIDs Death Rate
Sudden Infant Death Syndrome (R95)
Accidental Suffocation and Strangulation in Bed (W75)
Unknown (R99)

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
SUIDs Rates by Race
Indiana, 2009-2014

**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.
Rate of SIDS per 100,000 live births
IN & U.S.
2006 - 2014

Rate per 100,000 live births

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S.</th>
<th>Indiana</th>
<th>Healthy People 2020</th>
</tr>
</thead>
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SIDS = Sudden infant death syndrome (R95)
Source: Indiana State Department of Health, Maternal & Child Epidemiology Division [December 21, 2015]
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
Rate of Suffocation Deaths per 100,000 live births
IN & U.S.
2006 - 2014

Suffocation Deaths = Accidental suffocation and strangulation in bed (W75)
Source: Indiana State Department of Health, Maternal & Child Epidemiology Division [December 21, 2015]
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
Sleep tight
knowing your baby is asleep Alone, on her Back in a Crib.

Protect your baby from suffocation by practicing the ABCs of safe sleep and help reduce Indiana’s infant death rate. Visit www.LaborofLove.in.gov or call 211 to learn more.
% Women Smoking During Pregnancy
Indiana, U.S. & Healthy People 2020 Goal
2010 - 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>United States</th>
<th>Indiana</th>
<th>Healthy People 2020 Goal</th>
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Source: Indiana State Department of Health, Maternal & Child Health Epidemiology Division [February 24, 2016]
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Indiana Original Source: Indiana State Department of Health, PHPC, ERC, Data Analysis Team
Smoking During Pregnancy 2014

Indiana Overall: 15.1%

Source: Indiana Natality Report 2014

- **Significantly higher than state rate**
- **Significantly lower than state rate**
- **Statistically similar to state rate or unstable rate**
### % Women Receiving PNC 1st Trimester

#### Indiana, U.S. & Healthy People 2020 Goal

#### 2010 - 2014

<table>
<thead>
<tr>
<th></th>
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<th>2011</th>
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Source: Indiana State Department of Health, Maternal & Child Health Epidemiology Division [February 24, 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
Early Prenatal Care
2014

Indiana Overall: 67.5%

Source: Indiana Natality Report 2014

- Red: Significantly lower than state rate
- Green: Significantly higher than state rate
- Light beige: Statistically similar to state rate or unstable rate
% Women Breastfeeding at Hospital Discharge
Indiana, U.S. & Healthy People 2020 Goal
2011 - 2014

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
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Summary

- **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
Contact Information

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  - Infant Mortality Epidemiologist
  - kham@isdh.in.gov