

## PRAMS – Pregnancy Risk Assessment Monitoring System

PRAMS is a random, population-based survey system of maternal behaviors and experiences before, during and shortly after pregnancy. New to Kansas, but well established in many states in the country, PRAMS data will provide us with information to help shape policy and programs in Kansas related to improving maternal and child health.

The 80 question survey covers a wide variety of topics including: pregnancy intention; prenatal healthcare (including physical, mental, and dental); mom’s behavior during pregnancy; support available to the pregnant woman; postpartum care; sleep position/habits of the baby; and many other topics that lead to improved health of mothers and babies in Kansas.

The Kansas PRAMS team has developed the processes and protocol for collecting the data from a random sample of approximately 1,700 women per year in Kansas that have given live birth within the past three months. The survey is administered via mail and, if no response, phone.

It is so important that women that are randomly selected to receive the survey take the time to tell us the story of their pregnancy and child’s birth. Kansas PRAMS staff and partners will use the data to improve maternal and child health outcomes in Kansas.

The first questionnaires will be mailed out in April, 2017. The sample will include women who had a baby in the month of January, 2017.

Staff will continue to keep healthcare providers and other partners aware of the Kansas PRAMS project. We need your support in encouraging women to complete and return the questionnaire and tell the story of their baby’s birth.

Information on Kansas PRAMS can be found at: <http://www.kdheks.gov/prams> or by calling the Kansas PRAMS Project Coordinator at (844) 353-9249.

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# Infant Mortality Report Released

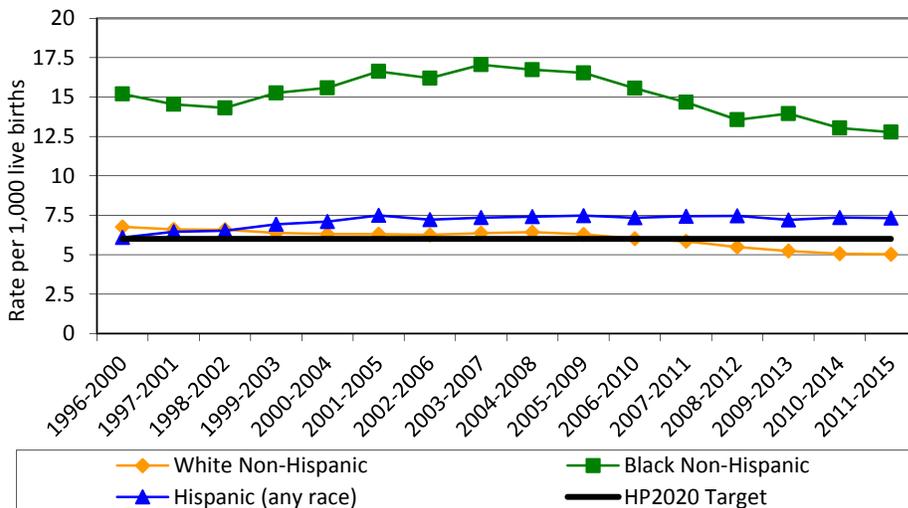
## Introduction

The Kansas Department of Health and Environment’s Bureau of Epidemiology and Public Health Informatics has released Selected Special Statistics, Stillbirths and Infant Deaths, 2015, which summarizes vital records data on stillbirths and infant mortality. Infant mortality is an important indicator of community health. It is associated with a variety of factors such as economic development, general living conditions, social well-being where basic needs are met, rates of illness such as diabetes and hypertension, and quality of the environment [1]. The purpose of this report is to move beyond single-year statistics reported in the Annual Summary of Vital Statistics and provide a more long-term view of stillbirth and infant mortality data and statistics. In an attempt to increase data reliability, years are combined. Trends are evaluated using 20 years.

## Selected Findings

- In the last century, the Kansas single year infant mortality rate (IMR) has decreased dramatically from 73.5 deaths per 1,000 live births in 1912 (2,795 infant deaths) to 5.9 in 2015 (230 infant deaths).
- In the last 20 years (1996-2015), the IMR fluctuated with a high of 8.2 in 1996 to a first low of 6.7 in 2003, then reaching a high of 7.9 in 2007, and an overall low of 5.9 in 2015. The IMR has been significantly decreasing since 2007.

Figure 1.  
Five Year Average Infant Mortality Rates  
by Population Group of Mother  
Kansas, 1996-2015



- The Kansas five-year average (2011-2015) shows that the Kansas rate 5.9 meets the Healthy People 2020 (HP2020) objective of 6.0 deaths per 1,000 live births. The White non-Hispanic population IMR met the HP2020 target, while the Hispanic and Black non-Hispanic rates did not (Figure 1).

## Cause of Death

The leading underlying cause of infant mortality (2010-2014) was congenital anomalies (23.3%), followed by prematurity or low birth weight (19.8%), SUID or sudden unexplained infant death (17.0%), and maternal factors and complications (10.3%).

## County Rates

The counties with the highest number of infant deaths in the 2011-2015 cohort included Sedgwick (259), Johnson (170), Wyandotte (108), and Shawnee (72). These four counties accounted for 49.7 percent of all infant deaths.

The counties with the highest reliable (RSE  $\leq$  30%) infant mortality rates, included Reno (9.3 infant deaths per 1,000 live births), Ford (8.9), Barton (8.2), Franklin (8.2), and Lyon (8.2); while the counties with the lowest (reliable) non-zero rates were Douglas (4.0), Leavenworth (4.1), Saline (4.2), Johnson (4.6), and Riley (5.2).

## Risk Factors-Linked Birth and Death Files

Analysis of the linked file (death cohort) revealed that low birthweight or prematurity were important risk factors for infant death even when the primary cause of death was not prematurity or low birthweight.

The 2011-2015 premature infant mortality rate of 43.5 deaths per 1,000 live births was over 21 times higher than the rate for infants born at term (2.0 deaths per 1,000 live births). The infant mortality rate for very premature infants was 200.2 deaths per 1,000 live births, 100 times higher than infants born at term.

Additional notable risk factors for infant deaths (linked file) included no prenatal care (6.1% of linked deaths), multiple births (14.5%), mothers who smoked during pregnancy (20.6% of infant deaths), and out-of-wedlock births (49.5%). Analysis of mother's age showed the highest percent of infant deaths among mothers aged 20-24 (29.8%), but the highest rate was among 10-19 year old adolescents (8.2 infant deaths per 1,000 live births).

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## Reference

[1] Reidpath D, Allotey P. Infant mortality rate as an indicator of population health. *J. Epidemiol Community Health*. 2003; 57:344-346.

## Prevalence of Severe Joint Pain Among Kansas Adults with Arthritis – 2015 KS Behavioral Risk Factor Surveillance System

### Background

Arthritis is the most common cause of disability. Arthritis affects 53 million adults in United States and is projected to increase to 78 million adults by the year 2040. The most common symptom of arthritis is joint pain. Severe joint pain impacts activity and quality of life [1]. Data on the health status of people with arthritis who have severe pain will help public health officials incorporate strategies to reduce barriers to pain care and dissemination of evidence-based interventions to improve the quality of lives of adults with arthritis.

## Objective

The objective of this analysis is to examine the prevalence of severe joint pain among adults with doctor-diagnosed arthritis by selected sociodemographics and health characteristics in Kansas.

## Methods

Data from the 2015 Kansas BRFSS were analyzed to assess prevalence of severe joint pain among Kansas adults aged 18 years and older with arthritis in various population subgroups. Respondents were classified as having doctor-diagnosed arthritis if they answered “yes” to the question, “Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?” Among adults with doctor-diagnosed arthritis, respondents were asked to “Please think about the past 30 days, keeping in mind all of your joint pain or aching and whether or not you have taken medication. During the past 30 days, how bad was your joint pain on average? Please answer on a scale of 0 to 10 where 0 is no pain or aching and 10 is pain or aching as bad as it can be.” Severe joint pain was defined as a response greater than or equal to 7. Prevalence estimates and 95% confidence intervals (CI) were calculated. Weighted analysis procedures were applied using SAS 9.3 software.

## Results

An estimated 537,154 (24.5%) Kansas adults have doctor-diagnosed arthritis. Among adults with arthritis, prevalence of severe joint pain was 25.7% (138,048). Higher prevalence of severe joint pain was seen among females (29.2%), non-Hispanic African Americans (46.6%), those with annual household income less than \$15,000 (57.1%), those with less than a high school education (44.9%), those who were out of work (41.4%) or unable to work (63.2%) and those living with a disability (41.0%) (Table 1). Further, higher prevalence was also seen among adults with self-perceived poor or fair general health (48.6%), obesity (31.0%), current smoking (39.3%), no leisure time physical activity (36.7%), heart disease (36.1%), diabetes (37.3%), current asthma (41.6%) and depression (39.5%) (Table 2).

## Conclusion

Approximately one in four Kansas adults with arthritis has severe joint pain. Disparities among those with severe joint pain exist within various sociodemographic sub groups. Self-perceived poor or fair general health, depression, obesity, current smoking, other chronic diseases and risk factors are higher among those with severe joint pain. This population-based information indicates the need of public health strategies to address issues related to severe joint pain among Kansas adults with arthritis.

Kansas Health Statistics Report

Table 1. Prevalence of severe joint pain among adults aged 18 years and older with arthritis by sociodemographic characteristics in Kansas, 2015 BRFSS

Sociodemographic characteristics	Prevalence of severe joint pain among adults aged 18 years and older with arthritis			
	Unweighted Frequency	Weighted Percentage	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Total	1544	25.7%	24.4%	27.0%
<b>Gender</b>				
Male	472	21.0%	19.0%	23.0%
Female	1072	29.2%	27.4%	31.0%
<b>Age groups</b>				
18-34 years	44	22.5%	15.7%	29.3%
35-44 years	97	28.2%	22.7%	33.7%
45-54 years	251	31.7%	27.9%	35.5%
55-64 years	454	27.3%	24.8%	29.7%
65 years and older	698	22.1%	20.4%	23.8%
<b>Race*</b>				
White, Non-Hispanic	1262	22.0%	19.2%	24.8%
African American, Non-Hispanic	127	46.6%	37.6%	55.5%
Other†/Multi-Race, , Non-Hispanic	95	34.3%	26.4%	42.1%
Hispanic	46	32.2%	22.2%	42.2%
<b>Annual Household Income</b>				
Less than \$15,000	303	57.1%	51.7%	62.6%
\$15,000 - \$24,999	354	35.9%	32.2%	39.6%
\$25,000 - \$34,999	173	27.6%	23.4%	31.8%
\$35,000 - \$49,999	190	22.2%	18.8%	25.7%
\$50,000 or higher	258	12.8%	11.1%	14.6%
<b>Education</b>				
Less than high school	182	44.9%	39.2%	50.6%
High school graduate or G.E.D	565	28.9%	26.5%	31.3%
Some college	514	25.3%	23.1%	27.6%
College graduate	283	13.4%	11.7%	15.1%
<b>Employment Status</b>				
Employed for wages or Self-employed	331	16.5%	14.5%	18.4%
Out of work	81	41.4%	32.0%	50.7%
Homemaker or Student	83	21.9%	16.7%	27.2%
Retired	569	21.0%	19.2%	22.9%
Unable to work	475	63.2%	59.2%	67.3%
<b>Disability Status</b>				
Living with a disability	1244	41.0%	39.0%	43.1%
Living without a disability	291	10.5%	9.1%	12.0%

\* Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

† Other non-Hispanic group includes non-Hispanic American Indian or Alaskan Native, non-Hispanic Asian, non-Hispanic Native Hawaiian or other Pacific Islander.

Source: 2015 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Table 2. Prevalence of severe joint pain among adults aged 18 years and older with arthritis by health characteristics in Kansas, 2015 BRFSS

Selected health characteristics	Prevalence of severe joint pain among adults aged 18 years and older with arthritis			
	Unweighted Frequency	Weighted Percentage	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Total	1544	25.7%	24.4%	27.0%
Smoking Status				
Current Smoker	383	39.3%	35.6%	42.9%
Non-smoker	1151	22.5%	21.1%	23.8%
Leisure-time physical activity				
Yes	766	19.8%	18.3%	21.4%
No	774	36.7%	34.2%	39.1%
Recommended level of physical activity				
Met both aerobic and strengthening guidelines	154	17.8%	14.6%	21.1%
Did not meet both aerobic and strengthening guidelines	1319	26.9%	25.4%	28.4%
Overall Health Status				
Fair or Poor Health	904	48.6%	46.0%	51.3%
Excellent/Very Good/Good	634	15.3%	13.9%	16.7%
Weight Category				
Normal or Underweight, BMI<25	295	22.4%	19.6%	25.2%
Overweight, 25<= BMI<30	401	20.5%	18.3%	22.8%
Obese, BMI>=30	746	31.0%	28.8%	33.2%
Heart Disease Status				
Yes	225	36.1%	31.7%	40.4%
No	1289	24.5%	23.1%	25.9%
Current Asthma Status				
Yes	304	41.6%	35.7%	45.8%
No	1215	23.1%	21.7%	24.5%
Diabetes Status				
Yes	456	37.4%	34.3%	40.5%
No	1085	22.7%	21.3%	24.2%
Depression Status				
Yes	703	39.5%	36.7%	42.2%
No	834	19.5%	18.0%	20.9%

Source: 2015 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Pratik Pandya, MPH, Ghazala Perveen, MBBS, PhD, MPH  
Bureau of Health Promotion

## References

- [1] Centers for Disease Control and Prevention. Arthritis-Related Statistics. Available at: [https://www.cdc.gov/arthritis/data\\_statistics/arthritis-related-stats.htm](https://www.cdc.gov/arthritis/data_statistics/arthritis-related-stats.htm) Accessed on January 10, 2017.

## Prevalence of Electronic Cigarette Use Among Kansas Adults—2015 KS Behavioral Risk Factor Surveillance System

### Background

Electronic cigarettes or e-cigarettes or electronic nicotine delivery systems are battery-powered devices that provide nicotine, flavorings and other additives to user in vapor (aerosol) instead of smoke. E-cigarettes are marketed as an alternate to conventional smoking and as a smoking cessation tool. Long-term effects of using e-cigarettes are not known and the health risks and safety are unclear. However, e-cigarettes release nicotine that is known to have detrimental effects on health. Some aerosols in e-cigarettes contain carcinogens and toxins [1]. Data on the percentage of Kansas adults ever using e-cigarettes will be helpful in understanding the extent, disparities and for monitoring changes over the years.

### Objective

The objective of this analysis is to examine the prevalence of ever e-cigarettes use among Kansas adults 18 years and older by selected socio-demographics and health characteristics.

### Methods

Data from the 2015 Kansas BRFSS were analyzed to assess prevalence of ever e-cigarettes use among Kansas adults aged 18 years and older in various population subgroups. Respondents were classified as having ever used e-cigarettes if they answered “yes” to the question, “Have you ever used or tried Electronic Cigarettes or E-cigarettes, such as Ruyan or NJOY?” Prevalence estimates and 95% confidence intervals (CI) were calculated. Weighted analysis procedures were applied using SAS 9.3 software.

### Results

An estimated 366,142 (16.7%) Kansas adults have ever used or tried e-cigarettes. Higher prevalence of ever e-cigarettes use was seen among males (19.2%), adults aged 18-24 years (32.2%), adults aged 25-34 years (26.0%), non-Hispanic Whites (18.0%), non-Hispanic other/multi-race adults (20.7%) those with annual household income less than \$15,000 (25.0%), those who received a high school diploma or receive a GED (21.6%), those who were out of work (33.5%) or unable to work (30.3%), those who are never married (28.7%) or divorced/separated (23.7%), and those without insurance (29.5%) (Table 1). Further, higher prevalence was also seen among adults with self-perceived poor or fair general health (23.7%), frequent mental distress (34.4%), current smoking (58.8%), no leisure time physical activity (19.5%), depression (27.0%) and those living with a disability (20.8%) (Table 2).

Kansas Health Statistics Report

Table 1. Percentage of adults aged 18 years and older who have ever used or tried e-cigarettes by sociodemographic characteristics in Kansas, 2015 BRFSS

Sociodemographic characteristics	Percentage of adults aged 18 years and older who have ever used or tried e-cigarettes			
	Unweighted Frequency	Weighted Percentage	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Total	1269	16.7%	15.6%	17.7%
<b>Gender</b>				
Male	627	19.2%	17.6%	20.8%
Female	642	14.3%	13.0%	15.5%
<b>Age groups</b>				
18-24 years	176	32.2%	27.8%	36.7%
25-34 years	232	26.0%	22.7%	29.2%
35-44 years	196	16.2%	13.8%	18.5%
45-54 years	218	14.5%	12.3%	16.6%
55-64 years	266	12.1%	10.6%	13.7%
65 years and older	181	5.3%	4.5%	6.2%
<b>Race*</b>				
White, Non-Hispanic	1064	18.0%	16.7%	19.2%
African American, Non-Hispanic	51	19.4%	13.4%	25.4%
Other†/Multi-Race, Non-Hispanic	74	20.7%	16.0%	25.4%
Hispanic	65	11.1%	8.4%	13.9%
<b>Annual Household Income</b>				
Less than \$15,000	143	25.0%	20.5%	29.5%
\$15,000 - \$24,999	249	24.8%	21.6%	28.0%
\$25,000 - \$34,999	144	21.3%	17.6%	24.9%
\$35,000 - \$49,999	164	16.2%	13.4%	18.9%
\$50,000 or higher	380	11.6%	10.3%	13.0%
<b>Education</b>				
Less than high school	116	20.3%	16.3%	24.3%
High school graduate or G.E.D	454	21.6%	19.5%	23.7%
Some college	445	19.4%	17.5%	21.4%
College graduate	253	7.5%	6.4%	8.6%
<b>Employment Status</b>				
Employed for wages or Self-employed	708	17.2%	15.8%	18.6%
Out of work	99	33.5%	27.2%	39.8%
Homemaker or Student	118	18.6%	15.0%	22.2%
Retired	172	6.0%	5.0%	7.0%
Unable to work	160	30.3%	25.6%	35.0%
<b>Marital Status</b>				
Married/member of unmarried couple	593	12.3%	11.2%	13.4%
Divorced or separated	296	23.7%	20.7%	26.6%
Widowed	73	7.3%	5.3%	9.4%
Never married	307	28.7%	25.5%	31.9%
<b>Insurance Status</b>				
Insured	1047	14.9%	13.8%	15.9%
Uninsured	214	29.5%	25.7%	33.3%

\* Prevalence estimates for race and ethnicity were age-adjusted to the U.S. 2000 standard population.

† Other non-Hispanic group includes non-Hispanic American Indian or Alaskan Native, non-Hispanic Asian, non-Hispanic Native Hawaiian or other Pacific Islander.

Source: 2015 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

Table 2. Percentage of adults aged 18 years and older who have ever used or tried e-cigarettes by selected health characteristics in Kansas, 2015 BRFSS

Selected health characteristics	Percentage of adults aged 18 years and older who have ever used or tried e-cigarettes			
	Unweighted Frequency	Weighted Percentage	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Total	1269	16.7%	15.6%	17.7%
<b>Disability Status</b>				
Living with a disability	419	20.8%	18.6%	23.0%
Living without a disability	845	15.6%	14.4%	16.8%
<b>Overall Health Status</b>				
Fair or Poor Health	317	23.7%	20.9%	26.5%
Excellent/Very Good/Good	951	15.4%	14.3%	16.5%
<b>Frequent Mental Distress</b>				
14+ days mental health not good	228	34.4%	30.0%	38.9%
<14 days mental health not good	1014	14.9%	13.9%	15.9%
<b>Depression Status</b>				
Yes	439	27.0%	24.4%	29.7%
No	824	14.1%	13.0%	15.2%
<b>Smoking Status</b>				
Current Smoker	818	58.8%	55.7%	62.0%
Non-smoker	445	8.1%	7.2%	9.0%
<b>Leisure-time physical activity</b>				
Yes	825	15.6%	14.4%	16.8%
No	440	19.5%	17.6%	21.5%

Source: 2015 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

### Conclusion:

Approximately one in six Kansas adults have ever used or tried e-cigarettes. Disparities among those who have used e-cigarettes exist within various socio-demographic sub groups. Higher percentages of adults who have ever used or tried e-cigarettes were seen among those who have self-perceived poor or fair general health, frequent mental distress, depression, current smoking, and no leisure time physical activity. This population-based information indicates the need of public health strategies to reduce e-cigarettes use and to address disparities in population sub-groups in Kansas.

Pratik Pandya, MPH, Ghazala Perveen, MBBS, PhD, MPH  
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### References

- [1] Centers for Disease Control and Prevention. Electronic Cigarette Use Among Working Adults — United States, 2014. Available at: <https://www.cdc.gov/mmwr/volumes/65/wr/mm6522a1.htm> Accessed on January 12, 2017.

## Overweight, Obesity and Associated Chronic Disease among Kansas Adults, 2015 Kansas Behavioral Risk Factor Surveillance System (BRFSS)

### Background

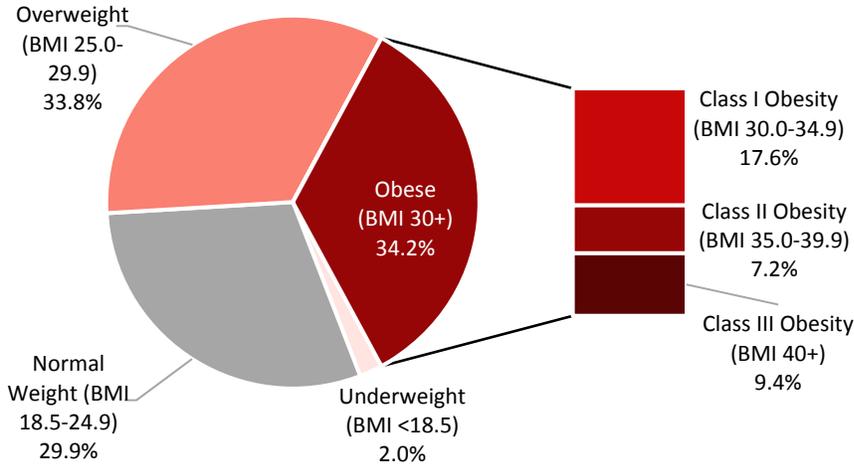
Overweight and obesity are associated with a variety of health conditions and are major preventable risk factors of chronic disease, yet the prevalence of overweight and obesity are increasing among Kansas adults. The percentage of adults who are overweight or obese has increased significantly from 58.7 percent (37.9% overweight, 20.8% obese) in 2000 to 64.5 percent in 2010 (34.4% overweight, 30.1% obese).[1] Overweight or obesity prevalence trends also continued to increase during more recent years, from 64.4 percent in 2011 (34.8% overweight, 29.6% obese) to 68.0 percent in 2015 (33.8% overweight, 34.2% obese). The percentage of Kansas adults who are obese increased significantly by 2.9 percent from 2014 (31.3%) to 2015 (34.2%),[1] ranking Kansas with the seventh highest adult obesity prevalence rate in the nation.[2]

The purpose of this study is to describe the prevalence of overweight, obesity and selected chronic diseases and examine their associations among Kansas adults 18 years and older.

### Methods

The Kansas Behavioral Risk Factor Surveillance System (BRFSS) is a random digit-dial population-based survey of non-institutionalized adults 18 years and older living in private residences and college housings with landline and/or cell phone service in Kansas. Using SAS complex survey procedures, data from the 2015 Kansas BRFSS were analyzed to estimate the overall prevalence of overweight and obesity and by subpopulation groups. Overweight and obesity prevalence was classified according to body mass index (BMI), calculated from self-reported weight and height. Overweight was defined as BMI of 25.0 to 29.9 kg/m<sup>2</sup> and obesity as BMI ≥ 30.0 kg/m<sup>2</sup> (class I obesity: BMI 30.0-34.9 kg/m<sup>2</sup>, class II obesity: BMI 35.0-39.9 kg/m<sup>2</sup> and class III obesity: BMI 40 kg/m<sup>2</sup> or greater). The prevalence of diseases (arthritis, diabetes, current asthma, and cardiovascular disease) were also calculated. The estimated prevalence of reported chronic conditions were defined as: adults who ever have some form of arthritis; adults who ever have diabetes; adults who been told they currently have asthma; and cardiovascular disease (CVD), which includes adults who ever have angina or coronary heart disease (CHD), heart attack or stroke. Bivariate analyses were applied to estimate the prevalence of these conditions by weight status. Logistic regression models were used to compare the adjusted prevalence odds ratios (PORs) of arthritis, diabetes, current asthma and CVD among Kansas adults who were overweight or obese versus those in the normal/underweight (BMI ≤ 24.9 kg/m<sup>2</sup>) category, while controlling for gender, age and race/ethnicity.

Figure 1. Prevalence of underweight, normal weight, overweight and obesity among Kansas adults, 2015 KS BRFSS



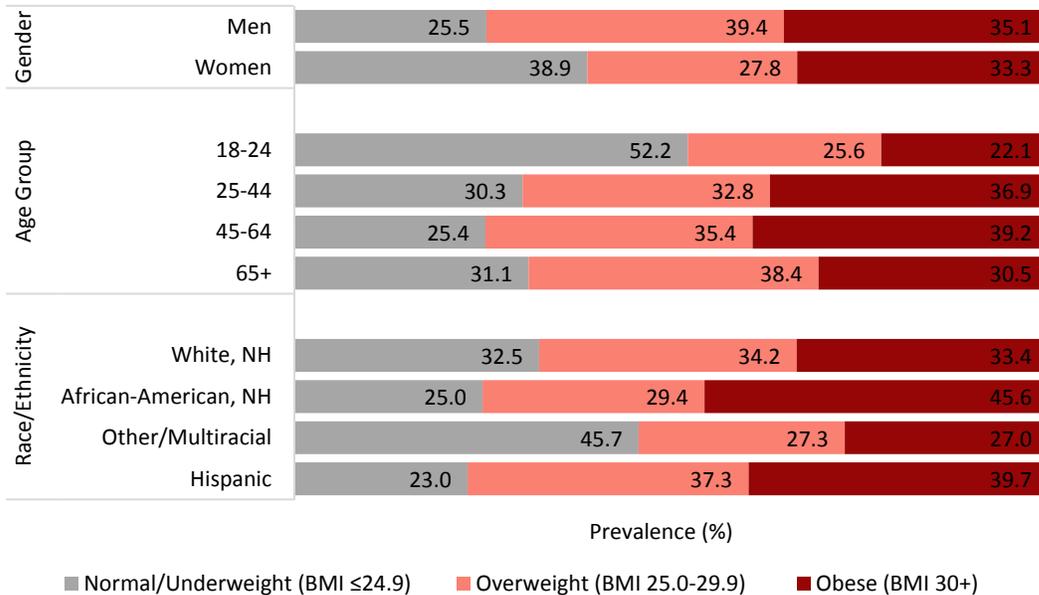
Source: 2015 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

## Results

In 2015, 34 percent of Kansas adults were overweight and 34 percent were obese, of which 18 percent were in class I, 7 percent were in class II and 9 percent were in class III (Figure 1). Prevalence of obesity was similar among men and women (35.1% and 33.3%), highest among age group 45 to 64 years and 25 to 44 years compared with adults in age

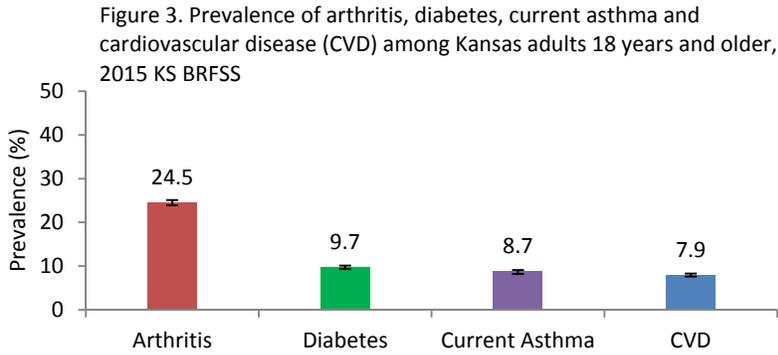
group 18 to 24 and 65 years and older, and highest among non-Hispanic African-Americans (Figure 2). The prevalence of overweight was significantly higher among men (39.4% vs. 27.8%), increased with increasing age groups and highest among Hispanics and non-Hispanic Whites (Figure 2). In 2015, 1 in 4 Kansas adults have arthritis and 1 in 10 Kansas

Figure 2. Prevalence of normal/underweight, overweight and obesity by gender, age group and race/ethnicity among Kansas adults, 2015 KS BRFSS



NH= non-Hispanic

Source: 2015 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

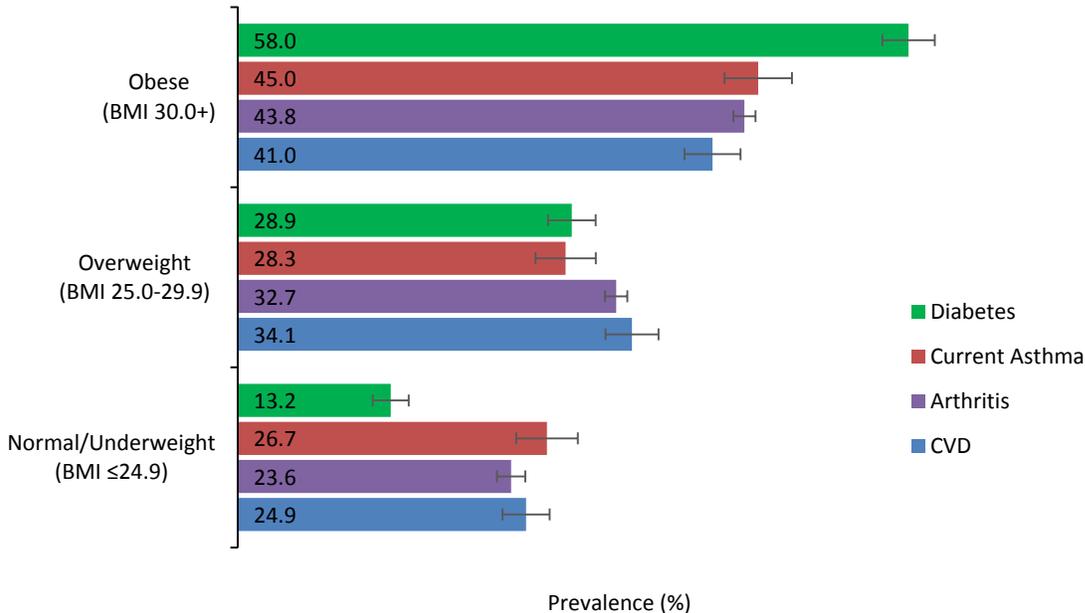


CVD includes angina or coronary heart disease (CHD), heart attack or stroke.  
 Source: 2015 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE.

adults have diabetes (Figure 3). Nine percent of Kansas adults have current asthma and eight percent of adults have cardiovascular disease (Figure 3). The prevalence of diabetes, arthritis and CVD were significantly higher among adults who were overweight and obese compared with adults who were normal/underweight

(Figure 4). The prevalence of current asthma was significantly higher among adults who were obese (Figure 4). The prevalence odds for these chronic conditions were significantly higher among adults who were obese compared with adults in the normal/underweight category, even after controlling for gender, age and race/ethnicity (Table 1). Among adults in the obese category, the adjusted prevalence odds of having diabetes were five time higher; having arthritis and current asthma were two times higher, and CVD were 1.5 times

Figure 4. Prevalence of chronic conditions by weight status among Kansas adults 18 years and older, 2015 KS BRFSS



Cardiovascular disease (CVD) includes angina or coronary heart disease (CHD), heart attack or stroke.  
 Source: 2015 Kansas Behavioral Risk Factor Surveillance System, Bureau of Health Promotion, KDHE

higher compared with adults in the normal/underweight category. Among adults in the overweight category, the adjusted prevalence odds of having diabetes were approximately two times higher, having arthritis was 1.3 times higher and having current asthma was 1.2 times higher compared with adults in the normal/underweight category (Table 1).

Table 1. Adjusted prevalence odds ratios (PORs) for selected chronic conditions by weight status

Chronic Conditions	Overweight Adjusted PORs (95% CI)	Obese Adjusted PORs (95% CI)
Diabetes	1.8 (1.6-2.2)	4.6 (3.9-5.4)
Arthritis	1.3 (1.2-1.5)	2.2 (2.0-2.5)
Current Asthma	1.2 (1.0-1.4)	1.8 (1.6-2.1)
CVD	1.0 (0.9-1.2)	1.5 (1.3-1.7)

Note: The models were adjusted for age, gender, and race/ethnicity.

Reference group: Normal/Underweight (BMI  $\leq 24.9$  kg/m<sup>2</sup>) category of weight status. Overweight and obese categories compared with normal/underweight category.

Cardiovascular disease (CVD) includes angina or coronary heart disease (CHD), heart attack or stroke.

CI = Confidence Interval

## Conclusions and Implications

Our findings support previous observations that a positive association exists between overweight and obesity and a number of chronic diseases. These results highlight the continued need to implement overweight and obesity prevention and control strategies and promote healthy lifestyles among Kansas adults to reduce burden of chronic diseases. To address obesity the Bureau of Health Promotion (BHP) at the Kansas Department of Health and Environment (KDHE) is working on chronic disease prevention and control initiatives focusing on active communities (joint use agreements, bike trails or sidewalks), early care and education, schools and worksites wellness program (e.g. focusing on nutrition, physical activity and tobacco cessation), improving food system (including increase access to local food for WIC and SNAP recipient at farmer’s markets, increase healthy restaurant menu options and work with stores to stock and market healthy foods and health care). In addition, BHP is providing resources and education materials for health care professionals for preventing and managing obesity and co-morbid chronic disease conditions including arthritis, diabetes, prediabetes and hypertension.

Vi T. Pham, MPH, CPH, Ghazala Perveen, MBBS, PhD, MPH  
Bureau of Health Promotion

## References

1. Kansas Behavioral Risk Factor Surveillance System, 2000-2015. Bureau of Health Promotion, Kansas Department of Health and Environment <http://www.kdheks.gov/brfss/>.
2. Segal L, Martin A, Rayburn J. State of obesity: Better policies for a healthier America 2016. Trust for America’s Health and Robert Wood Johnson Foundation; 2016. Available from <http://stateofobesity.org/files/stateofobesity2016.pdf>.

## KDHE Syndromic Surveillance Response to an Emergency Public Health Event Featured in CDC's National Syndromic Surveillance Program Newsletter



Syndromic Surveillance  
**Success Stories**



**Chemical Spill in Kansas: Importance of Sharing Information Across Sites**

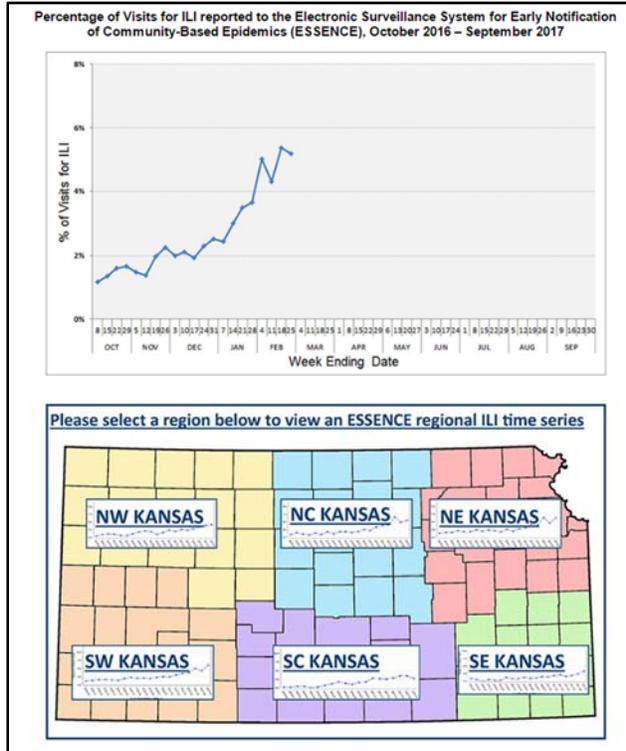
**Public Health Problem**

On October 21, 2016, at 8:02 am, a distilling plant in Kansas accidentally mixed sulfuric acid and sodium hypochloride, releasing a plume of chlorine gas. The respiratory effects of breathing chlorine gas can be felt almost immediately and can be severe. Symptoms include cough, wheezing, difficulty breathing, and tightness in the chest.<sup>1,2</sup> As the heavy plume spread across the nearby city of 11,000, residents experienced respiratory problems and sought medical care. One employee was taken to Hospital A, a participant in the Kansas Department

<https://www.cdc.gov/nssp/documents/success-story-chemical-spill-20170201.pdf>

KDHE's Syndromic Surveillance (SyS) program played a large role in monitoring the October Atchison chemical spill. KDHE SyS utilizes emergency department visit reporting for near real-time surveillance of emerging events of public health importance

## Visit KDHE's Flu Surveillance Website for State-Wide and Regional Influenza-Like Illness Charts



Visitors to the KDHE Flu Surveillance website will now find an additional regional map below the state-wide ILI visits reported to ESSENCE. The Kansas map is divided into 6 regions that can be selected to display a time-series relevant to the specific region. All ESSENCE graphics will be updated weekly on Wednesday during the flu season.

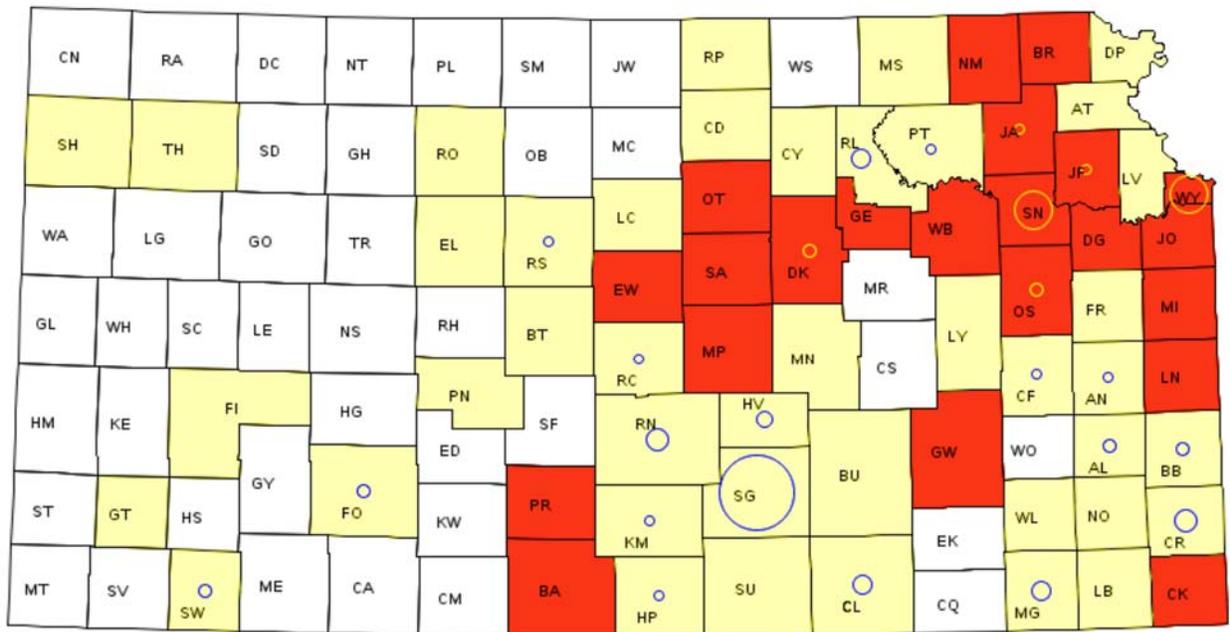
Please go to <http://www.kdheks.gov/flu/surveillance.htm> to find the most up-to-date information on influenza surveillance in your area.

## FastStats

Drug-related poisoning hospital discharges have increased in 22 Kansas counties while decreasing in 42 counties between 2005-2009 and 2010-2014. The increases in six counties have been statistically significant, Wyandotte (20%), Shawnee (46%), Dickinson (49%), Jackson (50%), Osage (64%), and Jefferson (82%).

All Drugs-related Poisoning Hospital Discharges by County\*\*  
 Kansas Hospital Association 2005-2014  
**Age-adjusted Rate Ratio: 2005-2009 age-adjusted rate is the reference category.**

Age-adjusted HD Rate Ratio     Decreased     Increased



- Age-adjusted rates significantly increased\*\*
- Age-adjusted rates significantly decreased\*\*

**\*\*Note:** The size of the circle is the geometric average number of hospital discharge in 2005-2009 and 2010-2014 involving a drug poisoning discharge. Each circle is a unique size. Only rate ratios that were statistically significant are circled to indicate potential 'hot-spots' and 'cold-spots.' Due to the lack of drug specific poisoning case definition for ICD-9-CM diagnosis codes, estimates may be an underestimate.

Source: [http://www.kdheks.gov/idp/download/HDD2005\\_2014.pdf](http://www.kdheks.gov/idp/download/HDD2005_2014.pdf) Kansas Department of Health and Environment

## Kansas Health Statistics Report

The Public Health Informatics Unit (PHI) of the Kansas Department of Health and Environment's Bureau of Epidemiology and Public Health Informatics produces *Kansas Health Statistics Report* to inform the public about availability and uses of health data. Material in this publication may be reproduced without permission; citation as to source, however, is appreciated. Send comments, questions, address changes, and articles on health data intended for publication to: PHI, 1000 SW Jackson, Suite 130 Topeka, KS, 66612-1354, [Kansas.Health.Statistics@kdheks.gov](mailto:Kansas.Health.Statistics@kdheks.gov), or 785-296-1531. Susan Mosier, MD, Secretary KDHE; D. Charles Hunt, MPH, State Epidemiologist and Director, BEPHI; Elizabeth W. Saadi, PhD, State Registrar, Deputy Director, BEPHI; Greg Crawford, BEPHI, Editor.

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