ACKNOWLEDGMENTS

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The KyBRFS program is grateful for the support provided by:
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Special thanks for assistance with document review:
Teri Wood, PhD, Chronic Disease Epidemiologist

Data for the 2012 Kentucky BRFS were collected by:
University of Kentucky Survey Research Center.

The KyBRFS program is grateful to Dr. Ron Langley and his staff for conducting the survey.

The Kentucky Department for Public Health is especially grateful to the many citizens of the Commonwealth who gave their time to make this survey successful.

The development of this report was supported in part by funds from Cooperative Agreement Number 5U58DP001969-02 from the Centers for Disease Control and Prevention (CDC).

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Suggested Citation:
Kentucky Department for Public Health (KDPH) and the Centers for Disease Control and Prevention (CDC). Kentucky Behavioral Risk Factor Survey Data. Frankfort, Kentucky: Cabinet for Health and Family Services, Kentucky Department for Public Health, [2012].
A message from the Kentucky Department for Public Health Commissioner

The Kentucky Department for Public Health in the Cabinet for Health and Family Services, with support from the Centers for Disease Control and Prevention, is pleased to present this report of selected findings from the 2012 Kentucky Behavioral Risk Factor Survey (KyBRFS). Every year, a number of Kentucky adults contribute important information about their health status, access to health care, and health risk behaviors to the KyBRFS through a statewide telephone survey. As such, the KyBRFS report provides a unique insight into our collective health as a state.

The Kentucky BRFS is a state-specific data source for various local and statewide programs. Data collected through the survey helps these programs target areas of need, develop and measure progress of public health initiatives, and monitor population-based health trends. Some state programs incorporate KyBRFS data in their grant applications for funds that support a variety of public health initiatives. Moreover, the data presents opportunities for researchers to better understand how specific health risk behaviors and socio-demographic variations impact chronic diseases as well as the overall health of adults in Kentucky.

The 2012 KyBRFS report is a snapshot of the health of our state. It also highlights specific demographic groups in the Commonwealth who are at a greater risk for poor health outcomes. The findings in this report are a challenge to public health organizations and stakeholders across the state to find more ways of improving access to health care, promoting healthier lifestyles, and reducing health disparities in Kentucky.

We appreciate all the citizens of our state who participated in the 2012 Kentucky Behavioral Risk Factor Survey. Your contributions were essential in completing this report. Together, we can help make Kentucky a healthier state.

Sincerely,

Stephanie Mayfield Gibson, MD, FCAP
Commissioner, Department for Public Health
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The 2012 KyBRFS Annual Data Report provides a snapshot of the health behaviors and health status indicators, that place Kentucky adults at risk for chronic diseases, injuries, and preventable infectious diseases. This report is based on a sample of non-institutionalized residents aged 18 years or older from over 11,000 households in the Commonwealth of Kentucky. The results are weighted to obtain representative estimates for all adults in the state. Some key findings from the 2012 survey include:

**Alcohol Consumption:**
In 2012, prevalence of binge drinking among adults in Kentucky (14.9%) was lower than the national estimate of 16.9%. In Kentucky, binge drinking was significantly higher among men than women (21.1% vs. 9.2%).

**Arthritis**
About 35% of Kentucky adults have been told by a health professional that they have arthritis; this is higher compared to the United States estimate of 25.7%. Arthritis prevalence in Kentucky was significantly higher among women than men (38.5 vs. 31.4%).

**Asthma:**
In 2012, about 11.1% of Kentucky adults reported that they currently have asthma; this was higher than the United States prevalence of 8.9%. Prevalence of current asthma in Kentucky was significantly higher among women compared to men (13.6% vs. 8.4%).

**Cardiovascular Diseases:**
About 6.6% of adults in Kentucky have been told by a health care professional that they had a heart attack, 6.1% have coronary heart disease, and 4.2% have been told they had a stroke. These Kentucky estimates are all higher than the national estimates for heart attack (4.5%), coronary heart disease (4.3%), and stroke (2.9%). Heart attack prevalence in Kentucky was significantly higher among men (8.4%) than women (5%).

**Colorectal Cancer Screening:**
An estimated 34.1% of Kentucky adults aged 50 years or older have never had a sigmoidoscopy or colonoscopy; this is higher compared to 32.7% in the United States. About 44.8% of Kentucky adults (aged 50+) with less than a high school education, and 41.4% of those with annual household income under $25,000, have never had a sigmoidoscopy or colonoscopy.

**Diabetes:**
About 10.7% of adults in Kentucky have been told by a doctor that they have diabetes; this estimate is slightly higher compared to 9.7% in the United States. Prevalence of diabetes was highest among adults aged 65 years or older (21.8%) and adults with less than a high school education (14.9%).

**Health Care Access/Coverage:**
The estimated proportion of adults in Kentucky without health care coverage or health insurance was 17.1% in 2012; this was similar to the estimate of uninsured adults in the United States (17.1%). About a third of Kentucky adults (33.4%) with household income under $25,000 a year did not have health insurance. A higher proportion of black adults compared to white adults in Kentucky did not have health insurance (24.8% vs. 15.8%).

**Obesity:**
In 2012, about 31.3% of Kentucky adults were classified as obese based on Body Mass Index (BMI); in the same year, 21.7% of adults in the United States were classified as obese. Obesity prevalence in Kentucky was significantly higher among black adults (42%) than among white adults (30.6%).

**Physical Activity:**
An estimated 29.7% of Kentucky adults did not participate in any leisure-time physical activity or exercise; this is higher compared to 22.9% in the United States. Adults who did not participate in any leisure-time physical activity were generally older, without a college education, and had lower levels of income.

**Tobacco Use:**
About 28.3% of Kentucky adults reported that they currently smoke cigarettes; this estimate is higher compared to 19.6% in the United States. About 45% of Kentucky adults with less than a high school education are current smokers.
Introduction

What is KyBRFS?
The Kentucky Behavioral Risk Factor Survey (KyBRFS) is a statewide telephone health survey jointly sponsored by the Centers for Disease Control and Prevention (CDC) and the Kentucky Department for Public Health (KDPH). The KyBRFS has been conducted continuously since 1985. KyBRFS data contributes to the CDC Behavioral Risk Factor Surveillance System (BRFSS) that is conducted within every state, the District of Columbia, and within several U.S. territories. The survey is administered to randomly selected non-institutionalized adults who live in a household with a telephone. Participation in the survey is strictly voluntary. Personal identifying information, such as a person’s name or address, is not collected.

New Changes in BRFSS Protocol
In 2011, two major changes were made in BRFSS Protocol: The incorporation of cell phone interviews and the adoption of a more advanced weighting method called iterative proportional fitting or raking (raking replaced the post-stratification weighting method used with previous BRFSS data sets). Due to these significant changes, estimates of prevalence from 2011 and subsequent years cannot be directly compared to estimates from previous years. Comparing 2011 and 2012 BRFSS data with BRFSS data from previous years may cause misinterpretation of trend line shifts in prevalence estimates.


How is the survey conducted?
Kentucky currently uses disproportionate stratified sampling to obtain a random sample of Kentucky telephone numbers. Once an interviewer reaches a household, a member of the household 18 years of age or older is randomly selected to be interviewed. Surveyors conduct interviews seven days a week, January through December. The number of completed interviews has increased each year.

How can this report be used?
Data from this report can be used in many of the following ways:
- To document health trends
- To provide information related to the development of policies and legislation
- To plan and measure the progress of health initiatives
- To educate the public about risk behaviors and preventive health practices
- To monitor health goals, such as those stated in Healthy Kentuckians 2020

Race
Beginning in 2001, the BRFSS race question allowed reporting of more than one race. Therefore, data users should be cautious when comparing race data from the year 2001 onward to race data from previous years due to the change in race categories. Since Kentucky’s population is predominantly white, survey respondents are predominantly white and the low number of non-white populations tend to make data regarding those populations statistically unstable. Race data, therefore, may be excluded from this report due to the small nature of the sample size. In this report, we are unable to include data on Hispanics and sometimes cannot include data on Blacks.
Introduction (continued)

How is the data analyzed?
Data is analyzed using the following statistical analysis software: SAS 9.3, SAS Callable SUDAAN, and SPSS Complex Samples. A pre-calculated weighting variable provided by the CDC is used to weight the data. Weighting adjusts for over-sampling or under-sampling of certain subgroups and allows the survey data to be representative of the Kentucky population. Factors in weighting include the number of telephone numbers per household, the number of adults per household, and the demographic distribution of the sample. BRFSS raking includes categories of age by gender, detailed race and ethnicity groups, education levels, marital status, regions within states, gender by race and ethnicity, telephone source, renter/owner status, and age groups by race and ethnicity.

The data are not age-adjusted. Data estimates for fewer than 50 respondents are considered statistically unreliable by the CDC and are not included in this report. Respondents who answered that they did not know or refused to answer a question were excluded from the calculation of prevalence estimates related to that question. Therefore, the sample sizes used to calculate the estimates in this report vary.

What are the limitations to the data?
There are two main limitations to BRFSS data: non-coverage bias and self-report bias. These limitations should not hinder the use of BRFSS data, but should be considered.

**Non-coverage bias:** Since the BRFSS is a telephone survey, adults who live in households without a telephone are not included in the sample. The BRFSS only surveys adults living in households. Therefore, individuals living in a group setting, such as a nursing home, the military, or prison are not surveyed.

**Self-report bias:** The BRFSS survey relies on self-reporting, which means that the prevalence estimates are strictly based on the respondents answers to the survey questions. The tendency to report a more healthy lifestyle may occur.

Small sample size for subgroups
Producing accurate prevalence estimates for different subgroups (men, women, Whites, Blacks, women aged 40+, etc.) requires a minimum number of 50 respondents per question. In some cases, the KyBRFS does not reach enough people in certain categories to produce statistically reliable estimates. Small sample sizes produce large variances (i.e. a deviation from the mean), resulting in a large confidence interval (CI). The same problem of small numbers of responses occurs at the county level. In order to provide locally relevant estimates, KyBRFS data is reported by Area Development District (ADD).

In this report, if the un-weighted sample size for the denominator is < 50, the data are not reported. Additionally, CDC BRFSS recommends using Relative Standard Error (RSE) as a criterion for estimates that meet standards of statistical reliability; if RSE is >0.3, the estimate is not reported on the CDC BRFSS website. These standards have also been adopted by KyBRFS.
Demographic Characteristics: Race/Ethnicity and Gender
A total of 11,223 Kentucky residents (18 years or older) participated in the 2012 Behavioral Risk Factor Survey. The initial sample of 11,223 residents was used to “weight” these survey data in order to obtain representative estimates for the state of Kentucky.

The distribution of respondents by race and by gender on the 2012 KyBRFS was similar to the 2012 Kentucky census population (as indicated in the charts below). The race/ethnicity categories used for this comparison are: Non-Hispanic White, Non-Hispanic Black, Hispanic, and Other/Non-Hispanic.

Distribution of KyBRFS Adult Population vs. KY Census Population, by Race/Ethnicity — 2012

Distribution of KyBRFS Adult Population vs. KY Census Population, by Gender — 2012

*Note: KY Census Population includes all age groups.
KY Census Population estimates obtained from Kentucky State Data Center website: http://ksdc.louisville.edu/.
**ALCOHOL CONSUMPTION: BINGE DRINKING**

**Question:** Considering all types of alcoholic beverages, how many times during the past month did you have four or more drinks on one occasion?

**At Risk:** Adult men who reported having five or more drinks on one occasion and adult females who reported having four or more drinks on one occasion (in the past month) are considered at risk.

**Who is at risk in Kentucky?**

- In 2012, 14.9% of Kentucky adults reported binge drinking. The estimate for Kentucky was lower compared to 16.9% in the United States.

- Prevalence of binge drinking was significantly higher among men compared to women (21.1% vs. 9.2%).

- There were no statistically significant differences in reported binge drinking by race.

- Binge drinking among 18 to 34 year old adults (25.7%) was significantly higher than other age groups.

- When compared by education, binge drinking did not vary significantly — although it was highest among individuals with a college education.

- Prevalence of binge drinking did not vary significantly among the income groups used in this report.

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* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
PHYSICAL ACTIVITY

Question: During the past 30 days, other than your regular job, did you participate in any physical activity or exercise such as running, calisthenics, golf, gardening, or walking for exercise?

At Risk: Adults who did not participate in any physical activity or exercise during the last 30 days are considered at risk.

Who is at risk in Kentucky?

- An estimated 29.7% of Kentuckians reported not participating in any physical activity during the past month compared to 22.9% in the United States.

- Women (31.8%) reported a significantly higher percentage of not participating in any physical activity during the past month than men (27.5%).

- There were no statistically significant differences between white and black adults who reported not participating in any physical activity.

- Lack of physical activity significantly increased with age, with the highest proportion being reported among adults aged 65 years and older (42.0%).

- Lack of physical activity was significantly higher among adults with less than a high school education (49.3%) compared to adults with other levels of educational attainment.

- A significantly higher proportion (40.3%) of adults with annual household income less than $25,000 reported a lack of physical activity in the past month, compared to adults with other income levels.

Percent of Kentucky Adults who did not Participate in any Physical Activity in the Past 30 Days by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
TOBACCO USE

**Question:** If you have smoked at least 100 cigarettes in your entire life, are you now smoking everyday, some days or not at all?

**At Risk:** Adults who are “Current Smokers” (i.e. smoke “everyday” or “some days” are considered at risk.

**Who is at risk in Kentucky?**

- In 2012, about 28.3% of Kentucky adults reported that they currently smoke cigarettes everyday or some days; this was a higher estimate compared to 19.6% in the United States.
- Smoking prevalence was significantly higher among men than among women (30.6% vs. 26.1%).
- There were no statistically significant differences in smoking prevalence between white and black adults.
- Smoking prevalence was significantly higher among adults aged 18-34 years (36.7%), compared to adults aged 50-64 years (26.6%) or adults aged 65+ years (12.2%).
- About 45.1% of Kentucky adults who have less than a high school education are current smokers; smoking prevalence decreased significantly with increasing levels of educational attainment.
- Smoking prevalence was significantly higher among adults with annual household income of less than $25,000 (42.1%) compared to adults with other levels of annual household income.

**Percent of Kentucky Adults who are Current Smokers, by Age*, Education*, and Income* — 2012**

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* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
ARThRITIS

Question: Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?

At Risk: Adults who answered “Yes” are considered at risk.

Who is at risk in Kentucky?

- An estimated 35% of Kentucky adults have been told by a health professional that they have arthritis; this was a higher estimate compared to 25.7% in the United States.
- Prevalence of arthritis was significantly higher among women (38.5%) than men (31.4%).
- There were no statistically significant differences in prevalence of arthritis between white and black adults.
- As expected, the proportion of adults with arthritis increased significantly with age; the highest prevalence was among adults aged 65 years or older (60.6%).
- About 50.3% of adults with less than a high school education have arthritis; prevalence of arthritis decreased significantly with increasing levels of education.
- Prevalence of arthritis was significantly higher among adults with annual household income under $25,000 compared to adults with annual household income of $50,000 or more (44.4% vs. 23.1%).

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence. Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
ASTHMA

Question: 1. Have you ever been told by a doctor, nurse, or other health professional that you had asthma? (lifetime)
2. Do you still have asthma? (current)

At Risk: Adults who answered “Yes” to both questions (i.e. currently have asthma are considered at risk.

Who is at risk in Kentucky?

- About 11.1% of Kentucky adults reported that they currently have asthma; this was a higher estimate compared to 8.9% in the United States.
- Current asthma prevalence was significantly higher among women compared to men (13.6% vs. 8.4%).
- There were no statistically significant differences in current asthma prevalence between white and black adults.
- Current asthma prevalence did not differ significantly across age groups.
- When compared by education level, current asthma prevalence was significantly higher among adults with less than a high school education compared to those with a college education (17.2% vs. 7.6%).
- Prevalence of current asthma was significantly higher among adults with household income of less than $25,000 a year, compared to those with household income of $50,000 or more a year (17.3% vs. 6.5%).

Percent of Kentucky Adults who have Current Asthma, by Age, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
CORONARY HEART DISEASE

Question: Have you ever been told by a doctor, nurse, or other health professional that you had angina or coronary heart disease?

At Risk: Adults who answered “Yes” are considered at risk.

Who is at risk in Kentucky?

- About 6.1% of adults in Kentucky have been told by a health professional that they have coronary heart disease or angina; this was a higher estimate compared to 4.3% in the United States.

- There were no statistically significant differences in the prevalence of coronary heart disease by gender.

- Prevalence of coronary heart disease was higher among white adults (6.1%) compared to black adults (4.8%) — however, the differences were not statistically significant.

- As would be expected, prevalence of coronary heart disease was significantly higher among adults aged 65+ years compared to other age groups.

- Adults with less than a high school education reported a significantly higher prevalence of coronary heart disease compared to those with a college degree (9.1% vs. 3.7%)

- Prevalence of coronary heart disease was significantly higher among adults with an annual household income of less than $25,000 compared to adults with other income levels.

Percent of Kentucky Adults who have Coronary Heart Disease, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
DIABETES

Question: Have you ever been told by a doctor, nurse, or other health professional that you have diabetes?

At Risk: Adults who answered “Yes” are considered at risk. Those with responses for gestational diabetes, pre-diabetes or borderline diabetes are excluded.

Who is at risk in Kentucky?

- About 10.7% of Kentucky adults reported that they have been told by a doctor that they have diabetes compared to 9.7% in the United States.
- Diabetes prevalence was statistically similar among men (10.6%) and women (10.8%).
- There were no statistically significant differences in diabetes prevalence between white and black adults.
- Diabetes prevalence increased significantly with age; adults 65 years or older had the highest prevalence of diabetes (21.8%).
- Diabetes prevalence was significantly higher among adults with less than a high school education (14.9%) compared to adults with a college degree (6.7%).
- Adults with an annual household income of less than $25,000 had a significantly higher prevalence of diabetes compared to adults with household income of $50,000 or more a year (14% vs. 7.3%).

Percent of Kentucky Adults who have Diabetes, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values. In this report, the term ‘significant’ only refers to statistically significant differences in prevalence. Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
HEART ATTACK

**Question:** Have you ever been told by a doctor, nurse, or other health professional that you had a heart attack, also called a myocardial infarction?

**At Risk:** Adults who answered “Yes” are considered at risk.

**Who is at risk in Kentucky?**

- About 6.6% of adults in Kentucky have been told by a health professional that they had a heart attack; this was a higher estimate compared to 4.5% in the United States.

- Heart attack prevalence was significantly higher among men (8.4%) than among women (5.0%).

- Prevalence of heart attack was statistically similar among white and black adults.

- As expected, prevalence of heart attack increased significantly with age; the highest prevalence was among adults 65 years or older (15.7%).

- Heart attack prevalence was significantly higher among adults with less than a high school education (11.6%) compared to adults with other levels of educational attainment.

- Heart attack prevalence was significantly higher among adults with an annual household income of less than $25,000 compared to adults with household income of $50,000 or more a year (10.2% vs. 3.6%).

**Percent of Kentucky Adults who have ever been told that they had a Heart Attack , by Age*, Education*, and Income* — 2012**

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
**STROKE**

**Question:** Have you ever been told by a doctor, nurse, or other health professional that you had a stroke?

**At Risk:** Adults who answered “Yes” are considered at risk.

**Who is at risk in Kentucky?**

- About 4.2% of adults in Kentucky have been told by a health professional that they had a stroke; this was a higher estimate compared to 2.9% in the United States.
- Prevalence of stroke did not differ significantly between men and women.
- There were no statistically significant differences in the prevalence of stroke between white and black adults.
- Prevalence of stroke increased significantly with age; the highest prevalence was among adults 65 years or older (9.0%).
- Prevalence of stroke was significantly higher among adults with less than a high school education (9.1%) compared to adults with other levels of educational attainment.
- Adults with an annual household income of less than $25,000 had a significantly higher prevalence of stroke compared to adults with household income of $50,000 or more a year (6.8% vs. 1.1%).

**Percent of Kentucky Adults who have ever been told they had a Stroke, by Age*, Education*, and Income* — 2012**

*Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
OBESITY

Question: Body Mass Index (BMI) was calculated based on data collected from:
1) How much do you weigh without shoes?
2) How tall are you without shoes?

At Risk: Adults with BMI scores greater or equal to 30.0 are considered obese.

Who is at risk in Kentucky?

- An estimated 31.3% of adults in Kentucky were classified as obese (i.e. Body Mass Index greater or equal to 30); this was a higher estimate compared to 27.6% in the United States.

- Prevalence of obesity was similar among men and women.

- Obesity prevalence was significantly higher among black adults than among white adults (42% vs. 30.6%).

- Among the different age groups used in this report, obesity prevalence was highest among adults aged 35-49 years (38%); this was a significantly higher estimate compared to obesity prevalence among adults aged 18-34 years (23.7%).

- Prevalence of obesity was significantly higher among adults with less than a high school education (33.2%) compared to adults who graduated with a college degree (26.5)

- Obesity prevalence was significantly higher among adults with household income of less than $25,000 a year, compared to those with household income of $50,000 or more a year (34.3% vs. 28.9%).

Percent of Kentucky Adults who are Obese, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term 'significant' only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
DISABILITY

Question: Are you limited in any way in any activities because of physical, mental, or emotional problems?

At Risk: Adults who answered “Yes” are at risk.

Who is at risk in Kentucky?

- About 26.2% of Kentucky’s adult population reported limited activities due to physical, mental, or emotional problems; this was higher than the United States estimate of 20.1%.
- Activity limitations were not significantly different between men and women.
- There were no significant differences in the prevalence of activity limitations between white and black adults.
- As would be expected, adults 50 years or older reported significantly higher activity limitations compared to younger adults.
- Activity limitations were significantly higher among adults with less than a high school education (40%) compared to adults who graduated from college (16%).
- Activity limitations were significantly higher among adults with household income of less than $25,000 a year, compared to adults with household income of $50,000 or more a year (40% vs. 14.3%).

Percent of Kentucky Adults who reported Limited Activity due to Physical, Mental, or Emotional Problems, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
GENERAL HEALTH

Question: Would you say that your general health is “Excellent”, “Very good”, “Good”, “Fair”, or “Poor”?  

At Risk: Adults who answered “Fair” or “Poor” are considered at risk.

Who is at risk in Kentucky?  
- Almost 24% of Kentucky adults rated their general health as fair or poor compared to about 17% in the United States.  
- There were no statistically significant differences between men and women who rated their general health as fair or poor.  
- There were no statistically significant differences between white and black adults who rated their general health as fair or poor.  
- Fair or poor general health ratings significantly increased with age.  
- Fair or poor general health ratings significantly decreased with increasing levels of educational attainment; 47% of adults with less than a high school education rated their general health as fair or poor.  
- About 40% of adults with an annual household income of less than $25,000 rated their general health as fair or poor, compared to only 9.5% of adults with household income of $50,000 or more a year; the differences were statistically significant.

Percent of Kentucky Adults who reported their General Health as Fair or Poor, by Race — 2012

Percent of Kentucky Adults who reported their General Health as Fair or Poor, by Gender, and by Race — 2012

Percent of Kentucky Adults who reported their General Health as Fair or Poor, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
HEALTH CARE ACCESS/Coverage

**Question:** Do you have any kind of health care coverage, including health insurance, pre-paid plans such as HMOs or governmental plans such as Medicare?

**At Risk:** Adults who answered “No” are considered at risk.

**Who is at risk in Kentucky?**

- About 17.1% of Kentucky adults did not have any form of health insurance in 2012; this was similar to the estimate of uninsured adults in the United States.

- The percentage of men who did not have health insurance was significantly higher when compared to the percentage of women without health insurance (19% vs. 15.3%).

- About 24.8% of black adults did not have health insurance; this estimate was significantly higher when compared to white adults (15.8%).

- Lack of health insurance decreased significantly with age; about 27% of adults aged 18-34 years did not have health insurance.

- About 26.4% of adults with less than a high school education did not have health insurance; this was a significantly higher estimate compared to adults with other levels of educational attainment.

- About a third of adults (33.4%) with household income under $25,000 a year did not have health insurance; this was a significantly higher estimate compared to only 4.8% of adults with household income of $50,000 or more.

**Percent of Kentucky Adults with No Health Insurance, by Age**, **Education**, and **Income** — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
BREAST CANCER SCREENING (Age 40+)

Question: A mammogram is an X-Ray of each breast to look for breast cancer. Have you ever had a mammogram? How long has it been since you had your last mammogram?

At Risk: Women aged 40 years or older who report that they have not had a mammogram within the past two years are considered at risk.

Who is at risk in Kentucky?
• An estimated 28.7% of Kentucky women aged 40 years or older reported that they have not had a mammogram in the past two years compared to 26% in the United States.

• Almost 30% of white women (aged 40+) did not have a mammogram in the past two years compared to 16.6% of black women (aged 40+) — the differences were statistically significant.

• About 38.1% of women aged 40 to 49 years did not have a mammogram in the past two years; this estimate was significantly higher when compared to women aged 50 years or older.

• A significantly higher percentage of women (aged 40+) with less than a high school education did not have a mammogram in the past two years, compared to women (aged 40+) who graduated from college (37.4% vs. 19.3%)

• More than a third of women (aged 40+) with annual household income of less than $25,000 did not have a mammogram in the past two years (36.4%); this was a significantly higher estimate compared to women (aged 40+) with higher levels of annual household income.

Percent of Kentucky Women (aged 40+) who did not have a Mammogram in the Past Two Years, by Race* — 2012

Percent of Kentucky Women (aged 40+) who did not have a Mammogram in the Past Two Years: Kentucky vs. Nationwide (States and DC) — 2012

Percent of Kentucky Women (aged 40+) who did not have a Mammogram in the Past Two Years, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
CERVICAL CANCER SCREENING‡ (Age 18+)

**Question:** A Pap Smear is a test for cancer of the cervix. How long has it been since you had your last Pap Smear test?

**At Risk:** Women who reported that they did not have a Pap Smear Test within the last three years are considered at risk.

‡Currently, the U.S. Preventive Services Task Force (USPSTF) recommends screening for cervical cancer among women aged 21 to 65 years with cytology (Pap Smear Test) every 3 years. A complete list of USPSTF recommendations are available online: [http://www.uspreventiveservicestaskforce.org/uspstf/uspscerv.htm](http://www.uspreventiveservicestaskforce.org/uspstf/uspscerv.htm)

**Who is at risk in Kentucky?**

- An estimated 23.4% of Kentucky women (aged 18+) reported that they have not had a Pap Smear test within the past three years compared to 22% in the United States.

- About 23.5% of white women (aged 18+) did not have a Pap Smear test in the past three years compared to 16% of black women (aged 18+); however, the differences were not statistically significant.

- About 42.1% of women aged 65+ years did not have a Pap Smear test in the past three years; this was a significantly higher estimate compared to women aged 18-64 years.

- Almost a third of women (aged 18+) with less than a high school education (32.2%) did not have a Pap Smear test in the past three years; this estimate was significantly higher when compared to women (aged 18+) with some post-High School education (20.8%) or those who graduated from college (11.2%).

- A significantly higher percentage of women (aged 18+) with an annual household income of less than $25,000 did not have a Pap Smear test in the past three years, compared to those with an annual household income of $50,000 or more (29.9% vs.13.3%).

**Percent of Kentucky Women (aged 18+) who did not have a Pap Smear Test in the Past Three Years, by Age*, Education*, and Income* — 2012**

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence. Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
COLORECTAL CANCER SCREENING (Age 50+)

**Question:** Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of the exams?

**At Risk:** Adults 50 years or older who have never had a sigmoidoscopy or colonoscopy are considered at risk.

**Who is at risk in Kentucky?**

- About 34.1% of Kentucky adults aged 50+ years have never had a sigmoidoscopy or colonoscopy compared to 32.7% in the United States.
- There were no statistically significant differences between men and women aged 50+ years who have never had a sigmoidoscopy or colonoscopy.
- There were no statistically significant differences between white and black adults aged 50+ years who have never had a sigmoidoscopy or colonoscopy.
- About 45.2% of adults aged 50 to 59 years have never had a sigmoidoscopy or colonoscopy; this was a significantly higher estimate compared to adults aged 60 years or older.
- An estimated 44.8% of adults (aged 50+ years) with less than a high school education have never had a sigmoidoscopy or colonoscopy; this was a significantly higher estimate compared to adults with higher levels of educational attainment.
- About 41.4% of adults (aged 50+ years) with household income of less than $25,000 a year, have never had a sigmoidoscopy or colonoscopy; this was a significantly higher estimate compared to adults with higher levels of annual household income.

**Percent of Kentucky Adults (aged 50+) who have never had a Sigmoidoscopy or Colonoscopy, by Age*, Education*, and Income* — 2012**

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
HIV/AIDS SCREENING

Question: Have you ever been tested for HIV?

At Risk: Adults who answered “No” are considered at risk.

Who is at risk in Kentucky?

- An estimated 68.6% of adults in Kentucky have never been tested for HIV; this was a higher estimate compared to 63% in the United States.

- There were no statistically significant differences between men and women who have never been tested for HIV.

- The percentage of white adults who have never been tested for HIV was significantly higher when compared to black adults (71.7% vs. 41.2%).

- About 91.3% of adults aged 65+ years have never been tested for HIV; this was a significantly higher estimate compared to adults aged 18-64 years.

- About 75.2% of adults with a high school diploma as their highest level of educational attainment, have never been tested for HIV; this was a significantly higher estimate compared to adults with some post-high school education (62.2%) or those who graduated from college (65%).

- A significantly higher proportion of adults with annual household income of $50,000 or more (68.9%) have never been tested for HIV, compared to adults with household income of less than $25,000 per year (62%).

Percent of Kentucky Adults who have never been tested for HIV, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence. Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
PROSTATE CANCER SCREENING‡ (Age 40+)

Question: Have you ever had a Prostate-Specific Antigen test, also called a PSA test? How long has it been since you had your last PSA test?

At Risk: Adult men aged 40 years or older who did not have a PSA test within the past two years are considered at risk.

‡Currently, the U.S. Preventive Services Task Force (USPSTF) recommends against PSA-based screening for prostate cancer. However, this recommendation does not include the use of the PSA test for surveillance after diagnosis or treatment of prostate cancer. A complete list of USPSTF recommendations are available online: http://www.uspreventiveservicestaskforce.org/prostatecancerscreening.htm

Who is at risk in Kentucky?

- About 55% of Kentucky men aged 40 years or older reported that they did not have a PSA test in the past two years; this was similar to the United States estimate (54.8%).

- There were no statistically significant differences between white and black men (aged 40+) who did not have a PSA test in the past two years.

- About 77% of men aged 40 to 49 years did not have a PSA test in the past two years; this was a significantly higher estimate compared to men aged 50 years or older.

- About two thirds (67.6%) of men (aged 40+) with less than a high school education did not have a PSA test in the past two years; this was a significantly higher estimate compared to men (aged 40+) with higher levels of educational attainment.

- A significantly higher proportion of men (aged 40+) with an annual household income of less than $25,000 did not have a PSA test in the past two years, compared to men (aged 40+) with an annual household income of $50,000 or more (67% vs. 48.1%).

Percent of Kentucky Men (aged 40+) who did not have a PSA Test in the Past Two Years, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
INFLUENZA IMMUNIZATION (Age 65+)

Question: In the past twelve months, have you had a flu shot?

At Risk: Adults aged 65+ years who did not get a flu shot in the past twelve months are considered at risk.

Who is at risk in Kentucky?

- About 38.2% of Kentucky adults aged 65 years or older reported that they did not get a flu shot in the past year; in the same year, an estimated 39.9% of adults (aged 65+) in the United States did not get a flu shot.

- There were no statistically significant differences between men and women (aged 65+) who did not get a flu shot in the past year.

- A higher percentage of black adults (aged 65+) reported that they did not get a flu shot in the past year, compared to white adults (aged 65+); however, the differences were not statistically significant.

- A significantly higher percentage of adults aged 65-74 years did not get a flu shot in the past year, compared to adults aged 75 years or older (42.1% vs. 32.5%).

- The prevalence of adults (aged 65+) who did not get a flu shot in the past year did not differ significantly by educational attainment or by annual household income.

Percent of Kentucky Adults (aged 65+) who did not get a Flu Shot in the Past Year, by Age*, Education, and Income — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
**PNEUMOCOCCAL VACCINATION (Age 65+)**

**Question:** Have you ever had a pneumonia shot?

**At Risk:** Adults aged 65 years or older who have never had a pneumonia shot (pneumococcal vaccine) are considered at risk.

### Who is at risk in Kentucky?

- About 34.4% of Kentucky adults 65 years or older have never had a pneumococcal vaccination; this was slightly higher than the United States estimate of 31.2%.

- There were no statistically significant differences between men and women (aged 65+) who have never had a pneumococcal vaccination.

- A significantly higher percentage of black adults (aged 65+) have never had a pneumococcal vaccination, compared to white adults aged 65 years or older (50.1% vs. 33.1%).

- Adults aged 65-74 years were significantly more likely to have never had a pneumococcal vaccination compared to adults who are 75 years or older (40.8% vs. 25.4%).

- The prevalence of adults (aged 65+) who have never had a pneumococcal vaccination did not differ significantly by educational attainment or by annual household income.

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**Percent of Kentucky Adults (aged 65+) who have never had a Pneumococcal Vaccination, by Age*, Education, and Income — 2012**

**Percent of Adults (aged 65+) who have never had a Pneumococcal Vaccination: Kentucky vs. Nationwide (States and DC) — 2012**

**Percent of Kentucky Adults (aged 65+) who have never had a Pneumococcal Vaccination, by Gender, and by Race* — 2012**

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* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
ORAL HEALTH

Question: How long has it been since you visited the dentist or dental clinic for any reason?

At Risk: Adults who answered “more than 1 year ago” or “never” are considered at risk.

Who is at risk in Kentucky?

- Almost 40% of Kentucky adults reported that they did not have a dental visit in the past year; this was higher than the United States estimate of 32.8%.
- A significantly higher percentage of men (44.8%) compared to women (34.9%) did not have a dental visit in the past year.
- The proportion of black adults who did not have a dental visit in the past year was significantly higher when compared to the proportion of white adults (47% vs. 38.8%).
- About 47% of adults aged 65 years or older did not have a dental visit in the past year; this was a significantly higher estimate compared to adults 18-64 years.
- The proportion of adults who did not have a dental visit in the past year decreased significantly with increasing levels of educational attainment; about 64.4% of adults with less than a high school education did not have a dental visit in the past year.
- The proportion of adults who did not have a dental visit in the past year decreased significantly with increasing levels of annual household income.

Percent of Kentucky Adults who did not have a Dental Visit in the Past Year, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
ORAL HEALTH (continued)

Question: How many of your permanent teeth have been removed because of tooth decay or gum disease?

At Risk: Adults who have had one or more teeth removed because of tooth decay or gum disease are considered at risk.

Who is at risk in Kentucky?

- An estimated 51.7% of Kentucky adults have had one or more teeth removed because of tooth decay or gum disease; this was a higher estimate than the United States estimate of 44.5%.
- There were no statistically significant differences between men and women who have had one or more teeth removed because of tooth decay or gum disease.
- There were no statistically significant differences between white and black adults who have had one or more teeth removed because of tooth decay or gum disease.
- As would be expected, the proportion of adults who have had one or more teeth removed because of tooth decay or gum disease, increased significantly with age.
- The proportion of adults who have had one or more teeth removed because of tooth decay or gum disease, decreased significantly with increasing levels of educational attainment.
- About 64.1% of adults with annual household income of less than $25,000 have had one or more teeth removed because of tooth decay or gum disease; this was a significantly higher estimate compared to 38.7% of adults with annual household income of $50,000 or more.

Percent of Kentucky Adults who have had one or more teeth removed because of tooth decay or gum disease, by Age*, Education*, and Income* — 2012

* Denotes a statistically significant difference among the values.

In this report, the term ‘significant’ only refers to statistically significant differences in prevalence.

Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
Prevalence Estimates by Area Development District (ADD)

The remainder of this report incorporates ArcGIS mapping to illustrate prevalence estimates by Area Development District (ADD) for each risk factor, condition, or indicator presented in the preceding pages.

Kentucky has 120 Counties that are divided into 15 ADDs for the planning of a variety of programs. Data for this part of the report are analyzed by ADDs, rather than by county, because sample sizes for most counties are too small to provide statistically reliable estimates.

Counties in each ADD

| Big Sandy:    | Floyd, Johnson, Magoffin, Martin, Pike |
| Bluegrass:    | Anderson, Bourbon, Boyle, Clark, Estill, Fayette, Franklin, Garrard, Harrison, Jessamine, Lincoln, Madison, Mercer, Nicholas, Powell, Scott, Woodford |
| Buffalo Trace:| Bracken, Fleming, Lewis, Mason, Robertson |
| Cumberland Valley: | Bell, Clay, Harlan, Jackson, Knox, Laurel, Rockcastle, Whitley |
| FIVCO:        | Boyd, Carter, Elliott, Greenup, Lawrence |
| Gateway:      | Bath, Menifee, Montgomery, Morgan, Rowan |
| Green River:  | Daviess, Hancock, Henderson, McLean, Ohio, Union, Webster |
| Kentucky River: | Breathitt, Knott, Lee, Leslie, Letcher, Owsley, Perry, Wolfe |
| KIPDA:        | Bullitt, Henry, Jefferson, Oldham, Shelby, Spencer, Trimble |
| Lake Cumberland: | Adair, Casey, Clinton, Cumberland, Green, McCreary, Pulaski, Russell, Taylor, Wayne |
| Lincoln Trail:| Breckinridge, Grayson, Hardin, Larue, Marion, Meade, Nelson, Washington |
| Northern Kentucky: | Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, Pendleton |
| Pennyrile:    | Caldwell, Christian, Crittenden, Hopkins, Livingston, Lyon, Muhlenberg, Todd, Trigg |
| Purchase:     | Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, McCracken, Marshall |
Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
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Percent of Kentucky Adults who have Current Asthma, by Area Development District, 2012

Statewide Prevalence: 11.1%
Nationwide (States and DC) Median: 8.9%

Percent of Kentucky Adults who have Coronary Heart Disease, by Area Development District, 2012

Statewide Prevalence: 6.1%
Nationwide (States and DC) Median: 4.3%
Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
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Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.

Percent of Kentucky Women (aged 18+) who did not have a Pap Smear Test in the Past Three Years, by Area Development District, 2012

Statewide Prevalence: 23.4%
Nationwide (States and DC) Median: 22.0%

Percent of Kentucky Adults (aged 50+) who have never had a Sigmoidoscopy/Colonoscopy, by Area Development District, 2012

Statewide Prevalence: 34.1%
Nationwide (States and DC) Median: 32.7%
Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.
Due to BRFSS methodology changes in 2011, estimates from 2011 and 2012 cannot be directly compared to estimates from previous years.

Percent of Kentucky Adults who did not have a Dental Visit in the Past Year, by Area Development District, 2012

Percent of Kentucky Adults who have had One or More Permanent Teeth Removed because of Tooth Decay or Gum Disease, by Area Development District, 2012