# Kentucky Behavioral Risk Factor Survey 

## 2010 Annual Report



Kentucky Department for Public Health Division of Prevention and Quality Improvement Chronic Disease Prevention \& Control Branch

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KyBRFS 2010 Annual Report

## Executive Summary

The 2010 KyBRFS Annual Data Report presents a snapshot of the health behaviors and health status indicators, that place Kentucky adults at risk for chronic diseases, injuries, and preventable infectious diseases. The report is based on information collected from residents aged 18 years or older from over 8,000 households in the Commonwealth of Kentucky throughout 2010. Some key findings from the survey include:

## Alcohol Consumption:

In 2010, prevalence of binge drinking among adults in Kentucky (11.9\%) was lower than the national median estimate of $15.1 \%$. This report defines binge drinkers as males who report having five or more drinks on one occasion or females who report having four or more drinks on one occasion in the past month. Prevalence of binge drinking among men (16.9\%) was significantly higher than women (7.3\%).

## Physical Activity:

About 30\% of Kentucky adults did not participate in any leisure-time physical activity or exercise. Adults who did not participate in any leisure-time physical activity were generally older, without a college education, and had lower levels of income.

## Cardiovascular Diseases:

In 2010, an estimated 6\% of adults in Kentucky had ever been told by a health care professional that they had a heart attack and $3.5 \%$ had ever been told they had a stroke. Almost $6 \%$ of Kentuckians have been told they have coronary heart disease. A higher percentage of men (8.4\%) than women (3.8\%) reported ever having a heart attack.

## Colorectal Cancer Screening:

An estimated $36.3 \%$ of adults aged 50 years or older in Kentucky have never had a sigmoidoscopy or colonoscopy. About $50 \%$ of Kentucky adults aged $50+$ years with less than a high school education have never had a colonoscopy or sigmoidoscopy.

## Diabetes:

An estimated $10 \%$ of adults in Kentucky have been told by a doctor that they have diabetes. In 2010, prevalence of diabetes was highest among residents aged $65+(20.4 \%)$, residents with less than a high school education ( $15.9 \%$ ), and residents with an income less than $\$ 25,000$ ( $15.6 \%$ ).

## Health Care Access/Coverage:

The estimated proportion of adults in Kentucky without health care coverage or health insurance was $16.9 \%$ in 2010. Most adults without health care coverage were younger, had less than a high school education, and had an income under $\$ 25,000$.

## Obesity:

In 2010, an estimated $31.8 \%$ of Kentucky adults were classified as obese based on Body Mass Index (BMI) classification. Kentucky had the 5th highest prevalence of adult obesity in the nation. Obesity prevalence in Kentucky was higher among men ( $32.8 \%$ ) than among women ( $30.8 \%$ ). Obesity prevalence among adults in Kentucky has been trending upwards since 1995 when it was $16.9 \%$.

## Tobacco Use:

About a quarter (24.8\%) of Kentucky's adult population were current smokers in 2010 which was much higher than the national prevalence of $17.3 \%$. This report defines current smokers as adults who have smoked at least 100 cigarettes (five packs) in their lifetime and currently smoke every day or some days. In 2010, Kentucky had the second highest proportion of smokers in the nation.

## Women's Health:

In 2010, $30.1 \%$ of women aged $40+$ in Kentucky reported that they did not have a mammogram in the past two years. Women over $40+$ who did not have a mammogram in the past two years had significantly lower levels of educational attainment and household income. An estimated $19.1 \%$ of women reported they did not have a Pap smear test in the past three years. Most women who did not receive a Pap smear test were less educated and earned a lower income in 2010.

## 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.

## 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 2010


## How is the data analyzed?

Data is analyzed using the following statistical analysis software: SAS 9.3, SAS Callable SUDAAN 9.1, and SPSS Complex Samples 18.0. 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 responses to be projected to a state estimate. Factors in weighting include the number of telephone numbers per household, the number of adults per household, and the demographic distribution of the sample. 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.

## Introduction (continued)

## 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. Respondents who indicate "don't know", "not sure", or "refused" are excluded from the calculation of prevalence estimates. Therefore, the sample sizes used to calculate the estimates in this report vary.

## 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.

## 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 Blacks.

## 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 unweighted sample size for the denominator is $<50$ or if the confidence interval for a subgroup is too large (i.e. CI half width > 10), the data are not reported.

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## Demographics

## Who participated in the 2010 KY BRFS survey?

## Demographic Characteristics by Gender

- A total of 8,061 Kentucky residents (aged 18 years or older) participated in the 2010 BRFSS. The initial sample of 8,061 residents was used to "weight" these survey data in order to obtain representative estimates for the state of Kentucky.
- According to the BRFSS, there were more women residents over the age of 18 in Kentucky than men ( $51.8 \%$ versus $48.2 \%$ ) in 2010.
- There was a greater percentage of white residents than black residents in Kentucky in 2010 ( $88.4 \%$ versus $5.6 \%$ ). The percentage of men compared to women were similar for both races.
- There were more women than men in the $65+$ age group ( $20 \%$ versus $15.6 \%$ ) and there were slightly more men than women in the $18-34$ age group ( $29.8 \%$ versus $24.8 \%$ ). The other age groups had similar distributions by gender.
- The majority of respondents were high school graduates or higher ( $88.2 \%$ ) and had a household income less than $\$ 50,000$ a year (57.5\%).

Distribution of Kentucky Adults by Gender, 2010


Distribution of Kentucky Adults by Gender and Race, 2010


Distribution of Kentucky Men and Women, by Age, Education, and Income, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## 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 males 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 2010, 11.9 \% of Kentucky adults reported binge drinking. This estimate is lower than the national median estimate of $15.1 \%$.
- Men were significantly more likely to report binge drinking than women ( $16.9 \%$ versus $7.3 \%$ ).
- There was no significant difference in reported binge drinking by race.
- The percentage of adults who reported binge drinking decreased with age.
- Binge drinking increased with increasing educational attainment.
- Among the income groups used in this report, the highest proportion of binge drinking was reported by adults who had an annual household income of $\$ 50,000$ or more (15.1\%).

Percent of Adults Classified as Binge Drinkers: Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults Classified as Binge Drinkers, by Gender*, and by Race, 2010



Percent of Kentucky Adults Classified as Binge Drinkers, by Age*, Education, and Income, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## 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?

- In 2010, 29.3\% of Kentucky adults reported not participating in any physical activity or exercise during the past month.
- There was a higher percentage of women who reported not participating in any physical activity compared to men (31.1\% versus 27.4\%).
- There was no significant difference between white and black residents who reported not participating in any physical activity.
- Lack of physical activity generally increased with age, with the highest proportion among adults aged 65 and above (39.7\%).
- Adults with lower levels of education were more likely to report a lack of physical activity.
- Over $40 \%$ of Kentucky adults with a household income of less than $\$ 25,000$ a year reported not participating in any physical activity.

Percent of Adults who did not Participate in any Physical Activity in the Past 30 Days: Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults who did not Participate in any Physical Activity in the Past 30 Days, by Gender, and by Race, 2010



Percent of Kentucky Adults who did not Participate in any Physical Activity in the Past 30 Days, by Age*, Education*, and Income*, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## 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 "every day" or "some days") are considered at risk.

## Who is at risk in Kentucky?

- In 2010, 24.8\% of Kentuckians reported that they smoke cigarettes every day or some days.
- Smoking prevalence among Kentucky adults in 2010 was much higher when compared to the national median estimate of $17.3 \%$.
- Smoking prevalence was not statistically different between men and women.
- Tobacco use in Kentucky did not vary significantly by race.
- A greater proportion of Kentucky adults who reported that they currently smoke are less than 65 years of age.
- An estimated $38.9 \%$ of adults who earn less than $\$ 25,000$ a year are current smokers
- About $40 \%$ of Kentuckians who currently smoke have less than a high school education.

Percent of Adults who are Current Smokers: Kentucky vs. Nationwide (States, and DC), 2010


Percent of Kentucky Adults who are Current Smokers,
by Gender, and by Race, 2010



Percent of Kentucky Adults who are Current Smokers, by Age, Education*, and Income*, 2010


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## ASTHMA

Questions: 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?

- In 2010, one in ten (10.4\%) Kentucky adults reported that they currently have asthma.
- Prevalence of current asthma among women residents was significantly higher than men (12.6\% versus $8.0 \%$ ).
- There were no statistically significant differences in current asthma prevalence among black and white residents.
- There were no statistically significant variations in current asthma prevalence across age groups.
- Prevalence of current asthma was highest among adults with lower levels of education and income.
- An estimated 106,400 children (under 18 years of age) in Kentucky (10.7\%) were told by a health professional that they had asthma. The estimate is based on information gathered from their parents, who participated in this survey.

Percent of Adults with Lifetime and Current Asthma: Kentucky vs Nationwide (States and DC,), 2010


Percent of Kentucky Adults who have Current Asthma, by Gender*, and by Race, 2010



Percent of Kentucky Adults who have Current Asthma, by Age, Education*, and Income*, 2010


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## 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?

- Almost $6 \%$ of adults in Kentucky have ever been told by a health professional that they had coronary heart disease.
- The percentage of men who had coronary heart disease (6.8\%) was significantly higher than the percentage of women who had the disease (4.9\%).
- Prevalence of coronary heart disease was significantly higher among white residents ( $5.9 \%$ ) than among black residents (1.9\%) in Kentucky.
- Prevalence of coronary heart disease increased significantly with age.
- Coronary heart disease was significantly more prevalent among adults with less than high school education compared to adults with a college degree.
- Prevalence of coronary heart disease was significantly higher among adults with low income (less than $\$ 25,000$ a year) compared to adults with an annual household income of $\$ 25,000$ or more.

Percent of Adults who have Coronary Heart Disease: Kentucky vs
Nationwide (States and DC), 2010


Percent of Kentucky Adults who have Coronary Heart Disease, by Gender*, and by Race*, 2010


Percent of Kentucky Adults who have Coronary Heart Disease, by Age*, Education*, and Income*, 2010


## DIABETES

Question: Have you ever been told by a doctor that you have diabetes?
At Risk: Adults who answered "Yes" are considered at risk.
Those who had gestational diabetes, pre-diabetes or borderline diabetes are excluded.

## Who is at risk in Kentucky?

- In $2010,10 \%$ of Kentucky adults reported that they have been told by a doctor that they have diabetes.
- There were no statistically significant differences in the percent of adults with diabetes by race or gender.
- The percentage of Kentucky adults with diabetes typically increased with age; prevalence of diabetes was highest among adults aged 65 years and above (20.4\%).
- Diabetes prevalence was higher among Kentucky adults with lower levels of education compared to those with a college degree.
- Diabetes prevalence decreased significantly with increased income levels.

Percent of Adults who have Diabetes: Kentucky vs Nationwide (States, and DC), 2010


Percent of Kentucky Adults who have Diabetes,
by Gender, and by Race, 2010



Percent of Kentucky Adults who have Diabetes, by Age*, Education*, and Income*, 2010


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## 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?

- In 2010, more adults in Kentucky reported having been told that they had a heart attack compared to the rest of the nation ( $6.0 \%$ versus $4.2 \%$ )
- A significantly higher percentage of men (8.4\%) than women (3.8\%) reported ever having a heart attack.
- Heart attack prevalence was higher among white residents than black residents ( $6.1 \%$ versus $3.7 \%$ ); however this difference was not statistically significant.
- As would be expected, the prevalence of heart attack increased with age.
- Prevalence of heart attack was higher among Kentuckians with lower levels of education compared to those with a college degree.
- Heart attacks decreased significantly with increasing levels of income in Kentucky.

Percent of Adults who have ever been told that they had a Heart Attack: Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults who have ever been told that they had a Heart Attack, by Gender*, and by Race, 2010



Percent of Kentucky Adults who have ever been told that they had a Heart Attack, by Age*, Education*, and Income*, 2010


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## 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?

- Prevalence of stroke was higher among adults in Kentucky (3.5\%) than in the rest of the nation (2.7\%)
- There was no significant difference between men and women who reported ever having a stroke.
- There were no statistically significant differences in the prevalence of stroke among black and white residents.
- Stroke prevalence among Kentucky adults increased with age.
- Prevalence of stroke was highest among Kentuckians aged $65+$, adults with less than a high school education, and among adults earning less than $\$ 25,000$ a year.

Percent of Adults who have ever been told that they had a Stroke: Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults who have ever been told that they had a Stroke, by Gender, and by Race, 2010



Percent of Kentucky Adults who have ever been told that they had a Stroke, by Age*, Education*, and Income*, 2010


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## OBESITY

Questions: 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: Respondents with BMI scores greater or equal to 30.0 are considered obese.

## Who is at risk in Kentucky?

- In 2010, 31.8\% of Kentucky adults were classified as obese. (i.e. Body Mass Index greater or equal to 30.0)
- Men reported being obese more than women in Kentucky, $32.8 \%$ and $30.8 \%$ respectively.
- Obesity prevalence among black residents was higher than among white residents ( $40 \%$ versus $31.5 \%$ ).
- Adults aged 35-64 years were significantly more likely to be obese compared to adults who were younger than 35 years or older than 65 years.
- Adults with lower levels of education were significantly more likely to be obese compared to adults who graduated from college.
- Adults with a household income less than $\$ 50,000$ a year were more likely to be obese compared to those with a household income of $\$ 50,000$ or more a year.

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## 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 considered at risk.

## Who is at risk in Kentucky?

- In 2010, a quarter of Kentucky's adult population reported having limited activities because of physical, mental, or emotional problems.
- Women in Kentucky were more likely to report having limited activity because of physical, mental, or emotional problems compared to men.
- An estimated $25.6 \%$ of white Kentuckians reported activity limitations compared to $16.8 \%$ of black Kentuckians.
- Kentuckians who reported limited activities due to physical, mental, or emotional problems were significantly older, and had lower levels of education and income.

Percent of Adults who reported Limited Activity due to Physical, Mental, or Emotional Problems: Kentucky vs Nationwide
(States and DC), 2010


Percent of Kentucky Adults who reported Limited Activity due to Physical, Mental, or Emotional Problems, by Gender, and by Race*, 2010



Percent of Kentucky Adults who reported Limited Activity due to Physical, Mental, or Emotional Problems, by Age*, Education*, and Income*, 2010


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## 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?

- In 2010, 21.5\% of Kentucky adults rated their general health as fair or poor as compared to $14.7 \%$ of the nation.
- There was no significant difference by gender of Kentucky residents rating their general health as fair or poor.
- There was no significant variation of white and black residents who rated their general health as fair or poor.
- Residents who reported fair or poor health tended to be older
- Fair or poor general health ratings significantly decreased with increasing education and income levels.
- About half of Kentucky residents who have less than a high school education ( $50.2 \%$ ) reported their general health as fair or poor compared to $9.9 \%$ of college graduates.
- In 2010, $41.9 \%$ of Kentuckians who earn less than $\$ 25,000$ per year reported fair or poor general health compared to only $8.0 \%$ of those earning $\$ 50,000$ or more.

Percent of Adults who reported their General Health as Fair or Poor: Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults who reported their General Health as Fair or Poor, by Gender, and by Race, 2010



Percent of Kentucky Adults who reported their General Health as Fair or Poor, by Age*, Education*, and Income*, 2010


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## HEALTH CARE ACCESS/COVERAGE

Question: Do you have any kind of health care coverage, including health insurance, prepaid 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?

- Almost $17 \%$ of Kentuckians reported not having any form of health care coverage.
- There were no statistically significant variations between the proportion of male and female residents who did not have health care coverage.
- There was no statistically significant difference among white and black residents who did not have health care coverage in Kentucky.
- Lack of health care coverage significantly decreased with increasing age, increasing education level, and increasing income level.
- The highest percentages of residents with no health care coverage were adults aged 18-24 years (28.7\%), adults with less than a high school education (29\%), and adults earning less than $\$ 25,000$ a year ( $32.5 \%$ ).

Percent of Adults with No Health Insurance: Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults with No Health Insurance, by Gender, and by Race, 2010



Percent of Kentucky Adults with No Health Insurance, by Age*, Education*, and Income*, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## 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?

- In 2010, 30.1\% of Kentucky women aged 40 years or older reported that they have not had a mammogram in the past two years compared to $24.8 \%$ in the United States.

Percent of Women aged 40+ who did not have a Mammogram in the Past Two Years: Kentucky vs. Nationwide (States and DC), 2010

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- The proportion of women (aged 40 years or older) who did not have a mammogram in the past two years ranged from $42 \%$ among those earning less than $\$ 25,000$ a year to $22.2 \%$ among those earning more than $\$ 50,000$ a year.
- The number of black women aged $40+$ years who responded to this question in 2010 was too low to make statistically sound comparisons by race.
- An estimated $43.2 \%$ of women (aged 40 years or older) who have less than a high school education did not have a mammogram in the past two years.

Percent of Kentucky Women aged 40+ who did not have a Mammogram in the Past Two Years, by Age, Education*, and Income*, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## CERVICAL CANCER SCREENING

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.

## Who is at risk in Kentucky?

- In 2010, $19.1 \%$ of Kentucky women reported that they have not had a Pap Smear test within the last three years.
- The number of black women who responded to this question was too low to make statistically sound comparisons by race.
- Women with less than a college education were significantly more likely to report not having a Pap Smear test in the past three years.
- An estimated $27.9 \%$ of women earning less than $\$ 25,000$ per year did not have a Pap Smear test within the past

Percent of Adult Females who did not have a Pap Smear Test in the Past Three Years: Kentucky vs. Nationwide (States and DC), 2010
 three years compared to $11.9 \%$ of women earning more than $\$ 50,000$ a year.

Percent of Kentucky Adult Females who did not have a Pap Smear Test in the Past Three Years, by Age*, Education*, and Income*, 2010


## 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 these exams?

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

## Who is at risk in Kentucky?

- Among Kentucky adults aged 50 years or older, $36.3 \%$ have never had a sigmoidoscopy or colonoscopy.
- Men (aged 50+ years) were more likely to report never having a colonoscopy or sigmoidoscopy than women, $38.8 \%$ vs. $34.2 \%$ respectively.
- The number of black Kentuckians aged 50+ years who responded to this question in 2010 was too low to make statistical comparisons by race.
- One in two Kentucky adults, aged 50 years or older with less than a high school education, have never had a sigmoidoscopy or colonoscopy.
- Over $40 \%$ of adults aged $50+$ years who earn less than $\$ 25,000$ per year have never had a sigmoidoscopy or colonoscopy.

Percent of Adults aged 50+ years who have never had a Sigmoidoscopy or Colonoscopy: Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults aged 50+ years who have never had a Sigmoidoscopy or Colonoscopy, by Gender, 2010


Percent of Kentucky Adults aged 50+ years who have never had a Sigmoidoscopy or Colonoscopy, by Age*, Education*, and Income*, 2010


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## HIV/AIDS Screening Test (Ages 18-64)

Question: Have you ever been tested for HIV?
At Risk: Adults ages 18-64 who have never been tested for HIV are considered at risk.

## Who is at risk in Kentucky?

- Among Kentucky adults ages 18-64, 62.3\% have never been tested for HIV.
- Over 65\% of men in Kentucky ages 18-64, reported never being tested for HIV compared with $59.2 \%$ of Kentucky women.
- The number of black people ages $18-64$, who responded to this question in 2010 was too low to make statistical comparisons by race.
- Kentuckians ages 18-64 who have never been tested for HIV were generally older.
- There was no statistically significant variation in HIV testing between education levels in Kentucky.
- A higher proportion of Kentuckians (ages 18-64) who earn over $\$ 25,000$ per year have never been tested for HIV compared to Kentuckians who earned less than \$25,000 per year.

Percent of Adults (ages 18-64) who have never been tested for HIV:
Kentucky vs. Nationwide
(States, DC, and Territories), 2010


Percent of Kentucky Adults (ages 18-64) who have never been tested for HIV, by Gender, 2010


Percent of Kentucky Adults (ages 18-64) who have never been tested for HIV, by Age*, Education, and Income*, 2010


[^1]
## 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 males aged 40 years or older who did not have a PSA test within the past two years are considered at risk.

## Who is at risk in Kentucky?

- About $50 \%$ of Kentucky men aged 40 years or older reported that they have not had a PSA test within the past two years.
- The number of black men aged $40+$ years who responded to this question in 2010 was too low to make statistically sound comparisons by race.
- Over three-fourths of the men in the 40-49 age group reported that they have not had a PSA test in the last two years.
- The proportion of men aged $40+$ years who did not have a PSA test in the past two years significantly decreased with increasing levels of education.
- A high proportion (60.5\%) of men (aged $40+$ years) who earn less than $\$ 25,000$ a year did not have a PSA test in the past two years.


## Percent of Men aged 40+ who did not have a

 PSA Test in the Past Two Years: Kentucky vs. Nationwide (States and DC), 2010

Percent of Kentucky Men aged 40+ who did not have a PSA Test in the Past Two Years, by Age*, Education*, and Income*, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## INFLUENZA IMMUNIZATION

Question: In the past twelve months, have you had a flu shot?
At Risk: Adults who did not receive a flu shot in the past twelve months are considered at risk.

## Who is at risk in Kentucky?

- In 2010, $57.3 \%$ of Kentucky adults reported that they did not have a flu shot in the past twelve months. Which was lower than the national percentage ( $60.2 \%$ ).
- A significantly higher percentage of men (61\%) compared to women (53.8\%) did not have a flu shot in the past twelve months.
- There was no significant difference between the percentage of white residents and the percentage of black residents who did not receive a flu shot in the past twelve months.
- Over $70 \%$ of adults aged $18-34$ years did not have a flu shot in the past twelve months. This estimate is significantly higher compared to adults aged 35-49 years (65\%), 50-64 years ( $50.6 \%$ ), and 65 years or older ( $32.3 \%$ ).
- The percentage of adults who did not have a flu shot in the past 12 months decreased significantly with increased levels of educational attainment and income.

Percent of Adults who did not get a Flu Shot in the Past Year: Kentucky vs. Nationwide (States, DC, and Territories), 2010


Percent of Kentucky Adults who did not get a Flu Shot in the Past Year, by Gender* and by Race, 2010


Percent of Kentucky Adults who did not get a Flu Shot in the Past Year, by Age*, Education*, and Income*, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## 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?

- An estimated $35.4 \%$ of Kentucky adults aged 65 years or older have never received a pneumococcal vaccination.
- Among adults aged 65 years or older, there was no significant difference between the percentage of men and women who have not received a pneumococcal vaccination.
- The number of black residents aged $65+$ years who responded to this question in 2010 was too low to make statistically sound comparisons by race.
- A significantly higher percentage of adults aged 65-74 years have never had a pneumococcal vaccine ( $42.8 \%$ ) compared to adults who are 75 years or older ( $25.3 \%$ ).
- The percentage of adults aged $65+$ who never received a pneumococcal vaccination significantly decreased by educational attainment.
- The percentage of adults (aged 65+) who have not had a pneumonia shot did not vary significantly by annual household income.

Percent of Adults aged 65+ who have never had a Pneumococcal Vaccination: Kentucky
vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults aged 65+ who have never had a Pneumococcal Vaccination, by Gender, 2010


Percent of Kentucky Adults aged 65+ who have never had a Pneumococcal Vaccination, by Age*, Education, and Income, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## 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?

- In 2010, 36.8\% of adults in Kentucky reported that they did not have a dental visit in the past year.
- A significantly higher percentage of men (40.7\%) compared to women ( $33.1 \%$ ) did not visit the dentist or a dental clinic in the past year.
- There were no statistically significant differences between the proportion of black and white residents who did not have a dental visit in the past year.
- Adult residents who do not have a college degree are significantly less likely to have a dental visit compared to those who have a college degree.
- Almost $60 \%$ of adults who earn less than $\$ 25,000$ a year reported that they did not have a dental visit in the past year.

Percent of Adults who did not have a Dental Visit in the Past Year: Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults who did not have a Dental Visit in the Past Year: by Gender*, and by Race, 2010



Percent of Kentucky Adults who did not have a Dental Visit in the Past Year, by Age*, Education*, and Income*, 2010


* Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.


## 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 are considered at risk.

## Who is at risk in Kentucky?

- Over $50 \%$ of adults in Kentucky reported that they have had one or more teeth removed because of tooth decay or gum disease.
- There was no statistically significant difference between the proportion of men and women who had teeth removed in Kentucky.
- The number of black residents who responded to this question in 2010 was too low to make statistically sound comparisons by race.
- Having one or more teeth removed because of tooth decay or gum disease in Kentucky significantly increases with age.
- There were significant variations in education and income among Kentucky adults who reported that they had one or more teeth removed because of tooth decay.

Percent of Adults who have had one or more teeth removed, Kentucky vs. Nationwide (States and DC), 2010


Percent of Kentucky Adults who have had one or more teeth removed, by Gender, 2010


Percent of Kentucky Adults who have had one or more teeth removed, by Age, Education*, and Income,* 2010


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## 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 |
| :--- | :--- |
| Barren River: | Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, Warren |
| Big Sandy: | Floyd, Johnson, Magoffin, Martin, Pike |
| Bluegrass: | Anderson, Bourbon, Boyle, Clark, Estill, Fayette, Franklin, Garrard, Harrison, Jessamine, <br> 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 |

## Percent of Kentucky Adults Classified as Binge Drinkers, by Area Development District, 2010

## Percent



Statewide Prevalence: 11.9\%
Nationwide (States and DC) Median: 15.1\%

## Percent of Kentucky Adults who did not Participate in any Physical Activity in the Past 30 Days, by Area Development District, 2010

## Percent



Statewide Prevalence: 29.3\%
Nationwide (States and DC) Median: 23.9\%

## Percent of Kentucky Adults who are Current Smokers, by Area Development District, 2010

## Percent



Statewide Prevalence: 24.8\%
Nationwide (States and DC) Median: 17.3\%

## Percent of Kentucky Adults who have Current Asthma, by Area Development District, 2010

## Percent



Statewide Prevalence: 10.4\%
Nationwide (States and DC) Median: 9.1\%

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## Percent of Kentucky Adults who have Coronary Heart Disease, by Area Development District, 2010



Statewide Prevalence: 5.8\%
Nationwide (States and DC) Median: 4.1\%

## Percent of Kentucky Adults who have Diabetes, by Area Development District, 2010

Percent


Statewide Prevalence: 10\%
Nationwide (States and DC) Median: 8.7\%

## Percent of Kentucky Adults who have ever had a Heart Attack, by Area Development District, 2010

Percent

| $\square$ | $4.0-5.5$ |
| :--- | :--- |
| $\square$ | $5.6-6.5$ |
|  | $6.6-8.0$ |
|  | $8.1-10.3$ |



Statewide Prevalence: 6.0\%
Nationwide (States and DC) Median: 4.2\%

## Percent of Kentucky Adults who have ever had a Stroke, by Area Development District, 2010



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## Percent of Kentucky Adults who are Obese, by Area Development District, 2010

## Percent



Statewide Prevalence: 31.8\%
Nationwide (States and DC) Median: 27.5\%

## Percent of Kentucky Adults with Activity Limitations due to Health Problems, by Area Development District, 2010



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## Percent of Kentucky Adults with Fair or Poor General Health, by Area Development District, 2010



## Percent of Kentucky Adults with No Health Care Coverage, by Area Development District, 2010

Percent


Statewide Prevalence: 16.9\%
Nationwide (States and DC) Median: 15.0\%

## Percent of Kentucky Women (aged 40+) who did not have a Mammogram in the Past Two Years, by Area Development District, 2010

## Percent



Statewide Prevalence: 30.1\%
Nationwide (States and DC) Median: 24.8\%

## Percent of Kentucky Women who did not have a PAP Smear Test in the Past Three Years, by Area Development District, 2010

## Percent



Statewide Prevalence: 19.1\%
Nationwide (States and DC) Median: 18.7\%

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## Percent of Kentucky Adults (aged 50+) who have never had a Sigmoidoscopy/Colonoscopy, by Area Development District, 2010

## Percent



Statewide Prevalence: 36.3\%
Nationwide (States and DC) Median: 34.8\%

Percent of Kentucky Adults who have never been tested for HIV, by Area Development District, 2010


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## Percent of Kentucky Men (aged 40+) who did not have a PSA Test in the Past Two Years, by Area Development District, 2010

## Percent



Statewide Prevalence: 50.2\%
Nationwide (States and DC) Median: 46.8\%

## Percent of Kentucky Adults who did not get a Flu Shot in the Past Year, by Area Development District, 2010



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## Percent of Kentucky Adults (aged 65+) who have never had a Pneumococcal Vaccination, by Area Development District, 2010

## Percent



Statewide Prevalence: 35.4\%
Nationwide (States and DC) Median: 31.2\%

## Percent of Kentucky Adults who did not have a Dental Visit in the Past Year, by Area Development District, 2010

## Percent



Statewide Prevalence: 36.8\%
Nationwide (States and DC) Median: 30.3\%

## Percent of Kentucky Adults who have had One or More Permanent Teeth Removed, by Area Development District, 2010



Statewide Prevalence: 53.1\%
Nationwide (States and DC) Median: 43.6\%


[^0]:    * Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.

[^1]:    * Denotes a statistically significant difference among the values. In this report, the term 'significant' only refers to statistically significant differences in prevalence.

