



2011 COMMUNITY HEALTH PROFILE

JOHNSON COUNTY, KANSAS

**An Examination of the Health of
Johnson County, Kansas**

Johnson County Health Department



2011 COMMUNITY HEALTH PROFILE JOHNSON COUNTY, KANSAS

Executive Summary

Community health assessment is a core function of public health that informs the public about health risks within the community. Health assessments allow communities to make informed health decisions and mobilize to improve their collective health.

Provided in this report is information on a wide variety of public health topics. Meaningful comparisons are made both internal and external to Johnson County.

Johnson County is a vibrant and healthy community. The County has already exceeded many of the goals set forth in the United States Department of Health and Human Services document, *Healthy People 2020*. This is evidenced by the fact that few people smoke in Johnson County. In fact, the number of smokers has consistently decreased over the past decade. In addition, most babies born in Johnson County receive adequate prenatal care; building a foundation for a healthy life. These are only two of the many positive health aspects found inside this report.

However, like most of the country, there are stark differences in the health of people across racial, ethnic and economic lines. In Johnson County, the African American population is less healthy than the Caucasian population; Hispanic citizens tend to have less access to healthcare. Diseases related to smoking, diet and physical activity account for more than 60% of deaths in Johnson County and the rate of poverty is rising.

This document provides a snapshot in time characterizing the current community health assessment process, demographics and health issues of the Johnson County community. The information was compiled by the Johnson County Health Department (JCHD) whose mission is to prevent disease and to protect and promote the health of the community.

FINDINGS

- More than 60% of deaths are related to behavior such as diet, physical activity, smoking and alcohol consumption.
- More than 40% of Johnson County residents are overweight and another 20% are obese.
- The mortality rate is consistently higher among African Americans compared to other racial and ethnic groups.
- A greater proportion of African American cancer patients die, compared to other racial groups.
- The proportion of non-white residents is increasing by about a third of a percent each year.
- 6% of pregnant women and 16% of young pregnant women smoke.
- Not enough pregnant Hispanic women receive adequate prenatal care starting in the first trimester.

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COMMUNITY HEALTH ASSESSMENT

The purpose of local health departments is to create environments where people can be healthy (NACCHO, 2005). Public health agencies do this through the core functions of assessment, policy development and assurance. Assessment, or the measuring, monitoring and investigation of the public's health is the cornerstone of all public health services as it allows people and organizations throughout the public health system to make educated decisions.

Community health assessment can be defined as a systematic process of identifying and prioritizing health issues, targeting the populations with the most need and taking action in the most cost effective and efficient way. Additionally, community assets rather than deficits should be addressed (Hancock & Minkler, 2005). Community health assessment and improvement works best through a collaborative process as evidenced by the Johnson County Community Health Assessment Process (CHAP).

Facilitated by Johnson County Health Department (JCHD), CHAP is a group of social service, healthcare and community partners that come together to identify opportunities for improving the health of people living in Johnson County. CHAP consists of more than 34 community partners (Table 1.1). These partners work together and leverage their collective abilities and resources in a collaborative, participatory and empathetic way to address health issues in the community. The work of the coalition is evidence based, using proven scientific data to identify opportunities for improving the health and wellbeing of the citizens of Johnson County.

CHAP borrows methods from other common frameworks such as *Mobilizing for Action through Planning and Partnerships* (NACCHO, 2011) and *Health Needs Assessment: A Practical Guide* (Cavanagh & Chadwick, 2005). Community health assessment is not just the collection and analysis of data in the same way that it is not just community engagement. Rather, it is using data from a variety of reliable sources on needs, assets, and best practices, in conjunction with community partners to bring about change that has high potential to improve the community's health (Figure 1.1).

Using these principals, CHAP identified three priority issues: 1) Physical Activity and Nutrition; 2) Access to Healthcare; and 3) Mental Health and Substance Abuse.

In the initial community health assessment meeting, an overall introduction to the process was provided and information about a broad range of public health topics was presented. Data from the Behavioral Risk Factor Surveillance System, the American Community Survey (U.S. Census), United Community Services of Johnson County, Kids Count, the Centers for Disease Control and Prevention, and Kansas Vital Statistics was disseminated. At a follow up meeting, once CHAP members had an opportunity to assimilate the information, topics were listed on easel pads and placed throughout the room. They were then given six circular stickers and asked to place them on topics that they did not want the group to focus on. A blank easel pad was also available for members to write in topics. After all the dots were placed, the meeting was adjourned and the public health topics were ranked from least to most stickers.

This provided the foundation for the following meeting, at which JCHD facilitated a discussion about the health information provided and the health topic rankings from the previous meeting. For validation purposes, CHAP members were again asked to rank priorities, this time prioritizing topics they did want to focus on. The results remained consistent. The group also decided to consolidate similar topics and select those thought to be at the root of multiple problems. In the end, the three priorities were selected based on public health data and theory as well as a democratic process. There were additional meetings to formulate work groups around each of the selected priorities. Currently, the work groups are meeting to devise strategies that will culminate in a Johnson County Community Health Improvement Plan. The Plan will include implementation details and timelines as well as an evaluation component.

Figure 1.1: Johnson County CHAP Framework

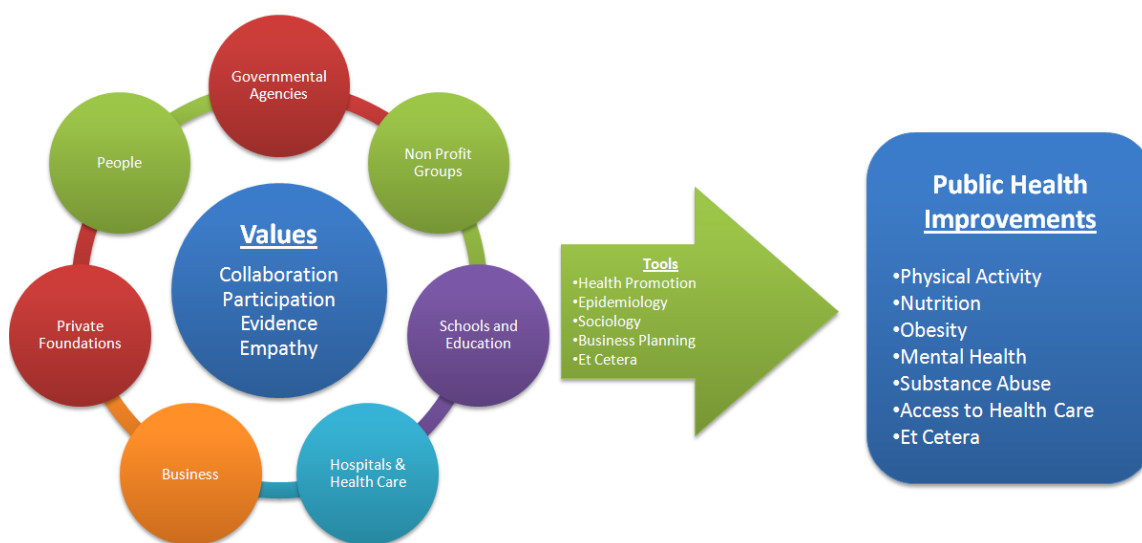


Table 1.1: CHAP Members

Agencies
American Heart Association
Blue Cross Blue Shield of Kansas City
Blue Valley School District
Carondelet Health
Cerner
Children's Mercy Hospital
Cleveland Chiropractic College
Drug and Alcoholism Council
El Centro
Health Partnership Clinic
HomewatchCareGivers
Humana
Johnson County Health Department
Johnson County Developmental Supports
Johnson County Environmental Department
Johnson County Human Services
Johnson County Library
Johnson County Mental Health Center
Johnson/Wyandotte County Medical Society
Kansas State Extension Office
University of Kansas Medical Center
League of Women Voters
Mother and Child Health Coalition
Olathe Medical Center
PB & J Restaurants
REACH Health Care Foundation
Regional Prevention Center
Shawnee Mission School District
Shawnee Mission Medical Center
Kansas Department of Social and Rehabilitative Services
United Community Services
United Way
VVV Marketing and Development, Inc.
Your Wellness Connection
Johnson County Citizens

WORKS CITED

Cavanagh, S., & Chadwick, K. (2005). *Health Needs Assessment: A Practical Guide*. London: National Institute of Health and Clinical Excellence.

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Institute of Medicine. (1988). *The Future of Public Health*. Washington D.C.: IOM/NAS.

NACCHO. (2011). *Mobilizing for Action through Planning and Partnerships (MAPP)*. Retrieved October 5, 2011, from NACCHO: <http://www.naccho.org/topics/infrastructure/mapp/index.cfm>

NACCHO. (2005). *Operational Definition of a Functional Local Health Department*. Washington D.C.: NACCHO.

The following information includes demographic and health data about the Johnson County community. It is by no means a comprehensive list of the health risks in our community, but rather a selection of compelling health issues.

METHODS

The data provided within is intended to be used by the Johnson County Health Department, its partners and by the general public. This section provides a general overview of the information presented.

Data Sources

This report presents data collected by state and national agencies in a routine and systematic manner. Demographic information comes from the United States Census Bureau. Information about births, deaths, hospitalizations and cancer come from Kansas vital statistics and cancer registry. Information about behavior comes from the Behavioral Risk Factor Surveillance System (CDC, 2006), an annual national survey of the health habits of Americans. Information about communicable diseases collected by the Johnson County Health Department is also presented.

Purpose

The World Health Organization defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO, 2011). Because of this, a broad net is cast to pull together a wide spectrum of community health data. Included is information about demographics, mortality, cancer, maternal and child health, health behavior, injuries and violence, as well as substance abuse, mental health and communicable diseases. Also included is a section on assets for promoting health, such as parks, trails, organizations and laws.

Presentation of Data

The information presented is for the most part statistical. A narrative is provided in each section to describe findings. Statistical information is most useful when comparisons are available. Comparisons were made whenever possible for each type of data; however, in some cases there was not enough data to make a comparison. Johnson County is compared with:

- Kansas – to get a sense of how Johnson County compares to a more general group of people,
- Healthy People 2020 – to see how Johnson County measures up with the goals set forth by the nation’s public health experts, and
- Groups within Johnson County – to see how health differs among different people within the community.

There are three general tables or graphs utilized; the first being a line graph, which is used to represent changes over time. The second is a bar graph, which is used to compare groups within Johnson County. Finally, tables are used to present information about additional groups or further characteristics than the bar graphs include.

There are two important things to look for when examining tables and graphs. The first is the measure. This will either be a rate, percent or count and is graphically represented by the top of a bar in a bar chart or the line in a line graph. The second item is the confidence interval or margin of error. Statisticians will have more use for this measure, but in general, the closer the confidence interval is to the main measure or the tighter the error bars are to the bar, the more precise the estimate is and the more it can be trusted. This is especially important when examining data from surveys or from small groups.

Finally, many of the rates presented are *age adjusted*. The age of the population is taken into account and the rate is systematically changed so that more comparable measures can be made. This is completed because age is a risk factor for almost every disease. If a young population is compared to an older population, the rates of almost all chronic diseases will be higher in the older group, simply because of age. This however doesn’t mean they are less healthy. The age adjusted rates allow for better comparisons.

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CDC. (2006). *Behavioral Risk Factor Surveillance System - Operational and User's Guide Version 3.0*. Atlanta, GA: CDC.

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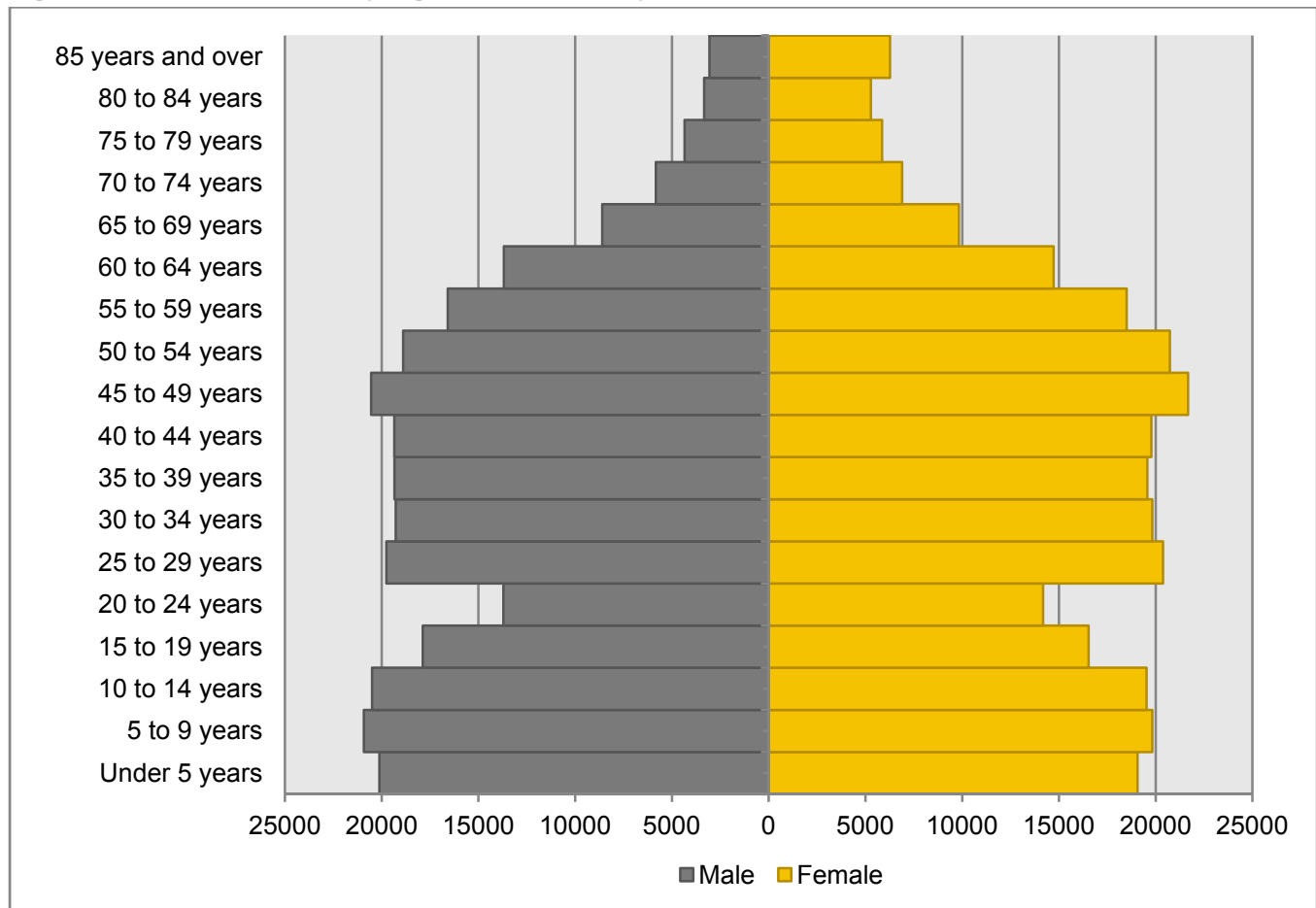
DEMOGRAPHICS

Population

According to the 2010 Census there were 544,179 people and 201,911 households within Johnson County. With 19% of Kansans living in Johnson County, it is the most populous county in Kansas. Over the past decade the population increased by 20.6%, growing at a rate nearly 3.5 times faster than the rest of Kansas and more than 2 times as fast as the United States (U.S. Census Bureau, 2011).

Johnson County's age distribution is stable and resembles that of the broader United States (Figure 2.1). There are more individuals of working age (20 to 64) compared to school age and retired individuals. Many residents live well into old age (U.S. Census Bureau, 2011).

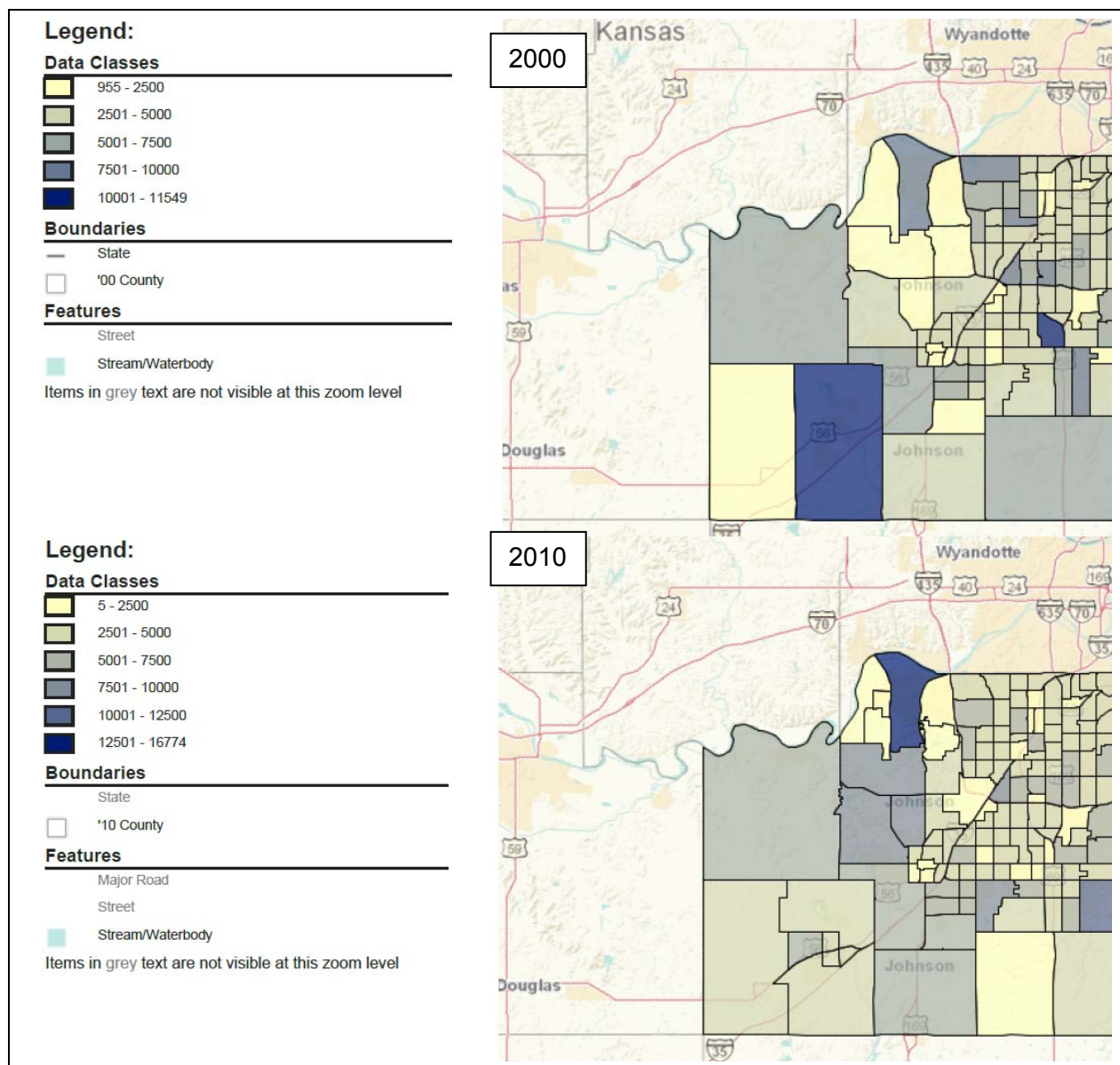
Figure 2.1: Johnson County Age Distribution by Gender – 2009



Source: U.S. Census Bureau, 2010

There has been a slight population shift over the past decade (Figure 2.2). This is evidenced by the change in census tracts (small geographic areas selected for conducting census surveying that are designed to include roughly the same number of people in each block). Small census blocks indicate a high population density. Larger blocks indicate less population density. Comparing the 2000 and 2010 maps, the census blocks in the northeastern region remained roughly the same. However, in the south and southwestern regions there was both breaking of census tracts as well as an increased number of people within tracts that did not break. Both are indications of population growth.

Figure 2.2: Johnson County Population Distribution by Census blocks 2000 & 2010



Source: U.S. Census Bureau, 2000 & 2010

Race and Ethnicity

Eighty-six percent of Johnson County residents are white, making Johnson County less diverse than the United States. Hispanics are the largest minority group (7.2%) followed by African Americans (4.3%) and Asians (4.2%) (Table 2.1).

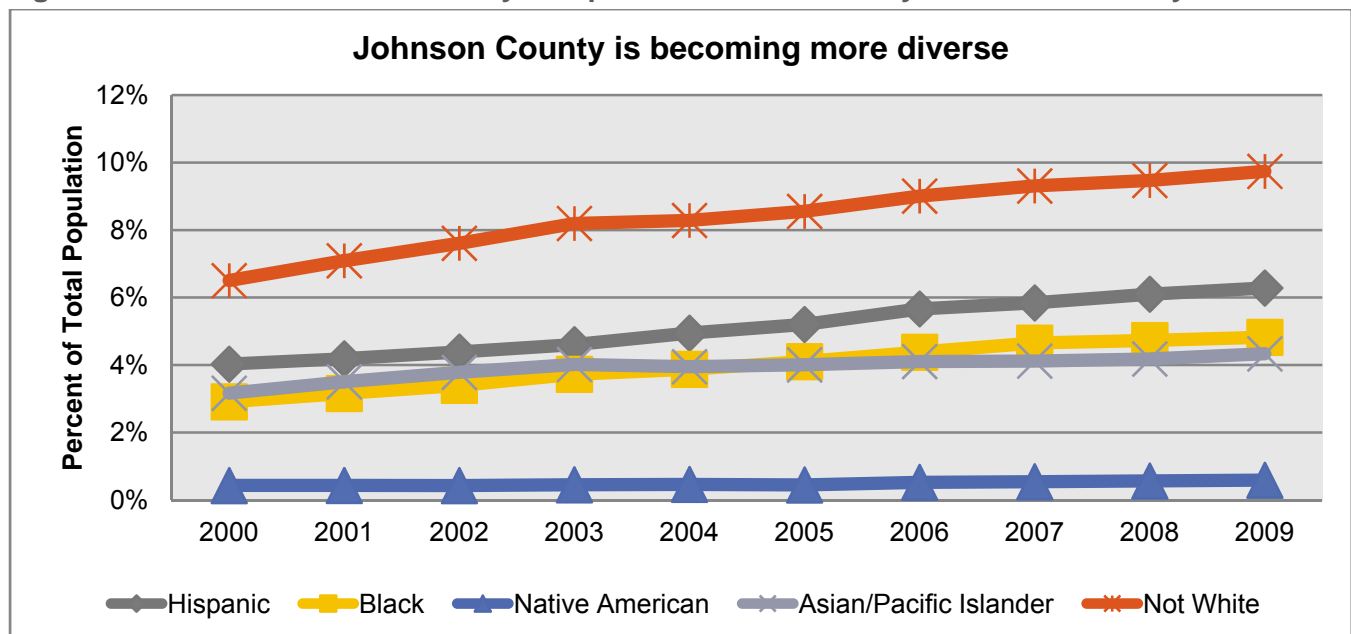
Johnson County became more diverse over the past decade. Non-white residents increased from approximately 6% of the population in 2000 to nearly 10% in 2009 (Figure 2.3). The proportion of Hispanic, African American, Asian and Pacific Islander and Native American populations have all increased the past decade. The proportion of non-white individuals increased, on average, 0.35% each year from 2000-2009 (KDHE-BEPHI, 2009). Also, from 2005-2009, 7.5% of Johnson County residents were foreign born (U.S. Census Bureau, 2011).

Table 2.1: Johnson County Race and Ethnicity compared to Kansas and the US

Race/Ethnicity	Johnson County	(%)	Kansas	(%)	United States	(%)
White	468,052	(86.0%)	2,391,044	(83.8%)	223,553,265	(72.4%)
Hispanic or Latino (of any race)	38,949	(7.2%)	300,042	(10.5%)	50,477,594	(16.3%)
Black or African American	23,636	(4.3%)	167,864	(5.9%)	38,929,319	(12.6%)
Asian	22,743	(4.2%)	67,762	(2.4%)	14,674,252	(4.8%)
Two or More Races	13,638	(2.5%)	85,933	(3.0%)	9,009,073	(2.9%)
American Indian and Alaska Native	2,014	(0.4%)	28,150	(1.0%)	2,932,248	(0.9%)

Source: U.S. Census Bureau, 2008-2010 American Community Survey

Figure 2.3: Trend in Johnson County's Population Distribution by Race and Ethnicity



Source: KDHE - BEPHI

Education

In Johnson County, for the years 2008-2010, a greater proportion of people graduate high school and college compared to both Kansas and the United States (Table 2.2). This is important because educational attainment is associated with poverty, and poverty is associated with almost all measures of poor health. Fourteen percent of young adults have less than a high school diploma, but this drops to 4.5% for individuals older than 25. Educational attainment is not even among races and ethnic groups (Table 2.3). During the years 2008-2010, twenty-eight percent of Hispanics did not graduate high school. This is 24% greater than Johnson County as a whole, and 13% greater than the United States. More White and Asians graduated from college compared to others, however a greater proportion of all groups in Johnson County graduated from college compared to the entire United States, except for Hispanics, whose college graduation rate is similar to that of the US.

Table 2.2: Johnson County Education compared to Kansas and the US

Education	Johnson County		Kansas		United States	
	Percent	(90% CI)	Percent	(90% CI)	Percent	(90% CI)
Population 18-24						
Less than high school	14.4%	(12.8% - 16.0%)	14.7%	(14.0% - 15.4%)	16.9%	(16.8% - 17.0%)
Population 25 years and older						
Greater than high school	95.5%	(95.2% - 95.8%)	89.5%	(89.3% - 89.7%)	85.3%	(85.2% - 85.4%)
Greater than bachelor's degree	51.8%	(51.1% - 52.5%)	29.6%	(29.3% - 29.9%)	28.0%	(27.9% - 28.1%)
Poverty Rate by Education						
Less than high school	19.1%	(14.9% - 23.3%)	23.7%	(22.6% - 24.8%)	25.6%	(25.5% - 25.7%)
High school graduate	7.6%	(6.1% - 9.1%)	11.0%	(10.5% - 11.5%)	12.5%	(12.4% - 12.6%)
Some college	5.3%	(4.6% - 6.0%)	8.1%	(7.7% - 8.5%)	8.9%	(8.8% - 9.0%)
Bachelor's degree or higher	2.0%	(1.7% - 2.3%)	3.4%	(3.2% - 3.6%)	3.9%	(3.8% - 4.0%)

Source: U.S. Census Bureau, 2008-2010 American Community Survey

Table 2.3: Educational Attainment by Race and Ethnicity in Johnson County

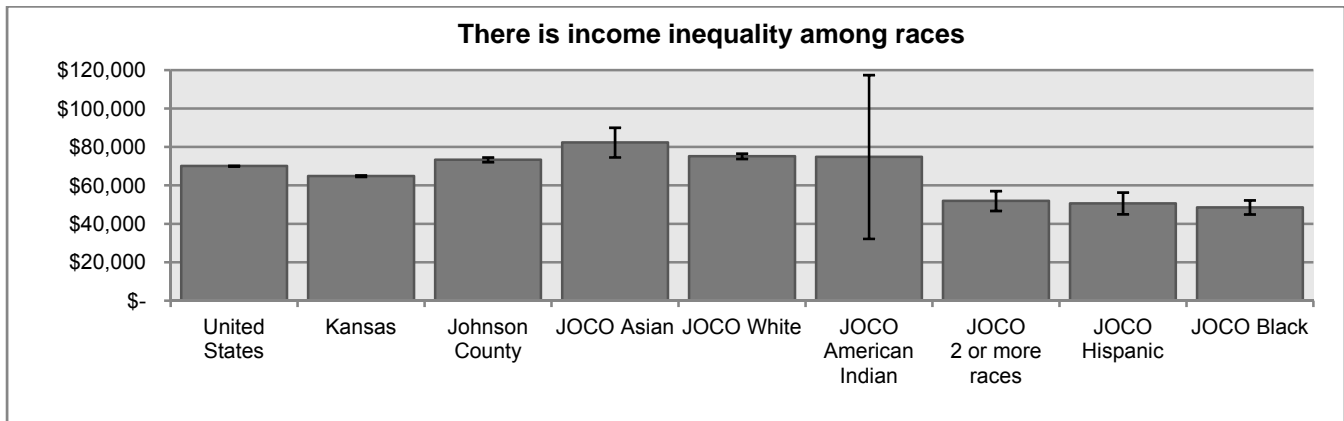
Race/Ethnicity	Less than HS Diploma	Bachelor's degree or greater
Asian	11%	67%
White	4%	52%
Two or more races	6%	39%
Black	6%	37%
Hispanic	28%	25%

Source: U.S. Census Bureau, 2008-2010 American Community Survey

Income and Employment

The median household income in Johnson County is \$73,365. This is \$8500 and \$3250 greater than that of households in Kansas and the United States, respectively. But, there are wide income disparities. Asians (+\$9,000) and Caucasians (+\$1,800) earn more than the Johnson County average. While individuals of two or more races (-\$21,500), Hispanics (-\$23,000) and African Americans (-\$25,000) earn less (Figure 2.4). Unemployment follows trends similar to that seen among income. All groups in Johnson County fare better than their counterparts in Kansas and the United States, but, Hispanics, African Americans and individuals of two or more races experience more unemployment compared to Johnson County as a whole. Education is greatly associated with unemployment. The unemployment rate for individuals with a bachelor's degree or more is half that of persons with less than a bachelor's degree (Table 2.4).

Figure 2.4: Johnson County Median Household Income Compared to Kansas, the US & Groups



Source: U.S. Census Bureau, 2008-2010 American Community Survey

Table 2.4: Unemployment in Johnson County compared to Kansas and the United States

Characteristics	Johnson County		Kansas		United States	
	%	90% CI	%	90% CI	%	90% CI
Unemployment by Race/Ethnicity						
Individuals 16 year or older	5.1%	(4.80% - 5.40%)	6.5%	(6.30% - 6.70%)	9.0%	(8.90% - 9.10%)
Asian	3.6%	(1.80% - 5.40%)	5.6%	(4.20% - 7.00%)	7.2%	(7.10% - 7.30%)
White	4.8%	(4.50% - 5.10%)	5.8%	(5.60% - 6.00%)	7.9%	(7.80% - 8.00%)
Hispanic or Latino origin	7.5%	(5.60% - 9.40%)	9.3%	(8.50% - 10.10%)	10.9%	(10.80% - 11.00%)
Two or more races	9.0%	(5.10% - 12.90%)	12.3%	(10.60% - 14.00%)	13.3%	(13.10% - 13.50%)
Black or African American	10.6%	(10.33% - 10.87%)	15.8%	(14.50% - 17.10%)	15.2%	(15.10% - 15.30%)
Unemployment by Education						
Less than high school graduate	7.1%	(4.30% - 9.90%)	11.2%	(10.20% - 12.20%)	13.8%	(13.70% - 13.90%)
High school graduate or GED	6.6%	(5.50% - 7.70%)	7.2%	(6.80% - 7.60%)	9.5%	(9.40% - 9.60%)
Some college or associate's	5.8%	(4.90% - 6.70%)	5.3%	(5.00% - 5.60%)	7.4%	(7.30% - 7.50%)
Bachelor's degree or higher	3.1%	(2.70% - 3.50%)	2.8%	(2.60% - 3.00%)	4.0%	(3.90% - 4.10%)

Source: U.S. Census Bureau, 2008-2010 American Community Survey

Disabilities

Roughly 8% (43,120) of individuals in Johnson County are disabled (Table 2.5). This proportion is less than both Kansas and the United States. The majority of disabled people are 65 years old or greater. Among this group, 20% have ambulatory difficulties or issues walking or moving about and 14% have difficulty hearing.

Table 2.5: Disabilities in Johnson County compared to Kansas and the United States

Characteristic	Johnson County		Kansas		United States	
	Percent	90% CI	Percent	90% CI	Percent	90% CI
Total Population	8.0%	(7.7% - 8.3%)	12.3%	(12.1% - 12.5%)	12.0%	(11.90% - 12.10%)
Under 5 years	0.6%	(0.2% - 1.0%)	0.9%	(0.7% - 1.1%)	0.8%	(0.70% - 0.90%)
Hearing difficulty	0.3%	(0.0% - 0.6%)	0.6%	(0.4% - 0.8%)	0.5%	(0.40% - 0.60%)
Vision difficulty	0.3%	(0.0% - 0.6%)	0.4%	(0.3% - 0.5%)	0.4%	(0.30% - 0.50%)
5 to 17 years	4.0%	(3.5% - 4.5%)	5.5%	(5.2% - 5.8%)	5.2%	(5.10% - 5.30%)
hearing difficulty	0.6%	(0.4% - 0.8%)	0.8%	(0.7% - 0.9%)	0.7%	(0.60% - 0.80%)
vision difficulty	0.5%	(0.3% - 0.7%)	0.8%	(0.7% - 0.9%)	0.8%	(0.70% - 0.90%)
cognitive difficulty	3.2%	(2.7% - 3.7%)	4.2%	(3.9% - 4.5%)	3.9%	(3.80% - 4.00%)
ambulatory difficulty	0.4%	(0.2% - 0.6%)	0.6%	(0.5% - 0.7%)	0.7%	(0.60% - 0.80%)
self-care difficulty	0.8%	(0.6% - 1.0%)	0.8%	(0.7% - 0.9%)	0.9%	(0.80% - 1.00%)
18 to 64 years	6.1%	(5.7% - 6.5%)	10.3%	(10.1% - 10.5%)	10.0%	(9.90% - 10.10%)
hearing difficulty	1.9%	(1.7% - 2.1%)	2.6%	(2.5% - 2.7%)	2.1%	(2.00% - 2.20%)
vision difficulty	1.0%	(0.8% - 1.2%)	1.6%	(1.5% - 1.7%)	1.7%	(1.60% - 1.80%)
cognitive difficulty	2.4%	(2.1% - 2.7%)	4.1%	(4.0% - 4.2%)	4.1%	(4.00% - 4.20%)
ambulatory difficulty	2.5%	(2.2% - 2.8%)	5.1%	(4.9% - 5.3%)	5.2%	(5.10% - 5.30%)
self-care difficulty	0.9%	(0.7% - 1.1%)	1.7%	(1.6% - 1.8%)	1.8%	(1.70% - 1.90%)
independent living	1.9%	(1.7% - 2.1%)	3.2%	(3.1% - 3.3%)	3.4%	(3.30% - 3.50%)
65 years and over	32.3%	(30.7% - 33.9%)	38.1%	(37.5% - 38.7%)	37.2%	(37.10% - 37.30%)
hearing difficulty	14.2%	(12.9% - 15.5%)	16.9%	(16.5% - 17.3%)	15.4%	(15.30% - 15.50%)
vision difficulty	5.8%	(4.9% - 6.7%)	6.8%	(6.5% - 7.1%)	7.1%	(7.00% - 7.20%)
cognitive difficulty	7.2%	(6.3% - 8.1%)	9.0%	(8.7% - 9.3%)	9.5%	(9.40% - 9.60%)
ambulatory difficulty	20.0%	(18.5% - 21.5%)	24.5%	(24.0% - 25.0%)	24.1%	(24.00% - 24.20%)
self-care difficulty	6.2%	(5.4% - 7.0%)	7.7%	(7.4% - 8.0%)	8.8%	(8.70% - 8.90%)
independent living	13.1%	(12.1% - 14.1%)	14.4%	(14.0% - 14.8%)	16.4%	(16.30% - 16.50%)

Source: U.S. Census Bureau, 2008-2010 American Community Survey

Language

Many languages are spoken in Johnson County. English is by far the dominant language and at least 95% of Johnson County residents speak English as a first or second language. Five percent of the population speak Spanish, but of this group, 50% speak English well. In fact, most people that speak a language other than English as their primary language also speak English well (Table 2.6).

Table 2.6: Languages spoken in Johnson County*.

Language spoken at home	Percent	Percent who speak English Well
English	88.7%	-
Spanish	5.1%	50.0%
Other Asian languages	0.7%	82.6%
Chinese	0.7%	57.8%
African languages	0.5%	73.0%
French	0.4%	79.0%
German	0.4%	83.9%
Hindi	0.4%	77.4%
Korean	0.4%	39.3%
Russian	0.4%	51.4%
Vietnamese	0.3%	35.4%
Other Indic languages	0.3%	63.8%
Arabic	0.3%	71.5%
Laotian	0.2%	58.6%
Urdu	0.1%	86.2%
Tagalog	0.1%	58.4%
Portuguese	0.1%	67.7%
Japanese	0.1%	70.7%
Gujarati	0.1%	54.0%
Persian	0.1%	60.4%
Italian	0.1%	89.8%
Thai	0.1%	34.0%
Other Pacific Island languages	0.1%	56.0%
Greek	<0.1%	65.3%
Other Indo-European languages	<0.1%	77.2%
Polish	<0.1%	71.1%

*Only languages with 200 or more estimated speakers were presented.

Source: U.S. Census Bureau, 2008-2010 American Community Survey

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KDHE - BEPHI. (2011, April 15). *Kansas Information for Communities*. Retrieved 5 2011, October, from Kansas Department of Health and Environment: <http://kic.kdhe.state.ks.us/kic/index.html>

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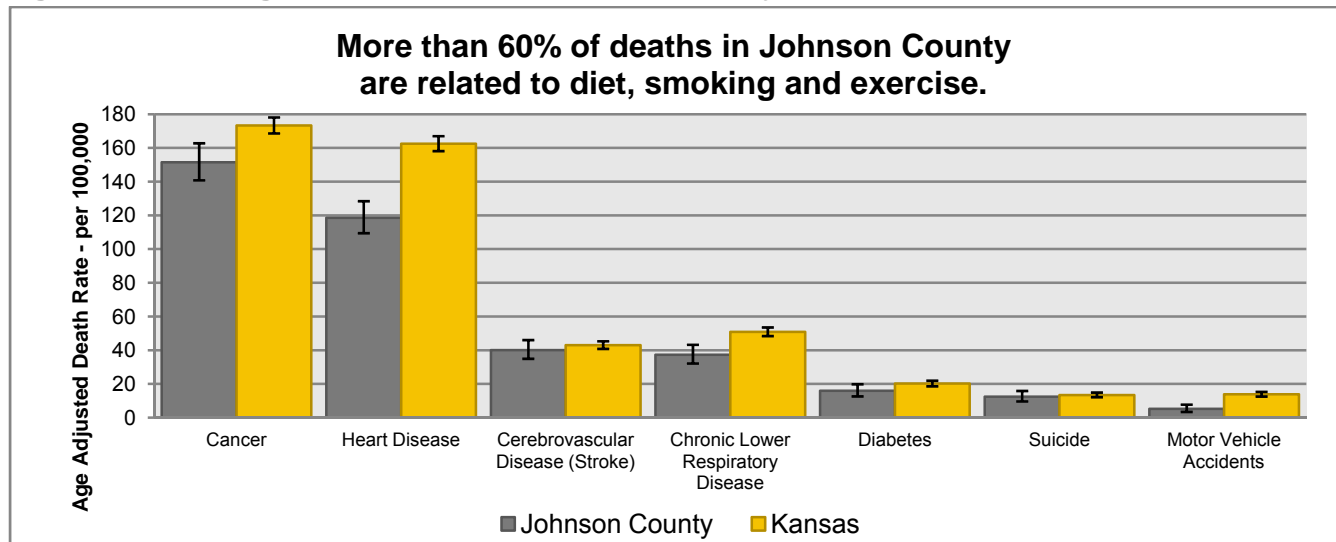
MORTALITY

The leading causes of death in Johnson County are cancer, heart disease, stroke, chronic lower respiratory diseases and diabetes. Cancer and heart disease alone make up 45% of all deaths and stroke, atherosclerosis and Chronic Obstructive Pulmonary Disease account for another 18%. Each of these diseases is influenced in large part through behaviors such as smoking, drinking alcohol, eating a high calorie or high fat diet and not getting enough exercise. Suicide and car crashes round out the list (Figure 3.1).

The age adjusted mortality rate in Johnson County has been fairly stable over the past decade. Men have slightly higher death rates than women. Hispanics fare better compared to Caucasians. African Americans experience significant disparities in mortality; however it appears there has been a large decrease in this population’s mortality rate in recent years (Figure 3.2).

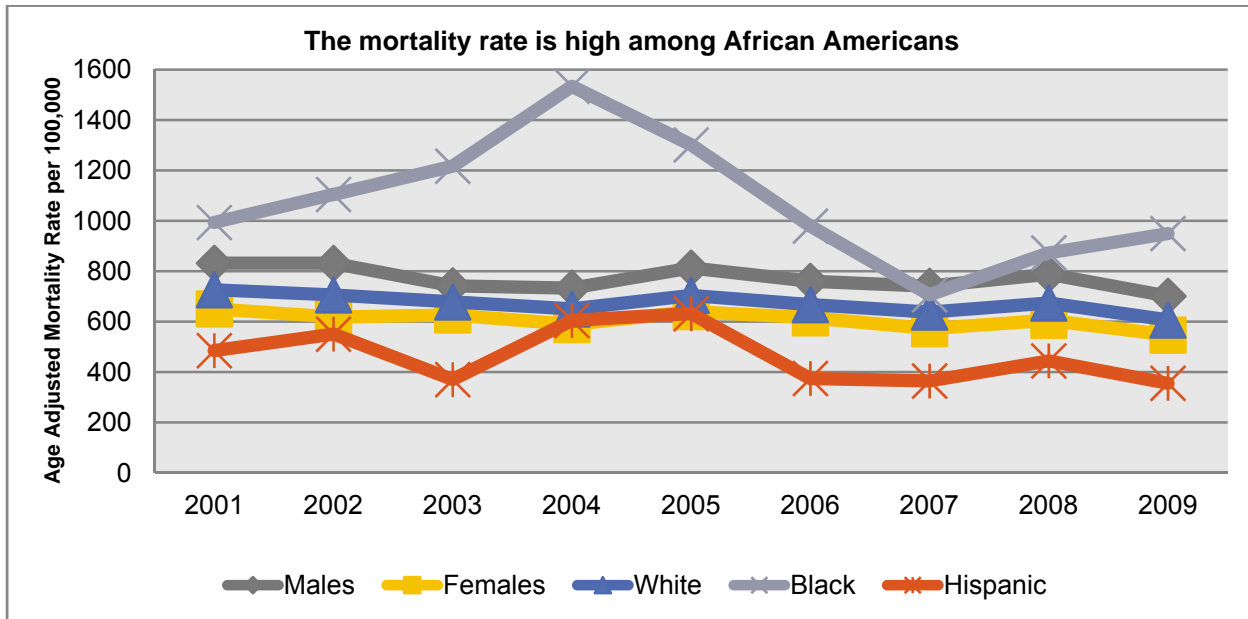
There are sizeable health disparities across racial and ethnic boundaries in Johnson County (Table 3.1). The age adjusted death rate for African Americans is 50% greater for cancer, 30% greater for heart disease, 70% greater for stroke and more than double compared to Johnson County as a whole. On the other hand, the age adjusted death rate in Hispanics is less than that of Johnson County as a whole. This is also reflected in the age adjusted mortality trends from 2001 to 2009. African Americans have had substantially greater age adjusted death rates consistently throughout this decade.

Figure 3.1: Leading causes of death in Johnson County, 2009



Source: KDHE - BEPHI

Figure 3.2: Age adjusted mortality rate in Johnson County, 2001 -2009



Source: KDHE - BEPHI

Table 3.1: Leading causes of death in Johnson County (2001-2009) by race and ethnicity

<u>Cause of Death</u>	<u>Percent of all deaths</u>	<u>Age Adjusted Rate (per 100,000)</u>	<u>(95% Confidence Interval)</u>
Johnson County			
Cancer	24%	161.2	(157.3 - 165.2)
Heart disease	21%	140.9	(137.3 - 144.7)
Stroke	7%	47.3	(45.2 - 49.5)
Atherosclerosis	6%	44.1	(42.1 - 46.2)
Chronic lower respiratory diseases	5%	35.7	(33.9 - 37.7)
Alzheimer's disease	4%	28.4	(26.8 - 30.1)
Pneumonia & influenza	2%	16	(14.8 - 17.3)
Diabetes	2%	14.7	(13.5 - 15.9)
Kidney disease	2%	13.7	(12.6 - 14.9)
Suicide	2%	10.7	(9.8 - 11.7)
African Americans			
Cancer	22%	241.5	(198.5 - 291.1)
Heart disease	18%	183.6	(145.8 - 228.2)
Atherosclerosis	6%	111.3	(79.1 - 152.1)
Stroke	6%	79.6	(53.7 - 113.7)
Diabetes	4%	44.3	(26.7 - 69.2)
Motor vehicle accidents	3%	10.2	(5.7 - 16.8)
Hispanics			
Cancer	13%	100.3	(77.3 - 128.1)
Heart disease	7%	61.8	(43.1 - 86)
Stroke	5%	46.1	(29.5 - 68.6)

Source: KDHE - BEPHI

As people age, different risks become more serious (Table 3.2). Younger people are much more affected by genetics and their parents' health behaviors. Individuals less than 15 years old mostly die from birth defects or accidents. Adolescents and young adults have similar risks; however a disturbing trend, suicide, begins at this age and continues throughout adulthood. More than 400 people committed suicide in Johnson County from 2001 to 2009. In addition, the leading cause of death among people age 15 to 24 years is from traumatic injuries. When individuals reach middle and old age, chronic diseases are responsible for a majority of deaths (Table 3.2).

Table 3.2: Leading causes of death in Johnson County (2001-2009) by age group

Cause (total deaths from 2001 to 2009)	
<p><u>Infants (<1 year)</u></p> <ol style="list-style-type: none"> 1. Birth Defects (112) 2. Sudden Infant Death Syndrome (39) 3. Accidents other than car crash (24) <p><u>Age 15 to 24 years</u></p> <ol style="list-style-type: none"> 1. Car Crash (100) 2. Suicide (67) 3. Accidents other than car crash (41) <p><u>Age 45 to 64 Years</u></p> <ol style="list-style-type: none"> 1. Cancer (1712) 2. Heart Disease (755) 3. Suicide (166) 	<p><u>Age 1 to 14 years</u></p> <ol style="list-style-type: none"> 1. Accidents other than car crash (21) 2. Birth Defects (9) <p><u>Age 25 to 44 years</u></p> <ol style="list-style-type: none"> 1. Cancer (221) 2. Suicide (182) 3. Heart Disease (140) <p><u>Age 65+ Years</u></p> <ol style="list-style-type: none"> 1. Heart Disease (4777) 2. Cancer (4529) 3. Stroke (1712)

Source: KDHE –BEPHI

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CANCER

Cancer is the second leading cause of death in the United States. In 2007, more than 562,000 people died from cancer and more than 1.45 million were diagnosed with cancer nationwide (CDC, 2011).

In Johnson County, cancer is the leading cause of death, killing 727 people per year on average from 2001 to 2010. Cancer does not affect all groups equally. In the United States, African Americans are more likely to die from cancer compared to all other racial and ethnic groups. The age adjusted incidence rate for cancer in Johnson County is 430 per 100,000 Caucasians, and 459 per 100,000 African Americans for the years 2001 to 2007. Over this same time period, the age adjusted death rate from cancer was 163 per 100,000 Caucasians and 250 per 100,000 African Americans. Proportionally, more African Americans die from cancer. In this time frame, the age adjusted incidence rate was 8% higher for African Americans, but the age adjusted death rate was 35% higher for African Americans (Table 4.1 & 4.2).

Cancers of the breast, prostate, lung, colon, rectum, and skin were the leading types of cancers diagnosed in Johnson County from 2001 to 2007 (Table 4.1). Age adjusted incidence rates are greater among African Americans for prostate cancer (+27 per 100,000), lung cancer (+21 per 100,000) and colorectal cancer (+42 per 100,000) compared to Johnson County as a whole. Cancers of the lung, colon or rectum, breast, pancreas and prostate were the leading causes of death from cancer. Age adjusted death rates were greater for both lung cancer (+28 per 100,000) and colorectal cancer (+25 per 100,000) among African Americans compared to Johnson County as a whole.

The age adjusted incidence and mortality rate of cancer is lower in Johnson County, compared to Kansas. The trend for both age adjusted incidence and mortality has remained relatively stable throughout the decade (Figure 4.1 & 4.2).

Table 4.1: Cancer Incidence in Johnson County from 2001 to 2007

Cancer diagnosis	Number	Percent	Cumulative Percent	Age Adjusted Rate per 100,000
Johnson County				
Female Breast*	2476	18%	18%	138.1
Prostate*	1805	13%	31%	129.7
Lung	1609	12%	43%	53.3
Colorectal	1300	9%	52%	41.5
Skin	851	6%	59%	25.4
All Cancer	13734			429.6
African Americans				
Female Breast	54	19%	19%	128.1
Prostate	44	16%	35%	156.8
Lung	36	13%	48%	74.3
Colorectal	31	11%	59%	67.4
All	280			459.0

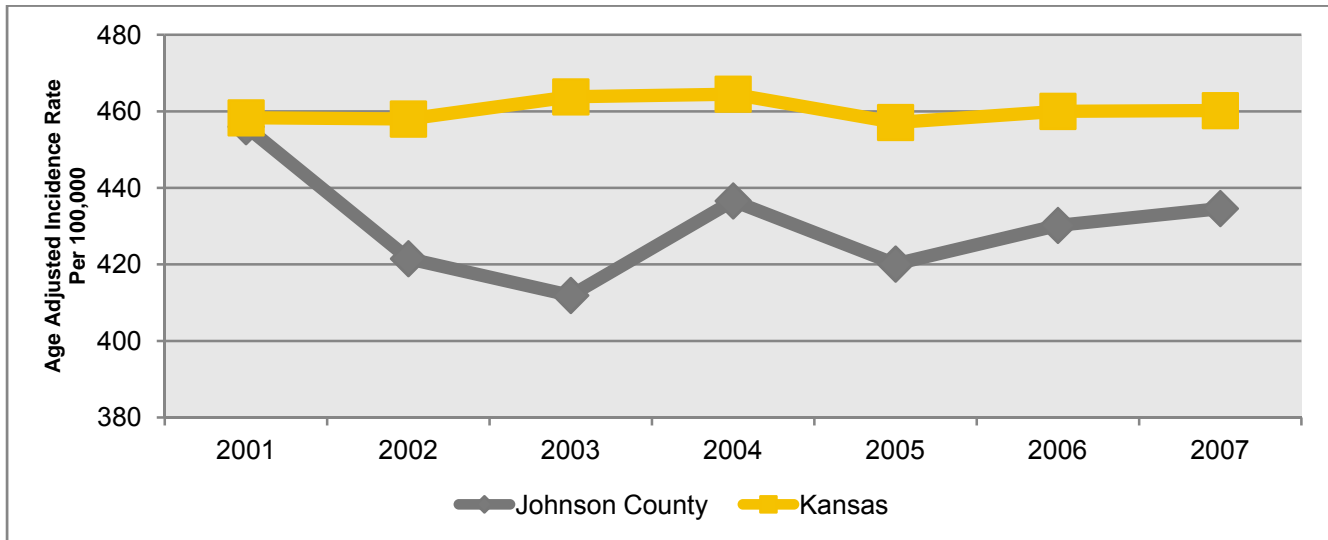
* Rates calculated for breast cancer include only women and rates for prostate cancer include only men
 Source: KDHE –BEPHI

Table 4.2: Deaths from Cancer in Johnson County from 2001 to 2010

Cancer Death	Number	Percent	Cumulative Percent	Age Adjusted Rate per 100,000
Johnson County				
Lung	2041	28%	28%	45.8
Colorectal	649	9%	37%	14.1
Female Breast*	613	8%	45%	22.9
Pancreas	455	6%	52%	10.1
Prostate*	326	4%	56%	19.4
All	7271			159.8
African Americans				
Lung	47	30%	30%	73.8
Colorectal	22	14%	43%	38.5
All	159			238.8

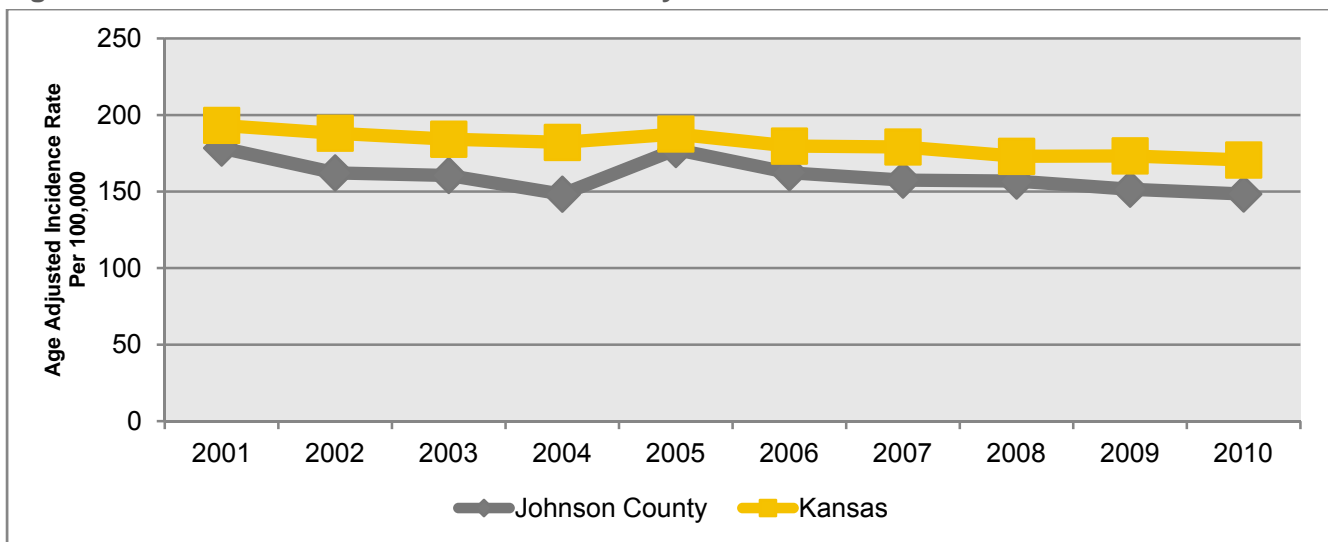
* Rates calculated for breast cancer include only women and rates for prostate cancer include only men
 Source: KDHE –BEPHI

Figure 4.1: Cancer Incidence Trend Johnson County and Kansas from 2001 to 2007



Source: KDHE –BEPHI

Figure 4.2: Cancer Death Trend Johnson County and Kansas from 2001 to 2007



Source: KDHE –BEPHI

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MATERNAL AND CHILD HEALTH

Rationale for Protecting the Young

Assuring the health of infants and pregnant women is essential to public health's mission. Not only is it fundamental to public health ethics to protect those who cannot protect themselves, but early life exposures have marked effects on adult health. An example of this is offered through the life course epidemiological framework, which suggests that experiences, such as prematurity or slow growth during fetal and infant years may be linked with chronic disease later in life (Rothman, Greenland, & Lash, 2008). Logically it follows that by ensuring healthy pregnancies, births and infancies, we also protect adult health. Protecting young people helps build communities where all people can be healthy, throughout their entire lives.

Infant Mortality

One of the most common measures of a population's health is its infant mortality rate. It is a measure of the number of infant deaths or deaths before age one, divided by the number of all live births. The United States has a much higher infant mortality rate compared to a multitude of industrialized nations. It is three times greater than that of Singapore (6.8 versus 2.3 per 1,000) and two times greater than France and Israel (6.8 versus 3.2 and 3.4 per 1000, respectively). The United States also lags behind the United Kingdom (4.6 per 1,000) and Canada (5.3 per 1000) (The World Bank, 2011). The infant mortality rate in Kansas (7.3 per 1,000 live births) is slightly greater than that of the United States (7.0 per 1,000 live births), but Johnson County's (5.6 per 1,000 live births) is lower than both (KDHE - BEPHI, 2011). Caucasian and Hispanic rates declined slightly from 2000 to 2009. However, the infant mortality rate among African Americans increased by 32% during the same period and is almost three times greater than that of Caucasians (Table 5.1).

The leading causes of infant mortality in Kansas include birth defects (23%), preterm and low birth weight (17%), Sudden Infant Death Syndrome or SIDS (15%) and maternal complications (11%). In Johnson County from 2001 to 2010, birth defects accounted for about 29% of infant deaths and SIDS accounted for about 10%. However, SIDS accounted for 16% of infant deaths in African Americans (Table 5.1).

Fetal Mortality

The fetal death rate is another common measure of population health. This is a measure of the number of still births compared to potential births (the sum of live births and still births). The US fetal death rate was 6.2 per 1000 potential births in 2005. Both Kansas and Johnson County have better rates. African Americans have nearly twice the risk of having a still birth compared to Johnson County as a whole (Table 5.1).

Table 5.1: Selected Fetal and Infant Health Measures in Johnson County, Kansas – 2001 to 2009

	Frequency	Rate (per 1000)	95% CI
Infant Mortality Rate*			
<u>Johnson County</u>	378	5.56	(5.52 - 5.60)
White	309	5.36	(5.32 - 5.41)
Black	37	13.07	(9.20 - 18.00)
Hispanic	40	6.39	(4.57 - 8.71)
<u>Kansas</u>	2629	7.25	(7.22 - 7.27)
White	1733	5.65	(5.63 - 5.67)
Black	376	14.71	(14.5 - 14.90)
Hispanic	395	7.36	(7.30 - 7.43)
Healthy People 2020 Benchmark	-	6.00	-
Fetal Mortality Rate**			
<u>Johnson County</u>	274	4.01	(3.98 - 4.04)
White	212	3.67	(3.64 - 3.70)
Black	24	8.41	(5.39 - 12.50)
Hispanic	-	-	-
<u>Kansas</u>	1714	4.70	(4.69 - 4.72)
White	1314	4.26	(4.25 - 4.28)
Black	236	9.15	(9.04 - 9.26)
Hispanic	-	-	-
Healthy People 2020 Benchmark	-	5.60	-
Infant Deaths from SIDS***			
<u>Johnson County</u>	39	0.57	(0.41 - 0.78)
White	29	0.50	(0.34 - 0.72)
Black	6	2.11	(0.78 - 4.60)
Hispanic	-	-	-
<u>Kansas</u>	389	1.07	(1.07 - 1.07)
White	267	0.87	(0.87 - 0.87)
Black	83	3.24	(2.58 - 4.01)
Hispanic	-	-	-
Healthy People 2020 Benchmark	-	0.55	-

Source: KDHE –BEPHI

*Infant Mortality Rate = (Infant Deaths ÷ Live Births) x 1,000

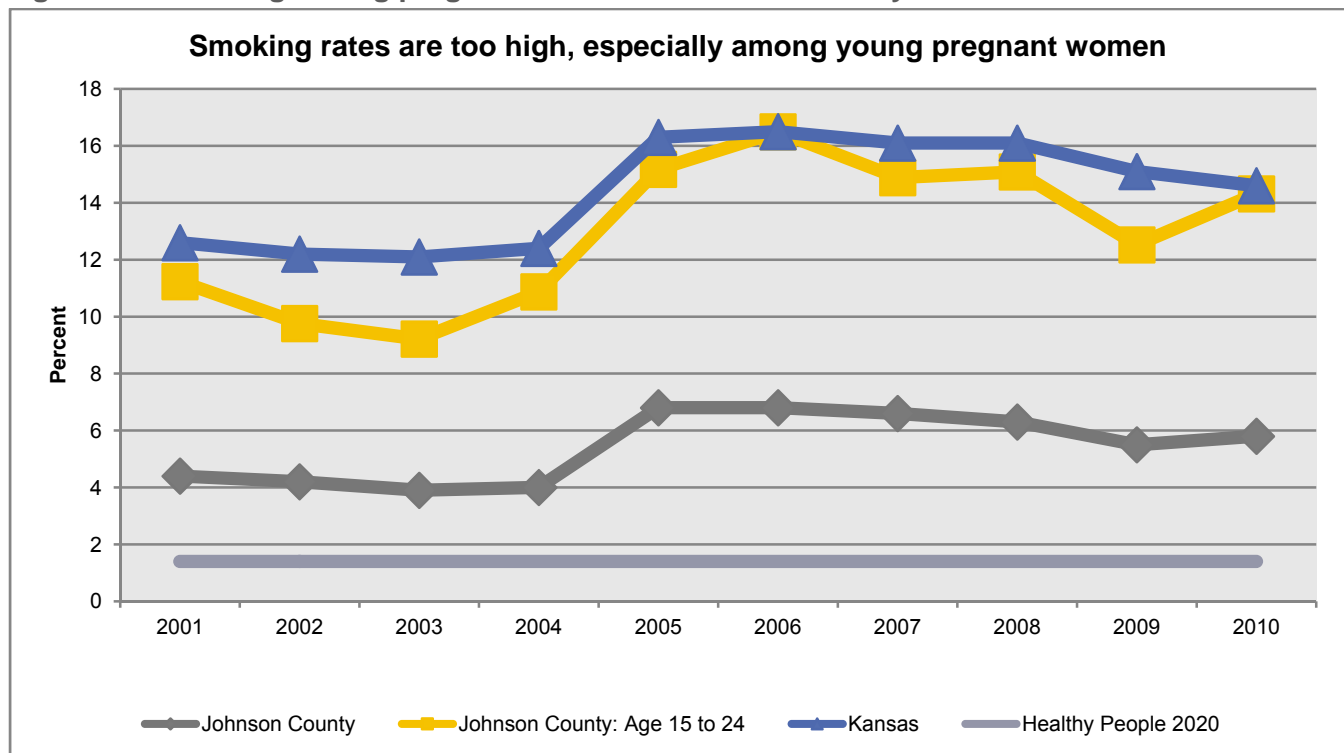
**Fetal Mortality Rate = ((Fetal Deaths ÷ (Live Births + Fetal Deaths)) x 1,000

***Infant Death Rate from SIDS = (Infant Deaths from SIDS ÷ Live Births) x 1,000

Risk Factors for Fetal and Infant Deaths

Babies in the fetal stage of life as well as infants are dramatically affected by the behavior of their mother. The US Department of Health and Human Services recommends that pregnant women receive prenatal care from a doctor, take prenatal vitamins containing folic acid, eat a variety of foods, especially fruits and vegetables and get a flu shot. Pregnant women should avoid smoking, should try to stay away from second hand smoke and also avoid drinking alcohol (U.S. Department of Health and Human Services, 2009). In Johnson County the percent of white and African American women receiving adequate prenatal care met the Healthy People 2020 goal. However, slightly fewer pregnant African American women started care in the first trimester. Pregnant Hispanic women were more than 20% less likely to have received adequate prenatal care compared to others. In Johnson County, the rate of pregnant women who smoke falls far short of the Healthy People 2020 goal (Figure 5.1). Additionally, the smoking rate among young pregnant women is increasing. Finally, the percent of premature births and low birth weight births were better than the benchmark set by Healthy People 2020 (Table 5.2).

Figure 5.1: Smoking among pregnant women in Johnson County and Kansas – 2001 to 2009



Source: KDHE –BEPHI

Table 5.2: Risk Factors and Birth Outcomes Stratified by Race in Johnson County - 2009

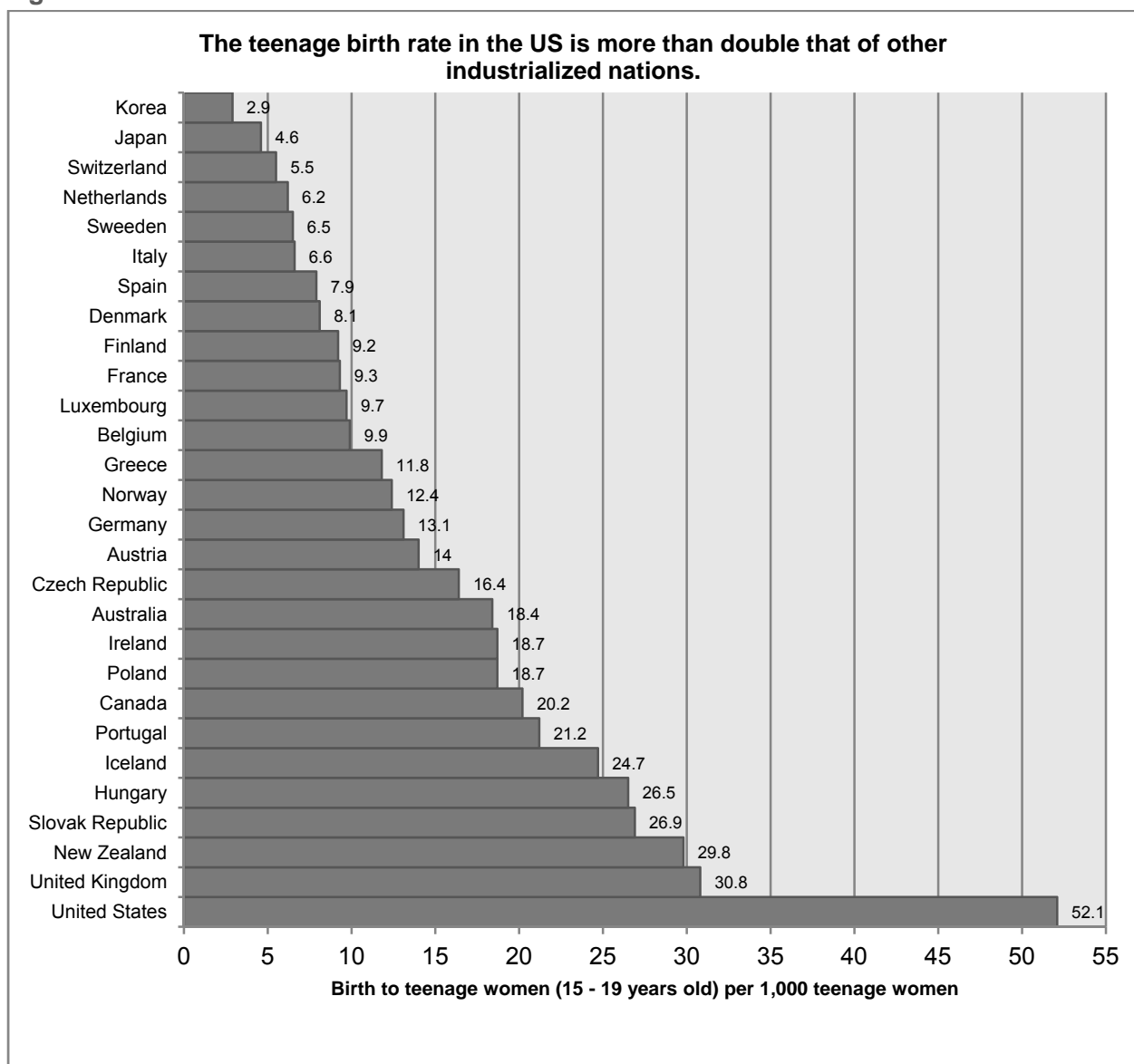
	Number	Percent	95% CI
Prenatal Care			
<u>Adequate</u>			
White	5021	83.3%	(82.4% - 84.2%)
African American	291	77.0%	(72.7% - 81.2%)
Hispanic	433	55.2%	(51.7% - 58.6%)
Healthy People 2020	-	77.6%	-
<u>First Trimester</u>			
White	4968	82.4%	(81.5% - 83.4%)
African American	271	71.7%	(67.2% - 76.2%)
Hispanic	430	54.8%	(51.3% - 58.3%)
Healthy People 2020	-	77.9%	-
Mother's Characteristics			
<u>Smoking during pregnancy</u>			
White	372	6.2%	(5.6% - 6.8%)
African American	23	6.1%	(3.7% - 8.5%)
Hispanic	15	1.9%	(1.0% - 2.9%)
Healthy People 2020	-	1.4%	-
<u>Normal Weight Gain</u>			
White	4691	77.8%	(76.8% - 78.9%)
African American	274	72.5%	(68.0% - 77.0%)
Hispanic	531	67.6%	(64.4% - 70.9%)
Healthy People 2020	-	N/A	-
Child's Characteristics			
<u>Premature</u>			
White	550	9.1%	(8.4% - 9.9%)
African American	40	10.6%	(7.5% - 13.7%)
Hispanic	60	7.6%	(5.8% - 9.5%)
Healthy People 2020	-	11.4%	-
<u>Low Birth Weight</u>			
White	367	6.1%	(5.5% - 6.7%)
African American	37	9.8%	(6.8% - 12.8%)
Hispanic	42	5.4%	(3.8% - 6.9%)
Healthy People 2020	-	9.3%	-

Source: KDHE –BEPHI

Teenage Births

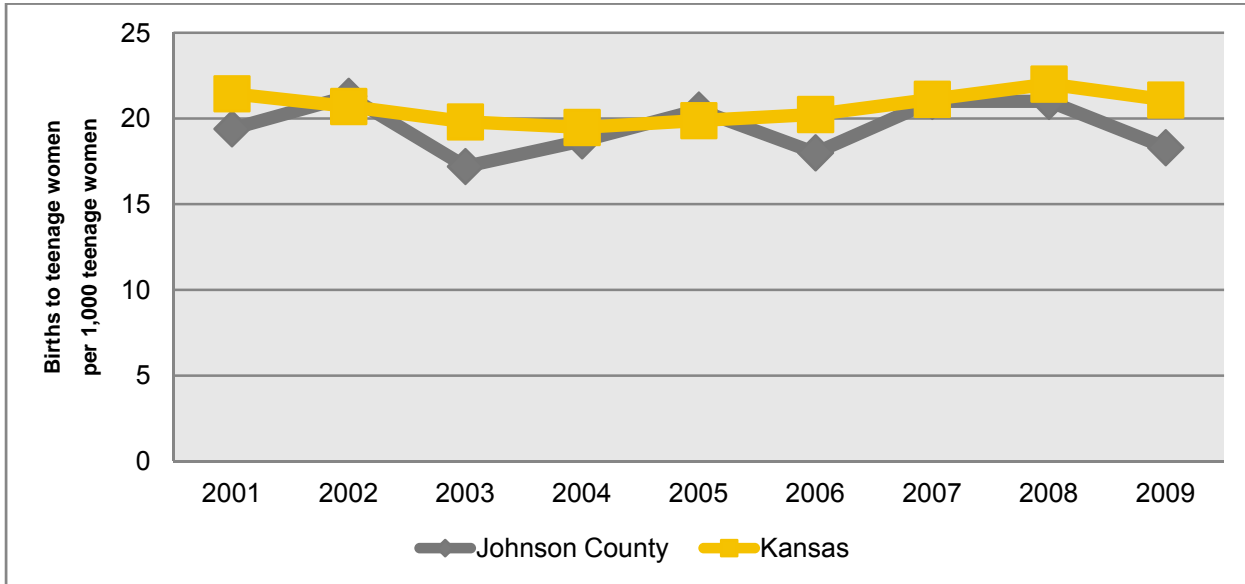
The teen birthrate in the United States is the highest of all industrialized nations (Figure 5.2). This fact is important to consider when looking at local data. Even if teen birthrates are low locally, it is possible that they fall short in the global stage. The teen birthrate in Johnson County has remained stable at about 20 births to teenage women (age 15 – 19 years old) per 1,000 teenage women, similar to the rate in Kansas (Figure 5.3). In 2009, the majority of babies were born to mothers at least 25 years old. Roughly 4% of births occurred in women less than 19 years old (Figure 5.4).

Figure 5.2: Teen Birth Rates of industrialized nations.



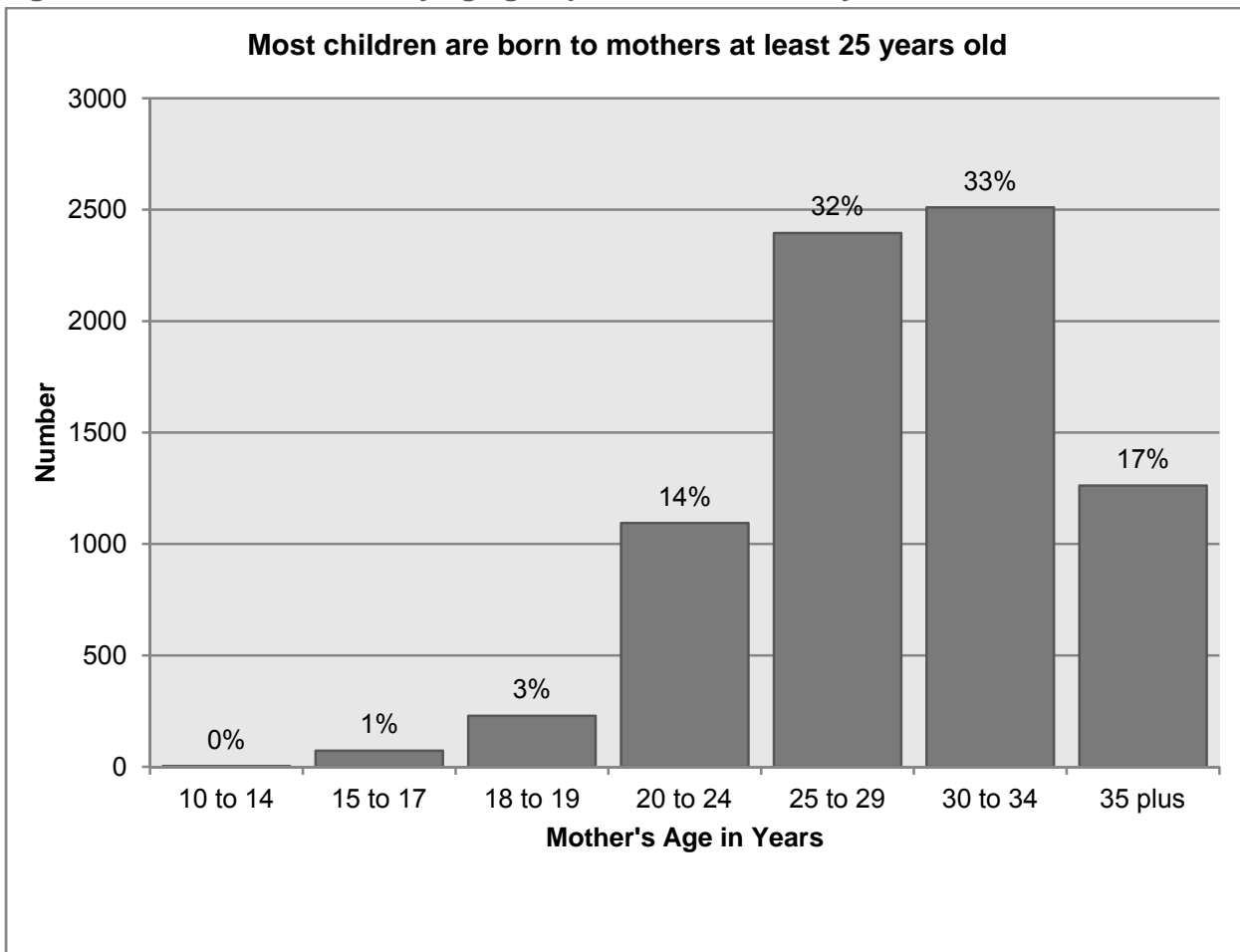
Source: (UNICEF, 2001)

Figure 5.3: Teen Birth Rate Trend, Johnson County and Kansas– 2001 to 2009



Source: KDHE –BEPHI

Figure 5.4: Number of births by age group in Johnson County – 2009.



Source: KDHE –BEPHI

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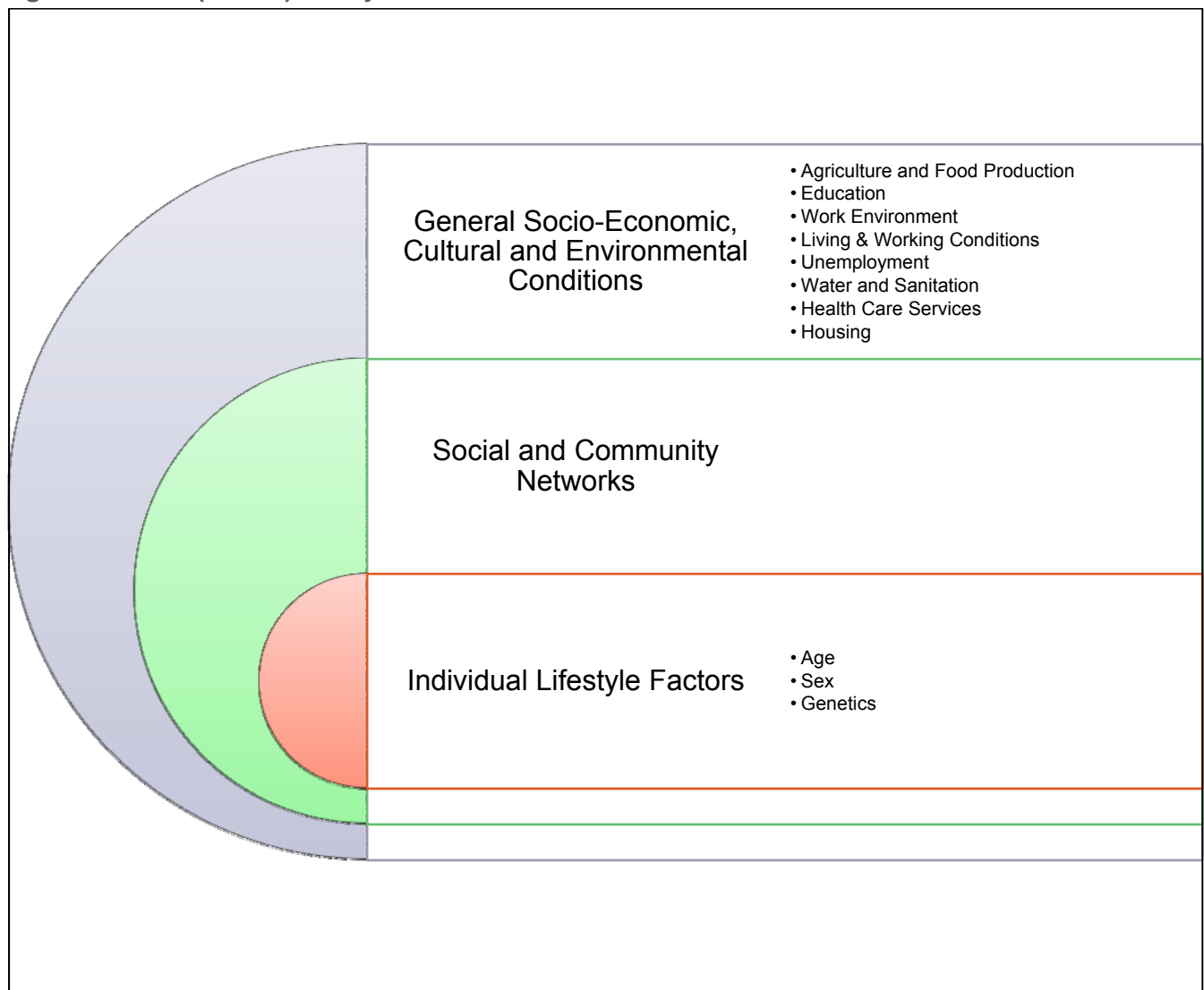
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BEHAVIORAL RISK FACTORS

An individual's behavior plays an important role in their own health, as well as the health of others. It has been said to account for up to 40% of morbidity and mortality (McGinnis, Williams-Russo, & Knickman, 2002). Behavior is also influenced by one's social economic status, the health policy of their city, county, state and nation as well as social and cultural influences (Figure 6.1) (Davies & Macdowall, 2006). By measuring health behaviors and working to improve upon them, public health officials can help to improve the population's health.

Figure 6.1: The (Health) Policy Rainbow



Source: (Davies & Macdowall, 2006)

Behavioral Risk Factor Surveillance System

The Centers for Disease Control and Prevention (CDC), in collaboration with state and local health departments carry out a population based survey to measure health behaviors of the population annually (CDC, 2006). The Behavioral Risk Factor Surveillance System (BRFSS) allows health behaviors to be compared across geo-political boundaries. It also allows for trends in health behaviors to be measured. BRFSS can be used as a basic evaluation system to assess health policy choices.

The BRFSS is designed to make estimates about the health behaviors for all 50 states as well as many counties. For Johnson County, BRFSS makes relatively precise estimates for the total county, as well as for large sub groups, such as males or females. However, for groups such as African Americans or Hispanics the estimates are often imprecise. The differences in precision arise because of differences in the sample size. Still, BRFSS is one of public health's best tools for addressing health behavior. BRFSS measures include behaviors, such as alcohol and drug use, dietary and physical activity habits, and tobacco use. Other measures include use and access of the healthcare system, and disease and injury prevalence.

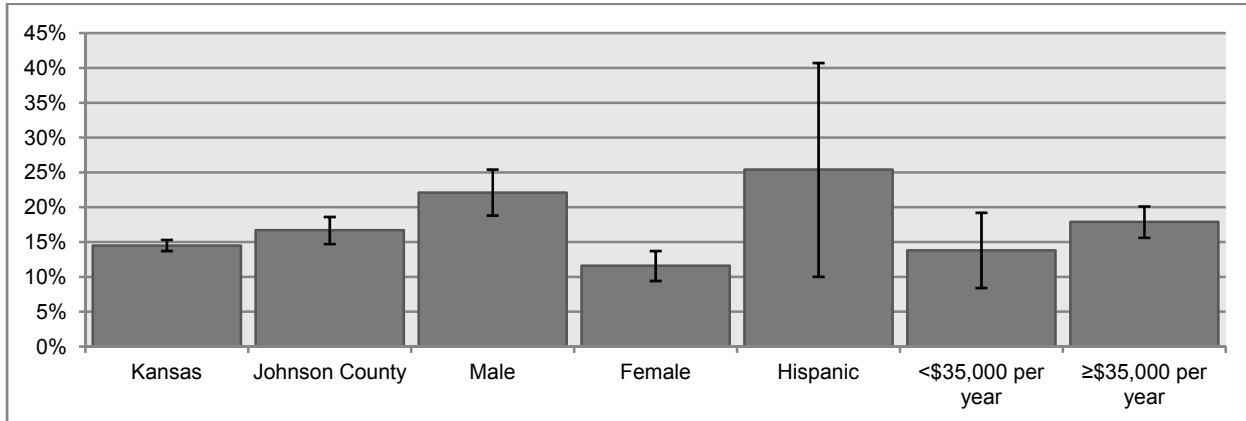
Alcohol Use

Binge drinking is defined as men who have had five or more drinks or women who have had four or more drinks in a sitting. Approximately 17% of adults in Johnson County reported binge drinking (Figure 6.2). More men than women are binge drinkers. Hispanic respondents were more likely to be binge drinkers compared to Johnson County as a whole, but this is not statistically significant. The sample size was too small to measure the prevalence in African Americans. The prevalence of binge drinking has remained stable at roughly 16% over the past nine years (Figure 6.3). This is better than the goal set in Health People 2020 (U.S. Department of Health and Human Services, 2011). Problem drinking is defined as men who have two or more drinks each day or women who have one or more drinks each day, on average. Respondents from Johnson County were slightly more likely to report problem drinking, compared to Kansas (Figure 6.4). However this was not statistically significant.

There are 89 liquor stores in Johnson County; 17 per 100,000 people. This falls in the lower range for counties in Kansas (range: 0 to 98 per 100,000 people). The liquor store density of more comparable counties is: 15 per 100,000 people in Leavenworth, 19 per 100,000 people

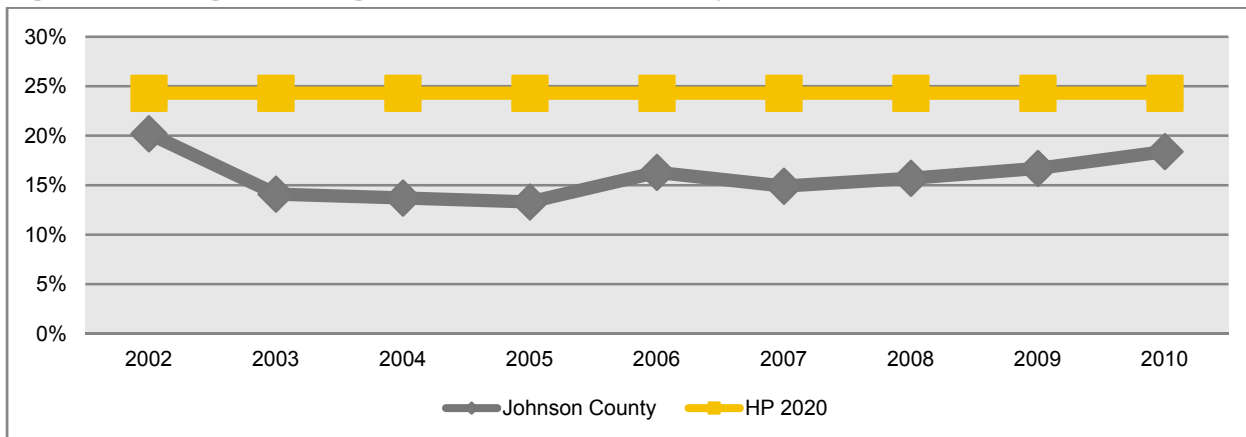
in Wyandotte, and 21 per 100,000 people in Sedgwick Counties (County Health Rankings, 2011). Liquor store density is associated with problem drinking, car crashes and death from car crashes, violence and sexually transmitted diseases (Theall, et al., 2011).

Figure 6.2: Prevalence of Binge Drinking in Johnson County –2009



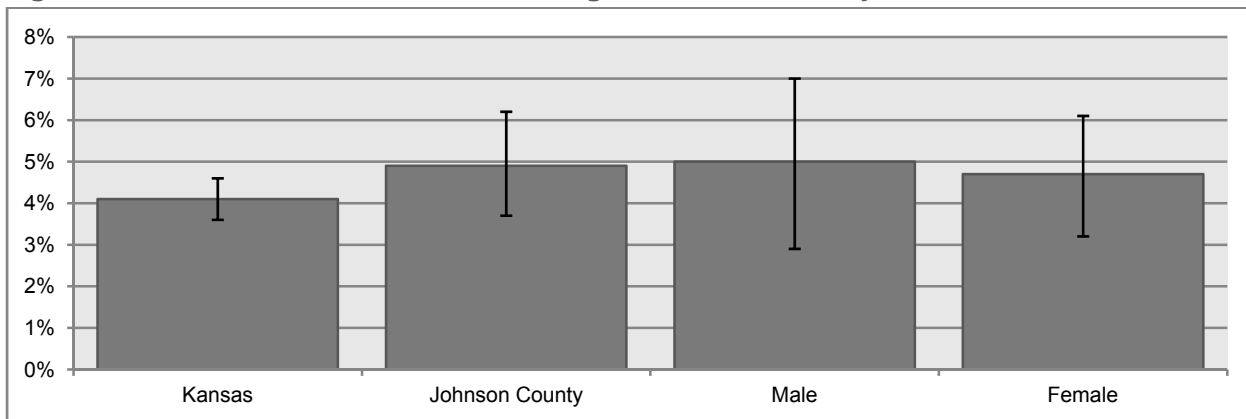
Source: BRFSS

Figure 6.3: Binge Drinking Trend in Johnson County –2002 to 2010



Source: BRFSS

Figure 6.4: Prevalence of Problem Drinking in Johnson County – BRFSS 2009

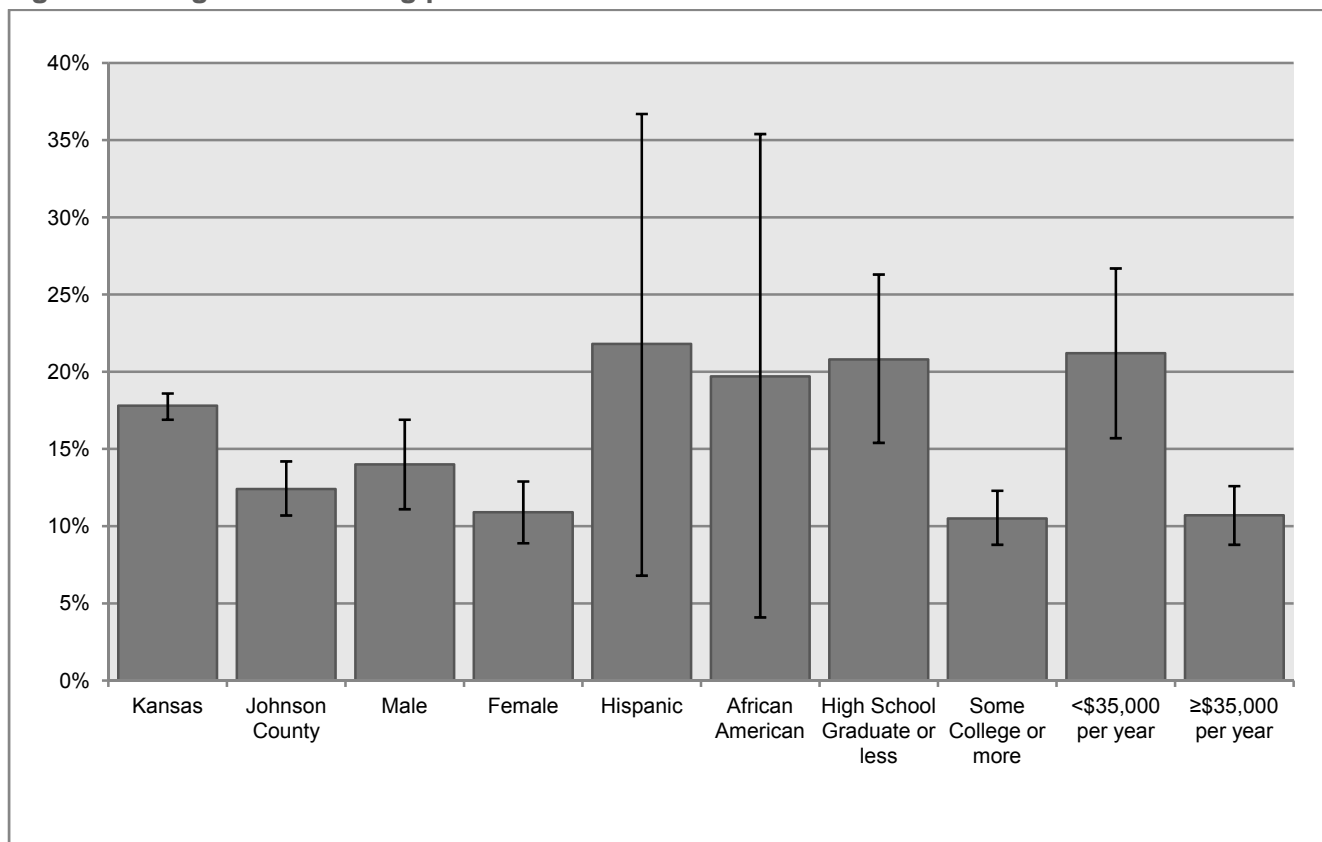


Source: BRFSS

Smoking

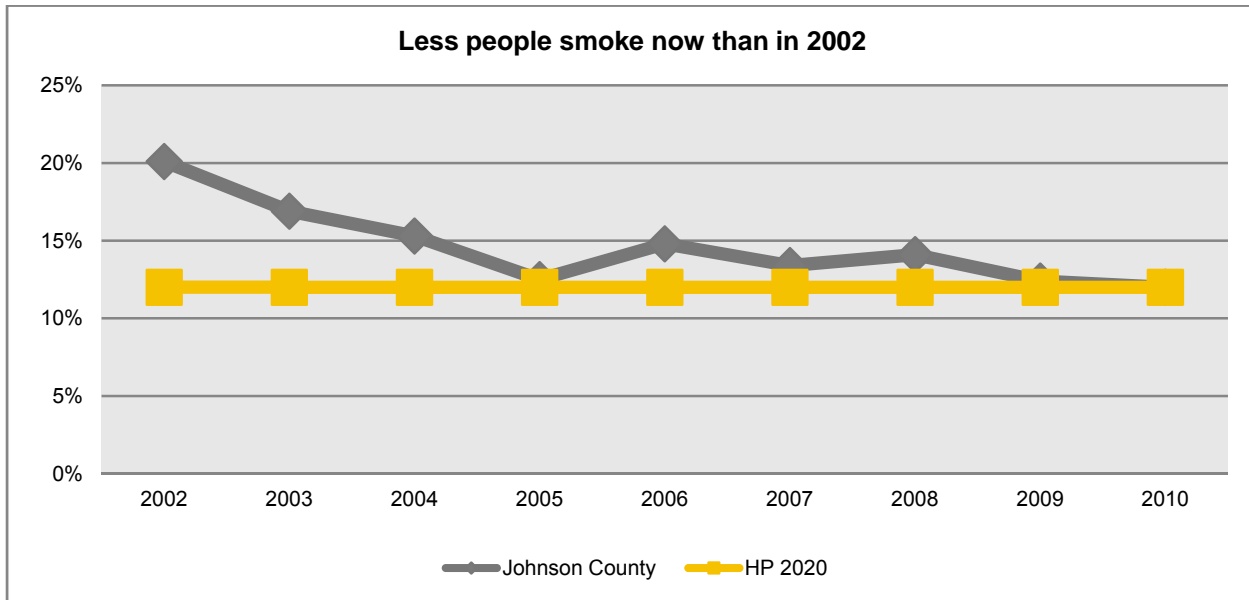
Smoking is one of largest public health problems. From 2000 to 2004, cigarette smoking and exposure to environmental smoke resulted in 443,000 premature deaths (deaths before age 75), 5.1 million years of potential life lost and 96.8 billion dollars in productivity losses in the United States (Adhikari, Kahende, Malarcher, Pechacek, & Tong, 2008). In 2009, an estimated 12% of adults in Johnson County smoked. This is less than Kansas' estimate and is equal to the Healthy People 2020 goal. Social economic status is a strong indicator. There is a statistically significant difference between those with no college education (21%) and those with some college education (11%). The same was found among individuals who make less than \$35,000 per year and those who make more; likely because these were the same respondents. Rates were also higher among Hispanics and African Americans; however the estimates were imprecise (Figure 6.5). Over the past nine years, the proportion of smokers, as estimated by BRFSS, has decreased by about one percent each year from 2002 to 2010 (Figure 6.6).

Figure 6.5: Cigarette smoking prevalence – BRFSS 2009



Source: BRFSS

Figure 6.6: Cigarette smoking prevalence (Trend) –2002 - 2010



Source: BRFSS

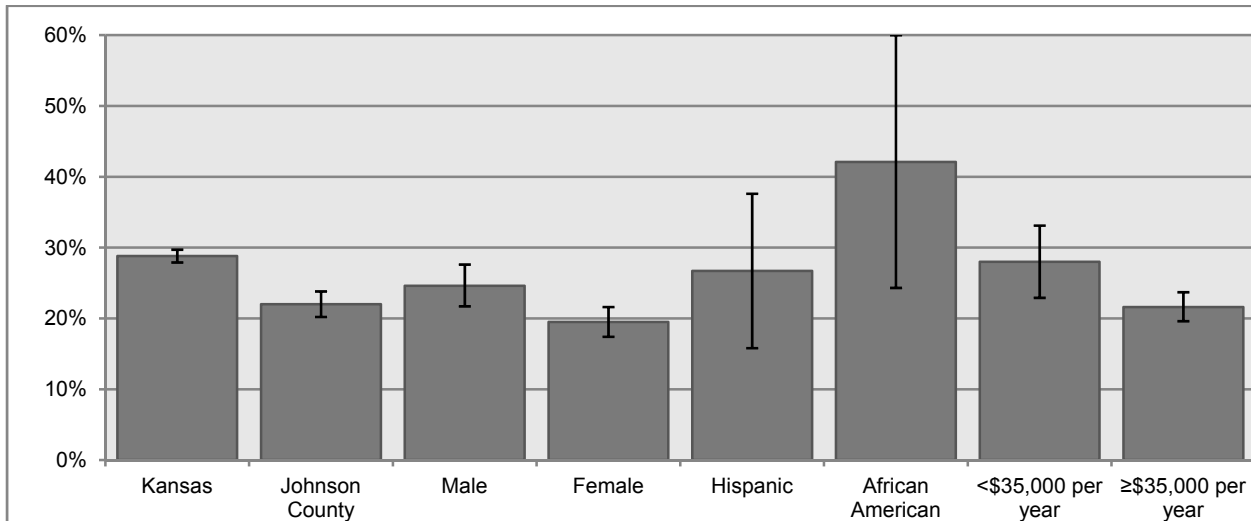
DIET, PHYSICAL ACTIVITY AND OBESITY

Diet, physical activity and body composition are three topics that are best discussed together because of their innate interconnectedness. Body composition and weight are influenced by the types of food and quantity consumed, as well as how much physical activity is accomplished (Philipson & Posner, 2008). These three factors have both independent and related effects on health. Recently, obesity has overtaken tobacco smoking as the number one health burden in the United States. Tobacco still kills more people, but obesity reduces the quality of peoples' lives to a larger extent (Jia & Lubetkin, 2010).

The prevalence of overweight and obese individuals in Johnson County (59%) is less than that among all Kansans (64%) and is more pronounced for obesity alone (Figures 6.7 & 6.8). More men (71%) than women (48%) are estimated to be overweight or obese. Greater than 40% of African Americans surveyed reported being obese, however the estimate was not precise. The overweight and obesity trend in Johnson County has remained stable over the past decade and is better than the Healthy People 2020 benchmark of 66% (U.S. Department of Health and Human Services, 2011). More people in Johnson County participate in leisure time physical activity compared to Kansas, meeting the Health 2020 benchmark for physical activity. More men than women participate in physical activity. Hispanics and African

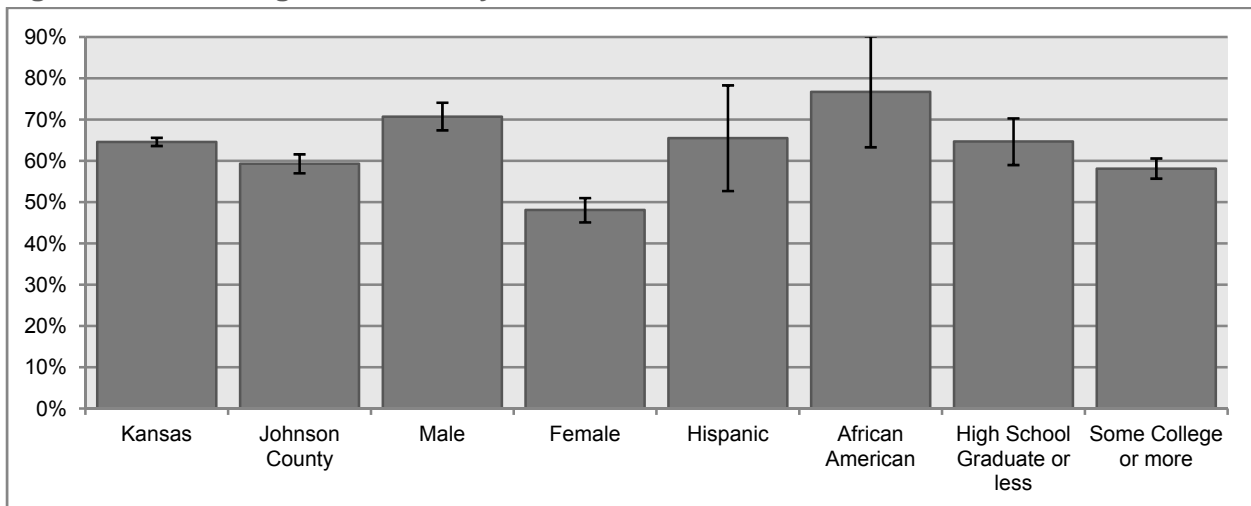
Americans reported participating in less physical activity compared to Johnson County as a whole, however the estimate was imprecise (Figure 6.9). About, 80% of all groups in Johnson County do not eat enough fruits or vegetables (Figure 6.10).

Figure 6.7: Obesity Prevalence –2009



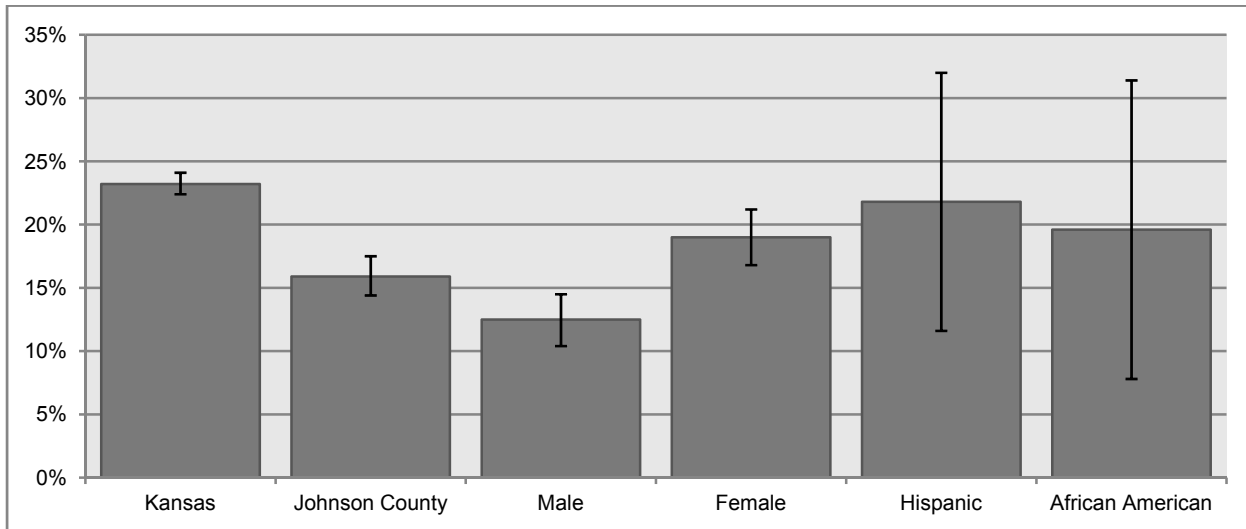
Source: BRFSS

Figure 6.8: Overweight and Obesity Prevalence –2009



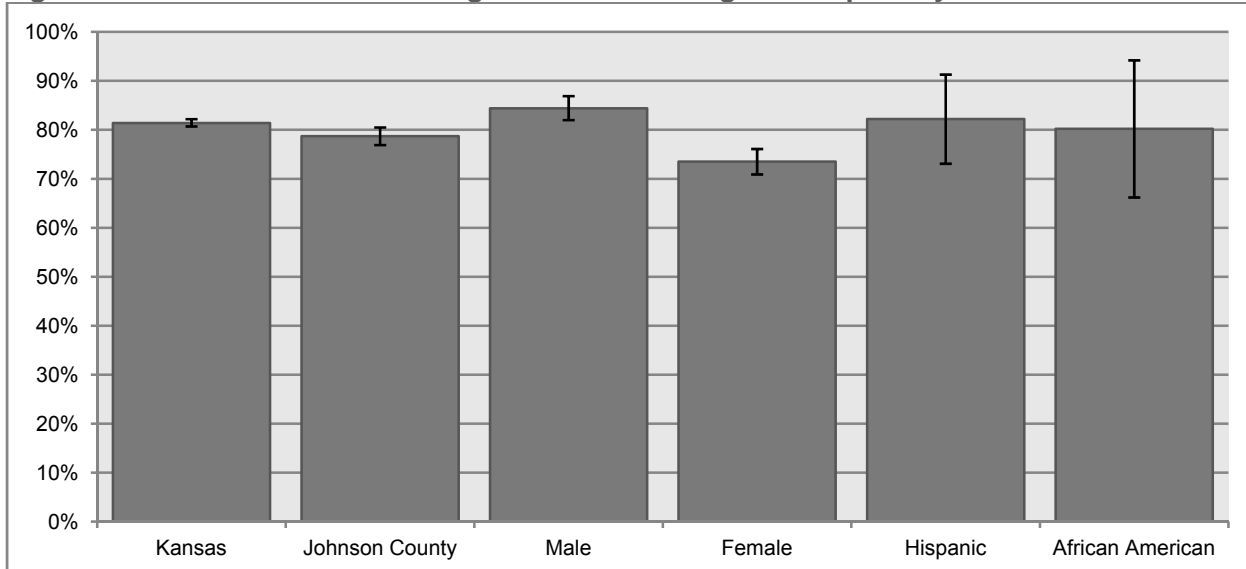
Source: BRFSS

Figure 6.9: No Physical Activity–2009



Source: BRFSS

Figure 6.10: Less than five servings of fruits and vegetables per day –2009



Source: BRFSS

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INJURY AND VIOLENCE

Injuries are a leading cause of death and disability and are a major public health problem nationwide. Injuries were responsible for 51% of deaths among Americans age one to forty-four years of age in 2007; this is more than communicable and non communicable diseases combined. A person dies from an injury about every three minutes and more than 2.8 million people are hospitalized each year due to injuries. The result is that approximately \$406 billion is spent annually in medical costs and lost productivity (CDC, 2011).

Deaths from injuries, including car crashes, suicide, homicide and other injuries accounted for 1,713 deaths in Johnson County between the years 2001 to 2010. This is roughly 6% of all deaths. Injuries accounted for an even greater percent of deaths among specific age groups, except individuals 65 years old or older. This was not because deaths from injuries decreased among older adults, rather, deaths from other causes increased (Table 7.1).

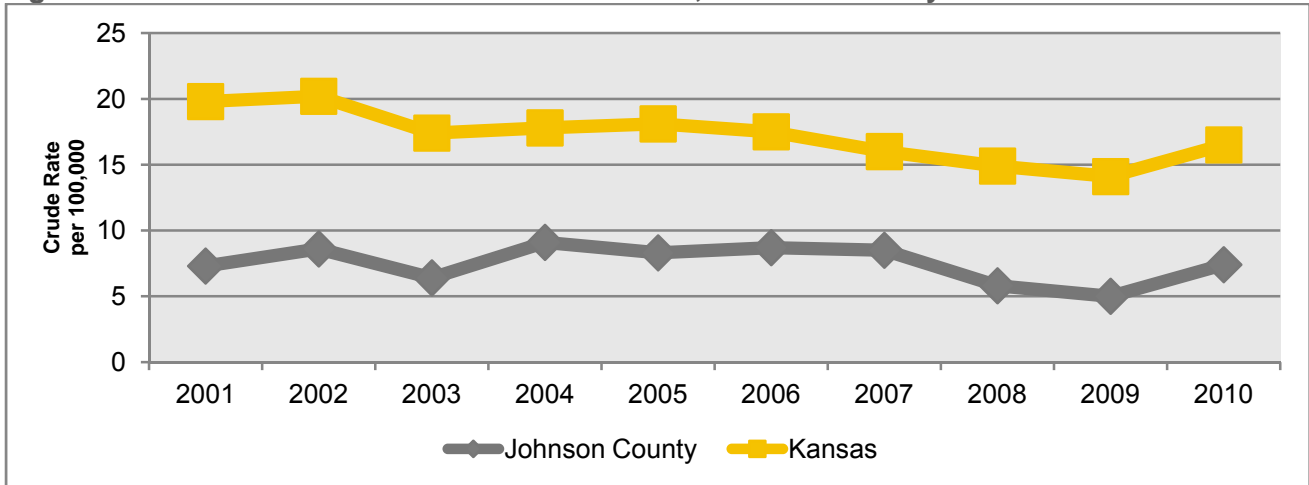
The causes of death from injuries, tracked by the Kansas Department of Health and Environment, are deaths from motor vehicle accidents, suicides, homicides and all other injuries. In Johnson County, all other injuries account for the majority of deaths, followed by suicide, automobile accidents and homicides. Johnson County's death rate from these causes has been consistently less than Kansas' from 2001 to 2010. However, in Johnson County, deaths from suicides have increase steadily from 2006 to 2010. Johnson County and Kansas now have similar rates of death from suicides (Figure 7.1 – 7.4).

Table 7.1: Deaths due to injuries by age group, Johnson County, Kansas 2001 – 2010.

Age Group	Number of Deaths	Percent of total deaths
Under 15	78	15%
15 to 24	264	71%
25 to 44	494	39%
45 to 64	459	10%
65 and over	413	2%

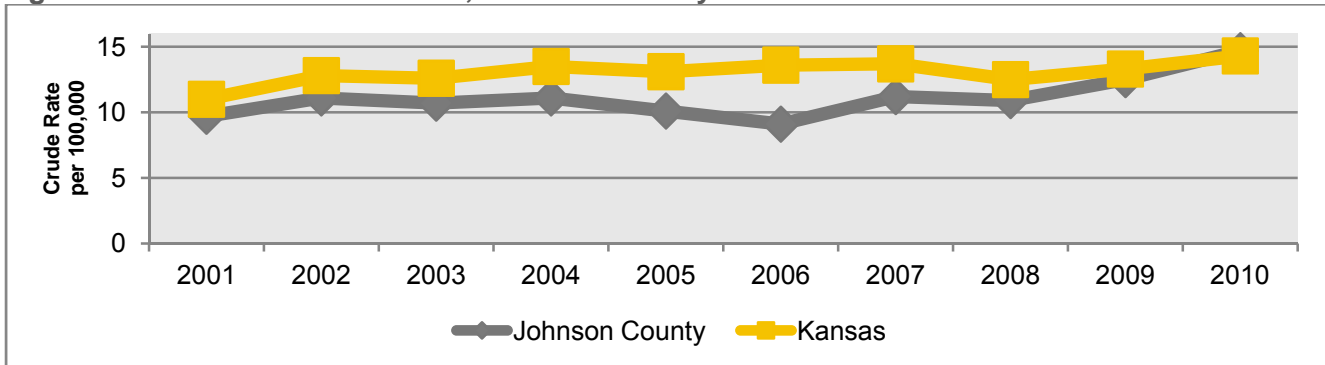
Source: KDHE –BEPHI

Figure 7.1: Deaths due to motor vehicle accidents, Johnson County and Kansas 2001 – 2010.



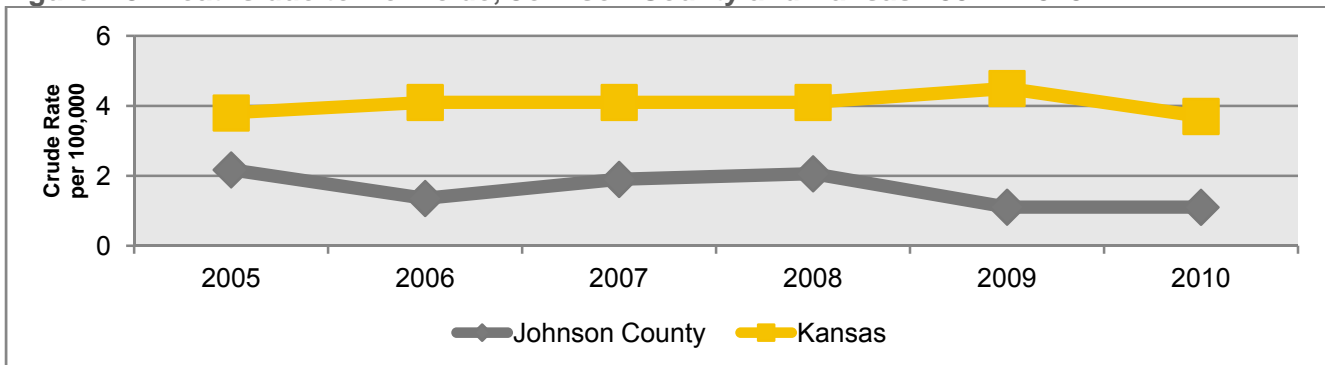
Source: KDHE –BEPHI

Figure 7.2: Deaths due to Suicide, Johnson County and Kansas 2001 – 2010.



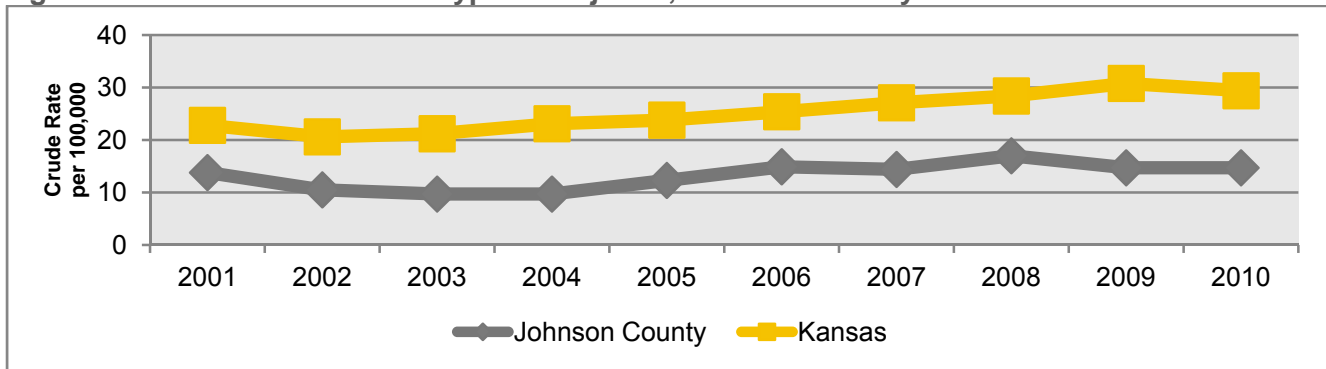
Source: KDHE –BEPHI

Figure 7.3: Deaths due to Homicide, Johnson County and Kansas 2001 – 2010.



Source: KDHE –BEPHI

Figure 7.4: Deaths due to other types of injuries, Johnson County and Kansas 2001 – 2010.



Source: KDHE –BEPHI

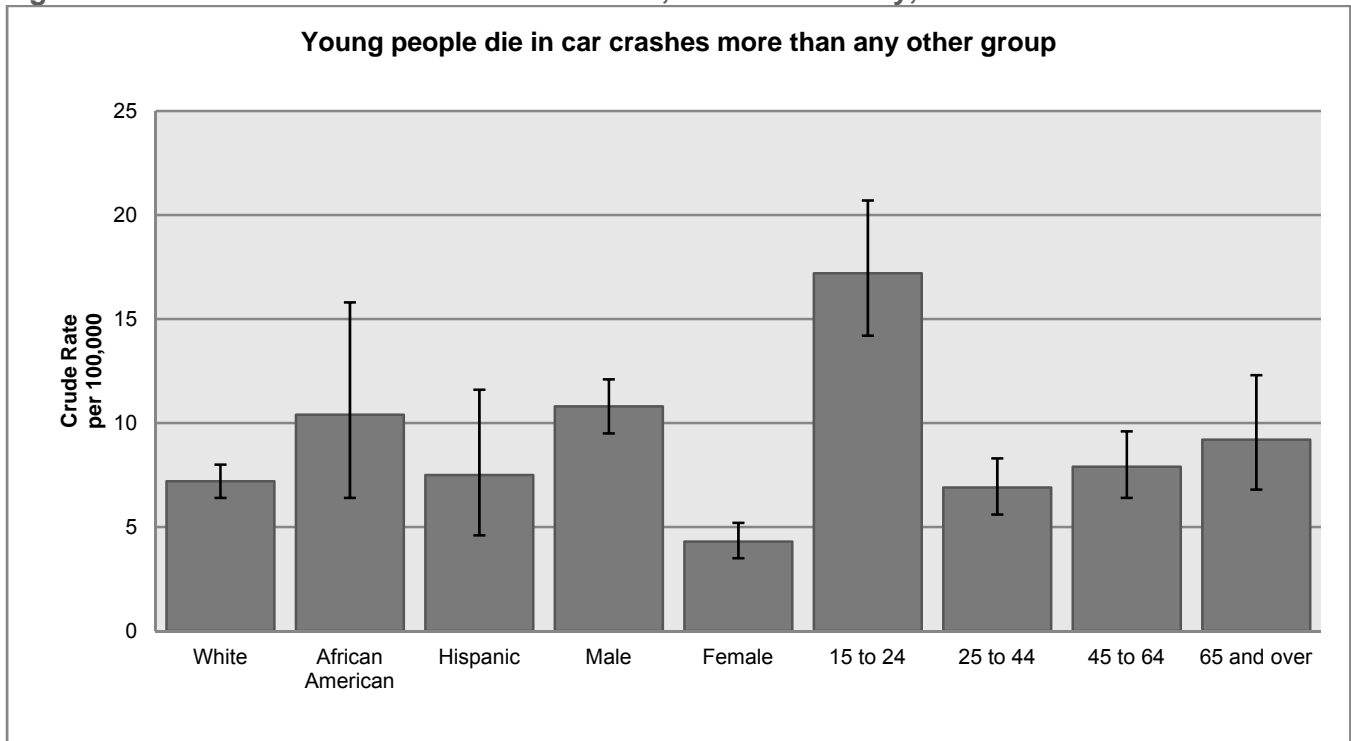
Deaths due to injury do not affect all groups similarly. Young people (age 15 – 24) are much more likely to die in a car crash than individuals in other age groups. Men are also more likely than women to die in car crashes (Figure 7.5).

The suicide rate is similar among all age groups. But men are more likely to kill themselves compared to women (Figure 7.6).

Very few homicides occur in Johnson County, about 9 per year on average from 2001 to 2010. Because of this there was very little data on how homicide rates differed among groups. It appeared that men were more likely to be murdered than women, and people aged 15 to 24 were more likely to be murdered than people aged 25 to 44. But these results are not statistically significant. From 2001 to 2010, 67 white, 16 African American and 12 Hispanic individuals were killed, in Johnson County (Figure 7.7).

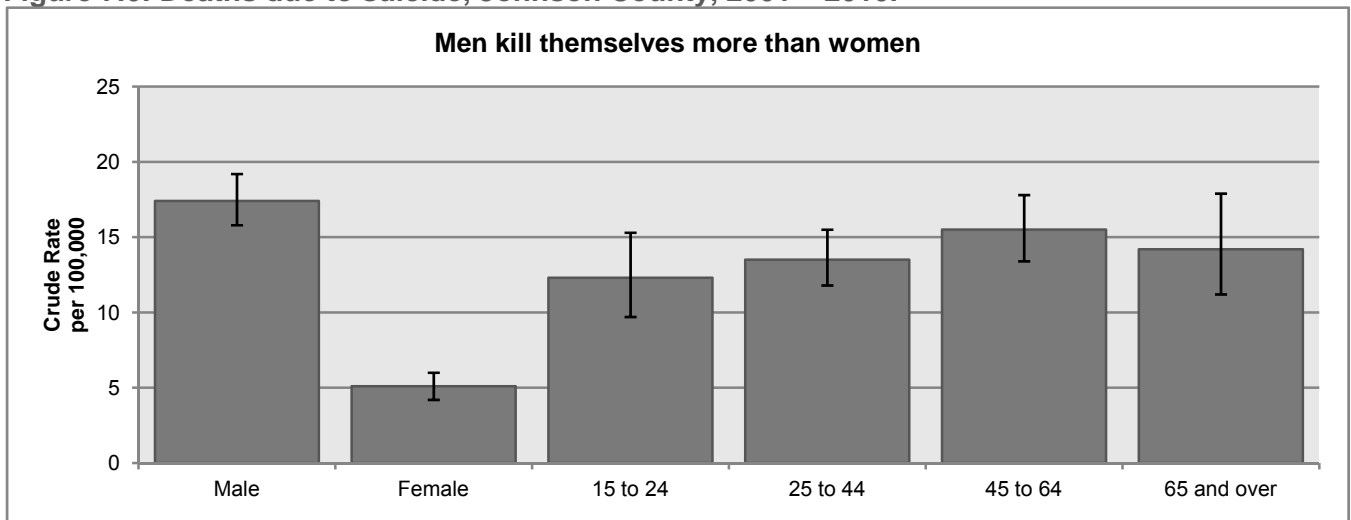
Deaths from other injuries make up about 40% of all deaths from injuries. From 2001 to 2010 the crude death rate from other injuries was roughly 13 per 100,000 people. This is stable among most groups. But, individuals who are 65 years old or older are much more likely to die from other types of injuries, compared to those who are younger (Table 7.8).

Figure 7.5: Deaths due to automobile accidents, Johnson County, 2001 – 2010.



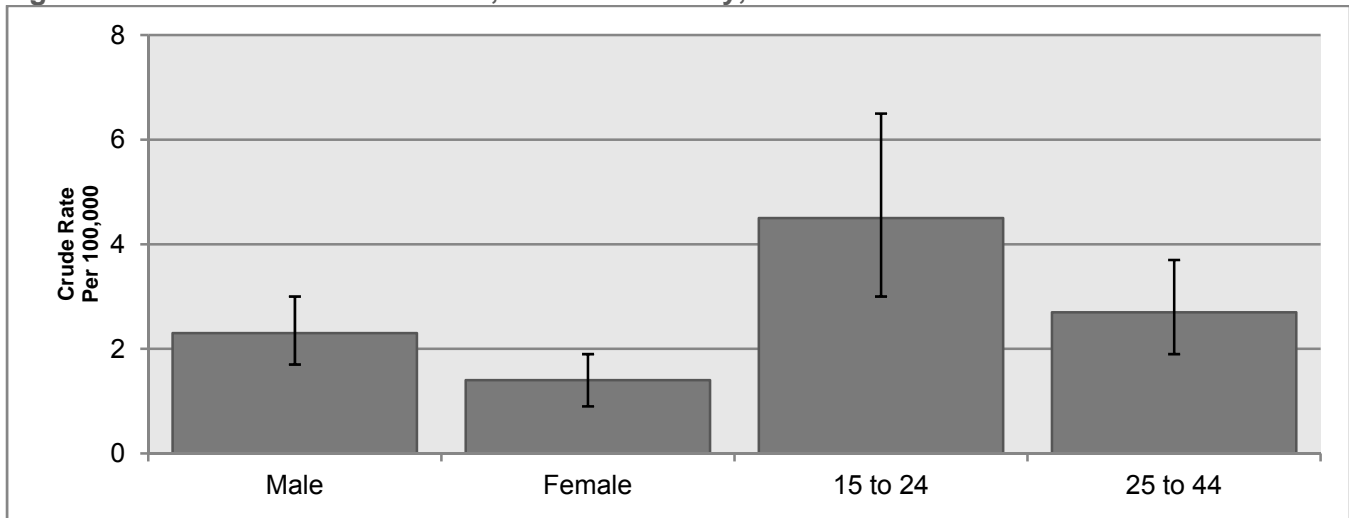
Source: KDHE –BEPHI

Figure 7.6: Deaths due to suicide, Johnson County, 2001 – 2010.



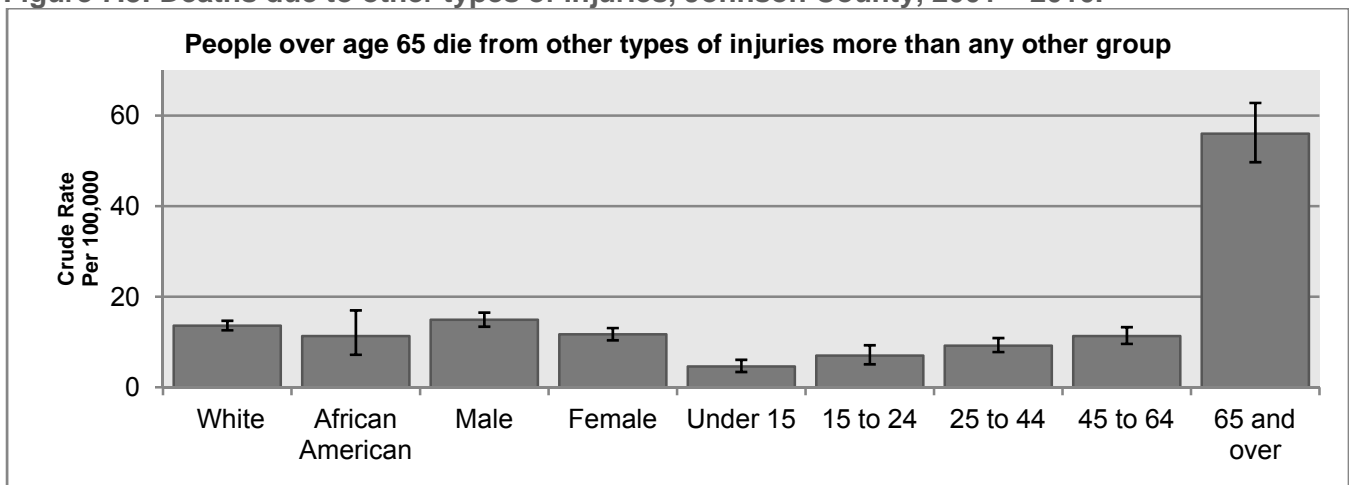
Source: KDHE –BEPHI

Figure 7.7: Deaths due to homicide, Johnson County, 2001 – 2010.



Source: KDHE –BEPHI

Figure 7.8: Deaths due to other types of injuries, Johnson County, 2001 – 2010.



Source: KDHE –BEPHI

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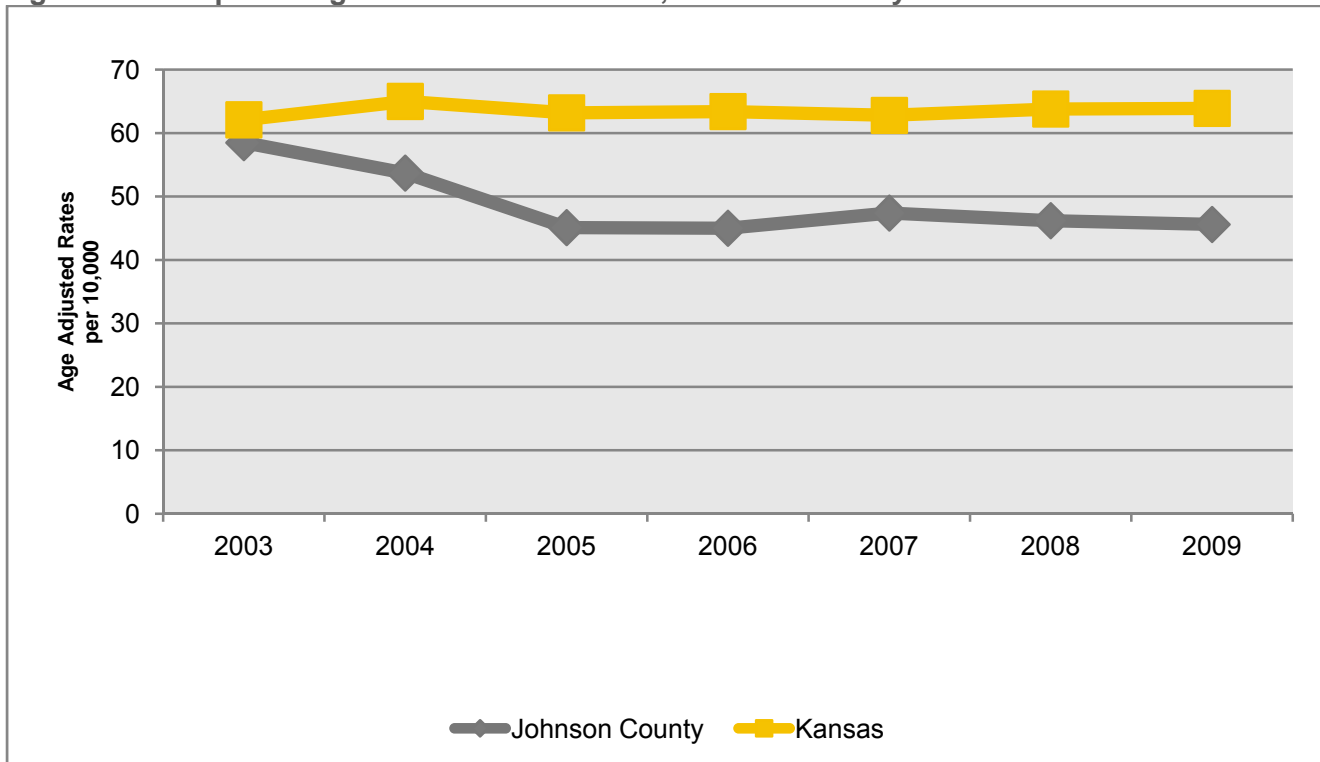
MENTAL HEALTH AND SUBSTANCE ABUSE

Mental illness is characterized as sustained, abnormal alterations in thinking, mood, or behavior, associated with distress and impaired functioning. More Americans suffer from mental illness than any other group of illnesses. Approximately 25% of Americans have a mental illness and roughly 50% of Americans will experience mental illness in their lifetime. Mental illness is a major public health concern, both in its own right and because it increases the risk of unhealthy behaviors like smoking, drinking and drug use as well as chronic disease conditions like heart disease and cancer. In addition, mentally ill individuals are two to six times more likely to suffer a major injury. Mental illness cost the United States \$300 billion annually in 2002 and 2003 (Reeves, et al., 2011).

In Kansas, in 2008, an estimated 8.6% of people reported being depressed, 2.5% reported serious psychological distress, and 13.5% and 10.4% reported having received a diagnosis of depression and anxiety respectively. Kansans also reported having on average 2.9 mentally unhealthy days in 2009. These estimates were obtained through the Behavioral Risk Factor Surveillance System and did not include Johnson County specific information (Reeves, et al., 2011). Johnson County specific data about mental illness comes from death certificate records and hospital discharge diagnoses. However, this is likely an underestimate of the true burden of mental illness. Roughly 2,500 Johnson County residents were diagnosed at a hospital with a general mental health condition annually from 2003 to 2009. Of these diagnoses, affective disorders accounted for the most (46%). Affective disorders are characterized by extreme mood swings; bi-polar disorder is an example. Alcohol related disorders (18%), senility (10%) and schizophrenia (7%) follow. Johnson County residents experienced fewer mental health diagnoses compared to Kansas (Figure 8.2).

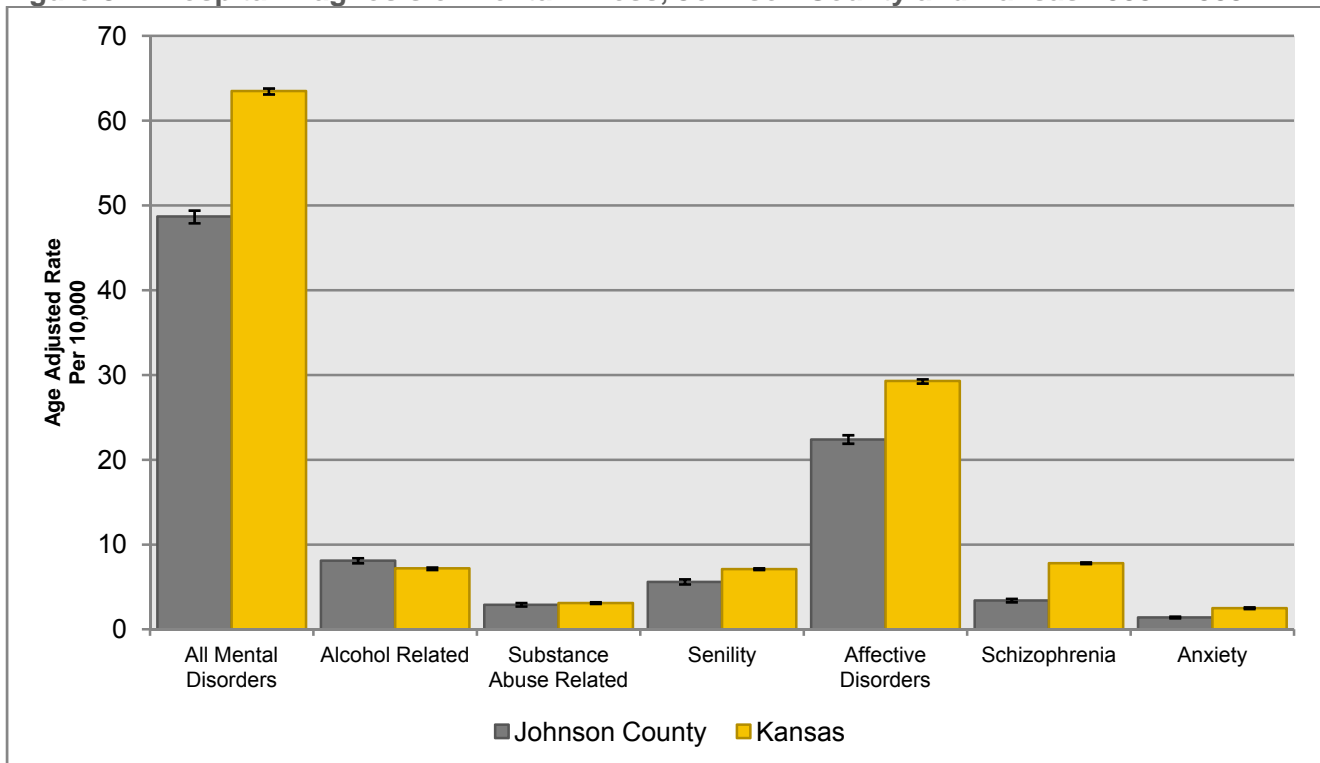
Deaths from Alzheimer's disease and suicide were the only mental health issues directly reflected among death certificate data. Suicides are covered in *Section 8: Injury and Violence*. The age adjusted death rate from Alzheimer's disease was greater among Johnson County residents compared to all Kansans until recently. In 2009 and through 2010 the rate dropped significantly in Johnson County and is now less than that of the Kansas rate (Figure 8.3).

Figure 8.1: Hospital Diagnosis of Mental Illness, Johnson County and Kansas 2003 - 2009.



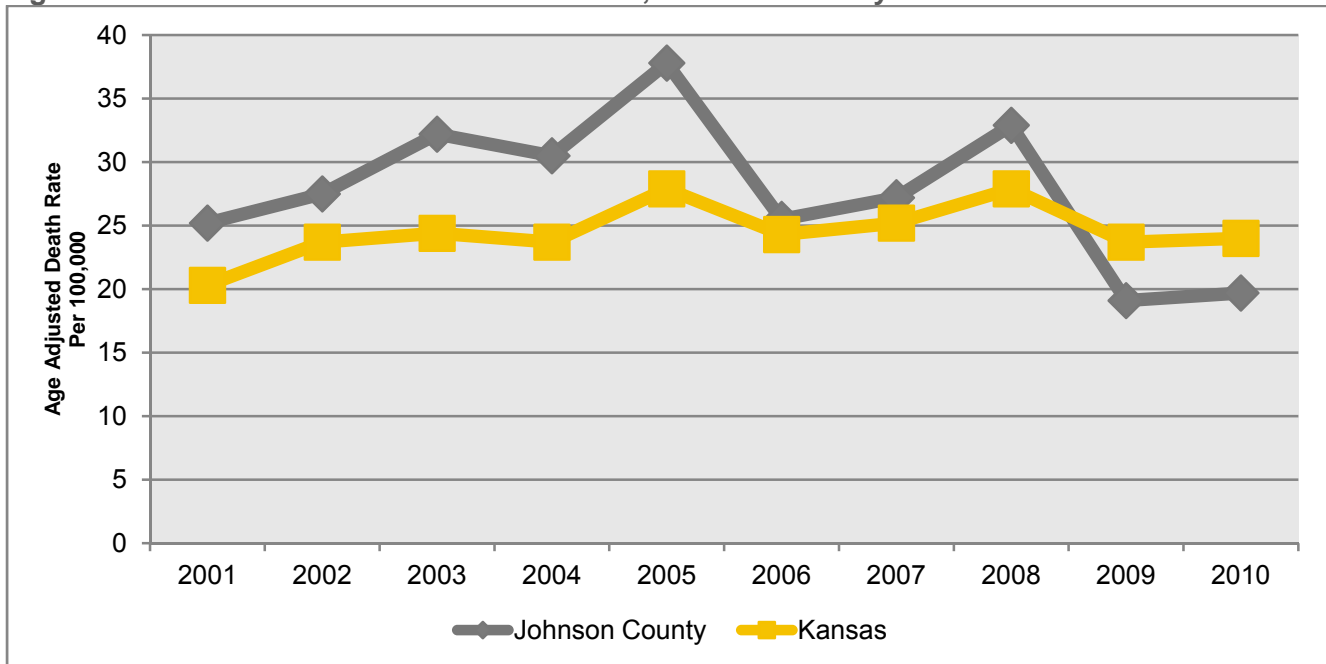
Source: KDHE –BEPHI

Figure 8.2: Hospital Diagnosis of Mental Illness, Johnson County and Kansas 2003 - 2009.



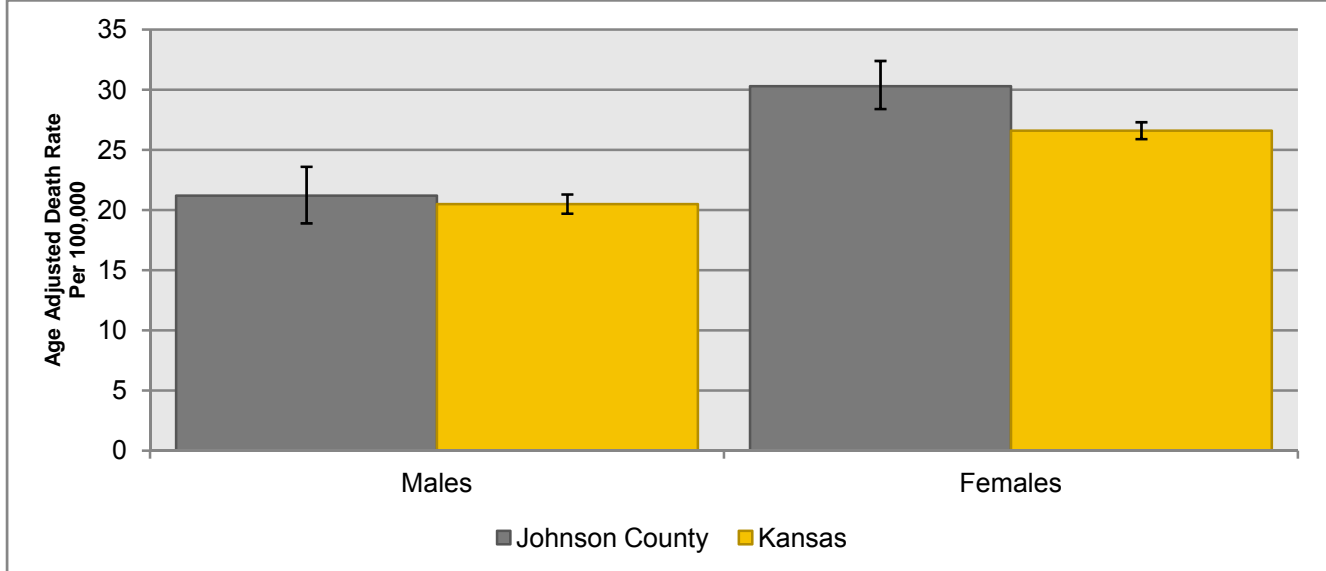
Source: KDHE –BEPHI

Figure 8.3: Deaths due to Alzheimer’s disease, Johnson County and Kansas 2001 – 2010.



Source: KDHE –BEPHI

Figure 8.4: Deaths due to Alzheimer’s disease by gender, Johnson County & Kansas 2001 – 2010.



Source: KDHE –BEPHI

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COMMUNICABLE DISEASE

Communicable diseases once accounted for a majority of death and disability in humans. This is still true in some parts of the world but not in the United States and other industrialized countries. Improvements in nutrition, sanitation and the investment in vaccines have drastically decreased the number of illness and deaths from these devastating diseases., Very few illnesses are caused from polio or measles and smallpox has been eradicated (Schlipkoter & Flahault, 2010). Public health agencies must remain vigilant in halting the spread of infectious disease. Without high functioning public health agencies, communicable diseases will strike again. Additionally, new diseases like HIV/AIDS, SARS and the H1N1 influenza strain have emerged. The events of September 11, 2001 and the anthrax attacks that began one week later are a reminder of the threat of harm to Americans and that infectious disease can be used to do so (Pomerleau & McKee, 2005).

VACCINE PREVENTABLE DISEASES

Vaccines are one of the most effective methods of preventing disease today. The Centers for Disease Control and Prevention recommends 12 vaccinations for children and adolescents, eight of which are required for attendance in schools and early childhood programs in Kansas. Twelve diseases prevented by these vaccines are reportable diseases in Kansas; health care providers are required by law to report cases to public health agencies. In general, the incidence of vaccine preventable diseases is low.

Table 9.1 shows the goals set forth by Healthy People 2020 and the corresponding goals for Johnson County in 2011. Local goals were established by dividing Johnson County's population by the nation's population and multiplying the Healthy People 2020 goal by this ratio (Equation 9.1). Figures 9.1 to 9.6 show the incidence of confirmed, probable and suspected cases of Hepatitis A, Hepatitis B, Pertussis, Varicella, Measles and Mumps, among all age groups in Johnson County, respectively. The yellow line shows the average number of cases from 2005 to 2011 and can be used as a crude measure for the number of cases expected in any given year.

The incidence of Hepatitis A was low from 2005 to 2009, however more than three times the average number of cases was reported in 2011. The number of Hepatitis B cases reported has leveled off at around 120 cases per year from 2008 to 2011, after more than 150 cases

were reported in 2006. From 2005 to 2011 there was an average of 63 cases of Pertussis each year, with no real trend evident. The number of Varicella cases, commonly known as chickenpox, has steadily decreased since 2008. Few cases of measles and mumps were reported in Johnson County from 2005 to 2011, except for an outbreak of measles in 2011 and an outbreak of mumps in 2006. Listed below are six Healthy People 2020 vaccine preventable disease benchmarks with corresponding Johnson County Data. Of these six, Johnson County has met four benchmarks in 2011 (Table 9.1).

Equation 9.1: Calculation of Johnson County Goals base on Healthy People 2020

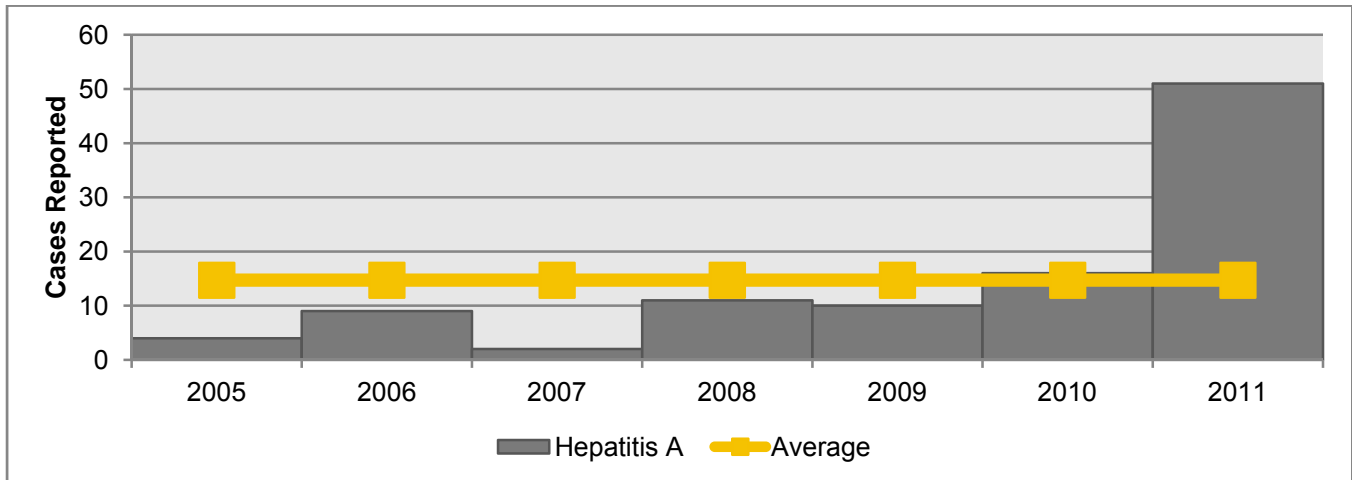
$$\frac{\text{Johnson County Population 2010}}{\text{United States Population 2010}} * \text{Healthy People 2020 goal} = \text{Johnson County Goal}$$

Table 9.1: Healthy People 2020 – Vaccine Preventable Disease Benchmarks

Disease	Healthy People 2020 Goal (Nationwide)	Healthy People 2020 Goal (Johnson County)	Johnson County's Measure (2011)	Met in 2011
Hepatitis A	0.3 cases per 100,000 people	0.3 cases per 100,000 people	Less than 0.1 confirmed cases per 100,000 people	Yes
Hepatitis B	No Cases in individuals 2 - 18 years old.	No Cases in individuals 2 - 18 years old.	0 confirmed cases	Yes
Pertussis	2000 cases among children less than one year old.	Four cases among children less than one year old.	1 confirmed cases	Yes
Varicella	100,000 cases among children less than 18 years old.	176 cases among children less than 18 years old.	17 confirmed cases	Yes
Measles	115 cases among all age groups.	Less than 1 case among all age groups.	6 confirmed cases	No
Mumps	500 cases among all age groups.	Less than 1 case among all age groups.	1 confirmed case	No

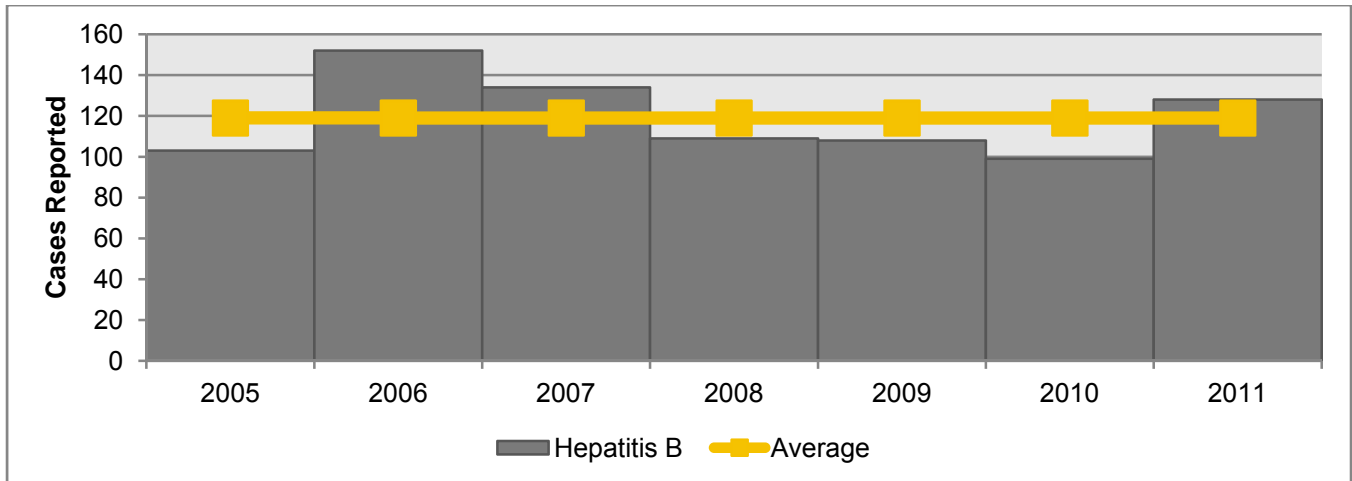
Source: Healthy People 2020, EDSS & U.S. Census Bureau

Figure 9.1: Number of Reported Cases of Hepatitis A in Johnson County – 2005 to 2011



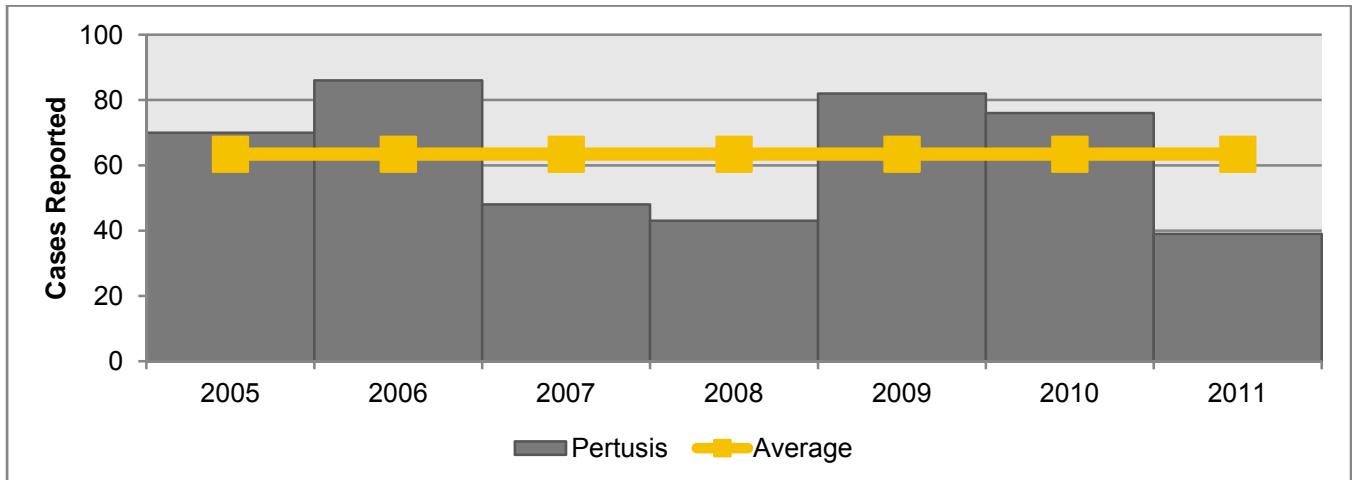
Source: EDSS

Figure 9.2: Number of Reported Cases of Hepatitis B in Johnson County – 2005 to 2011



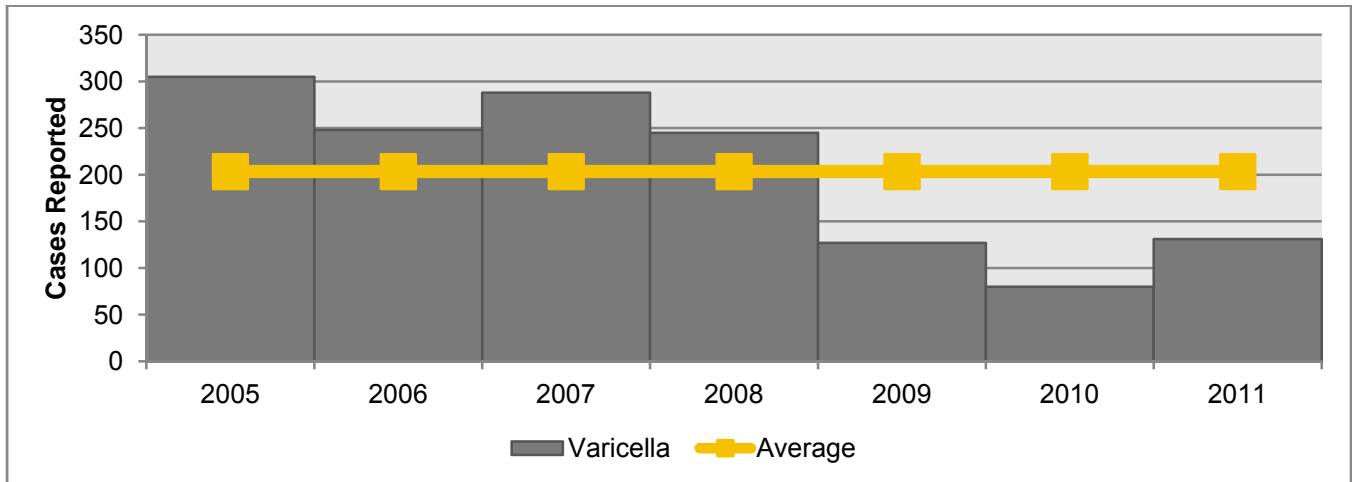
Source: EDSS

Figure 9.3: Number of Reported Cases of Pertussis in Johnson County – 2005 to 2011



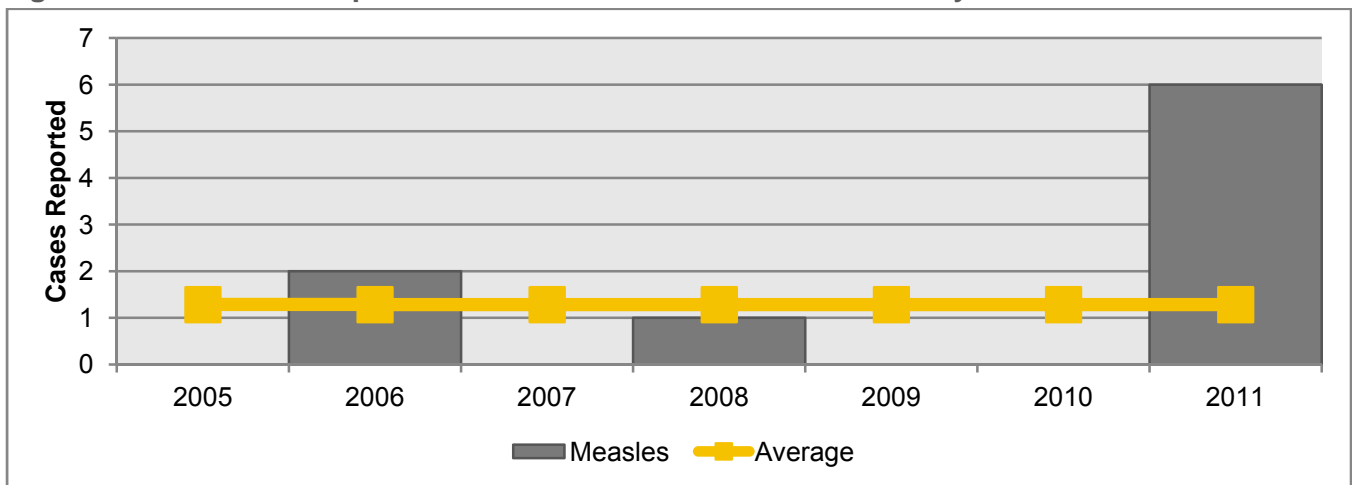
Source: EDSS

Figure 9.4: Number of Reported Cases of Varicella in Johnson County – 2005 to 2011



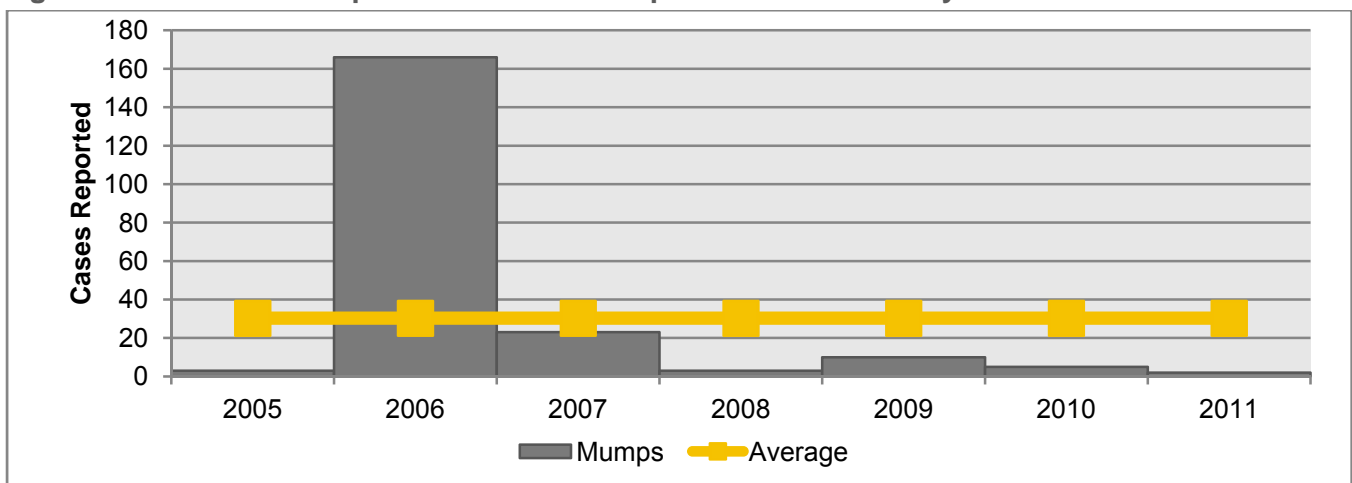
Source: EDSS

Figure 9.5: Number of Reported Cases of Measles in Johnson County – 2005 to 2011



Source: EDSS

Figure 9.6: Number of Reported Cases of Mumps in Johnson County – 2005 to 2011



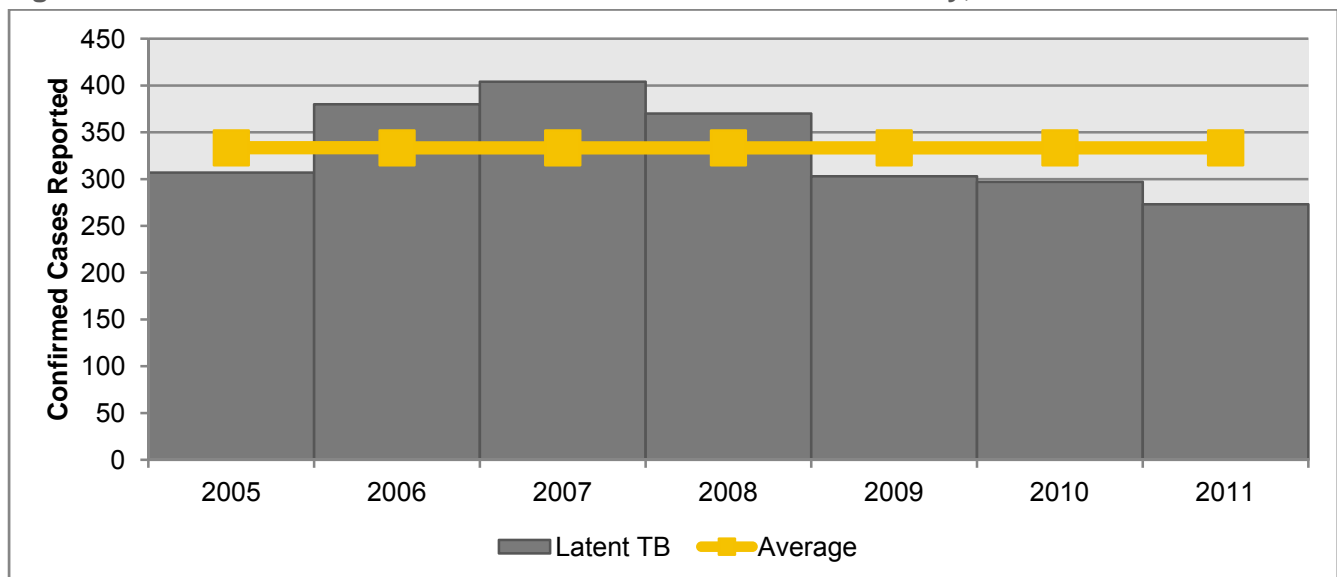
Source: EDSS

TUBERCULOSIS (TB)

Tuberculosis (TB) is a mycobacterial disease that is a major cause of disability and death around the world. TB is spread through the air when a person infected with TB coughs, laughs, sings or sneezes. If untreated, about 65% of patients with confirmed pulmonary TB will die within 5 years, most of these within 2 years. The TB germ can lay dormant in humans. Individuals can be infected without showing symptoms and can spread the disease to others, this is called Latent Tuberculosis Infection, or LTBI. Individuals with LTBI should be treated with an anti-tuberculosis drug to ensure the infection will not progress to active tuberculosis infection. In the United States, most active cases result from latent cases. The incidence of active TB is low in the United States, at about 10 per 100,000 people. Because of the severity of untreated disease and potential for spread among certain populations, it is important to treat active cases and monitor and manage latent cases (Heymann, 2004).

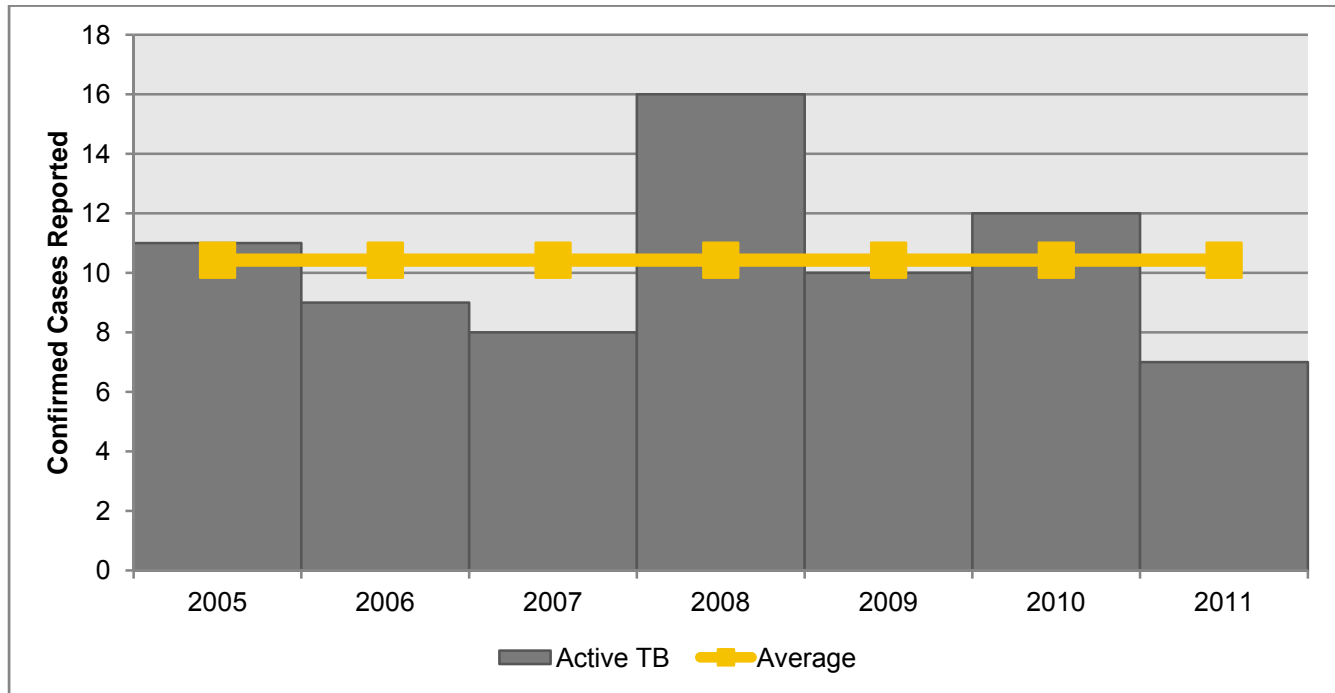
Johnson County averaged 333 new cases of confirmed LTBI each year from 2005 to 2011 although the number has been decreasing in recent years. There were fewer than 300 new cases confirmed in both 2010 and 2011 (Figure 9.7). There were approximately 10 new cases of confirmed active tuberculosis identified each year from 2005 to 2011. A similar decline was not seen among active cases (Figure 9.8). Healthy People 2020 have set a nationwide goal of one active TB case per 100,000 people. Johnson County experienced slightly more than this (Table 9.2).

Figure 9.7: Confirmed Latent Tuberculosis Cases in Johnson County, Kansas



Source: EDSS

Figure 9.8: Confirmed Active Tuberculosis Cases in Johnson County, Kansas



Source: EDSS

Table 9.2: Healthy People 2020 – Tuberculosis Benchmarks

Disease	Healthy People 2020 Goal (Nationwide)	Healthy People 2020 Goal (Johnson County)	Johnson County's Measure (2011)	Met in 2011
Active TB Infection	1 case per 100,000 people	1 case per 100,000 people	1.27 per 100,000 people	No

Source: Healthy People 2020, EDSS & U.S. Census Bureau

SEXUALLY TRANSMITTED DISEASES

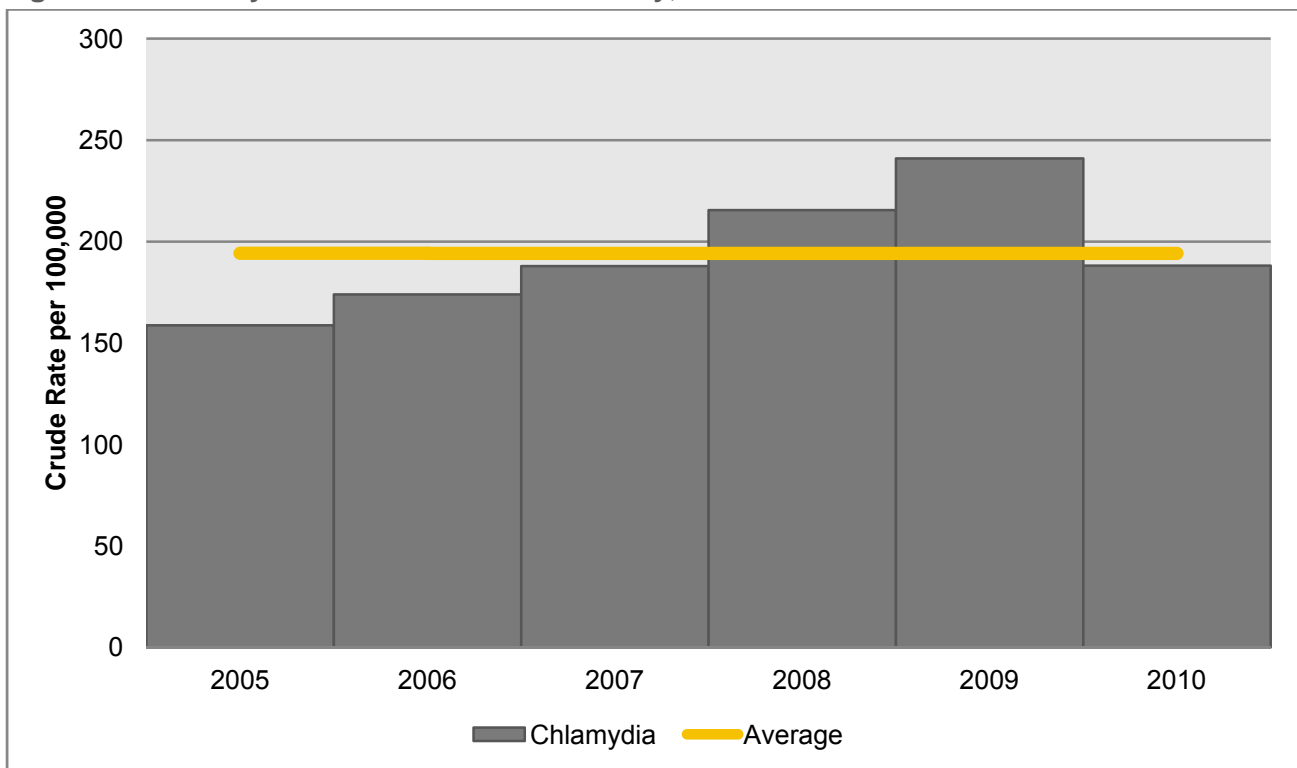
Sexually transmitted diseases (STDs) cause enormous health and economic consequence in the United States.

Chlamydia is the most commonly reported disease in the United States. It can lead to Pelvic Inflammatory Disease (PID) which is a major cause of infertility, ectopic pregnancy and chronic pelvic pain. Chlamydia infection can also facilitate the spread of HIV infection. CDC recommends that all sexually active women younger than age 26 receive an annual Chlamydia screening. Rates are higher in women than in men and there has been a steady increase over the past 20 years. In 2010 there were 426 case per 100,000 people reported in the United States (CDC, 2011). Rates were lower in both Kansas (341 per 100,000) and Johnson County (188 per 100,000) in 2010 (KDHE, 2011) (Figure 9.9).

Gonorrhea is the second most commonly reported disease in the United States, following Chlamydia. Like Chlamydia, Gonorrhea can cause PID. From 1975 to 2010 Gonorrhea rates dropped by more than 70% in the United States after the national gonorrhea control program was adopted. There were approximately 450 cases per 100,000 people in 1975. In 2010 there were 100 cases per 100,000 (CDC, 2011). Rates were lower in both Kansas (73.9 per 100,000) and Johnson County (36.2 per 100,000) in 2010 compared to the United States (KDHE, 2011) (Figure 9.10).

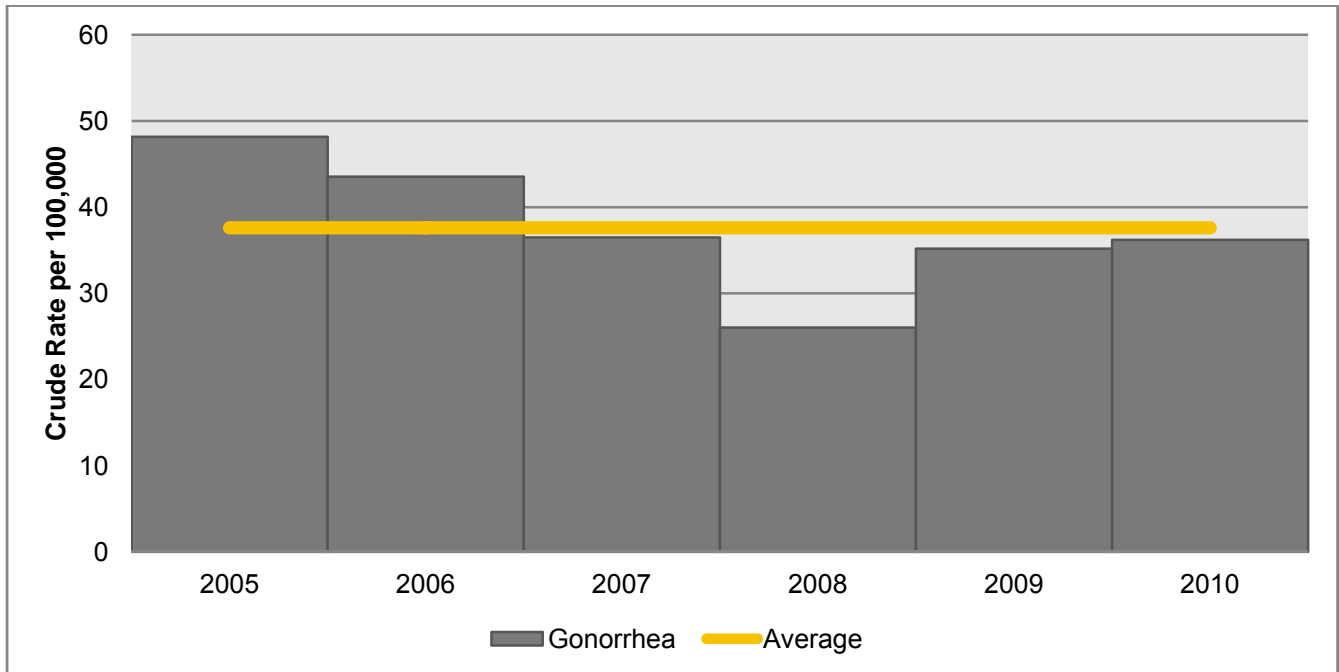
Syphilis is a genital ulcerative disease and causes significant complications if left untreated. Like Chlamydia and Gonorrhea, it facilitates HIV infection. Untreated early Syphilis in pregnant women results in perinatal death in about 40% of cases. It can lead to infection of the fetus if syphilis was acquired four years prior to the pregnancy. Nationwide, the number of syphilis cases increased by about 2.2%, from 44,830 in 2009 to 45834 in 2010. However, this is still historically very low (CDC, 2011). In 2010, both Kansas and Johnson County experienced about 0.7 cases per 100,000 people (KDHE, 2011) (Figure 9.11).

Figure 9.9: Chlamydia Rates in Johnson County, Kansas



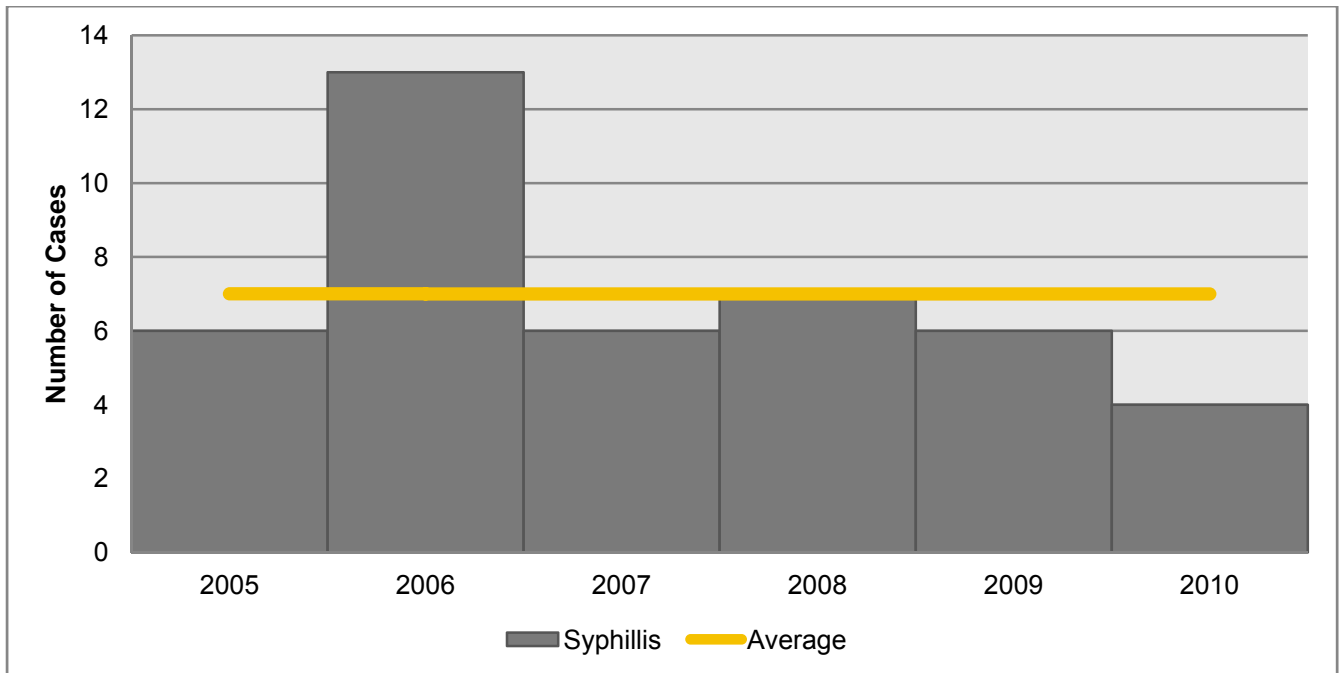
Source: KDHE STD Statistics

Figure 9.10: Gonorrhea Rates in Johnson County, Kansas



Source: KDHE STD Statistics

Figure 9.11: Syphilis Cases in Johnson County, Kansas



Source: KDHE STD Statistics

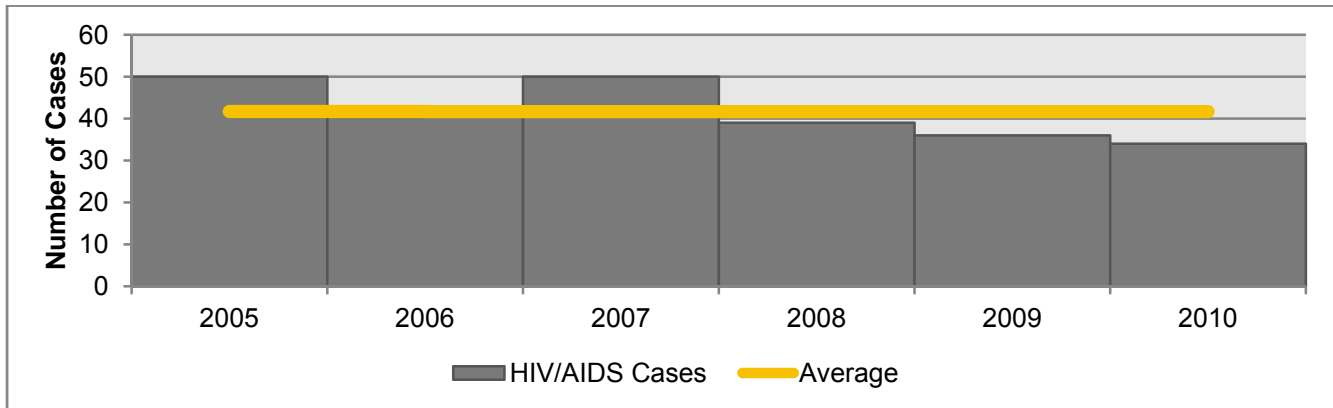
HIV/AIDS

Human immunodeficiency virus or HIV damages a person's body by destroying certain blood cells that fight disease. Late stage disease is called acquired immune deficiency syndrome more commonly known as AIDS. At this stage, it is difficult for individuals to recover from diseases, and people with AIDS often die from diseases that others would overcome easily. People that have contracted HIV may not know they are sick for many years. Because of this, it is recommended that individuals from the age of 13 to 64 be tested at least once and people participating in high risk behaviors should be tested at least once a year (CDC, 2011).

CDC estimated that there were about 1.2 million people nationwide infected with HIV living in the United States in 2009. The annual number of new HIV infections has remained relatively stable over the past decade, with about 56,000 persons being infected annually. HIV disproportionately effects certain populations. Men who have sex with men (MSM) represent about 2% of the U.S. population, but make up about half of all new HIV cases. African Americans make up about 12% of the U.S. population, but account for almost half of all new HIV infections (CDC, 2010).

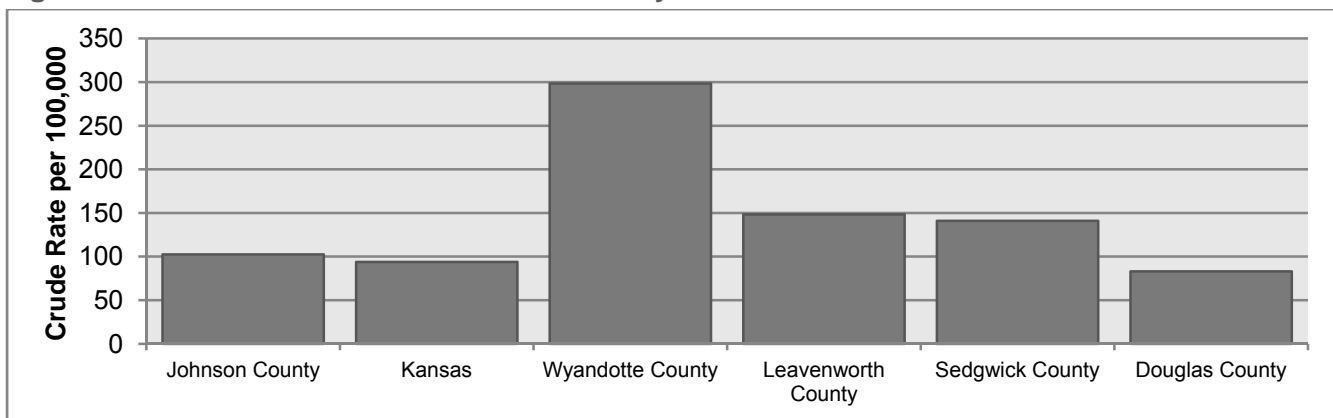
Kansas ranks 35th among all states and has reported 3,106 HIV or AIDS cases through 2008. Approximately 63% of the cases were among men who have sex with men, 10% among intravenous drug users, and about 12% among heterosexuals with no other risk factors. Roughly 69% of the cases were Caucasian, 20% African American and 9% Hispanic. In Johnson County, there were 558 people living with HIV or AIDS as of December 31, 2010 (KDHE-BDCP, 2011). About 42 new cases were reported annually from 2005 to 2010, with a high of 50 in 2005 and 2007 and a low of 34 in 2010 (Figure 9.12). The HIV/AIDS prevalence rate in Johnson County is 103 per 100,000. This is slightly higher than that of Kansas (94 per 100,000) but less than other comparable Kansas counties such as Wyandotte (298 per 100,000), Leavenworth (148 per 100,000) and Sedgwick (141 per 100,000) (Figure 9.13).

Figure 9.12: HIV/AIDS Cases in Johnson County, Kansas



Source: KDHE HIV/AIDS Statistics

Figure 9.13: HIV/AIDS Cases in Johnson County and other Kansas Counties



Source: KDHE HIV/AIDS Statistics

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COMMUNITY ASSETS

Community health issues are best addressed using existing assets and community strengths. The community health improvement planning process can be thought of as linking the identified health issues to community defined goals via existing assets and strengths. In this sense, it is important to know what assets exist and how to utilize them.

This section is structured so that resources are identified for each of the priority issues as defined by the Community Health Assessment Process Coalition. That being: 1) Physical Activity and Nutrition; 2) Access to Healthcare and 3) Mental Health and Substance Abuse. A final section on general community health assets is also included.

PHYSICAL ACTIVITY AND NUTRITION

Obesity is now the greatest health challenge facing the United States. It is generally dependent on two factors; diet and physical activity habits (Philipson & Posner, 2008). The community assets for this goal band together around two factors; assisting people in accessing and preparing high quality, nutrition rich foods and encouraging people to build exercise into their daily lives. Presented below is a partial list of community resources.

PHYSICAL ACTIVITY

- Johnson County Parks and Recreation Department <http://jcprd.com>
- Johnson County Community College
Athletics <http://www.jccc.edu/cavs/department/youth-sports-camps.html>
- Matt Ross Community Center and Tomahawk Ridge Community
Center www.opkansas.org
- Sylvester Powell Jr. Community Center www.sylvesterpowell.com
- Jewish Community Center of Greater Kansas City www.jcckc.org
- Private Fitness Clubs and Gymnasiums
- Local Hospitals

NUTRITION

- **Urban Farming**
 - <http://www.cultivatekc.org>
 - <http://urbanfarmstourkc.com>

- http://www.marc.org/environment/Energy/Green_Practices_Guide/Zoning/urban_ag.htm: Provides a list of local policies about urban agriculture
- **Farmers' Markets**
 - Blue Valley Recreation Farmers' Market: <http://www.bluevalleyrec.org/page/market.php>
 - Gardner Farmers' Market: www.gardnerfarmersmarket.com
 - Merriam Marketplace: <http://www.merriam.org/park/Marketplace>
 - Shawnee Farmers' Market: <http://www.cityofshawnee.org/WEB/ShawneeCMS.nsf/vwContent/FarmersMarket>
 - Olathe Farmers' Market: <http://www.olatheks.org/ParksRec/Farmers>
 - Overland Park Farmer's Market: http://www.downtownop.org/farmers_market.html
 - Spring Hill Farmers' Market: <http://springhillmarket.org/>
- **Cooking & Culinary Arts**
 - The Culinary Center of Kansas City: <http://www.kcculinary.com/>
 - Whole Foods Market – The Cooking Studio: <http://wholefoodsmarket.com/stores/metcalfe/cooking-classes-2>
 - Cookbooks and classes from the Johnson County Library: <http://www.jocolibrary.org/>
 - K State Extension Office: <http://www.johnson.ksu.edu>

OBESITY

- Weighing In: <http://www.childrensmercy.org/content/view.aspx?id=6557>
- Healthy Families Program Powered by Blue KC: <http://www.kansascityymca.org/about-y/news/healthy-families-program-powered-blue-kc>
- Kansas City Chiefs Sports Lab Powered by Blue KC: <http://www.kcchiefs.com/community/sportslab.html>

MENTAL HEALTH AND SUBSTANCE ABUSE

- Johnson County Mental Health Services: <http://mentalhealth.jocogov.org/htpages/olathe.shtml>
- Regional Prevention Center: <http://www.4prevention.info/>
- Substance Abuse Treatment Facility Locator: <http://findtreatment.samhsa.gov/TreatmentLocator/faces/quickSearch.jspx>

- Treatment Center directory <http://www.treatmentcentersdirectory.com/>
- Mental Health Association of the Heartland www.mhah.org

ACCESS TO HEALTHCARE

- The Health Resource
Guide: http://www.kchealthresource.org/assets/healthresourceguide_eng.pdf
- Johnson County Community College Dental Hygiene Clinic:
<http://www.jccc.edu/dentalhygiene/>
- Health Partnership Clinic of Johnson County
www.hpjc.org
- Mercy & Truth Medical Missions www.mercyandtruth.com
- WyJo Care – Medical Society of Johnson and Wyandotte Counties
<http://www.msjwc.org/care.html>
- Johnson County Health Department: <http://health.jocogov.org>

GENERAL COMMUNITY HEALTH ASSETS

- Johnson County Library – Health and Wellness
Services: <http://www.jocolibrary.org/default.aspx?id=13895&epslanguage=EN>

2011 COMMUNITY HEALTH PROFILE
JOHNSON COUNTY, KANSAS

**ISSUED BY JOHNSON COUNTY HEALTH DEPARTMENT
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