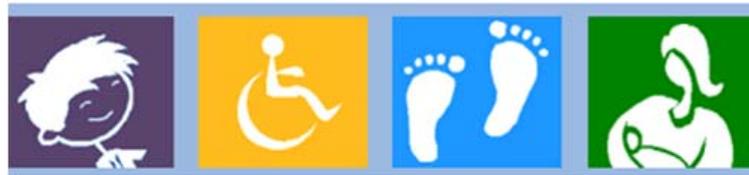


Kansas Maternal and Child Health

**2012
Biennial Summary**



**Kansas Department of Health and Environment
Bureau of Family Health
Bureau of Epidemiology and Public Health Informatics**

November 2012

Dear Fellow Kansans:

It is my pleasure to present to you the 2012 Maternal and Child Health Biennial Summary for the State of Kansas. This is our department's fourth such report; the first was issued in 2006. Feedback from previous documents has been resoundingly positive.

We heard from policy makers, program managers, other decision makers and advocates alike that the report was useful in getting an overall picture of the health of Kansas mothers and children. In particular, the document increased understanding of the important role this information plays in assessing key indicators of population health. The analyses of disparities served to underscore the need for targeting services and resources to certain populations and areas of the state with greatest need.

Please submit comments and your thoughts about this Summary and what it says about the health status of Kansas mothers and children by sending an email to Jamie Kim at jkim@kdheks.gov.

Sincerely,



Robert Moser, MD
Secretary and State Health Officer
Kansas Department of Health and Environment

KANSAS MATERNAL AND CHILD HEALTH

2012 BIENNIAL SUMMARY



November 2012

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EXECUTIVE SUMMARY

- ❑ In Kansas, 2001-2010, there was an increasing trend in the percent of women 18-44 who lack health insurance with about 18.7% of women lacking health insurance in 2010. In 2010, women at greatest risk of being uninsured were Hispanic, have less than a high school education, earn less than \$25,000, reside in a rural county, or were widowed, divorced, or separated. The percent of Hispanic women ages 18-44 with no health insurance increased from 28.4% in 2001 to 48.3% in 2010.
- ❑ The rate of smoking during pregnancy has declined significantly over the past six years (2005-2010), but was still nearly 1.5 times the national rate. In 2010, the percent of pregnant Kansas women reporting smoking during pregnancy was 15.0%. The smoking rate was highest for non-Hispanic Native American women, 29.8%, followed by non-Hispanic white women, 17.5%, and non-Hispanic black women, 15.7%. Rates for Hispanic (4.8%) and non-Hispanic Asian women (2.5%) were substantially lower. Teenagers 18-19 years and women in their early twenties had the highest smoking rates (23.4% and 21.9%, respectively). Smoking rates for women in their thirties and older were sharply lower, approximately 9%.
- ❑ In recent years (2004-2010), the Kansas preterm and late preterm birth rates have declined significantly. In 2010, the rate for preterm births, those occurring before 37 weeks gestational age, was 8.8%. The non-Hispanic black prematurity rate was 41.9% higher than the non-Hispanic white rate (12.2% and 8.6%, respectively). Hispanic premature births (7.5%) were lower than the state average (8.8%).
- ❑ In 2010, approximately one-third (30.5%) of Kansas births were delivered by cesarean section, a 35.6% increase from 22.5% in 2001. There was an increase in cesareans among all gestational age groups. The induction rate increased 43.9% from 19.6% in 2001 to 28.2% in 2010. An increasing trend was observed in inductions among all gestational age groups.
- ❑ For the period of 2001-2010, the percent of low birthweight (LBW) births in Kansas has remained unchanged. The LBW rate in Kansas has remained consistently lower than the nation. LBW and very low birthweight (VLBW) infants contribute heavily to the total infant mortality rate. During 2008-2010, almost two thirds (61.7%) of infant deaths occurred among the 7.2% of infants who were born at LBW. Similarly, 45.5% of infant deaths occurred among the 1.3% of infants born at VLBW. The risk of delivering a LBW infant is greater among non-Hispanic black mothers and differs by maternal age, with the highest risk for the youngest and oldest mothers regardless of race.
- ❑ Over the past decade (2001-2010), the infant mortality rate (IMR) has statistically remained the same. However, for 2007-2010, there was a significant decrease in trend detected. For many years, the rate of non-Hispanic black infant mortality has been more than two times that of the non-Hispanic white infant mortality rate. Decreases in IMRs were observed for non-Hispanic white and non-Hispanic black infants from 2001 to 2010. However, no change was observed for Hispanic infants.
- ❑ The percent of Kansas WIC infants (Special Supplemental Nutrition Program for Women, Infants, and Children) ever breastfed has increased by 11.0% in the last 10 years from 61.0% in 2001 to 67.7% in 2010. However, the percent breastfed at least 6 months and 12 months have decreased.

- ❑ The percent of Kansas WIC children (ages 24-59 months) who are overweight or obese has decreased slightly from 28.7% in 2010 to 28.4% in 2011. In 2011, 32.4% of Hispanic children and 35.0% of American Indian/Alaskan Native children participating in WIC were overweight or obese.
- ❑ In Kansas, for adolescents and young adults ages 15-24 (2008-2010), 69.6% of unintentional injury deaths were caused by motor vehicle crashes, 15.7% were caused by poisonings, and 3.0% were caused by drowning. In non-Hispanic white and Hispanic adolescents and young adults unintentional injury caused the highest percent of injury deaths. However, in non-Hispanic black adolescents and young adults, homicides caused more deaths than unintentional injuries.
- ❑ Systems of Care for CYSHCN: Effective promotion of health and health services for children and youth with special health care needs (CYSHCN) requires a system of care that is integrated, comprehensive, coordinated, family centered and consistent across the life course (or lifespan). The six core outcomes that the Federal Maternal and Child Health Bureau established to facilitate integrated systems of care for CYSHCN are: 1. Partners in Decision-Making, 2. Medical Home, 3. Adequate Health Insurance, 4. Early and Continuous Screening, 5. Ease of Community-Based Service Use, and 6. Transition to Adulthood (age 12-17 years only).¹
- ❑ The 2009/10 National Survey of Children with Special Health Care Needs (NS-CSHCN) estimates that 25.0% of Kansas CYSHCN age 0-11 met all five core outcomes, compared to 20.2% of the U.S., and Kansas ranks 7th in the nation. For CYSHCN age 12-17, 19.9% met all six core outcomes compared to 13.6% of the U.S., and Kansas ranks 4th in the nation.
- ❑ In Kansas, 52.7% of youth with special health care needs received services necessary to transition to all aspects of adult life compared to the national average of 40.0% . Kansas ranks 1st in the nation.

Reference:

1. National Survey of Children with Special Health Care Needs. NS-CSHCN 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

INTRODUCTION

This fourth edition of the Kansas Biennial Summary of Maternal and Child Health (MCH) was prepared in the context of many changes in federal and state health policy relating to mothers and children. In the past decade, new policies have emerged relating to health insurance, welfare reform, federal and state funding reductions, provider workforce shortages, and rapid advances in technology, among others. All of these impact the health status of our mothers and children. In turn, changes in the health status of the MCH population reflect changes in the health status of the general population.

Kansas has made steady progress in developing program capacity to collect and analyze MCH data and monitor trends in child health that will guide program and policy decision making. Each year for several years, a vast amount of information and data have been collected as part of the federal application for MCH Services Block Grant funding. In addition to dramatic improvements in data quality, Kansas is now able to see trends in Kansas' performance on national and state priority measures, health status and outcomes, and the capacity of our health system to meet the needs of mothers and children, including children and youth with special health care needs.

In addition to federal reporting, the MCH Services Block Grant data are used to prioritize MCH initiatives for the state. A 5-Year MCH Statewide Needs Assessment is conducted as part of the federal requirements for this grant. Kansas' most recent assessment, referred to as MCH 2015, can be viewed on the KDHE website at: http://www.datacounts.net/mch2015/documents/MCH2015_Report.pdf. The assessments are major undertakings involving diverse groups of stakeholders. The purpose of the 5-Year MCH Needs Assessment is to focus on priority work.

For the period 2011-2015, the MCH priorities for Kansas are as follows:

Pregnant Women and Infants

Goal: Enhance the health of Kansas women and infants across the lifespan.

- All women receive early and comprehensive care before, during, and after pregnancy.
- Improve mental health and behavioral health of pregnant women and new mothers.
- Reduce preterm births (including low birthweight and infant mortality).
- Increase initiation, duration and exclusivity of breastfeeding.

Children and Adolescents

Goal: Enhance the health of Kansas children and adolescents across the lifespan.

- All children and youth receive health care through medical homes.
- Reduce child and adolescent risk behaviors relating to alcohol, tobacco and other drugs.
- All children and youth achieve and maintain healthy weight.

Children and Youth with Special Health Care Needs (CYSHCN)

Goal: Enhance the health of all Kansas children and youth with special health care needs across the lifespan.

- All CYSHCN receive coordinated, comprehensive care within a medical home.
- Improve the capacity of YSHCN to achieve maximum potential in all aspects of adult life, including appropriate health care, meaningful work, and self-determined independence.
- Financing for CYSHCN services minimizes financial hardship for their families.

Until now, there has been little effort to share these data and priorities for a wide range of activities with the general public, private providers, and others despite the usefulness of the data. It is the intent that this changes all that. The 2012 Biennial Summary of MCH is the fourth summary providing an overview of MCH in Kansas. We hope readers will look forward to this biennial publication and analyses.

Purpose and format of the report

The purpose of the report is to provide useful information on MCH in Kansas for health care providers, public health workers and policy makers. The report presents summaries of three population groups: Women of Reproductive Age and Infants, Children and Adolescents, and Children and Youth with Special Health Care Needs (CYSHCN).

The report is divided into six sections. Sections I - IV present summaries of 28 important health issues for women of reproductive age and infants (Section I), children and adolescents (Section II), children and youth with special health care needs (Section III), and MCH health systems indicators (Section IV). Each of the health issues is presented with a brief overview of the Kansas goal, definition, significance of the health issue, and Healthy People 2020 Objectives, when available. The race and ethnicity categories presented are consistent with Office of Management and Budget's (OMB) Directive 15^{1,2}, when possible. For this report, race and Hispanic origin categories are combined. Self-reported single race data are utilized for non-Hispanic white, non-Hispanic black, non-Hispanic American Indian or Alaska Native, non-Hispanic Asian and Pacific Islander and non-Hispanic other. If more than one racial category is checked, the person's race is classified as non-Hispanic multiple category. Data shown for Hispanic persons included all persons of Hispanic origin of any race.

A summary of the health issues in Kansas including key statistics and trends is supplemented by tables and graphs with the latest data available. Rates have been calculated from the appropriate most recent available census estimates to adjust for population size and allow for more meaningful interpretation of the data. In this report, data analysis and display were based on suggestions of the Maternal and Child Health Bureau, Health Resources and Services Administration. (Please refer to the Technical Notes on page 94 - Table 1 includes the guidelines for measures with small sample sizes used in this document.)

Section V includes special studies and reports. Section VI includes a map of Kansas with county names, a list of county abbreviations, technical notes, and glossary.

KDHE update

Please note that in 2012, Executive Reorganization No. 41 consolidated the financing arm of Medicaid in the Division of Health Care Finance within the KDHE. The reorganization renames the Department on Aging as the Department for Aging and Disability services and consolidates all disability waiver and mental health services from the Department of Social and Rehabilitation Services into the Department for Aging and Disability Services. The reorganization renames the Department of Social and Rehabilitation Services as the Department for Children and Families.

Within the agency (KDHE), internal reorganization involved merging the Bureau of Family Health (MCH) and the Child Care Licensing Program effective July 1, 2012. Child Care and Foster Care align quite well with the other Family Health programs, which are largely child centered. Rachel Berroth is now the Bureau Director.

These changes fit well with the Governor's Road Map for Kansas and the goals that lead to protecting the well-being of Kansas families: <http://ksGOP.org/wp-content/uploads/2012/05/Road-Map-for-Kansas-I.pdf>.

Acknowledgments

We would like to thank all the physicians, nurses, hospitals, laboratorians, county health department staff, and others who provided data. We would also like to acknowledge the Bureau of Family Health and Bureau of Epidemiology and Public Health Informatics staff for their support and assistance.

Rachel Berroth, MS
Director
Bureau of Family Health

Reference:

1. Directive No. 15. Race and Ethnic Standards for Federal Statistics and Administrative Reporting. May 12, 1977. <http://wonder.cdc.gov/wonder/help/populations/bridged-race/Directive15.html>
2. Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity. Federal Register Notice. October 30, 1997. http://www.whitehouse.gov/omb/fedreg_1997standards

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SECTION I
WOMEN OF REPRODUCTIVE AGE
AND
INFANTS

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Demographics¹

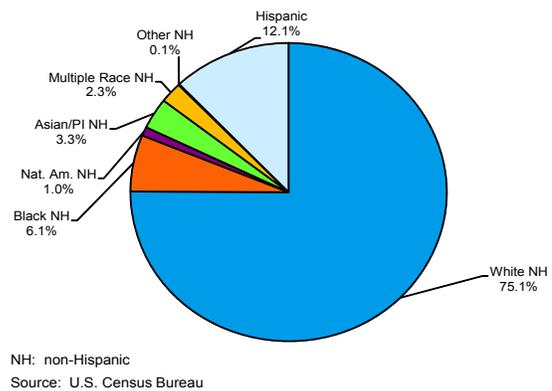
In 2010, there were an estimated 40,786 infants living in Kansas or about 1.4% of the total Kansas population (2,853,118). Women of reproductive age 15-44 accounted for 19.4% (554,584) of the Kansas population. The race and ethnicity composition for this group was estimated at 75.1% non-Hispanic white, 6.1% non-Hispanic black, 1.0% non-Hispanic Native American or Alaska Native, 3.3% non-Hispanic Asian and Pacific Islander, 2.3% non-Hispanic multiple race, 0.1% non-Hispanic other and 12.1% Hispanic (any race).

**Population Composition by MCH groupings
Kansas, 2010**

Population Group	Age in Years	KS Population Estimate	KS %
Infants	<1	40,786	1.4%
Children	1-4	164,706	5.8%
Children	5-9	202,447	7.1%
Adolescents	10-14	198,884	7.0%
Women of Childbearing Age	15-44	554,584	19.4%
Teen Women	15-19	98,459	3.5%
Adult Women	20-44	456,125	16.0%
Total MCH Population		1,161,407	40.7%
Others		1,691,711	59.3%
Total Population		2,853,118	100.0%

Source: U.S. Census Bureau

**Women (ages 15-44) by Race and Ethnicity
Kansas, 2010**



In 2010, a total of 40,439 live births occurred to Kansas residents. This was a decrease of 2.3% from the 41,388 births reported in 2009. The birth rate decreased 3.4%, from 14.7 births per 1,000 population in 2009 to 14.2 births per 1,000 population in 2010. Geary (30.6), Finney (20.8), Seward (20.4) and Ford (20.0) counties had the highest county birth rates per 1,000 population.

In 2010, 36.2% of all Kansas live births occurred to women in the 15-24 age-group, 52.9% of live births occurred to women in the 25-34 age-group and 10.7% occurred to women in the 35-44 age-group. In 2010, 71.8% of Kansas live births were to non-Hispanic white mothers, 6.9% were to non-Hispanic black mothers, 5.4% were to mothers of non-Hispanic other/multiple races, and 15.9% were to Hispanic mothers. Even though Hispanic women comprise only 12.1% of women of reproductive ages, they had 15.9% of all live births.

During 2010, 56.6% of live births occurred in six urban counties (Douglas, Johnson, Leavenworth, Sedgwick, Shawnee and Wyandotte) with 72.4% (168) of Kansas obstetricians practicing in the same. The remaining 99 Kansas counties accounted for 43.4% of all births where 27.6% (64) of the state's 232 obstetricians practice. Twenty-seven rural and frontier counties average fewer than 40 births per year.

Data Sources and References:

1. Oakley D, Crawford G, Moyer C, Zornes R. *Kansas Annual Summary of Vital Statistics, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/annsumm.html

Women's Health Care Coverage

KANSAS GOAL: Increase health care coverage for women of reproductive age.

Indicator: The percent of women in their reproductive years (18-44) without public or private health insurance coverage.

Definition: Women ages 18-44 sampled by the Behavioral Risk Factor Surveillance System (BRFSS) who reported that they have no health care coverage, including health insurance, prepaid plans such as Health Maintenance Organizations (HMO), or government plans such as Medicaid.

Significance: Access to health services is a leading Healthy People 2020 indicator. Strong predictors of access to quality health care include having health insurance, a higher income level, and a regular primary care provider or other source of ongoing health care. Use of clinical preventive services, such as early prenatal care, can serve as indicators of access to quality health care services.¹ Research has shown that having health insurance increases timely initiation of prenatal care, promotes access to cesarean section deliveries for high risk births and increases access to neonatal intensive care for high risk babies.² Limitations in access to care extend beyond basic causes, such as a shortage of health care providers or a lack of facilities. Individuals also may lack a usual source of care or may face other barriers to receiving services, such as financial barriers (having no health insurance or being underinsured), structural barriers (no facilities or health care professionals nearby), and personal barriers (sexual orientation, cultural differences, language differences, not knowing what to do, or environmental challenges for people with disabilities). Patients with disabilities may face additional barriers arising from facilities that are not physically accessible or from the attitudes of clinicians. Hispanics, young adults, and uninsured persons are least likely to have a usual source of care.¹

Healthy People 2020 Objective: Related to Access to Health Services (AHS) Objective 1.1. Increase the proportion of persons with health insurance. (Target: 100%).³

Data Sources and References:

1. U.S. Department of Health and Human Services. Healthy People 2010. 2nd ed. *With Understanding and Improving Health and Objectives for Improving Health*. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
2. Hadley, J. *Sicker and Poorer: The consequences of being uninsured. The Kaiser Commission on Medicaid and the Uninsured* (May, 2002). www.kff.org/uninsured/20020510-index.cfm
3. U.S. Department of Health and Human Services. Healthy People 2020. www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf
4. U.S. Department of Health & Human Services, Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System.
5. U.S. Department of Health and Human Services, Health Resources and Services Administration. *Women's Health USA 2007*. Rockville, Maryland: U.S. Department of Health and Human Services, 2007.

Note: Percentages reported here are weighted percentages. See technical notes for explanation of weighting procedure.

Epidemiology and Trends

Elimination of health risks and comprehensive management of disease prior to pregnancy increases the likelihood of a pregnant woman delivering a healthy infant. Use of clinical preventive services for women of reproductive age before, during, and after pregnancy serves as an indicator of access to health care services. Access to health services including preventive, primary care, and tertiary care often depends on whether a person has health insurance. According to the BRFSS⁴, approximately 18.7% of Kansas women ages 18 to 44 years lacked health care coverage in 2010, which is slightly below the national average of 20.2%. Non-Hispanic black women were nearly twice as likely as non-Hispanic white women to be uninsured, and Hispanic women were more than three times as likely. From 2001 to 2010, the percentage of Hispanic women without health care coverage increased from 28.4% to 48.3%, an increase of 70.1%.

In 2010, 83.9% of women in Kansas reported having a usual source of care. Among women, non-Hispanic whites were most likely to report a usual source of care (86.4%), followed by non-Hispanic blacks (75.5%); Hispanic women were least likely to report a usual source of care (69.3%). Having a usual source of care varied by family income level.⁴ Women with family incomes under 100% of the federal poverty level (FPL) were more likely to report that hospital outpatient departments and emergency departments were the places they usually go when sick, and were more likely to have no usual source of care than those with higher incomes.⁵

Women 18- 44 Without Health Care Coverage Kansas, 2010	
Kansas	18.7%
U.S.	20.2%

Race/Ethnicity	
White, non-Hispanic	14.0%
Black, non-Hispanic	20.6%
Other race, non-Hispanic	29.7%
Multi race, non-Hispanic	32.5%
Hispanic	48.3%

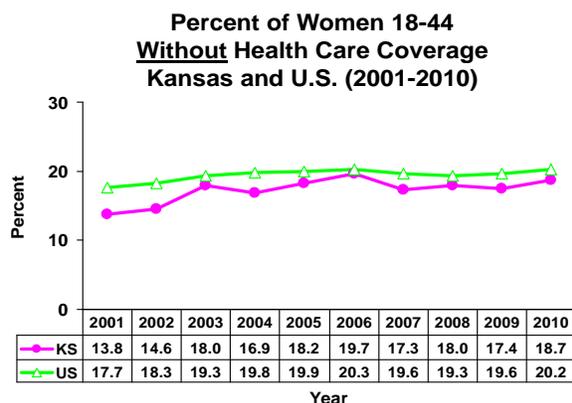
Education	
Less than high school	51.3%
High school or GED	23.1%
Some college	21.2%
College	8.8%

Annual Household Income	
Less than \$15,000	48.1%
\$15,000 - \$24,999	54.9%
\$25,000 - \$34,999	28.9%
\$35,000 - \$49,999	15.3%
\$50,000+	4.5%

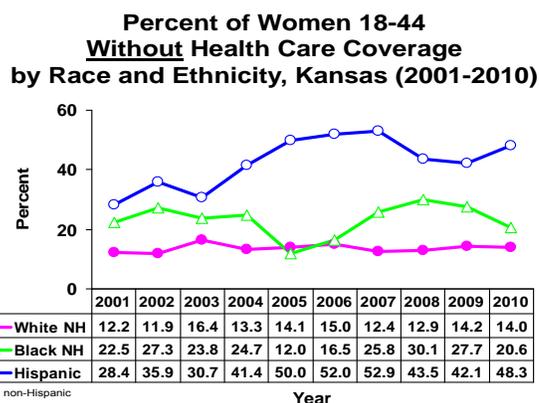
Marital Status	
Married/Unmarried couple	15.3%
Divorced/Separated	30.1%
Widowed	53.7%
Never married	22.7%

Population Density	
Frontier	26.8%
Rural	32.0%
Densely-settled rural	22.4%
Semi-urban	14.4%
Urban	16.2%

Source: Behavioral Risk Factor Surveillance System Survey



Source: Behavioral Risk Factor Surveillance System Survey



Source: Behavioral Risk Factor Surveillance System Survey

Prenatal Care

KANSAS GOAL: Ensure early entry into prenatal care to enhance pregnancy outcomes.

Indicator: The percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.

Definition: Comprehensive medical care provided during pregnancy, labor and delivery, and postpartum. Services include screening for medical and behavioral risk factors known to cause poor outcomes and treatment for those conditions. First trimester is the first three months of pregnancy.¹

Numerator: Number of live resident births with reported first prenatal visit during the first trimester (before 13 weeks gestation) in the calendar year reported on the birth certificate.

Denominator: Number of resident live births in Kansas in the calendar year where month prenatal care began was reported on the birth certificate.

Significance: Early identification of maternal disease and risks for complications of pregnancy or birth are the primary reason for first trimester entry into prenatal care. This can help ensure that women with complex problems and women with chronic illness or other risks are seen by specialists. Early high-quality prenatal care is critical to improving pregnancy outcomes.²

Healthy People 2020 Objective: Related to Maternal, Infant, and Child Health (MICH) Objective 10.1: Increase the proportion of pregnant women who receive prenatal care beginning in the first trimester. (Target: 77.9%)²

Data Sources and References:

1. Washington State Department of Health. *The Health of Washington State*. Maternal and Child Health: Prenatal Care, p.249. 2002.
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. Oakley D, Crawford G, Moyer C, Zornes R. *Kansas Annual Summary of Vital Statistics, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/annsumm.html
4. Centers for Disease Control and Prevention. National Center for Health Statistics. VitalStats. www.cdc.gov/nchs/vitalstats.htm.

Note:

1. Percentages were calculated only in counties with ≥ 20 live births. Percentages were not calculated in counties with a smaller number of live births as the percentages are not useful or meaningful.
2. The collection process for prenatal care (PNC) data has changed. Beginning with the reporting of 2005 data, Kansas implemented the 2003 revision of the U.S. standard birth certificate. While most data items on the certificates are comparable with past years, certain items such as prenatal care are not. For PNC, in previous years, the mother or prenatal care provider reported the month of pregnancy in which the mother began PNC. In 2005, this item was replaced by exact dates of first and last prenatal visit. States that have implemented the new standard birth certificate typically see a drop in percentage of women beginning care in the first trimester. For more information, please visit www.kdheks.gov/ches/download/Prelim_Findings_2005a.pdf.

Epidemiology and Trends

In 2010, 75.1% of infants were born to pregnant women receiving prenatal care in the first trimester, a slight increase from 2009 (74.1%).³ The U.S. data for 2010 on this measure was 73.1%.⁴ Kansas exceeded the U.S. on this measure by 2.7% in 2010. However, this was below the Healthy People 2020 goal of 77.9%. During 2005-2010, Joinpoint regression analysis showed a significantly decreasing trend over the interval 2005-2007 followed by a significantly increasing trend from 2007-2010.

In 2010, a total of 40,439 live births occurred to Kansas residents. Of these live births, 39,362 had “Date of First Prenatal Care Visit” indicated on the birth certificate. Among live births where start date for prenatal care is known, the proportion of births to mothers beginning in the first trimester was 75.1%. Kansas 2010 data shows that Hispanic and non-Hispanic black mothers are most likely to enter prenatal care late. Older mothers are most likely to begin prenatal care early regardless of race or ethnicity.

In counties shaded pink on the map below, 77.9% or more of the mothers meet or exceed the Healthy People 2020 target for beginning prenatal care in the first trimester of pregnancy. Women in Rawlins, Trego, Graham, Mitchell and Sherman counties were more likely to obtain early prenatal care. Women in Stanton, Finney, Seward, Scott and Chautauqua were least likely to obtain early prenatal care. In general, women in rural areas are less likely to get prenatal care.

Infants Born to Pregnant Women Receiving Prenatal Care Beginning in the First Trimester		
	Number	Percent
Kansas (2010)	29,552	75.1%
U.S. (2010)	n.a.	73.1%

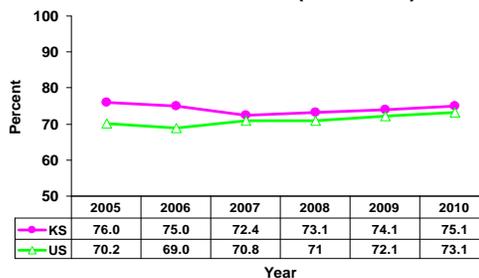
Source: Bureau of Epidemiology and Public Health Informatics, National Vital Statistics Reports (VitalStats)

Infants Born to Pregnant Women Receiving Prenatal Care Beginning in the First Trimester Kansas, 2010		
Race/Ethnicity	Number	Percent
White, non-Hisp	22,810	79.9%
Black, non-Hisp	1,610	62.2%
Other, non-Hisp	1,569	73.5%
Hispanic	3,540	58.4%

Age groups	Number	Percent
10-14	15	45.5%
15-17	555	52.9%
18-19	1,638	61.9%
20-24	7,097	67.6%
25-29	9,665	79.1%
30-34	7,149	82.8%
35 plus	3,432	80.3%

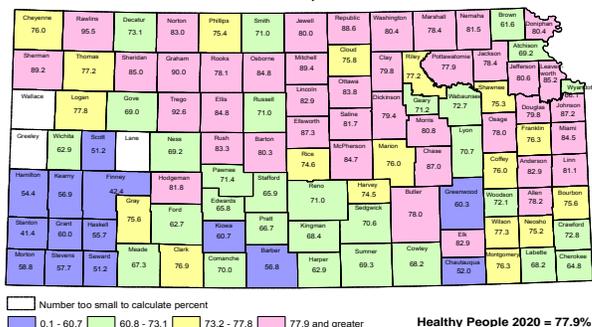
Source: Bureau of Epidemiology and Public Health Informatics.

Percent of Infants Born to Pregnant Women Receiving Prenatal Care Beginning in the First Trimester Kansas and U.S. (2005-2010)



Source: Bureau of Epidemiology and Public Health Informatics; National Center for Health Statistics (VitalStats)

Percent of Infants Born to Pregnant Women Receiving Prenatal Care Beginning in the First Trimester by County Kansas, 2010



Source: Bureau of Epidemiology and Public Health Informatics

Breastfeeding

KANSAS GOAL: Increase the incidence and duration of breastfeeding.

Indicators:

1. The percent of Kansas infants in which breastfeeding was initiated.
2. The percent of Kansas infants breastfed at least 6 months.
3. The percent of Kansas infants breastfed at least 1 year.
4. The percent of Kansas infants exclusively breastfed at 6 months.

Significance: Human milk is the preferred feeding for all infants, including premature and sick newborns. The American Academy of Pediatrics (AAP) recommends that an infant be breastfed without supplemental foods and liquids for the first 6 months after birth (known as exclusive breastfeeding). Exclusive breastfeeding is ideal nutrition and sufficient to support optimal growth and development for approximately the first 6 months after birth. The advantages of breastfeeding are indisputable and include nutritional, immunological and psychological benefits to both mother and infant, as well as economic benefits.¹ Observational studies have found that breast-fed infants have less earaches, respiratory infection, gastroenteritis, eczema² and a decreased risk of being overweight as a child.³ Breastfeeding also strengthens the nurturing relationship between a mother and her child, promoting stronger family bonds and positive self-esteem for mothers.⁴

Healthy People 2020 Objective: Related to Maternal, Infant, and Child Health (MICH) Objective 21: Increase the proportion of infants who are breastfed.^{1,5}

MICH-21.1: Ever. (Target: 81.9%)

MICH-21.2: At 6 months. (Target: 60.6%)

MICH-21.3: At 1 year. (Target: 34.1%)

MICH-21.4: Exclusively through 3 months. (Target: 46.2%)

MICH-21.5: Exclusively through 6 months. (Target: 25.5%)

Data Sources and References:

1. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
2. U.S. Preventive Services Task Force. *Behavioral Interventions To Promote Breastfeeding: Recommendations and Rationale*. July 2003. Agency for Healthcare Research and Quality, Rockville, MD. www.ahrq.gov/clinic/3rduspstf/brstfeed/brfeedrr.htm
3. Harder, T., Bergmann, R., Kallischnigg, G., Plagemann, A. *Duration of breastfeeding and risk of overweight*. *Am J Epidemiol*. 2005;162:5, 397-403.
4. Brandt, K.A., Andrews, C.M., Kvale, J. *Mother-infant interaction and breastfeeding outcome*. *JOGNN*. 1998;27:169-174.
5. U.S. Department of Health and Human Services. Healthy People 2020. www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf
6. National Immunization Survey. www.cdc.gov/breastfeeding/data/NIS_data/
7. Kansas Pediatric Nutrition Surveillance System - Supplemental Nutrition Program for Women, Infants, and Children (WIC) program data. This data represents Kansas families with incomes below 185% of the poverty level. www.kdheks.gov/nws-wic/download/2010_PedNSS_Tables_Kansas.pdf
8. Pediatric Nutrition Surveillance System, U. S. Department of Health & Human Services, Centers for Disease Control and Prevention. www.cdc.gov/pednss/pednss_tables/pdf/national_table19.pdf

Epidemiology and Trends

In 2010, Kansas birth certificate data showed that mothers initiated breastfeeding in 77.2% of resident live births. Although this was a slight decrease from the 78.0% reported in 2009, the trend during the six year period (2005-2010) for breastfeeding initiation has significantly increased. According to the National Immunization Survey (NIS), among Kansas children born in 2008 (provisional), 75.4% of Kansas mothers initiated breastfeeding. This was slightly higher than the national estimates (74.6%). The survey also reveals that low income mothers are less likely to breastfeed than their higher income counterparts.⁶ More work is needed to meet the Healthy People 2020 target for breastfeeding initiation of 81.9%.

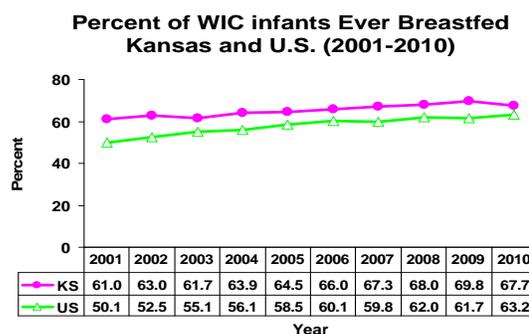
Over half of all women who have live births in Kansas participate in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) program. In 2010, the percent of Kansas WIC infants who initiated breastfeeding (67.7%) was higher than WIC infants nationally (63.2%).^{7,8} The percent of Kansas WIC infants ever breastfed has increased by 11.0% in the last 10 years from 61.0% in 2001 to 67.7% in 2010. However, the percent breastfed at least 6 months and 12 months has decreased.⁷ All rates are well below the HP2020 objectives. More work is needed in protecting, promoting, and supporting breastfeeding especially at 6 months and 12 months.

Incidence and Duration of Breastfeeding Children Born in 2008	
Ever breastfed	
Kansas	75.4%
U.S.	74.6%
Breastfeeding at 6 months	
Kansas	41.0%
U.S.	44.4%
Breastfeeding at 12 months	
Kansas	21.6%
U.S.	23.4%
Exclusive breastfeeding at 6 months	
Kansas	10.6%
U.S.	14.6%

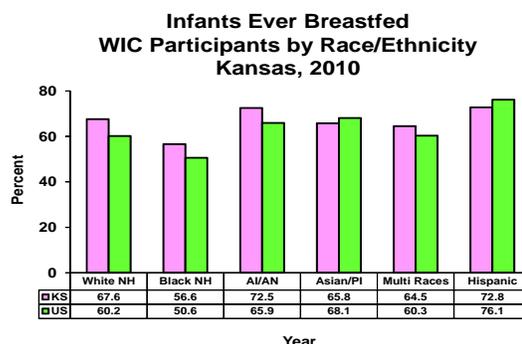
Breastfeeding Initiating By Maternal factors Children Born in 2007, U.S.	
College graduate	88.3%
Asian	86.4%
WIC ineligible	84.6%
Poverty level \geq 350%	84.4%
Married	81.7%
Hispanic or Latino	80.6%
Maternal age \geq 30	79.3%
MSA*, non-central city	77.9%
Birth order - not first born	75.6%

*MSA=Metropolitan Statistical Area defined by the Census Bureau

Source: National Immunization Survey, 2007 births (final) and 2008 births (provisional)



Source: Pediatric Nutrition Surveillance System (PedNSS)



NH: non-Hispanic; AI/AN: American Indian/Alaskan Native; PI: Pacific Islander
Source: Pediatric Nutrition Surveillance System (PedNSS)

Low Birthweight

KANSAS GOAL: Reduce the percent of births with low birthweight.

Indicators:

1. The percent of live birth infants weighing less than 2,500 grams.
2. The percent of live birth infants weighing less than 1,500 grams.

Definition: Low birthweight (LBW) infants are live born infants weighing less than 2,500g (5.5lb) at birth. They fall into two categories: those who are small because they are born prematurely (fewer than 37 weeks of gestation completed) and those who are small for their gestational age (intrauterine growth retardation). Very low birthweight infants (VLBW) are live born infants weighing less than 1,500g (3.3lb).

Significance: The general category of LBW infants includes preterm infants and infants with intrauterine growth retardation. Many risk factors have been identified for LBW babies including: both young and old maternal age, poverty, late prenatal care, smoking, substance abuse, and multiple births. LBW infants are about 25 times more likely to die during the first year of life than are infants of normal weight (at least 5.5 pounds). They are also at greater risk of physical and developmental health problems in both the short and long term. VLBW births are usually associated with preterm birth. The primary risk factors for preterm births are prior preterm birth, prior spontaneous abortion, low pre-pregnancy weight, cigarette smoking, and multiple births. VLBW infants are more than 100 times more likely to die in the first year of life than are infants of normal birth weight. VLBW infants who survive are at a significantly increased risk of severe health and developmental problems, including physical and sensory difficulties, developmental delays, and cognitive impairment, which may require increased levels of medical, educational, and parental care. In vitro fertilization has increased the number of multiple births. Multiple births often result in shortened gestation and low or very low birth weight infants.¹

Healthy People 2020 Objectives: Related to Maternal, Infant, and Child Health (MICH) Objective 8: Reduce low birth weight and very low birth weight.¹

MICH - 8.1 Low birthweight. (Target: 7.8%)

MICH - 8.2 Very low birthweight. (Target: 1.4%)

Data Sources and References:

1. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
2. Oakley D, Crawford G, Moyer C, Zornes R. *Kansas Annual Summary of Vital Statistics, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/annsumm.html
3. Martin JA, Hamilton BE, Ventura SJ, et al. *Births: Final Data for 2010*. National vital statistics reports; vol 59 no1. Hyattsville, MD: National Center for Health Statistics. 2012.

Epidemiology and Trends

Reducing births with low birthweight (LBW) is a Kansas MCH priority in the MCH 2015, the 5-Year MCH Statewide Needs Assessment (2011-2015). In Kansas, the percent of LBW decreased slightly in 2010 to 7.1% from 7.3% in 2009.² Kansas' LBW percentage has been slightly lower than the national average (7.1% and 8.1%, respectively, in 2010).³

Recent trends in LBW are influenced by the multiple birth rate. Twins and higher order multiples are much more likely to be born LBW than singletons. During 2008-2010, 56.9% of all plural births in Kansas were LBW. Non-Hispanic black women are more likely than non-Hispanic white women to give birth to a LBW (13.1% and 6.7% respectively). About 68.8% of infants who died were born to non-Hispanic black mothers and were LBW, compared to 59.2% of infants of non-Hispanic white mothers.

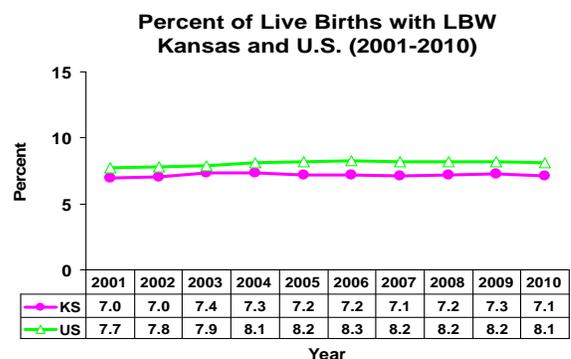
In Kansas, regardless of maternal race and ethnicity, LBW is associated with a small percentage of live births, but a disproportionately larger percentage of infant deaths. During 2008-2010, among the infant deaths where birthweight was known, 61.7% of infants who died were LBW in comparison to 7.2% for all live births at LBW. Similarly, 45.5% of infant deaths occurred among the 1.3% of infants born at VLBW.

The infant mortality rate (59.7/1,000 live births) for LBW infants with linked death and birth files (2006-2010 combined) was 21 times that for infants weighing 2,500 grams or more (2.8/1,000 live births). Similarly, the infant mortality rate for VLBW infants (238.7/1,000 live births) was 85 times higher than the rate for infants born weighing 2,500 grams or more.

In 2010, the risk of LBW was greater for smokers than for nonsmokers (10.9% vs. 6.3%), creating an excessive LBW risk of 4.6% associated with smoking. Other risk factors for LBW live births include low socioeconomic status, inadequate weight gain during the pregnancy, history of infertility problems, close inter-pregnancy spacing and age of mother (younger and older maternal age).

Live Births with LBW		
	# of LBW	Percent
Kansas (2010)	2,867	7.1%
U.S. (2010)	n.a.	8.1%

Source: Bureau of Epidemiology and Public Health Informatics; National Vital Statistics Reports

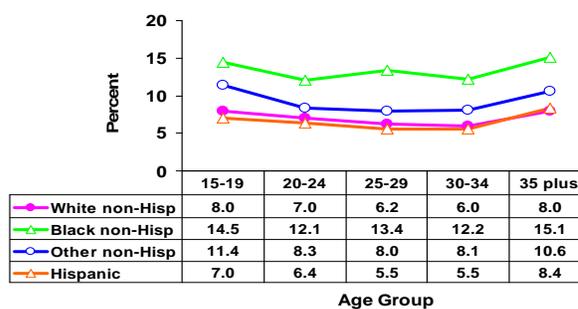


Source: Bureau of Epidemiology and Public Health Informatics; National Vital Statistics Reports

Live Births with LBW Kansas, 2008-2010 (combined)		
Maternal Race/Ethnicity	# of LBW	Percent
White, non-Hisp	5,927	6.7%
Black, non-Hisp	1,120	13.1%
Other, non-Hisp	588	8.8%
Hispanic	1,262	6.3%

Source: Bureau of Epidemiology and Public Health Informatics

**Percent of Live Births with LBW
by Age Group and Maternal Race/Ethnicity
Kansas (2008-2010, combined)**



Source: Bureau of Epidemiology and Public Health Informatics

Preterm births

KANSAS GOAL: Reduce the percent of preterm births.

Indicators:

1. The percent of live birth infants at less than 37 weeks of gestation.
2. The percent of live birth infants at 34 to 36 weeks of gestation (late preterm).
3. The percent of live birth infants at 32 to 33 weeks of gestation (moderate premature).
4. The percent of live birth infants at less than 32 weeks of gestation (very premature).

Definition: Most pregnancies last approximately 40 weeks. Babies born between 37 and 42 completed weeks of pregnancy are called full term. Babies born before 37 completed weeks of pregnancy are called premature. Most premature babies (71.2%) are born between 34 and 36 weeks of gestation. These are called late preterm births. Almost 13% of premature babies are born between 32 and 33 weeks of gestation, about 10% between 28 and 31 weeks, and about 6% at less than 28 weeks of gestation.¹

Significance: Approximately two-thirds of low birth weight (LBW) infants and 98% of very low birth weight (VLBW) infants are born preterm. In addition, preterm birth is the leading cause of neonatal deaths not associated with birth defects. Survival rates of infants have been shown to increase as gestational age advances, even among very preterm infants. Therefore, reduction in preterm delivery holds the greatest promise for overall reduction in infant illness, disability, and death. Because the specific causes of preterm delivery are unclear, research is needed before tailored interventions can be developed. Preterm birth is associated with a number of modifiable risk factors, including the use of alcohol, tobacco, or other drugs during pregnancy and low prepregnancy weight or low weight gain during pregnancy. Other important risk factors for preterm birth are vaginal infection and domestic violence. Rates of preterm delivery in the United States increased over the last three decades of the 20th century. Between 1989 and 1996, this increase was due largely to an increase in multiple gestation. The gap between African American and white infants persists as well, for reasons that are largely unexplained and that have been shown to be independent of other known risk factors. Risk factors that African American women may disproportionately experience include short interpregnancy intervals and exposure to psychosocial stress.²

Healthy People 2020 Objectives: Related to Maternal, Infant, and Child Health (MICH) Objective 9: Reduce preterm births.³

MICH-9.1 Total preterm births. (Target: 11.4%)

MICH-9.2 Late preterm or live births at 34 to 36 weeks of gestation. (Target: 8.1%)

MICH-9.3 Live births at 32 to 33 weeks of gestation. (Target: 1.4%)

MICH-9.4 Very preterm or live births at less than 32 weeks of gestation. (Target: 1.8%)

Data Sources and References:

1. March of Dimes. *Quick reference: fact sheets*. www.marchofdimes.com/professionals/14332_1157.asp
2. U.S. Department of Health and Human Services. *Healthy People 2010. With Understanding and Improving Health and Objectives for Improving Health*. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
3. U.S. Department of Health and Human Services. *Healthy People 2020*. www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf
4. Oakley D, Crawford G, Moyer C, Zornes R. *Kansas Annual Summary of Vital Statistics, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/annsumm.html
5. Martin JA, Hamilton BE, Ventura SJ, et al. *Births: Final Data for 2010*. National Vital Statistics Reports; vol 61 no 1. Hyattsville, MD: National Center for Health Statistics. 2012.

Epidemiology and Trends

Reducing premature births is a Kansas MCH priority in MCH 2015, the 5-Year MCH Statewide Needs Assessment (2011-2015). In 2010, 6.3% of Kansas babies were born at 34 to 36 weeks gestation, 1.1% were born at 32-33 weeks, and 1.4% were “very preterm” (less than 32 weeks).⁴ Overall, the rate for preterm births, those occurring before 37 weeks gestational age, has been lower in Kansas than the U.S.⁵ (8.8% and 12.0%, respectively, in 2010). In recent years (2004-2010), the Kansas preterm and late preterm birth rates have declined significantly. A similar trend was observed at the national level.

The preterm birth rate varies by race/ethnicity. In 2010, 12.2% of Kansas babies born to non-Hispanic black mothers were born preterm, compared to 8.6% of babies born to non-Hispanic white mothers. Hispanic premature births (7.5%) were lower than the state average.

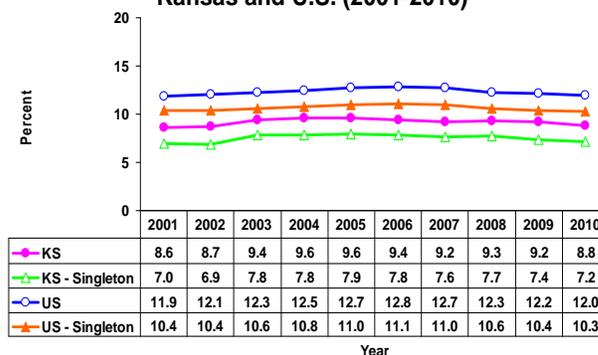
Preterm births were also down among Kansas infants born in singleton deliveries in 2010, to 7.2% from 7.4% in 2009. The singleton preterm rate is also down 8.9% since 2005 (7.9%). Between 2009 and 2010, there was a decrease in rate among all singleton preterm gestational age groups. It is important to track trends in singleton births independently of all births because multiples are more likely to be delivered preterm and their growing numbers have upwardly influenced the preterm rate for all births.⁵

The induction rate in Kansas increased 43.9% from 19.6% in 2001 to 28.2% in 2010. An increasing trend was observed in inductions among all gestational age groups. About 30.5% of Kansas births were delivered by cesarean in 2010, a 35.6% increase from 22.5% in 2001. There was an increase in cesareans among all gestational age groups. (For more information on cesarean delivery, please see page 18.)

Total preterm births (< 37 weeks of gestation)		
2010		
	Number	Percent
Kansas	3,534	8.8%
U.S.	n.a.	12.0%
Late preterm (34 to 36 weeks of gestation)		
Kansas	2,538	6.3%
U.S.	n.a.	8.5%
Moderate preterm (32 to 33 weeks of gestation)		
Kansas	430	1.1%
U.S.	n.a.	1.5%
Very preterm (<32 weeks of gestation)		
Kansas	566	1.4%
U.S.	n.a.	2.0%

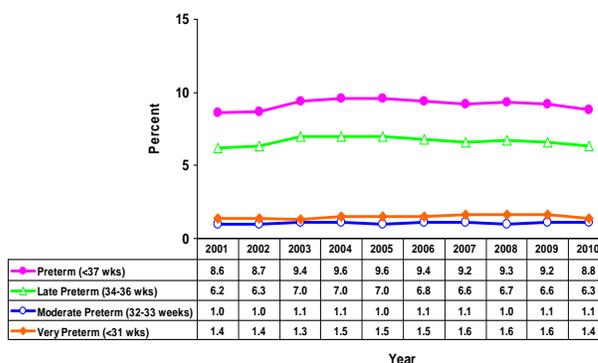
Source: Bureau of Epidemiology and Public Health Informatics; National Vital Statistics Reports

Percent of Total Preterm Births (<37 weeks) Kansas and U.S. (2001-2010)



Data Source: Bureau of Epidemiology and Public Health Informatics; National Center for Health Statistics

Preterm Birth Rates Kansas (2001-2010)



Source: Bureau of Epidemiology and Public Health Informatics
Gestational age: Based on the obstetric estimate of gestation.

Cesarean Delivery

KANSAS GOAL: Decrease cesarean delivery.

Indicator: The percent of all live births by cesarean delivery

Definition: Caesarean delivery — also known as a C-section — is a surgical procedure used to deliver a baby through an incision in the maternal abdominal and uterine walls.^{1,2} Some C-sections are planned due to pregnancy complications or a previous C-section. But, in many cases, the need for a first-time C-section doesn't become obvious until labor has already started.¹

Significance: In 2010, nearly one-third (32.8%)² of all births were cesarean deliveries in the United States. Although there are often clear clinical indications for a cesarean delivery, the short- and long-term benefits and risks for both mother and infant have been the subject of intense debate for over 25 years. Cesarean delivery involves major abdominal surgery, and is associated with higher rates of surgical complications and maternal rehospitalization, as well as with complications requiring neonatal intensive care unit admission. In addition to health and safety risks for mothers and newborns, hospital charges for a cesarean delivery are almost double those for a vaginal delivery, imposing significant costs. Besides clinical reasons, nonmedical factors suggested for the widespread and continuing rise of the cesarean rate may include maternal demographic characteristics (e.g., older maternal age), physician practice patterns, maternal choice, more conservative practice guidelines, and legal pressures.³

Healthy People 2020 Objectives: Related to Maternal, Infant, and Child Health (MICH) Objective 7: Reduce cesarean births among low-risk (full-term, singleton, vertex presentation) women.⁴

MICH-7.1 Women giving birth for the first time. (Target: 23.9%)

MICH-7.2 Prior cesarean birth. (Target: 81.7%)

Data Sources and References:

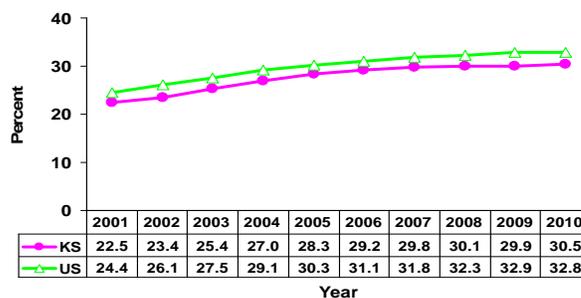
1. *C-section, definition.* www.mayoclinic.com/health/c-section/MY00214.
2. Martin JA, Hamilton BE, et.al. *Births: Final Data for 2010.* National vital statistics reports; vol 60 no 1. Hyattsville, MD: National Center for Health Statistics. 2011.
3. Menacker F, Hamilton BE. *Recent trends in cesarean delivery in the United States.* NCHS data brief, no 35. Hyattsville, MD: National Center for Health Statistics. 2010.
4. U.S. Department of Health and Human Services. Healthy People 2020. www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf

Epidemiology and Trends

In 2010, 30.5% of Kansas live births were delivered by cesarean section, a 35.6% increase from 22.5% in 2001. Cesarean rates increased for births at all gestational ages from 2001 to 2010. During the decade, the cesarean rate for very preterm infants (less than 32 weeks of gestation) increased by 29.6%. Rates for infants born late preterm (34 to 36 completed weeks of gestation) and term (37 to 41 completed weeks of gestation) rose by 22.7% and 37.1%, respectively. The increase mirrors similar trends at the national level.

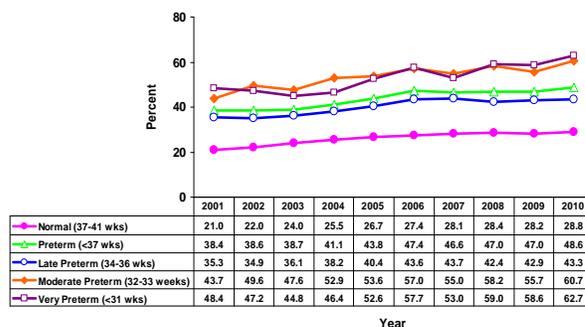
Rates of cesarean delivery rise with increasing maternal age in Kansas. The rate for mothers aged 40 and older in 2010 was nearly twice the rate for mothers under age 20 (41.5% and 21.3%, respectively). Cesarean delivery rates were slightly higher for non-Hispanic black women compared with non-Hispanic white women (32.8% and 31.0%, respectively). Hispanic women had the lowest cesarean delivery rate (26.8%, respectively).

**Total Cesarean Delivery Rate
Kansas and U.S. (2001-2010)**



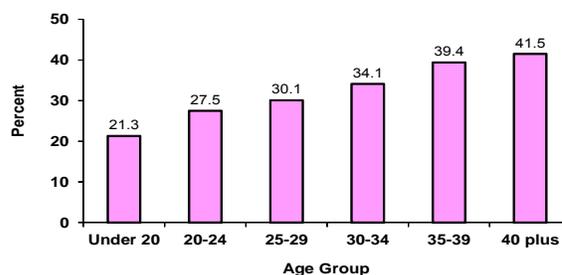
Source: Bureau of Epidemiology and Public Health Informatics;
National Vital Statistics Reports

**Cesarean Delivery Rates by Gestational Age
Kansas (2001-2010)**



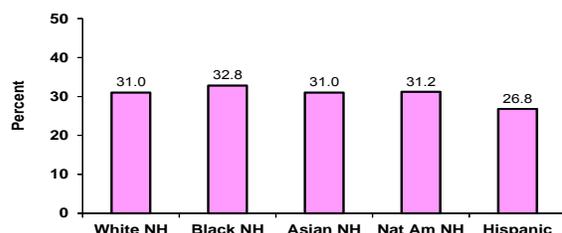
Source: Bureau of Epidemiology and Public Health Informatics
Gestational age: Based on the obstetric estimate of gestation.

**Cesarean Delivery Rates by Age Group
Kansas, 2010**



Source: Bureau of Epidemiology and Public Health Informatics

**Cesarean Delivery Rates by Race/Ethnicity
Kansas, 2010**



NH: non-Hispanic; Nat Am: American Indian or Alaska Native
Source: Bureau of Epidemiology and Public Health Informatics

Tobacco Use During Pregnancy

KANSAS GOAL: Decrease cigarette smoking among pregnant women.

Indicator: The percent of live births with reported tobacco use during pregnancy.

Definition: Live births with reported tobacco use on the birth certificate.

Significance: Cigarette smoking during pregnancy adversely affects the health of both mother and child.¹ The concern about smoking during pregnancy has been longstanding and is linked to adverse pregnancy outcomes, including low birthweight (LBW), intrauterine growth retardation, miscarriage, and infant mortality, as well as negative consequences for child health and development. These adverse consequences in turn are associated with substantial economic and social costs. Babies born to women who smoke are at substantially greater risk of LBW than babies born to nonsmokers.² Findings from other studies suggest that smoking is somewhat underreported on the birth certificate. Nonetheless, the trends and variations in maternal smoking based on birth certificate data are corroborated by data from surveillance data and nationally representative surveys.³ Final births data for 2007 show that 11.8% of babies born to smokers were LBW compared with 7.4% of babies born to nonsmokers in the United States.⁴

Healthy People 2020 Objective: Related to Maternal, Infant, and Child Health (MICH) Objective 11: Increase abstinence from alcohol, cigarettes, and illicit drugs among pregnant women. 11-3. Cigarette smoking. (Target: 98.6%)

Data Sources and References:

1. Centers for Disease Control and Prevention. *Smoking During Pregnancy — United States, 1990–2002*. MMWR 2004;53:911-915.
2. Martin JA, Hamilton BE, Sutton PD, et al. *Births: Final data for 2004*. National vital statistics reports; vol 55 no 1. Hyattsville, MD: National Center for Health Statistics. 2006.
3. Martin JA, Hamilton BE, Sutton PD, et al. *Births: Final data for 2003*. National vital statistics reports; vol 54 no 2. Hyattsville, MD: National Center for Health Statistics. 2005.
4. Centers for Disease Control and Prevention. National Center for Health Statistics. *VitalStats: Birth Data Files*. www.cdc.gov/nchs/vitalstats.htm. August 2010.
5. Oakley D, Crawford G, Moyer C, Zornes R. *Kansas Annual Summary of Vital Statistics, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/annsumm.html

Infant Mortality

KANSAS GOAL: Reduce infant deaths.

Indicator: The infant mortality rate per 1,000 live births.

Definition: Infant death - The death of a live-born infant which occurs within the first year of life (from birth through 364 days). Neonatal death - The death of a live-born infant which occurs prior to the twenty-eighth day of life. Postneonatal death - The death of a live-born infant which occurs from 28 through 364 days of life.

Significance: Infant mortality is an important indicator of the health of a nation or community because it is associated with a variety of factors such as maternal health, quality and access to medical care, socioeconomic conditions, and public health practices.¹ The U.S. infant mortality rate has substantially declined over the last century, and has essentially reached a plateau since 2002. Based on final data, in 2010, 24,586 infants died before age one year, representing an infant mortality rate of 6.15 deaths per 1,000 live births.² A significant disparity exists in U.S. infant deaths between racial groups³, particularly African Americans.⁴ Neonatal mortality is related to gestational age, low birth weight, congenital malformations and health problems originating in the perinatal period, as infections or birth trauma. Postneonatal mortality is generally related to Sudden Unexpected Infant Death (SUID)/Sudden Infant Death Syndrome (SIDS), unintentional injuries and congenital malformations. Infant mortality continues to be an extremely complex health issue with many medical, social, and economic determinants, including race/ethnicity, maternal age, education, smoking and health status.³

Healthy People 2020 Objectives: Related to Maternal, Infant, and Child Health (MICH) Objective 1.3: Reduce the rate of all infant deaths (within 1 year). (Target: 6.0 infant deaths per 1,000 live births)³

Data Sources and References:

1. MacDorman MF, Rowley DL, Lyasu S, et al. Infant Mortality. In: Wilcox, LS, Marks, JS, editors. *From Data to Action: CDC's Public Health Surveillance of Women, Infants, and Children*. Atlanta GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1994; p231-249.
2. Hoyert DL, Xu JQ. *Deaths: Preliminary Data for 2011*. National Vital Statistics Reports; vol 61 no 6. Hyattsville, MD: National Center for Health Statistics. 2012.
3. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
4. Office of Minority Health, Centers for Disease Control and Prevention. *Eliminate Disparities in Infant Mortality* (n.d). www.cdc.gov/omh/AMH/factsheets/infant.htm. Accessed October 14, 2005.
5. Oakley D, Crawford G, Moyer C, Zornes R. *Kansas Annual Summary of Vital Statistics, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/annsumm.html

Epidemiology and Trends

In 2010, 253 Kansas infants died before their first birthdays, representing an infant mortality rate (IMR) of 6.26 deaths per 1,000 live births, a 10.7% decrease from 2009 (7.01).⁵ In 2010, the Kansas rate was 1.8% higher than the U.S. rate (6.15).² Over the past decade (2001-2010), the IMR has statistically remained the same. However, for 2007-2010, there was a significant decrease in trend detected with the annual percent change of -7.16.

The IMR among non-Hispanic black infants was 2.4 times higher than that of non-Hispanic white infants in 2010. Decreases in IMRs were observed for non-Hispanic white and non-Hispanic black infants from 2001 to 2010. However, no change was observed for Hispanic infants.*

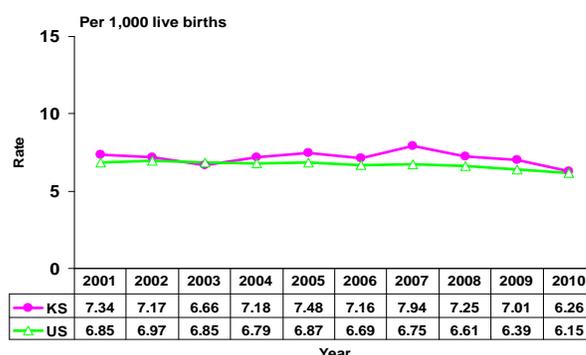
In 2010, 170 Kansas infants died before reaching 28 days of age, representing a neonatal mortality rate of 4.2 deaths per 1,000 live births. This rate is below that of the previous year (4.4). Neonatal mortality is generally related to short gestation and low birth weight, congenital malformations, and conditions occurring in the perinatal period such as birth trauma or infection.³

In 2010, 83 Kansas infants died between the ages of 28 days and 1 year, representing a postneonatal mortality rate of 2.1 deaths per 1,000 live births. This rate is lower than the previous year (2.8). Postneonatal mortality is generally related to Sudden Infant Death Syndrome (SIDS), congenital malformations, and unintentional injuries.³

Leading causes of infant deaths in 2010 were congenital anomalies (26.1%), followed by disorders relating to short gestation and low birth weight (15.4%), maternal factors and complications of pregnancy, labor and delivery (13.8%), SIDS (10.3%), and other causes (34.4%).⁵

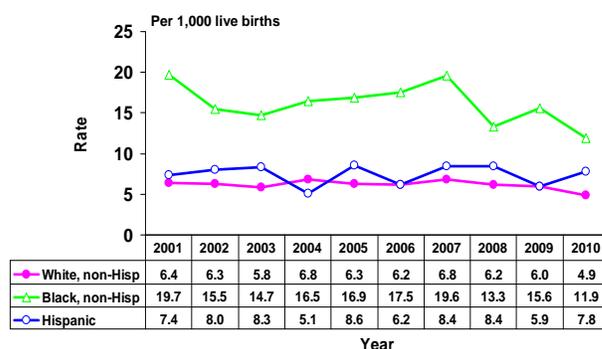
*Infant deaths (numerator) are based on race of child as stated on the death certificate and live births (denominator) are based on race of mother as stated on the birth certificate. Race cited on the death certificate is considered to be relatively accurate for white and black infants. For other race groups, however, race may be misreported on the death certificate. Hispanic origin and race for non-Hispanic origin are somewhat understated and better measured using data from the linked file of live births and infant deaths.²

**Infant Mortality Rates
Kansas and U.S. (2001-2010)**



Source: Bureau of Epidemiology and Public Health Informatics;
National Center for Health Statistics

**Infant Mortality Rates by Race/Ethnicity
Kansas (2001-2010)**



Source: Bureau of Epidemiology and Public Health Informatics

**Infant Mortality Rate
Kansas, 2010**

Race/Ethnicity	Deaths	Rate per 1,000 Live Births
White, non-Hispanic	142	4.9
Black, non-Hispanic	33	11.9
Other, non-Hispanic	26	11.7
Hispanic	50	7.8

Source: Bureau of Epidemiology and Public Health Informatics

**Infant Mortality
Kansas, 2010**

	Deaths	Rate per 1,000 Live Births
Infant deaths	253	6.3
Neonatal deaths	170	4.2
Post-neonatal deaths	83	2.1

Source: Bureau of Epidemiology and Public Health Informatics

Newborn Metabolic Screening

KANSAS GOAL: Reduce morbidity and mortality in infants with metabolic and genetic conditions.

Indicators:

1. The number and percent of newborns screened at birth for conditions mandated by the Kansas Newborn Screening Program.
2. The number of newborns with appropriate and timely follow-up.
3. The number of diagnosed newborns that receive appropriate and timely treatment and/or service interventions.

Definition: Tests of newborns that screen for serious treatable diseases most of which are genetic.¹ The newborn screening tests done in the United States are decided on a state-by-state basis.¹ Nearly all states are screening for 28 of the 29 core metabolic conditions recommended by the American College of Medical Genetics (ACMG).

Significance: Screening programs for newborns and children have been shown to be cost-effective and successful and have been shown to prevent mortality and morbidity.² Their success reflects the systems approach from early screening to appropriate early intervention and treatment.² Kansas newborns are screened for 28 of the 29 core metabolic conditions recommended for inclusion in all state screening programs by the ACMG.³ Since 2008, severe combined immunodeficiency (SCID) and critical congenital heart disease (CCHD) have been added to the ACMG panel. The state laboratory utilizes tandem mass technology (MS/MS), a major technological advance in newborn screening.³ The 28 metabolic conditions currently screened by Kansas are: 6 amino acid disorders (PKU, MSUD, HCY, TYR-1, ASA, CIT), 5 fatty acid disorders (MCAD, VLCAD, LCHAD, TFP, CUD), 9 organic acid disorders (IVA, GA-1, HMG, MCD, MUT, Cbl-A,B, 3-MCC, PROP, BKT), 3 hemoglobin conditions (Hb SCA, Hb S/C, Hb S/Th), 2 endocrine conditions (CH, CAH), and 3 other conditions (BIO, GALT, CF).³

Healthy People 2020 Objectives: Related to Maternal, Infant, and Child Health (MICH) Objective 32.2: Increase the proportion of screen-positive children who receive follow-up testing within the recommended time period. (Target: 100%)

Data Source and Reference:

1. MedicineNet.com. www.medterms.com/script/main/art.asp?articlekey=4564
2. Maternal and Child Health Bureau, U.S. Department of Health and Human Services. *MCH Services Title V Block Grant Guidance*. 2009.
3. Kansas Department of Health and Environment. Kansas Newborn Screening Program. www.kdheks.gov/newborn_screening.
4. National Newborn Screening and Genetics Resource Center. <http://genes-r-us.uthscsa.edu>.

Epidemiology and Trends

Approximately 42,000 Kansas newborns are screened each year. Of those, an estimated 3,000 newborns have out of range test results indicating a need for further testing. Newborn screening (NBS) follow-up coordinators at KDHE track children with out of range results to make sure that they receive further testing and, if needed, treatment. Of the approximately 3,000 babies who have an out of range screen each year, about 60 will be diagnosed with a condition. In 2010, 59 newborns confirmed with metabolic conditions received appropriate follow-up.

In Kansas, hospital personnel or midwives collect a blood spot specimen that is sent to the Kansas Health and Environmental Laboratories (KHEL) for processing. The neonatal screening staff at KHEL notifies the NBS follow-up coordinators of out of range results. The NBS follow-up coordinators serve as case managers. They notify the primary care physician (PCP) of the findings by phone, mail, or fax. The PCP is informed of consultation and referrals available through the Children and Youth with Special Health Care Needs program. The parents are also notified of the need to follow up with the PCP regarding out of range screening results. The NBS follow-up coordinators continue to provide case management services to ensure that the infant has appropriate testing, diagnosis, referral and treatment services.

The Kansas program encompasses all components of a comprehensive state system:

- Screening - About 42,000 KS births/initial tests each year with about 3,000 needing retest.
- Follow-up - Appropriate health care providers are notified and staff track to assure retesting.
- Diagnosis - Newborns with positive screens see medical specialists for a final determination.
- Management - Families and their infants receive ongoing care through a medical team.
- Education - Information and education are available to families and to providers.
- Evaluation - Advisory council oversees program/systems to ensure effectiveness/efficiency.

Newborn Screening Indicators

Newborns Screened, Confirmed, Diagnosed and Received Treatment and/or Intervention Kansas, 2009 and 2010		
	2009	2010
# screened	42,425	41,252
% of live births screened*	99.8%	99.2%
# confirmed	57	59
# diagnosed and received treatment and/or intervention	57	59

*Denominator: Occurrence births (42,512 in 2009 and 41,580 in 2010)

Source: KDHE, Bureau of Epidemiology and Public Health Informatics; Newborn Screening Program data, CY 2009 and 2010

Newborn Screening Results

Number of Infants with a Confirmed Diagnosis First Detected Kansas, 2010	
Conditions	Number of Cases
Congenital Hypothyroidism	16
Galactosemia	1
Congenital Adrenal Hyperplasia	2
Cystic Fibrosis	10
Biotinidase	1
Hemoglobin	5
Amino Acid	3
Fatty Acid	5
Organic Acid	1

Source: KDHE, Newborn Screening Program data, CY 2010

Newborn Hearing Screening

SoundBeginnings - Kansas Early Hearing Detection and Intervention (EHDI) Program

KANSAS GOAL: Increase the proportion of newborns who are screened for hearing loss before age 1 month, have audiologic evaluation before age 3 months, and are enrolled in appropriate intervention services before age 6 months.

Indicators:

1. The percent of newborns who have been screened for hearing before hospital discharge.
2. The percent of infants screened before 1 month of age.
3. The percent of infants with audiologic evaluation completed before 3 months of age.
4. The number of infants identified with permanent congenital hearing loss (PCHL).
5. The number of infants with PCHL enrolled in early intervention services before 6 months of age.

Definition: SoundBeginnings is the state funded EDHI program ran by the Kansas Department of Health and Environment. The program follows hearing screens of babies from the initial screens in the hospitals to appointments with hearing specialists, and to the agencies that provide services for children with hearing loss. Babies identified with hearing loss are referred to early intervention services so that they can receive the appropriate help for normal development of speech and language.

Significance: The advantages of early detection of hearing impairments are indisputable and include necessary follow-up of free and appropriate enrollment in habilitation and education programs.¹

Healthy People 2020 Objective: Related to Hearing and Other Sensory or Communication Disorders Objective 1.1: Screen for hearing loss no later than age 1 month. (Target: 90.2%)¹

Data Source and Reference:

1. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
2. SoundBeginnings program data. The data represents only those data reported to SoundBeginnings as of August 8, 2012.

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SECTION II

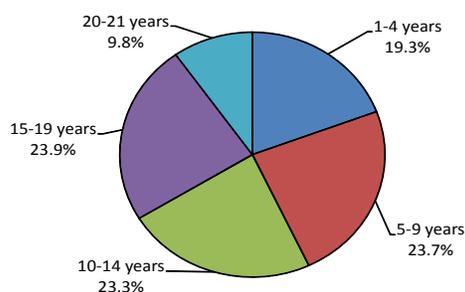
CHILDREN AND ADOLESCENTS

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Demographics

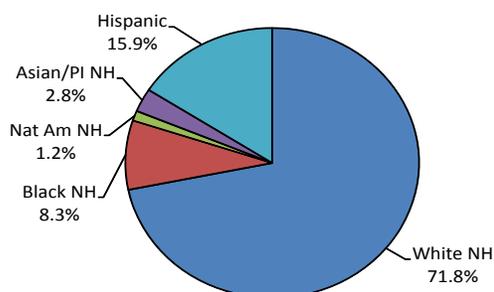
Based on the Title V definition, the children and adolescents population group is defined as “a child from first birthday through 21st year.”¹ In 2010, there were 853,547 children and adolescents aged 1 to 21 years living in Kansas, which represents 29.9% of the Kansas population. The Kansas population, like that of the nation, is becoming more racially and ethnically diverse.¹ One-in-four Kansas children and adolescents belong to a racial or ethnic minority. Across the age groups, three-in-ten young children (1 to 4 years) are part of a racial/ethnic minority versus two-in-ten young adults (20 to 21 years). About 13.3% of Kansans age 15 to 21 are Hispanic, compared to 17.2% of young children. Among families with children under 18, 31.8% are single-parent families versus married-couple families (68.2%).²

**Children (ages 1-21) by Age Group
Kansas, 2010**



Source: U.S. Census Bureau

**Children (ages 1-21) by Race and Ethnicity
Kansas, 2010**



NH: non-Hispanic
Source: U.S. Census Bureau

According to the 2010 American Community Survey, among people at least five years old living in Kansas in 2010, 11.0% spoke a language other than English at home. Of those speaking a language other than English at home, 65.6% spoke Spanish and 34.4% spoke some other language; 42.0% reported that they did not speak English “very well.”^{2,3} Compared to the U.S. population (2010), a higher percentage of Kansas children under age 18 live in households with incomes below the 100% federal poverty level (23.7% versus 22.0% for the U.S.).⁴ Poverty is more common in Kansas families headed by single females (46.2% versus 42.2% for the U.S.)⁴ and those with children under the age of five in the household, regardless of race or ethnicity. Most Kansas children under age 18 living in poverty live in three population centers: Sedgwick County (Wichita), Wyandotte County (Kansas City, Kansas) and Shawnee County (Topeka).⁵

Data Sources and References:

1. Kansas Department of Health and Environment, Bureau of Family Health. *MCH2015*. www.datacounts.net/mch2015/documents/MCH2015_Report.pdf
2. U.S. Census Bureau, 2010 American Community Survey. *DP02: Kansas - Selected Social Characteristics*.
3. U.S. Census Bureau, 2010 American Community Survey. *NP01: Kansas - Population and Housing Narrative Profile: 2010*.
4. U.S. Census Bureau, Current Population Survey, 2011 Annual Social and Economic Supplement. *POV46: Poverty Status by State: 2010*. www.census.gov/hhes/www/cpstables/032011/pov/new46_001_100125.htm
5. U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE). *Estimates for Kansas counties, under age 18 in poverty, 2010*.

Children's Health Insurance Coverage

KANSAS GOAL: Increase health insurance coverage for Kansas children.

Indicators: The percent of children ages <18 without health insurance.

Definition: Insurance against loss by illness or bodily injury. Health insurance provides coverage for medicine, visits to the doctor or emergency room, hospital stays and other medical expenses. Policies differ in what they cover, the size of the deductible and/or co-payment, limits of coverage and the options for treatment available to the policy holder.¹

Significance: There is well documented benefit for children in having health insurance. Research has shown that children who acquire health insurance are more likely to: have access to a usual source of care; receive well child care and immunizations; have developmental milestones monitored; and received prescriptions drugs, appropriate care for asthma and basic dental services. Serious childhood problems are more likely to be identified early in children with insurance, and insured children with special health care needs are more likely to have access to specialists. Insured children not only receive more timely diagnosis of serious health care conditions, but experience fewer avoidable hospitalizations, improved asthma outcomes and fewer missed school days.²

Healthy People 2020 Objective: Related to Access to Health Services Objective 1: Increase the proportion of persons with health insurance. (Target: 100%)²

Data Sources and References:

1. Investorwords.com. www.investorwords.com/2289/health_insurance.html.
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. U.S. Census Bureau, Current Population Survey (CPS) Table Creator for the Annual Social and Economic Supplement. www.census.gov/cps/data/cpstablecreator.html.
4. Kansas Health Institute. Annual Insurance Update 2010: Health Insurance in Kansas. July 2010. www.khi.org.

Immunization

KANSAS GOAL: Increase and/or maintain vaccination coverage levels among children aged 19 to 35 months.

Indicator: The percent of 19 to 35 month olds who have received the full schedule of age appropriate immunizations* against measles, mumps, rubella, polio, diphtheria, tetanus, pertussis, *Haemophilus influenzae* type b, and hepatitis B.

Definition: Immunization status is a measurable indicator of nonsusceptibility to specific infectious diseases. Immunity to disease is the ability of an individual to resist infection and may be conferred through artificial immunization or through previous natural infection.¹

Significance: Infectious diseases remain important causes of preventable illness in the United States despite significant reductions in incidence in the past 100 years. Vaccines are among the safest and most effective preventive measures.²

Healthy People 2020 Objective: Related to Immunization and Infectious Diseases (IID) Objective 8: Increase the proportion of children 19 and 35 months who receive the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella and PCV vaccine. (Target: 80%)²

Data Sources and References:

1. Miller C, Fine A, Adams-Taylor S. *Monitoring Children's Health: Key Indicators, 2nd edition*. Washington, DC: American Public Health Association, 1989.
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
4. Centers for Disease Control and Prevention. National Immunization Survey. www.cdc.gov/nip/coverage/#NIS
5. Kansas Department of Health and Environment. *Retrospective Immunization Coverage Survey, 2006-2007 Results (School Year 2010-2011)*. www.kdheks.gov/immunize/retro_survey.html

Note: *The 4:3:1:3:3 combination series includes four doses of Diphtheria, Tetanus, and Pertussis (DTaP) vaccine; three doses of Polio vaccine; one dose of Measles-Mumps-Rubella (MMR) vaccine; three doses of *Haemophilus influenzae* type b (Hib) vaccine, and three doses of Hepatitis B (HepB) vaccine.

Lead Poisoning in Children

KANSAS GOALS:

1. Housing Goal: Eliminate lead hazards from where children live, play, and visit by providing a mechanism to allow the public to make lead-safe housing choices.
2. Health Goals: Increase the number of children <72 months of age that have received a blood lead test. Decrease the percentage of children tested whose blood lead levels are $\geq 10 \mu\text{g/dL}$.

Indicator: The number of lead poisonings in children 0 to <72 months of age.

Definition: An elevated blood lead level is defined as a level of lead in the blood high enough to require medical evaluation for the possibility of adverse mental, behavioral, physical, or biochemical effects. Lead plays no known useful function in body chemistry.¹

Significance: Lead poisoning is a preventable health problem affecting Kansas children. Lead levels can affect the developing nervous system of young children, resulting in delayed development, decreased IQ, learning problems, and behavior problems. High levels of lead (greater than $20 \mu\text{g/dL}$) can have adverse effects on the kidneys and blood-producing organs as well as the digestive and reproductive systems. Very high blood lead levels (greater than $70 \mu\text{g/dL}$) can cause devastating health consequences, including seizures, coma, and death. The developing fetus is very susceptible to lead exposure and blood lead levels of the mother. Early identification and treatment of lead poisoning reduces the risk that children will suffer permanent damage.²

Healthy People 2020 Objective: Related to Environmental Health (EH) Objective 8: Reduce blood lead levels in children.

EH-8.1 Eliminate elevated blood lead levels in children. (Target: Not applicable)

EH-8.2 Reduce the mean blood lead levels in children. (Target: $1.4 \mu\text{g/dL}$ average blood lead level in children aged 1 to 5 years)

Data Source and Reference:

1. Miller C, Fine A, Adams-Taylor S. *Monitoring Children's Health: Key Indicators, 2nd Edition*. Washington, DC: American Public Health Association, 1989.
2. Kansas Department of Health and Environment, Division of Health, Bureau of Epidemiology and Disease Prevention. *Reportable Infectious Diseases in Kansas, 2005 Summary*. Page 71.
3. Kansas Department of Health and Environment, Kansas Healthy Homes and Lead Hazard Prevention Program. Data generated on August 13, 2012 from STELLAR 4.0 data base.
4. Kansas Department of Health and Environment, Kansas Healthy Homes and Lead Hazard Prevention Program. *2010 Annual Report*. 2011.

Epidemiology and Trends

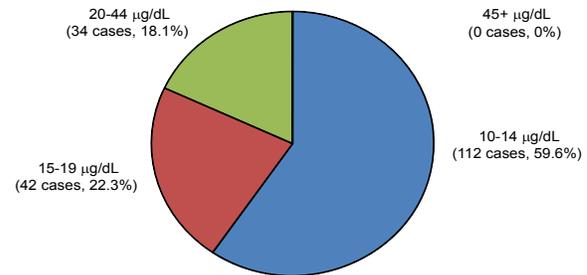
In 2010³, the number of unduplicated children <72 months of age screened was 34,134. Based on the KAN Be Healthy Annual Participation Report, during the federal fiscal year 2011 (10/1/2010-9/30/2011), only 21.0% of children under 6 years old who were eligible for Kan Be Healthy were screened for blood lead.

In 2010, the number of confirmed lead poisoning cases ($\geq 10 \mu\text{g/dL}$) reported in children <72 months old was 188. The age range of confirmed cases was 1-71 months. The median age was 25 months with an average age of 29 months. The 12-23 month age group accounted for 37.8% of the lead poisoning cases in children less than six years old and represented the age group with the highest incidence rate of blood lead poisoning and the highest levels of blood lead. Distribution of cases by race/ethnicity and sex was not available. There were 44.2% more cases residing in non-urban counties (111 cases) than in urban counties* (77). The chart below shows that 40.4% of confirmed cases had a blood lead level greater than $15 \mu\text{g/dL}$. There were 34 cases (18.1%) with a blood lead level $\geq 20 \mu\text{g/dL}$, a level that might warrant an environmental risk assessment.

A targeting model was developed to determine “High Risk” areas for lead poisoning within our state. The model considered four census variables: 1) density of pre-1960 housing, 2) density of minority population, 3) density of impoverished population, and 4) density of population age 5 and under. The six “High Risk” counties are identified as Johnson, Reno, Saline, Sedgwick, Shawnee, and Wyandotte.⁴ During 2010, the six counties identified account for 43.1% of total children tested and of identified cases within the State of Kansas.

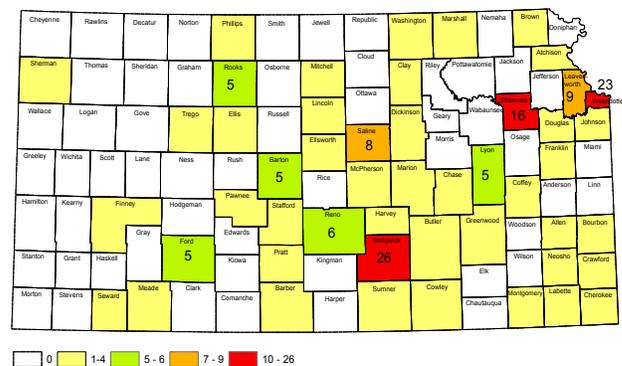
**For the purpose of this report, urban counties are defined as counties with a population density of 150.0 or more persons per square mile, and represent the four largest metropolitan areas in the state [Kansas City (Johnson, Leavenworth and Wyandotte counties), Wichita (Sedgwick County), Topeka (Shawnee County) and Lawrence (Douglas County). Non-urban counties represent the remaining 99 counties in Kansas.*

Positive Blood Lead Results ($\geq 10 \mu\text{g/dL}$) For Children 0 to 71 months Kansas, 2010



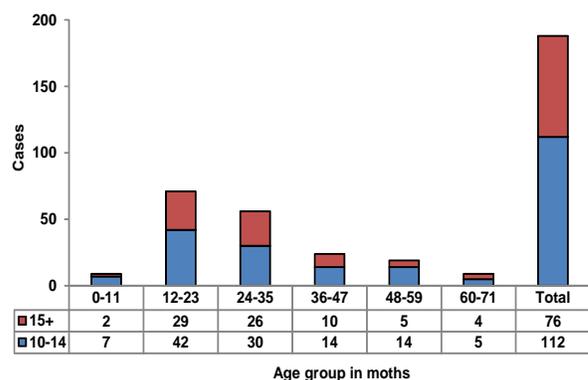
Source: KDHE, Kansas Healthy Homes and Lead Hazard Prevention Program
Data generated on August 13, 2012 from STELLAR 4.0 data base

Number of Lead Poisoning Cases ($\geq 10 \mu\text{g/dL}$) for Children 0 to 71 Months by County Kansas, 2010 (Total 188)



Counties with more than 1 but less than 5 cases were not reported to protect confidentiality.
Source: KDHE, Kansas Healthy Homes and Lead Hazard Prevention Program
Data generated on August 13, 2012 from STELLAR 4.0 data base

Lead Poisoning Cases ($>10 \mu\text{g/dL}$) by Age Group Kansas, 2010



Source: KDHE, Kansas Healthy Homes and Lead Hazard Prevention Program
Data generated on August 13, 2012 from STELLAR 4.0 data base

Oral Health

KANSAS GOALS: Increase the oral health status of Kansas children.

Indicators:

1. The percent of children whose parents report that the child's oral health is very good or excellent.
2. The percent of children in third grade who have dental caries in their primary or permanent teeth.
3. The percent of children in third grade who have received protective sealants on at least one permanent molar.

Definitions: Tooth decay (cavities) are an infectious disease caused by bacteria, *Streptococci mutans*. Tooth decay occurs when these bacteria, which adhere to the surface of tooth, produce acids from carbohydrates that breaks down (demineralizes the enamel and dentin) the tooth. One widely accepted method to prevent tooth decay is through the use of dental sealants, a plastic-like material attached to the chewing surfaces of permanent molar teeth. Dental sealants work by preventing the acid by-products of bacteria from contacting the tooth and thus prevents the pits and grooves where decay can occur.¹

Significance: Dental caries affects two-thirds of children by the time they are 15 years of age. Developmental irregularities, called pits and fissures, are the sites of 80-90% of childhood caries. Sealants selectively protect these vulnerable sites, which are found mostly in permanent molar teeth. Targeting sealants to those at greatest risk for caries has been shown to increase their cost-effectiveness. Although sealants have the potential to combine with fluorides to prevent almost all childhood tooth decay, they have been underutilized. In addition to being an excellent service in preventing tooth decay, sealants may also be a surrogate indicator of dental access, oral health promotion and preventive activities, and a suitable means to assess the linkages that exist between the public and private service delivery systems. Publicly managed sealant programs are usually school-based or school-linked and target underserved children, thus providing entry to other services. It has been stated on several occasions that dental sealants are the oral health equivalent to immunization.²

Healthy People 2020 Objectives: Related to Oral Health (OH) Objective 12: Increase the proportion of children and adolescents who have received dental sealants on their molar teeth.³

OH-12.1 Increase the proportion of children aged 3 to 5 years who have received dental sealants on one or more their primary molar teeth. (Target: 1.5%)

OH-12.2 Increase the proportion of children aged 6 to 9 years who have received dental sealants on one or more of their permanent first molar teeth. (Target: 28.1%)

Data Source and References:

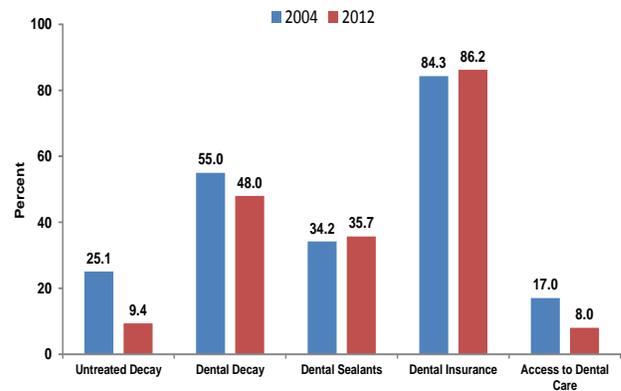
1. Kansas Department of Health and Environment, Bureau of Oral Health. 2004 and 2007. *Smiles Across Kansas: The Oral Health of Kansas Children*. www.kdheks.gov/ohi/index.html
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. U.S. Department of Health and Human Services. *Healthy People 2020*. www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf
4. Kansas Department of Health and Environment, Bureau of Oral Health. *2012 Smiles Across Kansas, A Survey of the Oral Health of Kansas Children*. www.childhealthdata.org/browse/survey
5. National Survey of Children's Health. 2007. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

Epidemiology and Trends

The 2012 Smiles Across Kansas⁴, A Survey of The Oral Health of Kansas Children (Third Grade), indicated that the oral health status of Kansas children is improving. Approximately one out of ten (9.4%) Kansas children has untreated, active dental decay. This is a remarkable improvement over the 2004 Smiles survey where one out of four children had untreated decay. A large number of Kansas children still experience dental decay. About 48.0% of Kansas children have decay currently or have had it in the past. In spite of the significant investments in oral health across the state, dental disease is still very common. Dental sealants are underutilized to prevent decay, especially in minorities. The placement of dental sealants on permanent molars is an evidence based public health best practice. Fewer than 36% of Kansas children have sealants on their first molars. Even fewer African American and Latino children have sealants. Most Kansas third graders (86.2%) have some form of dental insurance, and see their dentist annually (85.4%). Some children continue to have difficulty getting dental care. Approximately 8% of Kansas parents reported that their child needed dental care but could not get it.⁴ More information can be found at www.kdheks.gov/ohi/download/Smiles_Across_Kansas_2012.pdf.

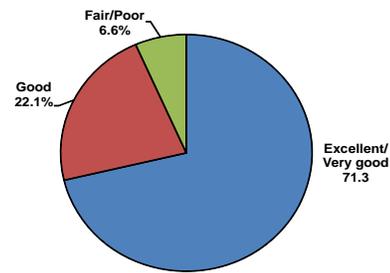
According to the 2007 National Survey of Children's Health⁵, the parents of 71.3% of Kansas children reported that their children's teeth were in excellent or very good condition. This compares to 70.7% for the U.S. The condition of children's teeth varies by a number of factors, including race and ethnicity. In Kansas, 77.0% of non-Hispanic white children had teeth that were in excellent or very good condition, as reported by their parents, as did 75.9% of non-Hispanic multiracial children. The parents of non-Hispanic black and Hispanic children were less likely to report that their children's teeth were in excellent or very good condition (60.0% and 46.9% respectively). Parents also reported on 4 individual oral health problems that may have occurred in the previous 6 months. Parents of 17.3% of Kansas children reported that their children had decayed teeth or cavities within the past 6 months, while 10.4% of children had a toothache during that time. Less common were broken teeth and bleeding gums, occurring in 2.8% and 2.1% of children, respectively. In total, 23.7% of children were reported to have at least one of these oral health problems.⁵

Key Findings of Third Grade Children Smiles Across Kansas



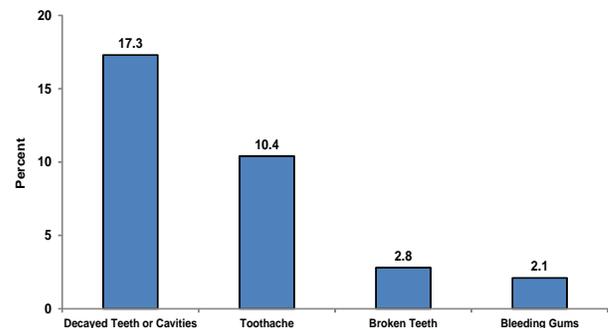
Source: 2004 and 2012 Smiles Across Kansas

Child Oral Health Status Kansas, 2007



Source: National Survey of Children's Health

Prevalence of Oral Health Problems In the Past 6 Months Kansas, 2007



Source: National Survey of Children's Health

Injury

KANSAS GOAL: Reduce the number of deaths to children and adolescents caused by injuries.

Indicator: The rate (per 100,000) of injury deaths among children and adolescents.

Definition: Injury deaths include both unintentional and intentional, excluding adverse events due to medical care (children: ages 1-14, adolescents/young adults: ages 15-24).

Significance: Injuries, particularly unintentional injuries are the leading cause of death for children and adolescents/young adults both in Kansas and in the U.S. The risk of injury is so great that most persons are seriously injured at some time during their lives. Nevertheless, this widespread human problem is often taken for granted, in the belief that injuries happen by chance and are the result of unpredictable “accidents.” In fact, many injuries are not “accidents”, or random, uncontrollable events. Rather, most injuries are predictable and preventable.¹

Healthy People 2020 Objectives: Related to Injury and Violence Prevention (IVP) Objective 1: Reduce fatal and nonfatal injuries. (Target: 53.3 deaths per 100,000 population)²

Data Source and Reference:

1. U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
2. U.S. Department of Health and Human Services. *Healthy People 2020*. www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf
3. Oakley D, Crawford G, Moyer C, Zornes R. *Kansas Annual Summary of Vital Statistics, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/annsumm.html
4. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/ncipc/wisqars/

Note: *The injury mortality data presented here are consistent with the External Cause of Injury Mortality Matrix for ICD-10 found on the National Center for Health Statistics (NCHS) website at http://www.cdc.gov/nchs/injury/injury_tools.htm (www.cdc.gov/nchs/data/injury/icd10_external.pdf).*

Epidemiology and Trends

In 2010, injuries caused the deaths of 68 children aged 1 to 14 years and 245 adolescents and young adults aged 15 to 24 years in Kansas. The Kansas injury death rate was higher than the U.S. rate for children ages 1-14 (12.0 and 7.2, respectively) and for adolescents and young adults 15-24 (60.0 vs. 50.8).^{3,4}

In Kansas, in a three-year period from 2008 through 2010, the injury death rates for both ages 1-14 and ages 15-24 were highest among non-Hispanic black children (19.5 and 83.4, respectively). Motor vehicle crashes (35.9%, 47 deaths), drowning (16.8%, 22 deaths), and fires and burns (9.2%, 12 deaths) were the most common causes of unintentional injury death among children aged 1 to 14 years. Motor vehicle crashes (69.6%, 302 deaths) were the most common cause of unintentional injury death among adolescents and young adults aged 15 to 24 years, followed by poisonings (15.7%, 68 deaths), and drowning (3.0%, 13 deaths). For non-Hispanic white and Hispanic adolescents and young adults, unintentional injury resulted in the highest percent of injury deaths. However, for non-Hispanic black adolescents and young adults, homicides resulted in more deaths than unintentional injuries.

Injury Mortality

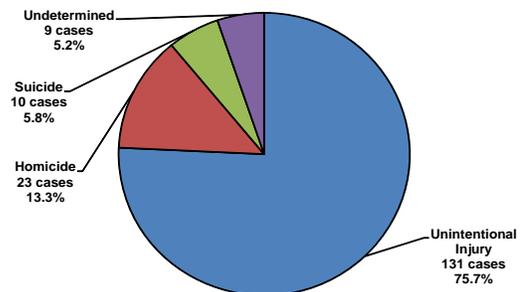
	Ages 1-14		Ages 15-24	
	Deaths	Rate*	Deaths	Rate*
Kansas (2010)	68	12.0	245	60.0
U.S. (2010)	4,108	7.2	22,149	50.8

Race/Ethnicity (2008-2010)	Ages 1-14		Ages 15-24	
	Deaths	Rate*	Deaths	Rate*
White, non-Hispanic	116	10.0	519	55.1
Black, non-Hispanic	22	19.5	74	83.4
Hispanic	28	10.7	90	64.3

*Rate: Deaths per 100,000 population

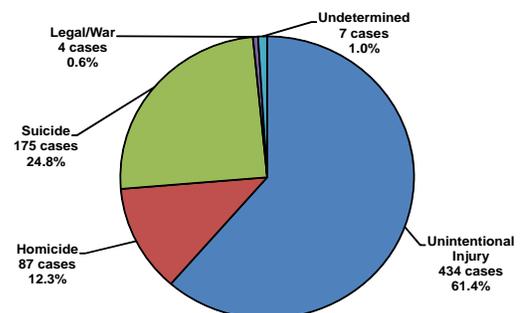
Source: KS - Bureau of Epidemiology and Public Health Informatics
US - WISQARS Injury Mortality Report

Injury Deaths by Intent (Ages 1-14) Kansas, 2008-2010



Source: Bureau of Epidemiology and Public Health Informatics

Injury Deaths by Intent (Ages 15-24) Kansas, 2008-2010



Source: Bureau of Epidemiology and Public Health Informatics

Overweight

KANSAS GOAL: Decrease the prevalence of overweight in Kansas children and adolescents.

Indicator: The percent of overweight or obese children and adolescents.

Definition: Body mass index (BMI) is a measure used to determine childhood overweight and obesity. It is calculated using a child's weight and height. BMI does not measure body fat directly, but it is a reasonable indicator of body fatness for most children and teens. A child's weight status is determined using an age- and sex-specific percentile for BMI rather than the BMI categories used for adults because children's body composition varies as they age and varies between boys and girls. CDC Growth Charts are used to determine the corresponding BMI-for-age and sex percentile.¹ For children and adolescents (aged 2-19 years):

Underweight	BMI-for-age < 5 th percentile
Healthy weight	BMI-for-age 5 th percentile to < 85 th percentile
Overweight	BMI-for-age 85 th percentile to < 95 th percentile
Obese	BMI-for-age ≥ 95 th percentile

For the 2000 CDC Growth Charts and additional information visit: www.cdc.gov/growthcharts and www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html.

Significance: Childhood overweight/obesity is a serious health problem in the United States, and the prevalence of overweight among preschool children has doubled since the 1970s. There have been significant increases in the prevalence of overweight in children younger than 5 years of age across all ethnic groups. Onset of overweight in childhood accounts for 25% of adult obesity, but overweight that begins before age 8 and persists into adulthood is associated with an even greater degree of adult obesity. Childhood overweight is associated with a variety of adverse consequences including an increased risk of cardiovascular disease, type 2 diabetes mellitus, asthma, social stigmatization, and low self-esteem.²

Healthy People 2020 Objective: Related to Nutrition and Weight Status (NWS) Objective 10: Reduce the proportion of children and adolescents who are considered obese.³

NWS 10.1 Children aged 2 to 5 years (Target: 9.6%)

NWS 10.2 Children aged 6 to 11 years (Target: 15.7%)

NWS 10.3 Adolescents aged 12 to 19 years (Target: 16.1%)

NWS 10.4 Children and adolescents aged 2 to 19 years (Target: 14.6%)

Data Sources and References:

1. Centers for Disease Control and Prevention (CDC). *Childhood overweight and obesity*. www.cdc.gov/obesity/childhood/basics.html
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. U.S. Department of Health and Human Services. *Healthy People 2020*. www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf
4. Centers for Disease Control and Prevention (CDC). *1991-2009 High School Youth Risk Behavior Survey Data*. <http://apps.nccd.cdc.gov/youthonline>.
5. Centers for Disease Control and Prevention (CDC). *Pediatric Nutrition Surveillance System*. www.cdc.gov/pednss/.

Epidemiology and Trends

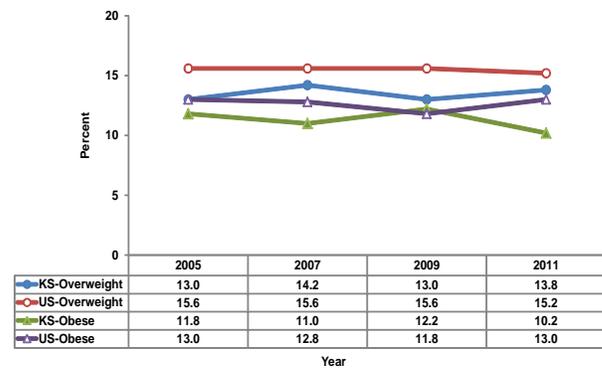
According to the 2011 Youth Risk Behavior Survey (YRBS),⁴ 10.2% of Kansas high school students (9th-12th graders) were obese, which was significantly lower than for the rest of the nation (13.0%). The prevalence of obesity was significantly higher among male (12.3%) than female (8.0%) students. The prevalence of obesity was significantly higher among black (18.1%) than white (9.1%) and higher among Hispanic (12.5%) than white students. Across YRBS survey years (2005-2011), a decrease occurred in the percentage of students who were obese (11.8%-10.2%). This however is not a statistically significant change.

In 2011, 13.8% of Kansas high school students were overweight, which was lower than the U.S (15.2%). The prevalence of overweight was 12.8% among female students and 14.8% among male students. The prevalence of overweight was higher among Hispanic students (17.0%) than among white students (12.9%) and black (14.1%) students. Across YRBS survey years, 2005-2011, this prevalence has been stable (13.0%-13.8%).

Related factors for Kansas high school students are as follows: 87.6% ate vegetables less than three times per day; 49.3% were physically active at least 60 minutes per day on less than 5 days; 24.6% played video or computer games or used a computer for something that was not school work 3 or more hours per day (on an average school day); and 25.1% watched television 3 or more hours per day (on an average school day).

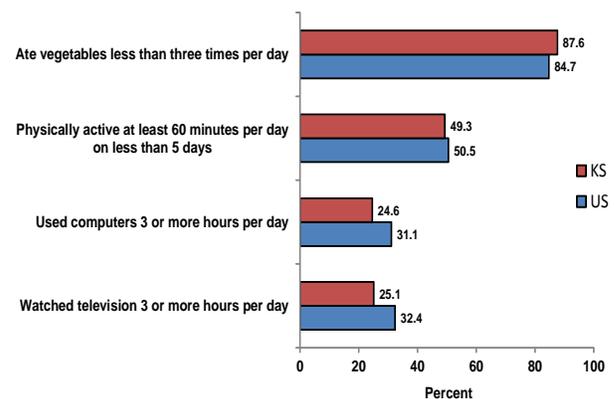
According to the 2011 Pediatric Nutrition Surveillance System (PedNSS)⁵, which assesses weight status of children from low-income families (below 185% of poverty level) participating in WIC, 28.4% of low-income children ages 24-59 months in Kansas were overweight (15.6%) or obese (12.8%). Kansas prevalence was significantly lower than the prevalence nationally (30.4%). The percentage of WIC participants overweight (15.7%) or obese (13.0%) remains about the same as 2010 (28.7%). There was a significant increasing trend during 2002-2004; since 2004, the trend has decreased significantly.

Overweight and Obesity among High School Students (9th-12th Grade) Kansas and U.S., 2005-2011



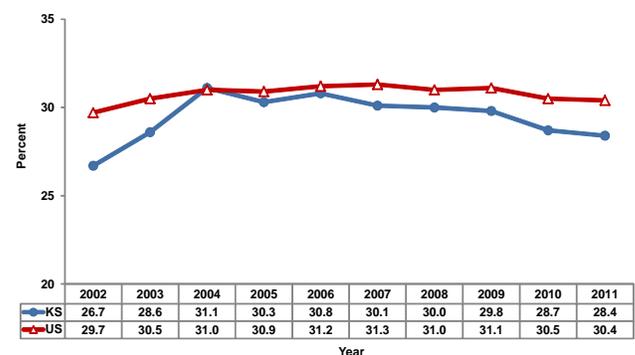
Source: Youth Risk Behavior Survey (YRBS)

Percent of Selected Dietary Behaviors and Physical Activity among High School Students (9th-12th Grade) Kansas and U.S., 2011



Source: Youth Risk Behavior Survey (YRBS)

Percent of WIC Children (24-59 months) Who are Overweight or Obese Kansas and U.S., 2002-2011



Source: Pediatric Nutrition Surveillance System

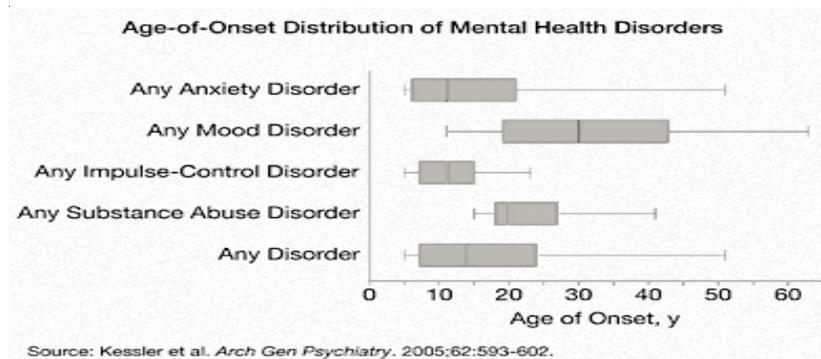
Behavioral/Mental Health

KANSAS GOAL: Improve the behavioral/mental health status of children and adolescents through early screening and referral.

Indicator: The percent of children and adolescents that receive behavioral/mental health services.

Definition: Mental health is how a child/adolescent thinks, feels, and acts when faced with life's situations.

Significance: For consumers of all ages, early detection, assessment, and linkage with treatment and supports can prevent mental health problems from compounding and poor life outcomes from accumulating. Early intervention can have a significant impact on the lives of children and adolescents who experience mental health problems. Emerging research indicates that intervening early can interrupt the negative course of some mental illnesses and may, in some cases, lessen long-term disability.¹ Early childhood is a critical period for the onset of emotional and behavioral impairments. Each year, young children are expelled from preschools and childcare facilities for severely disruptive behaviors and emotional disorders. Since children develop rapidly, delivering mental health services and supports early and swiftly is necessary to avoid permanent consequences and to ensure that children are ready for school.¹ A new survey of mental illness in the United States indicates that mental illnesses tend to strike early in life and delays in treatment leave affected individuals vulnerable to debilitating symptoms during their most productive years.² Half of all individuals who have a mental illness during their lifetimes report that the onset of disease occurred by age 14 years and three fourths by age 24 years, according to the National Institute of Mental Health (NIMH) National Comorbidity.²



Healthy People 2020 Objectives: Related to Mental Health and Mental Disorders (MHMD) Objective 6: Increase the proportion of children with mental health problems who receive treatment. (Target: 75.8%)

Data Sources and References:

1. Shonkoff, JP, Phillips, DA. *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, DC: National Academies Press; 2000.
2. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. *Related Articles, Links Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication*. *Arch Gen Psychiatry*. June 2005;62(6):593-602.
3. Kansas Department of Health and Environment, Kansas Medical Assistance Programs Reporting Systems. *Kan Be Healthy Participation Report*.
4. AIMS database, Mental Health Consortium, Kansas Community Mental Health Centers, Kansas.
5. U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.

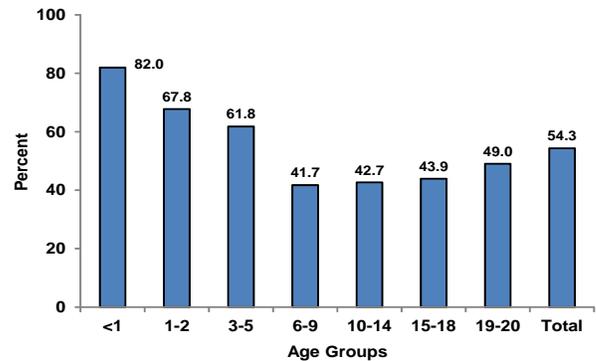
Epidemiology and Trends

Early and Periodic Screening, Diagnosis and Treatment (EPSDT) is a required service under the Medicaid KAN Be Healthy (KBH) program for categorically needy individuals under age 21.³ One component of EPSDT is developmental/mental health screening. The services can be provided within state and local health departments, school health programs, Head Start programs, community health centers and private practitioners. At the present time, developmental/mental health screening and referrals data are not captured separately from general exams. According to the 2007 National Survey of Children's Health, 24.7% of Kansas children age 10 months to 5 years received a standardized screening for developmental or behavioral problems (19.5% for the U.S.).

In 2011, the percent of children and adolescents (ages 0-21) that received behavioral and mental health services at community mental health centers (CMHCs)⁴ in Kansas was 6.2%, a 3.3% increase from 2010 (6.0%). The primary reason for the increase in youth enrolled in mental health services was tied to a goal of the Kansas public mental health system to provide outreach and mental health services for children with a serious emotional disturbance (SED). According to the 2007 National Survey of Children's Health, 72.3% of children age 2-17 with problems requiring counseling received mental health care (60.0% for the U.S.).

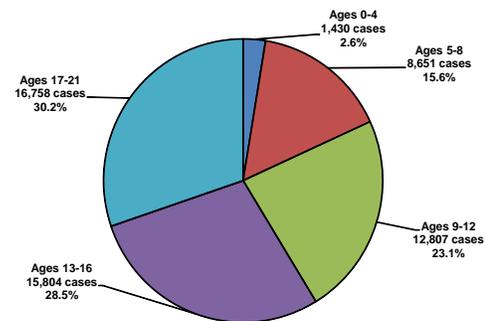
Mental and behavioral disorders and SEDs in children and adolescents can lead to school failure, alcohol or illicit drug use, violence, or suicide.⁴ The 2011 Kansas Youth Risk Behavior Survey (YRBS) showed that compared to 2009, fewer students reported smoking cigarettes (14.4% vs. 16.9%) and having at least one drink of alcohol (32.6% vs. 38.7%) on at least 1 day during the 30 days before the survey. While using ecstasy at least once in their lifetime has remained unchanged since 2009, more students reported using marijuana (16.8% vs. 14.7%) at least once in the previous 30 days. Students who reported attempted suicide (5.9% vs. 6.1%), and felt sad or hopeless (21.9% vs. 21.5%) in the previous 12 months have remained about the same.

KAN Be Healthy (KBH) Eligibles Receiving at Least One Initial or Periodic Screen Kansas, FY 2011



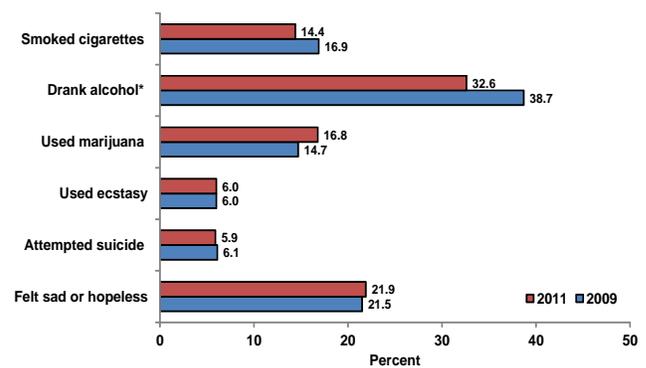
Source: KAN Be Healthy (KBH) Annual Participation Report

Children/Adolescents Receiving Community Based CMHC Services By Age Group Kansas, 2011



Source: AIMS database, Mental Health Consortium, Kansas Community Mental Health Centers (CMHC)

Kansas Youth Risk Behavior Survey (YRBS) 2009 and 2011



*Change over time is statistically significant for $p < 0.05$.
Source: Kansas Youth Risk Behavior Survey

Teen Pregnancy

KANSAS GOAL: Reduce teenage pregnancy and resulting health, educational, economic and social consequences for mother and child.

Indicator: The pregnancy rate per 1,000 population for teenagers aged 15-17 years.

Definition: Teenage pregnancies include live births, fetal deaths, and abortions.

Significance: Although the rate of teen pregnancy in the United States dropped by more than 25% during the 1990s, more than 800,000 U.S. teens still become pregnant each year, and eight in 10 of these pregnancies are unintended.¹ Close to half of unintended pregnancies (45 percent) end in abortion.² Pregnancy Risk Assessment Monitoring System (PRAMS) data (1999) show that 66-84% of pregnancies in women less than 20 years of age where there is a live birth are unintended. Women whose pregnancies are unintended are less likely to adopt healthy behaviors and to start prenatal care early in the pregnancy.³ Infant mortality rates are highest among teenage mothers.⁴ Teenagers are at a higher risk of delivering a low birth weight live birth. Studies suggest that the higher mortality risk for infants of younger mothers may be related to socioeconomic factors as well as biologic immaturity. Also, young maternal age may be a marker for poverty.³

Healthy People 2020 Objective: Related to Family Planning (FP) Objective 8: Reduce pregnancy rates among adolescent females. FP-8.1 Reduce the pregnancy rate among adolescent females aged 15 to 17 years. (Target: 36.2 pregnancies per 1,000)

Data Sources and References:

1. Guttmacher Institute. *National Day to Prevent Teen Pregnancy* (May 3, 2006). www.guttmacher.org/media/inthenews/2006/05/03/index.html
2. Henshaw, SK. *Unintended pregnancy in the United States*. Family Planning Perspective. 1998;30(1): Table 1.
3. O'Brien J, Benzyl B, Gilbert BC, et al. *PRAMS and Unintended Pregnancy* (n.d.). www.cdc.gov/PRAMS/UP.htm
4. Mathews TJ, MacDorman MF. *Infant mortality statistics from the 2006 period linked birth/infant death data set*. National vital statistics reports; vol 58 no 17. Hyattsville, Maryland: National Center for Health Statistics. 2010.
5. Ventura SJ, Curtin SC, Abma JC, Henshaw SK. Estimated pregnancy rates and rates of pregnancy outcomes for the United States, 1990-2008. National vital statistics reports; vol 60 no 7. Hyattsville, MD: National Center for Health Statistics. 2012. www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_07.pdf
6. Oakley D, Crawford G, Moyer C, Zornes R. *Kansas Annual Summary of Vital Statistics, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/annsumm.html
7. Oakley D, Crawford G, Moyer C. *Adolescent and Teenage Pregnancy Report Kansas, 2010*. Topeka, KS: Kansas Department of Health and Environment, 2011. www.kdheks.gov/hci/teenpreg.html

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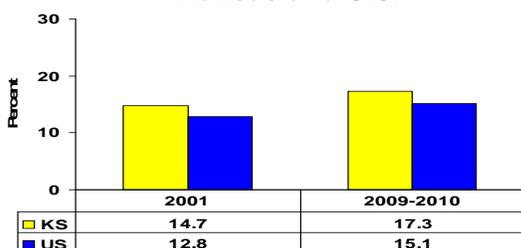
SECTION III

CHILDREN AND YOUTH WITH SPECIAL HEALTH CARE NEEDS

Demographics

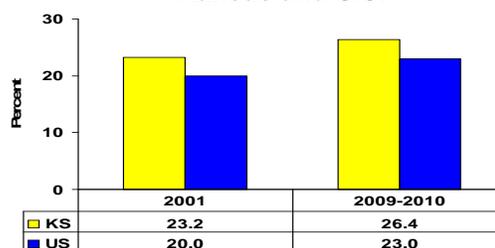
Children and Youth with Special Health Care Needs (CYSHCN) are defined as those who have or are at an increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require health and related services of a type or amount beyond that required by children and youth generally. According to the 2009/10 National Survey of Children with Special Health Care Needs (NS-CSHCN)¹, 17.3% of Kansas children aged 0 to 17 (est. 120,822 children) had special health care needs, which was significantly higher than 15.1% for the U.S. Overall, 26.4% of Kansas households with children have at least one child with special health care needs, compared to 23.0% for the U.S. These rates represent an increase from the percentage reported in 2001 for Kansas and the U.S. The reasons for this increase are not fully understood. While it is possible that the number of CYSHCN is actually increasing, it is also possible that children's conditions are more likely to be diagnosed, due to increased access to medical care or growing awareness of these conditions on the part of parents and physicians.

**Prevalence of CYSHCN: Persons
Kansas and U.S.**



Source: National CSHCN Survey, 2001 and 2009-2010 (Age 0-17 yrs.)

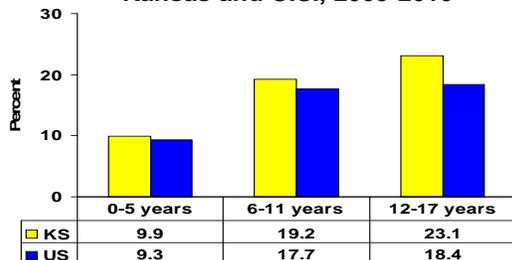
**Prevalence of CYSHCN: Households*
Kansas and U.S.**



*Includes only households with children - one or more CYSHCN living in households
Source: National CSHCN Survey, 2001 and 2009-2010 (Age 0-17 yrs.)

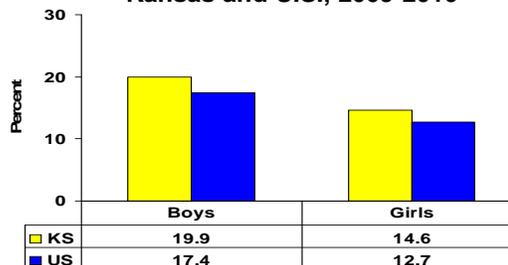
The prevalence of special health care needs within the child population increases with age. Older children in Kansas and the U.S. were twice as likely as younger children to have a special health care need. In Kansas, preschool children (aged 0-5 years) have the lowest prevalence of special health care needs (9.9%), followed by children aged 6-11 years (19.2%). Adolescents (aged 12-17 years) have the highest prevalence of special health care needs (23.1%). The higher prevalence of special health care needs among older children is likely attributable to conditions that are not diagnosed or that do not develop until later in childhood.² Special health care needs were more prevalent in boys than girls in Kansas and in the U.S. Among Kansas boys, 19.9% had special health care needs, compared to 14.6% of girls. A higher proportion of boys (6.9%) had special health care needs that included an ongoing emotional, behavioral or developmental problem which required treatment or counseling, compared to 3.5% of girls.

**Prevalence of CYSHCN: Age
Kansas and U.S., 2009-2010**



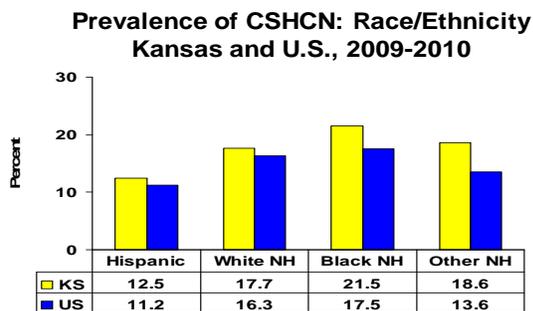
Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

**Prevalence of CYSHCN: Gender
Kansas and U.S., 2009-2010**

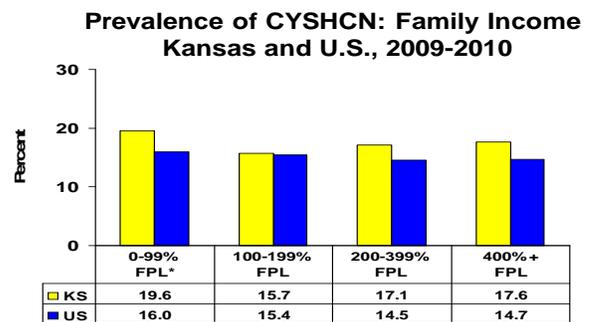


Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

The prevalence of special health care needs varies by the child's race and ethnicity. Kansas Hispanic children (12.5%) were least likely to have a special health care need compared to white non-Hispanic children (17.7%) and black non-Hispanic children (21.5%). In Kansas, the prevalence of special health care needs among the child population varies slightly by income group compared to the U.S. CYSHCN prevalence among high income families in Kansas, 200-399% and 400+% of the federal poverty level (FPL), was significantly higher (17.1% and 17.6%, respectively) than it is for the U.S. (14.5% and 14.7%, respectively). In 2009, the U.S. Department of Health & Human Services (HHS) poverty guidelines defined 100% of poverty as \$22,050 for a family of four.



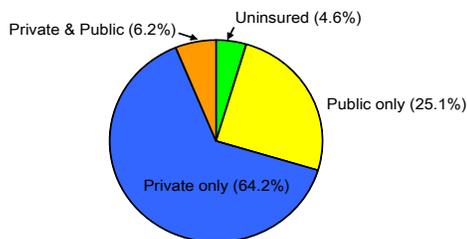
NH: non-Hispanic
Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)



*FPL: Federal Poverty Level
Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

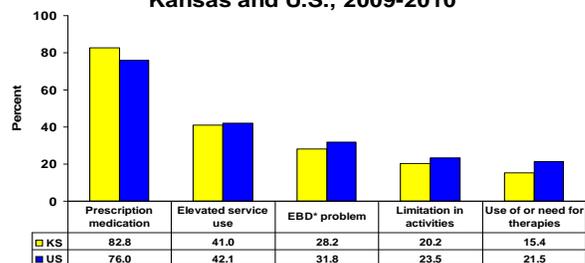
In Kansas, 89.3% of CYSHCN were reported to have been insured for all of the previous 12 months, while the remaining 10.7% were uninsured for all or some part of the year. Overall, almost 96% of CYSHCN were reported to have some type of insurance at the time of the interview: about two-thirds (64.2%) had private coverage, 25.1% had public coverage, 6.2% had both, and 4.6% had no insurance. Compared to 2001, a smaller percentage of CYSHCN were reported to have private coverage (70.5% in 2001 vs. 62.4% in 2009-2010), and higher percentage were reported to have public coverage (16.8% in 2001 vs. 25.1% in 2009-2010). Both U.S. and Kansas CYSHCN report that the need for prescription medication is by far the most common (82.8% of CYSHCN). The next most frequently reported need is for additional medical, mental health, or educational services (41.0%), followed by the need for help with emotional, behavioral, or developmental problems (28.2%), limitation in activities (20.2%), and the use of specialized therapies (15.4%).

**Type of Health Insurance Coverage for CYSHCN
Kansas, 2009-2010**



Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

**Proportion of CYSHCN: Experiencing Each
Consequence of Special Needs
Kansas and U.S., 2009-2010**



*EBD: Emotional/Behavioral/Developmental
Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

Data Source and Reference:

1. National Survey of Children with Special Health Care Needs. NS-CSHCN 2001 and 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The National Survey of Children with Special Health Care Needs Chartbook 2005-2006*. Rockville, Maryland: U.S. Department of Health and Human Services, 2007.

Partners in Decision-Making

KANSAS GOAL: Increase partnering in shared decision-making for child's optimal health.

Indicator: The percent of children and youth with special health care needs age 0 to 18 years whose families partner in shared decision-making for child's optimal health.

Definition: Family-centered care¹ is based on the recognition that children live within the context of families - which may include biological, foster, and adoptive parents, step-parents, grandparents, other family caregivers, and siblings. Family-centered care is a process to ensure that the organization and delivery of services, including health care services, meet the emotional, social, and developmental needs of children; and that the strengths, and priorities of their families are integrated into all aspects of the service system. For example, family-centered care supports families as they participate as integral partners in the medical home and work with their children's health care professionals in making informed health care decisions. Family-centered care recognizes that families are the ultimate decision-makers for their children, with children gradually taking on more and more of this decision-making as they mature. Satisfaction with services² includes: (1) satisfaction with the quality of regular source of primary care, getting referrals and appointments for needed services, coordination between primary and specialty care services; (2) satisfaction with their level of involvement/input in setting concerns and priorities to make decisions about their child's care plan; (3) knowing the steps to take when they are not satisfied with the services their child/family receives; (4) being supported financially for their involvement in state and local activities, including transportation, provision of stipends, employment of families, and child care; and (5) being effective partners in policy making at the state and local levels.

Significance: Family/professional partnerships have been incorporated into the Maternal and Child Health Bureau (MCHB) Block Grant Application and the MCHB strategic plan. The Omnibus Budget Reconciliation Act of 1989 (OBRA' 89) mandated that the States provide and promote family-centered, community-based, coordinated care. Family satisfaction is also a crucial measure of system effectiveness.³

Healthy People 2020 Objective: Related to Maternal, Infant, and Child Health (MICH) Objective 31: Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems.²

Data Source and Reference:

1. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The National Survey of Children with Special Health Care Needs Chartbook 2005-2006*. Rockville, Maryland: U.S. Department of Health and Human Services, 2007.
2. Early Intervention Research Institute. *Measuring and Monitoring Community-Based Systems of Care for CSHCN*. <http://eiri.usu.edu/Projects/MandM/>
3. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
4. National Survey of Children with Special Health Care Needs. NS-CSHCN 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

Epidemiology and Trends

The 2009-2010 National Survey of Children with Special Health Care Needs (NS-CSHCN)⁴ showed that overall 72.6% of Kansas families of Children and Youth with Special Health Care Needs (CYSHCN) partnered in shared decision-making for child's optimal health, compared to 70.3% for the U.S. The Kansas outcome is higher than the U.S. but not significant, and ranks 23rd in the nation.

Of the 72.6% of Kansas CYSHCN families that partnered in shared decision-making, 83.1% reported that doctors discussed range of health care/treatment options. Also 83.1% reported that doctors encouraged parents to ask questions or raise concerns and 86.3% reported that doctors made it easy for parents to ask questions or raise concerns. Nearly 87% reported that doctors considered and respected parents' treatment choices.

In Kansas, the "partners in decision-making" outcome was similar across the age groups, but slightly lower for school-aged children (age 6-11 years). CYSHCN in higher-income families were more likely to meet the outcome than CYSHCN in poverty. Nearly all CYSHCN who received services within a medical home met the outcome compared to CYSHCN without a medical home. A greater percentage of those with adequate insurance reported partnering in decision-making, compared to those without adequate insurance. By specific type of special health care needs, this outcome was achieved among nearly 82% with a need managed by prescription medication versus 60.8% of those with functional limitations.

Note: This measure is based on whether CYSHCN have families who usually or always feel that they: 1) discuss with providers a range of options to consider for their child's treatment; 2) are encouraged to ask questions or raise concerns; 3) it is easy to ask questions or raise concerns; and 4) their health care providers consider and respect what treatment choices the parent feels would be best for child. The items used to develop this measure were revised substantially between 2005/06 and 2009/10. This outcome should not be compared with the results from outcome from the 2005/06 NS-CSHCN.⁴

CYSHCN Families Partner in Shared Decision-Making Kansas and U.S., 2009-2010

Families of CYSHCN were partners in shared decision-making for child's optimal health	
Kansas	72.6%
U.S.	70.3%

Kansas: Higher than U.S., but not significant

Doctors discussed range of health care/treatment options.	
Kansas	83.1%
U.S.	81.6%

Doctors encouraged parents to ask questions or raise concerns.	
Kansas	83.1%
U.S.	81.4%

Doctors made it easy for parents to ask questions or raise concerns.	
Kansas	86.3%
U.S.	86.2%

Doctors considered and respected parents' treatment choices.	
Kansas	86.7%
U.S.	84.4%

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Kansas CYSHCN subgroup	Families Partner in Shared Decision-Making % achieving outcome
Age 0-5 years	76.9%
Age 6-11 years	67.7%
Age 12-17 years	74.6%
<100% FPL*	66.0%
100%-199% FPL	75.3%
200%-300% FPL	72.2%
400%+ FPL	75.0%
Within a medical home	91.7%
Without a medical home	54.1%
Current insurance is adequate	80.4%
Current insurance is not adequate	58.0%
Managed by Rx meds	81.5%
Above routine need/ Use of services	70.2%
Rx meds and service use	67.1%
Functional limitations	60.8%

*FPL: Federal Poverty Level

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Medical Home

KANSAS GOAL: Increase care within a medical home for children and youth with special health care needs.

Indicator: The percent of children and youth with special health care needs age 0 to 18 who receive coordinated, ongoing, comprehensive care within a medical home.

Definition: A medical home¹ is an important mechanism for uniting the many segments of a child's care, including behavioral and oral health. The Maternal and Child Health Bureau (MCHB) at the Health Resources and Services Administration (HRSA) has identified specific criteria to establish whether a child's health care meets the definition of a medical home. This criteria includes: (1) whether the child has at least one personal doctor or nurse who knows him or her well and a usual source of sick care; (2) whether the child has no problems gaining referrals to specialty care and access to therapies or other services or equipment; (3) whether the family is very satisfied with the level of communication among their child's doctors and other programs; (4) whether the family usually or always gets sufficient help coordinating care when needed and receives effective care coordination; (5) whether the child's doctors usually or always spend enough time with the family, listen carefully to their concerns, are sensitive to their values and customs, provide any information they need, and make the family feel like a partner in their child's care; and (6) whether an interpreter is usually or always available when needed. For more information, please visit <http://www.hrsa.gov/healthit/toolbox/Childrenstoolbox/BuildingMedicalHome/whyimportant.html> or <http://pediatrics.aappublications.org/content/110/1/184.full.pdf>.

Significance: Providing primary care to children and youth in a 'medical home' is the standard of practice. Research indicates that children with a stable and continuous source of health care are more likely to receive appropriate preventive care and immunizations, are less likely to be hospitalized for preventable conditions, and are more likely to be diagnosed early for chronic or disabling conditions. (American Academy of Pediatrics Medical Home Policy Statement, presented in *Pediatrics*, Vol. 100 No. 1, July, 2002).²

Healthy People 2020 Objective: Related to Access to Maternal, Infant, and Child Health (MICH) Objective 30.2: Increase the proportion of children with special health care needs who have access to a medical home (Target: 51.8%). Related to MICH Objective 31: Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems.²

Data Sources and References:

1. U.S. Department of Health and Human Services. *What is a medical home? Why is it important?* www.hrsa.gov/healthit/toolbox/Childrenstoolbox/BuildingMedicalHome/whyimportant.html
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. National Survey of Children with Special Health Care Needs. NS-CSHCN 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

Epidemiology and Trends

The 2009-2010 National Survey of Children with Special Health Care Needs (NS-CSHCN)³ showed overall 49.4% of Kansas Children and Youth with Special Health Care Needs (CYSHCN) reported receiving care within a medical home, compared to 43.0% for the U.S. The Kansas outcome is significantly higher ($p < 0.05$) than the U.S., and ranks fourth in the nation.

Of the 49.4% of Kansas CYSHCN receiving care within a medical care, 90.7% reported that they had a usual source for both sick and well care and 93.0% had a personal doctor or nurse. About 96.0% of Kansas CYSHCN reported that they had no need of any referrals or no problems obtaining referrals when needed. Nearly 70% of Kansas CYSHCN reported receiving family-centered care (i.e., doctors spent enough time with a child, doctors listened carefully to a child's parent(s), doctors were sensitive to family customs and values, doctors provided information specific to child's health, and doctors helped family feel like partners in care). About 46% of Kansas CYSHCN reported receiving effective care coordination when needed (i.e., received help to coordinate child's health care when needed, received extra help to coordinate child's health care if needed, satisfied with communication among child's doctors when needed, and satisfied with doctors' communication to school or programs when needed).

In Kansas, the "medical home" outcome measure was achieved for more of the younger versus older CYSHCN. Performance on this outcome improved with increasing family incomes. A greater percentage of those with adequate insurance reported receiving coordinated, comprehensive care within medical home, compared to those without adequate insurance. Children with more complicated needs were less likely to have a medical home, although they have great potential to benefit from one.³

Note: The American Academy of Pediatrics' (AAP) description of a "medical home" lists seven defining components: accessible, continuous, comprehensive, family-centered, coordinated, compassionate and culturally effective. The overall medical home measure is a composite score derived from five different subparts based on 19 different survey items. To qualify as having a medical home, a child must have a personal doctor or nurse and meet the criteria for adequate care on every needed component.³ For additional details on medical home, please visit: www.childhealthdata.org/browse/medicalhome.

CYSHCN Medical Home Kansas and U.S., 2009-2010

CYSHCN who received coordinated, ongoing, comprehensive care within a medical home.	
Kansas*	49.4%
U.S.	43.0%

*Kansas: Significantly higher than U.S. ($p < 0.05$)

Had usual source(s) for both sick and well care.	
Kansas	90.7%
U.S.	89.3%

Had a personal doctor or nurse.	
Kansas	93.0%
U.S.	93.1%

No need of any referrals or no problems getting needed referrals.	
Kansas	96.0%
U.S.	92.1%

Received family-centered care from health providers.	
Kansas	69.8%
U.S.	64.6%

Received effective care coordination.	
Kansas	45.7%
U.S.	42.3%

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Kansas CYSHCN subgroup	Medical Home % achieving outcome
Age 0-5 years	63.6%
Age 6-11 years	45.2%
Age 12-17 years	46.6%
<100% FPL*	36.0%
100%-199% FPL	47.4%
200%-300% FPL	51.9%
400%+ FPL	57.3%
Current insurance is adequate	58.1%
Current insurance is not adequate	32.4%
Managed by Rx meds	61.7%
Above routine need/ Use of services	38.2%
Rx meds and service use	43.8%
Functional limitations	34.6%

*FPL: Federal Poverty Level

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Adequate Health Insurance

KANSAS GOAL: Increase adequacy of insurance coverage for children and youth with special health care needs.

Indicator: The percent of children and youth with special health care needs age 0 to 18 whose families have adequate private and/or public insurance to pay for the services they need.

Definition: Access to health insurance is an essential step in receiving needed pediatric health care. National studies suggest that children without health insurance are less likely to receive necessary preventive and acute care. Having health insurance is particularly important for children with special health care needs (CSHCN), who have increased ongoing medical needs. Among CSHCN, having health insurance is associated with improved health care quality, fewer unmet needs, and having a usual source of care. Having health insurance also is a financial safeguard for families. Uninsured CSHCN are more likely to experience high levels of family financial stress, and having health insurance has been shown to reduce burdensome out-of-pocket costs and financial stress among families of all income levels.¹

Significance: Research indicates that children with a stable and continuous source of health care more likely to receive appropriate preventive services, less likely to be hospitalized and more likely to be diagnosed early for disabling conditions.²

Healthy People 2020 Objective: Related to Access to Health Services (AHS) Objective 1: Increase the proportion of persons with health insurance (Target: 100%). Related to Maternal, Infant, and Child Health (MICH) Objective 31: Increase the proportion of children with special health care needs (CSHCN) who receive their care in family-centered, comprehensive, coordinated systems.²

Data Sources and References:

1. Lucile Packard Foundation for Children's Health. *Children with Special Health Care Needs. A profile of Key Issues in California. November 2010.* www.lpfch.org/specialneeds
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance.* 2012.
3. National Survey of Children with Special Health Care Needs. NS-CSHCN 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

Epidemiology and Trends

The 2009-2010 National Survey of Children with Special Health Care Needs (NS-CSHCN)³ showed that overall 60.0% of Kansas children and youth with special health care needs (CYSHCN) had consistent and adequate health insurance coverage, compared to 60.6% for the U.S. The Kansas outcome is slightly lower than the U.S. but not significant, and ranks 28th in the nation.

Of the 60.0% of Kansas CYSHCN who reported having consistent and adequate health insurance, 95.6% of CYSHCN reported having health insurance at the time of survey. Nearly 90% reported having no gaps in coverage during the year before the survey, and 67.3% reported having adequate current health insurance.

Among the 67.3% of Kansas CYSHCN that reported having adequate current health insurance, 67.3% reported that their current health insurance benefits met the child's needs. About 71.3% reported that costs not covered by insurance were usually or always reasonable, and 91.1% reported that insurance usually or always permitted the child to see needed providers.

In Kansas, there was not much difference among age groups, although adolescent insurance adequacy was slightly lower. Fewer CYSHCN families with incomes <100% poverty reported having adequate insurance: more than half in this group lacked the insurance they needed for services. A greater percentage of CYSHCN receiving services within a medical home had adequate insurance compared to CYSHCN without a medical home. By specific type of special health care needs, CYSHCN with functional limitations were less likely to have adequate insurance compared to CYSHCN with a need managed by prescription medication.

CYSHCN Insurance Coverage Kansas and U.S., 2009-2010

Families of CYSHCN had consistent and adequate private and/or public insurance to pay for the services they need.	
Kansas	60.0%
U.S.	60.6%

Kansas: Lower than U.S., but not significant.

CYSHCN with health insurance at the time of survey.	
Kansas	95.6%
U.S.	96.5%

CYSHCN with no gaps in coverage during past 12 months.	
Kansas	89.3%
U.S.	90.7%

Adequacy of CYSHCN's current insurance.	
Kansas	67.3%
U.S.	65.7%
Current health insurance benefits met child's needs.	
Kansas	89.5%
U.S.	86.8%
Uncovered costs were reasonable.	
Kansas	71.3%
U.S.	71.3%
Health insurance let child see needed providers	
Kansas	91.1%
U.S.	89.5%

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Kansas CYSHCN subgroup	Adequate Insurance % achieving outcome
Age 0-5 years	65.2%
Age 6-11 years	59.6%
Age 12-17 years	57.9%
<100% FPL*	48.3%
100%-199% FPL	61.0%
200%-300% FPL	59.6%
400%+ FPL	67.7%
Within a medical home	70.6%
Without a medical home	49.9%
Managed by Rx meds	65.9%
Above routine need/ Use of services	67.0%
Rx meds and service use	53.2%
Functional limitations	52.1%

*FPL: Federal Poverty Level

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Early and Continuous Screening

KANSAS GOAL: Increase the proportion of children and youth who are screened early and continuously for special health care needs.

Indicator: The percent of children and youth who are screened early and continuously for special health care needs.

Definition: In public health, screening often refers to a strategy to detect disease in individuals without signs or symptoms of that disease in the population. However, in this document, the term screening is more comprehensive and includes ongoing monitoring and assessment of children and youth to promote health and well-being through family centered care practices.¹

Significance: Screening is critical to identify, as early as possible, children and youth in the general population who have special health care needs. Children identified early can receive the appropriate services and family support to reduce long term complications from the disease and impact on the activities of the child. Some needs may be identified in infancy, or during the perinatal period, while others may emerge later in childhood and adolescence. It is equally important that both children and youth with special health care needs have ongoing assessments to identify newly emerging issues including developmental/behavioral issues, oral health, and psychosocial issues, development and well-being. Ongoing assessments should also focus on identifying the unique strengths of each child and family.¹

Healthy People 2020 Objective: Related to Maternal, Infant, and Child Health (MICH) Objective 31: Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems.²

Data Sources and References:

1. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The National Survey of Children with Special Health Care Needs Chartbook 2005-2006*. Rockville, Maryland: U.S. Department of Health and Human Services, 2007.
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. National Survey of Children with Special Health Care Needs. NS-CSHCN 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

Epidemiology and Trends

The 2009-2010 National Survey of Children with Special Health Care Needs (NS-CSHCN)³ showed that overall 82.9% of Kansas children and youth with special health care needs (CYSHCN) were screened early and continuously for special health care needs, compared to 78.6% for the U.S. The Kansas outcome is significantly higher than the U.S., and ranks 11th in the nation. This indicator was measured as those who had at least 1 preventive medical visit and at least 1 preventive dental visit in the past 12 months.

Of the 82.9% of Kansas CYSHCN who were screened early and continuously for special health care needs, 90.9% reported of receiving routine preventive medical care and 89.9% reported receiving routine preventive dental care in the past 12 months.

In Kansas, school-aged and adolescent children were more likely to receive preventive screenings than younger children. The proportions of CYSHCN achieving the screening outcome increased with family incomes. CYSHCN within a medical home were more likely to receive preventive screenings than CYSHCN without a medical home. By specific type of special health care needs, CYSHCN with a need managed by prescription medication were more likely to receive preventive screenings than CYSHCN with functional limitations.

CYSHCN Screened Kansas and U.S., 2009-2010

CYSHCN who were screened early and continuously for special health care needs.	
Kansas	82.9%
U.S.	78.6%

Kansas: Significantly higher than U.S. (p<0.05)

Continuous Screening: Well child check-up in past 12 months	
Kansas	90.9%
U.S.	90.4%

Continuous Screening: Preventive dental visits in past 12 months	
Kansas	89.9%
U.S.	85.9%

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Kansas CYSHCN subgroup	Screening % achieving outcome
Age 0-5 years	68.1%
Age 6-11 years	89.9%
Age 12-17 years	83.9%
<100% FPL*	80.4%
100%-199% FPL	82.3%
200%-300% FPL	83.0%
400%+ FPL	85.2%
Within a medical home	85.0%
Without a medical home	81.6%
Current insurance is adequate	84.0%
Current insurance is not adequate	84.1%
Managed by Rx meds	85.4%
Above routine need/ Use of services	76.1%
Rx meds and service use	85.6%
Functional limitations	77.5%

*FPL: Federal Poverty Level

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Ease of Community-Based Service Use

KANSAS GOAL: Increase children and youth with special health care needs access to organized community-based services.

Indicator: The percent of children and youth with special health care needs age 0 to 18 years whose families report that community-based service systems are organized so they can use them easily.

Definition: Community-based system of services¹ is an infrastructure that operates across service sectors. It facilitates the integration of services in several dimensions - including organization, delivery, and financing. The development of community-based systems of services is a response to the complexity and fragmentation of services for children with special health care needs and their families. Multiple service programs - each with its own funding streams, eligibility requirements, policies, procedures, and services sites - serve CYSHCN. It is clear that communities and their resources affect the way families of CYSHCN find and use services. Therefore, the health of communities themselves can have a positive effect on the growth and development of CYSHCN. There now exists a number of initiatives to develop community-based systems of services and a number of related community development initiatives in communities throughout the Nation. The public sector has furnished much of the impetus for such initiatives, but the private sector, especially through the efforts of several national foundations, has increasingly become active in instituting such initiatives.

Significance: Families, service agencies, and the Federal Interagency Coordinating Council (FICC) have identified major challenges confronting families in accessing coordinated health care and related services that families need for their children with special health care needs. Differing eligibility criteria, duplication and gaps in services, inflexible funding streams and poor coordination among service agencies are concerns across States. Addressing these issues will lead to more efficient use of public funds and reduced family stress.³

Healthy People 2020 Objective: Related to Maternal, Infant, and Child Health (MICH) Objective 31: Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems.²

Data Source and References:

1. U.S Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The National Survey of Children with Special Health Care Needs Chartbook 2005-2006*. Rockville, Maryland: U.S. Department of Health and Human Services, 2007
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. National Survey of Children with Special Health Care Needs. NS-CSHCN 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

Epidemiology and Trends

The 2009-2010 National Survey of Children with Special Health Care Needs (NS-CSHCN)³ showed that overall 66.8% of Kansas children and youth with special health care needs (CYSHCN) families reported that community-based service systems were easy to use (i.e., no difficulties or frustration accessing services needed for their child in the past 12 months), compared to 65.1% for the U.S. The Kansas outcome is higher than the U.S. but not significant, and ranks 19th in the nation.

Of the 66.8% of Kansas CYSHCN families who reported that community-based service systems were easy to use, 66.9% reported that they experienced no difficulties or delays getting services. The table at right shows the results of the six subcomponent topics that describe difficulties with accessing care. About 64.3% of parents reported experiencing no frustration in getting services for their child.

In Kansas, achieving the “community-based services” outcome was similar across the age groups, but slightly higher for school-aged children. The proportions of CYSHCN achieving this outcome increased with family incomes. CYSHCN receiving care within a medical home were more likely to achieve this outcome than CYSHCN without a medical home. A greater percentage of those with adequate insurance reported achieving this outcome compared to those without adequate insurance. By specific type of special health care need, this outcome was achieved among nearly 80% with a need managed by prescription medication versus 43.4% of those with functional limitations.

Note: Though the concept about ease of access to services remains the same, this measure was completely revised in 2009/10. This measure is now comprised of six difficulties with accessing care: 1) not eligible for services; 2) services not available in your area; 3) waiting lists or other problems getting appointments; 4) issues related to cost; 5) trouble getting the information you needed; 6) any other difficulties not mentioned and an assessment of how often parents were frustrated in their efforts to get services. Those CSHCN in the numerator answered YES to one of the six difficulties and usually or always to the frustration item. This measure is not comparable to the outcome from the 2005/06 NS-CSHCN survey.³

CYSHCN Community-Based Service Systems Kansas and U.S., 2009-2010

Community-based service systems easy to use.	
Kansas	66.8%
U.S.	65.1%

Kansas: Higher than U.S. but not significant

Experienced no difficulties or delays getting services.	
Kansas	66.9%
U.S.	65.9%
No difficulties or delays due to eligibility	
Kansas	90.9%
U.S.	89.2%
No difficulties or delays due to availability	
Kansas	89.9%
U.S.	88.8%
No difficulties or delays due to problems getting appointments	
Kansas	83.2%
U.S.	82.2%
No difficulties or delays due to cost	
Kansas	84.7%
U.S.	85.1%
No difficulties or delays due to trouble getting needed information	
Kansas	92.3%
U.S.	91.0%
No difficulties or delays for any other reason	
Kansas	98.2%
U.S.	97.0%

Experienced no parental frustration in getting services for their child.	
Kansas	64.3%
U.S.	61.7%

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Kansas CYSHCN subgroup	Community-Based Services % achieving outcome
Age 0-5 years	66.7%
Age 6-11 years	68.3%
Age 12-17 years	65.6%
<100% FPL*	55.1%
100% -199% FPL	67.2%
200% -300% FPL	67.9%
400%+ FPL	73.0%
W within a medical home	83.4%
W without a medical home	50.5%
Current insurance is adequate	76.9%
Current insurance is not adequate	50.0%
Managed by Rx meds	79.4%
Above routine need/ Use of services	63.7%
Rx meds and service use	64.4%
Functional limitations	43.4%

*FPL: Federal Poverty Level

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Transition to Adulthood (age 12-17 years only)

KANSAS GOAL: Increase the services necessary to transition to all aspects of adult life for youth with special health care needs.

Indicator: The percent of youth with special health care needs who receive the services necessary to make transition to all aspects of adult life.

Definition: Transition includes: (1) a plan that addresses employment, transportation, housing, independent living, physical/mental health, necessary accommodations, and includes appropriate agencies as part of the transition planning team, (2) a regular source of primary medical care that facilitates the transition from pediatric to adult providers, and (3) services/supports by age 21 that provide health insurance, post-secondary education, employment, transportation, housing, personal care attendant, Supplemental Security Income (SSI), Social Security Administration SSA-related work incentives (e.g., Plan for Achieving Self-Support (PASS), 1619 a&b).¹

Significance: The transition of youth to adulthood has become a priority issue nationwide as evidenced by the President's "New Freedom Initiative: Delivering on the Promise" (March 2002). Over 90% of children with special health care needs now live to adulthood, but are less likely than their non-disabled peers to complete high school, attend college or be employed. Health and health care are cited as two of the major barriers to making successful transitions.²

Healthy People 2020 Objective: Related to Disability and Health (DH) Objective 5: Increase the proportion of youth with special health care needs whose health care provider has discussed transition planning from pediatric to adult health care (Target: 45.3%).²

Data Sources and References:

1. Early Intervention Research Institute. *Measuring and Monitoring Community-Based Systems of Care for CSHCN*. April 2004.
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
3. National Survey of Children with Special Health Care Needs. NS-CSHCN 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

Epidemiology and Trends

The 2009-2010 National Survey of Children with Special Health Care Needs (NS-CSHCN)³ showed that overall 52.7% of Kansas youth with special health care needs (YSHCN), 12-17 years, received the services necessary to make appropriate transitions to adult health care, work and independence. While Kansas outcome ranks 1st in the nation and is significantly higher (p-value<0.05) than the national average of 40.0%, this means that almost half of Kansas youth do not receive the necessary transitions services.

Of the 52.7% of Kansas YSHCN that received the services necessary to make appropriate transitions, 57.7% reported that they received anticipatory guidance for transition to adult health care and 83.5% reported that their doctors or other health care providers usually or always encouraged them to take responsibility for their health care needs, such as taking medication, understanding their diagnosis, or following medical advice.

Among the 57.7% of Kansas YSHCN that received the anticipatory guidance, 59.8% reported that their health providers discussed the shift to adult health care providers, and 72.6% reported that their health providers discussed their changing health needs as they become an adult. About 66.5% reported that their health providers discussed health insurance as they become as adult.

In Kansas, achieving the outcome of receiving services necessary for transition was similar across the age groups. A greater percentage of those in higher-income families reported receiving services necessary for transition, compared to those in lower-income families. YSHCN within a medical home were more likely to receive services necessary for transition than YSHCN without a medical home. YSHCN receiving services with adequate current insurance were nearly twice as likely to report positively on this outcome compared to those without. By specific type of special health care needs, YSHCN with a need managed by prescription medication were more likely to receive services than YSHCN with functional limitations.

CYSHCN Youth Transition Kansas and U.S., 2009-2010

Youth with special health care needs, who received the services necessary to make appropriate transitions to adult health care, work, and independence.	
Kansas	52.7%
U.S.	40.0%

Kansas: Significantly higher than U.S. (p<0.05)

Anticipatory guidance for transition to adult health care	
Kansas	57.7%
U.S.	45.7%
Doctors discussed shift to adult health care providers, if needed.	
Kansas	59.8%
U.S.	48.8%
Doctors discussed changing health needs as becomes an adult, if needed.	
Kansas	72.6%
U.S.	69.1%
Doctors discussed health insurance as becomes an adult, if needed.	
Kansas	66.5%
U.S.	56.5%
Doctors encourages self management skills.	
Kansas	83.5%
U.S.	78.0%

Source: National CSHCN Survey, 2009-2010 (Age 12-17 yrs.)

Kansas CYSHCN subgroup	Transition % achieving outcome
Age 12-14 years	52.6%
Age 15-17 years	52.8%
<100% FPL*	29.5%
100%-199% FPL	51.7%
200%-300% FPL	53.7%
400%+ FPL	66.5%
Within a medical home	67.3%
Without a medical home	40.0%
Current insurance is adequate	65.3%
Current insurance is not adequate	32.0%
Managed by Rx meds	61.3%
Above routine need/ Use of services	34.1%
Rx meds and service use	55.8%
Functional limitations	35.5%

*FPL: Federal Poverty Level

Source: National Survey of CSHCN, 2009-2010 (Age 0-17 yrs.)

Financial Impact on Families

KANSAS GOAL: Decrease the proportion of families with children and youth with special health care needs reporting that their child's health causes financial strain on the family.

Indicators:

1. The percent of children and youth with special health care needs (CYSHCN) whose families pay more than \$1,000 per year in out-of-pocket expenses for child's medical expenses in the past 12 months.
2. The percent of CYSHCN whose families experienced financial problems due to child's health need.
3. The percent of CYSHCN whose families spend 11 or more hours per week providing and/or coordinating health care for the child.
4. The percent of CYSHCN whose family members cut back and/or stopped working because of child's health needs.

Definition: The financial impact that children with special health care needs (CSHCN) have on their families. It is measured: 1) in dollars, as families often have substantial out-of-pocket expenses for their children's health care that are not covered by insurance; 2) the time spent by family members providing care directly or arranging for and coordinating their child's care; and 3) whether children's needs had required the parents to cut down on work or stop working altogether to care for their child - requiring both the parent's time as well as a financial sacrifice.¹

Significance: The costs of caring for CSHCN are high, relative to those for typically developing children, because of elevated requirements for both primary and specialty medical care, as well as therapeutic and supportive services such as rehabilitation, environmental adaptations, assistive devices, personal assistance, and mental health, home health, and respite care.² The demands on families may require that parents cut down their work hours or give up a job, at the same time that they face burdensome out-of-pocket health care costs.¹

Healthy People 2020 Objective: Related to Maternal, Infant, and Child Health (MICH) Objective 31: Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, coordinated systems.³

Data Sources and References:

1. U.S Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The National Survey of Children with Special Health Care Needs Chartbook 2005-2006*. Rockville, Maryland: U.S. Department of Health and Human Services, 2007.
2. Shattuck PT, Parish SL. *Financial burden in families of children with special health care needs: Variability among states*. Pediatrics. 2008;122(1):13-18.
3. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *The MCH Block Grant Guidance*. 2012.
4. National Survey of Children with Special Health Care Needs. NS-CSHCN 2009/10. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. www.childhealthdata.org

Epidemiology and Trends

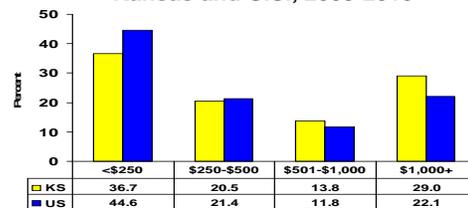
Families are often required to pay out of their pockets for health care services not fully covered by their insurance plans.¹ These services may include therapies, home health care, prescription drugs, mental health care, medical equipment, and dental services.¹ According to the 2009-2010 National Survey of Children with Special Health Care Needs (NS-CSHCN)⁴, about one-third of Kansas children and youth with special health care needs (CYSHCN) families reported spending \$1,000 or more on health care in the previous year for the care of their CYSHCN.

To further assess the financial impact of a child's condition on his or her family, the survey asked whether the child's condition had caused a financial problem.¹ It was reported that over 26% of CYSHCN have conditions that create financial problems for their families.

Many families devote substantial amounts of time to their children's health care.¹ They may participate in providing health care to their children through such tasks as administering medications and therapies, maintaining equipment, and providing transportation to appointments.¹ Families also spend time arranging or coordinating care for their children by making appointments, making sure that care providers are exchanging information, and following up on their child's health care needs.¹ While the families of 42.7% of CYSHCN spent less than an hour a week on these activities, the families of 36.8% devoted 1 to 4 hours a week to these tasks, and the families of 10.8% spent 11 hours a week or more.

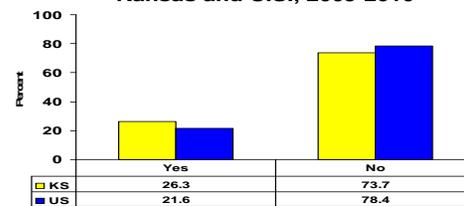
The complexity of a child's special needs and the parents' need to devote time to the child's care sometimes requires that parents cut back on the number of hours they work or stop working completely to care for their child.¹ Overall, the parents of 23% of CYSHCN report having to stop work or cut back on their hours at work, or both, because of their children's needs. Nearly 20% of family member(s) avoided changing jobs in order to maintain health insurance for their child.

**Percent of Annual Out-of-Pocket Expenditures for Care of CYSHCN
Kansas and U.S., 2009-2010**



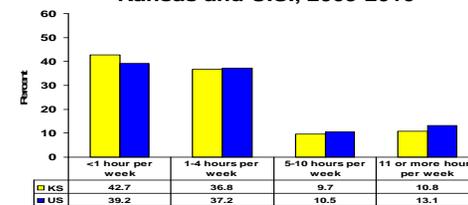
Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

**Percent of CYSHCN Whose Families Experience Financial Problems Due to Child's Condition
Kansas and U.S., 2009-2010**



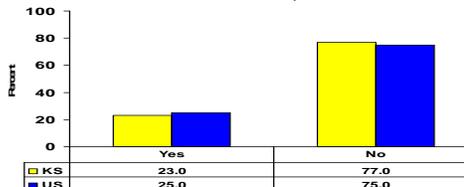
Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

**Percent of Time Spent Providing, Arranging, or Coordinating Health Care for CYSHCN, per Week
Kansas and U.S., 2009-2010**



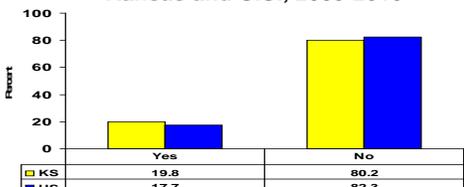
Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

**Percent of Impact of Child's Condition on Parent's Employment
Kansas and U.S., 2009-2010**



Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

**Percent of Family member(s) avoided changing jobs in order to maintain health insurance for child
Kansas and U.S., 2009-2010**



Source: National CSHCN Survey, 2009-2010 (Age 0-17 yrs.)

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SECTION IV

HEALTH STATUS INDICATORS

Poverty Status

KANSAS GOAL: Decrease the number of children and families in poverty.

Indicator: The percent of children and families in poverty.

Definition: Following the Office of Management and Budget's (OMB) Statistical Policy Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps).¹ For more information, please visit: www.census.gov/hhes/www/poverty/methods/definitions.html.

Significance: Poverty affects many aspects of a child's life, including living conditions, nutrition, and access to health care. A number of factors affect poverty status, and significant racial/ethnic disparities exist. A number of Federal programs work to protect the health and well-being of children living in low-income families. One of these is the National School Lunch Program, administered by the U.S. Department of Agriculture's Food and Nutrition Service. The program provides nutritionally-balanced low-cost or free lunches to children based on income.²

Healthy People 2020 Objective: Relates to Social Determinants of Health: Create social and physical environments that promote good health for all.³

Data Source and References:

1. U.S. Census Bureau. Social, Economic, and Housing Statistics Division: Poverty. Last Revised: June 25, 2012. www.census.gov/hhes/www/poverty/methods/definitions.html
2. U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. *Child Health USA 2011*. Rockville, Maryland: U.S. Department of Health and Human Services, 2011.
3. U.S. Department of Health and Human Services. *Healthy People 2020*. www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=39
4. Columbia University. National Center for Children in Poverty. *Kansas: Demographics of Poor Children*. www.nccp.org/profiles/KS_profile_7.html
5. U.S. Census Bureau. Current Population Survey (CPS). Annual Social and Economic (ASEC) Supplement. Pov46. Poverty Status by State (weighted). www.census.gov/hhes/www/poverty/data/incpovhlth/index.html
6. U.S. Census Bureau. Small Area Income and Poverty Estimates (SAIPE). Kansas, Under Age 18 in Poverty, 2010. www.census.gov/cgi-bin/saipe/saipe.cgi

Epidemiology and Trends

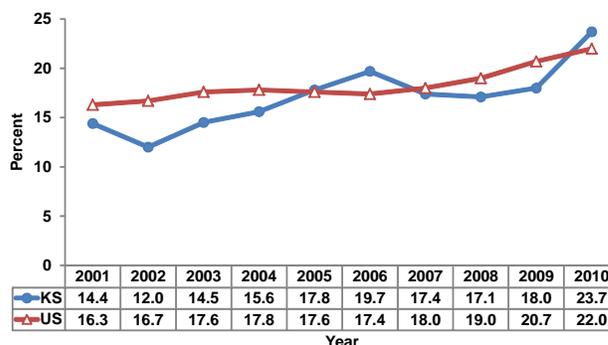
For 2010, the federal poverty level is \$22,050 for a family of four. Children living in families with incomes below the federal poverty level are referred to as poor. But research suggests that, on average, families need an income of about twice the federal poverty level to meet their basic needs.⁴

In 2010, compared to the U.S. population, a lower percentage of Kansans lived in households with incomes below the federal poverty level (14.3% vs. 15.1% for the U.S.) and a notably higher percentage of children under age 18 lived in households with incomes below the federal poverty level (23.7% vs. 22.0% for the U.S.). Over the 10 year period (2001-2010), Kansas experienced a statistically significant increase in the poverty rate for children under age 18. Similar trends were seen in the United States.⁵

In 2010, 129,009 Kansas children under 18 years of age were living in poverty. Most Kansas children under age 18 living in poverty live in three population centers: Sedgwick County (Wichita), Wyandotte and Johnson Counties (Kansas City, Kansas) and Shawnee County (Topeka). Six counties accounted for over half of all children (71,423 children; 55.4%) in poverty for Kansas: Sedgwick (27,167), Wyandotte (15,104), Shawnee (11,207), Johnson (10,994), Saline (3,847), and Reno (3,104). The highest percent of children in poverty are in the rural Southeastern portion of Kansas.⁶

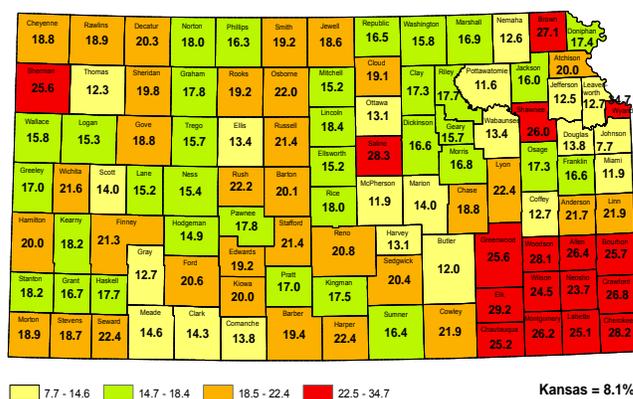
Overall, in 2010, the percent of Kansas' families living at or below the federal poverty level (10.7%) is slightly lower than the U.S. (11.7%). Poverty is more common in Kansas families headed by single females and those with children in the household, regardless of race or ethnicity. For the years 2001-2003, the Kansas percent of female headed households living below 100% federal poverty level remained below the U.S. percent. Starting in 2004, the percent of Kansas female headed households living in poverty increased and exceeded the U.S. rate.⁵

Percent of Children Under 18 Years of Age Below 100% Federal Poverty Level Kansas and U.S. (2001-2010)



Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement. POV46: Poverty Status by State

Percent of Children Under 18 Years of Age Living in Poverty by County Kansas, 2010



Linguistic Isolation

KANSAS GOAL: Eliminate health disparities among Kansans - gender, race/ethnicity, education, income, disability, geographic location, sexual orientation.

Indicator: The percent of households linguistically isolated (language spoken at home is other than English).

Definition: A linguistically isolated household is one in which no person aged 14 or over speaks English at least “Very well.” That is, no person aged 14 or over speaks only English at home, or speaks another language at home and speaks English “Very well.” A linguistically isolated person is any person living in a linguistically isolated household. All the members of a linguistically isolated household are tabulated as linguistically isolated, including members under 14 years old who may speak only English.¹

Significance: In the United States, the ability to speak English plays a large role in how well people can perform daily activities. How well a person speaks English may indicate how well he or she communicates with public officials, medical personnel, and other service providers. It could also affect other activities outside home, such as access and the quality of health care received. People who do not have a strong command of English and who do not have someone in their household to help them on a regular basis are at even more of a disadvantage.¹ Too often people with the greatest health burdens have limited access to relevant health information. In part, this is due to the complex and cumbersome ways health information often is presented, an individual’s limited abilities to fully interpret and understand complex health terminology and instructions, and to make personal decisions related to risk avoidance or risk reduction strategies. For instance, to follow health care instructions, patients need to be able to comprehend written and oral prescription instructions, directions for self-care, and plans for follow-up tests and appointments. In addition, health care providers may not communicate effectively with individuals. For instance, achieving informed consent for treatment is difficult when health care personnel cannot explain biological processes or treatment procedures in simplified language and patients cannot interpret health information. These situations hamper the effectiveness of health professionals’ efforts to prevent, diagnose and treat medical conditions, and limit many health care consumers’ abilities to make important health care decisions.²

Healthy People 2020 Objective: Relates to Social Determinants of Health: Create social and physical environments that promote good health for all.³

Data Source and Reference:

1. U.S. Census Bureau. *Language Use and English-Speaking Ability:2000*. www.census.gov/prod/2003pubs/c2kbr-29.pdf
2. Department of Health and Human Services. *Understanding and Promoting Health Literacy (R01)*. <http://grants.nih.gov/grants/guide/pa-files/PAR-04-116.html>
3. U.S. Department of Health and Human Services. *Healthy People 2020*. www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=39
4. U.S. Census Bureau. 2009-2011 American Community Survey. *Linguistic Isolation. Table S1602*. <http://factfinder2.census.gov>
5. U.S. Census Bureau. 2009-2011 American Community Survey. *Kansas Population and Housing Narrative Profile: 2009-2011*. <http://factfinder2.census.gov>

Epidemiology and Trends

According to the 2009-2011 American Community Survey¹, in Kansas, 2.5% of the households met the definition of being linguistically isolated compared to 4.7% of U.S. households. In Kansas, the prevalence of linguistic isolation in households varies by language spoken at home. Linguistic isolation among households speaking Spanish was 25.7%, other Indo-European languages 7.8%, Asian and Pacific Island languages 27.3%, and other languages 19.8%.

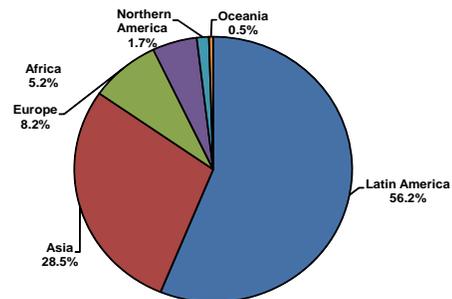
Ninety-three percent (93.3%) of the people living in Kansas in 2009-2011 were native residents of the United States. Fifty-eight percent of these residents were living in the state in which they were born. Seven percent (6.7%) of the people living in Kansas in 2009-2011 were foreign born. Of the foreign born population, 32% were naturalized U.S. citizens, and 58% entered the country before the year 2000. Forty-two percent of the foreign born entered the country in 2000 or later. Foreign born residents of Kansas come from different parts of the world.³

Among people at least five years old living in Kansas in 2009-2011, 11% spoke a language other than English at home. Of those speaking a language other than English at home, 66% spoke Spanish and 34% spoke some other language; 42% reported that they did not speak English “very well.”³ Notable is a change in Spanish speaking population in Kansas, which has been steadily increasing. The increase mirrors similar trends at the national level.

No one age 14 and over speaks English only or speaks English “very well” 2009-2011	
All Households	Estimate
Kansas	2.5%
U.S.	4.7%
Prevalence of Linguistic Isolation among Kansas Households by Language	
Spanish	25.7%
Other Indo-European languages	7.8%
Asian and Pacific Island languages	27.3%
Other languages	19.8%

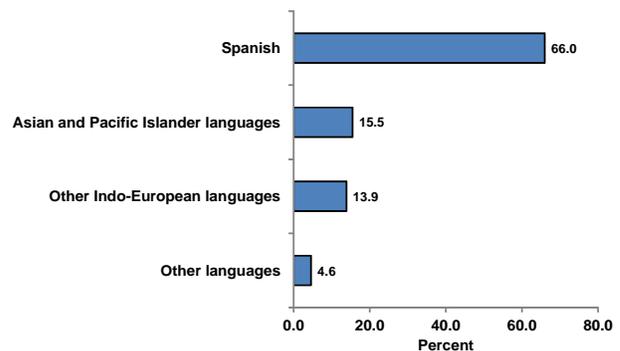
Source: U.S. Census Bureau. American Community Survey, 3-year Estimates, 2009-2011

Foreign Born Residents
Regions of the World
Kansas, 2009-2011



Source: U.S. Census Bureau. American Community Survey, 3-Year Estimates, 2009-2011

Percent of the Population 5 Years and Over who Speak a Language Other than English
Kansas, 2009-2011



Source: U.S. Census Bureau. American Community Survey, 3-Year Estimates, 2009-2011

Utilization of Health Care

KANSAS GOAL: Improve utilization of Medicaid/SCHIP by Kansas children.

Indicators:

1. The percent of Medicaid enrollees (ages 0-20) during the reporting year who received at least one initial periodic screen.
2. The percent of Medicaid enrollees (ages 0-20) who have received any dental services during the year.
3. The percent of CHIP enrollees (ages 0-19) during the reporting year who received at least one initial periodic screen.
4. The percent of CHIP enrollees (ages 0-19) who have received any dental services during the year.

Definition: (1) EPSDT - Early and Periodic Screening Diagnostic and Treatment services, Medicaid comprehensive and preventive health program for eligible children under the age of 21, is commonly known in Kansas as KAN-Be-Healthy (KBH).¹ A child should be able to receive examination, treatment, and when necessary, referral services from one provider to another provider. This program allows participating individuals to receive any services which are medically necessary. In order to be considered a program participant and receive additional services, individuals must follow the screening schedule.² (2) HealthWave19, a traditional Kansas Medicaid Program, has no premium costs, no co-pays or deductibles for covered children.³ (3) HealthWave21 - Children Health Insurance Program (CHIP) is a Federal/State partnership, similar to Medicaid. The goal is to expand health insurance access to children whose family incomes exceed Medicaid guidelines. It was created for uninsured children, ages 0-19, living in households with income levels at or below 250% of the 2008 federal poverty level. Some families qualify for no premium health insurance. Others will have minimal monthly premiums. There are no co-pays or deductibles and no exclusions for pre-existing conditions with HealthWave21.³

Significance: Financial, structural, and personal barriers can limit utilization of health care. Financial barriers include not having copay for health insurance, not having enough health insurance to cover needed services, or not having the financial capacity to cover services outside a health plan or insurance program. Structural barriers include the lack of primary care providers, medical specialists, or other health care professionals to meet special needs or the lack of health care facilities. Personal barriers include cultural or spiritual differences, language barriers, not knowing what to do or when to seek care, or concerns about confidentiality or discrimination.⁴

Healthy People 2020 Objective: Related to Access to Health Services.⁵

Data Sources and References:

1. Kansas Department for Children and Families. www.kmap-state-ks.us/Documents/Content/Provider%20Manuals/Gen%20benefits_090109_973.pdf
2. General Definition. sphhs.gwu.edu/departments/healthpolicy/CHPR/nnhs4/GSA/Subheads/gsa100.html
3. Kansas Department of Health and Environment. www.kdheks.gov/hcf/healthwave/about.html
5. U.S. Department of Health and Human Services. *Healthy People 2020*. www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=39
6. KAN-Be-Healthy and CHIP reports (Federal Fiscal Year 2011: 10/1/2010 - 9/30/2011).

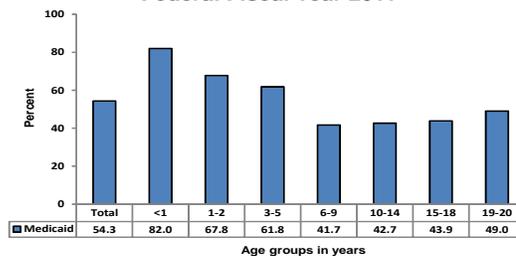
Epidemiology and Trends

A report submitted by Kansas Department of Department of Health and Environment to the Center for Medicare and Medicaid Services (CMS) showed an overall decline in participation of Kansas Medicaid enrollees (ages 0-20) for KAN Be Healthy (KBH) screens from 58.2% in Federal Fiscal Year (FFY) 2010 to 54.3% in FFY 2011⁵. The participation of Medicaid enrollees remained the same or decreased in FFY2011 for children across all age groups. Overall, the number of eligible/enrolled children continues to increase each year, as does the number actually getting into services. Although the overall FFY2011 result did not reach the CMS goal of 80% participation in Early and Periodic Screening Diagnostic and Treatment (EPSDT) services, there has been much improvement in getting children into care.

The participation of Kansas Children Health Insurance Program (CHIP) enrollees (ages 0-20) was 48.0% in FFY 2011. This is a 11.3% decrease over the 54.1% participation in FFY2010. The participation decreased in FFY2011 for children in all age groups. There has been a steady decline in the percent of CHIP children receiving a screen. Comparing the Medicaid data to the CHIP data, the CHIP numbers and percentages are considerably lower.

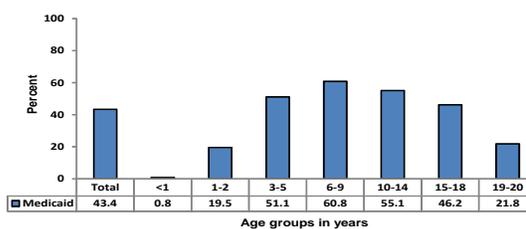
The percentage of children in all age groups who access dental services in Medicaid and CHIP continues to rise. When evaluating the trend in the last seven years (FFY2005-2011), the increase in the percentage of children enrolled who have received any dental services is statistically significant. The MCH program continues to play a key role in establishment of partnerships within and outside the Agency to improve access to dental services for both mothers and children.

Percent of Medicaid Eligible Children Receiving at least one initial or periodic screen* Federal Fiscal Year 2011



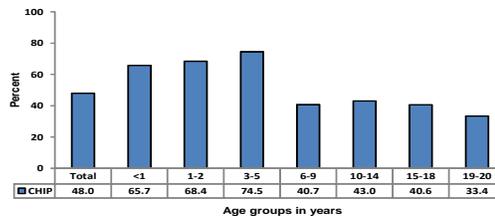
*Medicaid Participant % = $\frac{\text{Total eligibles receiving at least one initial or periodic screen}}{\text{Total eligibles who should receive at least one initial or periodic screen}}$
 Source: Medicaid Kan Be Healthy annual participant report.
 Report Period: 10/1/2010-9/30/2011

Percent of Medicaid Eligible Children Receiving Any Dental Services* Federal Fiscal Year 2011



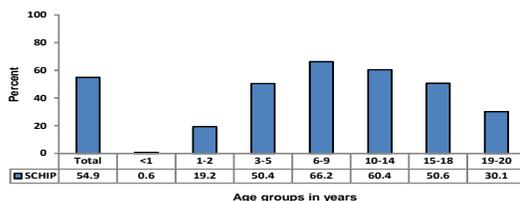
*Medicaid Dental % = $\frac{\text{Number of eligible receiving any dental services}}{\text{Number of individuals eligible for Kan Be Healthy}}$
 Source: Medicaid Kan Be Healthy annual participant report.
 Report Period: 10/1/2010-9/30/2011

Percent of CHIP* Eligible Children Receiving at Least One Initial or Periodic Screen Federal Fiscal Year 2011**



*CHIP: State Children Health Insurance Program
 **CHIP Participant % = $\frac{\text{Total eligibles receiving at least one initial or periodic screen}}{\text{Total eligibles who should receive at least one initial or periodic screen}}$
 Source: SCHIP/Well Child for HW21 annual participant report.
 Report Period: 10/1/2010-9/30/2011

Percent of CHIP* Eligible Children Receiving Any Dental Services Federal Fiscal Year 2011**



*CHIP: Children Health Insurance Program
 **CHIP Dental % = $\frac{\text{Number of eligible receiving any dental services}}{\text{Number of individuals eligible for KAN Be Healthy}}$
 Source: CHIP/Well Child for HW21 annual participant report.
 Report Period: 10/1/2010-9/30/2011

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SECTION V
Special Projects

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MCH2015

Pregnant Women and Infants Update

Infants born to mothers who smoke tend to weigh less than other infants. Low birth weight (< 2,500 grams) is a key indicator for infant deaths. The maternal and child health (MCH) Program collaborates with the Kansas Tobacco Use Prevention Program, local grantee health agencies, and other community providers in an effort to reduce the number of pregnant smokers. This is accomplished by a system that includes referral of pregnant women to a tobacco cessation Quitline and to local tobacco cessation services. In addition, The Kansas Clean Indoor Air Act went into effect July 1, 2010, and provides smoke-free environments in most public places and restaurants.

In an effort to improve birth outcomes for very low birthweight infants by helping to ensure they are born in facilities for high-risk deliveries and neonates, Kansas maintains a provider-driven perinatal referral system to facilitate access to consultation between obstetrical care providers and specialty maternal-fetal medicine professionals. Perinatal outcome data is available to delivering hospitals that request data about their hospital or hospital group in an electronic format. The Perinatal Association of Kansas, the Greater Kansas Chapter of the March of Dimes and the MCH Program at KDHE provide a forum for dialogue about state perinatal health issues and provide educational opportunities to MCH grantees, private providers and hospitals on current best practices. Since March 2010, Kansas has been a state-level partner with the national Healthy Mothers, Healthy Babies, text4baby, which provides free health-related text messages to pregnant women and new mothers.

Early entry into prenatal care is seen as one factor in improving the health of mothers and infants. Kansas continues to exceed the national average on this measure. Seventy-five percent (75.1%) of pregnant women received prenatal care in the first trimester in 2010. However, Kansas data also show that Hispanic and non-Hispanic Black mothers were more likely to enter prenatal care late. The Kansas MCH Program provides 85 grants to local communities serving almost all of the state's 105 counties. Through the use of Healthy Start Home Visitor outreach services, education, support and referrals to community services for families in need of those services were provided to approximately 13,103 women in 2011. MCH staff identifies women at risk for late entry into prenatal care in coordination with the state WIC and Family Planning Programs. Outreach and services to a primarily Hispanic migrant population, speaking Low German and Spanish, were provided in collaboration with the Kansas Farm Worker Health Program. MCH Program staff provide technical assistance to MCH grantees in developing and continuing transition services and print materials primarily in Spanish for the increasing Hispanic population in Kansas to encourage these women to seek early prenatal care. Workforce development and training is provided annually at the Governor's Conference on Public Health.

For more information or questions, please contact Joseph Kotsch at jkotsch@kdheks.gov or KDHE's Children and Families Section.

MCH2015 Pregnant Women and Infants Breastfeeding Update

The KDHE Nutrition and WIC Services (NWS) section continues to work toward promoting breastfeeding initiation and increasing the length of time that Kansans are breastfeeding. During the Maternal and Child Health Bureau's Five Years Needs Assessment in 2010, partners reaffirmed the importance of promoting exclusive breastfeeding for at least the first six months of an infant's life.

The NWS section continues to promote quality training and/or credentialing of health professionals involved in breastfeeding promotion and support by providing information about upcoming educational opportunities, stipends to cover registration and underwrite speakers on breastfeeding topics for the statewide conferences, including provision of the USDA's Grow and Glow In Breastfeeding training to local health department staff.

The NWS section collaborates with the Kansas Breastfeeding Coalition (KBC) on several projects. NWS assists in training local partners on ways to assist employers in developing or enhancing a lactation support program through the KBC's Business Case for Breastfeeding Grant. The NWS section is also assisting with promoting and supporting a coalition building summit sponsored by the KBC. NWS has been involved in the development of the High 5 for Mom and Baby project which provides education about breastfeeding support to Kansas birthing centers.

Peer counseling is a significant factor in improving breastfeeding initiation and duration rates among women in a variety of settings, including economically disadvantaged and WIC populations. The NWS section is working on maintaining the existing breastfeeding peer counseling programs with a goal of expanding the program to all counties.

The Kansas MCH program supports breastfeeding as the ideal nutrition for an infant and encourages local MCH grantees to participate in any available breastfeeding training (most often either directly provided by the Kansas WIC program or sponsored by them).

For more information or questions, please contact Martha Hagen at mhagen@kdheks.gov (Nutrition and WIC Services) or Joseph Kotsch at jkotsch@kdheks.gov (Children and Families Section).

MCH2015

Children and Adolescents

Reducing Risk Behaviors Update

Developed in 2010, Healthy People 2020 (HP2020) includes initiatives specific to adolescent health with an overall goal to improve the healthy development, health, safety, and well-being of adolescents and young adults. The HP2020 recognized that the behavioral patterns established during adolescent developmental periods help determine young people's current health status and their risk for developing chronic diseases in adulthood.¹

HP2020 health objectives were selected by a group of stakeholders based on scientific knowledge and available data in order to best measure progress over time. HP2020 identified eleven adolescent health objectives: 1) adolescent wellness checkup, 2) afterschool activities, 3) adolescent-adult connection, 4) transition to self-sufficiency from foster care, 5) educational achievement, 6) school breakfast program, 7) illegal drugs on school property, 8) student safety at school as perceived by parents, 9) student harassment related to sexual orientation and gender identity, 10) serious violent incidents in public schools, and 11) youth perpetration of and victimization by crimes.

The KDHE Bureau of Family Health, Children and Families Section stakeholders echoed the HP 2020 goal in the development of a Kansas goal: to enhance the health of Kansas children and adolescents across the lifespan. The HP2020 objectives were also reflected in the Kansas objectives: 1) all children and youth receive health care through medical homes, 2) reduce child and adolescent risk behaviors relating to alcohol, tobacco and other drugs, and 3) all children and youth achieve and maintain healthy weight.

For more information or questions, please contact Jane Stueve at jstueve@kdheks.gov or KDHE's Children and Families Section.

Reference:

1. National Research Council and Institute of Medicine. Committee on Adolescent Health Care Services and Models of Care for Treatment, Prevention, and Healthy Development. *Adolescent health services: Missing opportunities*. Lawrence RS, Gootman JA, Sim LJ, editors. Washington: National Academies Press, 2009. Available from: http://books.nap.edu/openbook.php?record_id=12063&page=1

MCH2015 Children and Adolescents Overweight and Obese Children Update

The KDHE Nutrition and WIC Services (NWS) section continues to work towards decreasing the prevalence of children in Kansas that are overweight or obese. During the Maternal and Child Health Bureau's Five Years Needs Assessment in 2010, partners reaffirmed the importance of decreasing the rate of childhood obesity.

The NWS section continues to do its best to work with local and state partners to encourage and promote events aimed at increasing healthy eating behaviors and physical activity of Kansas children. In addition, NWS staff continues to work to increase the number of well-trained MCH staff who plan, facilitate, deliver and evaluate healthy eating and physical activity messages, by sponsoring and promoting training opportunities.

The Kansas MCH program supports reducing the number of overweight and obese children and encourages local MCH grantees to participate in any relevant, evidence-based programs in support of this goal as part of their staff development process.

For more information or questions, please contact Sandy Perkins at sperkins@kdheks.gov (Nutrition and WIC Services) or Joseph Kotsch at jkotsch@kdheks.gov (Children and Families Section).

MCH2015

Children and Youth with Special Health Care Needs

Medical Home Update

In 2008, Kansas passed Sub. SB 81 (New Section 13), which defined the medical home in statute for Medicaid, SCHIP, and state employees.

The Children and Youth with Special Health Care Needs (CYSHCN) program continues to promote medical home objectives individually and in cooperation and collaboration with other state and local programs. The CYSHCN program readopted the medical home goal for the 5-Year MCH Statewide Needs Assessment (2010-2015). The focus of this goal is improving access to and expanding services available within a Medical Home. The CYSHCN program's action plan includes public education and community partnerships. The primary strategies to address this priority objective are: 1) educate families, youth and providers about the components of a medical home; 2) inform community partners and stakeholders of local, state, and national initiatives to support effective and successful system change; and 3) utilize community partnerships by linking community services and resources for CYSHCN and their families. Through these efforts, the program strives to empower consumers to take an active role in their health care and partner with providers in health care decisions.

Through a grant awarded by the Health Resources Services Administration, the CYSHCN program has partnered with local, state, and national partners to strengthen patient-parent-provider partnerships, educate patients and providers about the medical home concept and enhance access and services received within a Medical Home. Activities surrounding these efforts include: collaboration with the Kansas Academy of Family Physicians to host a series of Patient Centered Medical Home Learning Collaboratives and Summits; co-sponsoring conferences and workshops with Families Together, Inc.; development of educational materials for families about the medical home and how to partner with their doctor; providing education for health care professionals on interacting with people with disabilities; and developing a comprehensive health transition model that includes all professional domains who provide services and supports from time of diagnosis onward. The CYSHCN Family Advisory Council has embraced the medical home priority objective and assisted in developing educational materials and plans to develop and conduct web-based trainings on the medical home concept for parents and providers.

For more information or questions, please contact Heather Smith at hsmith@kdheks.gov or KDHE's CYSHCN program office.

MCH2015

Children and Youth with Special Health Care Needs Youth Transitioning into Adult Services Update

The Children and Youth with Special Health Care Needs (CYSHCN) program continues to be at the forefront of improving the transition of youth with special health care needs into adult services. During the 5-Year MCH Statewide Needs Assessment in 2010, parents and others reaffirmed the importance of transitioning all youth successfully.

Specialty clinics supported by CYSHCN offer transition clinics for older youth with special health care needs to begin the transition process from pediatric to adult health care systems. Partnerships with Families Together, Inc. has provided opportunities to promote the personal health care and transition notebooks for families and youth with special health care needs to encourage youth to take a more active role in their health care. Additionally, through this partnership, a number of transition workshops and conferences have been held to educate and inform parents and families about necessary steps for successful transitions.

The Integrated Community Systems for Youth with Special Health Care Needs (D-70) grant focused on preparing youth to transition from pediatric to adult health systems and partnering with their health care provider to develop or enhance their medical home. This grant sought to improve the integration and coordination of transition supports and services including health care, education, employment, and independent community living. A comprehensive transition model was developed with the youth and their families in the center of the model. The model includes tools and resources across disciplines related to family health care supports, medical and school coordination, health care provider engagement, individualized health planning, and youth-directed healthcare education. Through a partnership with the Kansas University Center on Developmental Disabilities, a computer-based transition curriculum for youth was developed to promote self-determination and provide opportunities to learn, practice, and master skills necessary for successful transitions. Efforts in conjunction with the Heartland Genetics Collaborative will enhance the individualized health planning efforts began in Kansas through this grant. Additionally, a partnership with the University of Kansas allowed for the development of a transition website, specific to Kansas resources and supports. This website, www.buildingalife.ku.edu, intends to help families and youth navigate the complex world of transition to adulthood.

For more information or questions, please contact Heather Smith at hsmith@kdheks.gov or KDHE's CYSHCN program office.

MCH2015

Children and Youth with Special Health Care Needs Financial Impact on the Family Update

The Children and Youth with Special HealthCare Needs (CYSHCN) renewed its mission to provide leadership and guidance to limit the financial impact of CYSHCN's conditions on the family's budget. During the 5-Year MCH Statewide Needs Assessment in 2010, parents and other stakeholders attested that financial concerns are one of the top issues faced by families who have CYSHCN.

The CYSHCN program continues to work towards minimizing financial impact on families, while ensuring that the program itself remains financially solvent. Since July of 2008, the CYSHCN program has experienced an expansion in the number of eligible conditions due to the newborn screening expansion to the 29 conditions (28 metabolic conditions and hearing) recommended by the American College of Medical Genetics. The financial difficulties faced by the CYSHCN program mount over time because individuals with eligible genetic/metabolic diagnoses and meet the financial criteria may be served through their lifetime. In addition, with the economic downturn, more unemployed/underemployed families are seeking financial assistance to cover their child's medical care. Although there has been an increase in demand for services, there has not been an increase in funding to programs that serve CYSHCN. The Maternal and Child Health budget under Social Security's Title V Act has remained level funded, while the State's resources have declined steadily, requiring the state to achieve a balanced budget by reduced spending.

To fulfill the mission of the CYSHCN program given by stakeholders, the program has partnered with a variety of agencies to provide providers and consumers with information about the impact of the Patient Protection and Affordable Care Act; assist families that have no insurance to apply for insurance; update the sliding fee scale in the CYSHCN program to better serve the most vulnerable children; and strengthen collaborative efforts to maximize available resources.

To address the growing needs of CYSHCN, the program reached out to local communities and implemented a regionalization to offer services at the community level, rather than a state level. In partnership with local health departments and other local entities, four regional offices in Western Kansas began providing a local point of entry into the program in July 2012. Expansion to Eastern Kansas is planned for the coming year, along with an expansion of clinic services through outreach to the Western regions of Kansas. The CYSHCN program is dedicated to providing services to families at the community level and will continue to move towards improved community-based services.

For more information or questions, please contact Marc Shiff at mshiff@kdheks.gov or KDHE's CYSHCN program office.

Children and Youth with Special Health Care Needs Family Survey

Children and Youth with Special Health Care Needs (CYSHCN) is a state and federally funded program. CYSHCN is involved in the planning, development, and promotion of specialty health care for children and youth with disabilities. To meet the needs of patients served by the program and fulfill goals set by stakeholders at the Maternal and Child Health 2015 Needs Assessment, a survey was conducted at clinics sponsored by CYSHCN. Individuals were asked 20 questions about unmet medical needs and services, financial impact, care coordination, and concerns about patient's skills/abilities. Individuals were asked to complete the survey during their specialty clinic appointments between April and July 2011. Two hundred and thirty-three individuals (overall response rate of 18.5%) answered the 2011 Family Survey. The survey revealed that:

- Half of respondents reported the patient received some form of care coordination
 - Care coordination was most commonly provided by nurses and social workers
 - Approximately one out of five individuals (19.2% of respondents) used more than one professional to coordinate care for their child/family
- Most individuals (82.2% of respondents) obtained services needed by their children/youth and reported no unmet medical service needs
 - Individuals reported the most difficulty receiving dental care and health screens
 - Insurance or payment issues were the primary reasons listed for not receiving a medical service
- Majority of individuals (90.6% of respondents) had no difficulty getting routine care for the patient from their doctor
 - Of those who reported difficulties, finding a local doctor that could care for their children's health needs was the most common reason
- Although most individuals (76.3% of respondents) reported having access to dental services, access to these services was more limited to patients with public insurance
- 27.9% of parents with school-aged children reported updating their child's individualized health plan when their child's health needs changed.
- The three most commonly cited concerns of individuals who responded to the survey for their children were
 - obtaining adequate health insurance for their child
 - locating an adult specialist that will accept the health insurance of the child
 - knowing what to do in a medical emergency
- The two most commonly requested care coordination services for individuals who responded to the survey were
 - scheduling preventative dental care appointments
 - assistance in applying for community-based services

The gaps and barriers identified by individuals in this survey will be considered in future efforts and partner discussions for CYSHCN.

To view the full report, please visit www.kdheks.gov/cyshcn/download/Family_Survey.pdf. For more information or questions, please contact Marc Shiff at mshiff@kdheks.gov or KDHE's CYSHCN program office.

Stillbirths and Infant Deaths Kansas, 2010

Carol Moyer, MPH, RN, Greg Crawford, BA, David Oakley, MA
Bureau of Epidemiology and Public Health Informatics

Infant mortality is an important indicator of the health of a community or state. It is associated with a variety of factors such as economic development, general living conditions, social wellbeing where basic needs are met, rates of illness such as diabetes and hypertension, and quality of the environment. The purpose of this report is to move beyond single-year statistics reported in the *Annual Summary of Vital Statistics* and provide a long-term view of underlying percentages or rates. Time periods used predominately in this report are five years and 20 years. At least five years are used to evaluate or present trends.

In the last century, the Kansas infant mortality rate (IMR) has decreased substantially (91.4%) from 73.5 deaths per 1,000 live births in 1912 (2,795 infant deaths) to 6.3 in 2010 (253 infant deaths).

- The overall trend for infant mortality rates has decreased significantly the last 20 years (1991-2010).
- The overall decline in infant mortality rates in the last five years was not a statistically significant trend.
- The Black non-Hispanic infant mortality rate in the last 20 years (1991-2010) has remained at least twice that of the White non-Hispanic population for most years.
- Low birthweight (62.5% of infant deaths) and prematurity (62.2%) were primary mortality risk factors based on analysis of the 2006-2010 linked birth/death file.
- Prematurity is an important risk factor for the Black non-Hispanic population (72.0% of infant deaths), White non-Hispanic population (59.1%), and the Hispanic population (65.6%).
- The infant mortality rate of 46.5/1,000 live births for premature infants was 16 times higher than the rate for infants born at term (2.9/1,000).
- The infant mortality rate for very premature infants (206.5/1,000) was 72 times higher than the rate for infants born at term (2.9/1,000).
- The maternal factors category was the leading cause of stillbirths (51.8%), while the prematurity or low birthweight category was the leading cause of death for hebdomadal period deaths (32.4%). In the last five years, there were 1,688 perinatal deaths (8.1/1,000 live births and stillbirths).

The *Selected Special Statistics Stillbirths and Infant Deaths Kansas, 2010* summarizes vital records data on stillbirths and infant deaths. This report can be found at [http://www.kdheks.gov/hci/IMR/2010 IMR Report.pdf](http://www.kdheks.gov/hci/IMR/2010%20IMR%20Report.pdf). For more information or questions, please contact Greg Crawford at gcrawford@kdheks.gov or KDHE's Bureau of Epidemiology and Public Health Informatics.

Adequacy of Prenatal Care Utilization Index Kansas, 2010

David Oakley, MA, Greg Crawford, BA, Carol Moyer, MPH, RN
Bureau of Epidemiology and Public Health Informatics

Improving family health is an essential role for public health agencies. Tracking the quantity of prenatal care pregnant women receive through the Adequacy of Prenatal Care Utilization Index (APNCU), enables public health to identify inequities in the provision of care. Using birth certificate information, KDHE calculates APNCU using methods developed by Dr. Milton Kotelchuck. In 2010 prenatal care described as inadequate decreased by 4.7 percent compared to 2009. Adequate care increased by 3.1 percent. While Kansas' level of adequate care (79.8%) is better than the Healthy People 2020 target of 77.6 percent, inequities by population group and pay source continue.

To view the full report, please visit www.kdheks.gov/hci/pdf/APNCU_10.pdf. For more information or questions, please contact Greg Crawford at gcrawford@kdheks.gov or KDHE's Bureau of Epidemiology and Public Health Informatics.

Adolescent and Teenage Pregnancy Report Kansas, 2010

David Oakley, MA, Greg Crawford, BA, and Carol Moyer, MPH
Bureau of Epidemiology and Public Health Informatics

Maintaining and improving family health is an essential component of the state's public health mission. Teen pregnancy accounts for a sizable burden on society. According to the Centers for Disease Control and Prevention (CDC) it is a "winnable battle." The Kansas Department of Health and Environment (KDHE) annually prepares this report to provide data to support assessment and evaluation of teen pregnancies in Kansas. KDHE has a number of programs directed at reducing teen pregnancy. The U.S. Department of Health and Human Services set a number of Healthy People 2020 targets for reducing pregnancy among females aged 10-19.

Pregnancy rates for Kansas resident females aged 10-19 dropped by 13.8 percent from 2009 to 2010. Rates among females aged 15-17 and 18-19 also dropped. The number of pregnancies among females aged 10-14 increased slightly (56 in 2009 to 59 in 2010), resulting in an unchanged pregnancy rate.

Kansas pregnancy rates among females 15-17 years of age, (22.4 per 1,000) compares favorably with the Healthy People 2020 national target of 36.2 pregnancies per 1,000 age group specific female population. The state pregnancy rate for females aged 18-19 (77.6 per 1,000 age group specific population) also compares favorably with the Healthy People 2020 national target of 105.9 pregnancies per 1,000 age group specific female population.

While Kansas has exceeded the national targets for teen pregnancy, the state's birth rate for females aged 15-19 remains higher than the national rate. The gap between the Kansas and U.S. rates is narrowing. In 2010, the Kansas rate was 39.0 births per 1,000 age group specific female population compared to the preliminary U.S. rate of 37.9.

Inequities continue to exist among population groups in Kansas. For example, pregnancy rates for Black non-Hispanic and Hispanic teens aged 10-17 are three times higher than the rate for White non-Hispanics of the same age group.

To view the full report, please visit www.kdheks.gov/hci/adol_teen_preg/Adolescent_Teenage_Pregnancy_10.pdf. For more information or questions, please contact Greg Crawford at gcrawford@kdheks.gov or KDHE's Bureau of Epidemiology and Public Health Informatics.

2011 Survey of Excessive Heat Policies and Practices in Kansas Schools

Garry Kelley, MS and Henri Menager, MPH, Bureau of Epidemiology and Public Health Informatics
Dale M. Dennis, MS, Ed.S., KSDE, Deputy Commissioner of Education

Kansas does not have a statewide policy or guidelines in place to address excessive heat health and safety issues in schools. Children are vulnerable to excessive heat because their metabolisms differ from the metabolisms of adults, and they rely on others to regulate the temperature of their environment and provide adequate fluid intake. The National Weather Service reports that occasionally temperatures can exceed 90° Fahrenheit in May and June when Kansas schools are still in session. In 2011, Kansas had more than 75 days with temperature at or exceeding 90°. Many public schools in Kansas already have an excessive heat policy in place. However, the nature and extent of these school policies and practices are not well known. A survey was sent to public school superintendents inquiring about their school policies and practices in regards to excessive heat policies.

To view the full report, please visit www.kdheks.gov/phi/khsnews/khs53.pdf. For more information or questions, please contact Henri Menager at hmenager@kdheks.gov or KDHE's Bureau of Epidemiology and Public Health Informatics.

Perinatal Periods of Risk (PPOR) Approach to Better Understand Fetal-Infant Mortality: A State-Level Analysis in Kansas, 2005-2009

Jamie S. Kim, MPH, Bureau of Family Health/Bureau of Epidemiology and Public Health Informatics
Carol Gilbert, MS, CityMatCH
Laurin Kasehagen, MA, PhD, CityMatCH and CDC

Background: Kansas' infant mortality rate (IMR) has been persistently higher than the national rate. In recent years, Kansas' IMR has stagnated while the national rate has declined. Furthermore, while many states have made progress closing the mortality gap between non-Hispanic black and non-Hispanic white infants, Kansas has not.

Methods: Fetal death and linked birth-infant death certificate files (2005-2009) were compiled and analyzed using the Perinatal Periods of Risk approach to gain greater insight into the underlying factors contributing to Kansas' fetal and infant deaths.

Results: When compared to a national reference group, 42.4% of Kansas' excess fetal-infant mortality was in the post-neonatal period among infants ≥ 1500 g. The excess mortality rate for non-Hispanic blacks (10.7) was 4.7 times greater than non-Hispanic whites (2.3). Among non-Hispanic white and Hispanic mothers excess mortality was attributable to risks relating to infant health and injury/safety. For non-Hispanic black mothers, the excess fetal-infant mortality was attributable to maternal health and prematurity. Further analysis showed that 91% of the non-Hispanic black mortality in very low birth weight births was attributable to birthweight distribution. Only 9% of the non-Hispanic black very low birthweight (VLBW) disparity was due to birthweight-specific mortality.

Conclusions: Causes of excess fetal-infant death and consequent opportunities for intervention vary according to the mother's race/ethnicity. To significantly impact Kansas' overall IMR, community-specific, tailored prevention efforts on prematurity, safe sleep, and injury prevention may be necessary. Complex factors necessitate a multi-pronged approach to reduce Kansas' overall IMR and collaborative efforts of community members, public health, and the medical community.

To view the full report, please visit www.kdheks.gov/phi/khsnews/khs52.pdf. For more information or questions, please contact Jamie Kim at jkim@kdheks.gov or KDHE's Bureau of Family Health/Bureau of Epidemiology and Public Health Informatics.

Trends in Breastfeeding Initiation Rates in Kansas, 2005-2010

Martha Hagen, MS, RD, LD, IBCLC, Bureau of Family Health

Jamie S. Kim, MPH, Bureau of Family Health/Bureau of Epidemiology and Public Health Informatics

For nearly all infants, breastfeeding is the best source of infant nutrition and immunologic protection, and it provides remarkable health benefits to mothers as well. The Agency for Healthcare Research and Quality released a review of the evidence on the effects of breastfeeding in developed countries in April 2007. Reviewing over 9,000 abstracts, they found a reduction in the risk of acute otitis media, gastroenteritis disorders, severe lower respiratory tract infection, atopic dermatitis, asthma, obesity, type 1 and 2 diabetes, childhood leukemia, sudden infant death syndrome, and necrotizing enterocolitis for breastfed infants. Mothers who breastfed had a reduced risk of type 2 diabetes and breast and ovarian cancers. Reduced incidence of illnesses provides health care cost savings.

Surgeon General Regina M. Benjamin, M.D., M.B.A. released a *2011 Call to Action to Support Breastfeeding*. The *Call to Action* states that “One of the most highly effective preventive measures a mother can take to protect the health of her infant and herself is to breastfeed.” The report sets forth the roles of clinicians, employers, communities, researchers and government leaders in the promotion and support of breastfeeding. The report states “Mothers are acutely aware of and devoted to their responsibilities when it comes to feeding their children, but the responsibilities of others must be identified so that all mothers can obtain the information, help, and support they deserve when they breastfeed their infants.”

To view the full report, please visit www.kdheks.gov/phi/khsnews/khs52.pdf. For more information or questions, please contact Martha Hagen at mhagen@kdheks.gov or KDHE’s Bureau of Family Health.

SECTION VI

Appendices

COUNTY ABBREVIATIONS

AL	Allen	GL	Greeley	OB	Osborne
AN	Anderson	GW	Greenwood	OT	Ottawa
AT	Atchison	HM	Hamilton	PN	Pawnee
BA	Barber	HP	Harper	PL	Phillips
BT	Barton	HV	Harvey	PT	Pottawatomie
BB	Bourbon	HS	Haskell	PR	Pratt
BR	Brown	HG	Hodgeman	RA	Rawlins
BU	Butler	JA	Jackson	RN	Reno
CS	Chase	JF	Jefferson	RP	Republic
CQ	Chataqua	JW	Jewell	RC	Rice
CK	Cherokee	JO	Johnson	RL	Riley
CN	Cheyenne	KE	Kearny	RO	Rooks
CA	Clark	KM	Kingman	RH	Rush
CY	Clay	KW	Kiowa	RS	Russell
CD	Cloud	LB	Labette	SA	Saline
CF	Coffey	LE	Lane	SC	Scott
CM	Comanche	LV	Leavenworth	SG	Sedgwick
CL	Cowley	LC	Lincoln	SW	Seward
CR	Crawford	LN	Linn	SN	Shawnee
DC	Decatur	LG	Logan	SD	Sheridan
DK	Dickinson	LY	Lyon	SH	Sherman
DP	Doniphan	MN	Marion	SM	Smith
DG	Douglas	MS	Marshall	SF	Stafford
ED	Edwards	MP	McPherson	ST	Stanton
EK	Elk	ME	Meade	SV	Stevens
EL	Ellis	MI	Miami	SU	Sumner
EW	Ellsworth	MC	Mitchell	TH	Thomas
FI	Finney	MG	Montgomery	TR	Trego
FO	Ford	MR	Morris	WB	Wabaunsee
FR	Franklin	MT	Morton	WA	Wallace
GE	Geary	NM	Nemaha	WS	Washington
GO	Gove	NO	Neosho	WH	Wichita
GH	Graham	NS	Ness	WL	Wilson
GT	Grant	NT	Norton	WO	Woodson
GY	Gray	OS	Osage	WY	Wyandotte

TECHNICAL NOTES

In this report, data analysis and display were based on suggestions of the Maternal and Child Health Services, Health Resources and Services Administration. Table 1 includes the guidelines for measures with small sample sizes used in this document.

TABLE 1

Number of Events	Calculate Rate/ Percent	Method of Analysis
At least 20 events in the numerator and /or at least 50 events in the denominator.	Yes	Used calculated rate or percent
Fewer than 20 events (numerator) and/or 50 events in the denominator.	Yes	Combine 3-5 years so there will be at least 10 in the numerator and 50 in the denominator

Procedures: Calculate rates (at least 20 events in one year)

Example: 25 infant deaths and 860 live births

calculate rate:

$$\frac{25 \text{ infant deaths}}{860 \text{ live births}} \times 1,000 = 29.1 \text{ (rate)}$$

Mortality Data

Death data are classified according to the World Health Organization’s International Classification of Diseases (ICD). The ICD – 10 classification system uses an alpha-numeric coding system denoting both the nature of injury and external causes.

Category	ICD-10 Coding
Vital Statistics - Death	
Injury	U01-U03, V01-Y36, Y85-Y87, Y89
Suicide	U03, X60-X84, Y870
Homicide	U01-U02, X85-Y09, Y871
Unintentional Injury	V01-X59, Y85-Y86

Weighting Procedure

Weighting is a process by which the survey data such as the Behavioral Risk Factor Surveillance System is adjusted to account for unequal selection probability and response bias and to more accurately represent the population from which the sample was drawn. The responses of each person interviewed are assigned a weight which accounts for the density stratum, the number of telephone numbers in the household, the number of adults in the household, and the demographic distribution of the sample. Alterations in the weighting formulas are made to arrive at estimates for prevalence of households and among children in specific age groups.

2005 Revisions to Certificates

Beginning with the reporting of 2005 data, Kansas implemented the 2003 revision of the U.S. standard certificates and reports. Please note that not all states have implemented the use of the new certificate format. Therefore, some information routinely collected on Kansas occurrence events may not be provided on births and deaths that involve Kansas residents who had events in another state.

While most data items on the certificates are comparable to past years, certain items have changed considerably. These changes can affect comparability with previous years data. Three data elements addressed in this report are: prenatal care visits, smoking, and race-ethnicity.

Prenatal care visits

In previous years, the mother or prenatal care provider reported the month of pregnancy in which the mother began prenatal care. As of 2005, this item was replaced by the exact dates of first and last prenatal visit. Therefore, the month prenatal care began is now calculated from the last normal menses date and the date of first prenatal care visit. Unfortunately, because exact dates are harder to get, the month prenatal care began now has high numbers of missing data. The missing data have been removed from totals when calculating percentages.

As a result of changes in reporting, levels of prenatal care utilization based on the new revised data are lower than those based on data from previous certificates. For example, 2004 data for Kansas indicates that 86.5% of residents began care in the first trimester compared to 75.0% based on the 2006 revised data. The Adequacy of Prenatal Care Utilization Index (APNCU) showed a small increase in the proportion of women receiving less than adequate care between 2004 (18.7 %) and 2006 (21.6%). Much of the difference between 2004 and 2006 is related to changes in reporting and not to changes in prenatal care utilization. Accordingly, prenatal care data in this report is not directly comparable to data collected from previous certificates.

Smoking

Adoption of the revised birth certificate produced substantive changes in the wording of the questions on tobacco use. The old certificate listed a tobacco use checkbox and a literal field for the number of cigarettes in the medical risk factor section. Smoking information was limited to whether the mother smoked anytime during the pregnancy. The new certificate asks about cigarette smoking in an item separate from medical risk factors. New fields address smoking behavior prepregnancy and during each trimester of the pregnancy. New data are not fully comparable with pre-2005 data. However, the new information will enable supplementary

research into changes in smoking patterns before and during the pregnancy. It remains uncertain whether the changes will address what has been chronic underreporting of smoking on birth certificates.

Race-Ethnicity

The revised certificate contains significant changes in the way self-reported race and ethnicity are collected. The race item was revised to allow the reporting of multiple races and can capture up to 15 categories and eight literal entries. In addition, Hispanic origin is now collected as a separate question from ancestry. These changes were implemented to provide a better picture of the nation's variation in race and Hispanic origin. The expanded racial and origin categories are compliant with the provisions of the Statistical Policy Directive No. 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting, issued by the Office of Management and Budget (OMB) in 1997.

For this report, race and Hispanic origin categories are combined. Self-reported single race data are utilized for non-Hispanic white, non-Hispanic black, non-Hispanic Native American, non-Hispanic Asian/Pacific Islander, and non-Hispanic other. If more than one racial category is checked, the person's race is classified as "Multiple" and is collapsed into the non-Hispanic other category. Data shown for Hispanic persons include all persons of Hispanic origin of any race. These particular groupings are categories that reflect the cultural and ethnic identities of subgroups of the population commonly addressed in the public health field and on which health disparities can be measured.

For more information, please visit www.kdheks.gov/hci/AS2010.html.

Glossary

Adequacy of Prenatal Care Utilization (APNCU)

Index: An assessment of the adequacy of prenatal care measured by the APNCU Index (often referred to as the Kotelchuck Index), a composite measure based on gestational age of the newborn, the trimester prenatal care began, and the number of prenatal visits made.

African American/"Black" (2000): The 2000 Census category "Black or African American" describes a person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black, African Am., or Negro," or provide written entries such as African American, Afro American, Kenyan, Nigerian, or Haitian.

Age-Adjusted Death Rate: A calculation by which the age composition of a population is defined as constant so that differences in age composition can be eliminated from the analysis.

American Indian or Alaska Native (2000): The 2000 Census category "American Indian or Alaska Native" describes a person having origins in any of the original peoples of North and South America (including Central America) and who maintain tribal affiliation or community attachment. It includes people who classified themselves as described below.

American Indian. This category includes people who indicated their race as "American Indian," entered the name of an Indian tribe, or reported such entries as Canadian Indian, French American Indian, or Spanish American Indian.

American Indian tribe. Respondents who identified themselves as American Indian were asked to report their enrolled or principal tribe. Therefore, tribal data in tabulations reflect the written entries reported on the questionnaires. Some of the entries (for example, Iroquois, Sioux, Colorado River, and Flathead) represent nations or reservations. The information on tribe is based on self-identification and therefore does not reflect any designation of federally or state-recognized tribe.

Information on American Indian tribes is presented in summary files. The information for Census 2000 is derived from the American Indian Tribal Classification List for the 1990 census that was updated based on a December 1997, Federal Register Notice, entitled "*Indian Entities Recognized and Eligible to Receive Service From the United States Bureau of Indian Affairs*," Department of the Interior, Bureau of Indian Affairs, issued by the Office of Management and Budget.

Alaska Native. This category includes written responses of Eskimos, Aleuts, and Alaska Indians as well as entries such as Arctic Slope, Inupiat, Yupik, Alutiiq, Egegik, and Pribilovian. The Alaska tribes are the Alaskan Athabascan, Tlingit, and Haida. The information for Census 2000 is based on the American Indian Tribal Classification List for the 1990 census, which was expanded to list the individual Alaska Native Villages when provided as a written response for race.

Apgar score: A summary measure of the condition of the infant based on heart rate, respiratory effort, muscle tone, reflex irritability, and color. Each factor is given a score of 0, 1, or 2; the sum of these five values is the Apgar score, ranging from 0 to 10.

Asian (2000): The 2000 Census category "Asian" describes a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," and "Other Asian."

Asian Indian. This category includes people who indicated their race as "Asian Indian" or identified themselves as Bengalese, Bharat, Dravidian, East Indian, or Goanese.

Chinese. This category includes people who indicate their race as "Chinese" who identify themselves as Cantonese, Chinese American, or Taiwanese.

Filipino. This category includes people who

indicate their race as “Filipino” or who report entries such as Filipino, Philippine, or Filipino American.

Japanese. This category includes people who indicate their race as “Japanese” or who report entries such as Nipponese or Japanese American.

Korean. This category includes people who indicate their race as “Korean” or who provide a response of Korean American.

Vietnamese. This category includes people who indicate their race as “Vietnamese” or who provide a response of Vietnamese American.

Cambodian. This category includes people who provide a response such as Cambodian or Cambodia.

Hmong. This category includes people who provide a response such as Hmong, Laohmong, or Mong.

Laotian. This category includes people who provide a response such as Laotian, Laos, or Lao.

Thai. This category includes people who provide a response such as Thai, Thailand, or Siamese.

Other Asian. This category includes people who provide a response of Bangladeshi; Bhutanese; Burmese; Indochinese; Indonesian; Iwo Jiman; Madagascar; Malaysian; Maldivian; Nepalese; Okinawan; Pakistani; Singaporean; Sri Lankan; or Other Asian, specified and Other Asian, not specified.

See Pacific Islander.

Behavioral Risk Factor Surveillance Survey

(BRFSS): The world’s largest telephone survey tracks health risks in the United States. Information from the survey is used to improve the health of the American people. Coordinated by the Centers for Disease Control and Prevention (CDC) and conducted by State health departments.

Kansas BRFSS: The Kansas BRFSS adapted from the National BRFSS. This surveillance system is based on a research design developed by the CDC and used in all 50 states, the District of Columbia, and three U.S. territories.

Birth rate: Measures the number of births that occur to 1,000 adults of reproductive age in any given

year. Birth rates are based on information collected from birth certificates, combined with population estimates generated by the U.S. Bureau of the Census.

Birth weight: The weight of the fetus or infant at the time of delivery.

Body Mass Index (BMI): A measure of weight relative to height. A BMI of less than 25 is considered ideal or healthy; a BMI of 25-29 is considered overweight; and a BMI greater than 30 is considered to be indicative of obesity. BMI is calculated by dividing an individual’s weight in kilograms by the individual’s height in meters squared.

CDC: Centers for Disease Control and Prevention, based in Atlanta, GA.

Community: Any set of persons within the society that differs from other sets due to demographic, economic or social characteristics such as age, sex, education level, race, religion, income level, lifestyle, beliefs, etc.

Congenital anomalies: Defects existing at and usually before birth regardless of causation.

Crude death rate: The number of deaths per 1,000 population, calculated by number of deaths divided by population of the area, multiplied by 1,000. See Mortality.

Death rate: A death rate is a ratio between mortality and population; the number of deaths per specific number of people. This is the most widely used measure to determine the overall health of a community. Death rates are usually computed per 100,000 population. Rates allow meaningful comparisons between groups of unequal size.

Disparities: Differences (in health) among individuals and/or groups in a population.

Environmental factors: Qualities or contaminants of living and working surroundings that contribute to health and health care disparities such as poor air qual-

ity, crime, contaminated water, and exposure to toxic chemicals. Environmental factors in combination with individual, social and health system factors lead to health and healthcare disparities.

Ethnicity: The characteristic of a group of people that share a common and distinctive national, religious, linguistic or cultural heritage. A quality or affiliation resulting from similar national, religious, linguistic, or cultural heritage.

Family: As defined by the U.S. Census Bureau, a family includes a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. All people in a household who are related to the householder are regarded as members of his or her family. A household can contain only one family for purposes of census tabulations. Not all households contain families since a household may be a group of unrelated people or one person living alone.

Fertility rate: The number of live births per 1,000 females 15-44 years of age. Calculated by number of live births divided by female population ages 15-44 multiplied by 1,000.

Health: A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Health care organization: Any public or private institution involved in any aspect of delivering health care services.

Health maintenance organization (HMO): A type of managed care organization that provides comprehensive medical care for a predetermined annual fee per enrollee.

Healthy People 2020: Healthy People (HP) provides science-based, 10-year national objectives for improving the health of all Americans. HP2020 is the most recent agenda for improving the nation's health. They establish benchmarks and help monitor progress to encourage between-sector collaboration, help individuals make informed health decisions and

measure the impact of prevention activities.

Hebdomadal death: The death of a live-born infant which occurs prior to the seventh day of life.

Hispanic/"Hispanic or Latino" (2000): The data on the Hispanic or Latino population were derived from answers to a question that was asked of all people. The terms "Spanish," "Hispanic origin," and "Latino" are used interchangeably. Some respondents identify with all three terms while others may identify with only one of these three specific terms. Hispanics or Latinos who identify with the terms "Spanish," "Hispanic," or "Latino" are those who classify themselves in one of the specific Spanish, Hispanic, or Latino categories listed on the questionnaire ("Mexican," "Puerto Rican," or "Cuban") as well as those who indicate that they are "other Spanish/Hispanic/Latino." People who do not identify with one of the specific origins listed on the questionnaire but indicate that they are "other Spanish, Hispanic, or Latino" are those whose origins are from Spain, the Spanish-speaking countries of Central or South America, the Dominican Republic, or people identifying themselves generally as Spanish, Spanish-American, Hispanic, Hispano, Latino, and so on. All write-in responses to the "other Spanish/Hispanic/Latino" category were coded.

If an individual could not provide a Hispanic origin response, their origin was assigned using specific rules of precedence of household relationship. For example, if origin was missing for a natural-born daughter in the household, then either the origin of the householder, another natural-born child, or spouse of the householder was assigned. If Hispanic origin was not reported for anyone in the household, the Hispanic origin of a householder in a previously processed household with the same race was assigned. This procedure is similar to those used in 1990, except for Census 2000 race and Spanish surnames were used to assist in assigning an origin.

Household: As defined by the U.S. Census Bureau, a household includes all of the people who occupy housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room occupied (or if vacant, intended for occupancy)

as separate living quarters. Separate living quarters are those in which the occupants live separately from any other people in the building and that have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living quarters.

ICD-10 Code: The cause-identifying number classified in the 10th Revision of the international classification of Diseases implemented by National Center for Health Statistics (NCHS) for deaths in 1999.

ICD-9 Code: International classification of Diseases, 9th Revision (1979-1998).

Incidence: Incidence is an estimate of the number of new cases of disease that develop in a population in a specified time period, usually one year. Incidence is often used as an indicator of the need for preventive measures, or to evaluate the effectiveness of existing programs. How often new cases of a health problem occur in a population.

Indian (American): See American Indian.

Infant death rate: The number of infant deaths per 1,000 live births, calculated as number of infant deaths divided by number of live births, multiplied by 1,000.

Infant death: The death of a live-born infant which occurs within the first year of life.

Interpreter: A person who not only translates from one language to another but assists in cross-cultural understanding between providers and patients.

Live birth: The complete expulsion or extraction of a product of human conception from its mother, irrespective of the duration of pregnancy, that, after such expulsion or extraction, shows any evidence of life such as breathing, heartbeat, pulsation of the umbilical cord, or voluntary muscle movement, whether or not the umbilical cord has been cut or the placenta attached.

Low birth weight: Weight of a fetus or infant at delivery which is under 2,500 grams (less than five pounds, 8 ounces).

Maternal death: Deaths attributable to delivery or the complications of pregnancy, childbirth or the immediate time period following childbirth.

Maternal death rate: The number of maternal deaths per 100,000 live births.

Medicaid: A state and federal program which funds and provides specific and approved health care and related services for individuals meeting certain eligibility conditions.

Medicare: A federal health insurance program designed to provide health care for the elderly and the disabled.

Minority (2000): 2000 minority population includes all persons who are not Non-Hispanic White Alone (e.g., White Hispanics would be a minority population as would persons who classified themselves as both White and American Indian).

Morbidity: A term used to describe disease, sickness or illness, as a departure from normal physiological and psychological conditions. It is normally expressed as a morbidity rate. Morbidity rates give the closest frame of the quality of life and health status in a given population.

Mortality: A term used to describe death. It is normally expressed as a rate, expressing the proportion of a particular population who die of one or more diseases or of all causes during a specified unit of time, usually a year. It is also the probability of dying within a specified time period.

Neonatal death: The death of a live-born infant which occurs prior to the twenty-eighth day of life.

Neonatal death rate: The number of neonatal deaths per 1,000 live births calculated thus, number of neonatal deaths divided by number of live births multiplied by 1,000.

Occurrence data: Vital statistics compiled on the basis of where the vital event happened.

Other race/“Some other race” (2000): This category includes all other responses not included in the “White,” “Black or African American,” “American Indian or Alaska Native,” “Asian,” and “Native Hawaiian or Other Pacific Islander” race categories described above. Respondents providing write-in entries such as multiracial, mixed, interracial, or a Hispanic/Latino group (for example, Mexican, Puerto Rican, or Cuban) in the “Some other race” write-in space are included in this category.

Pacific Islander/“Native Hawaiian or Other Pacific Islander” (2000): The 2000 Census category “Native Hawaiian or Other Pacific Islander” describes a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicate their race as “Native Hawaiian,” “Guamanian or Chamorro,” “Samoan,” and “Other Pacific Islander.” (In this document “Asian” and “Pacific Islander” data are combined into one category.)

Native Hawaiian. This category includes people who indicate their race as “Native Hawaiian” or who identify themselves as “Part Hawaiian” or “Hawaiian.”

Guamanian or Chamorro. This category includes people who indicate their race as such, including written entries of Guam or Chamorro.

Samoan. This category includes people who indicate their race as Samoan or who identify themselves as American Samoan or Western Samoan.

Other Pacific Islander. This category includes people who provide a write-in response of a Pacific Islander group such as Carolinian; Chuukese (Trukese); Fijian; Kosraean; Melanesian; Micronesian; Northern Mariana Islander; Palauan; Papua New Guinean; Pohnpeian; Polynesian; Solomon Islander; Thitian; Tokelauan; Tongan; Yapese; or Other Pacific Islander, specified and Other Pacific Islander, not specified.

In this report “Asian” and “Pacific Islander” data are combined into one category. See also Asian.

Patients/consumers: Individuals, including accompanying family members, guardians, or companions, seeking physical or mental health care services, or other health-related services.

Perinatal death: Fetal deaths plus hebdomadal deaths.

Population: All people, male and female, child and adult, living in a given geographic area.

Postneonatal death: Death of a person ages between 28 days and one year.

Postneonatal death rate: The number of post neonatal deaths per 1,000 live births, calculated as number of Postneonatal deaths divided by the number of live births, multiplied by 1,000.

Prenatal care: Pregnancy-related health care services provided to a woman between conception and delivery.

Prevalence: Prevalence is an estimate of how many people have a specific condition or disease at a given point in time. This number is useful in assessing the level of medical and social care needed for current cases.

Race (2000): The data on race were derived from answers to the question on race that was asked of all people. The concept of race, as used by the Census Bureau, reflects self-identification by people according to the race or races with which they most closely identify. These categories are socio-political constructs and should not be interpreted as being scientific or anthropological in nature. Furthermore, the race categories include both racial and national-origin groups.

The racial classifications used by the Census Bureau adhere to the October 30, 1997, Federal Register Notice entitled, “Revisions to the Standards for the Classification of Federal data on Race and Ethnicity” issued by the Office of Management and Budget (OMB). These guidelines reflect “the increasing diversity of our Nation’s population, stemming from growth in interracial marriages and immigration.”

The OMB standards govern the categories used to collect and present federal data on race and ethnicity. The OMB requires five minimum categories (White, Black or African American, American Indian or Alaska Native, Asian and Native Hawaiian or Other Pacific Islander) for race. A sixth category, “Some other race,” was added with OMB approval. In addition to the five race groups, the OMB also states that respondents should be offered the option of selecting one or more races.

If an individual did not provide a race response, the race or races of the householder or other household members were assigned using specific rules of precedence of household relationship. For example, if race was missing for a natural-born child in the household, then either the race or races of the householder, another natural-born child, or the spouse of the householder were assigned. If race was not reported for anyone in the household, the race or races of a householder in a previously processed household were assigned.

Comparability of 2000 Census race data with previous censuses: Census 2000 race data are not directly comparable with data from 1990 and previous censuses. See the Census 2000 Brief, “Overview of Race and Hispanic Origin” at www.census.gov/prod/2001pubs/c2kbr01-1.pdf.

Residence data: Vital statistics compiled on the basis of the usual place of residence of the person(s) to whom the vital event occurred.

Socioeconomic status (SES): A measure of a person’s available advantages in comparison to others in society. The factors that make up socioeconomic status include income, wealth, education, and employment. In addition, some are investigating the link between perceived social status and health. A growing body of evidence indicates that socioeconomic status (SES) is a strong predictor of health. Better health is associated with having more income, more years of education, and a more prestigious job, as well as living in neighborhoods where a higher percentage of residents have higher incomes and more education.

Surveillance: The ongoing study of a condition, characteristic or disease, generally to detect changes in trends or distribution to initiate investigate or control measures.

Teenage pregnancy: A live birth, stillbirth or abortion occurring to a female under 20 years of age.

Trimester: A three-month period of time. First trimester care, for example, refers to care initiated in the first three months of pregnancy.

Very low birth weight: Weight of a fetus or infant at delivery which is under 1,500 grams (less than 3 pounds, 5 ounces).

Vulnerable: Susceptible to injury or harm. Those whose needs are not fully addressed by traditional service providers. People who feel they cannot comfortably or safely access and use the standard resources offered. They include but are not limited to those who are physically or mentally disabled, limited or non-English speaking, geographically or culturally isolated, medically or chemically dependent, homeless, frail/elderly and children.

Weeks gestation: The number of weeks between the last reported normal menses and the delivery of the fetus or infant.

White (2000): The 2000 census category “White” describes a person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as “White” or report entries such as Irish, German, Italian, Lebanese, Near Easterner, Arab, or Polish.

References:

- Kansas Health Institute. *Racial and Ethnic Minority Health Disparities in Kansas*.
- Kansas Department of Health and Environment, Division of Public Health, Bureau of Epidemiology and Public Health Informatics. *Kansas Annual Summary of Vital Statistics 2010*.
- Data Resource Center for Child & Adolescent Health. www.childhealthdata.org/browse/healthy-people-2020

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