

Incidence and Causes of Infant Deaths in St. Clair County, Illinois

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Cynthia L. Price, MPH
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Health Policy Summit

Overview

- ❖ Prematurity and Birth Weight
- ❖ Fetal Loss and Infant Mortality
- ❖ Racial and Ethnic Disparities and Infant Mortality
- ❖ Infant Mortality in St. Clair County, Illinois

Preterm Birth and Birth Weight

- ❖ Preterm birth - an infant born **before 37** weeks of completed gestation
- ❖ Low Birth Weight (LBW) – an infant born **less than 2500 grams**, approximately 5.5 pounds.
- ❖ Prematurity and LBW are leading causes of **infant death and childhood disability**
- ❖ Earliest born infants (< 32 weeks) and the smallest (**less than 1500 grams**) most at risk of death prior to their first birthday

Source: Child Health USA 2014

Fetal Loss

❖ Fetal Mortality

The **death** of a fetus **before birth**, regardless of gestational age

- ❖ Miscarriages are early **fetal deaths <20 weeks' gestation**
- ❖ Stillbirths are **fetal deaths at 20 or more weeks' gestation** are generally reported by states in the National Vital Statistics System
- ❖ **Women ages < 20 and >35 most at risk**

Source: Child Health USA 2014

Infant Mortality

❖ Infant Mortality and Infant Mortality Rate

The **death** of a **live born infant within the first year of life**. The infant mortality rate (IMR) for a **particular time period** and **geographic population** is determined as:

$$\text{IMR} = \frac{\# \text{ infant deaths (infants} < 365 \text{ days old)}}{\# \text{ live births (in a geographic population)}} \times 1000$$

Calculated within a specific time period – Usually a year

❖ Age at death

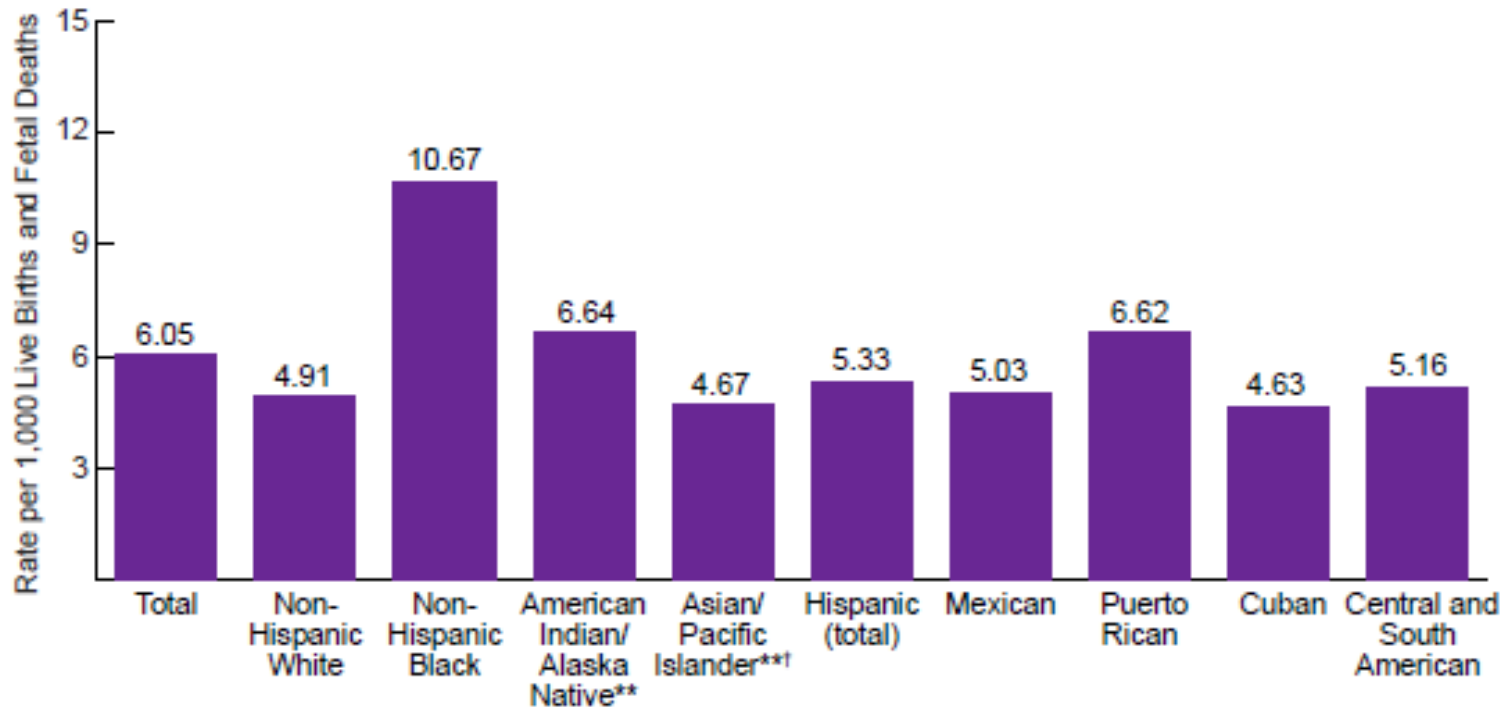
- ❖ Neonatal period - Birth to 27 days
- ❖ Postnatal period – 28 to 1 year

Disparities = Differences



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Figure 2. Fetal Mortality Rates per 1,000 Live Births and Fetal Deaths,* by Maternal Race/Ethnicity, 2012

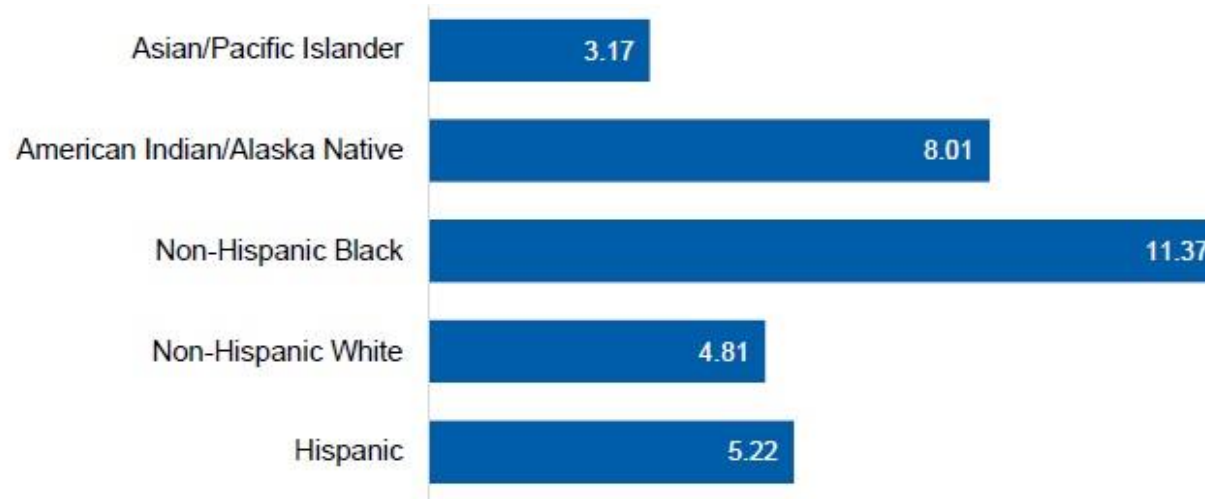


*Fetal deaths with a stated or presumed period of gestation of 20 weeks or more. Cases of unknown gestational age are proportionally assigned according to the known gestational age distribution. **May include Hispanics.

†Separate data for Asians, Native Hawaiians, and other Pacific Islanders are not available.

Non-Hispanic Blacks (African-Americans) experience fetal deaths 2.2 times more than Non-Hispanic Whites

Disparities = Difference



USA 2014 Infant Mortality Rate by Race and Ethnicity

Non-Hispanic Black (African American) infants are twice as likely to die before their first birthday than Non-Hispanic White infants

Source: <http://www.cdc.gov/chronicdisease/resources/publications/aag/images/2016/infant-graph.jpg>

St. Clair County, Illinois Infant Mortality by Race

1999-2014 Infant Deaths for St. Clair County*

Year	Total Population			African Americans			Whites			Other Race
	Infant Deaths	Live Births	IMR Rate	Infant Deaths	Live Births	IMR Rate	Infant Deaths	Live Births	IMR Rate	Infant Deaths
1999	31	3,699	8.4	20	1,493	13.4	11	2,146	5.1	0
2000	41	3,775	10.9	27	1,487	18.2	14	2,227	6.3	0
2001	40	3,697	10.8	29	1,483	19.6	11	2,165	5.1	0
2002	33	3,638	9.1	17	1,378	12.3	16	2,210	7.2	0
2003	35	3,679	9.5	17	1,392	12.2	16	2,238	7.1	0
2004	29	3,724	7.8	16	1,395	11.5	13	2,265	5.7	0
2005	28	3,653	7.7	16	1,435	11.1	12	2,176	5.5	0
2006	37	3,878	9.5	28	1,515	18.5	9	2,304	3.9	0
2007	32	3,840	8.3	24	1,520	15.8	8	2,255	3.5	0
2008	35	3,822	9.2	18	1,483	12.1	16	2,266	7.1	1
2009	24	3,718	6.5	12	1,449	8.3	11	2,175	5.1	1
2010	23	3,498	6.6	13	1,385	9.4	10	2,038	4.9	0
2011	13	3,496	3.7	11	1,286	8.6	2	2,124	0.9	0
2012	25	3,407	7.3	13	1,290	10.1	12	2,044	5.9	0
2013	27	3,341	8.1	17	1,388	12.2	10	1,874	5.3	0
2014	41	3,411	12.0	25	1,350	18.5	16	1,985	8.1	0

*Source: CDC Wonder

St. Clair County, Illinois Infant Mortality 2014

Number of Infants 2014	Immediate Cause of Death
1	UNKNOWN
1	ACUTE BRONCHOPNEUMONIA
1	ACUTE KIDNEY INJURY
1	ASPHYXIAL DEATH
1	CARDIAC ARREST
1	CHROMOSOME ANOMALY; CARDIAC ARREST
1	CHRONIC LUNG DISEASE OF PREMATURITY
1	CLOSED HEAD INJURIES
10	EXTREME PREMATURITY
1	HYPOVENTILATION
1	HYPOXIC ISCHEMIC INJURY
1	HYPOXIC-ISCHEMIC ENCEPHALOPATHY
1	LYMPHOCYTIC MYOCARDITIS
1	METABOLIC ACIDOSIS
1	OSTEOGENESIS IMPERFECTA, TYPE 2
2	PREMATURITY
1	PREVIABLE
1	PREVIABLE FETUS
1	PULMONARY HYPERTENSION
4	RESPIRATORY FAILURE
1	SUDDEN INFANT DEATH SYNDROME
1	SUDDEN UNEXPLAINED INFANT DEATH
1	SUFFOCATION
1	SUFFOCATION (UNSAFE SLEEP ENVIRONMENT)
3	SUFFOCATION ASPHYXIA
1	SUFFOCATION FROM OVERLAY AND LOOSE BED CLOTHING
41	

St. Clair County Illinois Infant Mortality 2014

Number of Infants deaths 2014	Immediate Cause of Death	Cause of Death
1	UNKNOWN	
1	ACUTE BRONCHOPNEUMONIA	
1	ACUTE KIDNEY INJURY	
1	ASPHYXIAL DEATH	asphyxiation from overlay
1	CARDIAC ARREST	
1	CHROMOSOME ANOMALY; CARDIAC ARREST	
1	CHRONIC LUNG DISEASE OF PREMATURITY	
1	CLOSED HEAD INJURIES	
10	EXTREME PREMATURITY	Live birth less than 37 weeks gestation
1	HYPOVENTILATION	
1	HYPOXIC ISCHEMIC INJURY	
1	HYPOXIC-ISCHEMIC ENCEPHALOPATHY	
1	LYMPHOCYTIC MYOCARDITIS	
1	METABOLIC ACIDOSIS	
1	OSTEOGENESIS IMPERFECTA, TYPE 2	
2	PREMATURITY	Live birth less than 37 weeks gestation, 1 unknown reason
1	PREVIABLE	
1	PREVIABLE FETUS	
1	PULMONARY HYPERTENSION	
4	RESPIRATORY FAILURE	
1	SUDDEN INFANT DEATH SYNDROME	
1	SUDDEN UNEXPLAINED INFANT DEATH	
1	SUFFOCATION	found between bed and wall
1	SUFFOCATION (UNSAFE SLEEP ENVIRONMENT)	Unsafe sleep environment
3	SUFFOCATION ASPHYXIA	overlay, Sharing of sleeping surface with adults, Suffocation from sleeping positioning
1	SUFFOCATION FROM OVERLAY AND LOOSE BED CLOTHING	Overlay and Loose bed clothing
41		

Every baby deserves a chance to celebrate their first birthday



3,370 infants celebrated their first birthday in 2014

As a community, what can we do?



How do we reduce Infant Mortality
in St. Clair County, Illinois?

Cynthia L. Price, M.P.H.
Program Manager - Healthy Start
Southern Illinois Healthcare Foundation
618.646.2510
cprice@sihf.org

