

INFANT MORTALITY

Health Issue Brief

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Sedgwick County Division of Health | 316-660-7300 | www.sedgwickcounty.org



Over 23,000 infants died in the United States in 2014. The death of a baby before his or her first birthday is called infant mortality. The infant mortality rate is the number of infant deaths that occur for every 1,000 live births. Most newborns grow and thrive. However, for every 1,000 babies that were born, almost six died during their first year.

(CDC <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm>)

Although IM rates are declining, areas exist in some communities and demographic groups in which the infant mortality rate is much higher than that of the general population. This brief seeks to explore some of the differences and factors that contribute to infant mortality. Additionally, some best practices addressing the issue in our county and throughout the state of Kansas will be listed.

Infant Mortality

As the chart below indicates, although the infant mortality rates are showing a decline, Sedgwick County rates still exceed those of the state of Kansas. From 1986 to 2015, Sedgwick County had higher rates of infant death than that of the state of Kansas.

The five-year rates for both Sedgwick County and Kansas are on a downward trend. While the rates for white non-Hispanics, black non-Hispanics and that of 'Other'; have all declined in the past 10 years (2005-2015), the Hispanic infant mortality rate has remained steady. However, the black non-Hispanic five-year rate is more than three times that of whites. The Hispanic five-year rates are two times higher than the white non-Hispanic rate

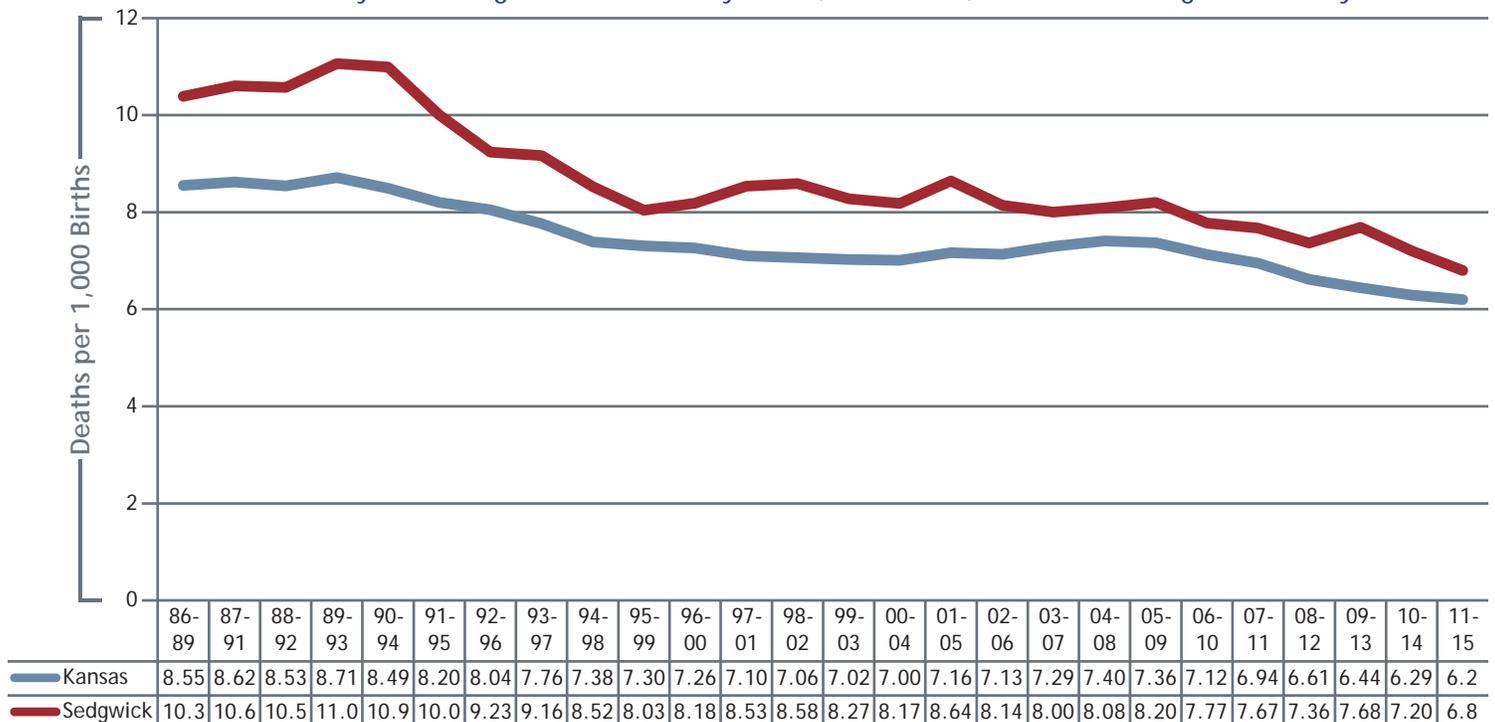
Over the last 22 years Kansas has experienced a statistically significant declining trend in the annual infant mortality rate (with a lot of ups and downs in between). The Healthy People 2020 target is 6.0 infant deaths per 1,000 live births.

Sources: Kansas Department of Health and Environment, *Period Cohort Infant Deaths Residence Data, 2013*

Infant Mortality Kansas, 2013 (Research Brief). Topeka, KS: Greg Crawford, BA

KDH&E Kansas Health Matters, 2015

Five-year Average Infant Mortality Rates, 1986-2015, Kansas and Sedgwick County

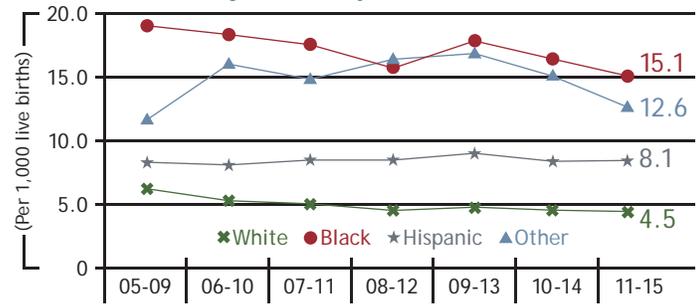


KDHE Period Cohort Infant Deaths Residence Data

Disparities

The overall rate of infant death in Sedgwick County in the years 2011-2015 is 6.8 per 1,000 live births. Although the black non-Hispanics have a declining trend over time since 2005, they are continually above the white non-Hispanic and Hispanics. The Sedgwick County Health Department administers the Fetal and Infant Mortality Review (FIMR) process, researching the issue and supporting other programs that are also combating infant mortality. Community partners include members of nonprofit, for-profit, academic and public entities. All are working together to shorten the disparate gap between the black non-Hispanic infant mortality rates and that of the other racial/ethnic groups. Within the health department, the Women, Infants and Children (WIC) and Healthy Babies programs continue to work with women and children educating residents of factors that contribute to infant mortality.

Five-Year Infant Mortality Rates by Population Groups
Sedgwick County Residents, 2005-2015



Source: Bureau of Epidemiology and Public Health Informatics
Kansas Department of Health and Environment
Period Cohort Mortality Files

Although there has been a steady decline in black non-Hispanic infant mortality rates, both charts show these infants are affected to a greater degree than other races/ethnicities. From 2005 to 2015, the black infant mortality rate (15.1) and the "other" (classified as two or more races) infant mortality rate (12.6) in Sedgwick County has been three times that of white infant mortality.

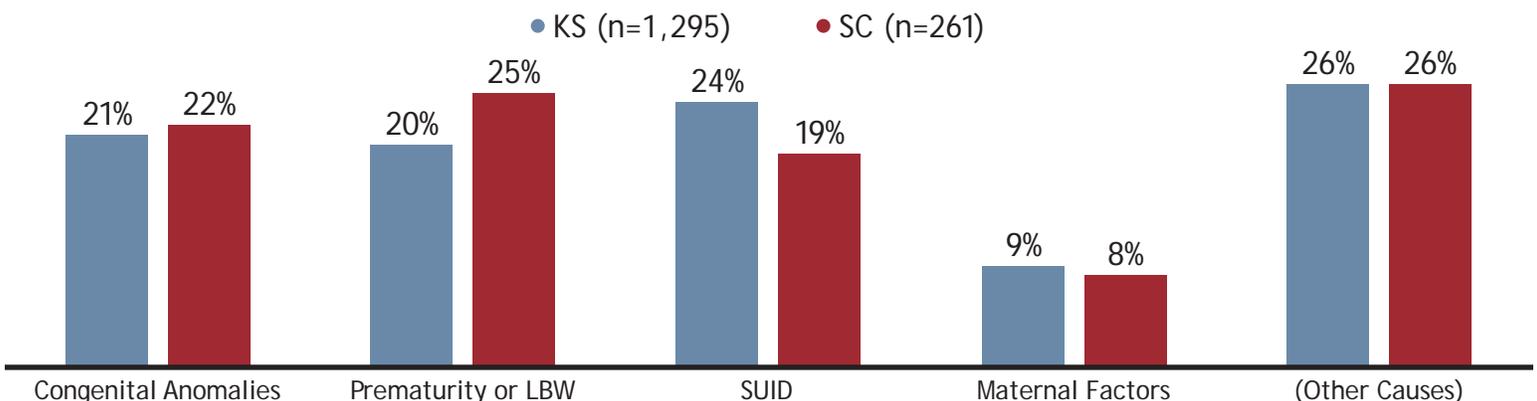
Source: Bureau of Epidemiology and Public Health Informatics, KDHE Period Cohort Mortality Files, 2015

Infant mortality cases are most often the result of premature births (delivery prior to 37 weeks) and low birth weight (less than five and a half pounds), but they are also impacted by a variety of other preconception, prenatal and postpartum factors, including but not limited to maternal health, access to equitable health care (or equitable access to quality health care), socioeconomic conditions and public health practices.

The leading causes of infant death in Sedgwick County and Kansas respectively are:

- Congenital anomalies (birth defects)
- Prematurity/low birth weight (baby is born preterm—less than 37 weeks or weighs less than 5 pounds 8 ounces)
- SUID (Sudden Unexpected/Unexplained Infant Death)
- Maternal factors and complications (problems the mother may experience during pregnancy)
- "Other and external causes" may include complications of the umbilical cord, placenta, or membranes; and at 26 percent, each is the largest category of the causes of infant deaths in both Kansas and Sedgwick County.

Infant Deaths by Cause, Kansas and Sedgwick County, 2011-2015



Infant Deaths by
Leading Cause of
Death, 2011-2015
Combined

	KS (n=1,295)	SC (n=261)
Congenital Anomalies	21	22
Prematurity or LBW	20	25
SUID	24	19
Maternal Factors	9	8
(Other Causes)	26	26
Total	100	100

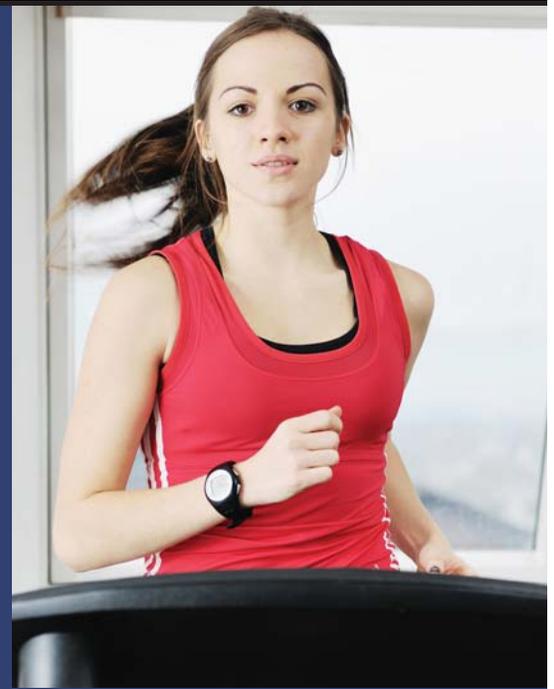
Source: Bureau of Epidemiology and Public Health Informatics
Kansas Department of Health and Environment
Period Cohort Mortality Files

Pregnancy results are affected by each woman's health and differ by factors such as race, ethnicity, age, location, health care access, education, and income.

What you can do...

1. Get healthy BEFORE and BETWEEN pregnancies.
 1. Adopt a healthy lifestyle - talk to your doctor before getting pregnant
 2. Think about when you will have children
 - 18 months birth spacing.
3. Important steps to take to improve your health, before you get pregnant:
 - Take 400 micrograms of folic acid.
 - Achieve and maintain a healthy diet and weight.
 - Be physically active regularly.
 - Quitting tobacco use.
 - Do not drink excessive amounts of alcohol and/or use "street" drugs.
 - Talk to your doctor about screening and proper management of chronic diseases, including depression.
 - Talking with their doctor at the scheduled times for important exams, screenings, and vaccinations and discuss if or when you are considering becoming pregnant.
 - Use effective birth control methods correctly and consistently.
 - Get help for intimate partner violence.
 - Learn about your family history and how this may affect your risks.

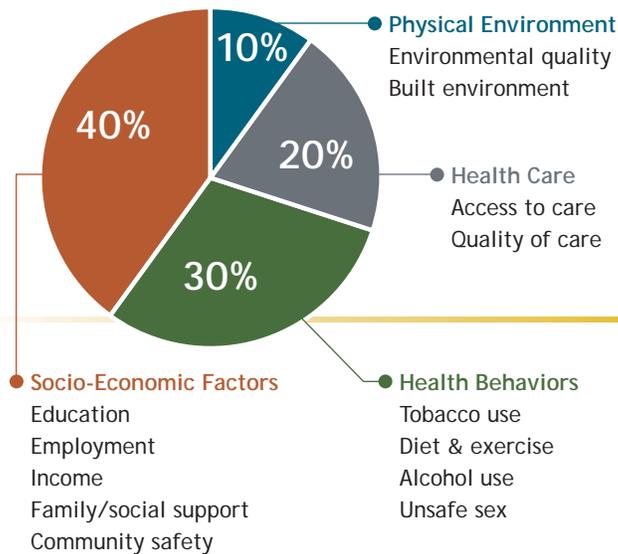
You and your doctor can work before and during pregnancy to deal with problems, if they arise and improve your chances for healthy birth outcomes.



Adopted from: Centers for Disease Control and Prevention, Reproductive Health, Infant Mortality <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm>

Social Determinants of Health

Population Health



Major health issues, like infant mortality, can be difficult to accurately describe because they encompass multi-layered dimensions. Thoughtfully and intentionally working to address personal, societal and community factors that could positively impact a baby's life is essential to empowering families to provide the best chances for survival and a better life for a child. Applying protective factors and lessening risk factors, early in life, can change a person's overall health trajectory.

"...Integrating the Life Course Perspective into Maternal Child and Family Health curricula and programs contribute to health outcomes across the span of a person's life."

(Jonathan E. Fielding, et. al., *A Framework for Public Health in the United States*, *Public Health Reviews*, Vol. 32, No 1 174-189, Accessed June 9, 2014)

As the chart to the left indicates, Health Care (access to care, quality of care, etc.) can have only 20 percent impact on the health of an individual. The **Physical**, **Socio-Economic**, and **Health Behavior** factors can have up to 80 percent of an impact on the health of an individual including an infant's.

Source: Author's analysis and adaption from the University of Wisconsin Population Health Institute's County Health Rankings model © 2010, <http://www.countyhealthrankings.org/about-project/background>. Accessed May 23, 2017.

Healthy Beginnings

Mothers who actively engage in proper preventive health care activities help to reduce their baby's risk of infant death. Key preventive strategies include:

- Consistent prenatal care, beginning in the first trimester and continuing throughout pregnancy
- Take folic acid, prior to and during pregnancy
- Oral health care
- Exclusive breastfeeding for the first six months of the child's life
- Provide safe sleeping arrangements for the infant
- Make well-child doctor visits through the baby's first two years



Community Programs

Kansas Blue Ribbon Panel on Infant Mortality

In 2009, the Kansas Blue Ribbon Panel on Infant Mortality was formed to tackle this problem. The panel brings together several organizations in Kansas with a broad range of expertise, including many that have been working for years to address infant mortality risk factors and improve birth outcomes. The panel has helped focus efforts among partners and generated new collaborative initiatives.

Project Imprint, Sedgwick County Fetal Infant Mortality Review (FIMR)

Project Imprint is a community initiative involving multiple disciplines, organizations and individuals seeking answers as to why infants are dying in our county. Based on data review and interviews with parents who have experienced a loss, Project Imprint's Case Review Team (CRT) makes recommendations to the Community Action Team (CAT), which results in increased knowledge about the issue, changes to service delivery and policy changes.

Healthy Babies Program

Healthy Babies is an educational program for prenatal and parenting families, with no out of pocket expense to the participant. Registered nurses and community liaisons provide education and family support through home and office visits. Providers are also available at community clinics to accompany clients to well-child visits and assist with navigation through the health care system.

Maternal Infant Health Coalition (MIHC)

MIHC has a mission to improve maternal and infant health outcomes in Sedgwick County by assuring quality preconception and perinatal care, and using data-driven, evidence-based practice and quality improvement processes. The MIHC works in partnership with public and private organizations that have a vested interest in maternal and infant health. They strive to improve maternal health for women of reproductive age, enhance service integration and promote social equity. MIHC members advocate for quality health care and support health promotion efforts throughout the community.

Women, Infants & Children (WIC)

WIC, another program of the Sedgwick County Health Department, is a nutrition education and supplemental food program for women, infants and children ages one to five.

Count the Kicks Campaign (CTK)

The CTK Campaign aims to reduce preventable stillbirths by teaching expectant parents the importance of, and method for, self-monitoring and tracking babies' daily movements during the third trimester. Recent research shows this simple, no-cost practice significantly decreases stillbirths. The ultimate goal of Count the Kicks is to improve the chances of delivering a healthy baby and to reduce stillbirth rates, which occur in one out of every 160 pregnancies nationwide. The Kansas CTK Ambassador partners with Project Imprint to help Kansas mothers give birth to strong, healthy and viable babies, thus giving them a "Healthy Birth Day."

Recommended Strategies

Source: Shore, Rima, Shore, Barbara, (2009). *KIDS COUNT Indicator Brief Reducing Infant Mortality for The Annie E. Casey Foundation.*

- **Take a Life-Course Approach to Maternal and Infant Health**
Focus not only on pregnant women and newborn babies, but work to build better health before and in between pregnancies. Better general health among women will reduce infant mortality and produce other lasting benefits as well.
- **Ensure Timely Prenatal Care for All Women**
Women need access to care throughout all trimesters of a pregnancy. Studies show that mothers who received prenatal care in each trimester were three times more likely to have a healthy baby. These services should be specifically targeted toward young moms, one-third of which fail to receive any care in their first trimester of pregnancy.
- **Address Racial and Ethnic Disparities in Infant Mortality**
As demonstrated in this brief, disparities among racial groups continue to exist. More research needs to be done to explore why these disparities exist, and how they may be eliminated via environmental, social and behavioral reform.
- **Sustain Efforts to Prevent Infant Mortality After the First Month of Life**
Emphasis needs to be placed on expanding breastfeeding, distributing safe sleep information for the prevention of SIDS and ensuring that all young children have access to health care.

To Learn More

- Visit the Sedgwick County Health Department's website at www.sedgwickcounty.org.
- Join the Sedgwick County Fetal Infant Mortality Review (FIMR) Team.
- Join Sedgwick County's Coalition of Community Health Clinics (CCHC).
- Volunteer to inform others about accessing affordable health care.
- Use United Way of the Plains' 2-1-1 Resource Call Line.
- 1-800-CHILDREN, KCSL Parent Helpline.



Sedgwick County...
working for you

For more information, contact the
Sedgwick County Division of Health