

Saline County Community Health Assessment

2012

Community Engagement and Prioritization

2013

Salina Saline County Health Department

Salina Regional Health Center

Central Kansas Foundation

Endorsed by Salina Surgical Hospital

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Purpose

The Community Health Assessment forms the foundation for community health improvement. The purpose of the assessment is to provide comprehensive, reliable measures that can be used to direct targeted, evidence based health improvement activities where they are needed; provide a baseline for ongoing evaluation; and guide resource utilization.

Community Health Assessment Core Group

Early in 2012 representatives of Salina Regional Health Center, the Salina Saline County Health Department and the Central Kansas Foundation partnered to conduct an assessment of the health status and needs of our community. These three organizations formed the Saline County Community Health Assessment (CHA) Core Group, thereby committing to an ongoing effort to improve the health of the community.

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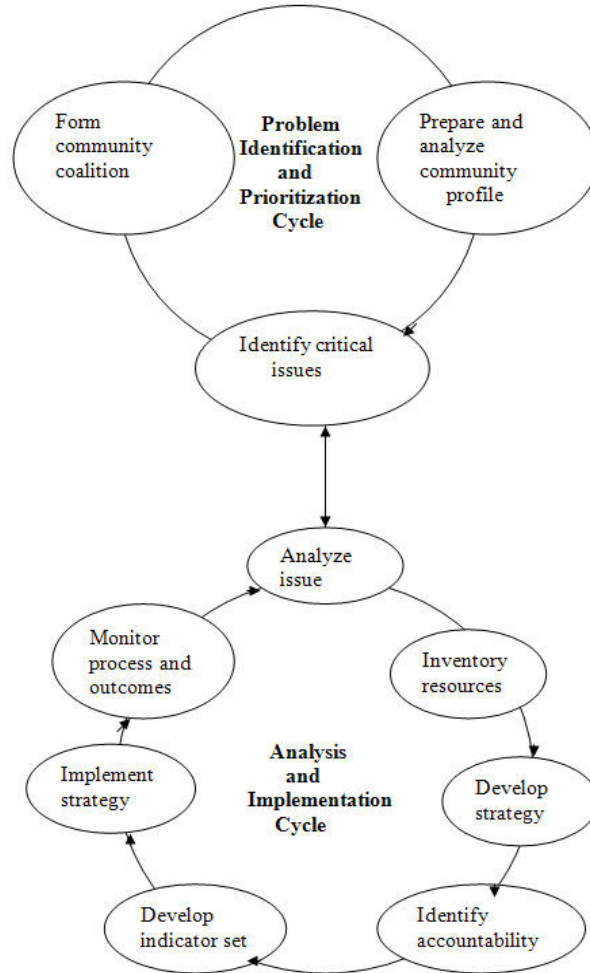
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Endorsed by **Salina Surgical Hospital**

The Community Health Improvement Process

Several tools and frameworks have been developed to guide communities through the CHA process. The framework that was selected by the CHA Core Group is the Institute of Medicine Community Health Improvement Process [1]. An important initial step in the process is the preparation, analysis and interpretation of data describing the community, the Community Profile. The Community Profile describes the factors that contribute to the health and the health status of the community.

Figure 1: A Community Health Improvement Process



J.S. Durch, L.A. Bailey, and M.A. Stoto, eds. Improving Health in the Community, Washington, DC: National Academy Press, 1997.

Data Sources

There are numerous publicly available sources for valid, reliable data. The Kansas State Department of Health and Environment (KDHE) collects information that includes pregnancy outcomes, births, deaths, cancer incidence, reportable diseases, and more. Kansas community specific data are accessible on the KDHE web site in the form of published reports or as customizable tables [2].

In 2011 The Kansas Partnership for Improving Community Health (KanPICH) launched the Kansas Health Matters web site to assist communities with the CHA/CHIP process. The web site is a publicly accessible repository for standardized, county specific health indicator data and CHA resources [3]

The Center for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS) is the largest annual health related phone survey conducted in the world. The KS BRFSS program provided county specific data for those counties with a population large enough for sufficient sample size in 2009. These data are accessible on the internet [4].

The measures compiled in this report come from multiple sources that use scientifically sound data collection and analysis methods. More information about the methods used to produce these data is available from each source.

Data Interpretation

For the purpose of this CHA, the community is Saline County. All of the local measures in this report are based on county of residence. The measures describe the rate at which events occur among the Saline County population, allow comparison to expected values and describe trends over time.

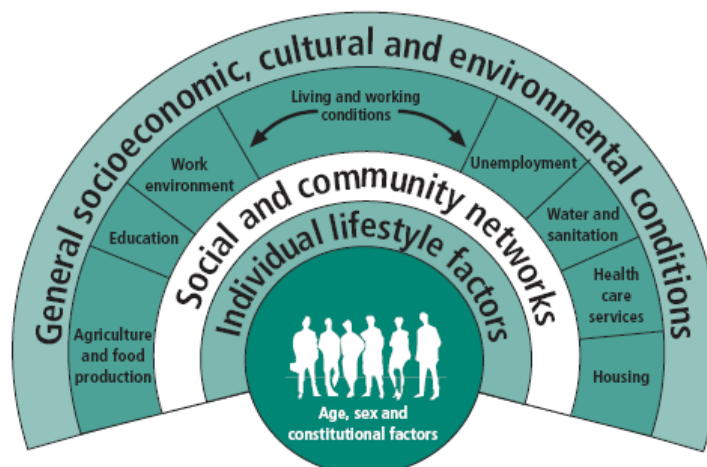
Percentages or other rates (number of events divided by the group of people affected) have been used to standardize and allow comparison to other population groups. For example, the adolescent birth rate is expressed as the number of live births per 1,000 age group female population. Age adjustment of data, such as age adjusted death rates, standardizes the measurement to account for varying age distributions within populations. When the number of annual events or population represented are small multiple years of data may be combined to enable meaningful rate calculation.

Comparison of local values to state or national values provides means to determine an expected number of events given population size [5]. While such comparisons provide additional insight, decisions that are made on the basis of these comparisons should be made with caution, particularly when the population of interest is small or the number of events of interest is small [1]. There are many measures in which Saline County measures appear higher or lower compared to Kansas overall. These differences are sometimes due to chance and aren't always significant. An asterisk (*) has been placed by the health condition when the difference is significant.

Determinants of Health

There are multiple internal and external factors that contribute to the health of a community. Thus, this report includes measures that describe cultural, social, behavioral, economic and environmental factors within the community as well as those that describe health status and behaviors.

Fig. 1. Social determinants of health



Source: Dahlgren G, Whitehead M. Tackling inequalities in health: what can we learn from what has been tried? Background paper for "The King's Fund International Seminar on Tackling Health Inequalities". Ditchely Park, Oxford: King's Fund; Reproduced with permission of the authors.

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Demographic Overview 2011 Estimates

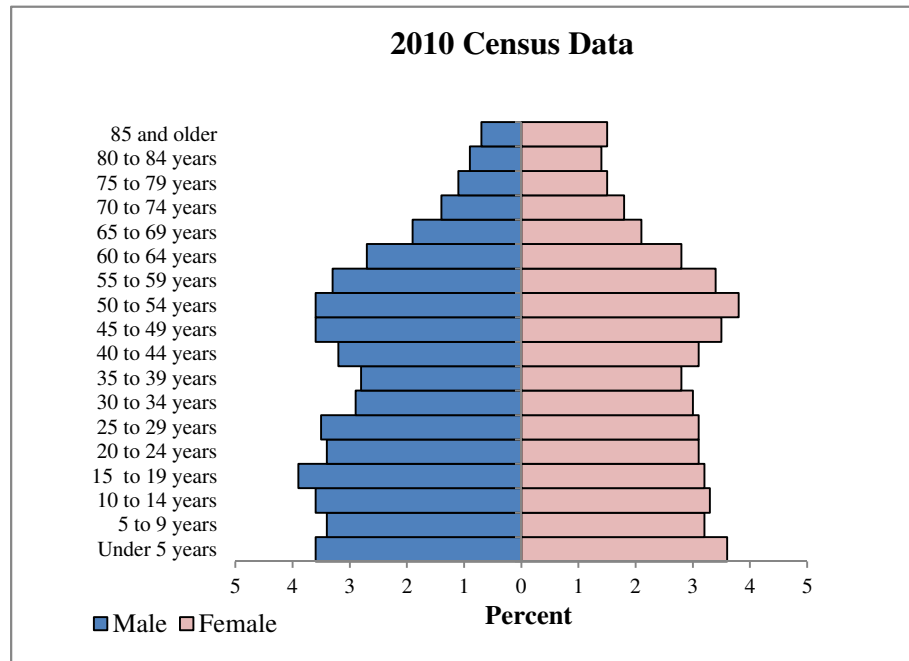
People QuickFacts	Saline County	Kansas
Population, 2011 estimate	55,844	2,871,238
Population, 2010	55,606	2,853,118
Population, percent change, April 1, 2010 to July 1, 2011	0.4%	0.6%
Persons under 5 years, percent, 2011	7.1%	7.1%
Persons under 18 years, percent, 2011	24.9%	25.2%
Persons 65 years and over, percent, 2011	14.6%	13.3%
Female persons, percent, 2011	50.3%	50.3%
Living in same house 1 year & over, 2006-2010	81.7%	82.2%
Foreign born persons, percent, 2006-2010	4.8%	6.3%
Housing units, 2011	24,181	1,237,651
Homeownership rate, 2006-2010	67.8%	69.4%
Housing units in multi-unit structures, percent, 2006-2010	17.4%	17.4%
Median value of owner-occupied housing units, 2006-2010	\$114,000	\$122,600
Households, 2006-2010	21,932	1,101,672
Persons per household, 2006-2010	2.45	2.48
Per capita money income in past 12 months (2010 dollars) 2006-2010	\$23,669	\$25,907
Median household income 2006-2010	\$45,162	\$49,424
Business QuickFacts	Saline County	Kansas
Private nonfarm establishments, 2010	1,614	74,301
Private nonfarm employment, 2010	26,897	1,127,160
Private nonfarm employment, percent change, 2000-2010	2.1	-0.1
Nonemployer establishments, 2010	3,382	183,642
Merchant wholesaler sales, 2007 (\$1000)	816,434	45,863,865
Retail sales, 2007 (\$1000)	1,064,587	34,538,332
Retail sales per capita, 2007	\$19,676	\$12,444
Accommodation and food services sales, 2007 (\$1000)	96,095	4,192,347
Building permits, 2011	90	5,386
Geography QuickFacts	Saline County	Kansas
Land area in square miles, 2010	720.23	81,758.72
Persons per square mile, 2010	77.2	34.9

Source: US Census Bureau State & County QuickFacts

Age Distribution

Age Group	2005	2006	2007	2008	2009	Census 2010	2011	2011 Percent of total	2005-2011 Percent change
0 to 4	3604	3737	3836	3903	3928	4005	3986	7.1	10.6
5 to 9	3549	3601	3708	3607	3499	3654	3692	6.6	4.0
10 to 14	3727	3797	3679	3668	3615	3879	3809	6.8	2.2
15 to 19	3628	3554	3617	3541	3629	3919	3959	7.1	9.1
20 to 24	3860	3513	3367	3325	3699	3660	3603	6.5	-6.7
25 to 29	3603	3717	3880	3841	3884	3719	3691	6.6	2.4
30 to 34	3331	3128	3147	3289	3155	3292	3417	6.1	2.6
35 to 39	3541	3631	3658	3521	3200	3136	2978	5.3	-15.9
40 to 44	3980	3814	3625	3469	3345	3522	3586	6.4	-9.9
45 to 49	4132	4156	4104	4023	4066	3962	3735	6.7	-9.6
50 to 54	3776	3892	3877	4005	4007	4096	4227	7.6	11.9
55 to 59	3242	3384	3395	3394	3568	3712	3799	6.8	17.2
60 to 64	2307	2385	2647	2779	2885	3048	3224	5.8	39.7
65 to 69	1914	2038	2103	2201	2115	2231	2307	4.1	20.5
70 to 74	1718	1737	1764	1803	1799	1822	1832	3.3	6.6
75 to 79	1651	1605	1597	1610	1479	1463	1490	2.7	-9.8
80 to 84	1212	1273	1311	1351	1282	1265	1226	2.2	1.2
85 and up	1144	1208	1268	1327	1209	1221	1283	2.3	12.2
All	53919	54170	54583	54657	54364	55606	55844	100	3.6

Source: Kansas Department of Health and Environment. Kansas Information for Communities, Population Estimates <http://kic.kdhe.state.ks.us/kic/Populate.html>



These data indicate that the largest increases in Saline County age group population from 2005 to 2011 occurred in the 60-64 and the 65-69 year age groups. The largest decrease in age group population occurred in the 35-39 year group. The age structure of a population is important in planning for the future of a community, particularly for schools, community centers, health care, and child care. A population with more youth will have greater education and child care needs, while an older population may have greater health care needs [3].

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Social Characteristics

SALINE COUNTY RACIAL AND ETHNIC CHARACTERISTICS CENSUS DATA	2000	Number	2010
One race	97.9%	53,901	96.9%
White	89.2%	48,695	87.6%
Black or African American	3.1%	1,814	3.3%
American Indian and Alaska Native	0.5%	295	0.5%
Asian	1.7%	1,156	2.1%
Native Hawaiian and Other Pacific Islander	0.1%	27	0.1%
Some other race	3.3%	1,914	3.4%
Two or more races	2.1%	1,705	3.1%
Hispanic or Latino (of any race)	6.0%	5,403	9.7%

Source: 2000 and 2010 U.S. Census. <http://factfinder2.census.gov>

SALINE COUNTY LANGUAGE SPOKEN AT HOME 2009-2011, 3 YEAR ESTIMATES	Number	Percent
Population 5 years and over	51,796	
English only	46,270	89.3%
Language other than English	5,526	10.7%
Speak English less than "very well"	2,149	4.1%
Spanish	3,940	7.6%
Speak English less than "very well"	1,503	2.9%
Other Indo-European languages	372	0.7%
Speak English less than "very well"	103	0.2%
Asian and Pacific Islander languages	1,214	2.3%
Speak English less than "very well"	543	1.0%

Source: American Community Survey. Selected Social Characteristics, 2009-2011.

<http://factfinder2.census.gov>

Saline County continues to become more culturally diverse. The Hispanic/Latino population grew 67% from 2000 to 2010. 10.7% of the Saline County population older than five years speak a language other than English in their home. Approximately 4% of the Saline County population speak English less than very well. The most commonly spoken languages other than English are Spanish and Asian.

Culturally appropriate, community-driven programs are critical for eliminating racial and ethnic disparities in health. Prevention research is needed to identify the causes of health disparities and the best means of delivering preventive and clinical services. Establishing these programs will require new and innovative partnerships [6].

SALINE COUNTY HOUSEHOLD TYPES AS A PERCENT OF THE TOTAL NUMBER OF HOUSEHOLDS	2000	2010	Kansas 2010
Number of households	21,436	22,416	
Households with individuals under 18 years	34.4%	31.7%	33.2%
Households with individuals 65 years and over	23.9%	25.3%	23.7%
Average household size (not a percent)	2.43	2.42	2.49
Average family size (not a percent)	2.98	2.98	3.06
FAMILY HOUSEHOLDS (families)	66.3%	64.2%	66.0%
Family households with own children under 18 years	32.1%	28.6%	30.4%
Married-couple family	52.9%	48.6%	51.1%
Married couple family with own children under 18 years	23.2%	18.7%	21.3%
Male householder, no wife present #		4.8%	4.5%
Male householder, no wife present, with own children under 18 years #		2.9%	2.6%
Female householder, no husband present	9.7%	10.8%	10.4%
Female householder, no husband present, with own children under 18 years	6.5%	7.0%	6.5%
NONFAMILY HOUSEHOLDS	33.7%	35.8%	34.0%
Householder living alone	28.3%	29.7%	27.8%
Householder 65 years and over, living alone	10.7%	10.9%	9.9%

Source: 2000 and 2010 U.S. Census. <http://factfinder2.census.gov>

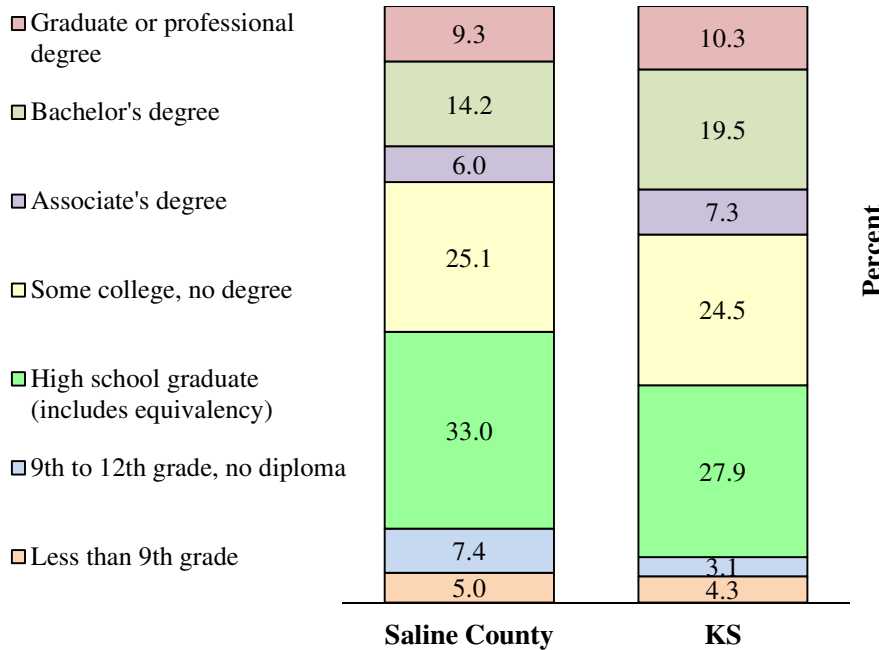
New measure on 2010 Census

RELATIONSHIPS OF PEOPLE LIVING IN SALINE COUNTY HOUSEHOLDS	2000	2010	Kansas 2010
Total Population	53,597	55,606	
Population in households	97.3%	97.4%	97.2%
Householder	40.0%	40.3%	39.0%
Spouse	21.2%	19.6%	19.9%
Child	28.5%	27.3%	28.8%
Own child under 18 years	24.0%	22.0%	23.1%
Other relatives	2.9%	4.4%	4.3%
Under 18 years	1.2%	2.1%	1.9%
65 years and over #		0.4%	0.5%
Nonrelatives	4.8%	5.7%	5.3%
Under 18 years #		0.6%	0.5%
65 years and over #		0.2%	0.2%
Unmarried partner	2.1%	2.9%	2.3%

Source: 2000 and 2010 U.S. Census. <http://factfinder2.census.gov>

Household structure in Saline County has changed since the 2000 U.S. Census. These measures may be impacted by the increasing age of the population. The number of households with children present has decreased. Nonfamily households and family households with a female householder and no husband present have increased. Household and family structure are important social and economic indicators. The American Community Survey 3-year Estimates of Economic Characteristics, 2009-2011 estimated that approximately 50% of Saline County female householders alone with children younger than eighteen years were living below the poverty level. In comparison, approximately 10% of married couple families with children were living below the poverty level [7].

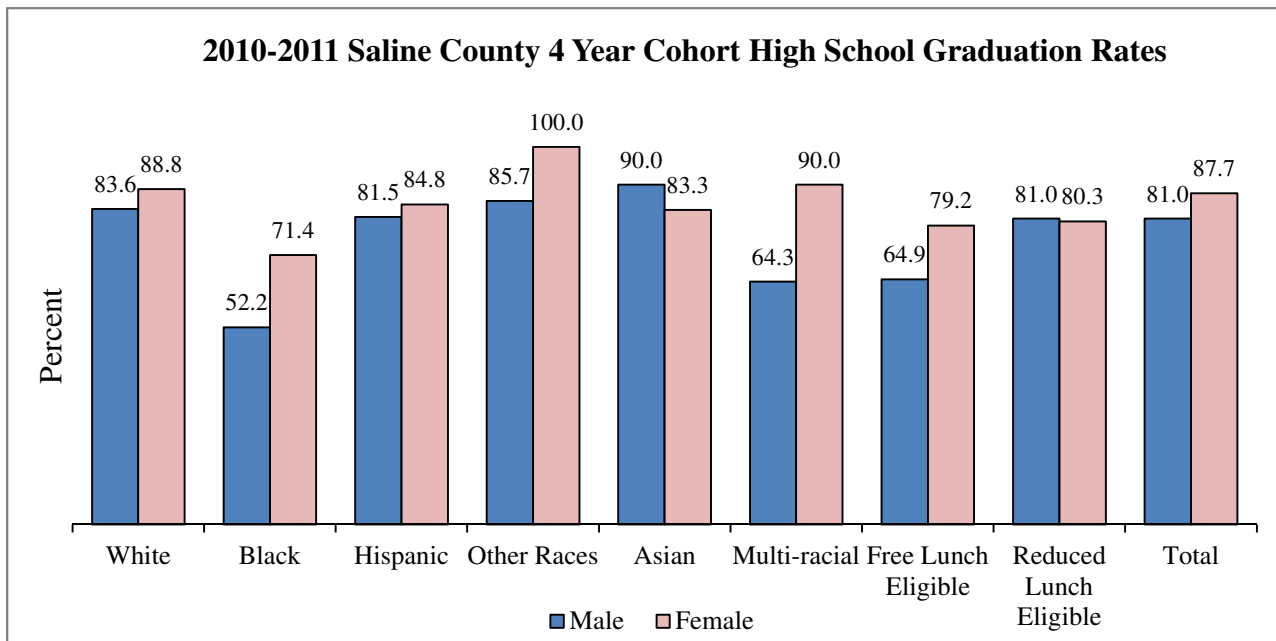
Educational Attainment



87% of Saline County residents have at least a high school diploma or the equivalent. 24.1% have attained a bachelor's degree or higher.

Source: American Community Survey. Selected Social Characteristics, 2009-2011.

<http://factfinder2.census.gov>



Source: Kansas State Department of Education, K-12 Reports.

<http://svapp15586.ksde.org/k12/k12.aspx>

There are notable racial, gender and economic disparities among the high school graduation rates of this cohort. Black or multi-racial males, as well as males eligible for free school lunches were the least likely to graduate from high school. Educational attainment is an important predictor of future earning potential.

Economic Characteristics

EMPLOYMENT STATUS	Saline County	Kansas
Population 16 years and over	43,086	
In labor force	70.1%	68.2%
Civilian labor force	69.7%	67.4%
Employed	65.4%	62.4%
Unemployed	4.4%	5.1%
Armed Forces	0.3%	0.8%
Not in labor force	29.9%	31.8%
COMMUTING TO WORK		
Mean travel time to work (minutes)	14.4	18.8
INDUSTRY		
Civilian employed population 16 years and over	28,159	
Agriculture, forestry, fishing and hunting, and mining	1.6%	3.6%
Construction	4.9%	6.3%
Manufacturing	18.4%	12.6%
Wholesale trade	2.7%	2.8%
Retail trade	12.7%	11.3%
Transportation and warehousing, and utilities	5.1%	4.8%
Information	1.3%	2.3%
Finance and insurance, and real estate and rental and leasing	4.6%	6.0%
Professional, scientific, and management, and administrative and waste management services	8.2%	8.5%
Educational services, and health care and social assistance	22.5%	24.6%
Arts, entertainment, and recreation, and accommodation and food services	9.4%	7.9%
Other services, except public administration	4.6%	4.6%
Public administration	4.1%	4.8%

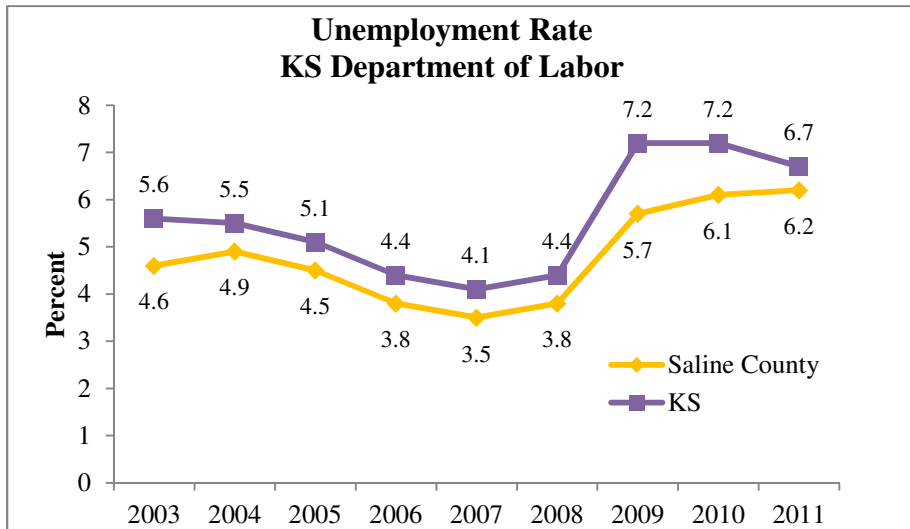
Source: American Community Survey. Selected Economic Characteristics, 2009-2011.
<http://factfinder2.census.gov>

INCOME AND BENEFITS (IN 2011 INFLATION-ADJUSTED DOLLARS)	Saline County	Kansas
TOTAL HOUSEHOLDS	22,184	
Less than \$10,000	5.2%	6.6%
\$10,000 to \$14,999	6.6%	5.4%
\$15,000 to \$24,999	13.2%	11.5%
\$25,000 to \$34,999	11.7%	11.3%
\$35,000 to \$49,999	17.8%	15.3%
\$50,000 to \$74,999	19.7%	19.6%
\$75,000 to \$99,999	13.1%	12.4%
\$100,000 to \$149,999	8.7%	11.4%
\$150,000 to \$199,999	2.0%	3.5%
\$200,000 or more	1.9%	3.0%
Median household income	\$45,350	\$49,929
Mean household income	\$58,604	\$65,605
With cash public assistance income	4.3%	2.4%
Mean cash public assistance income	\$2,497	\$3,302
With Food Stamp/SNAP benefits in the past 12 months	10.1%	8.9%

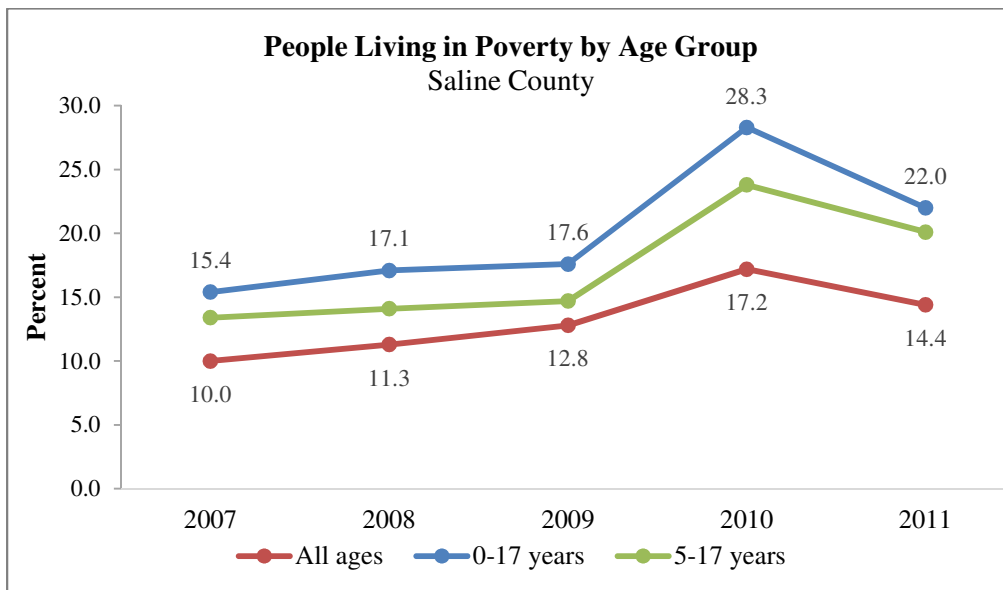
Source: American Community Survey. Selected Economic Characteristics, 2009-2011.
<http://factfinder2.census.gov>

The largest proportion of Saline County residents work in educational, healthcare and social assistance industries. The second largest proportion work in manufacturing. Half of the households in Saline County have an annual income that is more than \$45,350 and half have an income that is less.

Unemployment and Poverty Estimates



The unemployment rate is a key indicator of the local economy. A high rate of unemployment has personal and societal effects. During periods of unemployment, individuals are likely to feel severe economic strain and mental stress. Unemployment is also related to access to health care, as many individuals receive health insurance through their employer. A high unemployment rate places strain on financial support systems, as unemployed persons qualify for unemployment benefits and food stamp programs [3].



Year	All ages living in poverty		Ages 0-17 years living in poverty		Ages 5-17 years living in poverty	
	Saline County	KS	Saline County	KS	Saline County	KS
2007	10.0%	11.2%	15.4%	14.7%	13.4%	12.6%
2008	11.3%	11.3%	17.1%	14.6%	14.1%	12.3%
2009	12.8%	13.2%	17.6%	17.1%	14.7%	14.7%
2010	17.2%	13.5%	28.3%	18.1%	23.8%	15.9%
2011	14.4%	13.8%	22.0%	18.8%	20.1%	16.2%

Source: U.S. Census Bureau, Small Area Income and Poverty Estimates

<http://www.census.gov/did/www/saie/index.html>

Family income has been shown to affect a child's well-being in numerous studies. Compared to their peers, children in poverty are more likely to have physical health problems like low birth weight or lead poisoning, and are also more likely to have behavioral and emotional problems. Children in poverty also tend to exhibit cognitive difficulties, as shown in achievement test scores, and are less likely to complete basic education [3].

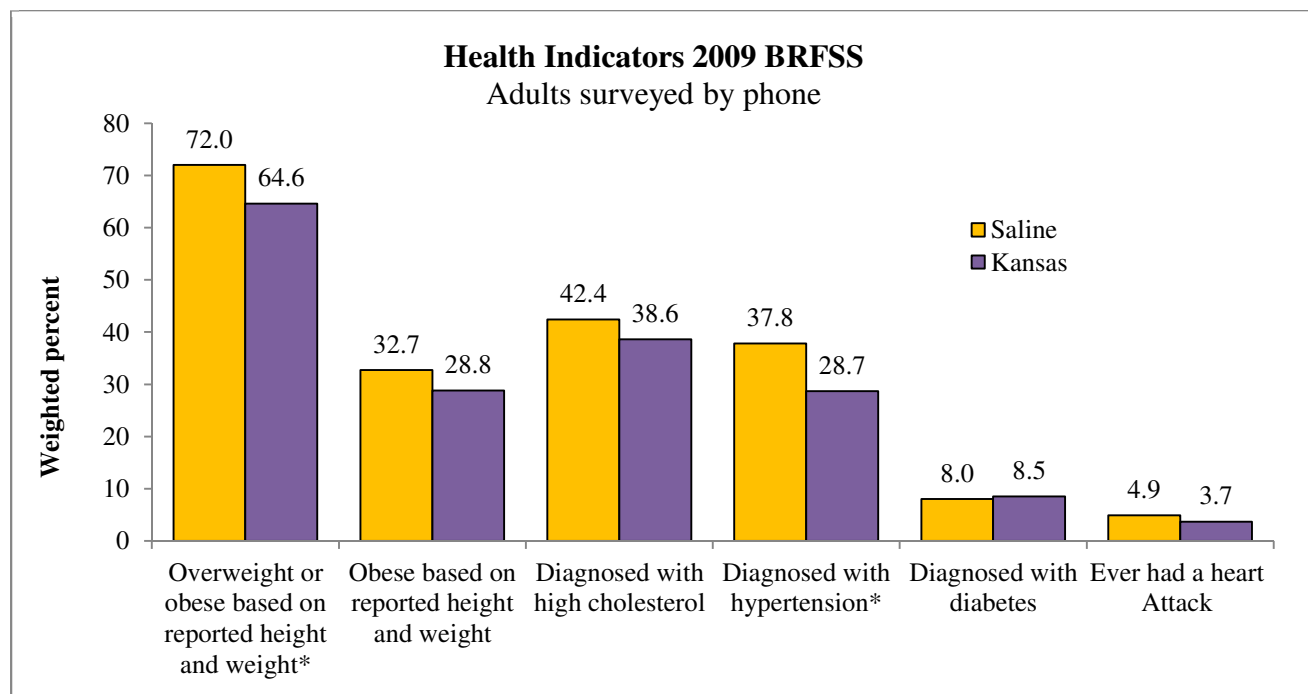
Access to Health Services

		2011	Data Source
WIC Participation/1000 population	Saline County	32.4	Kansas Health Matters www.kansashealthmatters.org
	Kansas	26.6	
Number of staffed hospital beds/1000 population	Saline County	3.9	Kansas Health Matters
	Kansas	3	
Ratio of population to primary care physicians	Saline County	1179.8	Kansas Health Matters
	Kansas	1723.8	
Ratio of population to dentists	Saline County	2375	Kansas Health Matters
	Kansas	2618	
		2011-2012	
Percentage of screened K-12 grade students with obvious dental decay	Saline County	18.9%	Kansas Health Matters
	Kansas	17.6%	
Percentage of screened 3-12 grade students with no dental sealants	Saline County	77.4%	Kansas Health Matters
	Kansas	61.2%	
		2010	
Population 18 to 64 years without health insurance coverage	Saline County	20.7%	US Census Bureau Small Area Health Insurance Estimates http://www.census.gov/did/www/saie
	Kansas	19.1%	
Population <19 years without health insurance coverage	Saline County	8.4%	Kansas Behavioral Risk Factor Surveillance System, 2009
	Kansas	8.1%	
		2009	
Weighted % of adults who report inability to see a doctor because of cost in the past 12 months	Saline County	10.8%	Kansas Behavioral Risk Factor Surveillance System, 2009
	Kansas	11.2%	

Saline County residents have access to a larger pool of primary care physicians and dentists than residents of KS overall. Primary care is the backbone of preventive health care, and a strong primary care workforce is essential to health.

Health insurance coverage helps patients get into the health care system. Uninsured people are less likely to receive medical and dental care. They are more likely to die early and more likely to have poor health status. Salina Family Health Care, a Federally Qualified Health Center, serves many of the low income and uninsured Saline County residents.

Health Status

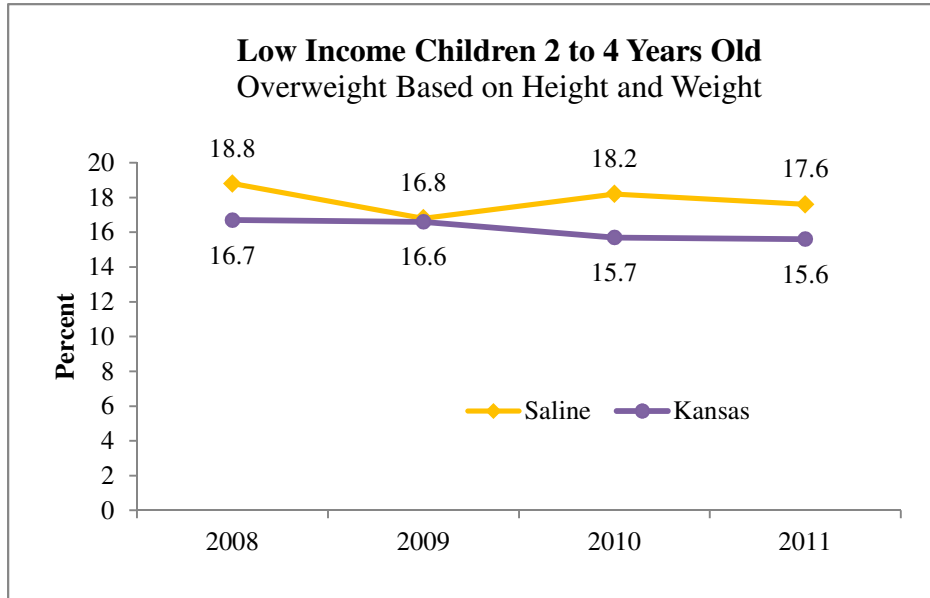


Kansas Behavioral Risk Factor Surveillance System, Local Data 2009.

www.kdheks.gov/brfss/Expansion/index.html

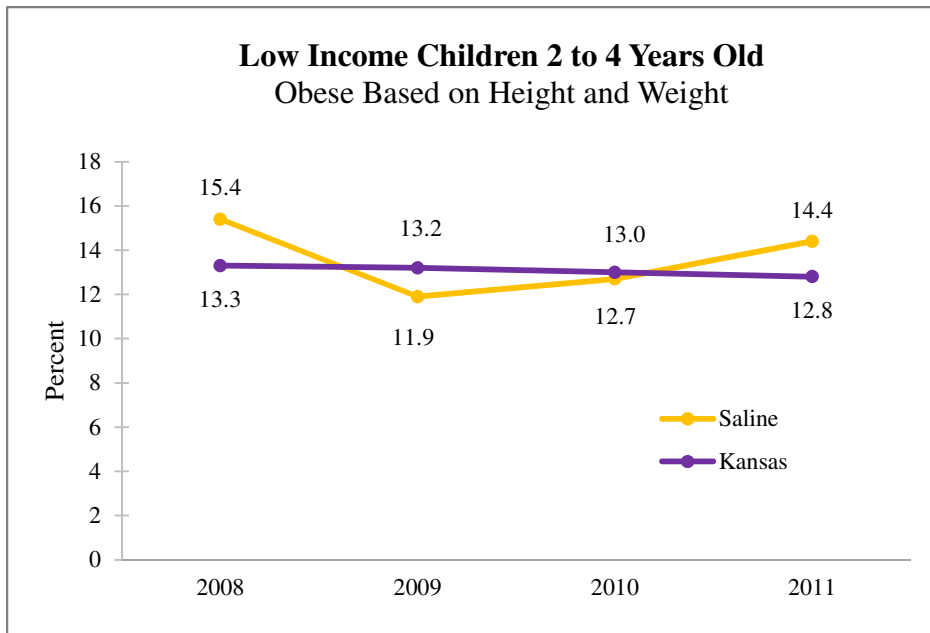
*significant difference between KS and Saline County

In 2009, an estimated 72% of Saline County adults were overweight or obese. 37% had been told by a doctor that they had high blood pressure and 42% had been told by a doctor they had high cholesterol. Obesity increases the risk of many health problems. These include heart disease, diabetes, cancer, high blood pressure, stroke, breathing problems, high cholesterol and arthritis. In the U.S., in 2008, obesity related healthcare costs were about \$147 billion [8]. The CDC considers obesity a “winnable” battle. It is one of six national Healthy People 2020 priorities [9].



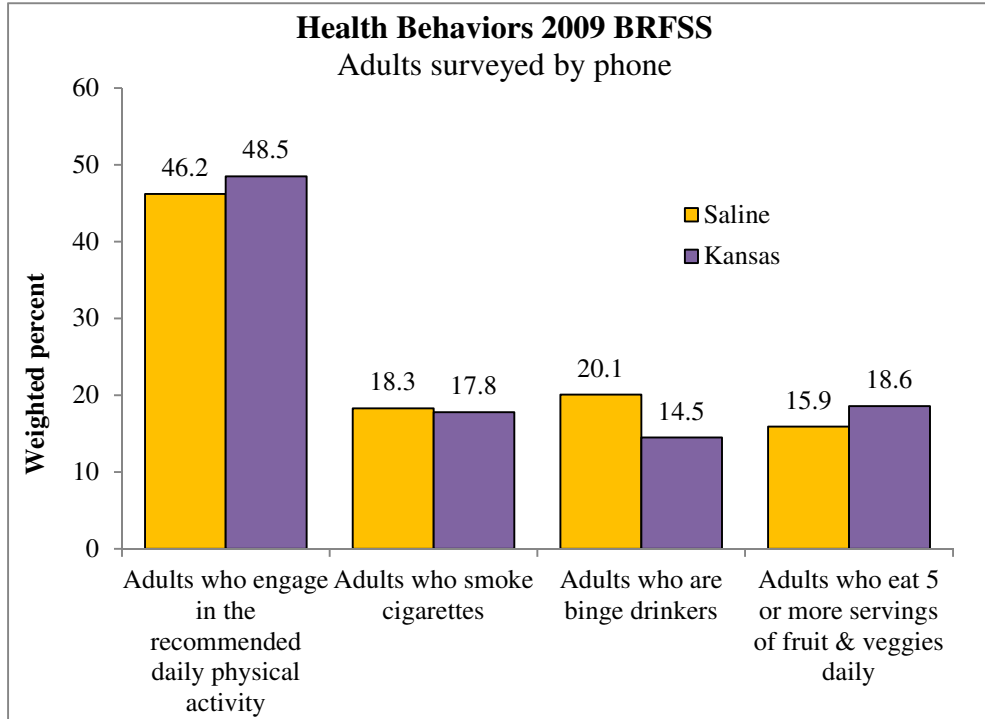
In the U.S., an estimated 17% of children 2 to 19 years old are obese. Obese children are more likely to have high blood pressure, high cholesterol, sleep apnea and asthma. They are at greater risk of discrimination and poor self-esteem, which can continue into adulthood.

KS Women Infants and Children Program Pediatric Nutrition Surveillance Reports: www.kansaswic.org



Children who are obese are more likely to become obese adults. Obesity in adulthood may be more severe if it begins during childhood [10].

Health Behaviors



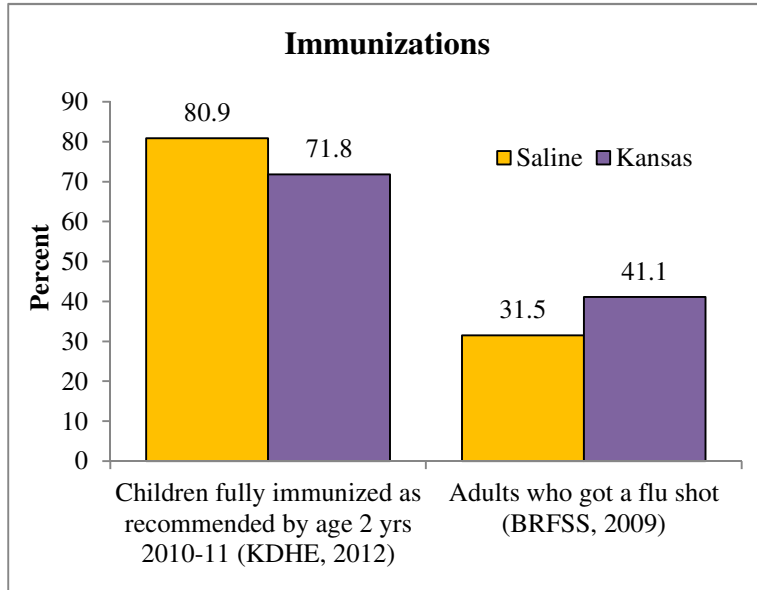
Less than half of Saline county adults surveyed engage in the recommended amount of daily physical activity. About 16% consume the recommended servings of fruits and vegetables each day. Regular physical activity has been shown to reduce the risk of many serious health conditions including obesity, heart disease, diabetes, colon cancer, and high blood pressure. In addition, physical activity reduces the

Kansas Behavioral Risk Factor Surveillance System, Local Data 2009.
www.kdheks.gov/brfss/Expansion/index.html

symptoms of anxiety and depression, improves mood and feelings of well-being, and promotes healthy sleep patterns. Consuming a fresh, healthy and balanced diet is essential for maintenance of a healthy weight and preventing chronic disease. Numerous studies have shown a clear link between the amount and variety of fruits and vegetables consumed and rates of chronic diseases, especially cancer [3].

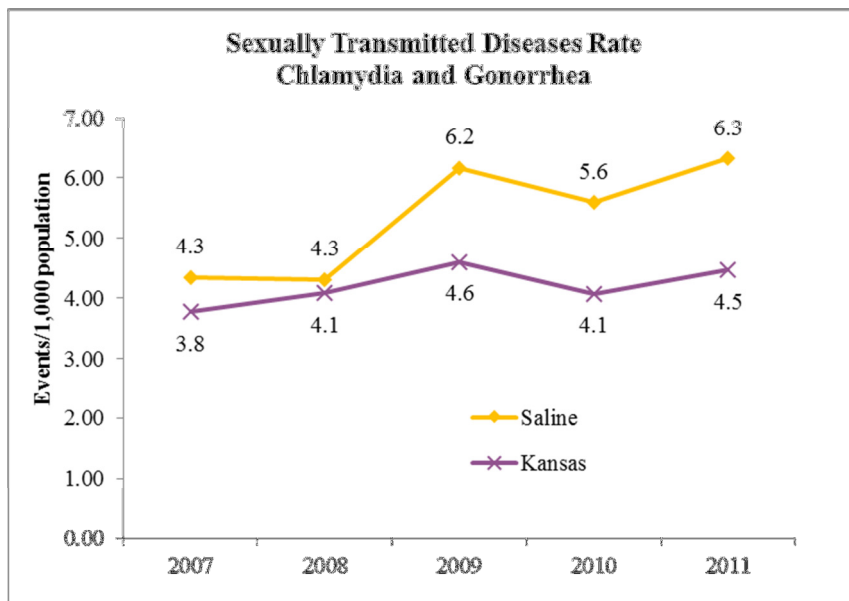
Binge drinking is defined as four or more alcoholic beverages on one occasion for women and five or more drinks for men. The proportion of Saline County residents who report engaging in binge drinking during the 30 days prior to the survey is below the Healthy People 2020 national health target of 24.3%. However, it remains an important cause of negative health and safety outcomes [3].

Tobacco use is one of the most preventable causes of illness and death in America today. Approximately one-third of all tobacco users in this country will die prematurely because of their dependence on tobacco. Areas with a high smoking prevalence will also have greater exposure to secondhand smoke for non-smokers, which can cause or worsen a wide range of adverse health conditions, including cancer, heart disease, respiratory infections, and asthma. The Healthy People 2020 national health target is to reduce the proportion of adults aged 18 years and older who smoke cigarettes to 12% [3].



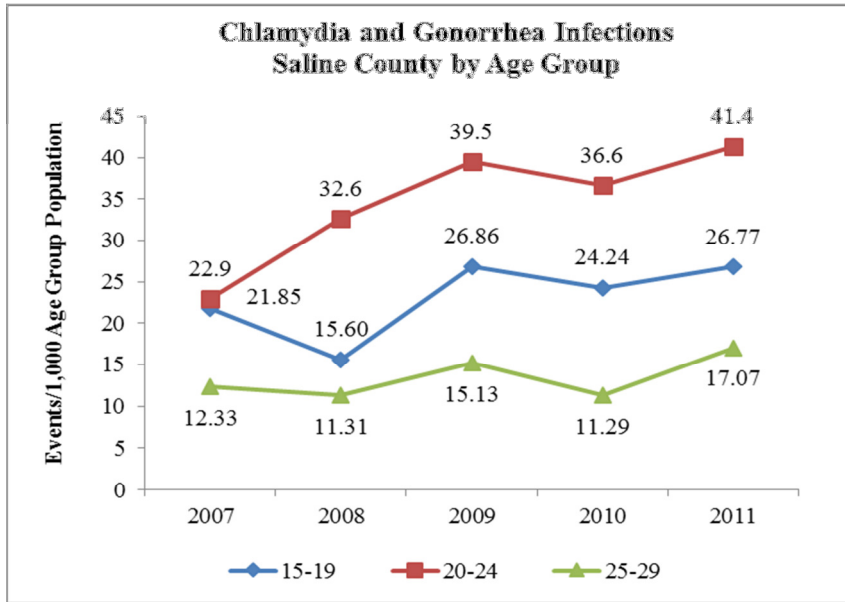
Declining rates of diseases prevented by vaccines is one of the great achievements in Public Health. By having greater vaccine coverage, there is an increase in herd immunity, which leads to lower disease incidence and an ability to limit the size of disease outbreaks. However, due to unvaccinated and under-vaccinated individuals, the United States, including Saline County, has seen a rise in diseases that were previously present at historically low levels, such as pertussis (whooping cough) [3].

Influenza is a contagious respiratory disease caused by the influenza virus. It can lead to pneumonia and can be dangerous for people with chronic medical conditions. It is estimated that 226,000 people are hospitalized each year due to influenza and 36,000 die, mostly the elderly. The effectiveness of the vaccine in preventing illness varies from year to year. However, even if the vaccine doesn't prevent the flu it may prevent serious illness, hospitalization and death. Annual vaccination is recommended for everyone older than 6 months to prevent the spread of influenza [11].



Saline County has a significantly higher rate of infections spread by sexual activity than Kansas overall. This is a direct result of high risk sexual behavior, particularly among young people. Chlamydia is the most often reported STD and Gonorrhea is second. Chlamydia is often not reported. Many people are not aware of their infections and do not get tested. Untreated infections can spread to other pelvic organs. Untreated infections also increase the risk of infection with the virus that causes AIDS [12].

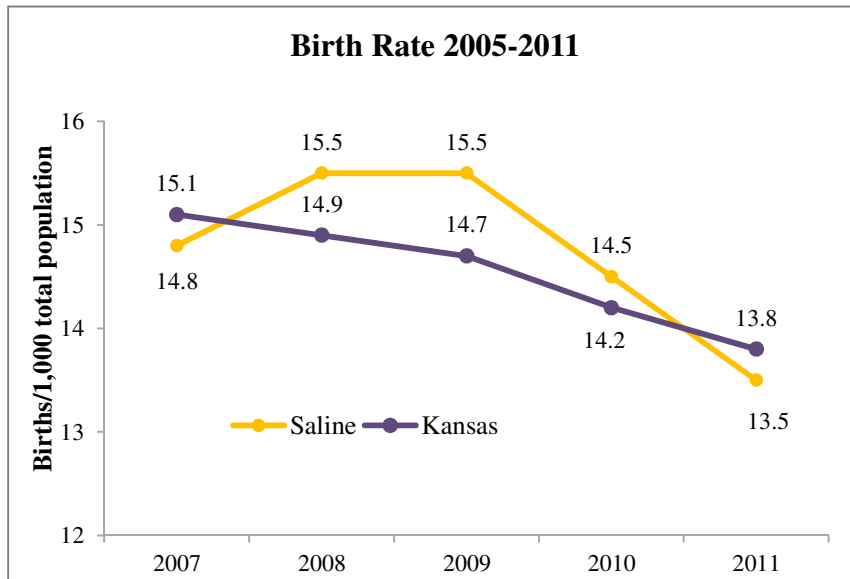
Unpublished report: Chlamydia and Gonorrhea, Saline County, 2007-2011. Data collected by KDHE, analyzed by SSCHD.



In 2011, more than 350 Chlamydia and Gonorrhea infections were reported among Saline County residents. Seven out of ten were among people 15 to 24 years old. Studies suggest that high risk behavior beginning in the teenage years continues through young adulthood.

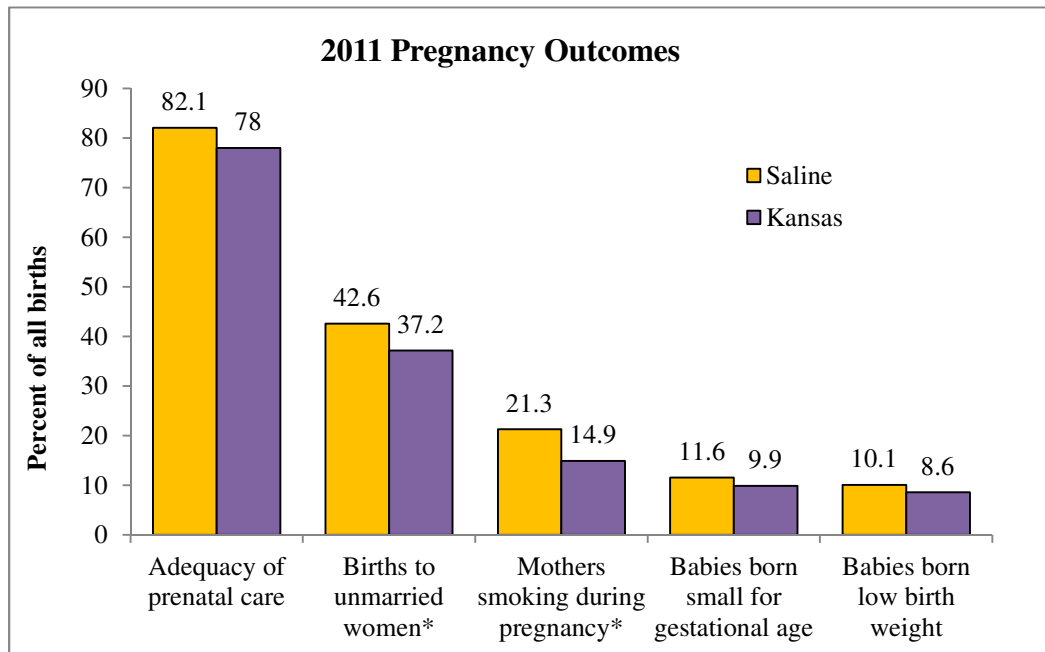
Unpublished report: Chlamydia and Gonorrhea, Saline County, 2007-2011. Data collected by KDHE, analyzed by SSCHD.

Maternal Child Health



There were 756 live births to Saline County women in 2011. This is a decrease from 861 in 2009.

Source: KDHE. Kansas Annual Summary of Vital Statistics, 2011. <http://www.kdheks.gov/hci/annsumm.html>



The proportion of Saline County women who receive early, adequate prenatal care is above the Healthy People 2020 target of 77.6%. Increasing the number of women who receive prenatal care, and who do so early in their pregnancies, can improve birth outcomes and lower health care costs by reducing the likelihood of

*significant difference between Saline County and KS

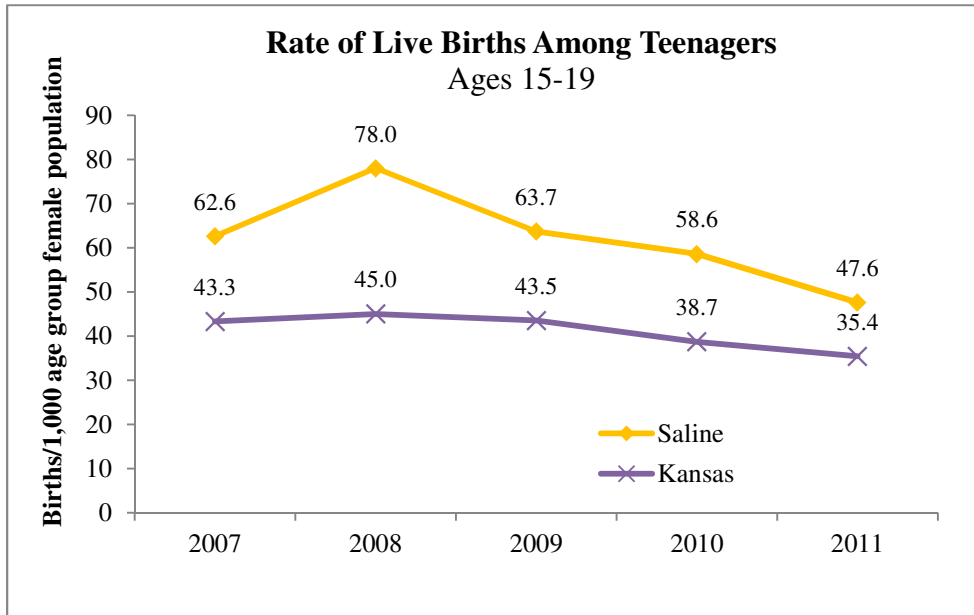
Source: KDHE. Kansas Annual Summary of Vital Statistics, 2011.

<http://www.kdheks.gov/hci/annsumm.html>

complications during pregnancy and childbirth. Babies born to mothers who do not receive prenatal care are three times more likely to have a low birth weight and five times more likely to die than those born to mothers who do get care.

The percentage of Saline County mothers who reported smoking during pregnancy is significantly higher than KS over all. Maternal smoking can result in miscarriages, premature delivery, and sudden infant death syndrome. Smoking during pregnancy nearly doubles a woman's risk of having a low birth weight baby, and low birth weight is a key predictor for infant mortality. In addition, smoking also increases the risk of preterm delivery. Low birth weight and premature babies face an increased risk of serious health problems during the infant period, as well as chronic lifelong disabilities such as cerebral palsy, mental retardation, and learning problems.

A significantly higher percentage of Saline County women who give birth are unmarried as compared to KS overall. This includes both planned and unplanned pregnancies as well as women who were living with a partner at the time of birth. In recent decades, the average age of unmarried women having children has increased and less than one quarter of non-marital births were to teenaged women. Despite the older age of unmarried mothers, health concerns remain for the children of unmarried women. Studies have found that infants born to non-married women are at greater risk of being born preterm, having a low birth weight, dying in infancy and living in poverty than babies born to married women [3].



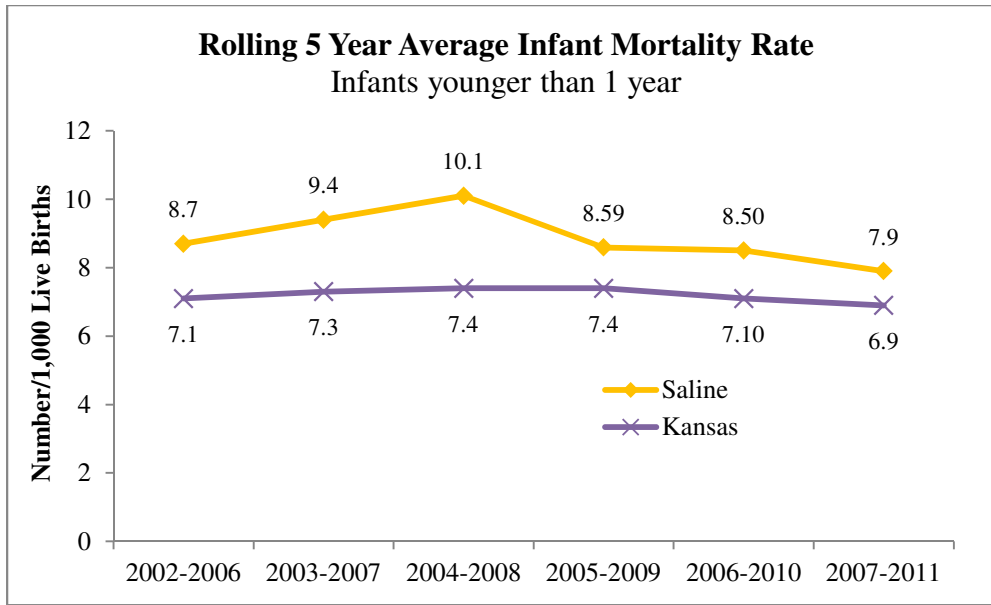
In 2011 there were 85 babies born among 15 to 19 year old Saline County females. The trend has been downward since 2008, but the rate of teenage births in Saline County remains significantly higher than Kansas overall. Teenage mothers and their babies face many challenges older mothers don't experience. These challenges come at a cost to themselves,

KDHE Adolescent and Teenage Pregnancy Reports, 2005-2011:
<http://kic.kdhe.state.ks.us/kic/index.html>

their families and the community. In the U.S., about half of teen mothers receive a high school diploma by they are 22 years old. This results in lower income during adulthood and a greater need for public assistance.

The children of teenage mothers often have more health problems. They are also more likely to drop out of high school and face unemployment as a young adult. Female children of teenage mothers are more likely to become teenage mothers themselves. Male children of teenage mothers are more likely to be incarcerated at some time during their teen years [13].

In the U.S., teen pregnancy costs about \$11 billion per year. The cost of teenage pregnancy in Saline County in 2008 was approximately \$3 million [14]. The CDC considers teenage pregnancy a “winnable” battle. It is one of six national priority issues [9].



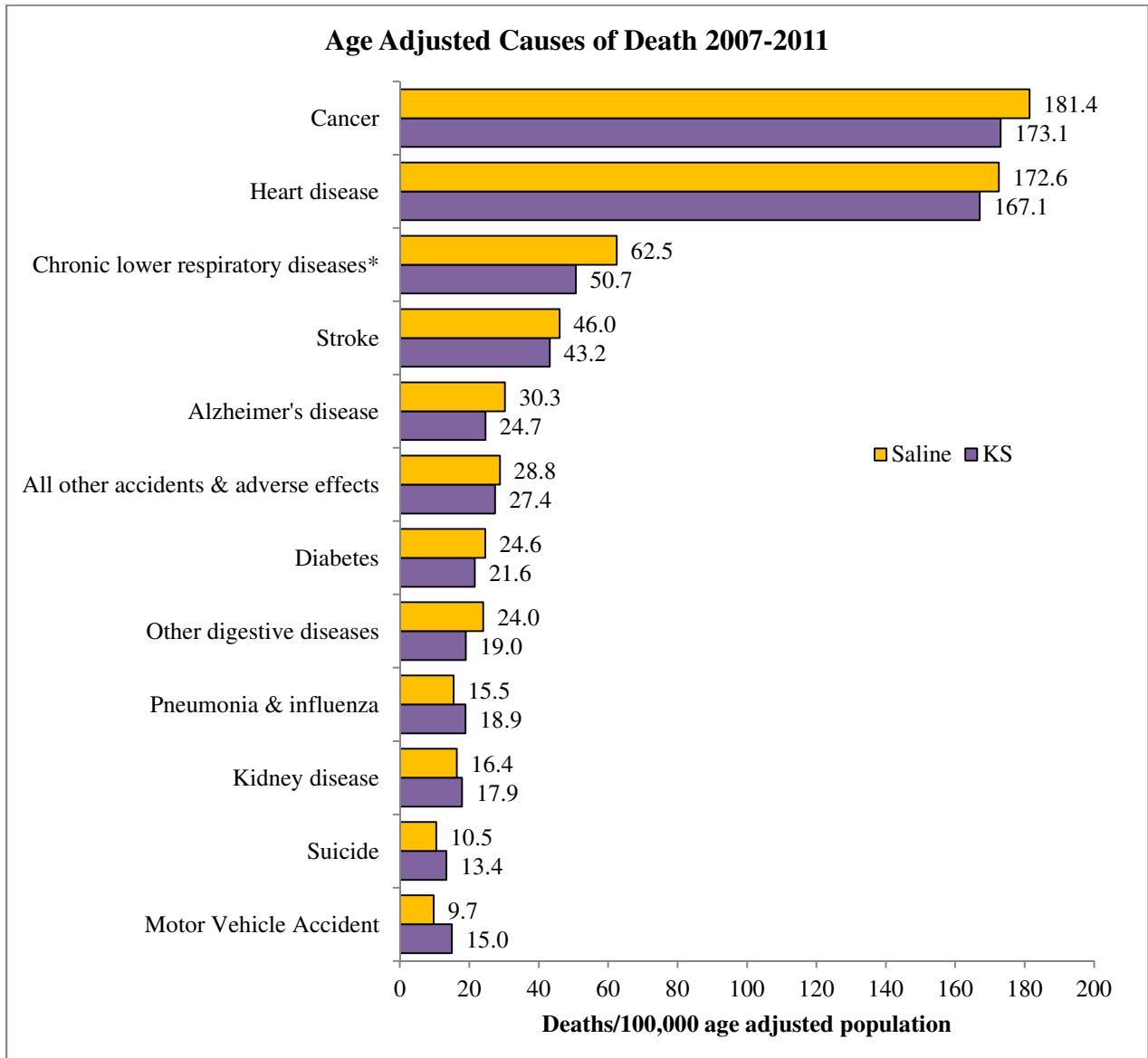
Source: KDHE. Kansas Annual Summary of Vital Statistics, 2006-2011.
<http://www.kdheks.gov/hci/annsumm.html>

One of the basic indicators of the health of a community or state is infant mortality, the death of an infant before one year of age. This rate is often used as an indicator to measure the health and well-being of a nation, because factors affecting the health of entire populations can also impact the mortality rate of infants. The leading causes of death among infants are birth defects, being born too small or too early, Sudden Infant Death Syndrome (SIDS) and maternal complications during pregnancy [3].

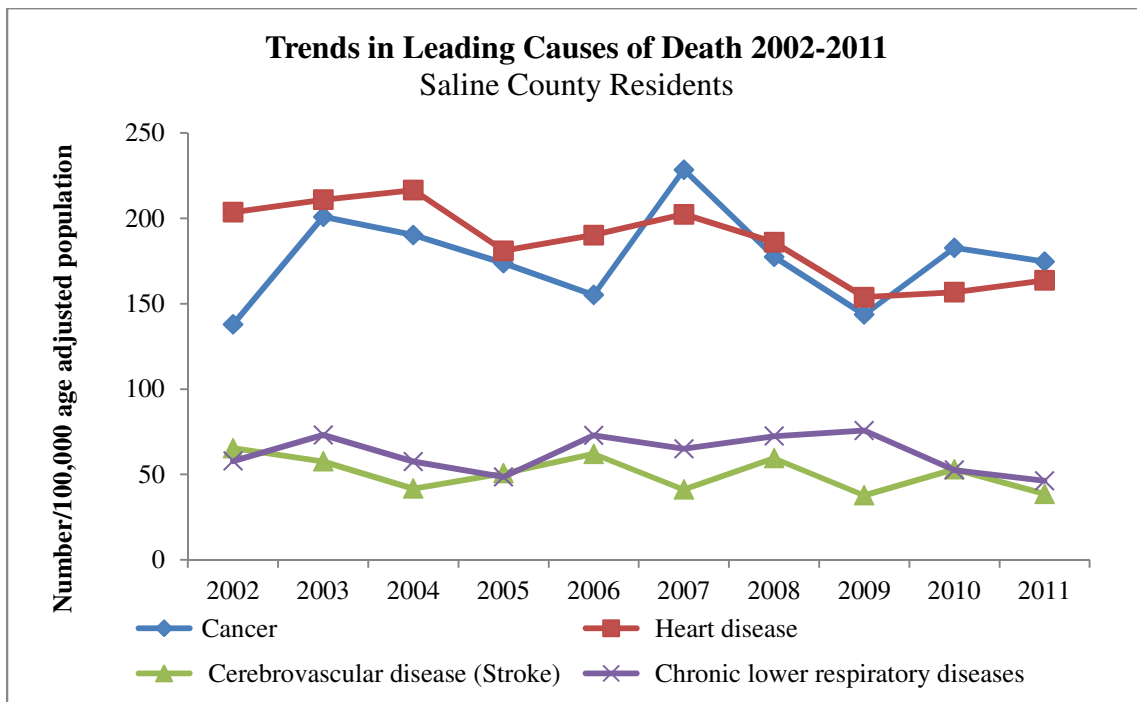
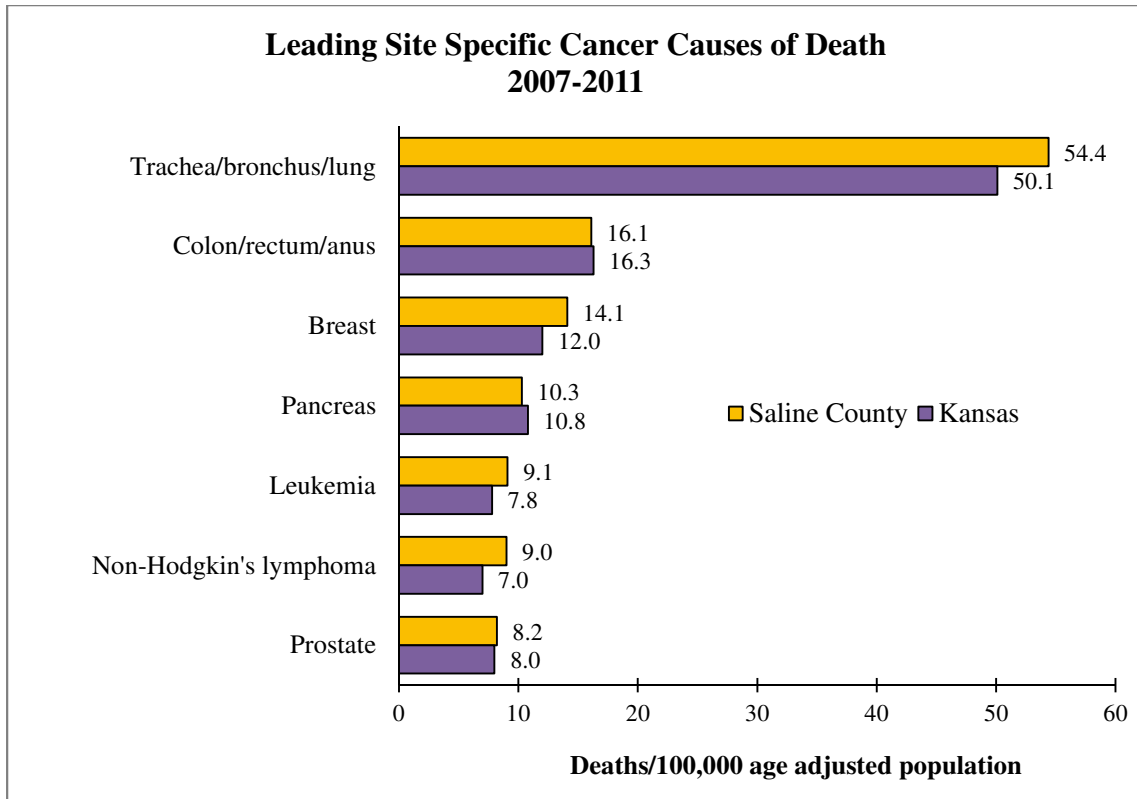
Pregnancy-related health outcomes are influenced by factors such as race, ethnicity, age, and income, but the most important is a woman's health. A healthy pregnancy begins before conception. Infant mortality can be positively impacted when pregnant women avoid tobacco, excessive alcohol and street drugs; maintain a healthy diet and weight; get timely, regular prenatal care; and take folic acid during pregnancy [15]. The Healthy People 2020 target is 6.0 infant deaths per 1,000 live births [9].

Causes of Death

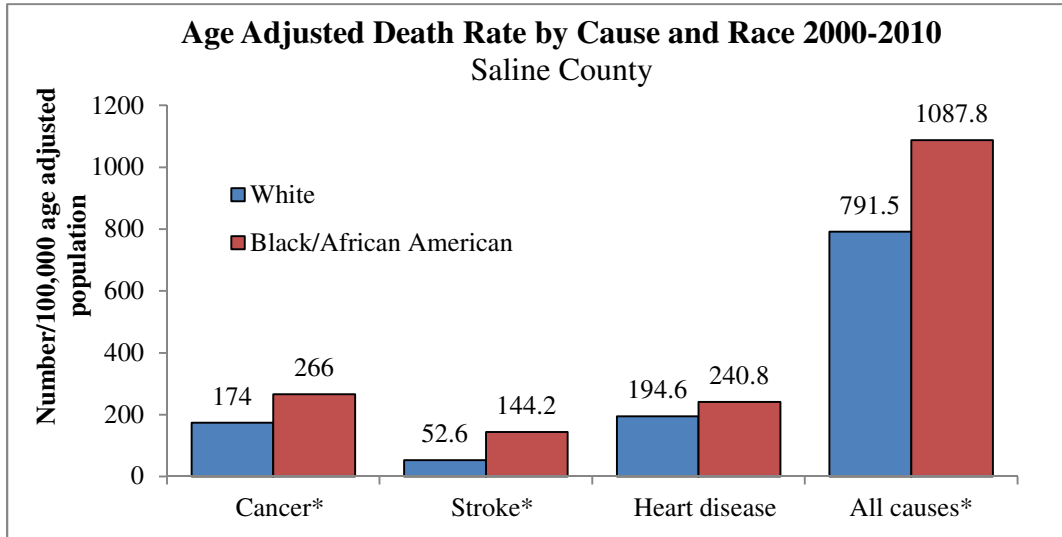
The source of all measures in this section (Cause of Death) is the Kansas Department of Health and Environment, Kansas Information for Communities website: Kansas Information for Communities, General Query reports. <http://kic.kdhe.state.ks.us/kic/index.html>



*significant difference between KS and Saline County

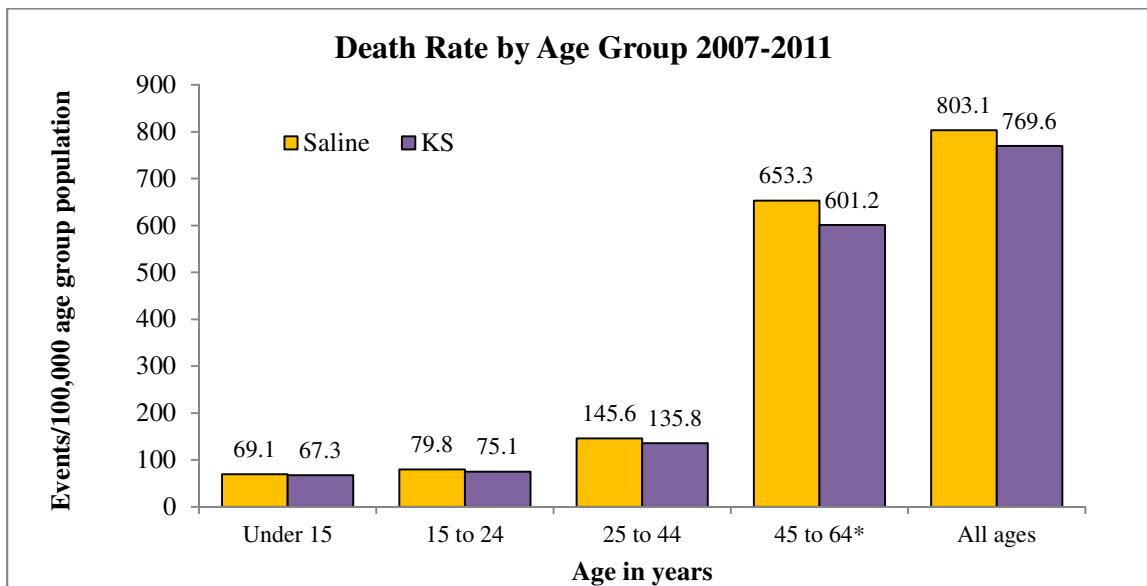


Heart disease is the leading cause of death in the United States and cancer is second. In 2010 cancer deaths became the number one cause of death among Kansans and Saline County residents. Physical inactivity, overweight, and obesity are considered cardiovascular risk determinants and may increase the risk for some types of cancer. Regular physical activity and a diet low in unhealthy fats and high in fruits and vegetables may help reduce the risk for cardiovascular disease and cancer.



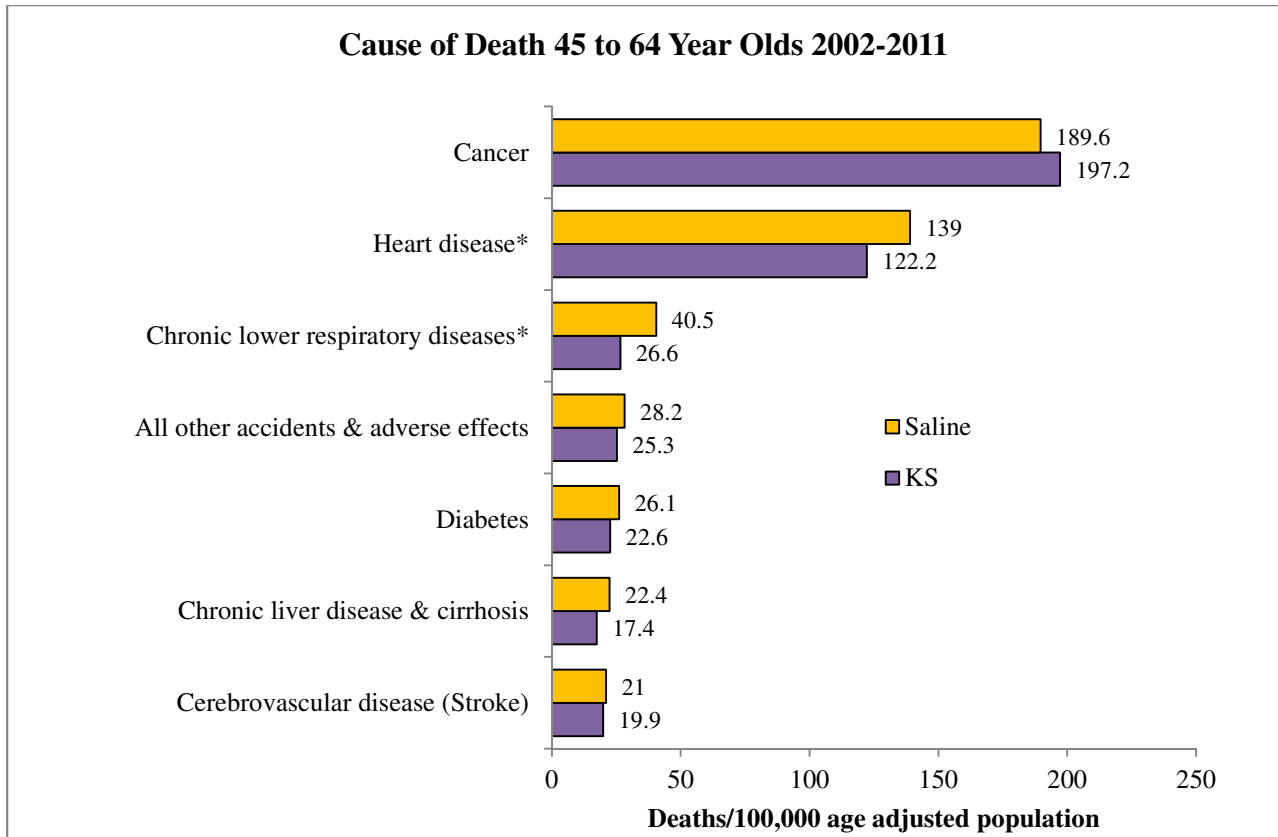
*significant difference between Black/African American and White

There is mounting evidence that race and ethnicity influence health disparities. From 2000-2010, deaths from all causes were proportionately higher among Saline County’s black population than among whites. Higher rates of death due to stroke and cancer are most notable. Racial health disparities are believed to be the result of the complex interaction among genetic variations, environmental factors, and specific health behaviors [3].



*significant difference between KS and Saline County

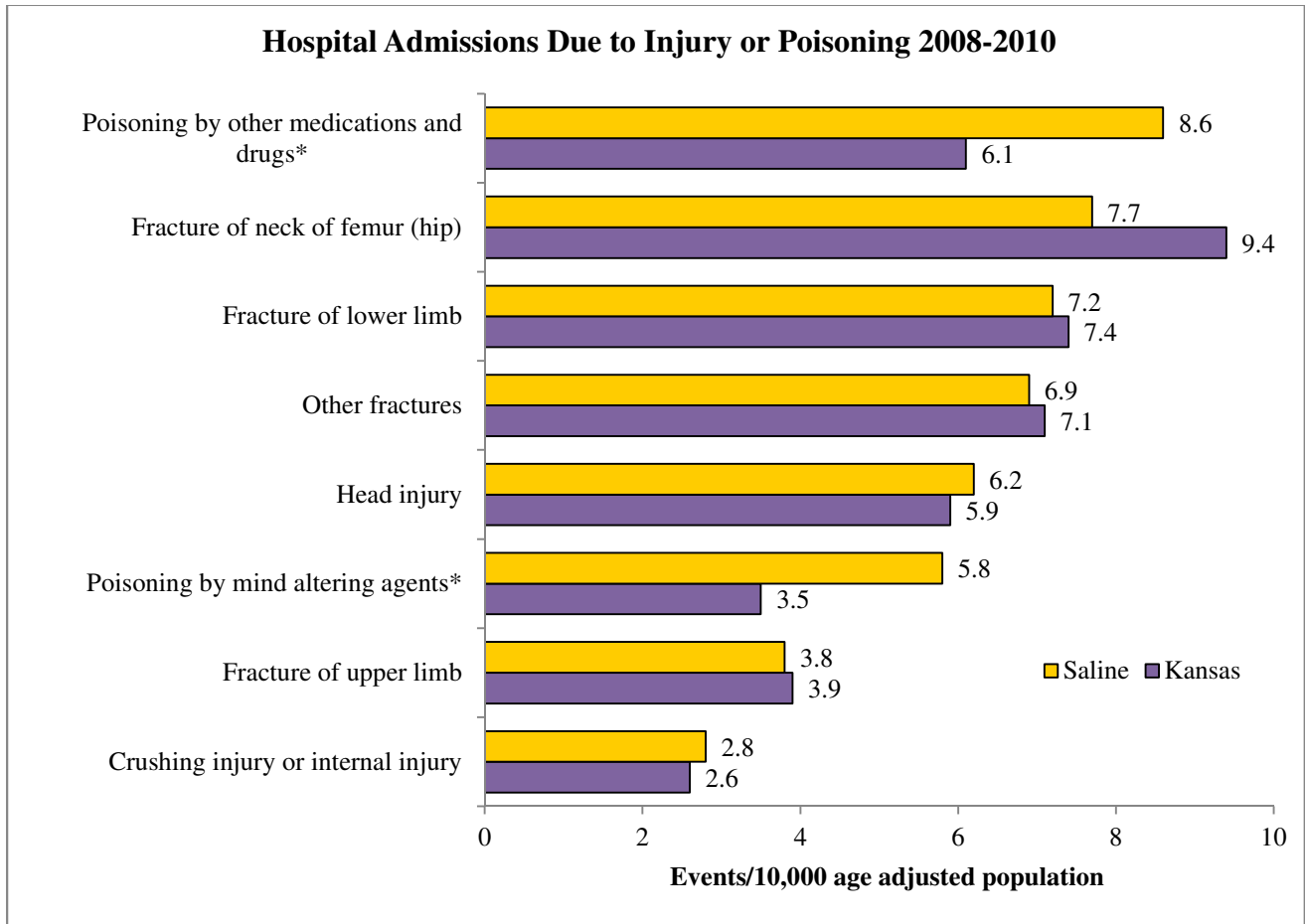
Saline County has a higher than expected rate of deaths among 45 to 64 year olds. In 2011 the average life expectancy for U.S. residents was 78.7 years. Deaths that occur before age 75 years are considered premature years of life lost.



*significant difference between KS and Saline County

Two causes of death among this age group are higher than expected. These are heart disease and respiratory diseases. Many of the risk factors for heart disease, cancer and premature death can be modified by diet, exercise and lifestyle changes. Obesity increases the risk for developing these conditions. Smoking and exposure to second hand smoke are proven causes of respiratory disease and lung cancer.

Safety



Kansas Information for Communities, Hospital Discharge Query Reports.

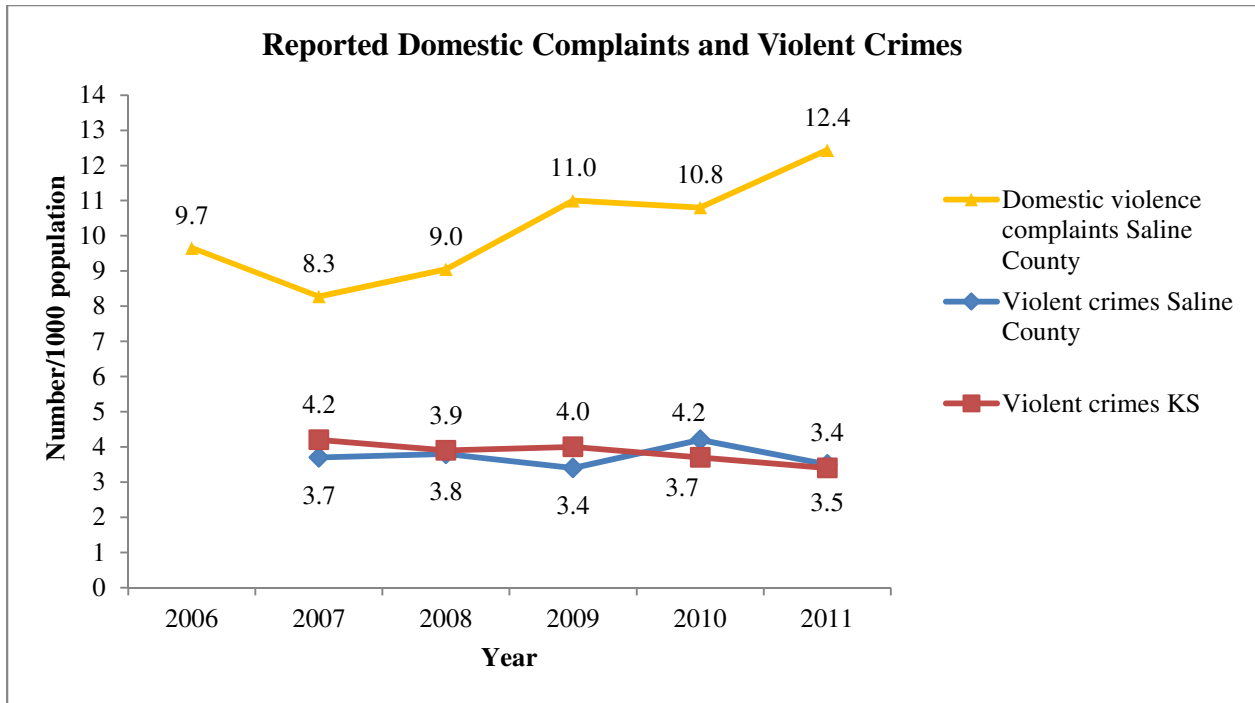
<http://kic.kdhe.state.ks.us/kic/index.html>

*significant difference between KS and Saline County

Injuries are the leading cause of death for Americans 1 to 44 years old, and a leading cause of disability for all ages. Injuries contribute to premature death, disability, high medical costs and lost productivity.

On average, 62 Saline County residents older than 64 years are admitted to a hospital each year because of a hip fracture (broken hip bone). More than 90% of hip fractures occur as a result of falls. Most are among persons older than 70 years. Falls are the most common cause of accidental deaths in persons over the age of 65 years. Deaths caused by falls increase with age [16].

A poison is any substance that causes harm if too much is taken. Saline County residents have a higher than expected rate of hospital admissions for poisoning from medicines and drugs. In 2010, 76 Saline County residents were admitted to a hospital for medication and drug related poisoning. In the U.S., in 2009, 91% of all unintentional poisoning deaths were caused by misuse of drugs. Prescription painkillers were most commonly involved, followed by cocaine and heroin [17].



Kansas Bureau of Investigation. Domestic Violence and Rape Statistics

http://www.accesskansas.org/kbi/stats/stats_dvrpe.shtml

Kansas Bureau of Investigation. Crime Statistics

http://www.accesskansas.org/kbi/stats/stats_crime.shtml

Notes: The definition of domestic incidents may vary from county to county, so this measure has not been compared to other geographic areas or the state. The domestic complaints represented above are all investigated complaints with a domestic component (explanation below). Violent domestic incidents may also be represented in the violent crimes rate. The violent crimes rate represents murder, rape, robbery and aggravated assault.

In 2011, there were 12 domestic incidents reported to Saline County law enforcement for every 1,000 Saline County residents. Domestic incidents include physical violence, mental and emotional abuse, stalking, rape and property damage. Violent acts or threats of violence are directed toward an intimate partner, family or household member. Nationally, two out of three victims are women. Two out of three offenders are a significant other (intimate partner). Intimate partners may be a current or past boyfriend, girlfriend or spouse. Women who are victims of physical abuse often experience mental and emotional abuse as well. They are more likely to be unemployed, socially isolated and experience numerous health problems. The consequences of intimate partner violence extend to children, families and the community. There is often overlap between intimate partner violence and child abuse. In the U.S., the costs of intimate partner violence exceed \$8 billion each year [18]. These costs include lost work time, medical care and mental health services.

Potential Issues

During review and discussion of these measures, the CHA Core Group identified several issues that clearly stood out as concerning. These events occur at a rate that is significantly higher among Saline County residents than is expected, or are leading causes of illness, injury, disability or death. The issues are:

- **Reproductive health /Teen sexual behavior**
 - Teenage pregnancy
 - Sexually transmitted infections
 - Babies born SGA
 - Smoking during pregnancy
 - Births to unmarried mothers
- **Adult obesity, overweight**
 - Hypertension
 - Deaths among 45-64 year olds due to heart disease
- **Childhood obesity**
- **Low adult influenza vaccination rate**
- **High rate of death among Black/African Americans due to stroke**
- **High rate of death among Black/African Americans due to cancer**
- **High rate of deaths due to chronic lower respiratory conditions**
- **High rate of hospital admissions due to injury**
- **Domestic violence**

Community Partner Organizations

In July, 2012 several community organizations were invited to review the community measures, discuss the issues and provide input as to the relative importance of each. Saline County community entities invited to participate included:

American Red Cross
 Catholic Charities
[Central KS Foundation](#)
[Central KS Mental health](#)
 Chamber of Commerce
 Child Advocacy & Parenting Services
 City and County Commissioners
[ComCare PA](#)
 Commission on Aging
 Domestic Violence Association of Central KS
 Emergency Management
[Heartland Programs](#)
 Salina Police Department

National Association for the Advancement of
 Colored People
[North Central KS Trauma Council](#)
[Occupational Center of Central KS](#)
 Parish nurse group
[Parks & Recreation](#)
[Salina Area United Way](#)
[Salina Community Foundation](#)
 Salina Emergency Medical Services
[Salina Family Healthcare](#)
 Salina Family YMCA
[Salina Regional Health Center](#)
[Salina Saline County Health Department](#)
[Saline County Extension Office](#)

Saline County Human Relations
 Saline County Sherriff's Office
 USD 305

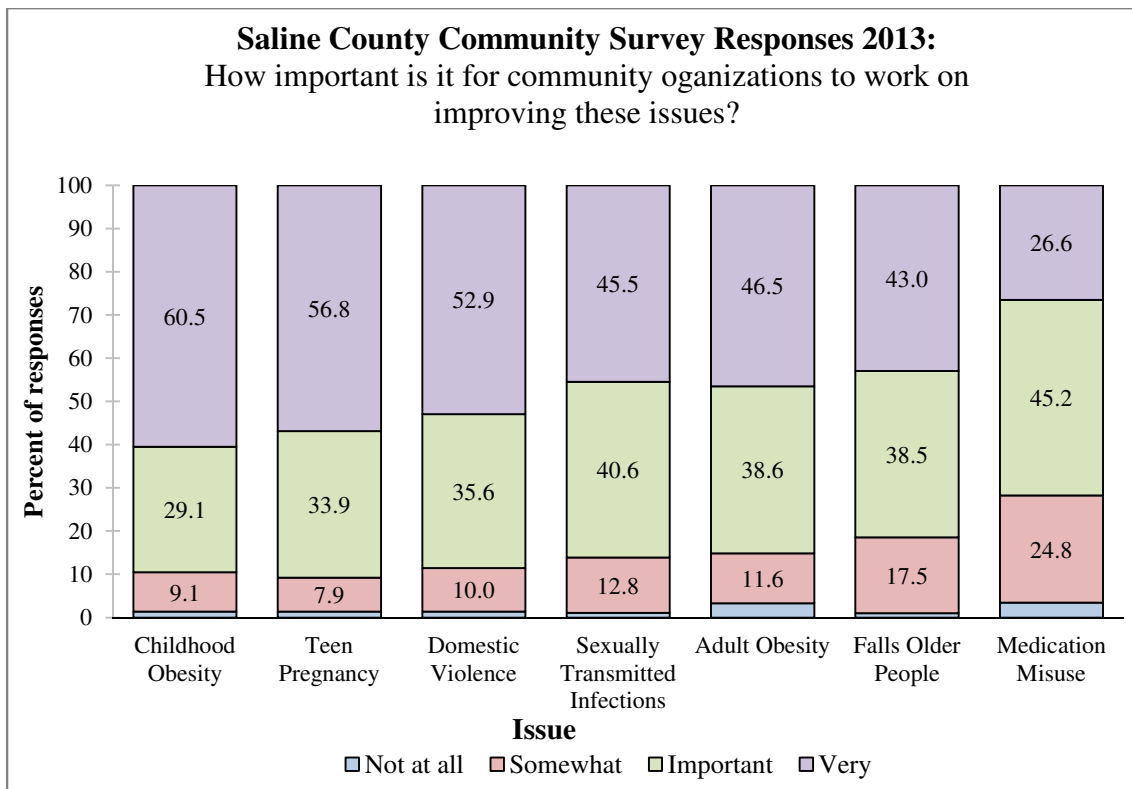
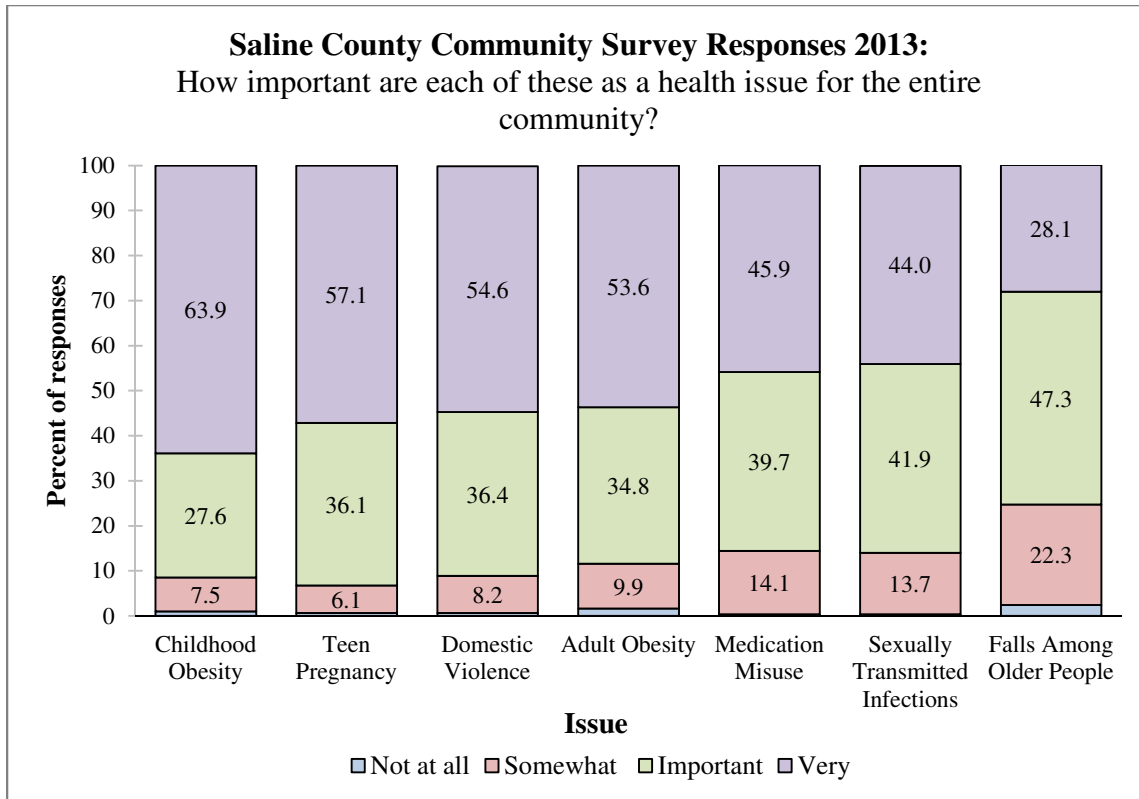
USD 306
 USD 307
 Volunteer Connection

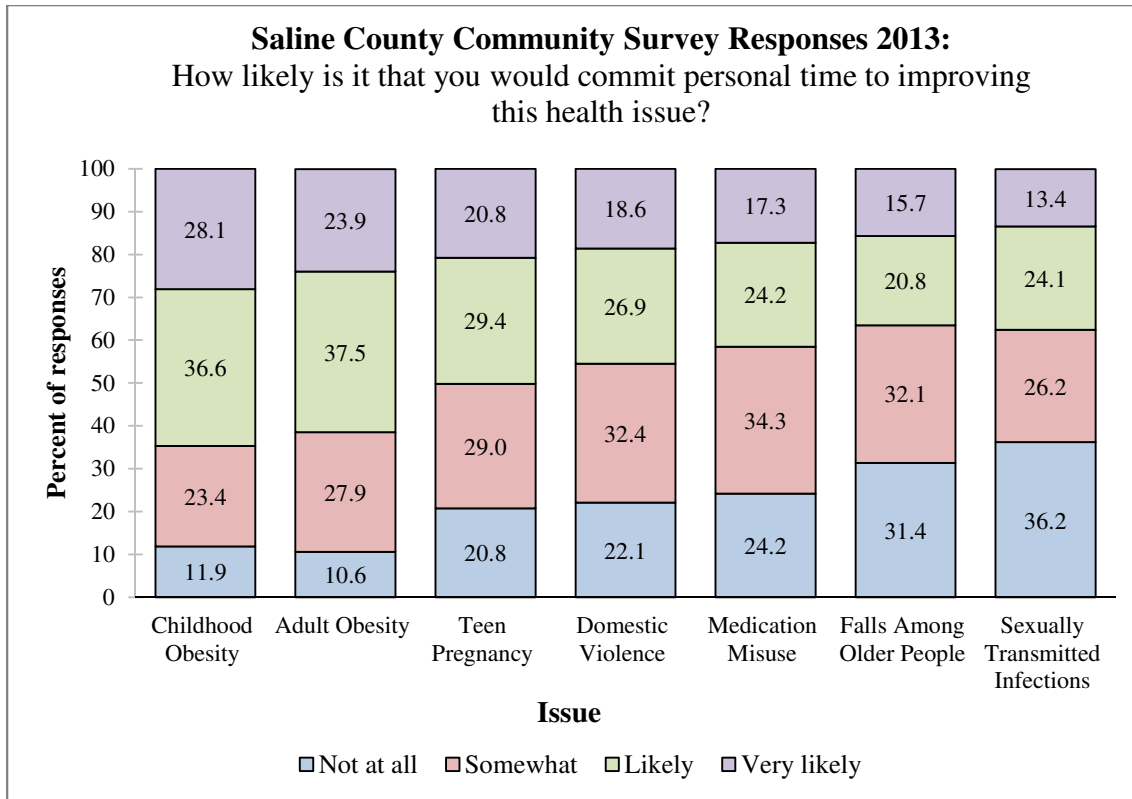
The entities listed in color sent one or more representatives to the meeting. Following the presentation and discussion, each representative was asked to identify the five issues they believed to be most important. They were then asked to rank those five issues in order of importance using a weighted multi-voting process.

	Critical Issue Resulting Rank Order	Total points
1	Reproductive health/Teen sexual behavior	99
2	Childhood obesity	87
3	Adult obesity, overweight	69
4	Domestic violence	33
5	High rate of hospital admissions due to injury	21
6	High rate of deaths due to chronic lower respiratory disease	16
7	Low rate of adult flu vaccination	13
8	High rate of death due to cancer among African Americans	8
9	High rate of death due to stroke among African Americans	4

Community Viewpoint

Obtaining input from individuals in the community at large increases the likelihood that the health issues targeted for improvement truly reflect the concerns of the community [19]. Public perception of an issue as important to the community as a whole, the need for community based action and willingness to personally support health improvement initiatives are important to successful health improvement programs [20]. To assess public perception of the health issues identified by community partner organizations as most concerning, background information and a survey were developed and distributed in March, 2013. Saline County residents were invited to review the information and participate in the survey via social media, the local newspaper, email and notices posted throughout the community. A summary of the issues was presented at two public meetings that included opportunity for discussion with CHA Core Group representatives. A written summary of issues and the survey were placed at community locations that were easily accessible. Electronic versions of materials and the link to an internet survey were distributed via social media, the local newspaper and email. Three hundred four (304) individual surveys were completed during the 30 days it was available.





Prioritization of Issues

All health issues are profoundly important to the people impacted by them. Healthcare providers, agencies and community organizations each have their inherent priorities, goals and missions. However, few communities or community organizations have the resources to effectively address every health issue in their jurisdiction. From a population perspective, each issue must be further assessed with regard to seriousness, impact on the community as a whole, economic burden and the potential for prevention or improvement. To objectively determine an order of priority for the critical health issues the CHA Core Group used these criteria and the results of the Community Survey to complete a weighted Prioritization Matrix. The resulting order is as follows:

1. Childhood obesity
2. Teenage pregnancy
3. Adult obesity
4. Domestic violence
5. Falls among older people
6. Medication misuse
7. Sexually transmitted infections

Discussion and Next Steps

The information provided in this report will hopefully inspire and empower community organizations and individuals to engage in collaborative processes on the way to improving health. There is evidence that communities that form partnerships linking corporations, public health, healthcare, faith based and educational entities increase their capacity for health improvement [1].

Further assessment of the individual issues for influencing factors is needed to identify the interventions that are most likely to be effective. There is a growing body of evidence based practices available to guide the development and implementation of health improvement activities. Community context also plays an important a role in attaining improved health. An assessment of issue specific community strengths and gaps will enable targeted resource allocation. Multidisciplinary, multi-level systems changes as well as changes in individual behavior will likely be necessary for measurable, sustained health improvement [21].

One of the unique challenges faced when evaluating population health interventions is the potentially long period of time between intervention implementation and evident changes in the ultimate outcome. Measurable changes in outcomes such as obesity prevalence or cancer incidence may not be apparent for decades. Shorter term goals and measures will be needed to assess progress. Thus, the health improvement process will be ongoing and long term, through what may prove to be numerous cycles of assessment, planning, action and evaluation. [21].

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