

2011 Kansas Behavioral Risk Factor Surveillance System  
Tobacco and Kansas Adults

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## Introduction

Each year since 1992, the Kansas Department of Health and Environment, Bureau of Health Promotion, Tobacco Use Prevention Program (TUPP) has proposed questions to be included in the annual Kansas Behavioral Risk Factor Surveillance System (BRFSS) conducted by the state. This report summarizes the results of the state-added and core tobacco indicators in the 2011 BRFSS.

Nationally and in Kansas, tobacco use is the leading underlying cause of death and is associated with heart disease, cancer and chronic lung problems. The Kansas Department of Health and Environment is currently working with many local entities to provide a comprehensive tobacco use prevention program across the state. Surveillance and evaluation are major components of this comprehensive approach. Currently, surveillance of tobacco-related trends is used to provide guidance for tobacco prevention activities statewide and permits cultural tailoring to Kansas' increasingly diverse population. Additionally, surveillance aids in monitoring the effectiveness of health promotion measures once implemented.

The proposed questions directly impact the four goals areas of Comprehensive Tobacco Control as described in the Centers for Disease Control and Prevention (CDC) *Best Practices for Comprehensive Tobacco Control Programs*.

1. Elimination of exposure to environmental tobacco smoke
2. Promotion of tobacco cessation among youth and adults
3. Prevention of initiation of tobacco use among youth
4. Identification and elimination of disparities among different populations

## Conventions

Several conventions are used throughout this document to aid the reader in understanding complex data. In the following tables, the relative size of the point prevalence of an indicator is represented by bar graphs within each table. In each table the bars are red, green or blue. These colors are intended to give the reader some idea of where the measure described in each table falls on the spectrum of health risk.

- **Red:** Tables with red bars describe a behavior that is a health risk. Generally speaking, larger estimates of these measures are worse for population health and smaller estimates are better.
- **Green:** Tables with green bars describe protective factors or population outcomes promoted by TUPP, such as cessation. Never-smokers and current smokers who have tried to quit in the past 12 months, for instance, are depicted with green bars.
- **Blue:** Tables with blue bars describe public opinions or behaviors that are related to risk behaviors. Public support or opposition to an increase in cigarette tax and support for smoke-free laws, for instance, are depicted with blue bars.

It is important to note that the colored bars in each table do not denote statistically significant differences. To determine whether two weighted percents are significantly different from one another, the reader must compare the upper and lower confidence limits. For instance, on table 1 we see that 24.6 percent of male adults and 19.5 percent of female adults smoked cigarettes in 2011. Are these two estimates significantly different? Because the upper confidence limit of the female estimate, 20.4 percent, is less than the lower confidence limit of the male estimate, 23.3 percent, we can see that the confidence limits do not overlap and estimates of cigarette smoking among male and female Kansas adults are significantly different from each other. Similarly, the difference between the percent of white non-Hispanic adults who smoke (21.1%, 95% CI: 20.2%-21.9%) is not significantly different from the percent of Hispanic adults who smoke (22.6%, 95% CI: 19.2%-26.1%) because the confidence limits of the two estimates overlap (table 1).

Finally, where sample size permits, crude Race/Ethnicity subpopulation prevalence estimates have been replaced with age-adjusted Race/Ethnicity subpopulation prevalence estimates. Race/Ethnicity estimates were standardized to the 2000 US Census age distribution and are denoted by “(Age Adj.)” in the title. Where age-adjusted estimates are used, crude Race/Ethnicity subpopulation prevalence estimates have been made available in the appendix.

## Technical Notes

### 2011 METHODOLOGY CHANGES

Beginning in 2011, the CDC adopted iterative proportional fitting, or “raking,” in place of post stratification weighting as the sole BRFSS statistical weighting method. In compliance with the current CDC guidelines regarding BRFSS sampling methodology, the Kansas BRFSS program implemented dual frame sampling methodology for the 2011 Kansas BRFSS survey. The dual frame sampling methodology for 2011 includes two components: 1) landline telephone service and 2) cellular telephone-only service. These two adjustments are in response to growing cellular telephone-only service and provide improved estimates.

Some estimates may have changed significantly as a result of the improved methodology while others may not have changed. Because it is not possible to determine whether a 2011 estimate is significantly different (or not significantly different) from previous estimates because of the change in methodology or actual changes in the population measure, making comparisons to previous years is inappropriate.<sup>i</sup>

Additional reading on this topic can be found at: <http://www.kdheks.gov/brfss/newmethod.html>.

### 95% Confidence INTERVALS

A confidence interval is a range of values that is likely to include an unknown population parameter, the range being calculated from a given set of sample data. If independent samples are taken repeatedly from the same population, and a confidence interval calculated for each sample, then a certain percentage of the intervals will include the unknown population parameter.

Data results from the BRFSS survey are the estimate of actual population parameters. A 95 percent confidence interval is calculated for estimates obtained from the BRFSS sample, which is interpreted as, “We are 95 percent confident that the interval contains the true population value of the indicator.” The smaller the range between the lower limit and upper limit of the confidence interval, the more precise the estimated percentage. BRFSS data produces highly reliable estimates and the interpretation of data is based on the application of 95 percent confidence intervals.

### DATA WEIGHTING INFORMATION

Data weighting is an important statistical process that attempts to remove bias in the sample. It corrects for differences in the probability of selection due to non-response and non-coverage errors. Data weighting also allows the generalization of findings to the whole population, not just those who respond to the survey. Once BRFSS data are collected, statistical procedures are undertaken to make sure the estimates of health indicators generated by the analysis of survey data are representative of the population for each state and/or local area.

In 2011, landline telephone respondents were randomly sorted to Questionnaire Split A or Questionnaire Split B after completing the Core Questionnaire. This report includes data from the Core Questionnaire (landline and cellular telephone respondents) and Questionnaire Split A (landline telephone-only respondents). Unless otherwise specified, the combined landline and cellular telephone weight was used to calculate estimates. When data from Questionnaire Split A is presented using the landline telephone-only weight, the title of the table or figure will specify “[Landline Survey].”

## INTERPRETATION OF STATISTICS

In general, the correct interpretation of these statistics involves specifying the **timeframe** and inserting the [weighted percentage] into the appropriate indicator. For instance, under “Cigarette Smoking”, we can see from looking at figure 1 that...

**In 2011**, [22.0%] of adult Kansans were current cigarette smokers.

For the subpopulation analysis we follow a similar formula that also specifies the *subpopulation*. In Table 1, for instance, we find that...

**In 2011**, [24.6%] of *male* adult Kansans were current cigarette smokers.

## Tobacco Use

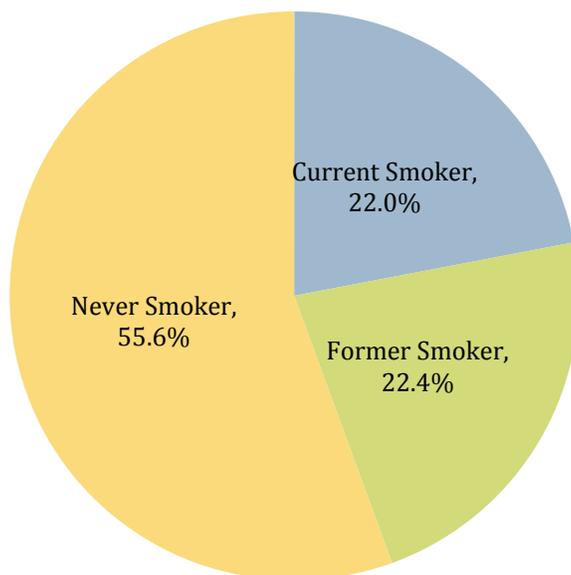
Despite a variety of brand name product line expansions and new products, cigarette smoking and smokeless tobacco use remain the most common types of tobacco use. Questions about other products have been included in previous Kansas BRFSS surveys, but the 2011 BRFSS is limited to questions regarding cigarette smoking and smokeless tobacco use. Composites of these two measures are also discussed: dual use of smokeless tobacco and cigarettes in the adult Kansas population, and smokeless tobacco use by adults who smoke cigarettes.

With the change in BRFSS methodology in 2011, it is inappropriate to compare estimates before 2011 to estimates from 2011 or after. One of the primary objectives of public health surveillance is to determine if a measure is increasing or decreasing over time. To accomplish this type of trend analysis, the same indicator must be repeatedly measured in the same way to allow public health practitioners to compare apples to apples and draw conclusions. With the 2011 BRFSS methodology changes, measures from 2011 and after are not comparable to data in previous years and any conclusions one would draw from comparing these measures to pre-2011 measures will lead to inaccurate interpretations. Therefore, there are no comparisons in this report to older estimates. The 2011 BRFSS is effectively a brand new baseline for public health surveillance in Kansas.

### Cigarette Smoking

Adults are classified as current smokers when they have smoked at least 100 cigarettes in their life and currently smoke some days or every day. Former smokers have smoked at least 100 cigarettes in their life and do not currently smoke. Never-smokers have not smoked 100 cigarettes in their life. In Kansas, more than 1 in 5 adults (22%, 95% CI: 21.2%-22.8%) currently smoke cigarettes.

**Figure 1. Kansas adult cigarette smoking status, BRFSS 2011**



In Kansas adults, current smoking (table 1) is more common among men than women and less common among adults who are 55 years old or older than younger adults. Table 1 also shows disparities in current smoking by race and ethnicity. White non-Hispanic Kansas adults have a lower prevalence of current smoking than non-Hispanic Other Race adults (includes American Indian, Alaska Native, Asian, Native Hawaiian, Pacific Islander and other racial and ethnic groups). Annual household income and education are strong predictors of cigarette smoking. A lower level of education attainment and lower annual income is associated with a higher prevalence of current smoking. Finally, those without health insurance coverage have more than double the prevalence of current smoking compared to those who do have health insurance coverage.

**Table 1. Current smoking among Kansas adults, BRFSS 2011.**

| Demographic Group                | Weighted Percent | 95% Confidence Limit |       |
|----------------------------------|------------------|----------------------|-------|
| <b>GENDER</b>                    |                  |                      |       |
| Male                             | 24.6%            | 23.3%                | 25.9% |
| Female                           | 19.5%            | 18.5%                | 20.4% |
| <b>AGE GROUP</b>                 |                  |                      |       |
| Age 18-24                        | 24.5%            | 21.4%                | 27.5% |
| Age 25-34                        | 30.4%            | 28.0%                | 32.9% |
| Age 35-44                        | 23.7%            | 21.6%                | 25.7% |
| Age 45-54                        | 25.5%            | 23.8%                | 27.1% |
| Age 55-64                        | 18.7%            | 17.3%                | 20.1% |
| Age 65+                          | 9.5%             | 8.6%                 | 10.3% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                      |       |
| White Non-Hispanic               | 22.0%            | 21.0%                | 22.9% |
| African American Non-Hispanic    | 26.7%            | 22.3%                | 31.1% |
| Hispanic                         | 21.6%            | 18.4%                | 24.9% |
| Other Race Non-Hispanic          | 29.3%            | 24.0%                | 34.7% |
| Multiracial Non-Hispanic         | 29.1%            | 22.1%                | 36.0% |
| <b>ANNUAL INCOME</b>             |                  |                      |       |
| Less than \$15,000               | 38.9%            | 35.5%                | 42.3% |
| \$15,000 to less than \$25,000   | 33.2%            | 30.8%                | 35.5% |
| \$25,000 to less than \$35,000   | 26.4%            | 23.9%                | 28.9% |
| \$35,000 to less than \$50,000   | 20.9%            | 18.8%                | 22.9% |
| \$50,000 or more                 | 13.2%            | 12.2%                | 14.3% |
| <b>EDUCATION</b>                 |                  |                      |       |
| Did not graduate high school     | 38.8%            | 35.4%                | 42.3% |
| High school graduate or GED      | 28.3%            | 26.7%                | 29.9% |
| Some college or technical school | 21.6%            | 20.2%                | 22.9% |
| College graduate                 | 8.6%             | 7.8%                 | 9.5%  |
| <b>HEALTH INSURANCE</b>          |                  |                      |       |
| Has health insurance             | 18.2%            | 17.4%                | 19.0% |
| Does not have health insurance   | 41.2%            | 38.5%                | 43.8% |

Former smoking in Kansas (table 2) is strongly associated with age. As people age, adults who smoke accumulate quit attempts and, assuming they do not die first, many eventually quit. In Kansas, nearly 40 percent of adults age 65 or older are former smokers. Men are more likely to be former smokers than women and white non-Hispanic and multiracial non-Hispanic Kansans have a higher prevalence of former smoking than African American non-Hispanic and Hispanic adults. Education and annual income do not appear to have a clear relationship with former smoking status, although Kansas adults with health insurance are significantly more likely than Kansas adults without health insurance to be former smokers.

Never-smoking status (table 3) is more common among adult women than men and is more common among young adults, age 18-24, than older adults. This measure consists of having smoked less than 100 cigarettes in one's life, so it does not provide an accurate picture of cigarette smoking initiation, more than 95 percent of which occurs before age 25, and may not reflect "casual" smoking in college-age students. Among race-ethnicity groups, never-smoking status is more common among Hispanic adults than among multiracial non-Hispanic adults. Annual income and education have the opposite relationship with never-smoking prevalence that they do with current smoking. Never-smoking prevalence is higher in adults with more education and higher annual income. Never-smoking prevalence is also higher in adults with health insurance coverage than adults who do not have health insurance coverage.

**Table 2. Former smoking among Kansas adults, BRFSS 2011.**

| Demographic Group                | Weighted Percent | 95% Confidence Limit |       |
|----------------------------------|------------------|----------------------|-------|
| <b>GENDER</b>                    |                  |                      |       |
| Male                             | 25.2%            | 24.1%                | 26.3% |
| Female                           | 19.7%            | 18.9%                | 20.6% |
| <b>AGE GROUP</b>                 |                  |                      |       |
| Age 18-24                        | 7.2%             | 5.3%                 | 9.0%  |
| Age 25-34                        | 15.1%            | 13.3%                | 16.8% |
| Age 35-44                        | 17.2%            | 15.5%                | 18.9% |
| Age 45-54                        | 21.8%            | 20.3%                | 23.3% |
| Age 55-64                        | 31.4%            | 29.9%                | 33.0% |
| Age 65+                          | 39.2%            | 37.8%                | 40.6% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                      |       |
| White Non-Hispanic               | 22.5%            | 21.7%                | 23.2% |
| African American Non-Hispanic    | 16.2%            | 13.1%                | 19.3% |
| Hispanic                         | 18.3%            | 15.4%                | 21.2% |
| Other Race Non-Hispanic          | 18.8%            | 14.4%                | 23.3% |
| Multiracial Non-Hispanic         | 30.4%            | 23.9%                | 36.9% |
| <b>ANNUAL INCOME</b>             |                  |                      |       |
| Less than \$15,000               | 20.6%            | 18.1%                | 23.1% |
| \$15,000 to less than \$25,000   | 19.6%            | 18.0%                | 21.3% |
| \$25,000 to less than \$35,000   | 24.9%            | 22.7%                | 27.0% |
| \$35,000 to less than \$50,000   | 25.0%            | 23.1%                | 26.9% |
| \$50,000 or more                 | 23.8%            | 22.7%                | 25.0% |
| <b>EDUCATION</b>                 |                  |                      |       |
| Did not graduate high school     | 20.6%            | 18.1%                | 23.1% |
| High school graduate or GED      | 24.2%            | 22.9%                | 25.5% |
| Some college or technical school | 22.4%            | 21.2%                | 23.7% |
| College graduate                 | 21.1%            | 20.1%                | 22.2% |
| <b>HEALTH INSURANCE</b>          |                  |                      |       |
| Has health insurance             | 24.1%            | 23.4%                | 24.9% |
| Does not have health insurance   | 14.3%            | 12.5%                | 16.0% |

**Table 3. Never smoking among Kansas adults, BRFSS 2011.**

| Demographic Group                | Weighted Percent | 95% Confidence Limit |       |
|----------------------------------|------------------|----------------------|-------|
| <b>GENDER</b>                    |                  |                      |       |
| Male                             | 50.2%            | 48.8%                | 51.6% |
| Female                           | 60.8%            | 59.7%                | 61.9% |
| <b>AGE GROUP</b>                 |                  |                      |       |
| Age 18-24                        | 68.4%            | 65.0%                | 71.7% |
| Age 25-34                        | 54.5%            | 52.0%                | 57.0% |
| Age 35-44                        | 59.1%            | 56.9%                | 61.4% |
| Age 45-54                        | 52.7%            | 50.9%                | 54.6% |
| Age 55-64                        | 49.9%            | 48.2%                | 51.5% |
| Age 65+                          | 51.3%            | 49.9%                | 52.7% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                      |       |
| White Non-Hispanic               | 55.6%            | 54.6%                | 56.6% |
| African American Non-Hispanic    | 57.1%            | 52.5%                | 61.8% |
| Hispanic                         | 60.1%            | 56.4%                | 63.8% |
| Other Race Non-Hispanic          | 51.9%            | 46.2%                | 57.6% |
| Multiracial Non-Hispanic         | 40.5%            | 32.9%                | 48.2% |
| <b>ANNUAL INCOME</b>             |                  |                      |       |
| Less than \$15,000               | 40.5%            | 37.0%                | 44.0% |
| \$15,000 to less than \$25,000   | 47.2%            | 44.8%                | 49.6% |
| \$25,000 to less than \$35,000   | 48.8%            | 46.1%                | 51.4% |
| \$35,000 to less than \$50,000   | 54.1%            | 51.8%                | 56.4% |
| \$50,000 or more                 | 62.9%            | 61.6%                | 64.3% |
| <b>EDUCATION</b>                 |                  |                      |       |
| Did not graduate high school     | 40.6%            | 37.1%                | 44.0% |
| High school graduate or GED      | 47.5%            | 45.8%                | 49.2% |
| Some college or technical school | 56.0%            | 54.4%                | 57.6% |
| College graduate                 | 70.3%            | 69.0%                | 71.5% |
| <b>HEALTH INSURANCE</b>          |                  |                      |       |
| Has health insurance             | 57.7%            | 56.8%                | 58.6% |
| Does not have health insurance   | 44.5%            | 41.8%                | 47.2% |

## Smokeless Tobacco Use

Overall, 5.3 percent (95% CI: 4.9%-5.8%) of Kansas adults currently use smokeless tobacco. Adults are classified as current smokeless tobacco users when they currently use chewing tobacco, snuff or snus every day or some days. Snus (rhymes with “goose”) is a Swedish word for snuff and refers to a moist smokeless tobacco that is usually sold in small pouches that are placed under the lip against the gum. Table 4 gives the prevalence of smokeless tobacco use in the population as a whole, but smokeless tobacco is almost exclusively a habit of males, so table 5 provides the prevalence of smokeless tobacco among male adult Kansas subpopulations.

Because males are the primary contributors to the overall population burden of smokeless tobacco use, the same patterns of use are reflected in both table 4 and table 5. Like cigarette smoking, male smokeless tobacco use is also less common in adults 55 years and older than in younger adults. Male African American non-Hispanic adults have a much lower prevalence of smokeless tobacco use than male white non-Hispanic adults, but are not significantly different than male Hispanic, multiracial non-Hispanics or other non-Hispanic adults. There is no clear relationship between male smokeless tobacco use and annual income or education and there is no difference in smokeless tobacco use between adult males who have health insurance and those who do not (table 5).

About 8 percent of all current smokers and 13.3 percent of male current smokers use smokeless tobacco. Male current smokers have a higher prevalence of smokeless tobacco use than adult males who do not currently smoke cigarettes (tables 4 and 5).

**Table 4. Current smokeless tobacco use among Kansas adults, BRFSS 2011.**

| Demographic Group                | Weighted Percent | 95% Confidence Limit |       |
|----------------------------------|------------------|----------------------|-------|
| <b>GENDER</b>                    |                  |                      |       |
| Male                             | 10.1%            | 9.2%                 | 11.0% |
| Female                           | 0.7%             | 0.5%                 | 0.9%  |
| <b>SMOKING STATUS</b>            |                  |                      |       |
| Current Smoker                   | 8.0%             | 6.7%                 | 9.3%  |
| Not current smoker               | 4.6%             | 4.1%                 | 5.0%  |
| <b>AGE GROUP</b>                 |                  |                      |       |
| Age 18-24                        | 6.9%             | 5.1%                 | 8.7%  |
| Age 25-34                        | 8.1%             | 6.7%                 | 9.5%  |
| Age 35-44                        | 7.2%             | 6.0%                 | 8.4%  |
| Age 45-54                        | 5.1%             | 4.3%                 | 6.0%  |
| Age 55-64                        | 2.7%             | 2.2%                 | 3.3%  |
| Age 65+                          | 2.2%             | 1.7%                 | 2.6%  |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                      |       |
| White Non-Hispanic               | 6.1%             | 5.6%                 | 6.7%  |
| African American Non-Hispanic    | 2.1%             | 0.5%                 | 3.8%  |
| Hispanic                         | 3.4%             | 2.0%                 | 4.7%  |
| Other Race Non-Hispanic          | 4.5%             | 2.0%                 | 6.9%  |
| Multiracial Non-Hispanic         | 7.2%             | 2.9%                 | 11.5% |
| <b>ANNUAL INCOME</b>             |                  |                      |       |
| Less than \$15,000               | 3.6%             | 2.3%                 | 4.8%  |
| \$15,000 to less than \$25,000   | 5.5%             | 4.3%                 | 6.7%  |
| \$25,000 to less than \$35,000   | 6.5%             | 4.9%                 | 8.0%  |
| \$35,000 to less than \$50,000   | 5.9%             | 4.6%                 | 7.2%  |
| \$50,000 or more                 | 5.6%             | 4.9%                 | 6.3%  |
| <b>EDUCATION</b>                 |                  |                      |       |
| Did not graduate high school     | 6.0%             | 4.1%                 | 7.8%  |
| High school graduate or GED      | 6.9%             | 6.0%                 | 7.8%  |
| Some college or technical school | 5.6%             | 4.8%                 | 6.4%  |
| College graduate                 | 3.1%             | 2.5%                 | 3.6%  |
| <b>HEALTH INSURANCE</b>          |                  |                      |       |
| Has health insurance             | 5.1%             | 4.6%                 | 5.6%  |
| Does not have health insurance   | 6.4%             | 5.1%                 | 7.6%  |

**Table 5. Current smokeless tobacco use among male Kansas adults, BRFSS 2011.**

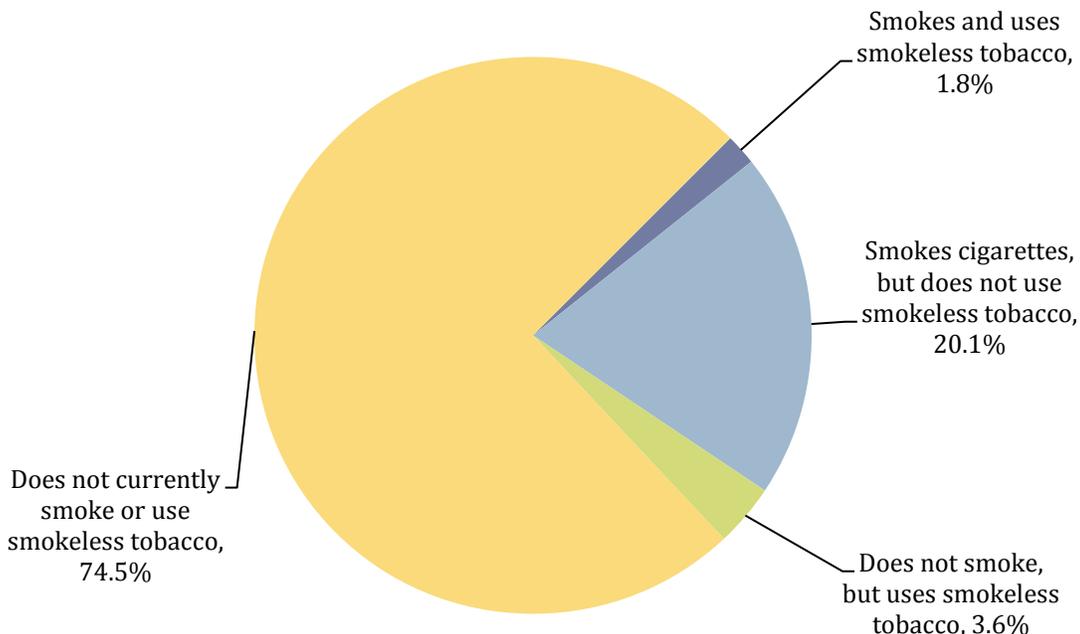
| Demographic Group                | Weighted Percent | 95% Confidence Limit |       |
|----------------------------------|------------------|----------------------|-------|
| <b>SMOKING STATUS</b>            |                  |                      |       |
| Current Smoker                   | 13.3%            | 11.1%                | 15.5% |
| Not current smoker               | 9.1%             | 8.2%                 | 10.0% |
| <b>AGE GROUP</b>                 |                  |                      |       |
| Age 18-24                        | 12.5%            | 9.2%                 | 15.7% |
| Age 25-34                        | 14.9%            | 12.3%                | 17.4% |
| Age 35-44                        | 13.1%            | 10.9%                | 15.3% |
| Age 45-54                        | 9.7%             | 8.1%                 | 11.4% |
| Age 55-64                        | 4.9%             | 3.8%                 | 6.0%  |
| Age 65+                          | 4.6%             | 3.6%                 | 5.6%  |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                      |       |
| White Non-Hispanic               | 11.8%            | 10.8%                | 12.8% |
| African American Non-Hispanic    | 2.4%             | 0.0%                 | 5.0%  |
| Hispanic                         | 5.2%             | 3.0%                 | 7.4%  |
| Other Race Non-Hispanic          | 7.4%             | 3.2%                 | 11.6% |
| Multiracial Non-Hispanic         | 11.2%            | 3.9%                 | 18.5% |
| <b>ANNUAL INCOME</b>             |                  |                      |       |
| Less than \$15,000               | 7.6%             | 4.5%                 | 10.6% |
| \$15,000 to less than \$25,000   | 10.7%            | 8.3%                 | 13.1% |
| \$25,000 to less than \$35,000   | 11.8%            | 9.0%                 | 14.7% |
| \$35,000 to less than \$50,000   | 10.9%            | 8.6%                 | 13.3% |
| \$50,000 or more                 | 9.9%             | 8.6%                 | 11.2% |
| <b>EDUCATION</b>                 |                  |                      |       |
| Did not graduate high school     | 9.9%             | 6.7%                 | 13.2% |
| High school graduate or GED      | 12.5%            | 10.8%                | 14.1% |
| Some college or technical school | 11.4%            | 9.8%                 | 13.1% |
| College graduate                 | 6.0%             | 4.9%                 | 7.0%  |
| <b>HEALTH INSURANCE</b>          |                  |                      |       |
| Has health insurance             | 10.1%            | 9.1%                 | 11.0% |
| Does not have health insurance   | 10.4%            | 8.2%                 | 12.5% |

## Dual Use

The use of two tobacco products, or “dual use,” can be examined in a variety of ways. In the 2011 BRFSS, the use of only two tobacco products was measured, so dual use is limited to a combination of current cigarette smoking and smokeless tobacco use. Dual use can be studied in the population as a whole (i.e., the percent of Kansas adults that smoke cigarettes and use smokeless tobacco) or within the population that uses one of the products (i.e., the percent of Kansas adult smokers who also use smokeless tobacco). In either case, any estimate will be heavily influenced by adult males because so few adult women use smokeless tobacco. Both are examined below. Table 6 breaks down the percent of Kansas adults who smoke cigarettes and use smokeless tobacco. Table 7 provides estimates of smokeless tobacco use within groups of Kansas adult smokers.

Overall, 1.8 percent (95% CI: 1.5%-2.0%) of Kansas adults smoke cigarettes and use smokeless tobacco. Significant differences are present between genders and across age groups, education and health insurance status, with disparity patterns similar to those seen in cigarette smoking prevalence (i.e., prevalence decreases as age, and education increase). Annual income does not have a clear relationship with dual use, although adults with an annual income of \$15,000 to \$24,999 have a significantly higher prevalence of dual use than adults with an annual income of \$50,000 or more. There is no difference in the prevalence of dual tobacco use between any of the race/ethnicity groups (table 6).

**Figure 2. Prevalence of dual and single tobacco product use in Kansas adults, BRFSS 2011**



**Table 6. Percent of Kansas adults who currently smoke cigarettes and use smokeless tobacco, BRFSS 2011.**

| Demographic Group                | Weighted Percent | 95% Confidence Limit |      |
|----------------------------------|------------------|----------------------|------|
| <b>GENDER</b>                    |                  |                      |      |
| Male                             | 3.3%             | 2.7%                 | 3.8% |
| Female                           | 0.3%             | 0.2%                 | 0.4% |
| <b>AGE GROUP</b>                 |                  |                      |      |
| Age 18-24                        | 2.6%             | 1.4%                 | 3.8% |
| Age 25-34                        | 3.8%             | 2.8%                 | 4.9% |
| Age 35-44                        | 2.3%             | 1.6%                 | 3.1% |
| Age 45-54                        | 1.1%             | 0.7%                 | 1.5% |
| Age 55-64                        | 0.6%             | 0.3%                 | 0.9% |
| Age 65+                          | 0.3%             | 0.1%                 | 0.4% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                      |      |
| White Non-Hispanic               | 2.0%             | 1.6%                 | 2.3% |
| African American Non-Hispanic    | 0.9%             | 0.0%                 | 2.1% |
| Hispanic                         | 1.2%             | 0.4%                 | 2.0% |
| Other Race Non-Hispanic          | 2.5%             | 0.6%                 | 4.4% |
| Multiracial Non-Hispanic         | 2.9%             | 0.0%                 | 5.9% |
| <b>ANNUAL INCOME</b>             |                  |                      |      |
| Less than \$15,000               | 2.0%             | 0.9%                 | 3.1% |
| \$15,000 to less than \$25,000   | 2.8%             | 1.9%                 | 3.7% |
| \$25,000 to less than \$35,000   | 2.5%             | 1.4%                 | 3.5% |
| \$35,000 to less than \$50,000   | 1.4%             | 0.8%                 | 2.0% |
| \$50,000 or more                 | 1.3%             | 0.9%                 | 1.7% |
| <b>EDUCATION</b>                 |                  |                      |      |
| Did not graduate high school     | 3.3%             | 1.8%                 | 4.8% |
| High school graduate or GED      | 2.3%             | 1.7%                 | 2.8% |
| Some college or technical school | 1.8%             | 1.3%                 | 2.3% |
| College graduate                 | 0.4%             | 0.2%                 | 0.7% |
| <b>HEALTH INSURANCE</b>          |                  |                      |      |
| Has health insurance             | 1.4%             | 1.1%                 | 1.7% |
| Does not have health insurance   | 3.4%             | 2.4%                 | 4.4% |

Overall, 8 percent of Kansas adult smokers use smokeless tobacco. The distribution of smokeless tobacco use within the adult smoking population mirrors the distribution of smokeless tobacco in the overall population. Men and younger adult smokers have a larger prevalence of smokeless tobacco use than women and adult smokers 45 years or older, respectively. Smokeless tobacco use by smokers does not appear to vary by annual income, education or health insurance status. White non-Hispanic smokers are more likely to use smokeless tobacco than African American non-Hispanic smokers (table 7).

**Table 7. Percent of Kansas adult current smokers who also currently use smokeless tobacco, BRFSS 2011.**

| Demographic Group                | Weighted Percent | 95% Confidence Limit |       |
|----------------------------------|------------------|----------------------|-------|
| <b>GENDER</b>                    |                  |                      |       |
| Male                             | 13.3%            | 11.1%                | 15.5% |
| Female                           | 1.5%             | 0.8%                 | 2.3%  |
| <b>AGE GROUP</b>                 |                  |                      |       |
| Age 18-24                        | 10.7%            | 6.1%                 | 15.3% |
| Age 25-34                        | 12.6%            | 9.3%                 | 15.9% |
| Age 35-44                        | 9.8%             | 6.7%                 | 12.8% |
| Age 45-54                        | 4.3%             | 2.7%                 | 5.9%  |
| Age 55-64                        | 3.2%             | 1.7%                 | 4.6%  |
| Age 65+                          | 2.8%             | 1.3%                 | 4.2%  |
| <b>RACE/ETHNICITY</b>            |                  |                      |       |
| White Non-Hispanic               | 8.4%             | 7.0%                 | 9.9%  |
| African American Non-Hispanic    | 2.8%             | 0.0%                 | 6.2%  |
| Hispanic                         | 7.3%             | 2.5%                 | 12.2% |
| Other Race Non-Hispanic          | 10.1%            | 2.4%                 | 17.8% |
| Multiracial Non-Hispanic         | 7.5%             | 0.0%                 | 15.6% |
| <b>ANNUAL INCOME</b>             |                  |                      |       |
| Less than \$15,000               | 5.2%             | 2.4%                 | 8.0%  |
| \$15,000 to less than \$25,000   | 8.4%             | 5.8%                 | 11.0% |
| \$25,000 to less than \$35,000   | 9.4%             | 5.7%                 | 13.2% |
| \$35,000 to less than \$50,000   | 6.8%             | 3.9%                 | 9.6%  |
| \$50,000 or more                 | 9.6%             | 6.8%                 | 12.5% |
| <b>EDUCATION</b>                 |                  |                      |       |
| Did not graduate high school     | 8.5%             | 4.8%                 | 12.2% |
| High school graduate or GED      | 8.1%             | 6.2%                 | 10.0% |
| Some college or technical school | 8.5%             | 6.3%                 | 10.7% |
| College graduate                 | 5.2%             | 2.6%                 | 7.8%  |
| <b>HEALTH INSURANCE</b>          |                  |                      |       |
| Has health insurance             | 7.9%             | 6.4%                 | 9.5%  |
| Does not have health insurance   | 8.3%             | 5.9%                 | 10.6% |

## Tobacco Use Cessation

There were four questions on the 2011 BRFSS specifically aimed at assessing and supporting tobacco use cessation in Kansas. These questions include past-year quit attempts by current smokers, time since last cigarette among former smokers, recall of Kansas Tobacco Quitline media and whether a physician or other health professional advised current smokers to quit in the past 12 months.

### Quit Attempts by Current Smokers

Adult current smokers who quit smoking cigarettes for one day or longer in the past 12 months because they were trying to quit smoking are classified as having made a quit attempt. Overall, 55.5 percent (95% CI: 53.4%-57.6%) of adult Kansas current smokers tried to quit at least once in the past year.

**Table 8. Percent of current adult Kansas smokers who stopped smoking for one day or longer in the past 12 months because they were trying to quit smoking, BRFSS 2011.**

| Demographic Group                | Weighted Percent | 95% Confidence Limit |       |
|----------------------------------|------------------|----------------------|-------|
| <b>GENDER</b>                    |                  |                      |       |
| Male                             | 55.0%            | 51.9%                | 58.1% |
| Female                           | 56.1%            | 53.3%                | 58.9% |
| <b>AGE GROUP</b>                 |                  |                      |       |
| Age 18-24                        | 65.9%            | 58.9%                | 72.9% |
| Age 25-34                        | 60.4%            | 55.6%                | 65.2% |
| Age 35-44                        | 55.2%            | 50.2%                | 60.3% |
| Age 45-54                        | 51.3%            | 47.5%                | 55.2% |
| Age 55-64                        | 49.8%            | 45.7%                | 53.9% |
| Age 65+                          | 41.4%            | 36.6%                | 46.1% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                      |       |
| White Non-Hispanic               | 52.2%            | 50.0%                | 54.4% |
| African American Non-Hispanic    | 55.5%            | 45.4%                | 65.6% |
| Hispanic                         | 62.2%            | 54.2%                | 70.3% |
| Other Race Non-Hispanic          | 60.3%            | 50.6%                | 70.0% |
| Multiracial Non-Hispanic         | 55.5%            | 41.1%                | 69.9% |
| <b>ANNUAL INCOME</b>             |                  |                      |       |
| Less than \$15,000               | 57.1%            | 51.5%                | 62.7% |
| \$15,000 to less than \$25,000   | 61.1%            | 56.8%                | 65.4% |
| \$25,000 to less than \$35,000   | 57.4%            | 51.8%                | 63.0% |
| \$35,000 to less than \$50,000   | 56.5%            | 51.0%                | 62.1% |
| \$50,000 or more                 | 50.7%            | 46.5%                | 55.0% |
| <b>EDUCATION</b>                 |                  |                      |       |
| Did not graduate high school     | 53.2%            | 47.3%                | 59.1% |
| High school graduate or GED      | 52.9%            | 49.5%                | 56.3% |
| Some college or technical school | 59.4%            | 55.9%                | 62.9% |
| College graduate                 | 56.3%            | 51.2%                | 61.4% |
| <b>HEALTH INSURANCE</b>          |                  |                      |       |
| Has health insurance             | 54.6%            | 52.1%                | 57.0% |
| Does not have health insurance   | 57.8%            | 53.7%                | 61.9% |

Quit attempts are more common among younger adult smokers, becoming progressively less common in older adult smokers. There is no significant difference in the prevalence of quit attempts between race/ethnicity groups. There is no clear apparent relationship between quit attempts by smokers and gender, annual income, education or health insurance status (table 8).

### Time Since Last Cigarette Among Former Smokers

Cigarette smoking is a behavior that can be difficult to quantify. By assessing how long it has been since former smokers had their last cigarette, one can better quantify smoking cessation and articulate changes in cessation

behavior. More than half of Kansas adult former smokers had their last cigarette 10 or more years ago. An additional 30.7% had their last cigarette one to 10 years ago (figure 3).

**Figure 3. Time since last cigarette among adult Kansas former smokers, BRFSS 2011**

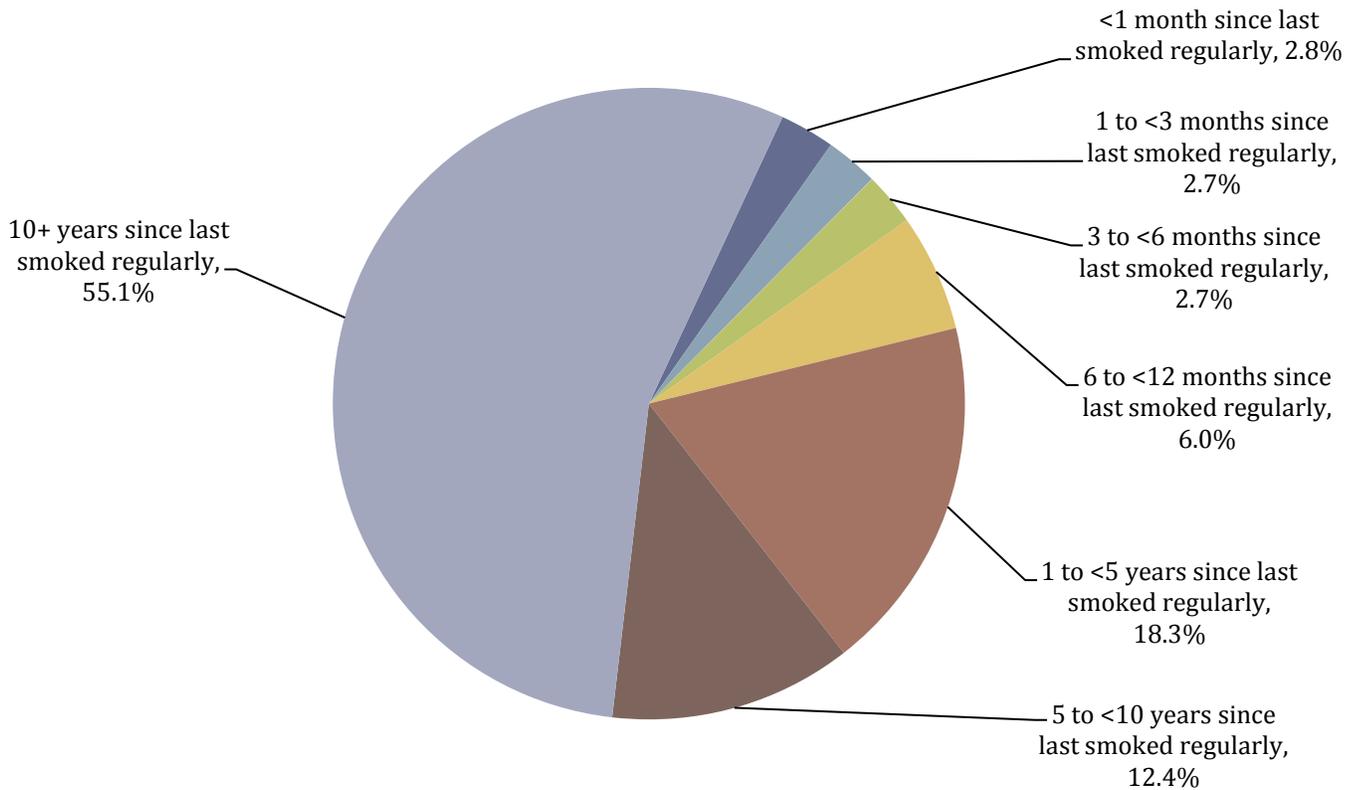


Table 9 differentiates between former smokers who had their last cigarette in the past 12 months and those who had their last cigarette more than 12 months ago. Overall, 14.2 percent (95% CI: 12.8%-15.6%) of adult former smokers had their last cigarette in the past year. Younger adult former smokers are more likely to have had their last cigarette in the past 12 months than older adults. There is no clear relationship between time since last cigarette and education. Multiracial non-Hispanic former smokers were more likely to have had their last cigarette in the past 12 months than Hispanic or white non-Hispanic adults. Adult former smokers with an annual income of less than \$15,000 are more likely to have had their last cigarette in the past 12 months than former smokers with an annual income of \$35,000 or more. Adult former smokers with no health insurance are also more likely to have had their last cigarette in the past 12 months than adult former smokers with health insurance.

**Table 9. Percent of adult former smokers who had their last cigarette in the past 12 months, BRFSS 2011.**

| Demographic Group                | Weighted Percent | 95% Confidence Limits |       |
|----------------------------------|------------------|-----------------------|-------|
| <b>GENDER</b>                    |                  |                       |       |
| Male                             | 13.3%            | 11.4%                 | 15.2% |
| Female                           | 15.3%            | 13.3%                 | 17.3% |
| <b>AGE GROUP</b>                 |                  |                       |       |
| Age 18-24                        | 70.3%            | 57.8%                 | 82.8% |
| Age 25-34                        | 35.7%            | 29.9%                 | 41.5% |
| Age 35-44                        | 17.4%            | 13.3%                 | 21.5% |
| Age 45-54                        | 11.7%            | 9.2%                  | 14.2% |
| Age 55-64                        | 6.9%             | 5.4%                  | 8.4%  |
| Age 65+                          | 3.5%             | 2.6%                  | 4.4%  |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                       |       |
| White Non-Hispanic               | 22.3%            | 19.7%                 | 24.8% |
| African American Non-Hispanic    | 27.3%            | 15.5%                 | 39.1% |
| Hispanic                         | 23.0%            | 16.4%                 | 29.6% |
| Other Race Non-Hispanic          | 22.4%            | 13.0%                 | 31.8% |
| Multiracial Non-Hispanic         | 39.4%            | 30.2%                 | 48.7% |
| <b>ANNUAL INCOME</b>             |                  |                       |       |
| Less than \$15,000               | 25.2%            | 18.7%                 | 31.7% |
| \$15,000 to less than \$25,000   | 16.8%            | 12.8%                 | 20.8% |
| \$25,000 to less than \$35,000   | 15.6%            | 11.5%                 | 19.7% |
| \$35,000 to less than \$50,000   | 11.0%            | 8.2%                  | 13.7% |
| \$50,000 or more                 | 12.7%            | 10.5%                 | 14.9% |
| <b>EDUCATION</b>                 |                  |                       |       |
| Did not graduate high school     | 13.0%            | 8.5%                  | 17.4% |
| High school graduate or GED      | 12.4%            | 9.8%                  | 14.9% |
| Some college or technical school | 17.5%            | 14.8%                 | 20.2% |
| College graduate                 | 12.4%            | 10.3%                 | 14.4% |
| <b>HEALTH INSURANCE</b>          |                  |                       |       |
| Has health insurance             | 12.9%            | 11.5%                 | 14.2% |
| Does not have health insurance   | 25.4%            | 19.1%                 | 31.8% |

### Recall of Kansas Tobacco Quitline Advertising

Recall of Kansas Tobacco Quitline (KTQL) advertising was assessed by asking, “During the past 30 days, have you heard or seen any advertisement for the Kansas Tobacco Quitline 1-800-QUIT-NOW?” The vast majority of adult Kansans who did recall KTQL advertising (28.6%, 95% CI: 26.9%-30.2%) did so without assistance. Less than 1 percent (0.3%, 95% CI: 0.1%-0.4%) of adults recalled the ad after hearing a prompt that briefly described imagery in the advertisements. Table 10 presents recall of KTQL advertising within different demographic groups.

Adults who are 35-44 and 65 years or older were less likely to recall seeing KTQL advertising than adults who were 25-34 years old. Recall also varied by education. Adults with a high school diploma or GED were more likely to recall KTQL advertising than adults who graduated college. Non-Hispanic African American adults were less likely to recall KTQL advertising than white non-Hispanic or multiracial non-Hispanic adults. Recall of KTQL advertising does not vary by gender, annual income or health insurance status (table 10).

**Table 10. Percent of Kansas adults who recalled seeing a KTQL advertisement in the past 30 days, BRFSS 2011 [Landline Survey].**

| Demographic Group                | Weighted Percent | 95% Confidence Limits |       |
|----------------------------------|------------------|-----------------------|-------|
| <b>GENDER</b>                    |                  |                       |       |
| Male                             | 29.3%            | 26.6%                 | 31.9% |
| Female                           | 27.9%            | 26.0%                 | 29.9% |
| <b>SMOKING STATUS</b>            |                  |                       |       |
| Current Smoker                   | 38.6%            | 34.3%                 | 42.9% |
| Not current smoker               | 25.9%            | 24.2%                 | 27.7% |
| <b>AGE GROUP</b>                 |                  |                       |       |
| Age 18-24                        | 32.2%            | 24.5%                 | 39.9% |
| Age 25-34                        | 32.8%            | 27.7%                 | 38.0% |
| Age 35-44                        | 24.4%            | 21.2%                 | 27.6% |
| Age 45-54                        | 29.2%            | 26.5%                 | 31.8% |
| Age 55-64                        | 29.8%            | 27.6%                 | 32.1% |
| Age 65+                          | 23.7%            | 21.9%                 | 25.4% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                       |       |
| White Non-Hispanic               | 29.0%            | 27.2%                 | 30.9% |
| African American Non-Hispanic    | 19.7%            | 14.1%                 | 25.3% |
| Hispanic                         | 23.5%            | 17.8%                 | 29.3% |
| Other Race Non-Hispanic          | 30.1%            | 21.2%                 | 39.0% |
| Multiracial Non-Hispanic         | 42.6%            | 26.6%                 | 58.6% |
| <b>ANNUAL INCOME</b>             |                  |                       |       |
| Less than \$15,000               | 30.4%            | 24.4%                 | 36.4% |
| \$15,000 to less than \$25,000   | 29.0%            | 24.7%                 | 33.4% |
| \$25,000 to less than \$35,000   | 29.6%            | 24.5%                 | 34.6% |
| \$35,000 to less than \$50,000   | 31.0%            | 26.8%                 | 35.1% |
| \$50,000 or more                 | 26.5%            | 24.2%                 | 28.9% |
| <b>EDUCATION</b>                 |                  |                       |       |
| Did not graduate high school     | 26.5%            | 20.6%                 | 32.5% |
| High school graduate or GED      | 33.0%            | 29.5%                 | 36.4% |
| Some college or technical school | 28.2%            | 25.3%                 | 31.0% |
| College graduate                 | 25.1%            | 22.9%                 | 27.3% |
| <b>HEALTH INSURANCE</b>          |                  |                       |       |
| Has health insurance             | 29.1%            | 27.3%                 | 30.8% |
| Does not have health insurance   | 26.2%            | 21.5%                 | 30.8% |

### Advised to Quit Smoking by a Health Care Provider

More than half (54.4%, 95% CI: 50.0%-58.9%) of Kansas adult current smokers were advised to quit smoking during a visit to a doctor or other health care provider in the past 12 months. Current smokers 45 years old and older are more likely to have been advised to quit than adult smokers 25-34 years old. There is a clear and related disparity in the percent of adult smokers who were advised to quit by health insurance status. Adult smokers with health insurance are more likely to have been advised to quit during a health care visit (59.9%, 95% CI: 54.9%-64.9%) than adults smokers without health insurance (41.3%, 95% CI: 32.5%-50.0%). The percent of current smokers who were advised to quit during a visit to a doctor or health care provider did not vary significantly by gender or education (table 11).

**Table 11. Percent of current smokers who were advised to quit during a visit to a health care provider in the past 12 months, BRFSS 2011 [Landline Survey].**

| Demographic Group                | Weighted Percent | 95% Confidence Limits |       |
|----------------------------------|------------------|-----------------------|-------|
| <b>GENDER</b>                    |                  |                       |       |
| Male                             | 49.8%            | 43.3%                 | 56.4% |
| Female                           | 59.9%            | 54.2%                 | 65.6% |
| <b>AGE GROUP</b>                 |                  |                       |       |
| Age 18-24                        | *                | *                     | *     |
| Age 25-34                        | 43.1%            | 31.8%                 | 54.3% |
| Age 35-44                        | 52.7%            | 43.0%                 | 62.3% |
| Age 45-54                        | 64.9%            | 58.9%                 | 71.0% |
| Age 55-64                        | 62.8%            | 56.7%                 | 68.9% |
| Age 65+                          | 64.1%            | 57.5%                 | 70.6% |
| <b>RACE/ETHNICITY</b>            |                  |                       |       |
| White Non-Hispanic               | 56.7%            | 52.0%                 | 61.4% |
| African American Non-Hispanic    | 52.9%            | 31.4%                 | 74.4% |
| Hispanic                         | *                | *                     | *     |
| Other Race Non-Hispanic          | *                | *                     | *     |
| Multiracial Non-Hispanic         | *                | *                     | *     |
| <b>ANNUAL INCOME</b>             |                  |                       |       |
| Less than \$15,000               | 57.7%            | 44.9%                 | 70.5% |
| \$15,000 to less than \$25,000   | 43.0%            | 34.2%                 | 51.7% |
| \$25,000 to less than \$35,000   | 46.4%            | 33.9%                 | 59.0% |
| \$35,000 to less than \$50,000   | 57.9%            | 46.1%                 | 69.8% |
| \$50,000 or more                 | 62.6%            | 54.5%                 | 70.7% |
| <b>EDUCATION</b>                 |                  |                       |       |
| Did not graduate high school     | 48.0%            | 36.2%                 | 59.8% |
| High school graduate or GED      | 52.6%            | 45.3%                 | 59.9% |
| Some college or technical school | 57.6%            | 50.2%                 | 64.9% |
| College graduate                 | 61.9%            | 52.8%                 | 71.0% |
| <b>HEALTH INSURANCE</b>          |                  |                       |       |
| Has health insurance             | 59.9%            | 54.9%                 | 64.9% |
| Does not have health insurance   | 41.3%            | 32.5%                 | 50.0% |

## Opinions on Tobacco Tax

One of the most effective ways to reduce tobacco use is to increase the price of tobacco products. Simple economic principles and an abundance of research in this area have proven that not only does increasing the real price of tobacco reduce tobacco use, it disproportionately reduces tobacco use in youth and young adults who are more sensitive to price changes than adults. One of the most common ways to increase the price of tobacco is to levy a tax on the sale of tobacco products.<sup>ii</sup> Cigarettes and other tobacco products (smokeless, cigars, etc.) are taxed differently, so the 2011 Kansas BRFSS included two questions to assess public support or opposition to increased state tax on cigarettes and smokeless tobacco products.

### Cigarette Excise Tax

Every state levies an excise tax on cigarettes. The average state excise tax is \$1.49 per pack. At \$0.79 per pack, Kansas ranks 36<sup>th</sup> in state cigarette excise tax, placing it in the lowest third of all state excise tax rates.<sup>iii</sup> To assess public support for increasing the Kansas cigarette excise tax, BRFSS asked respondents how much additional tax on a pack of cigarettes they would be willing to support – from none to more than \$2 per pack of cigarettes. Overall, 41.5 percent of Kansas adults support additional taxes on cigarettes, 1 in 3 Kansas adults (33.5%) do not support any additional tax on cigarettes and about 1 in 4 (24.9%) Kansas adults either did not know how much additional cigarette tax they would support or did not care. Nearly 1 in 3 (30.4%) support a cigarette tax increase of \$2 or more and 1 in 10 (11.2%) support a cigarette tax increase of \$1 per pack or less.

**Figure 4. Amount of increased cigarette excise tax supported by Kansas adults [Landline Survey]**

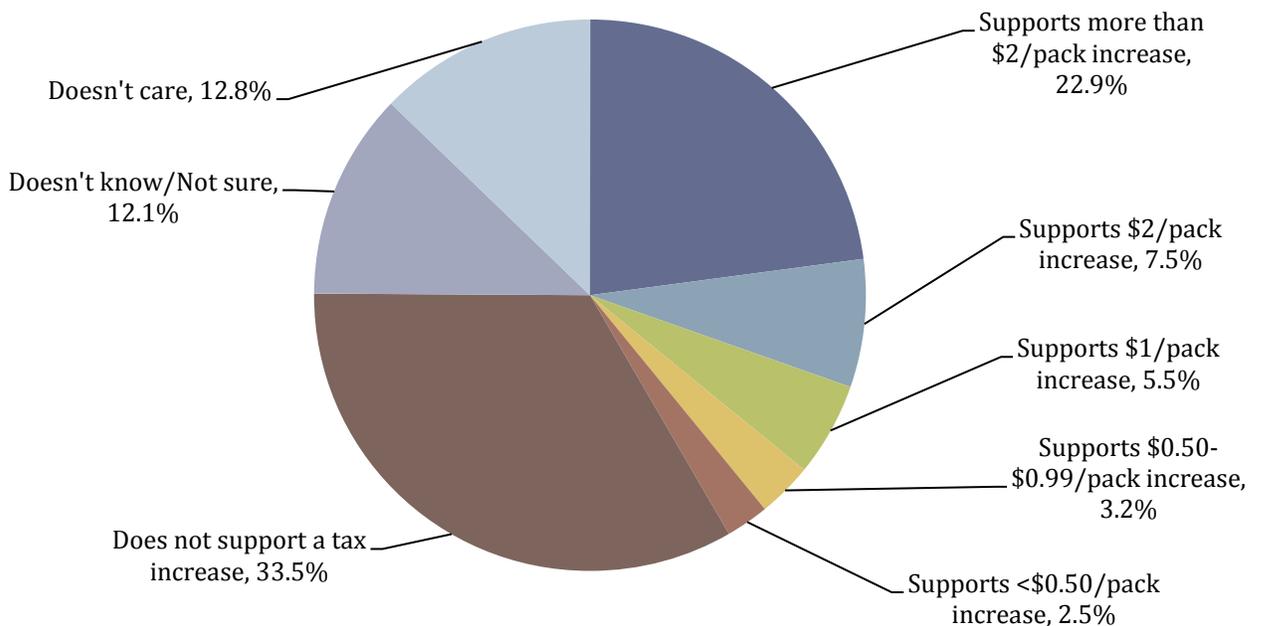


Table 12 presents estimates of the percent of Kansas adults who support an increased cigarette tax in any amount. Overall, 41.5 percent (95% CI: 39.8%-43.3%) of Kansas adults support a tax increase on a pack of cigarettes. There is variation in the support for a tax increase on a pack of cigarettes across smoking status, age groups, race/ethnicity, annual income, education and health insurance status categories, but not gender. One would assume that a cigarette tax increase would be less popular among smokers, though it is interesting to note that 1 in 5 smokers (20.6%, 95% CI: 16.6%-24.5%) do favor a tax increase on a pack of cigarettes. There is no significant difference between any of the age group categories except among adults age 65 years and older. There is a larger percent of adults age 25-44 that support a tax increase on a pack of cigarettes than adults who are age 65 years or older. African American non-Hispanic and Other Race non-Hispanic adults are less likely to support a tax increase

on a pack of cigarettes than white non-Hispanic adults. Higher annual income and education level is associated with increased levels of support for additional state tax on a pack of cigarettes. Finally, there is significantly more support for additional tax on a pack of cigarettes among adults with health insurance (43.4%, 95%CI: 41.6%-45.2%) than among adults without health insurance (32.4%, 95% CI: 27.1%-37.8%).

**Table 12. Percent of Kansas adults that support a tax increase on a pack of cigarettes, BRFSS 2011 [Landline Survey].**

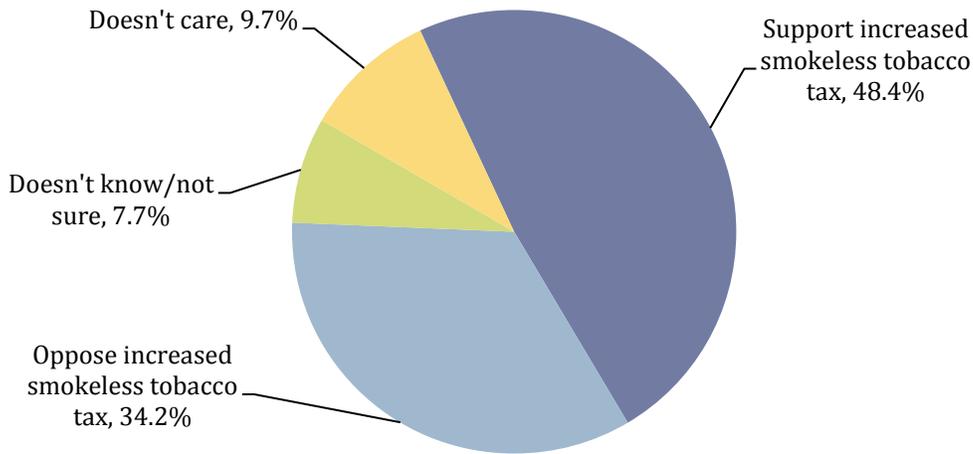
| Demographic Group                | Weighted Percent | 95% Confidence Limits |       |
|----------------------------------|------------------|-----------------------|-------|
| <b>GENDER</b>                    |                  |                       |       |
| Male                             | 41.4%            | 38.6%                 | 44.1% |
| Female                           | 41.7%            | 39.6%                 | 43.8% |
| <b>SMOKING STATUS</b>            |                  |                       |       |
| Current Smoker                   | 20.6%            | 16.6%                 | 24.5% |
| Not current smoker               | 46.8%            | 44.9%                 | 48.7% |
| <b>AGE GROUP</b>                 |                  |                       |       |
| Age 18-24                        | 40.8%            | 32.8%                 | 48.9% |
| Age 25-34                        | 44.9%            | 39.6%                 | 50.2% |
| Age 35-44                        | 44.7%            | 40.9%                 | 48.5% |
| Age 45-54                        | 40.7%            | 37.9%                 | 43.4% |
| Age 55-64                        | 41.8%            | 39.4%                 | 44.2% |
| Age 65+                          | 36.6%            | 34.7%                 | 38.5% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                       |       |
| White Non-Hispanic               | 43.6%            | 41.7%                 | 45.5% |
| African American Non-Hispanic    | 30.4%            | 22.3%                 | 38.5% |
| Hispanic                         | 35.9%            | 29.4%                 | 42.4% |
| Other Race Non-Hispanic          | 30.5%            | 21.5%                 | 39.6% |
| Multiracial Non-Hispanic         | 52.4%            | 39.1%                 | 65.8% |
| <b>ANNUAL INCOME</b>             |                  |                       |       |
| Less than \$15,000               | 26.8%            | 21.2%                 | 32.3% |
| \$15,000 to less than \$25,000   | 34.0%            | 29.4%                 | 38.5% |
| \$25,000 to less than \$35,000   | 36.7%            | 31.7%                 | 41.8% |
| \$35,000 to less than \$50,000   | 40.9%            | 36.6%                 | 45.2% |
| \$50,000 or more                 | 52.4%            | 49.9%                 | 54.9% |
| <b>EDUCATION</b>                 |                  |                       |       |
| Did not graduate high school     | 30.9%            | 24.6%                 | 37.1% |
| High school graduate or GED      | 33.8%            | 30.5%                 | 37.2% |
| Some college or technical school | 39.6%            | 36.5%                 | 42.7% |
| College graduate                 | 56.5%            | 54.1%                 | 58.9% |
| <b>HEALTH INSURANCE</b>          |                  |                       |       |
| Has health insurance             | 43.4%            | 41.6%                 | 45.2% |
| Does not have health insurance   | 32.4%            | 27.1%                 | 37.8% |

### Smokeless Tobacco Tax

Nearly half of Kansas adults (48.4%, 95% CI: 46.6%-50.1%) support an increased tax on smokeless tobacco products, about 1 in 3 (34.2%, 95%CI: 32.5%-35.9%) Kansas adults oppose an increased tax on smokeless tobacco products and 17.4% do not care or are uncertain about whether they support or oppose an increased tax on smokeless tobacco products (figure 5).

Similar to the cigarette tax question, increased support for additional tax on smokeless tobacco products is associated with non-current smoking status, having health insurance and higher levels of annual income and education. Support for increased tax on smokeless tobacco also varies by race/ethnicity groups: there is significantly less support for increased tax on smokeless tobacco products among African American non-Hispanic adults than among Hispanic, white non-Hispanic and multiracial non-Hispanic adults. Support for increased tax on smokeless tobacco products does not vary significantly by gender or age group (table 13).

**Figure 5. Percent of Kansas adults who support or oppose increased state tax on smokeless tobacco, BRFSS 2011 [Landline Survey]**



**Table 13. Percent of Kansas adults who support increased state tax on smokeless tobacco, BRFSS 2011 [Landline Survey].**

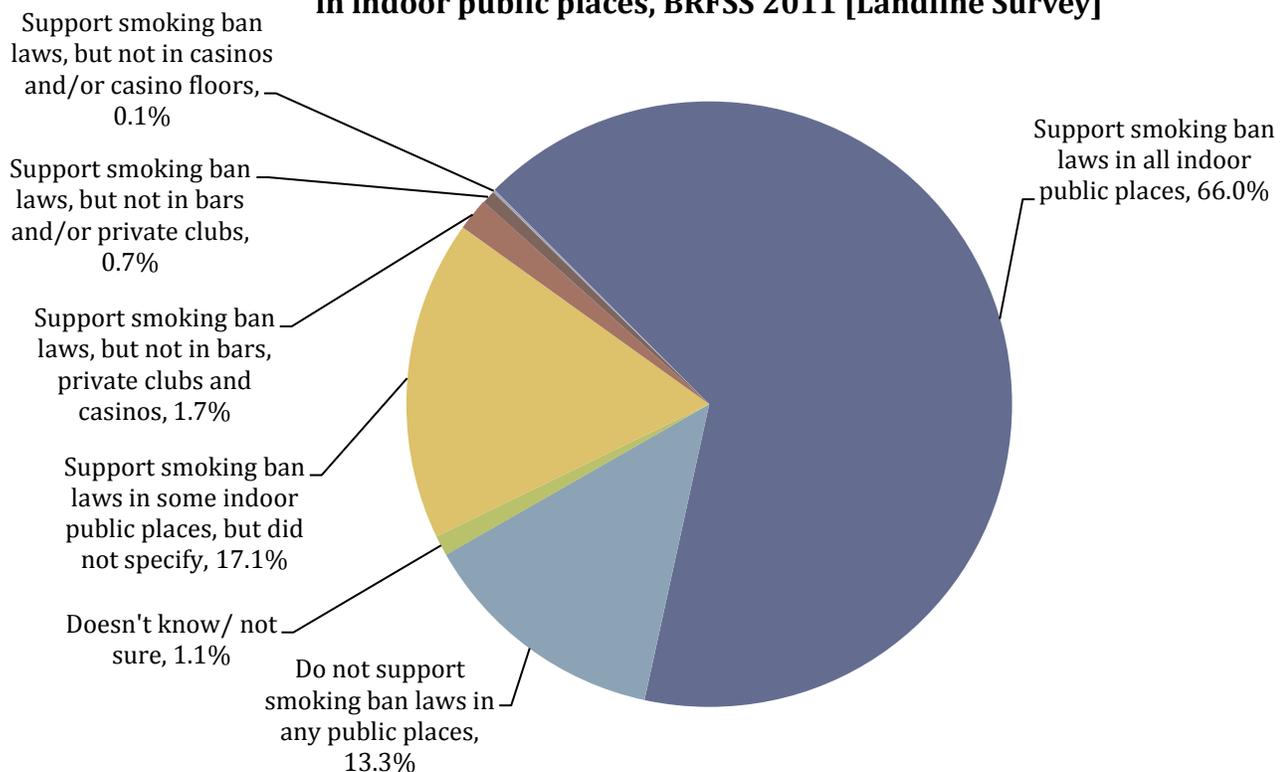
| Demographic Group                | Weighted Percent | 95% Confidence Limits |       |
|----------------------------------|------------------|-----------------------|-------|
| <b>GENDER</b>                    |                  |                       |       |
| Male                             | 46.7%            | 43.9%                 | 49.4% |
| Female                           | 50.0%            | 47.9%                 | 52.2% |
| <b>SMOKING STATUS</b>            |                  |                       |       |
| Current Smoker                   | 21.1%            | 17.3%                 | 24.8% |
| Not current smoker               | 55.2%            | 53.3%                 | 57.1% |
| <b>AGE GROUP</b>                 |                  |                       |       |
| Age 18-24                        | 50.1%            | 41.9%                 | 58.2% |
| Age 25-34                        | 48.6%            | 43.2%                 | 53.9% |
| Age 35-44                        | 49.2%            | 45.4%                 | 53.1% |
| Age 45-54                        | 45.2%            | 42.4%                 | 48.0% |
| Age 55-64                        | 50.2%            | 47.7%                 | 52.7% |
| Age 65+                          | 47.8%            | 45.8%                 | 49.8% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                       |       |
| White Non-Hispanic               | 49.5%            | 47.5%                 | 51.4% |
| African American Non-Hispanic    | 31.5%            | 23.4%                 | 39.7% |
| Hispanic                         | 47.7%            | 40.9%                 | 54.6% |
| Other Race Non-Hispanic          | 40.7%            | 30.7%                 | 50.8% |
| Multiracial Non-Hispanic         | 57.6%            | 43.7%                 | 71.4% |
| <b>ANNUAL INCOME</b>             |                  |                       |       |
| Less than \$15,000               | 35.2%            | 28.8%                 | 41.5% |
| \$15,000 to less than \$25,000   | 42.1%            | 37.4%                 | 46.8% |
| \$25,000 to less than \$35,000   | 42.0%            | 36.8%                 | 47.2% |
| \$35,000 to less than \$50,000   | 46.2%            | 41.9%                 | 50.5% |
| \$50,000 or more                 | 58.6%            | 56.1%                 | 61.1% |
| <b>EDUCATION</b>                 |                  |                       |       |
| Did not graduate high school     | 35.8%            | 29.5%                 | 42.1% |
| High school graduate or GED      | 40.9%            | 37.4%                 | 44.3% |
| Some college or technical school | 47.6%            | 44.4%                 | 50.7% |
| College graduate                 | 62.4%            | 60.0%                 | 64.8% |
| <b>HEALTH INSURANCE</b>          |                  |                       |       |
| Has health insurance             | 50.1%            | 48.3%                 | 51.9% |
| Does not have health insurance   | 39.5%            | 33.9%                 | 45.1% |

## Indoor Clean Air

Smoke-free policies are another effective way to reduce the health harms caused by smoking.<sup>iv</sup> In mid 2010, Kansas became the 27<sup>th</sup> state to enact a statewide smoke-free law known as the Kansas Indoor Clean Air Act (KICA). KICA prohibits smoking in most indoor public places such as restaurants, bars, workplaces and shopping malls. Studies have shown that support for these laws tends to increase following implementation and that, in addition to reducing exposure to secondhand smoke, smoke-free laws encourage smokers to quit.<sup>v</sup> Finally, one of the most common criticisms of smoke-free laws is that they hurt the hospitality industry, though this assertion has been consistently refuted by peer-reviewed studies.<sup>iv</sup> A recent study by the Kansas Health Institute concluded that the 2010 KICA had no apparent overall negative effect on food and liquor sales in restaurants and bars.<sup>vi</sup> To address each of these topics, the 2011 BRFSS included three questions related to the KICA.

### General Support for Statewide Indoor Smoking Bans

**Figure 6. Percent of adults that support or do not support smoking ban laws in indoor public places, BRFSS 2011 [Landline Survey]**



Despite wide public support, there were and continue to be legislative challenges to KICA. To assess public support, the Kansas 2011 BRFSS asked, “In general, do you support statewide laws that ban smoking in indoor public places such as stores, restaurants, bars, casinos, clubs, and sport arenas?” About 2 in 3 (66.0%, 95% CI: 64.3%-67.7%) adults support smoking ban laws in all indoor public places, 1 in 5 (19.7%, 95% CI: 17.1%-21.2%) support smoking ban laws in some indoor public places, 13.3 percent (95% CI: 12.0%-14.6%) do not support smoking ban laws in any public places and about 1 percent did not know or were not sure (figure 6).

The 66 percent of Kansas adults who support smoking bans in all indoor public places is broken down into subpopulations in table 14. There is more support among females than males for smoking bans in all public places and, not surprisingly, there is more support among non-current smokers than current smokers, although it is interesting to note that 1 in 3 (32.4%, 95% CI: 28.5%-36.4%) current smokers do support smoking bans in all indoor public places. There is little variation in the level of support for smoking bans in all indoor public places by age group, although adults age 65 years and older are more likely to support smoking bans in all indoor public

places than adults age 25-34 and 45-54 years old. There is significantly less support for smoking bans in all indoor public places among multiracial non-Hispanic adults (52.1%, 95% CI: 37.1%-67.2%) than among Hispanic adults (76.4%, 95% CI: 70.4%-82.4%). Support for smoking bans in all indoor public places appears to increase with higher levels of annual income. There is no significant difference in support for smoking bans in all indoor public places among those who did not graduate high school, those who did graduate high school or have a GED and those with some college or technical school. Adults who graduated college, however, have a significantly higher level of support for smoking bans in all indoor public places than adults with less education. Finally, there is more support for smoking bans in all indoor public places among adults with health insurance than among adults without health insurance.

**Table 14. Percent of adults that support smoking ban laws in all indoor public places, BRFSS 2011 [Landline Survey].**

| Demographic Group                | Weighted Percent | 95% Confidence Limits |       |
|----------------------------------|------------------|-----------------------|-------|
| <b>GENDER</b>                    |                  |                       |       |
| Male                             | 59.7%            | 56.9%                 | 62.5% |
| Female                           | 72.0%            | 70.0%                 | 74.1% |
| <b>SMOKING STATUS</b>            |                  |                       |       |
| Current Smoker                   | 32.4%            | 28.5%                 | 36.4% |
| Not current smoker               | 74.4%            | 72.7%                 | 76.2% |
| <b>AGE GROUP</b>                 |                  |                       |       |
| Age 18-24                        | 62.0%            | 54.0%                 | 70.0% |
| Age 25-34                        | 61.2%            | 55.8%                 | 66.6% |
| Age 35-44                        | 69.0%            | 65.4%                 | 72.6% |
| Age 45-54                        | 64.2%            | 61.4%                 | 67.0% |
| Age 55-64                        | 67.4%            | 65.0%                 | 69.8% |
| Age 65+                          | 71.4%            | 69.6%                 | 73.3% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                       |       |
| White Non-Hispanic               | 65.8%            | 63.9%                 | 67.7% |
| African American Non-Hispanic    | 64.1%            | 56.1%                 | 72.1% |
| Hispanic                         | 76.4%            | 70.4%                 | 82.4% |
| Other Race Non-Hispanic          | 61.5%            | 51.1%                 | 72.0% |
| Multiracial Non-Hispanic         | 52.1%            | 37.1%                 | 67.2% |
| <b>ANNUAL INCOME</b>             |                  |                       |       |
| Less than \$15,000               | 51.8%            | 44.9%                 | 58.7% |
| \$15,000 to less than \$25,000   | 62.0%            | 57.4%                 | 66.6% |
| \$25,000 to less than \$35,000   | 64.0%            | 58.7%                 | 69.3% |
| \$35,000 to less than \$50,000   | 68.1%            | 63.7%                 | 72.4% |
| \$50,000 or more                 | 71.0%            | 68.5%                 | 73.5% |
| <b>EDUCATION</b>                 |                  |                       |       |
| Did not graduate high school     | 59.8%            | 53.4%                 | 66.1% |
| High school graduate or GED      | 61.7%            | 58.3%                 | 65.1% |
| Some college or technical school | 63.5%            | 60.3%                 | 66.7% |
| College graduate                 | 76.0%            | 73.7%                 | 78.3% |
| <b>HEALTH INSURANCE</b>          |                  |                       |       |
| Has health insurance             | 67.6%            | 65.9%                 | 69.4% |
| Does not have health insurance   | 56.5%            | 50.8%                 | 62.1% |

### KICA Prompting Cessation

In an attempt to quantify how the 2010 KICA has contributed to smoking cessation in Kansas adults, the question, “Did this<sup>vii</sup> statewide smoking ban passed by the Kansas state legislature in 2010 prompt you to quit smoking or try to quit smoking?” was asked of current smokers who quit smoking for one day or longer in the past 12 months because they were trying to quit smoking and former smokers who had their last cigarette in the past 12 months. This analysis excludes those who did not know or were unsure if the 2010 KICA prompted them to quit or attempt to quit and those who were unaware of the 2010 KICA (combined excluded observations, n=10). While the results of this question should not be interpreted as the 2010 KICA causing a smoker to quit or try to quit, it seems reasonable to assert that the 2010 KICA contributed to a smoker quitting or trying to quit.

Overall, 23.4% (95% CI: 18.5%-28.3%) of smokers who tried to quit in the past year and former smokers who had their last cigarette in the past 12 months were prompted to quit or try to quit by the 2010 KICA.

**Table 15. Percent of current smokers who tried to quit and former smokers who did quit in the past 12 months that were prompted to quit or try to quit by the 2010 Indoor Clean Air law, BRFSS 2011\*\* [Landline Survey].**

| Demographic Group                   | Weighted Percent | 95% Confidence Limits |       |
|-------------------------------------|------------------|-----------------------|-------|
| <b>GENDER</b>                       |                  |                       |       |
| Male                                | 17.9%            | 11.3%                 | 24.5% |
| Female                              | 29.5%            | 22.6%                 | 36.5% |
| <b>SMOKING STATUS</b>               |                  |                       |       |
| Current smoker that tried to quit   | 24.9%            | 19.3%                 | 30.5% |
| Former smoker (cigarette < 12 mos.) | 18.2%            | 8.4%                  | 28.1% |
| <b>AGE GROUP</b>                    |                  |                       |       |
| Age 18-24                           | *                | *                     | *     |
| Age 25-34                           | 22.3%            | 10.2%                 | 34.3% |
| Age 35-44                           | 21.3%            | 12.4%                 | 30.1% |
| Age 45-54                           | 28.8%            | 21.4%                 | 36.2% |
| Age 55-64                           | 16.8%            | 10.6%                 | 23.1% |
| Age 65+                             | 19.9%            | 12.9%                 | 26.9% |
| <b>RACE/ETHNICITY</b>               |                  |                       |       |
| White Non-Hispanic                  | 20.5%            | 15.7%                 | 25.2% |
| African American Non-Hispanic       | *                | *                     | *     |
| Hispanic                            | *                | *                     | *     |
| Other Race Non-Hispanic             | *                | *                     | *     |
| Multiracial Non-Hispanic            | *                | *                     | *     |
| <b>ANNUAL INCOME</b>                |                  |                       |       |
| Less than \$15,000                  | 32.5%            | 16.8%                 | 48.2% |
| \$15,000 to less than \$25,000      | 29.2%            | 18.4%                 | 40.0% |
| \$25,000 to less than \$35,000      | 35.0%            | 17.2%                 | 52.7% |
| \$35,000 to less than \$50,000      | 19.8%            | 8.8%                  | 30.8% |
| \$50,000 or more                    | 13.1%            | 8.0%                  | 18.2% |
| <b>EDUCATION</b>                    |                  |                       |       |
| Did not graduate high school        | 40.7%            | 24.2%                 | 57.3% |
| High school graduate or GED         | 24.5%            | 16.4%                 | 32.7% |
| Some college or technical school    | 18.5%            | 11.1%                 | 25.8% |
| College graduate                    | 15.8%            | 9.2%                  | 22.3% |
| <b>HEALTH INSURANCE</b>             |                  |                       |       |
| Has health insurance                | 22.8%            | 17.3%                 | 28.4% |
| Does not have health insurance      | 24.8%            | 14.5%                 | 35.0% |

\*\*Excludes those who were unaware of the 2010 ICA and those who did not know or were not sure if the 2010 ICA prompted them to quit or attempt to quit.

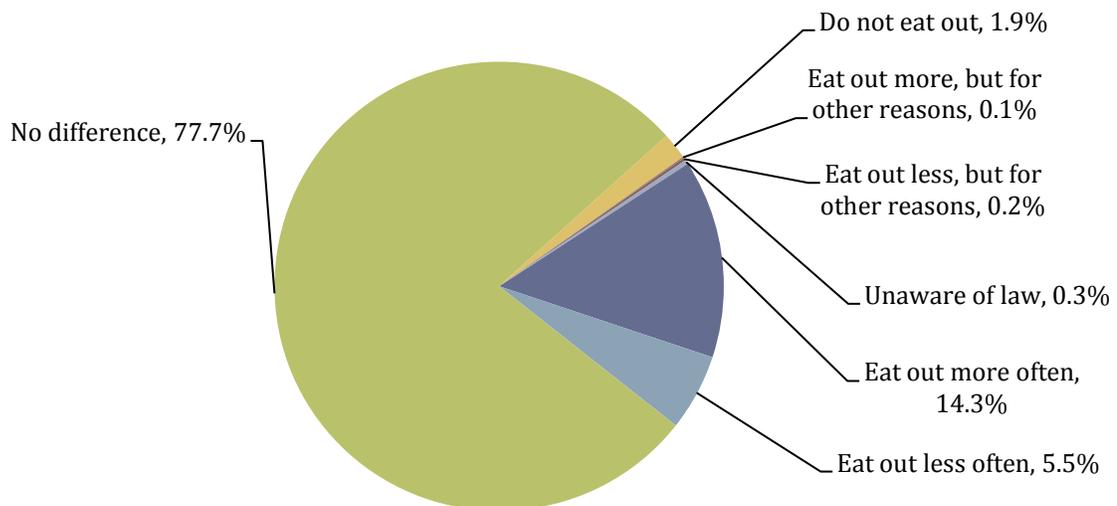
In 2011, 65,296 Kansas smokers were prompted to make a quit attempt by the 2010 KICA and 12,433 Kansas former smokers who had their last cigarette in the past 12 months were prompted to quit by the 2010 KICA. Combined, it is estimated that the 2010 KICA contributed to 77,729 Kansas adults quitting smoking or attempting to quit smoking.<sup>viii</sup>

The effect of the 2010 KICA in this subpopulation of current smokers and recent former smokers was experienced differently in different demographic groups. Despite limited sample size, there is evidence in table 15 that the 2010 KICA had a disproportionately larger impact on adult smokers and recent former smokers in lower socioeconomic groups. The percent of adults that smoke and were prompted to try to quit by KICA or former smokers who were prompted to quit recently by KICA is significantly lower among college graduates than among adults who did not graduate high school. Similarly, the percent of adults that smoke and were prompted to try to quit by KICA or former smokers who were prompted to quit recently by KICA is significantly lower among adults with an annual income of \$50,000 or more than among adults with an annual income of \$15,000 to less than \$25,000.

## Eating Out After the KICA

One common concern about smoke-free legislation is that it will hurt the hospitality industry. While the BRFSS is not an appropriate vehicle through which to conclusively evaluate the economic impact of the 2010 KICA, it can contribute to this discussion. In the 2011 Kansas BRFSS, respondents were asked, “Kansas state legislature passed a statewide smoking ban in 2010 that prohibits smoking in indoor public places. Has this new law prompted you to eat out more often, less often or was there no difference?” More than 3 in 4 Kansas adults (77.7%, 95% CI: 76.2%-79.1%) reported no difference in how often they ate out following the passage of the 2010 KICA. Significantly more adults ate out more often (14.3%, 95% CI: 13.2%-15.5%) than ate out less often (5.5%, 95% CI: 4.6%-6.4%). Taken at face value, this seems to indicate that the 2010 KICA benefited rather than harmed the restaurant industry (figure 7).

**Figure 7. Percent of adults who ate out more, less or the same following the 2010 ICA, BRFSS 2011 [Landline Survey]**



The percent of adults who were prompted to eat out more often following the passage of the 2010 KICA varies by gender, smoking status, age, annual income, education and health insurance status. The percent of women who were prompted to eat out more often by the 2010 KICA is significantly higher than the percent of men who were prompted to eat out more often. A significant difference in the percent of adults who were prompted to eat out more often by KICA by age groups is seen between adults age 35-44 years and adults 65 year or older. Increased annual income and education were associated with larger percentages of adults being prompted to eat out more often by KICA. Adults with health insurance were significantly more likely to have been prompted to eat out more often by KICA than adults without health insurance. Being prompted to eat out more often by the 2010 KICA did not vary by race/ethnicity categories and, not surprisingly, current smokers were much less likely to report being prompted to eat out more often by KICA than non-current smokers.

**Table 16. Percent of Kansas adults that were prompted to eat out more often by the 2010 KICA [Landline Survey].**

| Demographic Group                | Weighted Percent | 95% Confidence Limits |       |
|----------------------------------|------------------|-----------------------|-------|
| <b>GENDER</b>                    |                  |                       |       |
| Male                             | 12.0%            | 10.2%                 | 13.8% |
| Female                           | 16.6%            | 15.0%                 | 18.1% |
| <b>SMOKING STATUS</b>            |                  |                       |       |
| Current Smoker                   | 1.1%             | 0.5%                  | 1.7%  |
| Not current smoker               | 17.7%            | 16.3%                 | 19.2% |
| <b>AGE GROUP</b>                 |                  |                       |       |
| Age 18-24                        | 12.4%            | 7.0%                  | 17.7% |
| Age 25-34                        | 15.3%            | 11.8%                 | 18.8% |
| Age 35-44                        | 16.7%            | 13.9%                 | 19.4% |
| Age 45-54                        | 14.9%            | 13.0%                 | 16.8% |
| Age 55-64                        | 14.3%            | 12.7%                 | 15.9% |
| Age 65+                          | 12.1%            | 10.8%                 | 13.4% |
| <b>RACE/ETHNICITY (Age Adj.)</b> |                  |                       |       |
| White Non-Hispanic               | 14.9%            | 13.6%                 | 16.2% |
| African American Non-Hispanic    | 10.9%            | 4.7%                  | 17.2% |
| Hispanic                         | 15.5%            | 10.8%                 | 20.2% |
| Other Race Non-Hispanic          | 11.4%            | 5.3%                  | 17.5% |
| Multiracial Non-Hispanic         | 14.6%            | 4.2%                  | 25.1% |
| <b>ANNUAL INCOME</b>             |                  |                       |       |
| Less than \$15,000               | 7.2%             | 4.0%                  | 10.4% |
| \$15,000 to less than \$25,000   | 13.3%            | 9.9%                  | 16.7% |
| \$25,000 to less than \$35,000   | 12.7%            | 8.8%                  | 16.5% |
| \$35,000 to less than \$50,000   | 14.5%            | 11.8%                 | 17.2% |
| \$50,000 or more                 | 17.0%            | 15.3%                 | 18.7% |
| <b>EDUCATION</b>                 |                  |                       |       |
| Did not graduate high school     | 8.9%             | 5.2%                  | 12.6% |
| High school graduate or GED      | 10.4%            | 8.4%                  | 12.5% |
| Some college or technical school | 14.7%            | 12.4%                 | 17.0% |
| College graduate                 | 20.1%            | 18.2%                 | 22.0% |
| <b>HEALTH INSURANCE</b>          |                  |                       |       |
| Has health insurance             | 15.2%            | 14.0%                 | 16.4% |
| Does not have health insurance   | 10.1%            | 6.7%                  | 13.5% |

## Discussion

Results from the 2011 Kansas BRFSS support several key tobacco control strategies and initiatives. A higher percent of Kansas adults support increased state cigarette and smokeless tobacco tax than oppose increased taxes. Two-thirds (66%) of adult Kansans support smoke-free legislation in all indoor public places, a policy that is actually more stringent than the 2010 Kansas Indoor Clean Air Act, which includes limited exemptions. An additional 1 in 5 (19.7%) adults support smoke-free laws with limited exemptions for certain types of businesses. The 2010 KICA also contributed to the successful smoking cessation or attempted cessation of nearly 78,000 Kansans and there is evidence that it has encouraged more Kansans to eat out more often than less often. Finally, smoking cessation continues to be a critical part of reducing the burden of tobacco in Kansas. More than 1 in 4 Kansans in 2011 could recall seeing a Kansas Tobacco Quitline promotion in the past 30 days, more than half of current smokers tried to quit at least once and more than half were advised to quit smoking during a visit to a health care provider in the past 12 months.

This report covers a broad swath of BRFSS data, but does not delve too deeply into the data. The information presented here is a small fraction of the analysis possible with the wide variety of covariates available in the BRFSS. Future reports will have more specific topics and will likely use more complicated analytic techniques.

There is, of course, still much to be done. More than 1 in 5 Kansas adults currently smoke cigarettes and it is likely that this estimate does not include many young adults who smoke “casually” and do not identify as smokers. The tobacco industry continues to develop and market new tobacco products and nicotine delivery devices that can be used in smoke-free environments to maintain nicotine addiction and delay cessation. Many tobacco products also continue to be marketed in sweet and fruity flavors that appeal to youth. Kansas continues to lose 3,800 adults a year to smoking-attributable disease and spends an estimated \$927 million annually on health care costs directly caused by smoking.<sup>ix</sup> To learn more visit TUPP or the Tobacco Free Kansas Coalition at online at:

<http://www.kdheks.gov/tobacco>

<http://www.tobaccofreekansas.org/>

# Appendix

## Crude Race/Ethnicity Subpopulation Prevalence Estimates

**Table 1. Current smoking among Kansas adults, BRFSS 2011.**

| RACE/ETHNICITY                | Weighted Percent | 95% Confidence Limit |       |
|-------------------------------|------------------|----------------------|-------|
| White Non-Hispanic            | 21.1%            | 20.2%                | 21.9% |
| African American Non-Hispanic | 28.2%            | 23.5%                | 32.9% |
| Hispanic                      | 22.6%            | 19.2%                | 26.1% |
| Other Race Non-Hispanic       | 29.6%            | 23.8%                | 35.4% |
| Multiracial Non-Hispanic      | 29.9%            | 22.9%                | 36.8% |

**Table 2. Former smoking among Kansas adults, BRFSS 2011.**

| RACE/ETHNICITY                | Weighted Percent | 95% Confidence Limit |       |
|-------------------------------|------------------|----------------------|-------|
| White Non-Hispanic            | 23.9%            | 23.1%                | 24.6% |
| African American Non-Hispanic | 15.0%            | 11.7%                | 18.2% |
| Hispanic                      | 15.3%            | 12.7%                | 18.0% |
| Other Race Non-Hispanic       | 16.1%            | 11.7%                | 20.4% |
| Multiracial Non-Hispanic      | 26.8%            | 20.6%                | 33.1% |

**Table 3. Never smoking among Kansas adults, BRFSS 2011.**

| RACE/ETHNICITY                | Weighted Percent | 95% Confidence Limit |       |
|-------------------------------|------------------|----------------------|-------|
| White Non-Hispanic            | 55.1%            | 54.1%                | 56.0% |
| African American Non-Hispanic | 56.8%            | 51.9%                | 61.8% |
| Hispanic                      | 62.1%            | 58.2%                | 65.9% |
| Other Race Non-Hispanic       | 54.3%            | 48.1%                | 60.6% |
| Multiracial Non-Hispanic      | 43.3%            | 35.1%                | 51.4% |

**Table 4. Current smokeless tobacco use among Kansas adults, BRFSS 2011.**

| RACE/ETHNICITY                | Weighted Percent | 95% Confidence Limit |      |
|-------------------------------|------------------|----------------------|------|
| White Non-Hispanic            | 5.7%             | 5.2%                 | 6.2% |
| African American Non-Hispanic | 1.9%             | 0.4%                 | 3.4% |
| Hispanic                      | 4.0%             | 2.4%                 | 5.7% |
| Other Race Non-Hispanic       | 5.3%             | 2.3%                 | 8.3% |
| Multiracial Non-Hispanic      | 5.9%             | 2.3%                 | 9.5% |

**Table 5. Current smokeless tobacco use among male Kansas adults, BRFSS 2011.**

| RACE/ETHNICITY                | Weighted Percent | 95% Confidence Limit |       |
|-------------------------------|------------------|----------------------|-------|
| White Non-Hispanic            | 11.2%            | 10.2%                | 12.2% |
| African American Non-Hispanic | 1.9%             | 0.0%                 | 4.0%  |
| Hispanic                      | 6.4%             | 3.7%                 | 9.1%  |
| Other Race Non-Hispanic       | 8.8%             | 3.5%                 | 14.0% |
| Multiracial Non-Hispanic      | 9.1%             | 3.1%                 | 15.1% |

**Table 6. Percent of Kansas adults who currently smoke cigarettes and use smokeless tobacco, BRFSS 2011.**

| RACE/ETHNICITY                | Weighted Percent | 95% Confidence Limit |      |
|-------------------------------|------------------|----------------------|------|
| White Non-Hispanic            | 1.8%             | 1.5%                 | 2.1% |
| African American Non-Hispanic | 0.8%             | 0.0%                 | 1.8% |
| Hispanic                      | 1.6%             | 0.5%                 | 2.8% |
| Other Race Non-Hispanic       | 3.0%             | 0.6%                 | 5.3% |
| Multiracial Non-Hispanic      | 2.2%             | 0.0%                 | 4.7% |

**Table 8. Percent of current adult Kansas smokers who stopped smoking for one day or longer in the past 12 months because they were trying to quit smoking.**

| <b>RACE/ETHNICITY</b>         | <b>Weighted Percent</b> | <b>95% Confidence Limit</b> |       |
|-------------------------------|-------------------------|-----------------------------|-------|
| White Non-Hispanic            | 53.2%                   | 51.0%                       | 55.5% |
| African American Non-Hispanic | 57.9%                   | 47.7%                       | 68.1% |
| Hispanic                      | 67.1%                   | 59.3%                       | 74.9% |
| Other Race Non-Hispanic       | 67.3%                   | 57.0%                       | 77.6% |
| Multiracial Non-Hispanic      | 56.4%                   | 43.0%                       | 69.8% |

**Table 9. Percent of adult former smokers who had their last cigarette in the past 12 months.**

| <b>RACE/ETHNICITY</b>         | <b>Weighted Percent</b> | <b>95% Confidence Limits</b> |       |
|-------------------------------|-------------------------|------------------------------|-------|
| White Non-Hispanic            | 13.1%                   | 11.7%                        | 14.4% |
| African American Non-Hispanic | 22.2%                   | 9.3%                         | 35.0% |
| Hispanic                      | 21.8%                   | 14.2%                        | 29.5% |
| Other Race Non-Hispanic       | 18.7%                   | 6.5%                         | 30.8% |
| Multiracial Non-Hispanic      | 26.4%                   | 13.6%                        | 39.2% |

**Table 10. Percent of Kansas adults who recalled seeing a KTQL advertisement in the past 30 days.**

| <b>RACE/ETHNICITY</b>         | <b>Weighted Percent</b> | <b>95% Confidence Limits</b> |       |
|-------------------------------|-------------------------|------------------------------|-------|
| White Non-Hispanic            | 29.1%                   | 27.4%                        | 30.8% |
| African American Non-Hispanic | 20.9%                   | 15.0%                        | 26.8% |
| Hispanic                      | 25.4%                   | 18.0%                        | 32.8% |
| Other Race Non-Hispanic       | 28.8%                   | 17.2%                        | 40.4% |
| Multiracial Non-Hispanic      | 42.6%                   | 26.5%                        | 58.7% |

**Table 12. Percent of Kansas adults that support a tax increase on a pack of cigarettes.**

| <b>RACE/ETHNICITY</b>         | <b>Weighted Percent</b> | <b>95% Confidence Limits</b> |       |
|-------------------------------|-------------------------|------------------------------|-------|
| White Non-Hispanic            | 43.0%                   | 41.2%                        | 44.8% |
| African American Non-Hispanic | 30.5%                   | 23.0%                        | 38.0% |
| Hispanic                      | 37.3%                   | 29.1%                        | 45.5% |
| Other Race Non-Hispanic       | 31.0%                   | 18.9%                        | 43.1% |
| Multiracial Non-Hispanic      | 49.4%                   | 33.8%                        | 65.0% |

**Table 13. Percent of Kansas adults who support increased state tax on smokeless tobacco.**

| <b>RACE/ETHNICITY</b>         | <b>Weighted Percent</b> | <b>95% Confidence Limits</b> |       |
|-------------------------------|-------------------------|------------------------------|-------|
| White Non-Hispanic            | 49.5%                   | 47.7%                        | 51.3% |
| African American Non-Hispanic | 31.8%                   | 23.9%                        | 39.7% |
| Hispanic                      | 51.7%                   | 43.2%                        | 60.2% |
| Other Race Non-Hispanic       | 37.4%                   | 25.3%                        | 49.6% |
| Multiracial Non-Hispanic      | 55.6%                   | 40.3%                        | 71.0% |

**Table 14. Percent of adults that support smoking ban laws in all indoor public places.**

| <b>RACE/ETHNICITY</b>         | <b>Weighted Percent</b> | <b>95% Confidence Limits</b> |       |
|-------------------------------|-------------------------|------------------------------|-------|
| White Non-Hispanic            | 66.0%                   | 64.2%                        | 67.8% |
| African American Non-Hispanic | 61.7%                   | 53.1%                        | 70.3% |
| Hispanic                      | 75.8%                   | 68.4%                        | 83.1% |
| Other Race Non-Hispanic       | 59.6%                   | 46.3%                        | 72.9% |
| Multiracial Non-Hispanic      | 48.8%                   | 33.4%                        | 64.1% |

**Table 16. Percent of Kansas adults that were prompted to eat out more often by the 2010 KICA.**

| RACE/ETHNICITY                | Frequency | Weighted Percent | 95% Confidence Limits |       |
|-------------------------------|-----------|------------------|-----------------------|-------|
| White Non-Hispanic            | 1149      | 14.6%            | 13.4%                 | 15.8% |
| African American Non-Hispanic | 25        | 10.7%            | 5.4%                  | 15.9% |
| Hispanic                      | 48        | 15.6%            | 9.7%                  | 21.5% |
| Other Race Non-Hispanic       | 22        | 10.7%            | 3.3%                  | 18.0% |
| Multiracial Non-Hispanic      | 10        | 14.3%            | 1.1%                  | 27.5% |

<sup>i</sup> See the Kansas BRFSS Technical Notes website for a detailed methodology discussion:

<http://www.kdheks.gov/brfss/technotes.html>.

<sup>ii</sup> U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.

<sup>iii</sup> <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>

<sup>iv</sup> U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.

<sup>v</sup> Reductions in tobacco smoke pollution and increases in support for smoke-free public places following the implementation of comprehensive smoke-free workplace legislation in the Republic of Ireland: findings from the ITC Ireland/UK Survey. Fong GT, Hyland A, Borland R, Hammond D, Hastings G, McNeill A, Anderson S, Cummings KM, Allwright S, Mulcahy M, Howell F, Clancy L, Thompson ME, Connolly G, Driezen P. *Tob Control*. 2006 Jun;15 Suppl 3:iii51-8. PMID: 16754947.

<sup>vi</sup> Kansas Health Institute (2013). IMPACT OF THE KANSAS INDOOR CLEAN AIR ACT ON RESTAURANTS AND BARS, retrieved from [http://media.khi.org/news/documents/2013/01/23/Smoking\\_Ban\\_Brief.pdf](http://media.khi.org/news/documents/2013/01/23/Smoking_Ban_Brief.pdf).

<sup>vii</sup> The word “this” is used because this question followed another question in which a more complete description of the 2010 KICA was provided.

<sup>viii</sup> In 2011, Kansas had about 2,147,686 adults, 22 percent of which were current smokers and 55.5 percent of current smokers had made a quit attempt in the past 12 months. This works out to  $2,147,686 \times 0.22 \times 0.555 = 262,233$  adult current smokers who stopped smoking for one day or longer in the past 12 months because they were trying to quit. In table 15, we see that almost 1 in 4 (24.9%, 95% CI: 19.3%-30.5%) of these current smokers who tried to quit were prompted to quit by the 2010 KICA. Again, this works out to  $262,233 \times 0.249 = 65,296$  Kansas smokers who were prompted to make a quit attempt by the 2010 KICA. Using similar logic ( $2,147,686 \times 0.224 \times 0.142 \times 0.182$ ) we can estimate that an additional **12,433** Kansas former smokers who had their last cigarette in the past 12 months were prompted to quit by the 2010 KICA. Combined, it is estimated that the 2010 KICA contributed to **77,729** Kansas adults quitting smoking or attempting to quit smoking.

<sup>ix</sup> CDC, *Data Highlights 2006* [and underlying CDC data/estimates; CDC's STATE System average annual smoking attributable productivity losses from 1997-2001 (1999 estimates updated to 2004 dollars);

CDC, "State-Specific Smoking-Attributable Mortality and Years of Potential Life Lost – United States, 2000-2004," (MMWR) 58(2), January 22, 2009. See also, Zhang, X., et al., "Cost of Smoking to the Medicare Program, 1993," *Health Care Financing Review* 20(4): 1-19, Summer 1999;

[http://www.tobaccofreekids.org/facts\\_issues/toll\\_us/kansas](http://www.tobaccofreekids.org/facts_issues/toll_us/kansas)