



Infant Mortality Kansas, 2014 Research Brief

Introduction

Infant mortality is an important proxy indicator of population health, since there is a potential association between the causes of infant mortality and factors that are likely to influence health status of the whole population. The Kansas Department of Health and Environment’s (KDHE) Division of Public Health monitors infant mortality and supports programs that promote access to health services and prevention for mothers and infants.

Methods

The KDHE Bureau of Epidemiology and Public Health Informatics (BEPHI) collects birth and death certificates through both the Office of Vital Statistics (OVS) and from other states. After data validation is completed, the Bureau creates an analytical file of the prior year’s vital events on July 1. The analytical files are then used as the basis of statistical reports issued by KDHE. All data reported herein are residence data, regardless of where the event occurred. Trends are analyzed using five-year rolling average rates during 20-year time period and were tested for statistical significance.

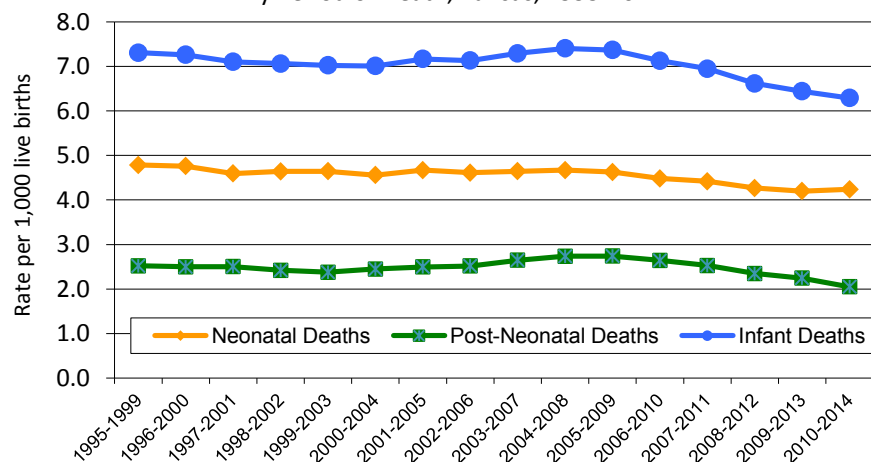
Findings

The number of infant deaths to Kansas residents decreased from 248 in 2013 to 246 in 2014. The number of Kansas resident births in 2014 was 39,193, resulting in an infant mortality rate (IMR) of 6.3 per 1,000 live births, slightly lower than 2013 (6.4 per 1,000 live births) and the same as 2012. Males accounted for 53.3 percent of 2014 resident infant deaths, while females accounted for 46.7 percent.

Despite annual fluctuations, the Kansas resident IMR declined from 1995-2014 based on rolling five-year averages. The decline was statistically significant.

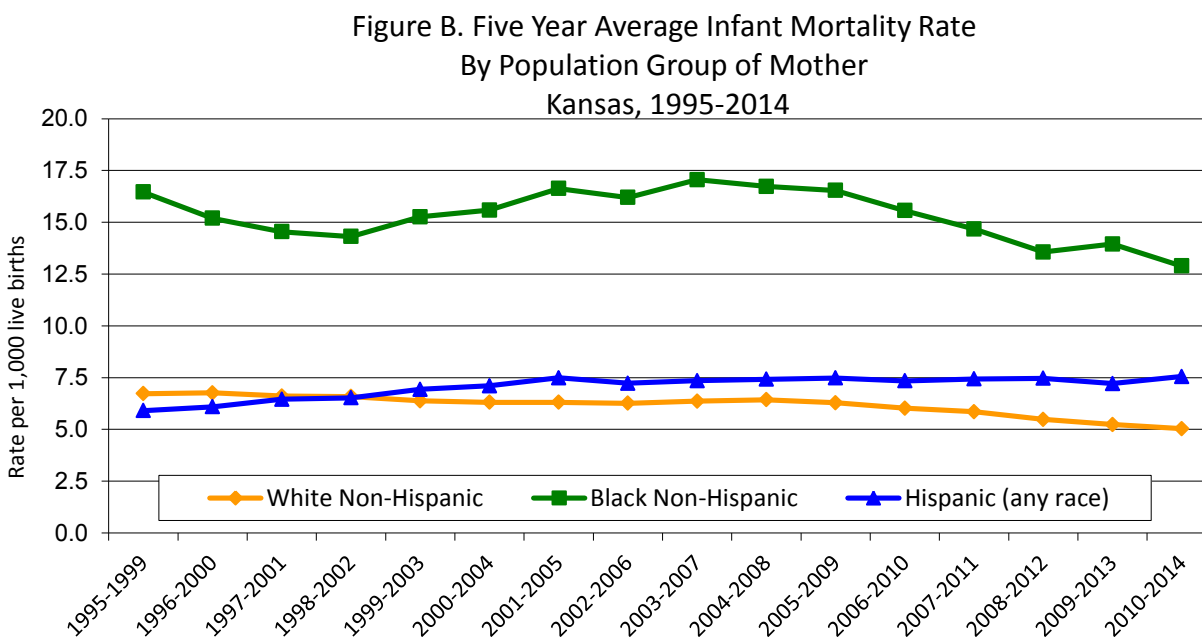
During the same 20 years, both neonatal and post-neonatal deaths rates appeared to be decreasing. Neonatal death rates showed a statistically significant decreasing trend while the post-neonatal trend did not reach significance (Figure A).

Figure A. Five-year Average Infant Mortality Rate
By Period of Death, Kansas, 1995-2014



Between 1995 and 2014 IMR has decreased for Black non-Hispanic and White non-Hispanic infants, and increased for Hispanic infants, based on rolling five year averages. The decreasing trend in White non-Hispanic death rates was significant while the Black non-Hispanic trend was not due to the increase in the middle of this time period. Hispanic any race IMR showed a statistically significant increasing trend in this 20-year time period (Figure B).

Infant mortality rates for White non-Hispanics and Black non-Hispanics decreased in the most recent period (2010-2014). While the Black non-Hispanic IMR decreased in 2010-2014, the rate remained 2.6 times that of White non-Hispanic infants. During the past 20 years the Hispanic any race IMR has increased. The Hispanic any race IMR is 1.5 times higher than the White non-Hispanic rate (Figure B).



In 2014, 46.3 percent of infant deaths (114) occurred within the first day of life. One hundred thirty-eight or 56.1 percent of infants died within the first week of life. Approximately 71 percent of infant deaths occurred during the neonatal period, while only about 29 percent occurred during the post neonatal period (Table 1).

In 2014, congenital anomalies was the leading cause of death (56 deaths), followed by length of gestation or low birthweight (48 deaths), and SUID (37 deaths). SUID or sudden unexplained infant death includes sudden infant death syndrome or SIDS (ICD10 code R95), unknown cause (R99), and suffocation in bed (W75) (Table 2).

Discussion

Both the state’s single-year infant mortality rate and the number of infant deaths decreased in 2014 compared to 2013. The decreased rate was due in part to the number of infant deaths in 2014 being the lowest ever recorded in Kansas. However, a 1.0 percent increase in the number of live births to Kansas residents in 2014 also contributed.

The overall five-year average infant mortality rate has continued to decline. Charting the five-year average rates provides a more reliable indicator of the state’s trend, since it accounts for

the fluctuating number of annual deaths. The trend for White non-Hispanics and Black non-Hispanics based on five-year average mortality rates was down, while the trend for Hispanics any race was upward.

Despite the low number of infant deaths in 2014, the Kansas one-year infant mortality rate remained higher than the Healthy People 2020 target of 6.0 infant deaths per 1,000 live births.

The Black non-Hispanic race carries a disproportionate share of the state’s infant mortality. Black non-Hispanic births accounted for 6.7 percent of Kansas resident births in 2010-2014, while Black non-Hispanic infant deaths accounted for 13.8 percent of all infant death.

Table 1. Infant Deaths by Age Group by Year, Kansas, , 2010-2014

Age Group	Year				
	2010	2011	2012	2013	2014
Under 1 hour	45	39	45	30	43
1 hour to under 1 day	74	60	64	85	71
1 day to under 1 week	24	22	33	25	24
1 week to under 1	27	36	31	26	37
1 month to under 1	83	90	81	82	71
Total	253	247	254	248	246

Table 2. Infant Deaths by Cause of Death Group by Year, 2010-2014

Cause Group (ICD-10 Code)	Year				
	2010	2011	2012	2013	2014
Congenital Anomalies (Q00-Q99)	66	59	51	59	56
Length Gestation/Low Birthweight (P07)	39	49	58	53	48
Maternal Complications/Factors (P00-P04)	35	28	20	17	29
SUID (SIDS/Suffocation in Bed, Unknown) (R95, R99, W75)	42	42	40	51	37
Other External Causes * (V01-Y89)	10	12	10	7	8
Other Causes	61	57	75	61	68
Total	253	247	254	248	246

* Excludes Suffocation in Bed

Table 3. Infant Deaths by Race/Hispanic Origin by Year, Kansas, 2010-2014

Population group	Year				
	2010	2011	2012	2013	2014
White NH*	142	150	145	137	142
Black NH*	33	35	38	39	27
Native American NH*	1	5	1	1	2
Asian NH*	5	5	3	3	9
Native Hawaiian and other Pacific Islander	0	0	0	1	0
Other NH*	1	1	3	1	2
Multi-race NH*	19	8	8	18	17
Hispanic (any race)	50	42	54	44	46
Not Specified (n.s.)	2	1	2	4	1
Total	253	247	254	248	246

* NH = Non-Hispanic

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Our Vision – Healthy Kansans living in safe and sustainable environments.
Our Mission –To protect and improve the health and environment of all Kansans.