

State Health Assessment

2017 UPDATE

**A Compilation of Priority Health Issues from
data through 2015**



Kentucky Public Health

Prevent. Promote. Protect.

**Kentucky Department for Public Health
Cabinet for Health and Family Services
275 East Main Street
Frankfort, Kentucky 40621**



March 22, 2017

ACKNOWLEDGEMENTS

The following individuals and organizations contributed to this compilation. Others not mentioned here include all those public health professionals who developed reports and compiled data for the source documents and referenced materials that were used to compile this assessment.

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SECTION 1 - OVERVIEW

INTRODUCTION

The Kentucky Department for Public Health (KDPH) compiled a comprehensive Kentucky health status assessment in 2013. Reviewing data contained in the 2013 assessment for reference, over 1300 Kentuckians responded to an electronic survey identifying what they perceived to be Kentucky's priority health issues. The top ten (10) health issues perceived by Kentuckians in 2013 were: access to care, obesity, drug & alcohol, cancer (all kinds), tobacco use, mental health, diabetes, maternal & child health, heart disease & stroke, and physical activity.

The following document, the **2017 Kentucky State Health Assessment Update**, serves as a brief data report containing the most recently reported data related to health factors/outcomes associated with Kentucky's top ten priority health issues as identified in the aforementioned survey.

The data referenced throughout this document ranges from years 2006-2015. Due to the rigorous process utilized by the Centers for Disease Control and Prevention (CDC) to analyze data prior to release, limited staff within the Office of Vital Statistics at KDPH needed to query and analyze large data sets, and contracted agencies who need the latest data to complete reports, the KDPH is providing the most current analyzed data available in this report. As the latest data becomes available, this document will be updated and available on the KDPH website at <http://www.chfs.ky.gov/dph>.

The 2017 Kentucky State Health Assessment Update

EXECUTIVE SUMMARY

DEMOGRAPHIC SUMMARY

- Kentucky's population of 4,339,367 ranks 26th among the states.
- Kentucky has less diversity by Race/Ethnicity than other U.S. states, with 87.8% White persons, 7.8% Black or African-Americans and 1.2% Hispanic/Latino comprising the population.

HEALTHCARE ACCESS/COVERAGE SUMMARY

- The prevalence of Kentucky residents without healthcare coverage is higher among those with less education, and younger adults.
- The prevalence of Kentuckians without healthcare coverage is far below the national median.

HEALTH BEHAVIOR FACTORS SUMMARY

- Kentuckians continue to have increased smoking habits and sedentary lifestyles.
- Alcohol consumption is lower than the U.S. norm but significantly higher among Kentucky men than Kentucky women.

HEALTH OUTCOMES SUMMARY

- Kentucky had the highest rate of new (acute) Hepatitis C Virus (HCV) infection in the nation from 2008-2015.
- New HIV cases reside primarily in the urban areas of Louisville, Lexington, and Northern Kentucky.
- Cancer mortality rates for all sites remained steady from 2010-2014.
- Kentuckians have a higher percentage of people with diabetes than the U.S.
- Prevalence of coronary heart disease significantly increases with age.
- Black adults have a significantly higher prevalence of obesity compared to white adults; however, among adolescents there was not a significant difference by race.
- Opioid overdose deaths have tripled from 2006-2015.

MATERNAL AND CHILD HEALTH SUMMARY

- Compared to the nation, Kentucky has increased infant mortality and obesity rates among youth.
- There has been a six-fold increase in the number of infants with neonatal abstinence syndrome (NAS) over the past ten years.
- Women who smoke during pregnancy has declined 25% from 2006-2015.

SECTION 2 - DATA

DEMOGRAPHICS

According to the Official 2010 Census, Kentucky's population was 4,339,367. Kentucky's growth since the 2000 census equaled 7.4 percent, less than the overall U.S. population growth of 9.7 percent for the same time period (Table 1).

Table 1. Population and Growth		
	Kentucky	U.S. Population
2010 Census	4,339,367	308,745,538
2000 Census	4,041,769	281,424,602
% Growth	7.4%	9.7%
Source: U.S. Census Data for 2010.		

Kentucky's population can be viewed through a number of important segments. The percentage of females in both Kentucky and the United States are slightly over half (Table 2).

Table 2. Comparison of Gender Distribution		
Gender	Kentucky	U.S. Population
Female	50.8%	50.8%
Male	49.2%	49.2%
	100.0%	100.0%
Source: U.S. Census Data for 2010.		

Comparing Kentucky's population by age categories to the U.S. population, there are only slight variations (Table 3).

Table 3. Population Segmented by Age		
	Kentucky	U.S. Population
Ages: Under 5	6.5%	6.5%
Ages: 5 - 9 years	6.5%	6.6%
Ages: 10 - 19 years	13.4%	13.8%
Ages: 20 - 44 years	33.0%	33.6%
Ages: 45 - 64 years	27.2%	26.4%
Ages: Over 65 years	13.3%	13.0%
	100.0%	100.0%
Source: U.S. Census Data for 2010.		

As Table 4 shows, Kentucky has less diversity by Race/Ethnicity than other U.S. states, with 87.8% White persons, 7.8% Black or African-Americans and 1.2% Hispanic/Latino comprising the population. Although the percentage is small, the Hispanic/Latino population doubled from 1.5 percent in 2000 to 3.1 percent in 2010.

Table 4. Population Segmented by Race/Ethnicity		
Race or Ethnicity	Kentucky	U.S. Population
White	87.8%	72.4%
Black	7.8%	12.6%
Asia, Hawaii, Pacific	1.2%	5.0%
2 or more races	1.7%	2.9%
Hispanic/Latino origin	3.1%	16.3%
White not Hispanic	86.3%	63.7%
Source: U.S. Census Data for 2010.		

HEALTHCARE ACCESS/COVERAGE

HEALTHCARE ACCESS/COVERAGE

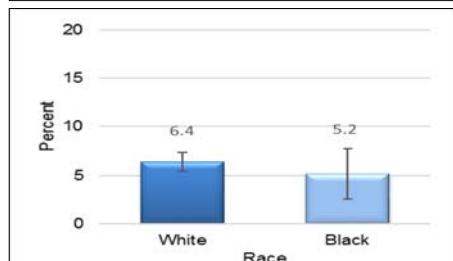
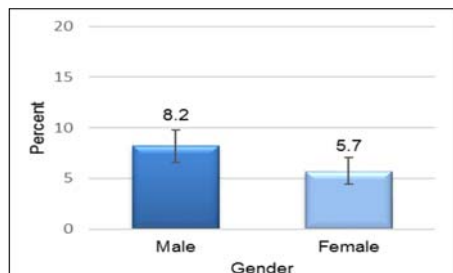
Question: Do you have any kind of healthcare coverage, including health insurance, pre-paid plans such as HMOs or governmental plans such as Medicare?

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

Percent of Adults with No Healthcare Coverage: Kentucky vs. Nationwide (States and DC) — 2015



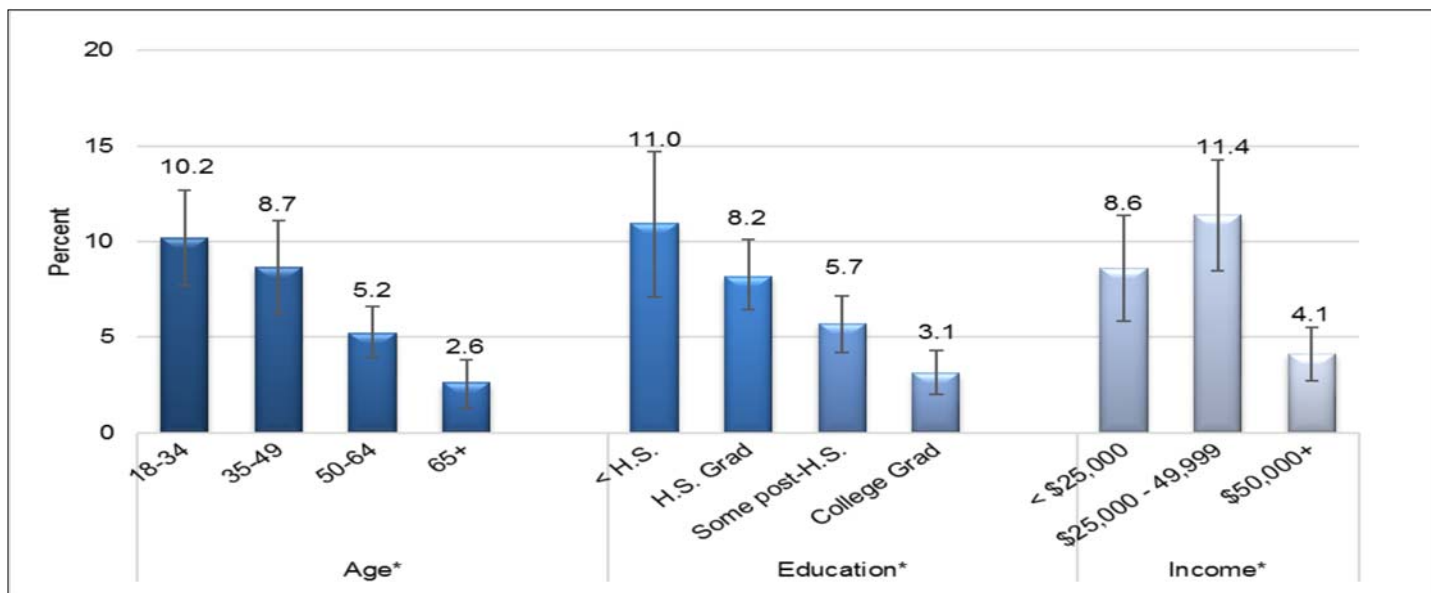
Percent of Kentucky Adults with No Healthcare Coverage, by Gender and by Race — 2015



Who is at risk in Kentucky?

- Only 7.0% of Kentucky adults reported having no healthcare coverage. This is less than the U.S median prevalence (10.8%).
- No significant differences were observed in prevalence of lack of health care coverage by gender.
- The prevalence of no healthcare coverage did not significantly differ by race.
- Young adults aged 18-34 reported significantly higher prevalence of no health care coverage than adults aged 65 years or older (10.2% vs 2.6%).
- Adults with less than high school reported a significantly higher prevalence of no healthcare coverage than those with a college degree (11.0% vs 3.1%).
- The prevalence of no healthcare coverage was significantly higher among adults with an annual household income between \$25,000—\$49,999 than among those with household income of \$50,000 or more (11.4% vs 4.1%).

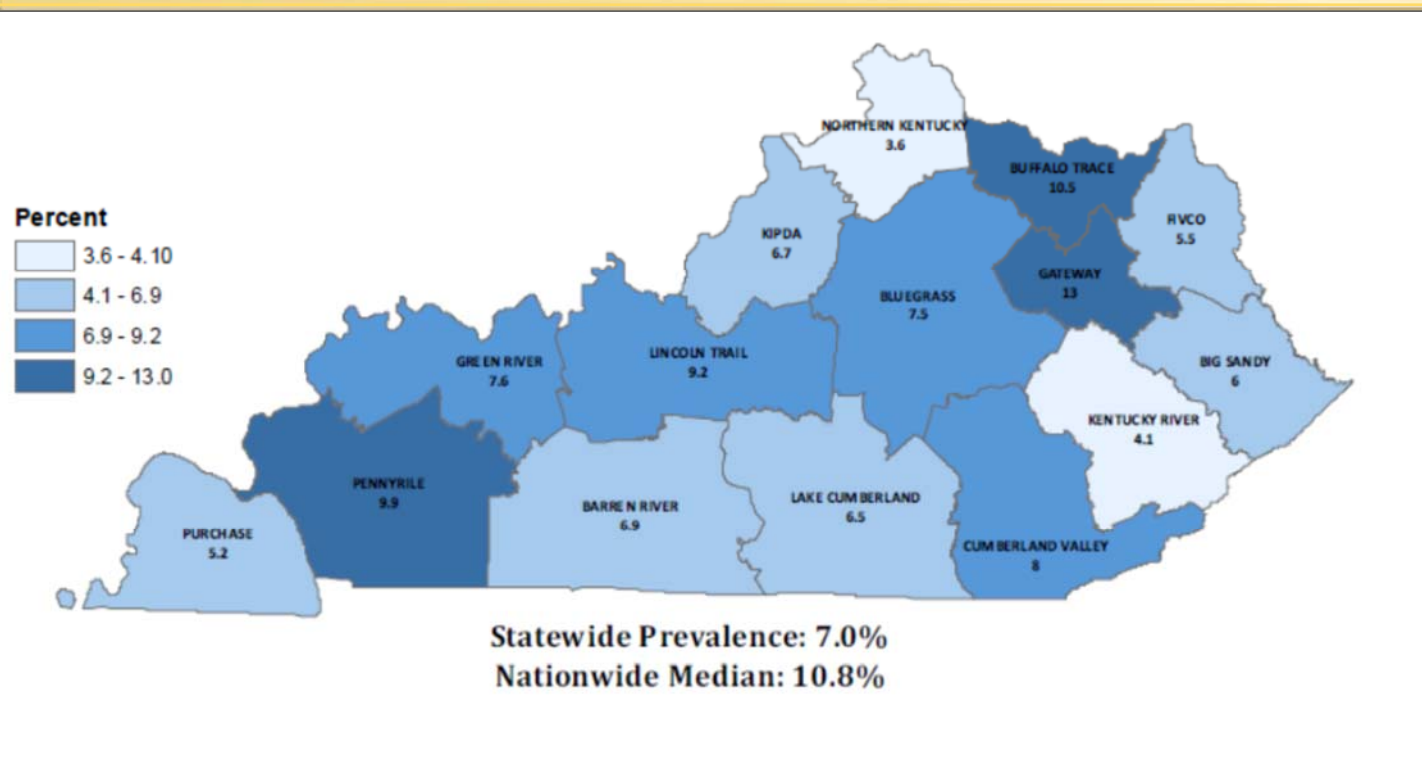
Percent of Kentucky Adults with No Healthcare Coverage, by Age*, Education*, and Income* — 2015



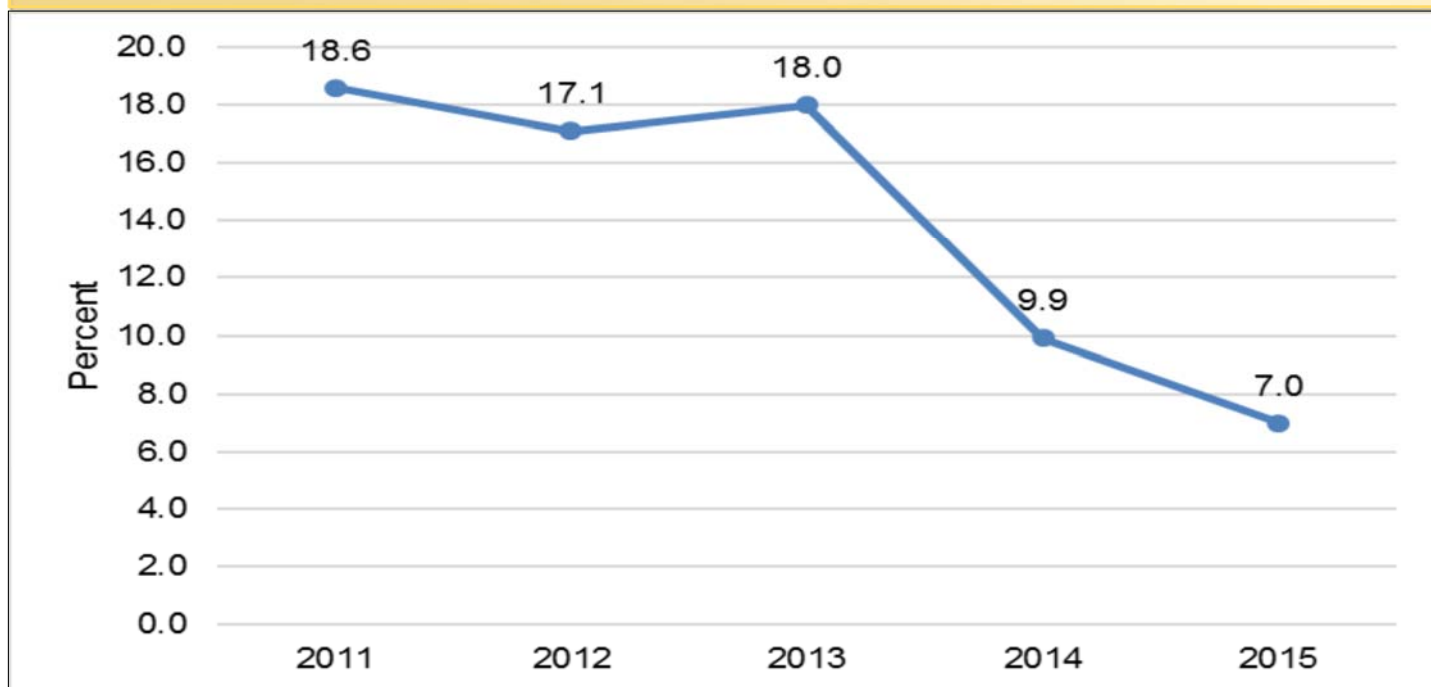
Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2015

* Denotes a statistically significant difference among the values

Percent of Kentucky Adults with No Healthcare Coverage, by Area Development District, 2015



Percent of Kentucky Adults with No Healthcare Coverage, 2011-2015



Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2011-2015

HEALTH BEHAVIOR FACTORS

ALCOHOL CONSUMPTION: BINGE DRINKING

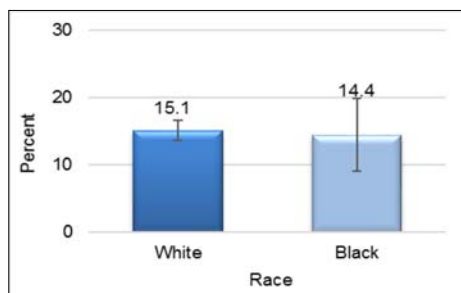
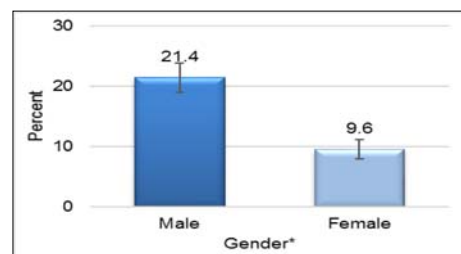
Question: Considering all types of alcoholic beverages, how many times during the past month did you have four or more drinks on one occasion?

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.

Percent of Adults Classified as Binge Drinkers: Kentucky vs. Nationwide (States and DC) — 2015



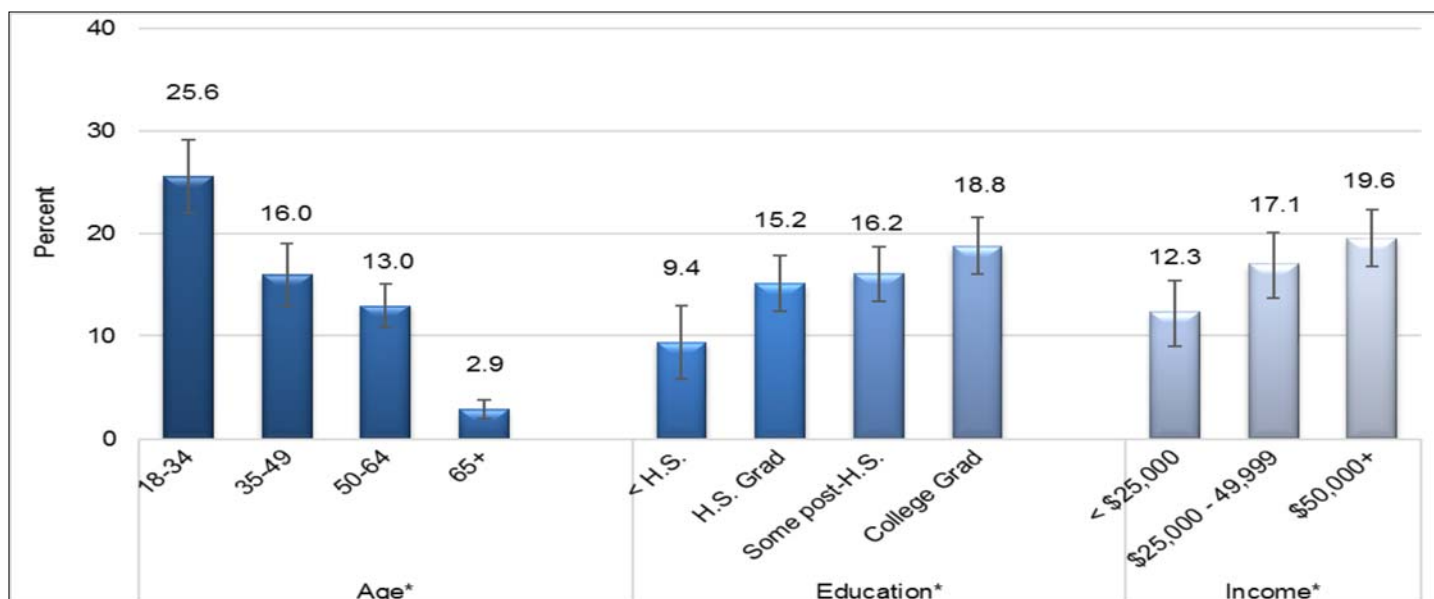
Percent of Kentucky Adults Classified as Binge Drinkers by Gender and by Race — 2015



Who is at risk in Kentucky?

- ◆ In 2015, the prevalence of binge drinking among Kentucky adults (15.3%) was lower than the U.S. median prevalence (16.3%).
- ◆ The prevalence of binge drinking among men was more than twice the prevalence among women (21.4% vs 9.6%).
- ◆ The prevalence of binge drinking did not significantly differ by race.
- ◆ The prevalence of binge drinking was higher among adults aged 18-34 years, 35-49 years and 50-64 years than among those aged 65 years and older.
- ◆ Binge drinking was highest among adults with a college degree (18.8%), and lowest among those with less than high school education (9.4%).
- ◆ Binge drinking was significantly more common among those with an annual income of \$50,000 or more than among those who earn less than \$25,000 a year (19.6% vs 12.3%).

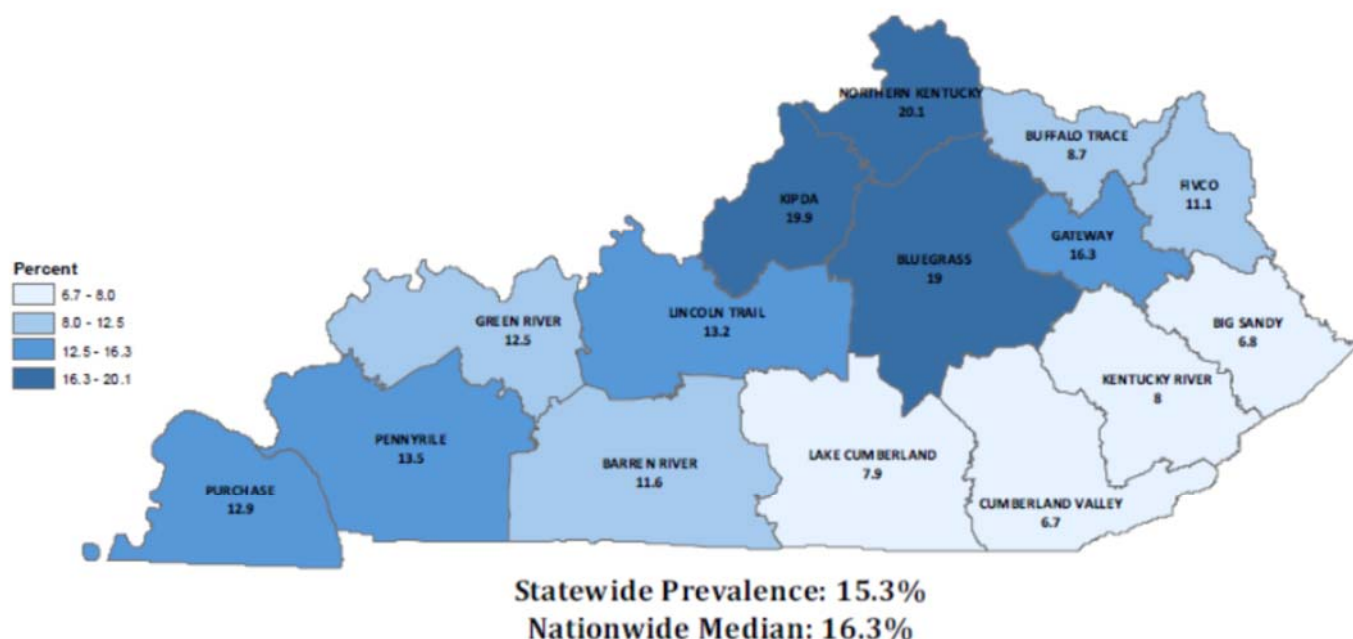
Percent of Kentucky Adults Classified as Binge Drinkers, by Age*, Education*, and Income*— 2015



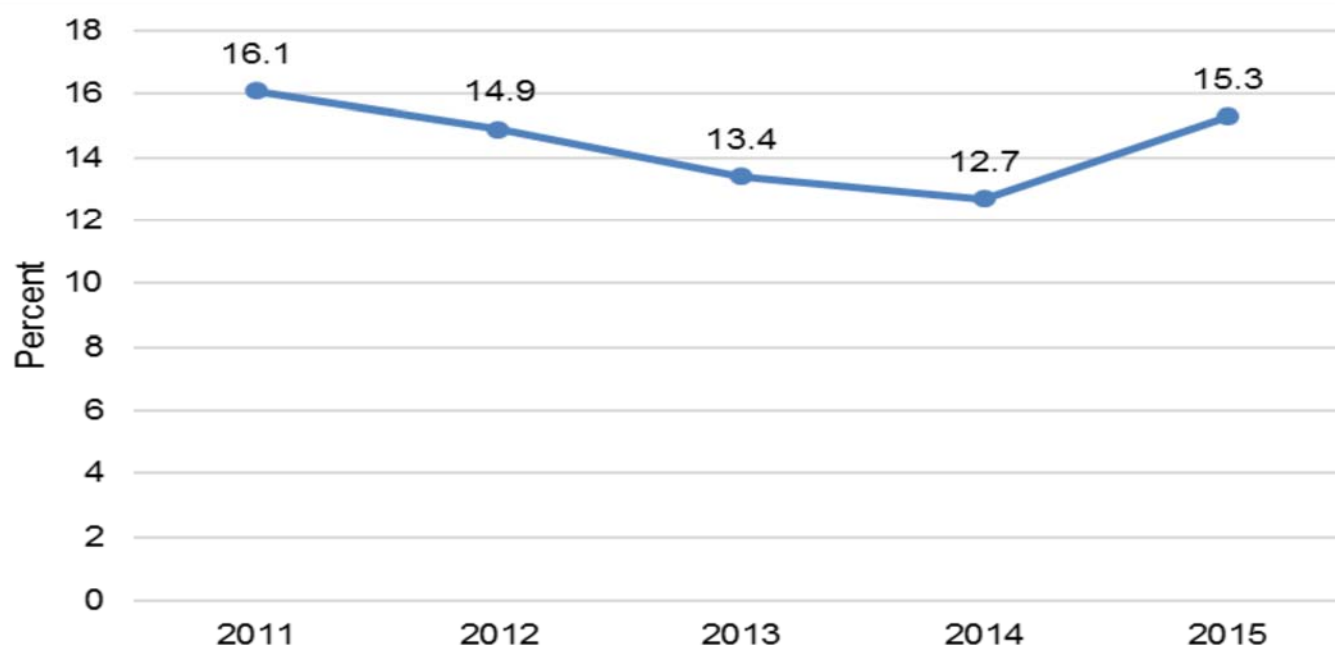
Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2015

* Denotes a statistically significant difference among the values

Percent of Kentucky Adults Classified as Binge Drinkers, by Area Development District, 2015



Percent of Kentucky Adults Classified as Binge Drinkers, 2011-2015



Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2011-2015

NO LEISURE TIME PHYSICAL ACTIVITY

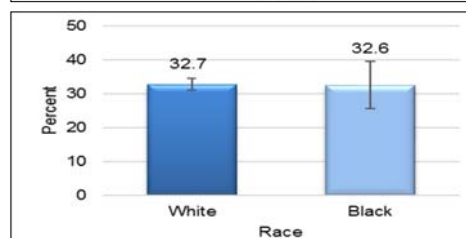
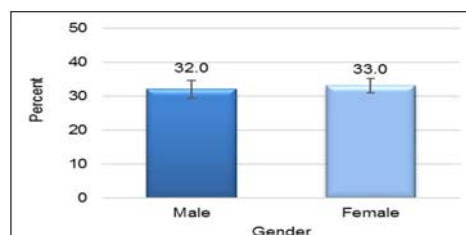
Question: During the past 30 days, other than your regular job, did you participate in any physical activity or exercise such as running, calisthenics, golf, gardening, or walking for exercise?

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

Percent of Adults who did not Participate in any Physical Activity in the Past 30 days: Kentucky vs. Nationwide (States and DC) — 2015



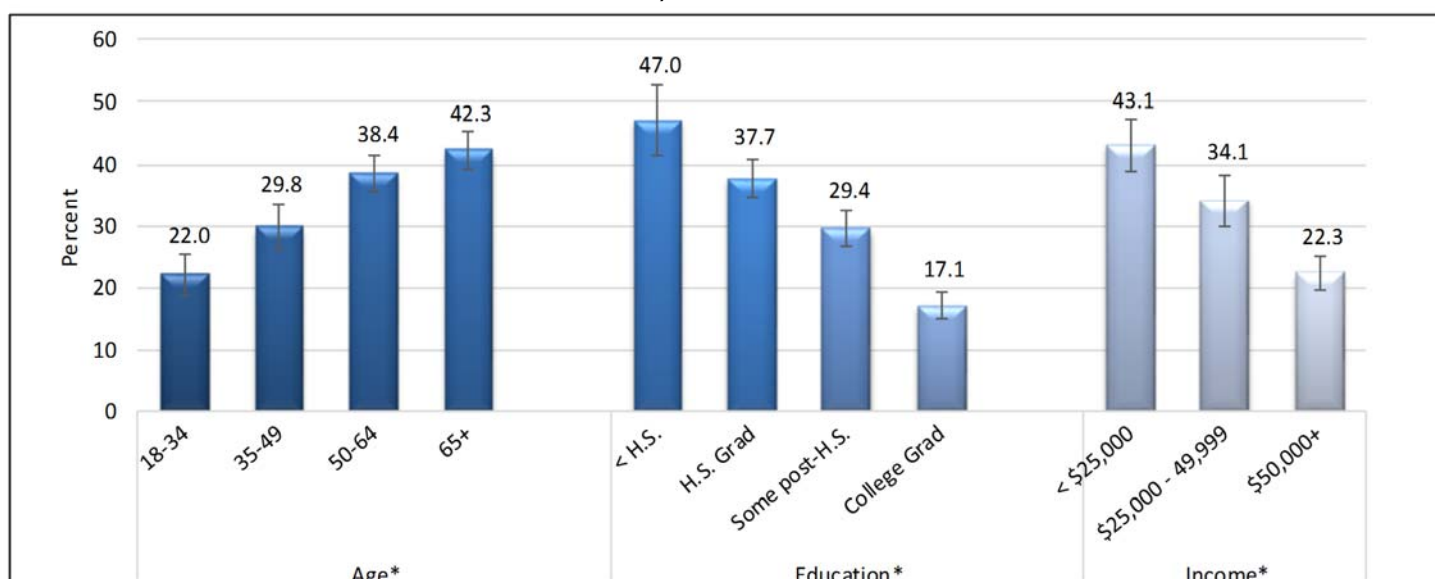
Percent of Kentucky Adults who did not Participate in any Physical Activity in the Past 30 Days, by Gender and by Race — 2015



Who is at risk in Kentucky?

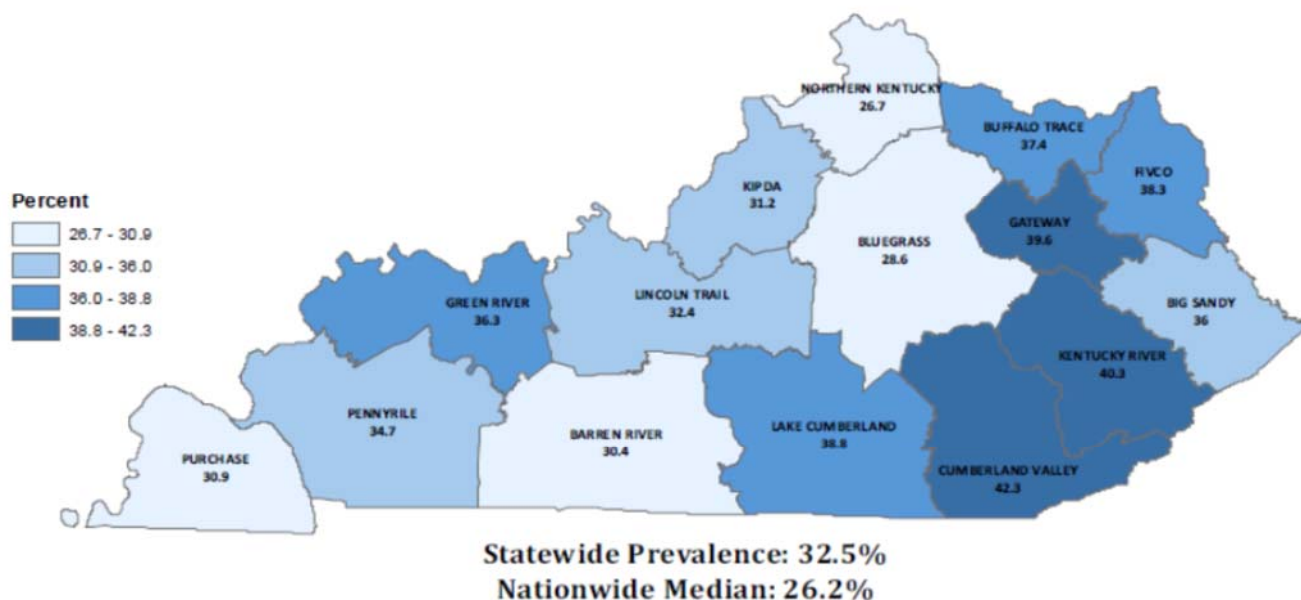
- ◆ In 2015, an estimated 32.5% of Kentucky adults reported no leisure time activity. This estimate was higher than the U.S. median (26.2%).
- ◆ The prevalence of no leisure time physical activity did not significantly differ by gender.
- ◆ The prevalence of no leisure time physical activity was similar by race.
- ◆ No leisure time physical activity significantly increased with age, with the highest prevalence being reported among adults aged 65 years and older (42.3%) and the lowest among those aged 18-34 years (22.0%).
- ◆ When compared by education, no leisure time activity was highest among adults with less than high school education (47.0%), and lowest among those with a college degree (17.1%).
- ◆ The prevalence of no leisure time physical activity significantly decreased as household income increased.

Percent of Kentucky Adults who did not Participate in any Physical Activity in the Past 30 Days by Age*, Education*, and Income* — 2015

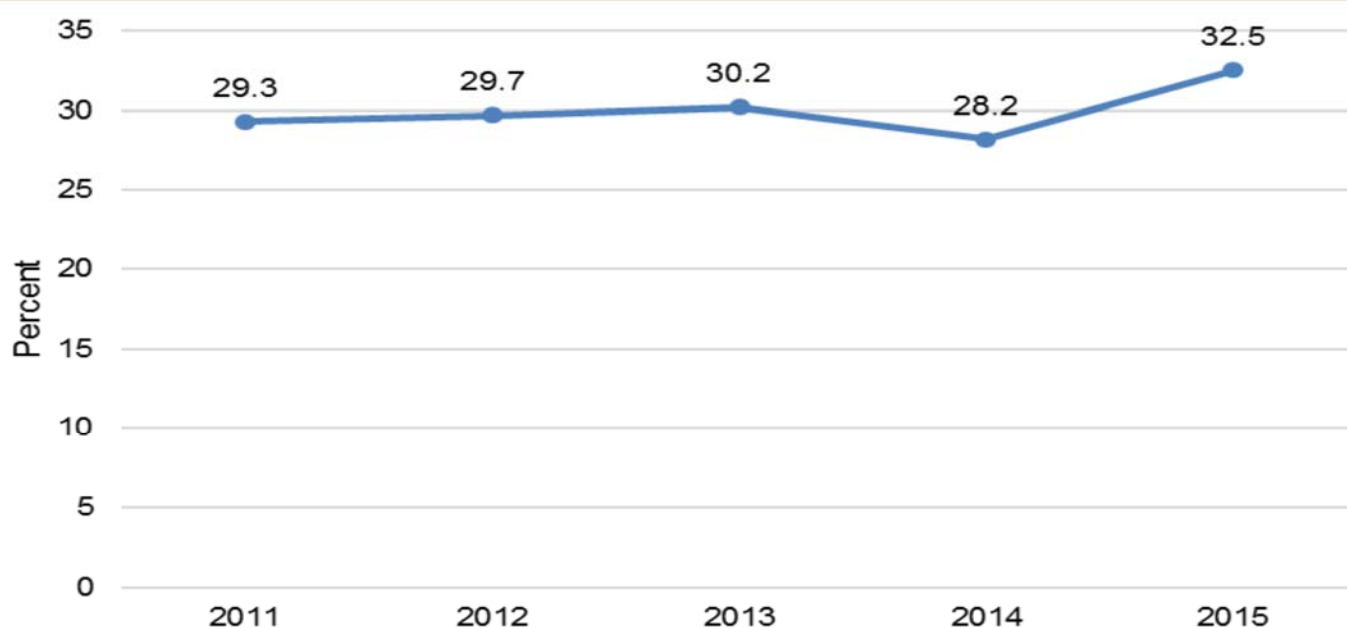


* Denotes a statistically significant difference among the values

Percent of Kentucky Adults who did not Participate in any Physical Activity in the Past 30 days, by Area Development District, 2015



Percent of Kentucky Adults who did not Participate in any Physical Activity in the Past 30 days, 2011-2015



Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2011-2015

TOBACCO USE

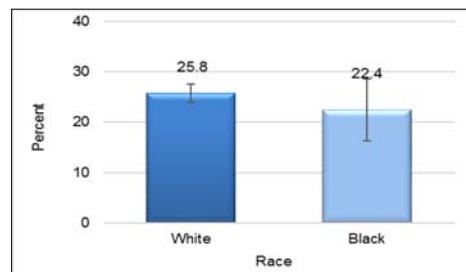
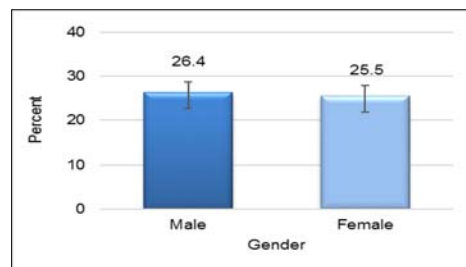
Question: If you have smoked at least 100 cigarettes in your entire life, are you now smoking everyday, some days, or not at all?

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

Percent of Adults who are Current Smokers: Kentucky vs. Nationwide (States and DC) — 2015



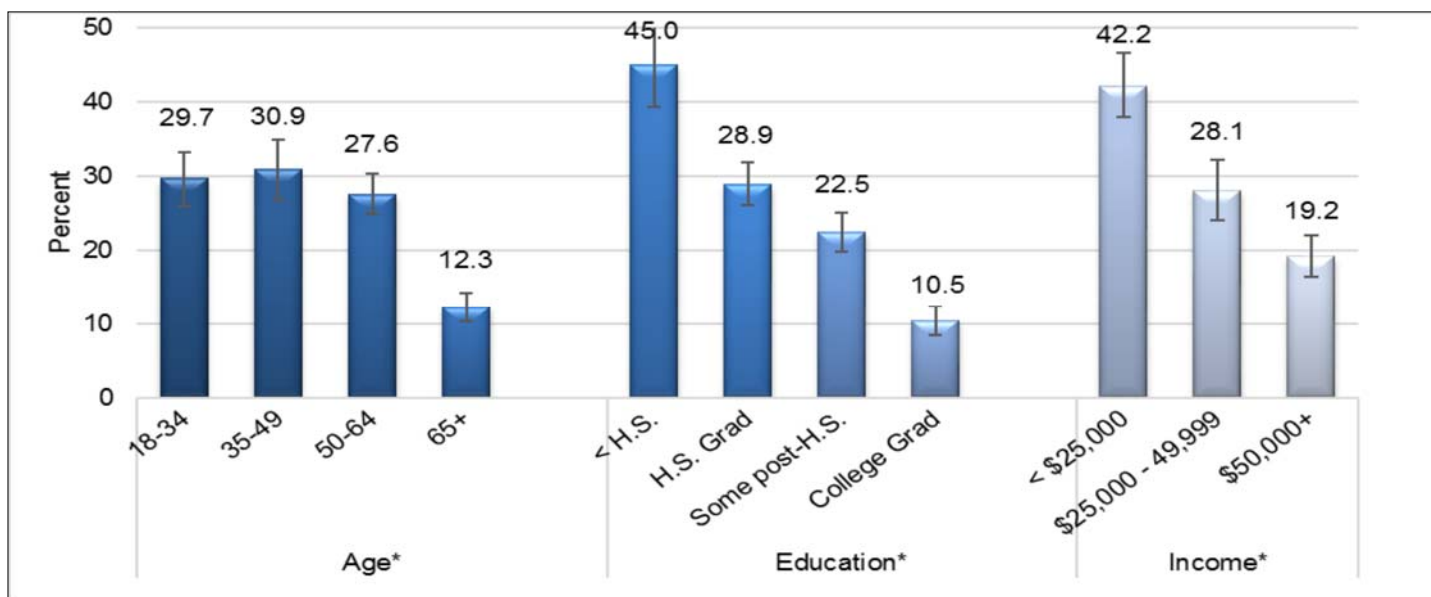
Percent of Kentucky Adults who are Current Smokers, by Gender and by Race — 2015



Who is at risk in Kentucky?

- ♦ About 26.0% of Kentucky adults reported that they were current smokers in 2015. This estimate was higher than the U.S. median (17.5%).
- ♦ The prevalence of cigarette smoking did not differ significantly by gender.
- ♦ The prevalence of cigarette smoking did not differ significantly by race.
- ♦ The prevalence of cigarette smoking was significantly lower among adults aged 65 and older (12.3%) compared with other age groups.
- ♦ The prevalence of cigarette smoking significantly decreased as education level increased. 45.0% of adults with less than a high school education reported that they were currently smokers, compared with 10.5% of those with a college degree.
- ♦ Cigarette smoking is significantly more common among those with an annual household income of less than \$25,000 than among those with a higher annual household income.

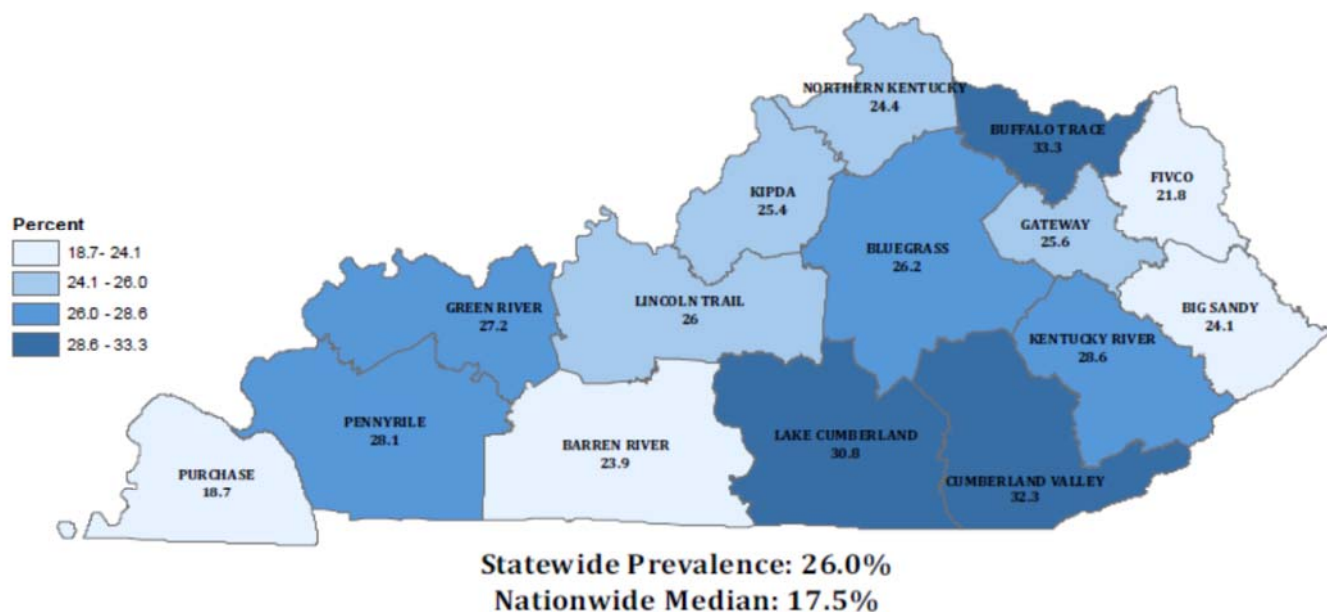
Percent of Kentucky Adults who are Current Smokers, by Age*, Education*, and Income* — 2015



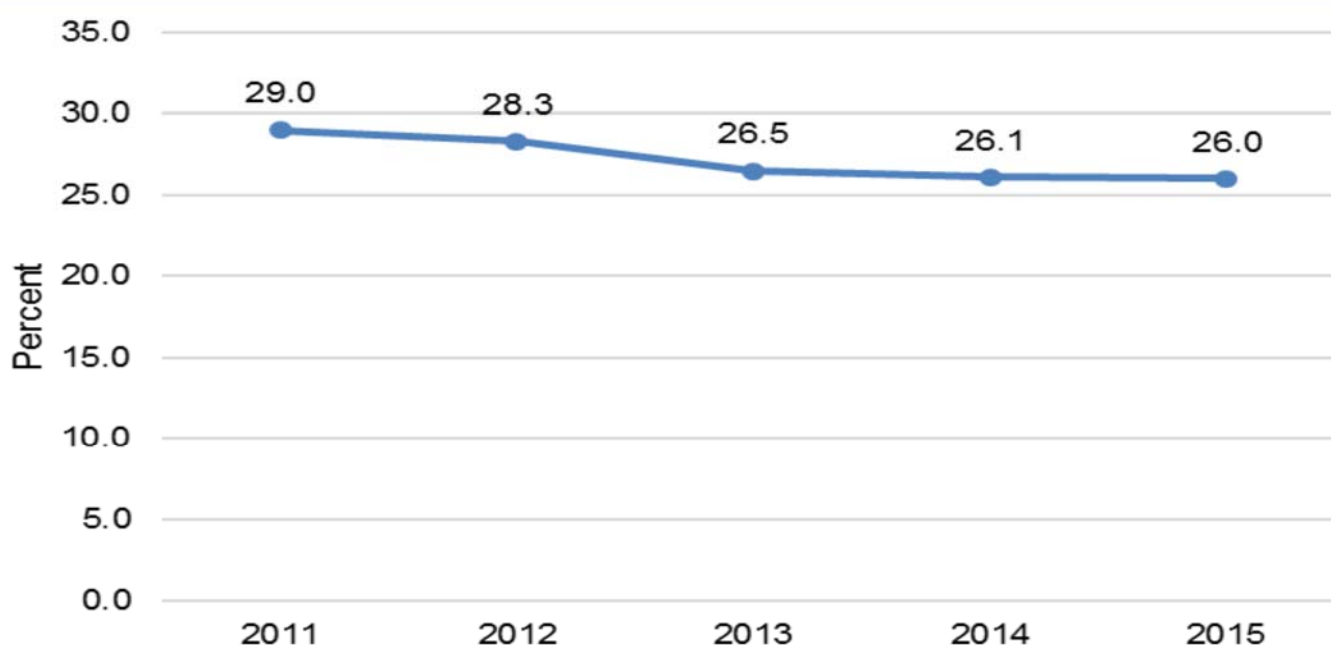
Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2015

* Denotes a statistically significant difference among the values

Percent of Kentucky Adults who are Current Smokers, by Area Development District, 2015



Percent of Kentucky Adults who are Current Smokers, 2011-2015



Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2011-2015

HEALTH OUTCOMES

Cancer Sites: All, Breast (Male & Female), Colorectal & Rectum, Lung & Bronchus

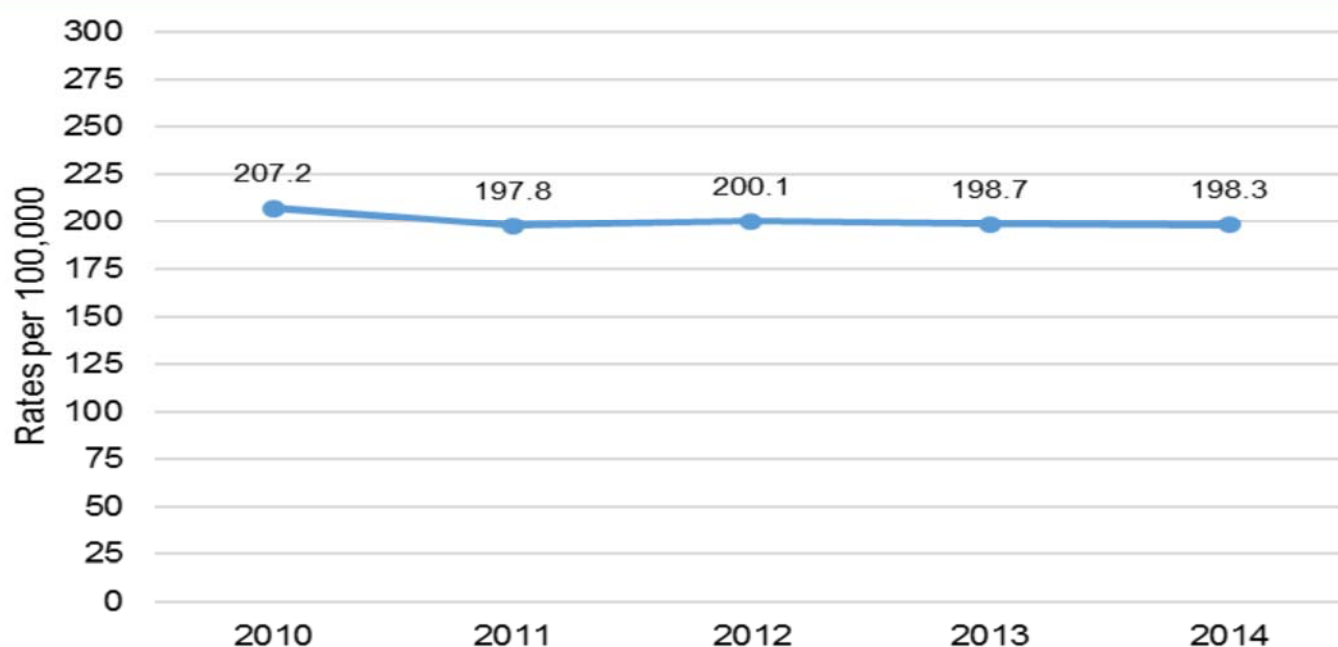
Definition of Indicators: All, Breast (Male & Female), Colorectal & Rectum, Lung & Bronchus cancer site mortality rates per 100,000 in Kentucky.

At Risk: Individuals in Kentucky who have been diagnosed with cancer.

Who is at risk in Kentucky?

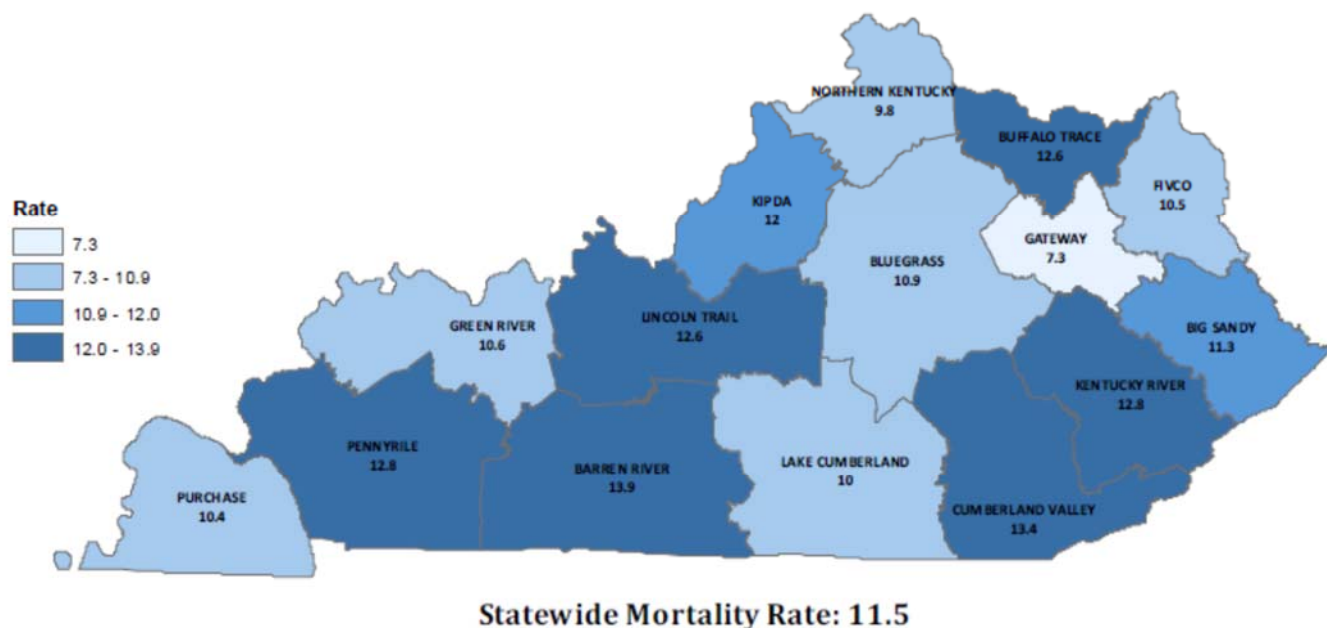
- ◆ Cancer death rates for all sites declined from 207.2 per 100,000 in 2010 to 198.3 per 100,000 in 2014.
- ◆ The cancer mortality rate for all sites is higher among Black Kentuckians than their White counterparts.
- ◆ Breast cancer deaths declined from 12.8 per 100,000 in 2012 to 11.5 per 100,000 in 2014.
- ◆ In 2014, the Area Development Districts (ADDs) with the highest breast cancer death rates were Barren River and Cumberland Valley.
- ◆ The colorectal and rectum cancer mortality rate fluctuated from 2010 to 2014 with the highest rate at 17.5 per 100,000 in 2011 and the lowest rate at 16.6 per 100,000 in 2012.
- ◆ The ADD with the highest colorectal and rectum cancer mortality rate in 2014 was Buffalo Trace at 31.4 per 100,000.
- ◆ The lung and bronchus cancer mortality rate declined from 73.8 per 100,000 in 2010 to 66.9 per 100,000 in 2014.
- ◆ In 2014, the ADDs with the highest lung and bronchus cancer mortality rates include Cumberland Valley, Kentucky River, and Buffalo Trace, respectively.

All Cancer Sites Mortality Rate per 100,000, Kentucky, 2010-2014

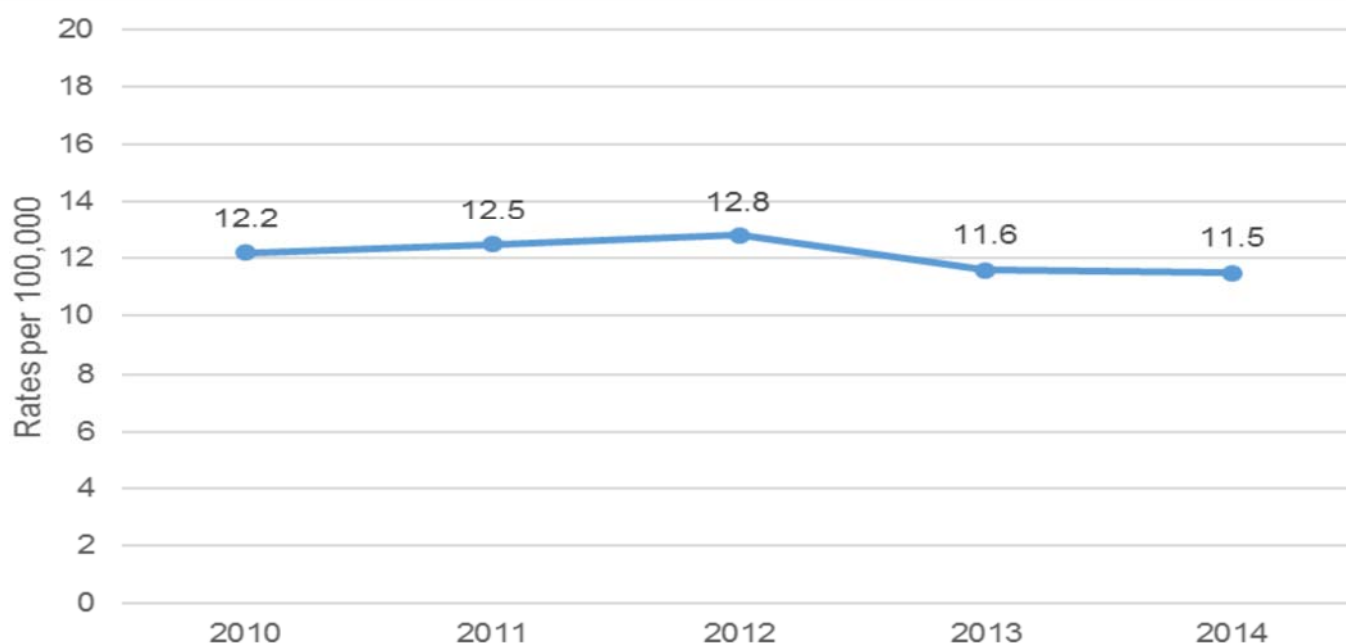


Source: Kentucky Cancer Registry, 2010-2014

Breast Cancer (Male & Female) Mortality Rates per 100,000, by Area Development District, 2014

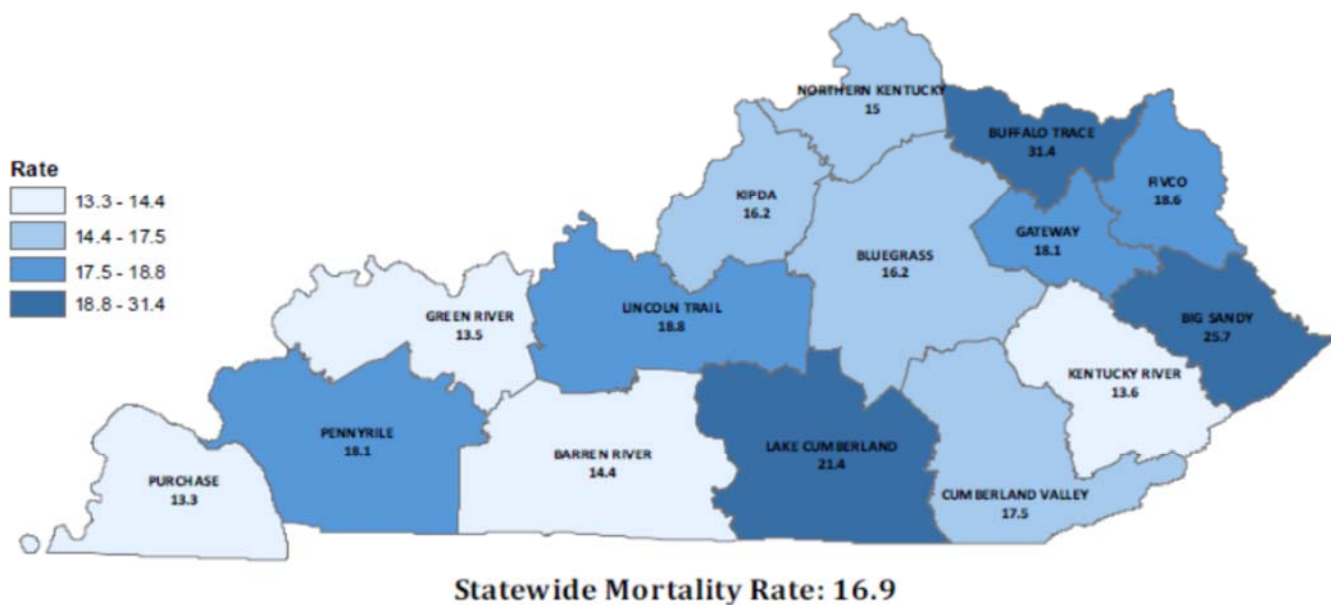


Breast Cancer (Male & Female) Mortality Rate per 100,000, Kentucky, 2010-2014

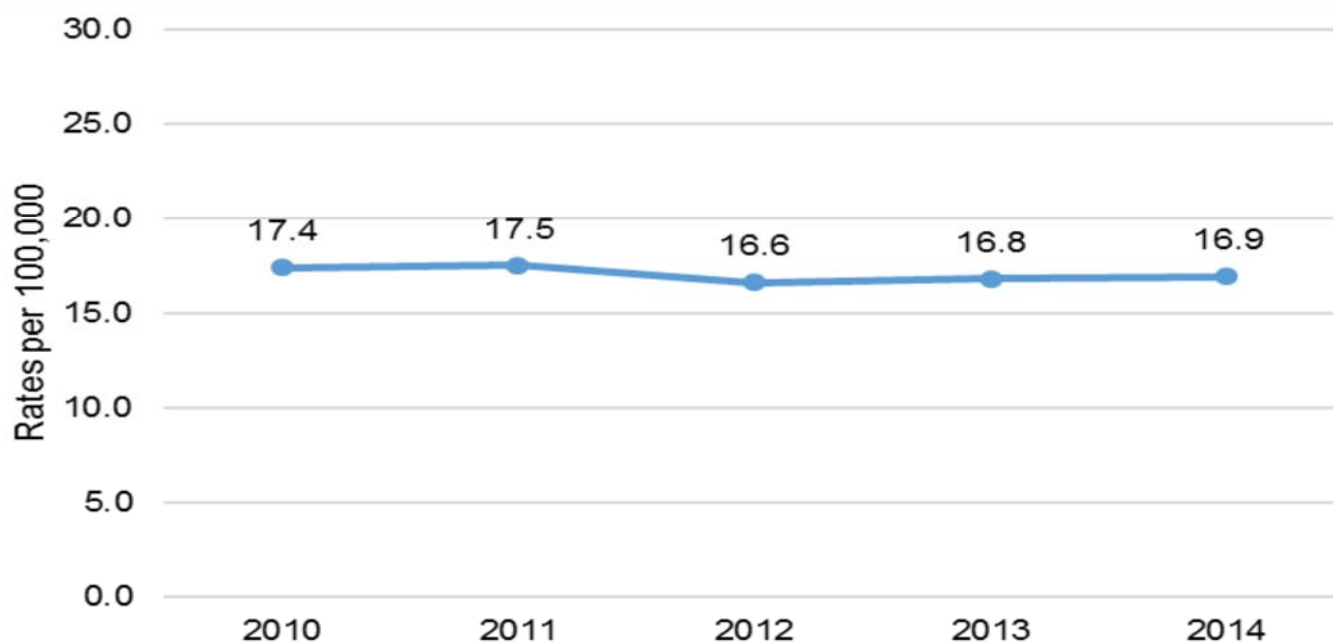


Source: Kentucky Cancer Registry, 2010-2014

Colorectal & Rectum Cancer Mortality Rates per 100,000, by Area Development District, 2014

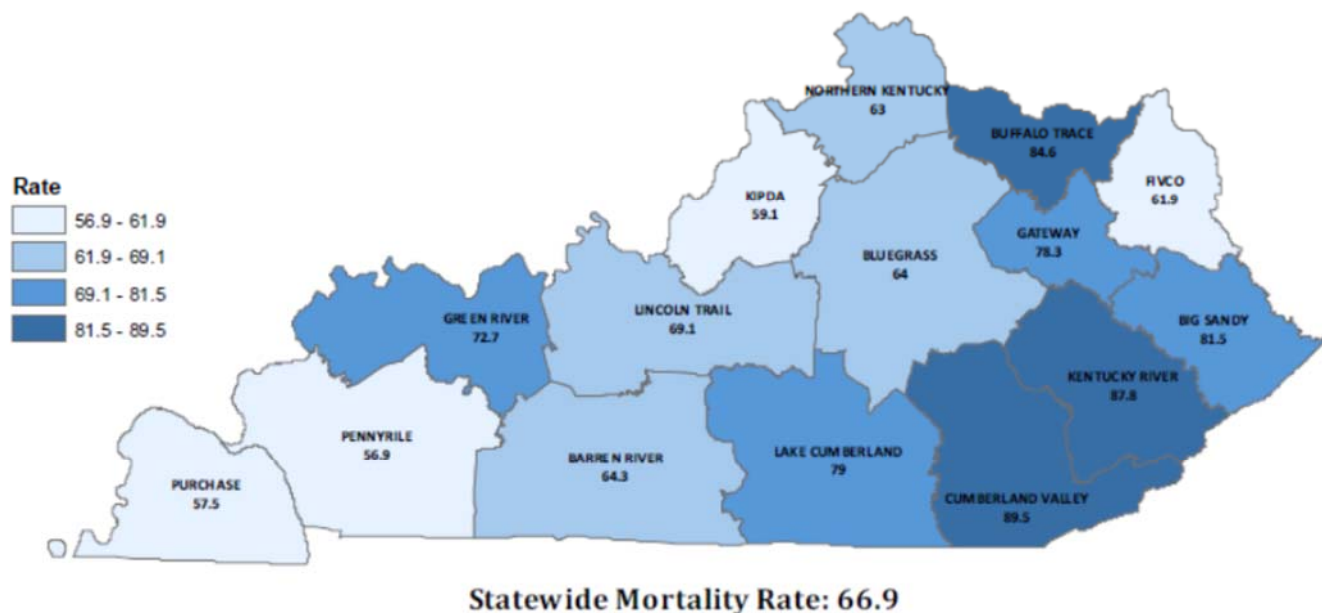


Colorectal & Rectum Cancer Mortality Rate per 100,000, Kentucky, 2010-2014

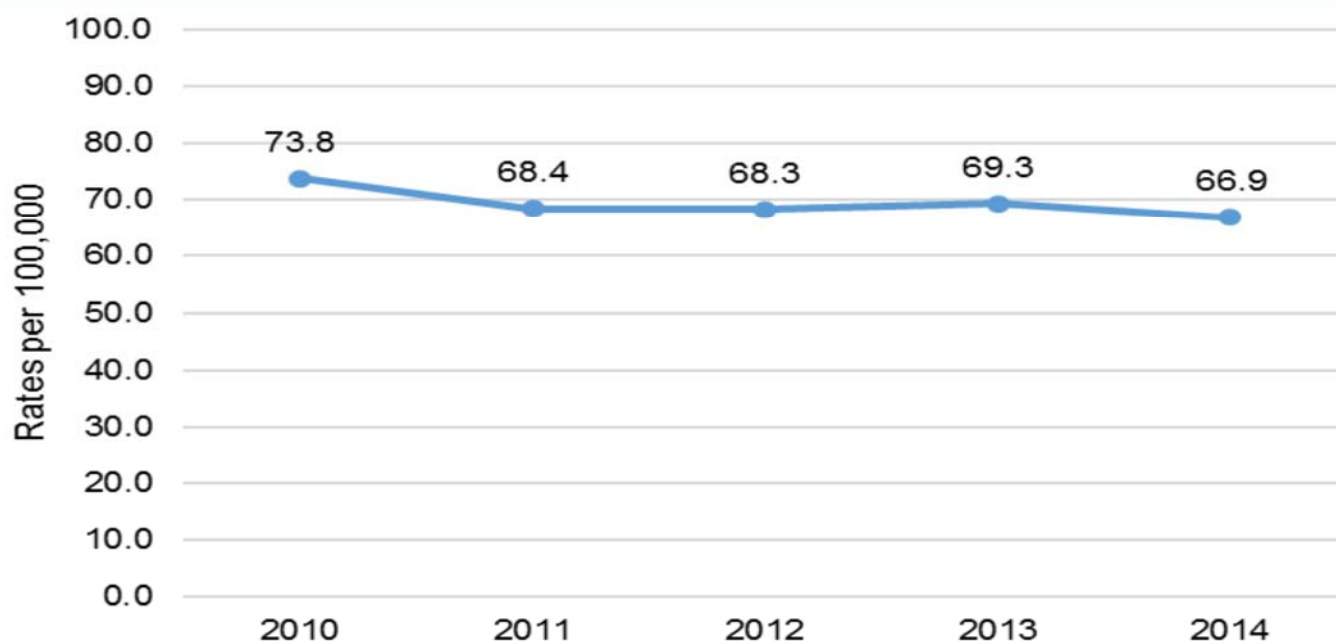


Source: Kentucky Cancer Registry, 2010-2014

Lung & Bronchus Cancer Mortality Rates per 100,000, by Area Development District, 2014



Lung & Bronchus Cancer Mortality Rate per 100,000, Kentucky, 2010-2014



Source: Kentucky Cancer Registry, 2010-2014

CORONARY HEART DISEASE

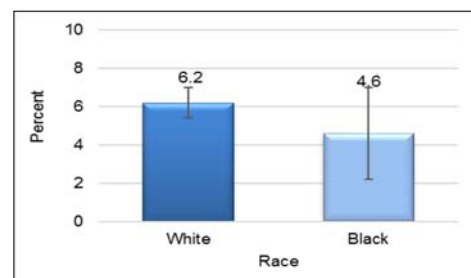
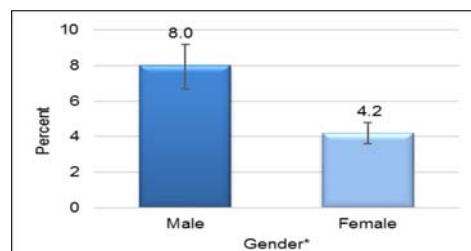
Question: Have you ever been told by a doctor, nurse, or other health professional that you had angina or coronary heart disease?

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

Percent of Adults who have Coronary Heart Disease: Kentucky vs. Nationwide (States and DC) — 2015



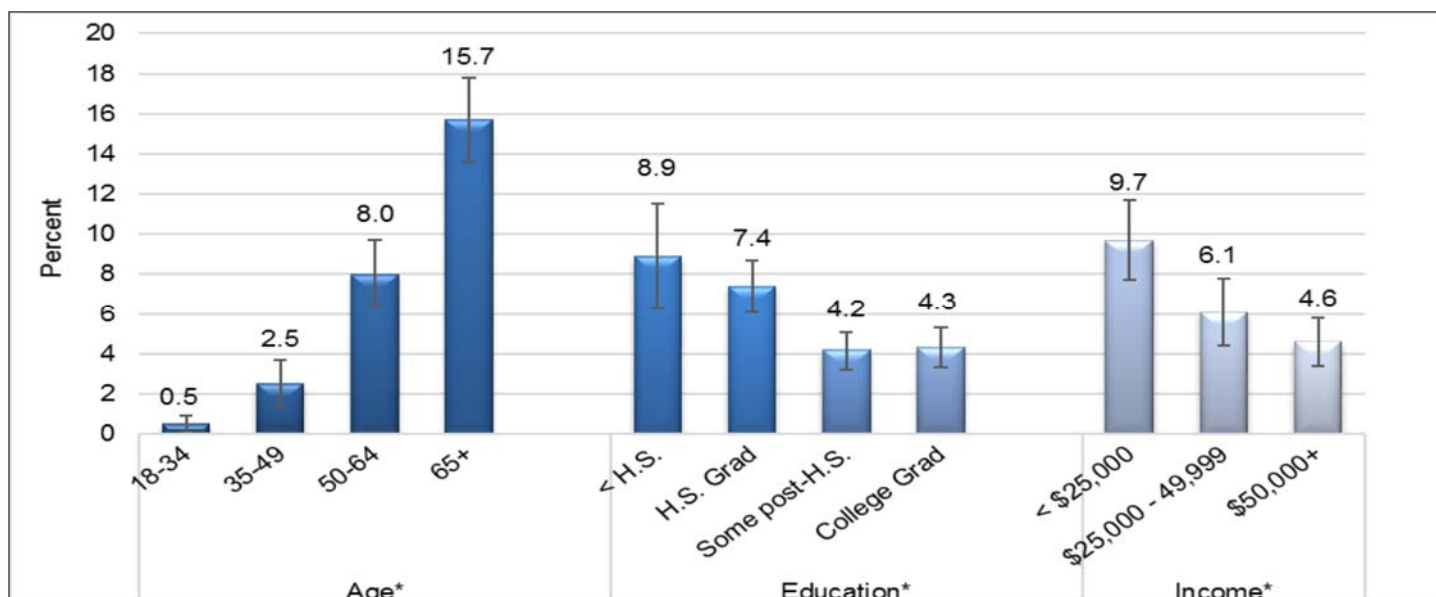
Percent of Kentucky Adults who have Coronary Heart Disease by Gender*, and by Race — 2015



Who is at risk in Kentucky?

- ◆ In 2015, an estimated 6.0% of Kentucky adults reported ever being told by a doctor that they had coronary heart disease.
- ◆ Males (8.0%) reported significantly higher prevalence of coronary heart disease than females (4.2%).
- ◆ The prevalence of coronary heart disease did not significantly differ by race.
- ◆ As would be expected, the prevalence of coronary heart disease increased with age. The smallest prevalence was among adults aged 18-34 years (0.5%), and the highest prevalence was among those aged 65+ years (15.7%).
- ◆ The prevalence of coronary heart disease was significantly higher among adults with less than high school education than among those with a college degree (8.9% vs 4.3%).
- ◆ As annual household income increased, the prevalence of coronary heart disease decreased. The lowest prevalence was among adults with an annual household income of \$50,000 or more (4.6%).

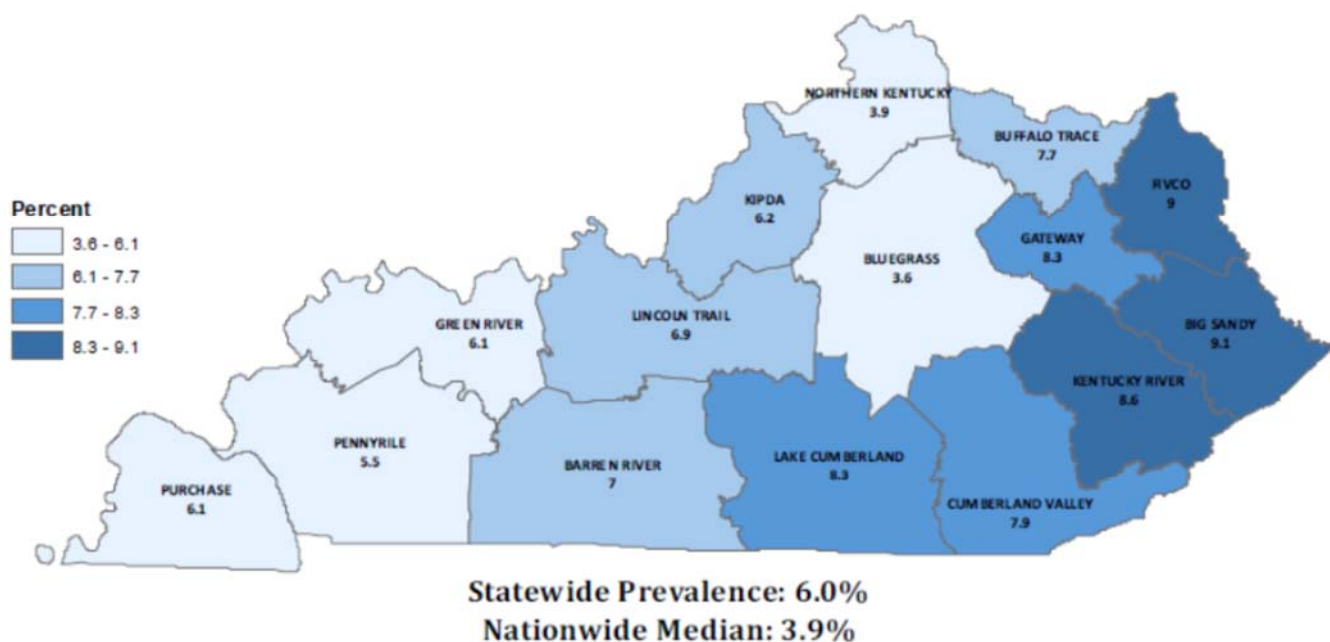
Percent of Kentucky Adults who have Coronary Heart Disease, by Age*, Education*, and Income* — 2015



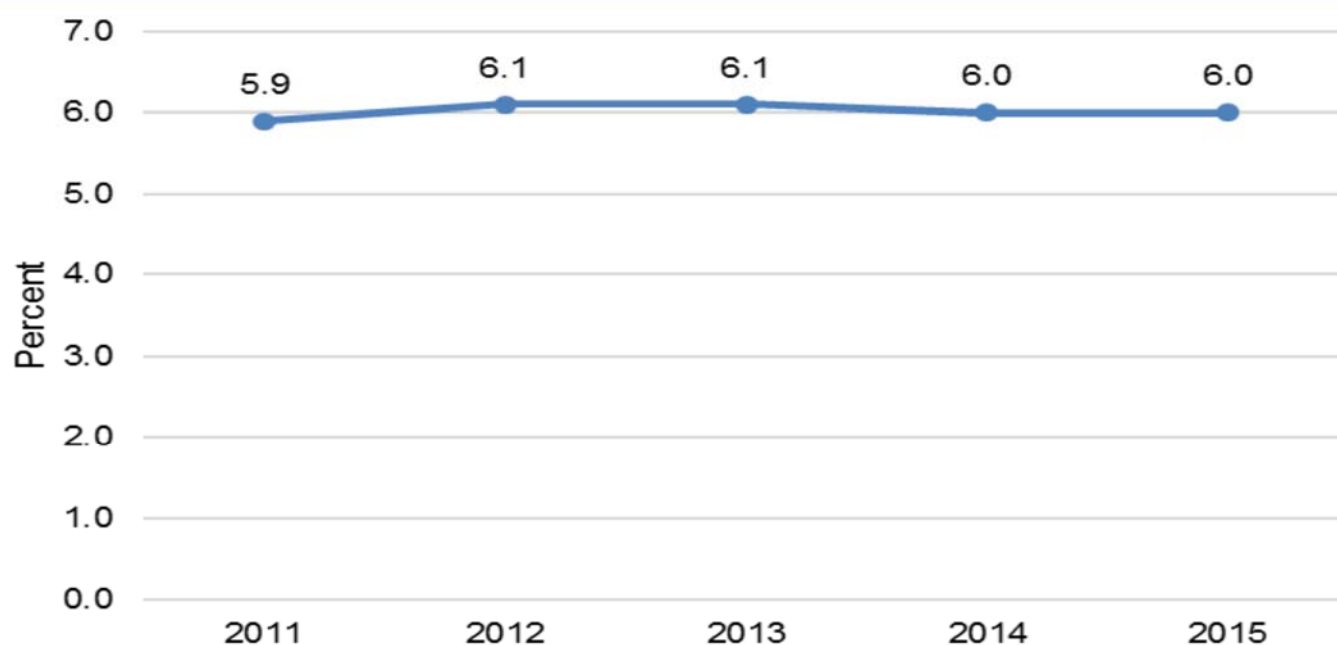
Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2015

* Denotes a statistically significant difference among the values

Percent of Kentucky Adults who have Coronary Heart Disease, by Area Development District, 2015



Percent of Kentucky Adults who have Coronary Heart Disease, 2011-2015



Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2011-2015

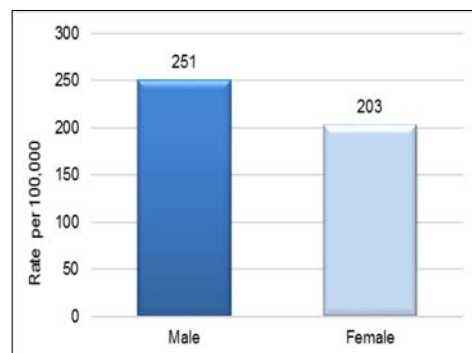
CORONARY HEART DISEASE MORTALITY

Definition of Indicator: Numerator: Number of adults (18+) who died with coronary heart disease listed as the underlying cause of death.

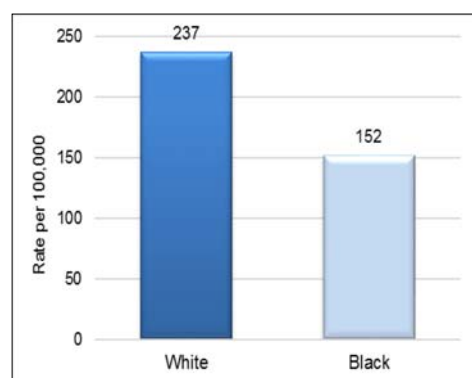
Denominator: Number of adults age eighteen and over.

Based on ICD-10. Same selection criteria used by the National Vital Statistics System.

Heart Disease Death Rates by Gender, Kentucky, 2015*



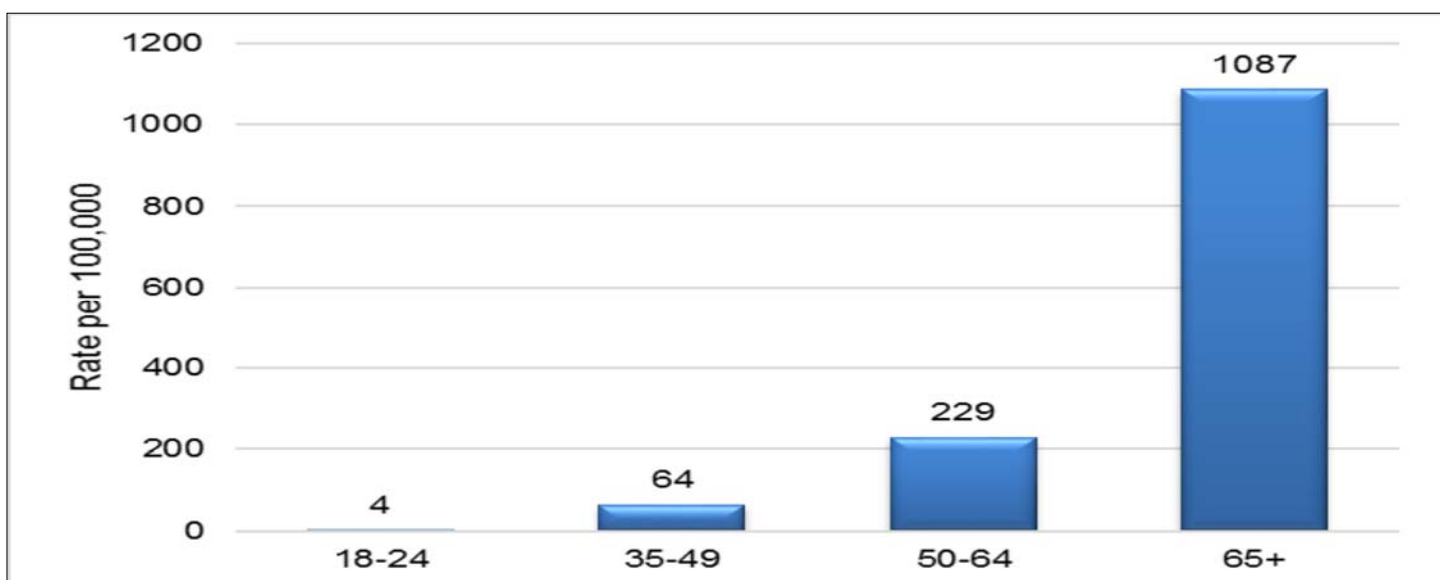
Heart Disease Death Rates by Race, Kentucky, 2015*



Who is at risk in Kentucky?

- ◆ In 2015, 55% of the total number of deaths due to diseases of the heart were male.
- ◆ Around 93% of the total number of deaths due to diseases of the heart were White.
- ◆ From the age group 50-64 years to more than 65 years there was a 254% increase in the number of deaths due to diseases of the heart.
- ◆ Kentucky River had the highest rate of deaths due to diseases of the heart, at 370 deaths per 100,000 population; while, Northern Kentucky had the lowest at 181.

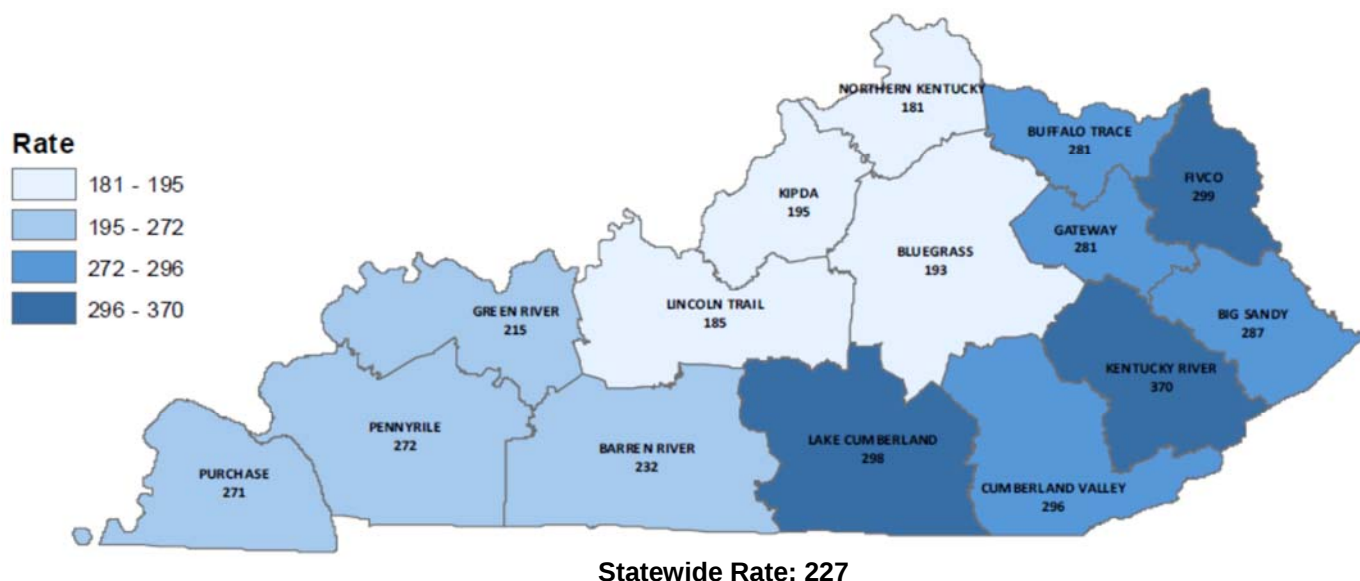
Heart Disease Death Rates by Age, Kentucky, 2015*



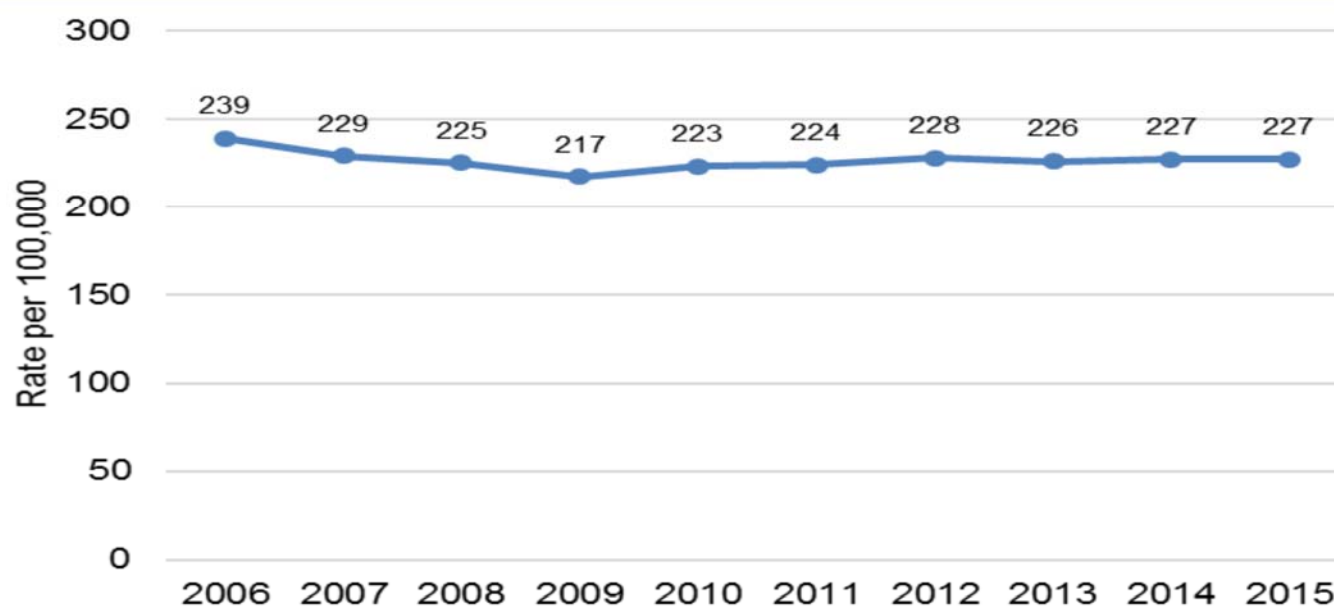
Source: KY Vital Statistics Files, Death Certificate files.

Note: 2015 data is preliminary and numbers may change

Coronary Heart Disease Death Rates per 100,000, by Area Development District, 2015



Coronary Heart Disease Death Rates per 100,000, Kentucky, 2006-2015



Source: KY Vital Statistics Files, Death Certificate files, Years 2006-2015;
Note: 2009-2015 data is preliminary and numbers may change

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.

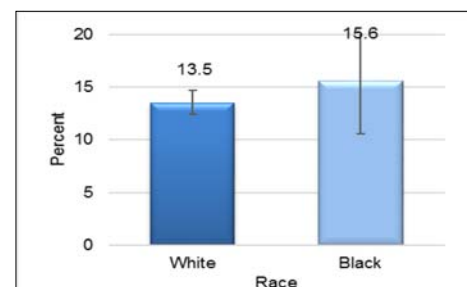
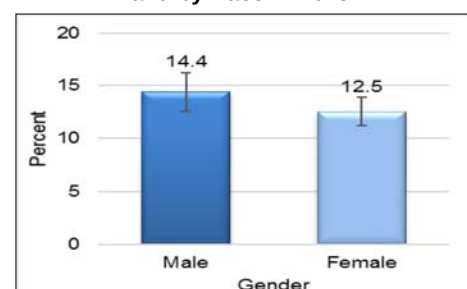
Who is at risk in Kentucky?

- ◆ About 13.4% of Kentucky adults reported ever being told by a doctor that they had diabetes. This was a higher prevalence compared to U.S. median prevalence (9.9%).
- ◆ Males (14.4%) reported higher prevalence of diabetes than females (12.5%); however, these differences were not statistically significant.
- ◆ The prevalence of diabetes did not differ significantly by race.
- ◆ The prevalence of diabetes significantly increased with age. The highest prevalence was among adults aged 50 years or older.
- ◆ The prevalence of diabetes decreased as education level increased. Adults with less than high school education (22.1%) reported a significantly higher prevalence of diabetes than those with a college degree (9.5%).
- ◆ Adults with an annual household income of less than \$25,000 reported a significantly higher prevalence of diabetes compared to those with household income of \$50,000 or more (20.1% vs 9.7%).

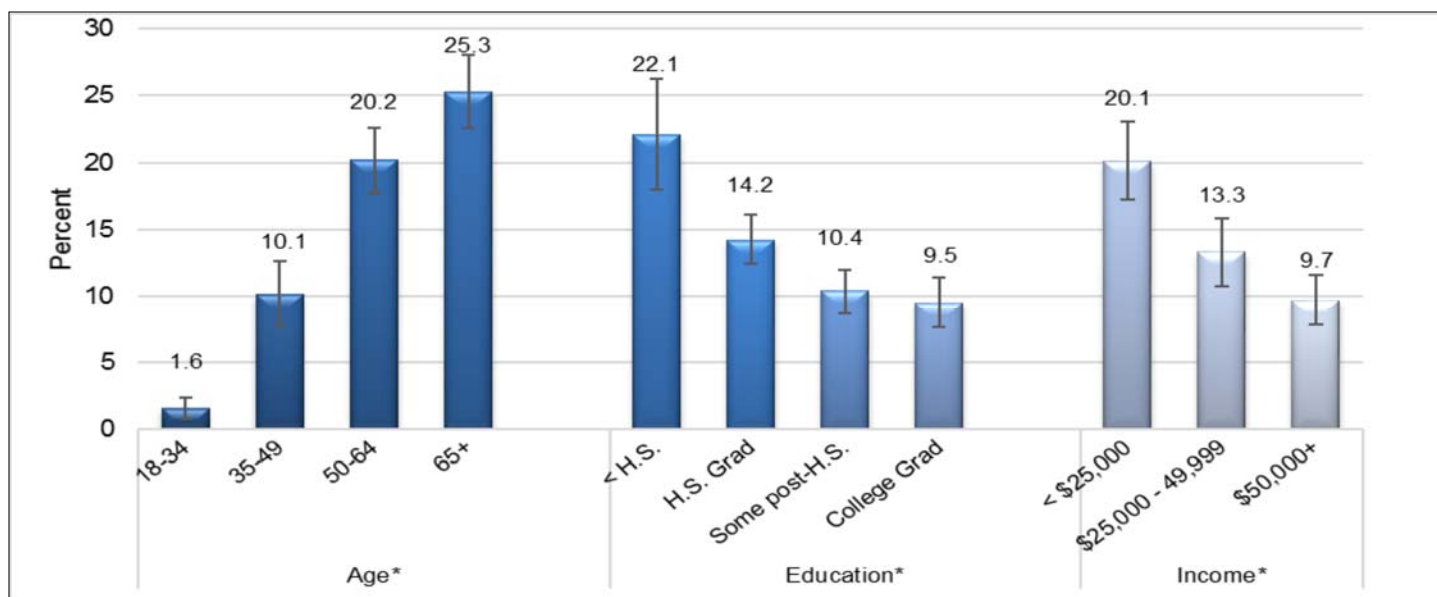
Percent of Adults who have Diabetes: Kentucky vs. Nationwide (States and DC) — 2015



Percent of Kentucky Adults who have Diabetes by Gender, and by Race — 2015



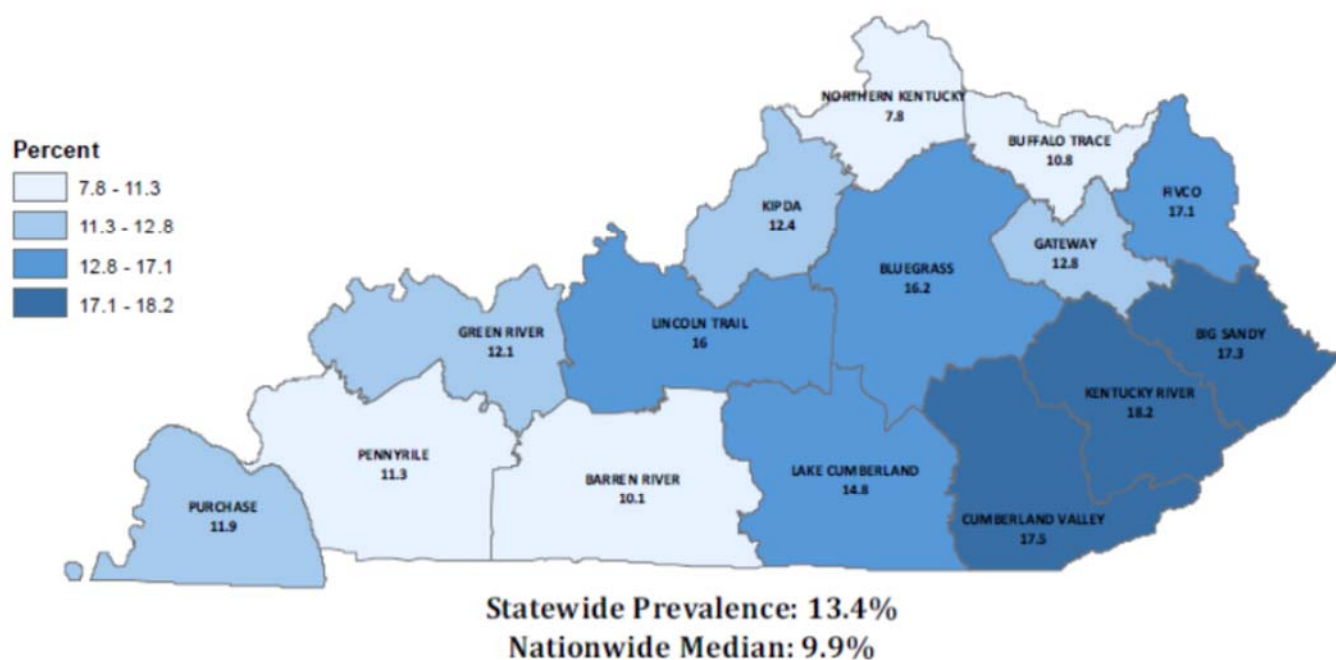
Percent of Kentucky Adults who have Diabetes, by Age*, Education*, and Income* — 2015



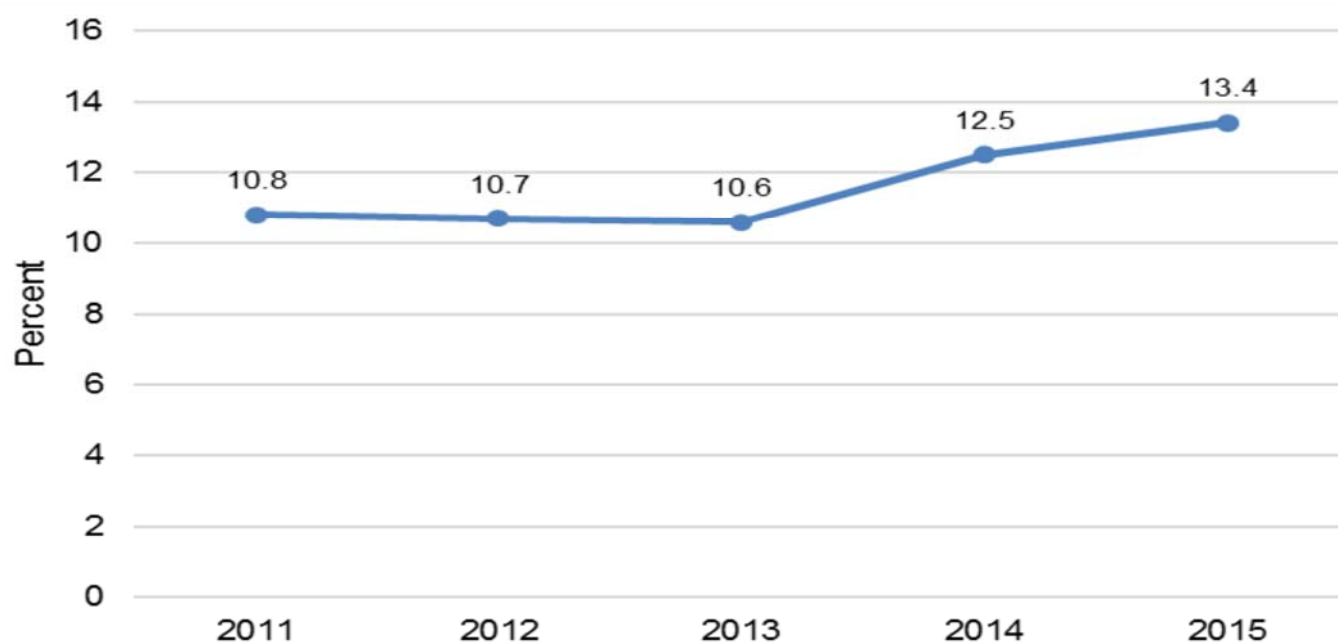
Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2015

* Denotes a statistically significant difference among the values

Percent of Kentucky Adults who have Diabetes, by Area Development District, 2015



Percent of Kentucky Adults who have Diabetes, 2011-2015

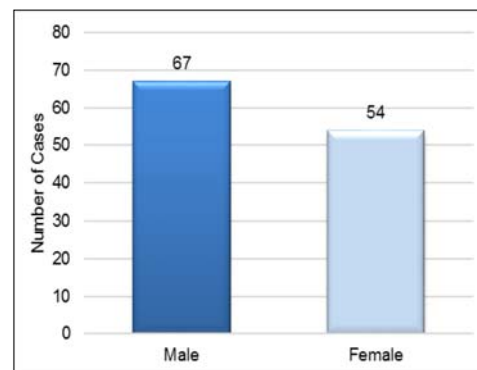


Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2011-2015

HEPATITIS C VIRUS (HCV)

Definition of Indicator: Those Kentuckians diagnosed with acute Hepatitis C (HCV).

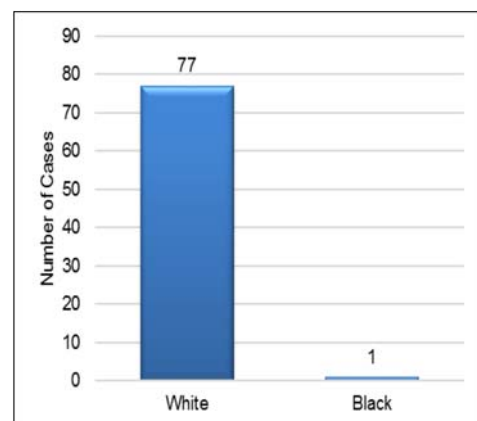
Number of Cases of HCV by Gender, Kentucky, 2015



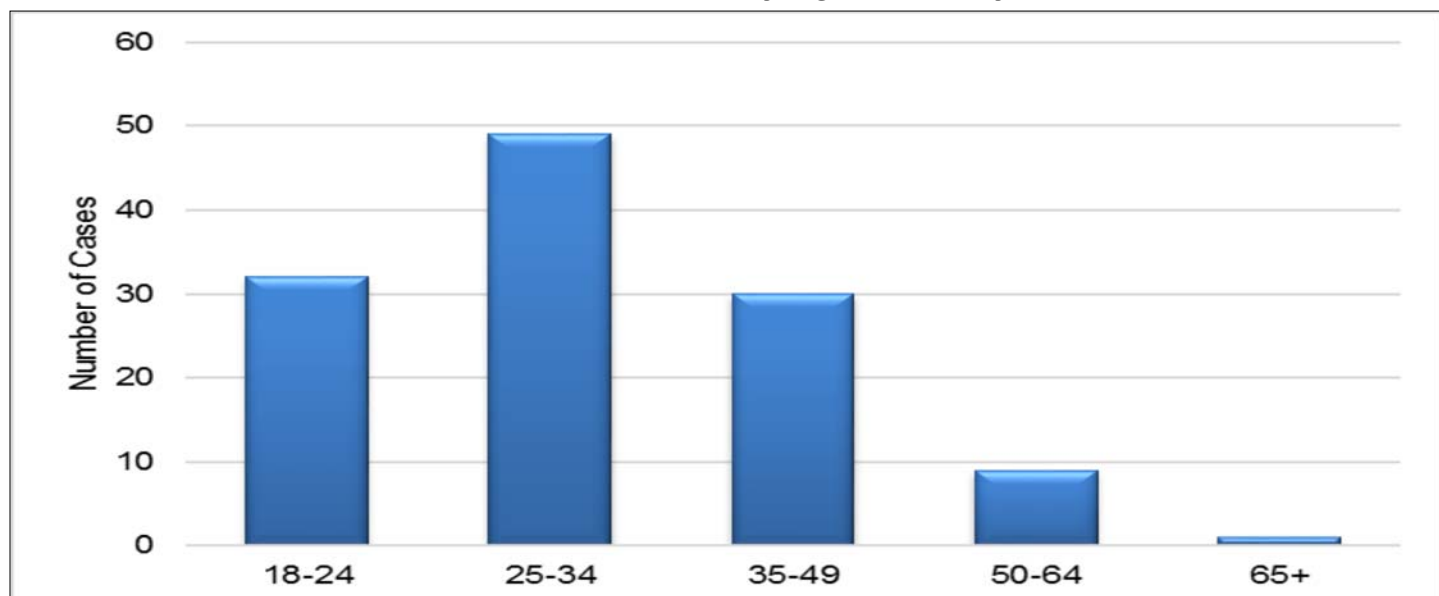
Who is at risk in Kentucky?

- ◆ Kentucky had the highest rate of new (acute) HCV infection in the nation from 2008 – 2015 (1,089 total number of cases).
- ◆ Males represented 55% of the acute HCV infections in 2015.
- ◆ Majority of new HCV cases in Kentucky in 2015 were White (77 cases).
- ◆ Nearly all new cases of HCV in 2015 were <50 years old (92%), with the greatest burden among the 25-34 year age group (40%).
- ◆ The highest rates of HCV infection occur in the Appalachian region and northern Kentucky, where injection drug use is most prevalent.
- ◆ Acute HCV rates rose dramatically between 2006 and 2013 but have shown declines in 2014-2015.
- ◆ Although the data presented relate to acute HCV cases, it is estimated that over 38,000 Kentuckians are chronically infected with HCV.

Number of Cases of HCV by Race, Kentucky, 2015



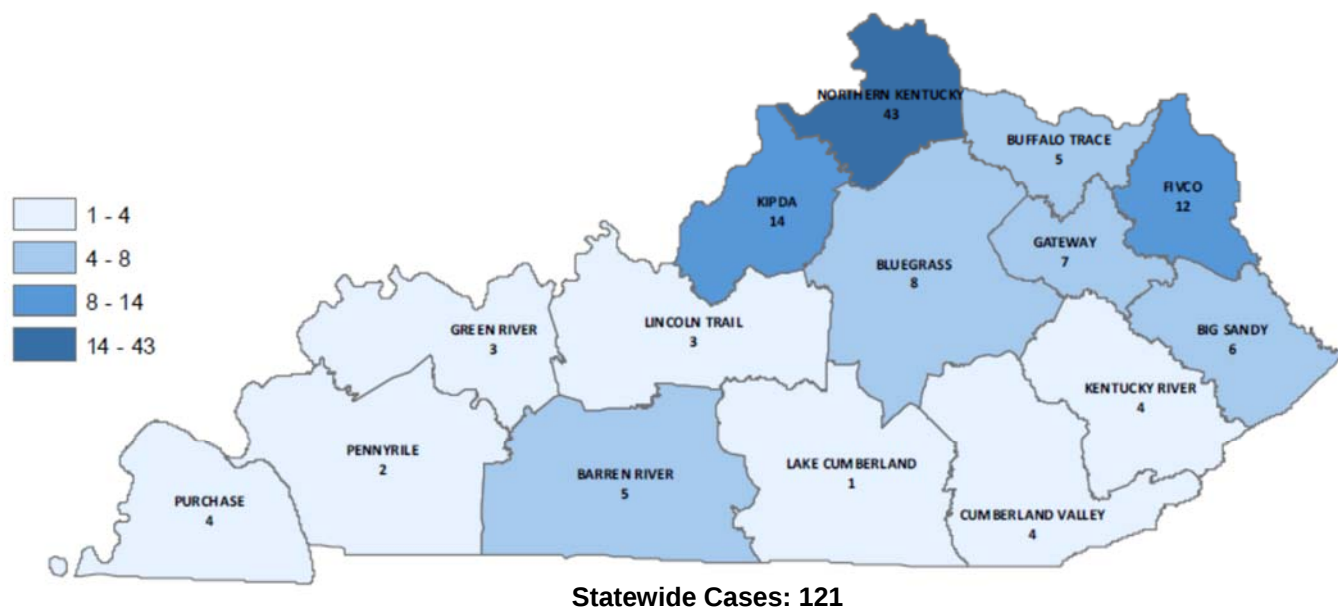
Number of Cases of HCV by Age, Kentucky, 2015



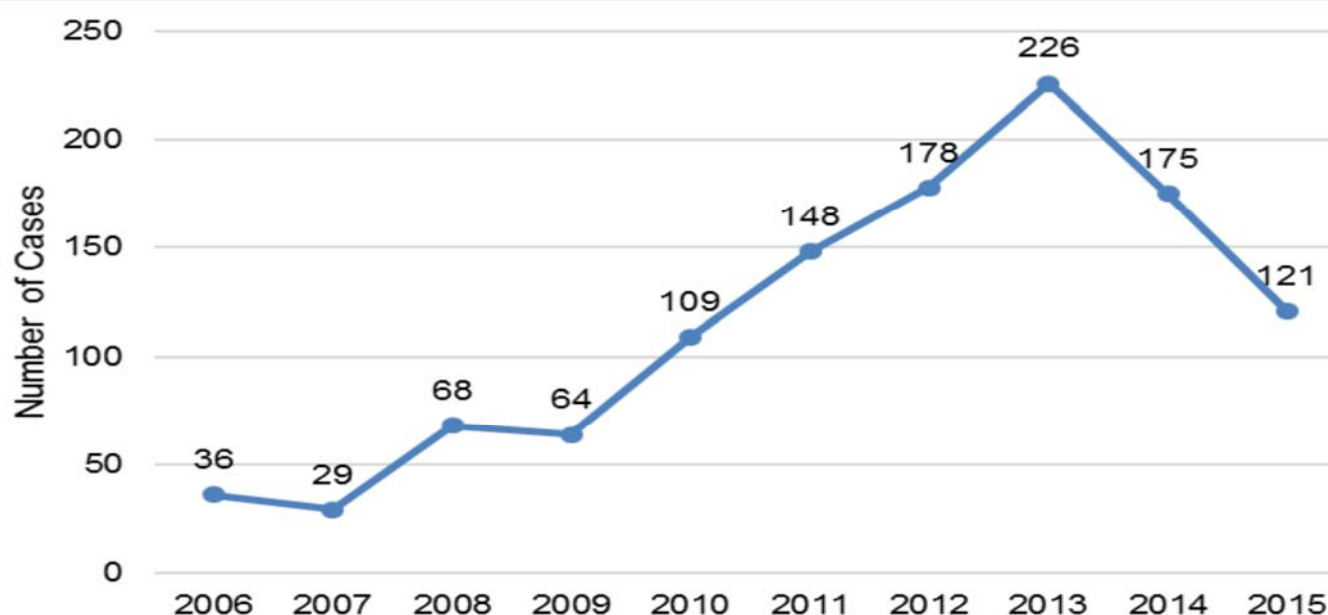
Source: Kentucky Department for Public Health, 2015

All data are subject to change due to reporting delays especially most recent years.

Number of Acute Cases of HCV, by Area Development District, 2015



Number of Acute Cases of HCV, Kentucky, 2006-2015

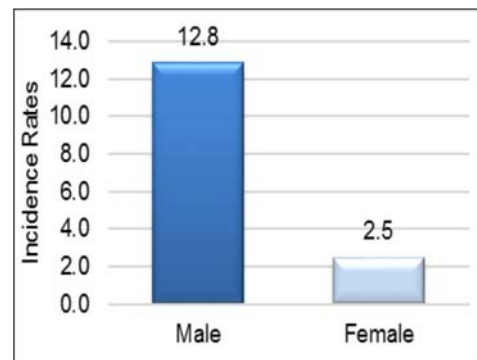


Source: Kentucky Department for Public Health, 2006-2015
All data are subject to change due to reporting delays especially most recent years.

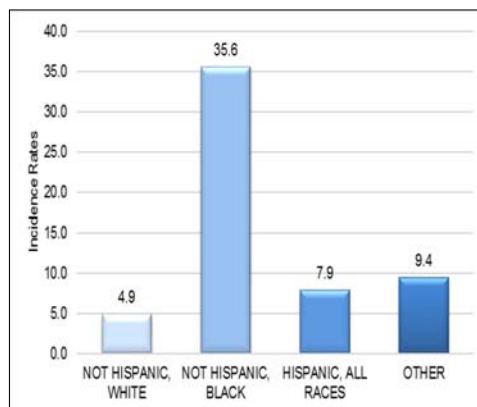
Human Immunodeficiency Virus (HIV)

Definition of Indicator: HIV disease refers to cases diagnosed with HIV, regardless of progression to AIDS.

Incidence Rates of HIV by Gender, Kentucky, 2015



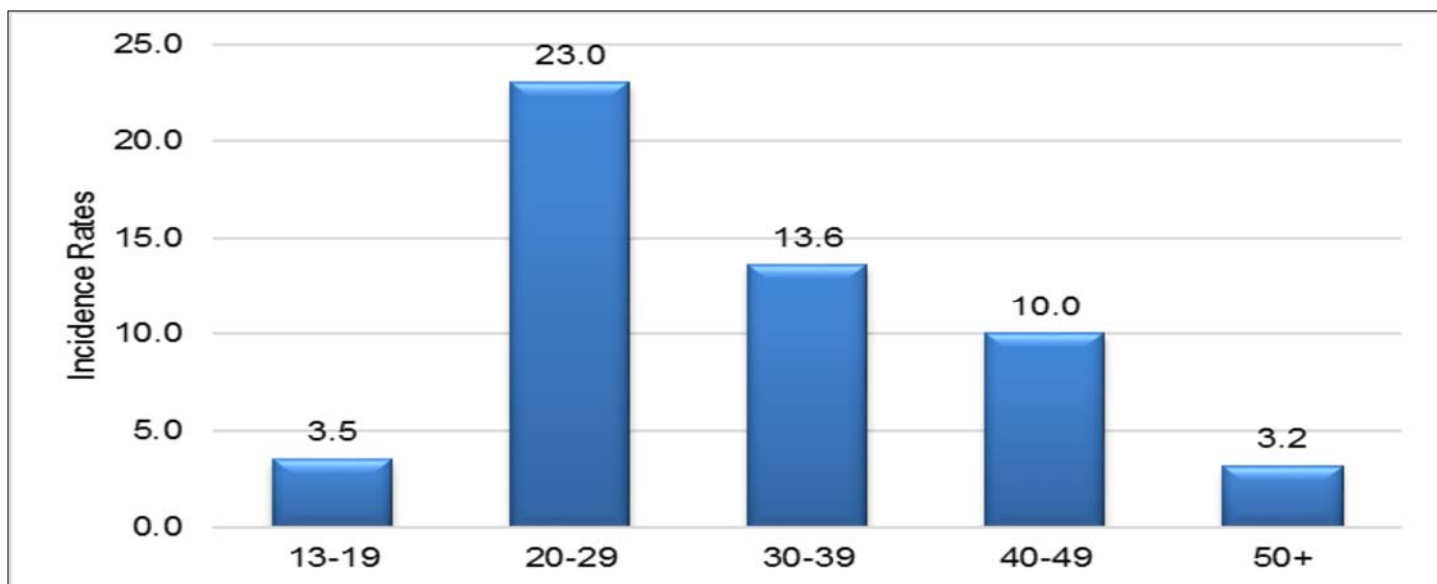
Incidence Rates of HIV by Race, Kentucky, 2015



Who is at risk in Kentucky?

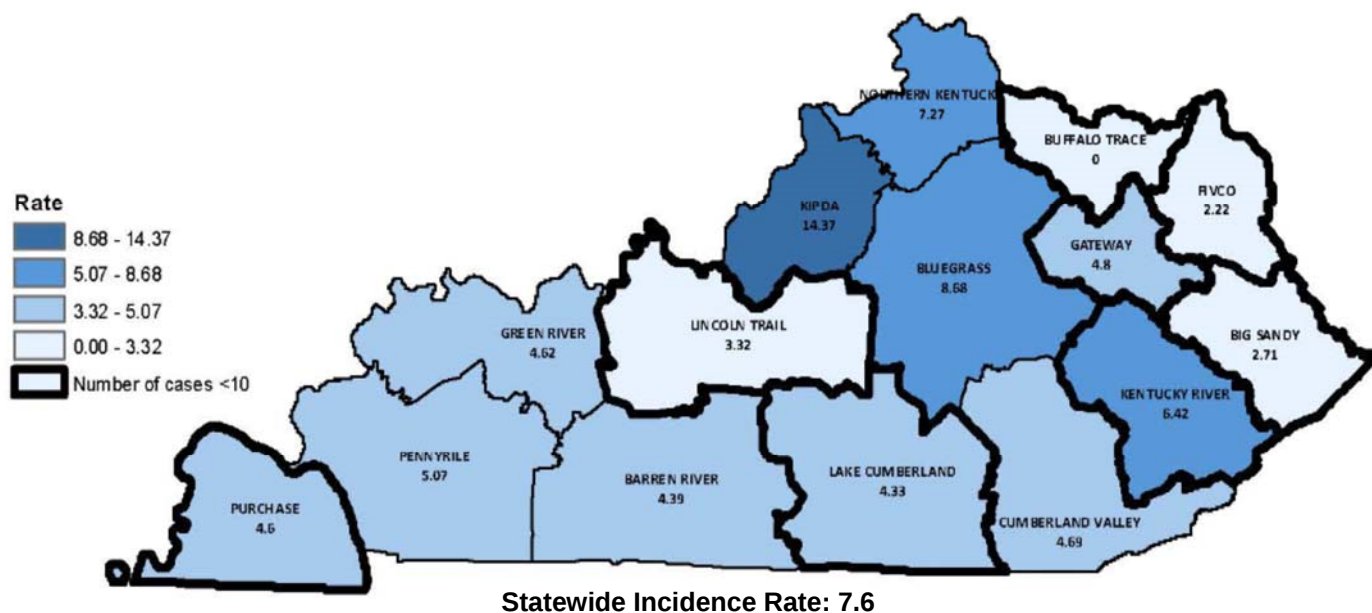
- ◆ HIV infections in Kentucky occur in males over females at a 6:1 ratio.
- ◆ The greatest number of new HIV cases are identified in non-Hispanic Whites (183 cases), but the highest rate of infection is in non-Hispanic Blacks (127 cases) (35.59/100,000 vs. <10/100,000 in all other categories).
- ◆ The rate of HIV infection in Kentucky is highest among 20-29 year olds (23/100,000).
- ◆ The primary mode of transmission of HIV identified in Kentucky is through men who have sex with men.
- ◆ The incidence of new HIV infections has remained steady 2006-2015 at around 7-9 cases per 100,000 population, with a total of 337 cases in 2015, averaging around a case daily in Kentucky.
- ◆ New HIV cases reside primarily in the urban areas of Louisville, Lexington, and Northern Kentucky.

Incidence Rates of HIV by Age, Kentucky, 2015



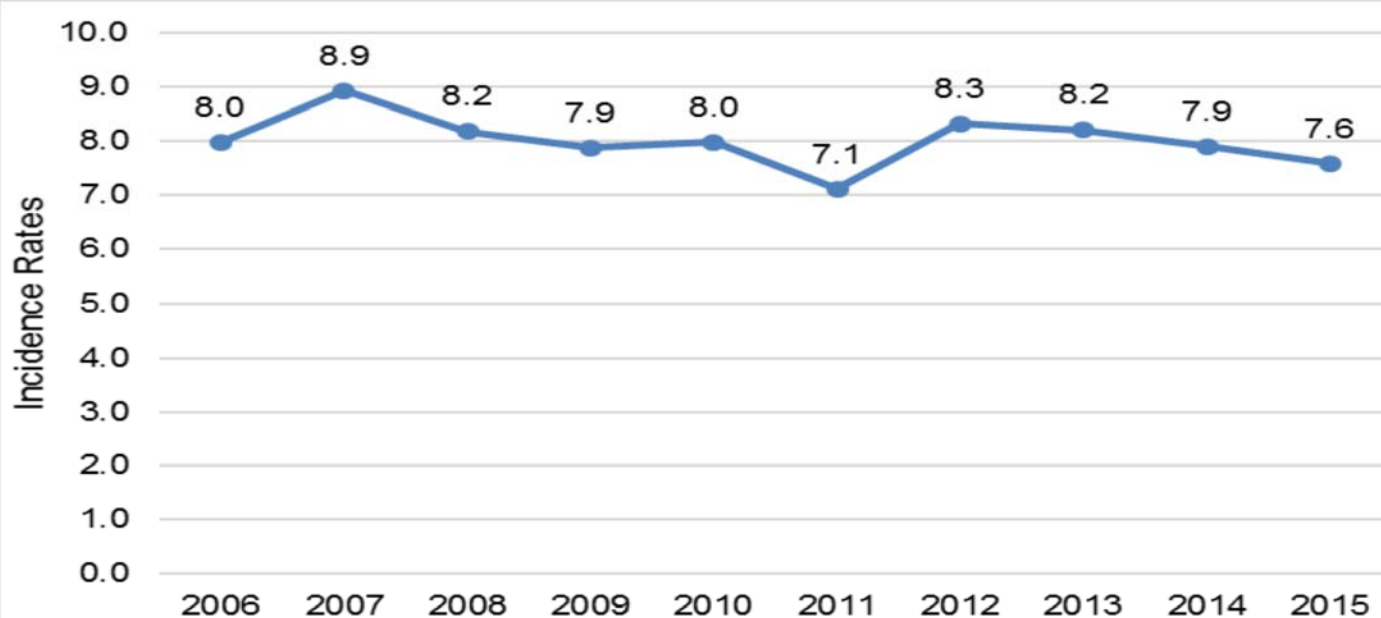
Source: Kentucky Department for Public Health and current as of December, 31 2016
All data are subject to change due to reporting delays especially most recent years.

HIV Incidence Rates per 100,000, by Area Development District, 2015



ADDs that included counts less than 10 are considered unreliable according to the HIV/AIDS Program data release policy.

HIV Incidence Rates per 100,000, Kentucky, 2006-2015



Source: Kentucky Department for Public Health and current as of December, 31 2016.
All data are subject to change due to reporting delays especially most recent years.

OBESITY

Question: Body Mass Index (BMI) was calculated based on data collected from:

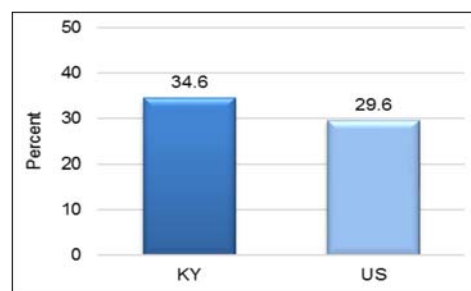
- 1) How much do you weigh without shoes?
- 2) How tall are you without shoes?

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

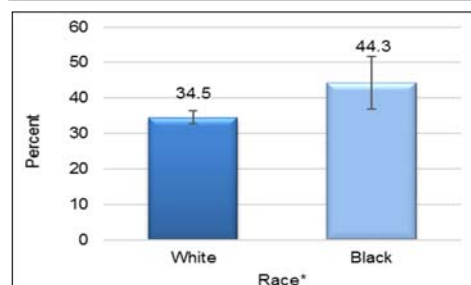
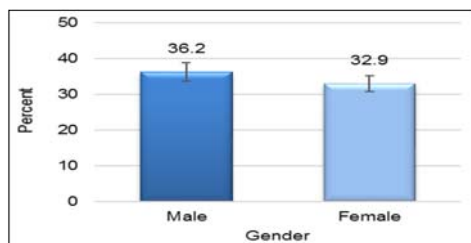
Who is at risk in Kentucky?

- ◆ In 2015, an estimated 34.6% of Kentucky adults were classified as being obese (BMI $\geq$ 30.0), which is higher than the U.S. median prevalence of 29.6%.
- ◆ The prevalence of obesity was higher among men than women (36.2% vs 32.9%); however, this difference was not statistically significant.
- ◆ The prevalence of obesity among Black adults (44.3%) was significantly higher than White adults (34.5%).
- ◆ The prevalence of obesity was significantly higher among middle age adults aged 35-49 years (38.3%) and older adults aged 50-64 (40.5%) than young adults aged 18-34 years (28.2%).
- ◆ The prevalence of obesity did not differ significantly by education level.
- ◆ When compared by annual household income, the prevalence of obesity was higher among adults with less than \$25,000 than those with household income of \$50,000 or more (38.8% vs 35.5%); however there were no significant differences between obesity and income level.

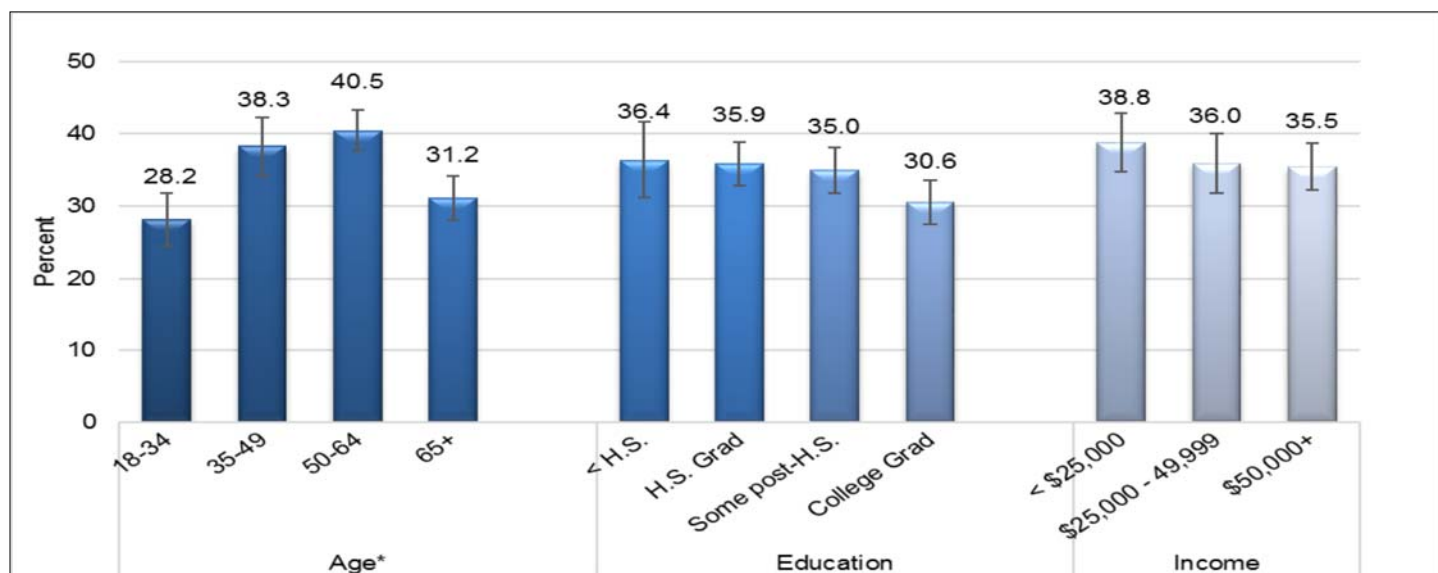
Percent of Adults who are Obese: Kentucky vs. Nationwide (States and DC) — 2015



Percent of Kentucky Adults who are Obese, by Gender, and by Race* — 2015



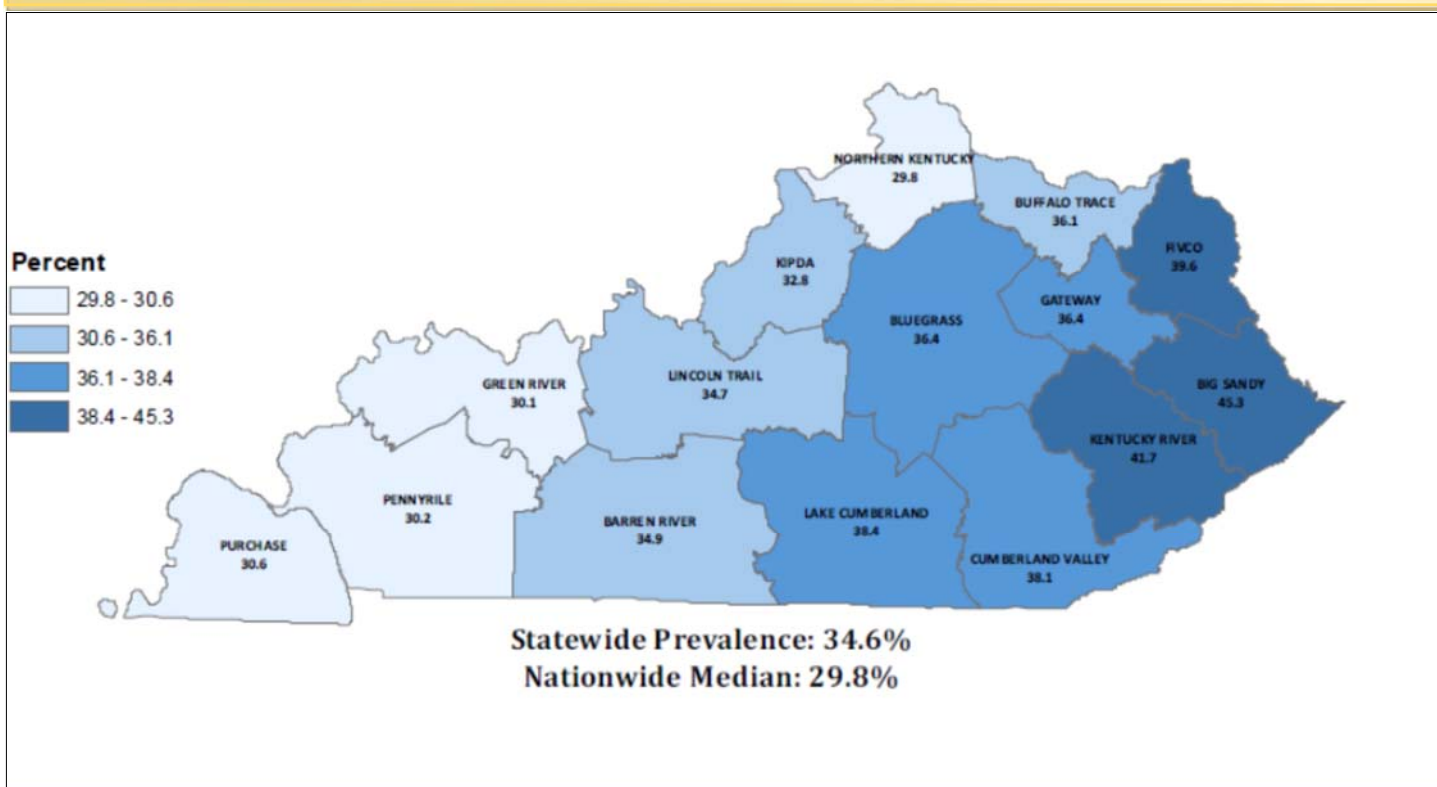
Percent of Kentucky Adults who are Obese, by Age*, Education, and Income — 2015



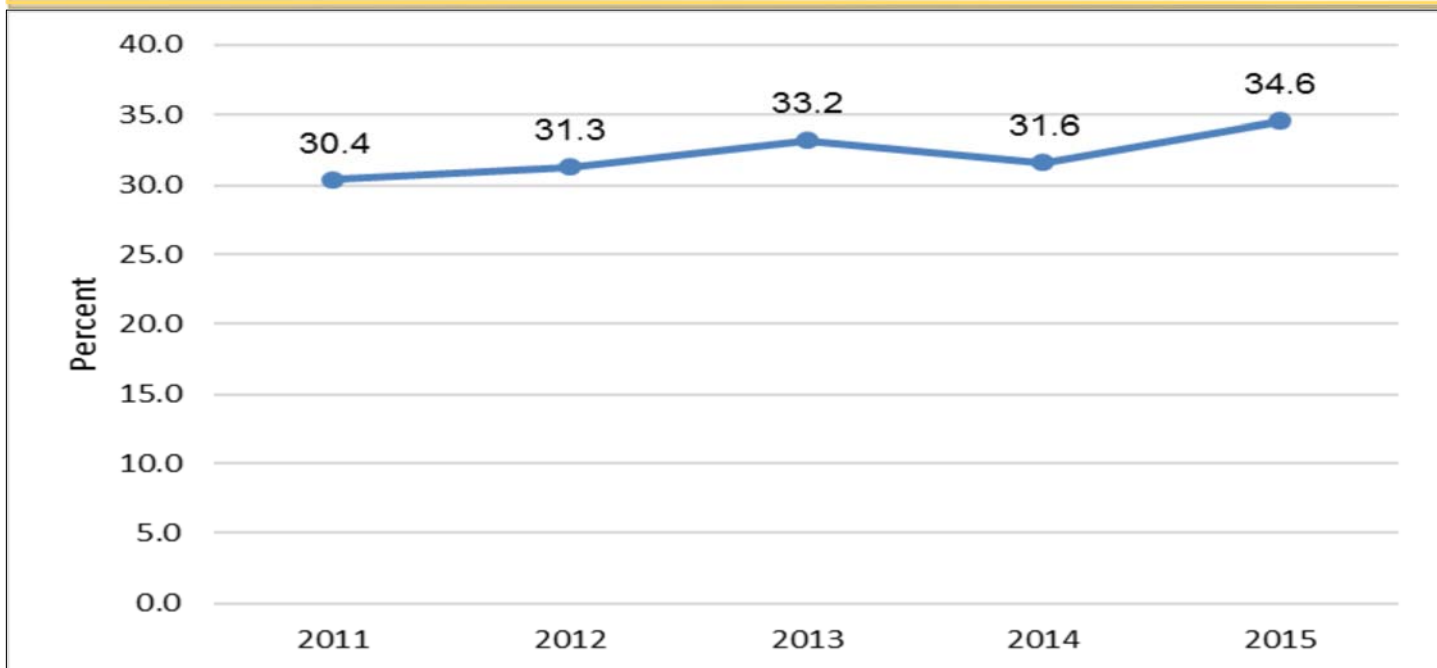
Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2015

* Denotes a statistically significant difference among the values

Percent of Kentucky Adults who are Obese, by Area Development District, 2015



Percent of Kentucky Adults who are Obese, 2011-2015



Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2011-2015

OPIOID INDUCED DEATHS

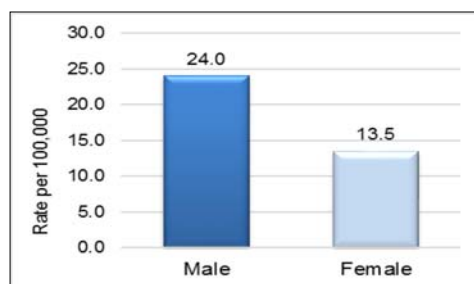
Definition of Indicator: Drug overdose deaths were identified as deaths with an underlying cause of death in the following ICD-10 code range: X40-X44 (accidental/unintentional drug poisoning), X60-X64 (suicide by drug poisoning), X85 (homicide by drug poisoning), and Y10-Y14 (drug poisoning with undetermined intent).

Additionally, opioid deaths are identified by a code in the T40.1-T40.4 range in any multiple cause of death field.

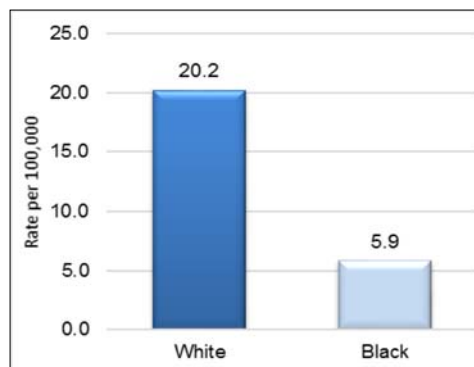
Who is at risk in Kentucky?

- ◆ There were 827 drug overdose deaths of Kentucky residents involving opioids in 2015. The opioid induced death rate was 18.7 per 100,000.
- ◆ The rate among males at 24.0 per 100,000 was higher than the rate among females at 13.5 per 100,000
- ◆ The rate among Whites at 20.2 per 100,000 was higher than the rate among Blacks at 5.9 per 100,000
- ◆ The ADD with the highest rate was Northern Kentucky at 36.1 per 100,000.
- ◆ The opioid induced death rate per 100,000 increased from 5.9 in 2006 to 18.7 in 2015.

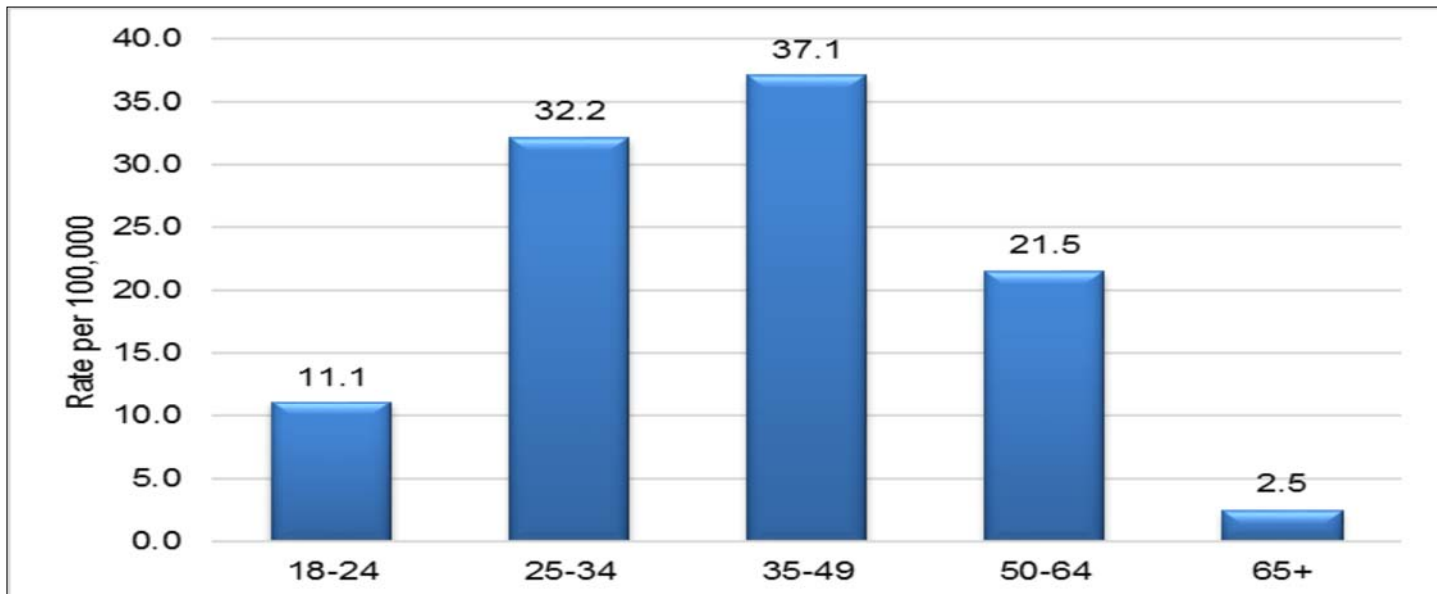
Opioid Induced Death Rates by Gender, Kentucky, 2015*



Opioid Induced Death Rates by Race, Kentucky, 2015*



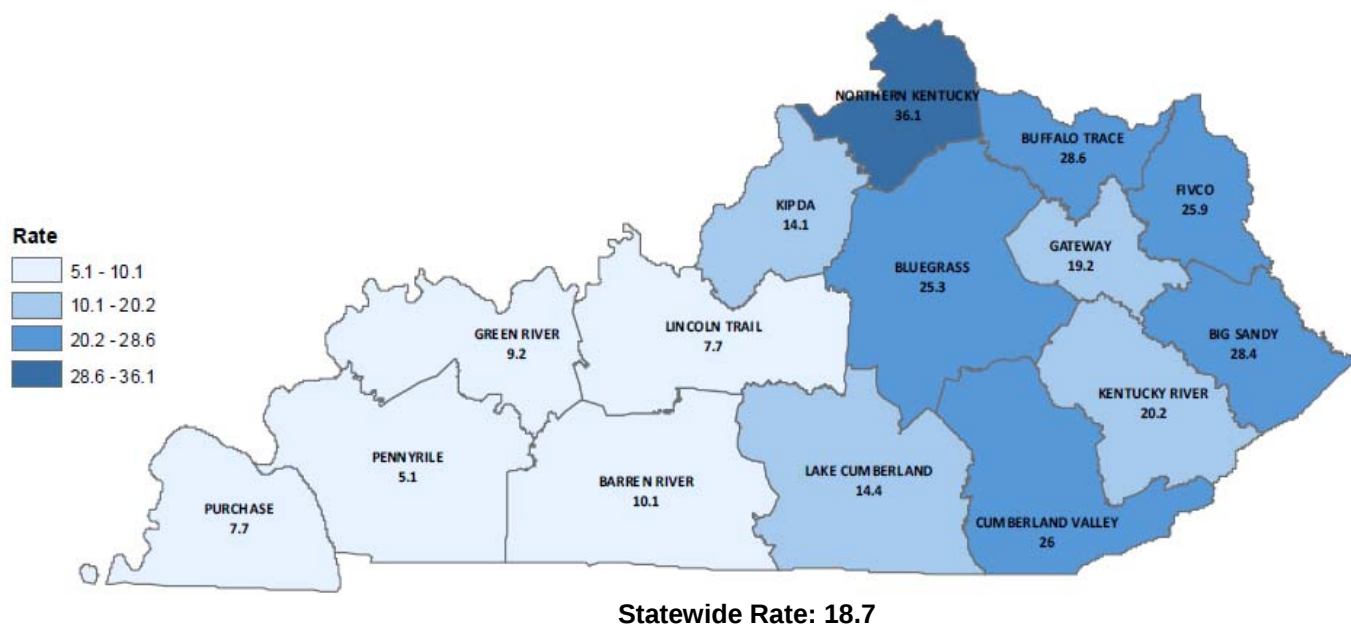
Opioid Induced Death Rates by Age, Kentucky, 2015



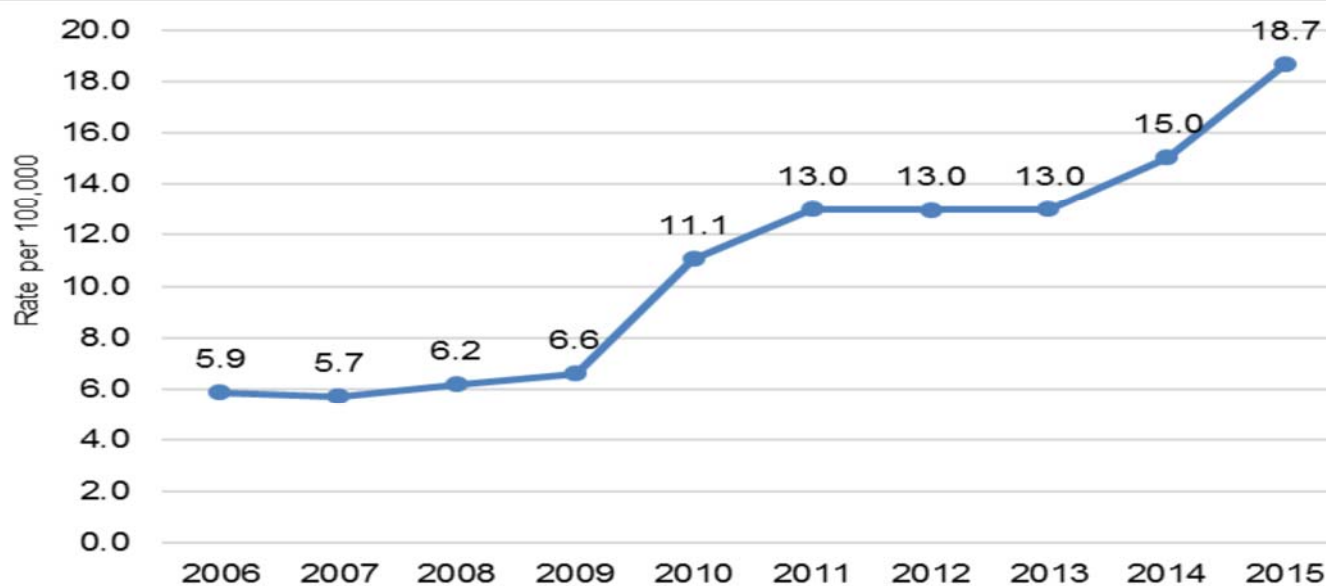
Source: KY Vital Statistics Files, Death Certificate files, 2015

Note: 2015 data is preliminary and numbers may change

Opioid Induced Death Rates per 100,000, by Area Development District, 2015



Opioid Induced Death Rates per 100,000, Kentucky, 2006-2015



Source: KY Vital Statistics Files, Death Certificate files, 2006-2015
Note: 2009-2015 data is preliminary and numbers may change

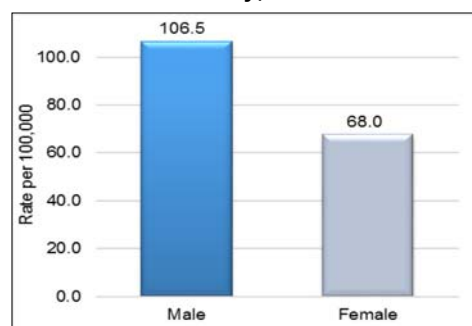
OPIOID INDUCED EMERGENCY DEPARTMENT (ED) VISITS

Definition of Indicator: These are emergency department (ED) visits of a Kentucky resident in a Kentucky facility that involved an ICD-9-CM or ICD-10-CM diagnosis code or e-code indicating drug overdose. In addition, these visits had a code for a pharmaceutical opioid or heroin.

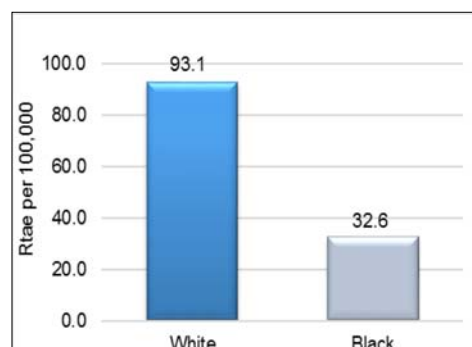
Who is at risk in Kentucky?

- ◆ There were 3,848 drug overdose ED visits of Kentucky residents involving an opioid in 2015 with a rate of 87.0 per 100,000.
- ◆ The rate of opioid ED visits was noticeably higher among males compared to females, 106.5 vs. 68.0, respectively.
- ◆ The rate among Whites at 93.1 per 100,000 was higher than the rate among Blacks at 32.6 per 100,000.
- ◆ The 25-34 age category had the highest rate at 255.1 per 100,000.
- ◆ The ADD with the highest rate was Northern Kentucky at 268.1 per 100,000.
- ◆ The rate increased from 18.6 per 100,000 in 2008 to 87.0 per 100,000 in 2015.

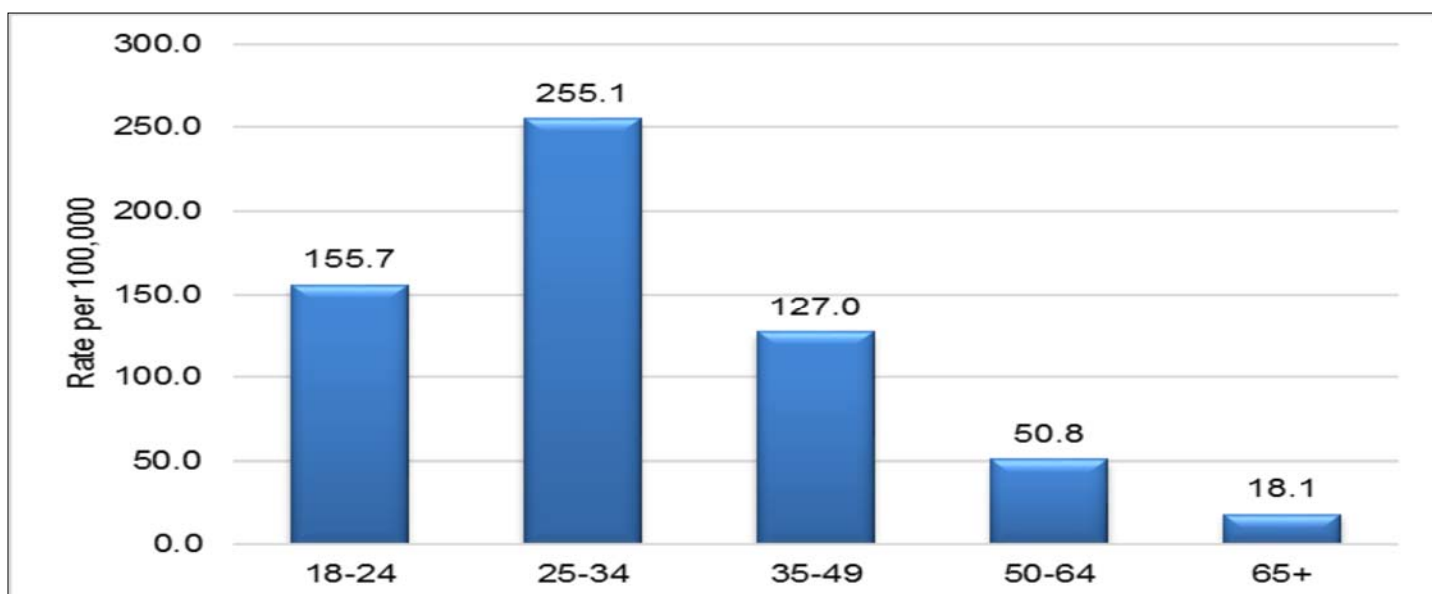
Opioid Induced ED Visits by Gender, Kentucky, 2015*



Opioid Induced ED Visits by Race, Kentucky, 2015*



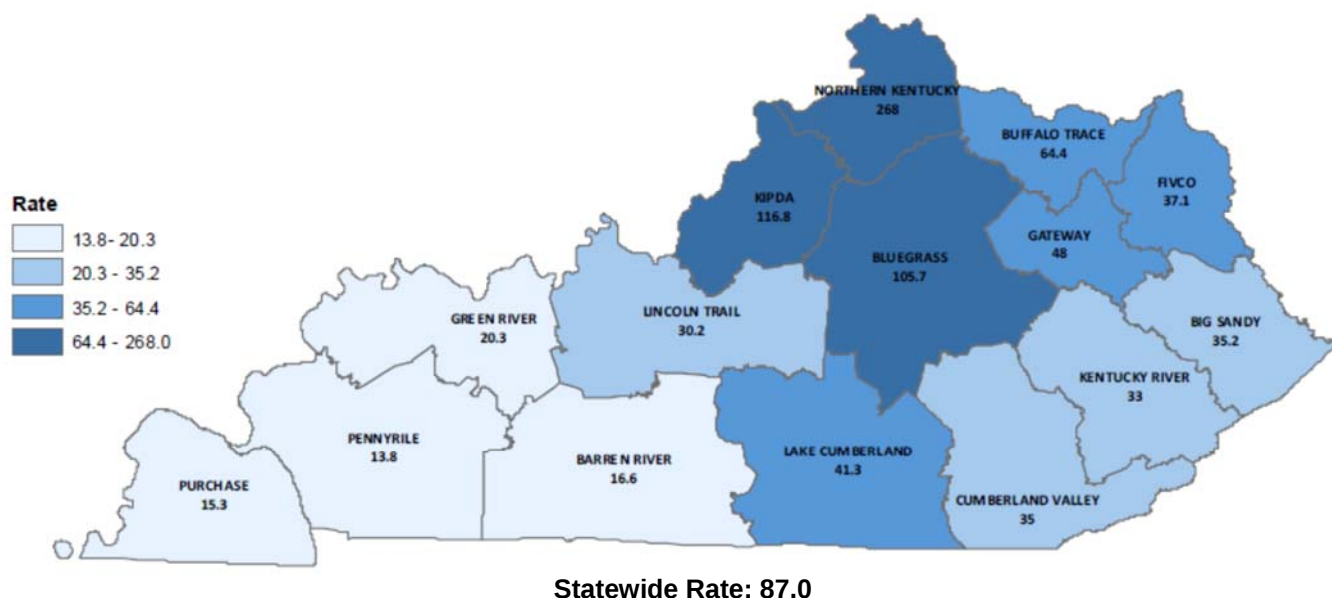
Opioid Induced ED Visits by Age, Kentucky, 2015



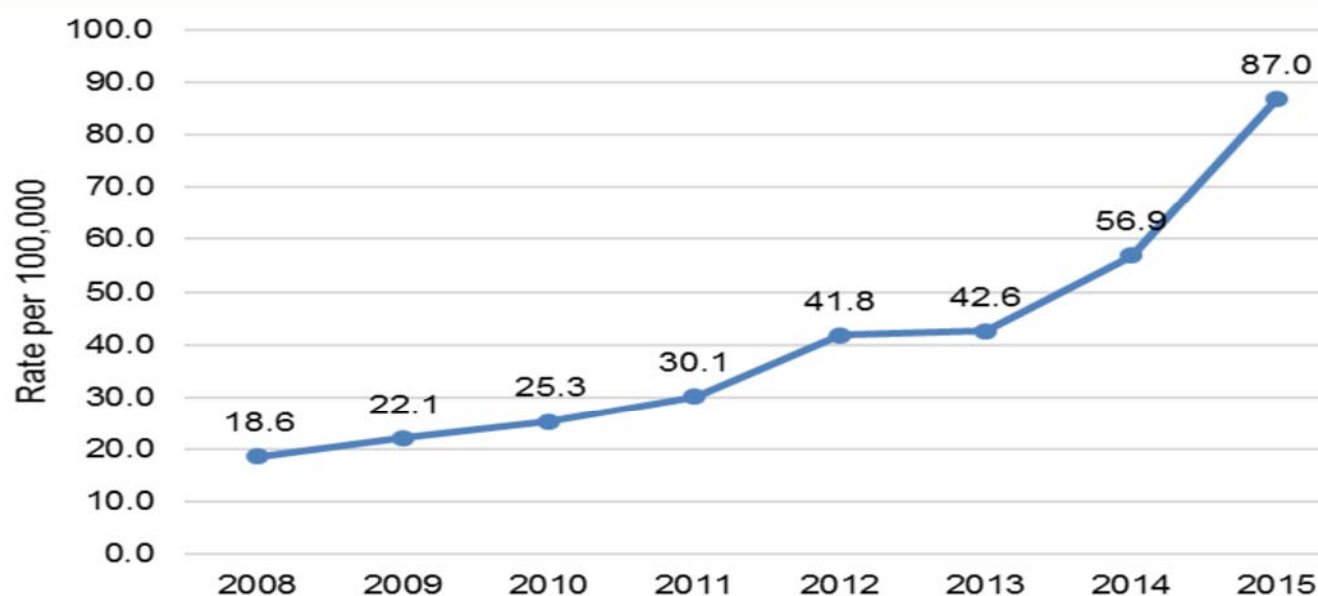
Data provided by Kentucky Injury Prevention and Research Center

Source: Kentucky Outpatient Hospitalization Claims files 2008-2015, Cabinet for Health and Family Services, Office of Health Policy; Data for 2015 is provisional and subject to change.

Opioid Induced ED Visits per 100,000, by Area Development District, 2015



Opioid Induced ED Visits per 100,000, Kentucky, 2008-2015



Data provided by Kentucky Injury Prevention and Research Center

Source: Kentucky Outpatient Hospitalization Claims files 2008-2015, Cabinet for Health and Family Services, Office of Health Policy; Data for 2010-2015 are provisional and subject to change.

POOR MENTAL HEALTH DAYS

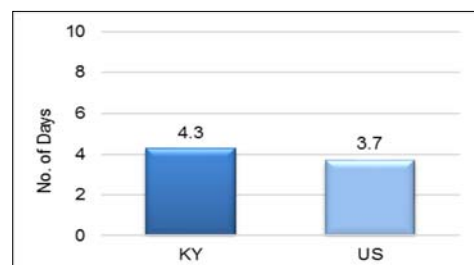
Question: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

Measure: Poor Mental Health Days is the average number of days in the previous 30 days adults report their mental health was not good.

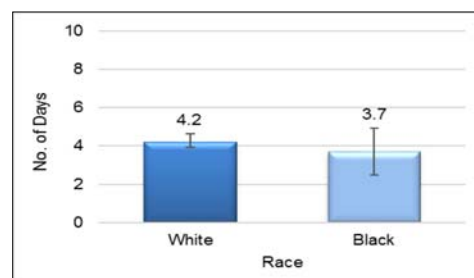
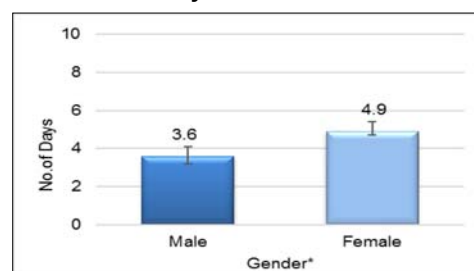
Who is at risk in Kentucky?

- ◆ In 2015, adults in Kentucky reported that on an average their mental health was not good for 4.3 days. The average number of poor mental health days in the previous 30 days for the United States is 3.7 days.
- ◆ Women were significantly more likely to have a higher number of poor mental health days as compared to men, 4.9 days vs. 3.6 days, respectively.
- ◆ The average number of days in the previous 30 days adults report their mental health was not good did not differ significantly by race.
- ◆ Adults aged 35 to 49 years reported significantly higher poor mental health days (5.8 days) as compared to ages 65 and older (2.5 days).
- ◆ The average number of poor mental health days in the previous 30 days decreased significantly with increasing levels of educational attainment.
- ◆ Poor mental health days was significantly higher among adults with an annual household income of less than \$25,000 compared to those with a higher annual household income of \$50,000 or more.

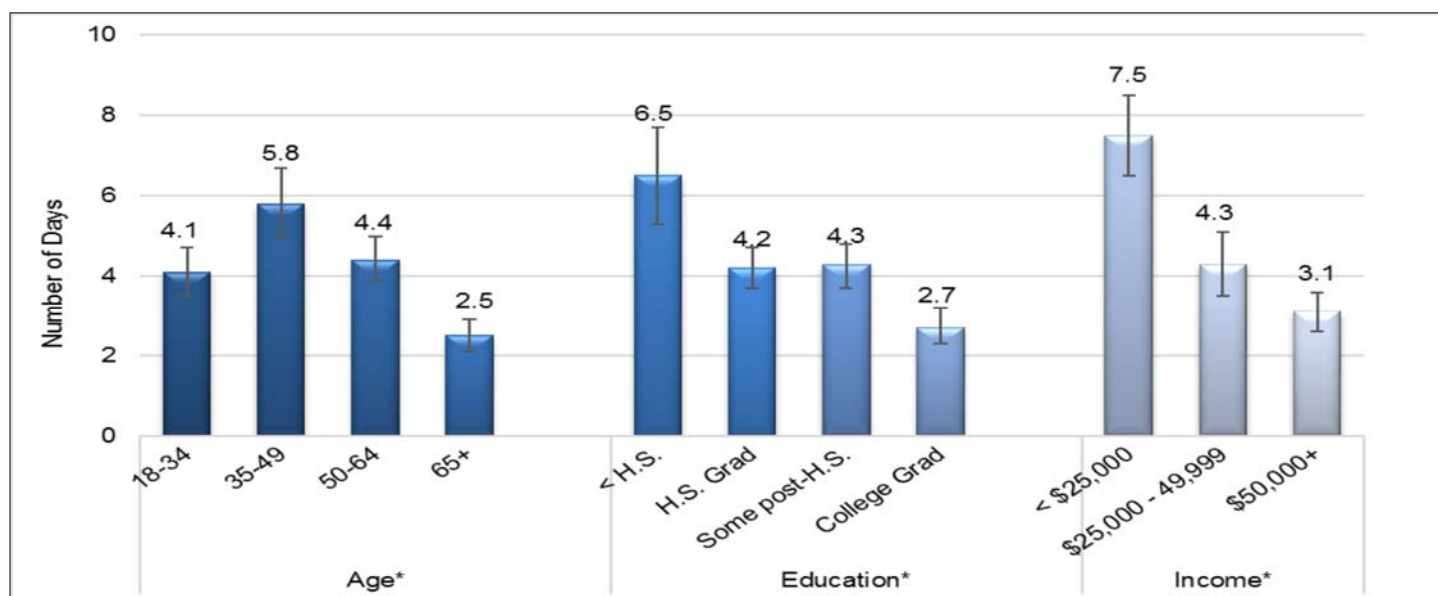
Mean number of days in past 30 days mental health not good: Kentucky vs. Nationwide



Mean number of days in past 30 days mental health not good, by Gender*, and by Race — 2015



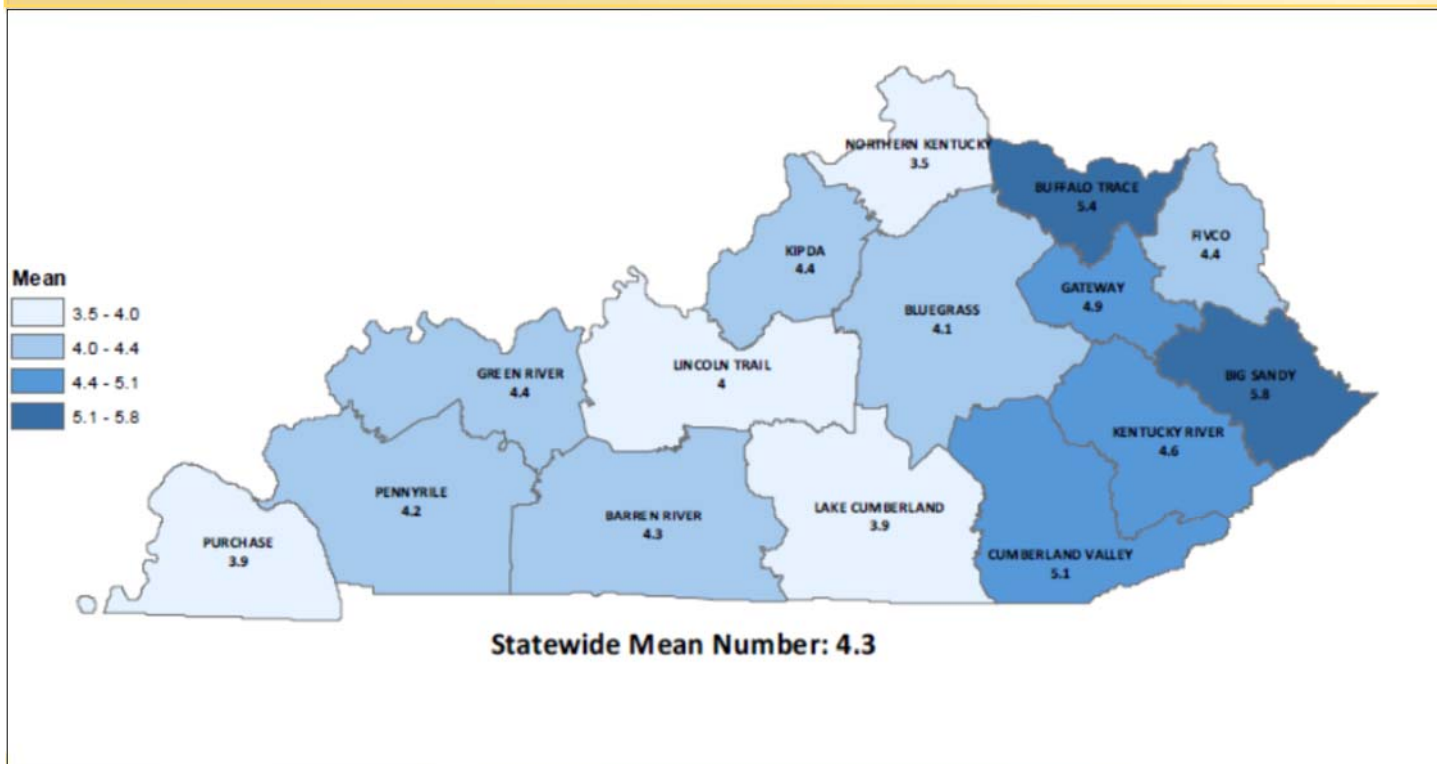
Mean number of days in past 30 days mental health not good, by Age*, Education*, and Income* — 2015



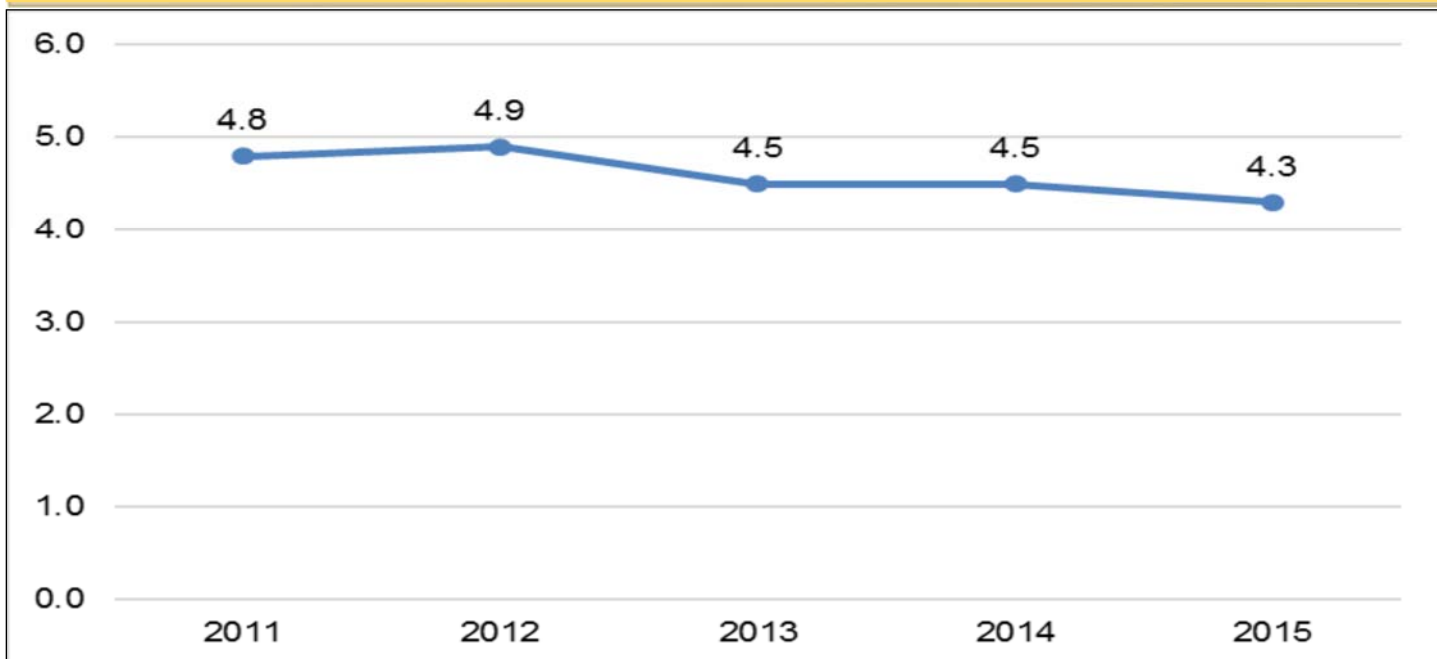
Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2015

*Denotes a statistically significant difference

Average Number of Days in Past 30 Days Mental Health Not Good, by Area Development District, 2015



Average Number of Days in Past 30 Days Mental Health Not Good, Kentucky, 2011-2015



Source: Kentucky Behavioral Risk Factor Surveillance (KyBRFS), 2011-2015

MATERNAL AND CHILD HEALTH

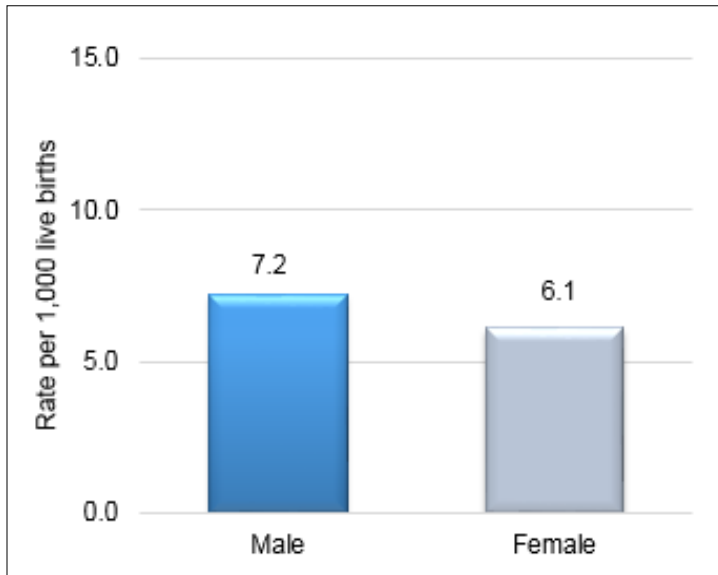
INFANT MORTALITY

Definition of Indicator: The infant mortality rate (IMR) is the number of infant deaths for every 1,000 live births and is seen as the best indicator of a state's overall health, social, and economic environment.

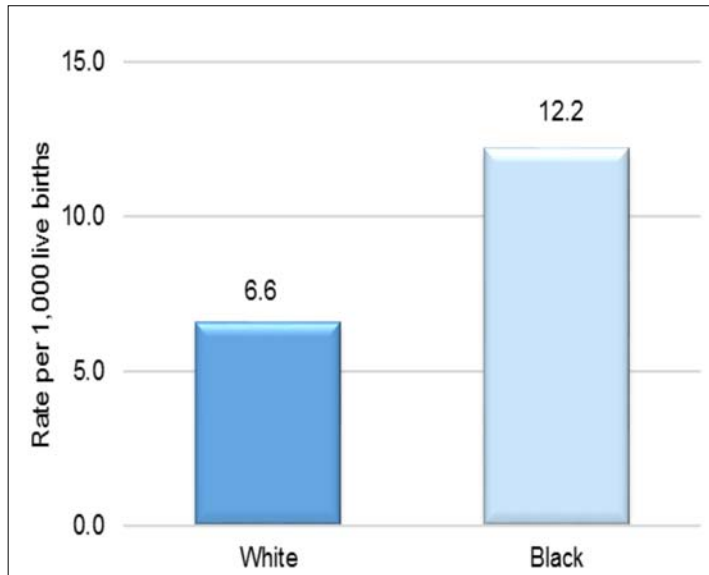
Who is at risk in Kentucky?

- ◆ From 2006 to 2015, the infant mortality rate in Kentucky has declined from 7.7 per 1,000 live births to 6.7 per 1,000 live births. The U.S. infant mortality rate was 5.8 per 1,000 live births in 2014. (2015 data is not available).
- ◆ In 2015, male infants died at a slightly higher rate than female infants, 7.2 vs 6.1, respectfully.
- ◆ In 2015, the infant mortality rate among Black infants (12.2 per 1,000 live births) was nearly twice the rate of White infants (6.6 per 1,000 live births).
- ◆ From 2006 to 2015, Big Sandy, Buffalo Trace, and Kentucky River ADDs had the highest infant mortality rates respectively.

**Infant Mortality Rate by Gender
Kentucky, 2015***



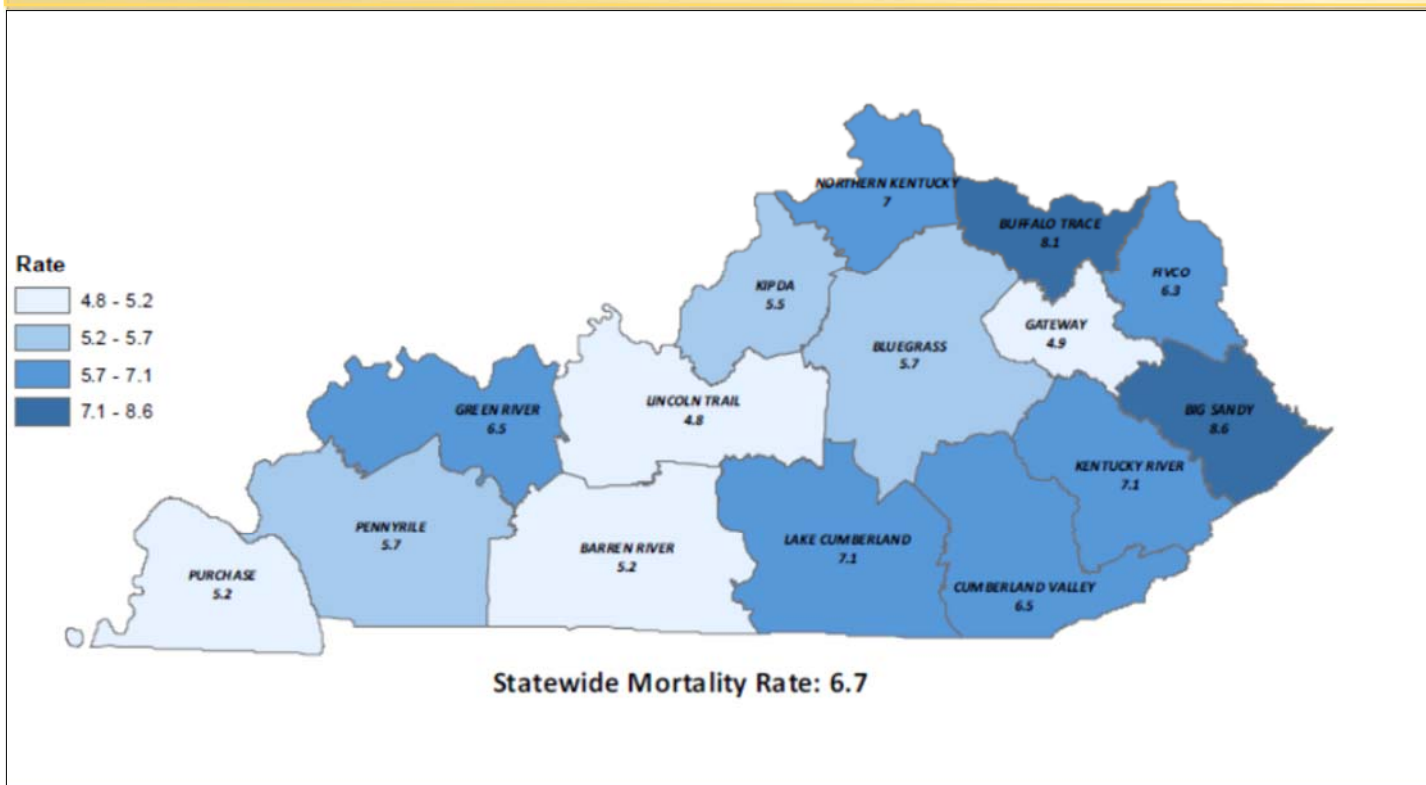
**Infant Mortality Rate by Race
Kentucky, 2015***



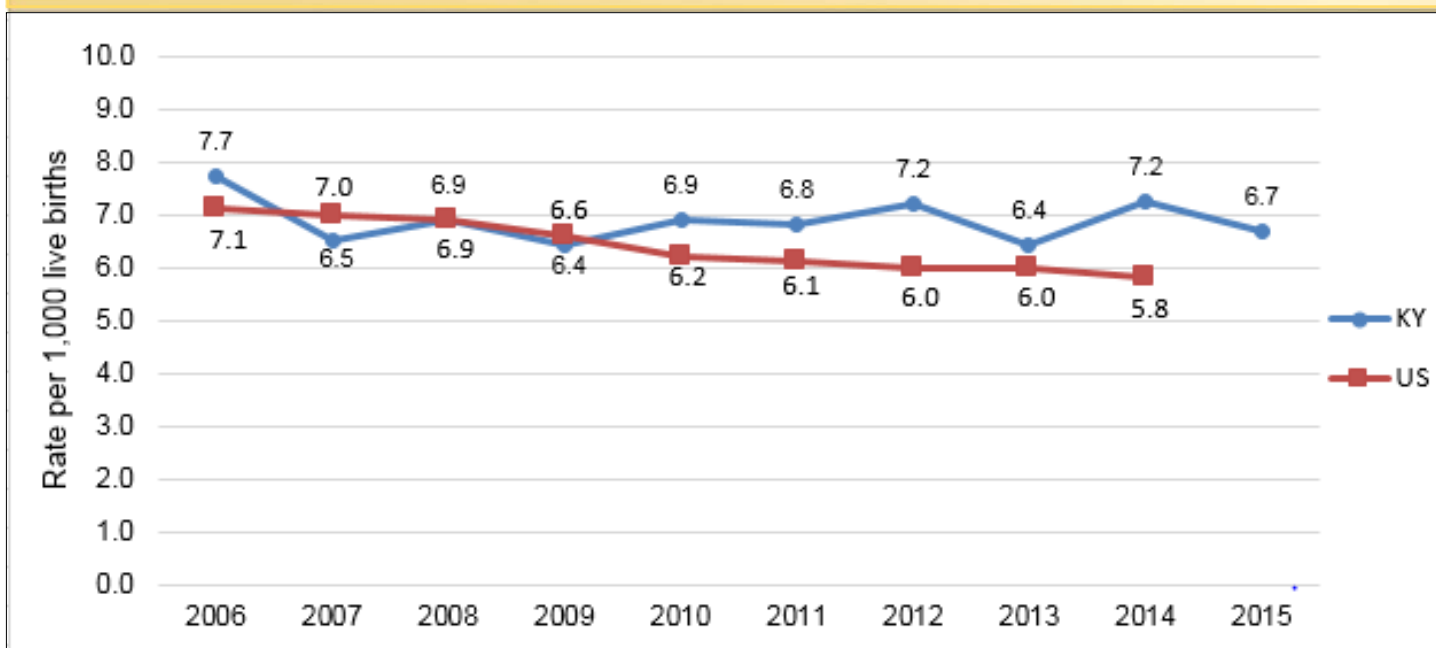
Source: KY Vital Statistics Files, Death Certificate Files, 2015 and Birth Certificate Files (denominator), 2014-2015

*Note: 2008-2015 data are preliminary and numbers may change.

Infant Mortality Rate per 1,000, by Area Development District, 2006-2015*



Infant Mortality Rate per 1,000 Kentucky and U.S., 2006-2015*



Source: KY Vital Statistics Files, Death Certificate Files and Birth Certificate Files (denominator), Years 2005-2015; U.S. National Center for Health Statistics, Deaths Final Data, 2006-2014.

*Note: 2008-2015 data are preliminary and numbers may change. U.S. data is not available for 2015.

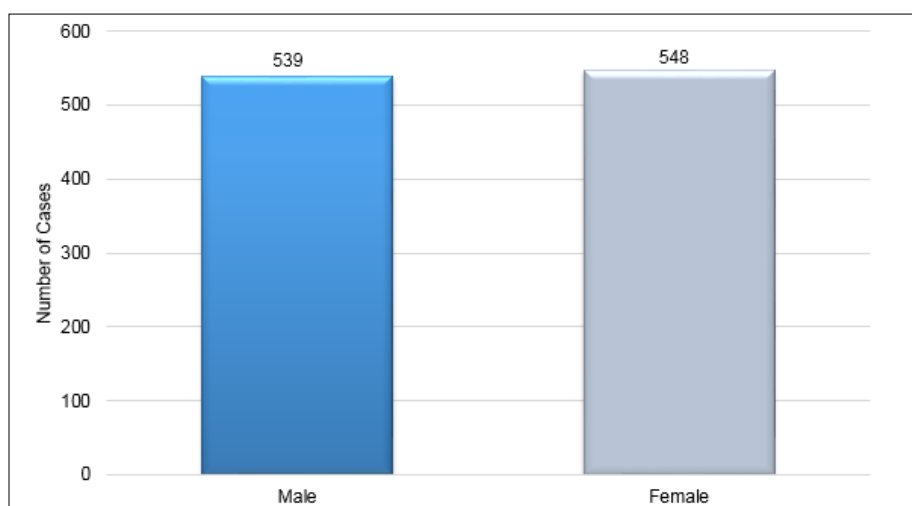
NEONATAL ABSTINENCE SYNDROME (NAS)

Definition of Indicator: Neonatal abstinence syndrome (NAS) is the collection of symptoms that babies experience when they have withdrawal from drugs that they were exposed to in utero.

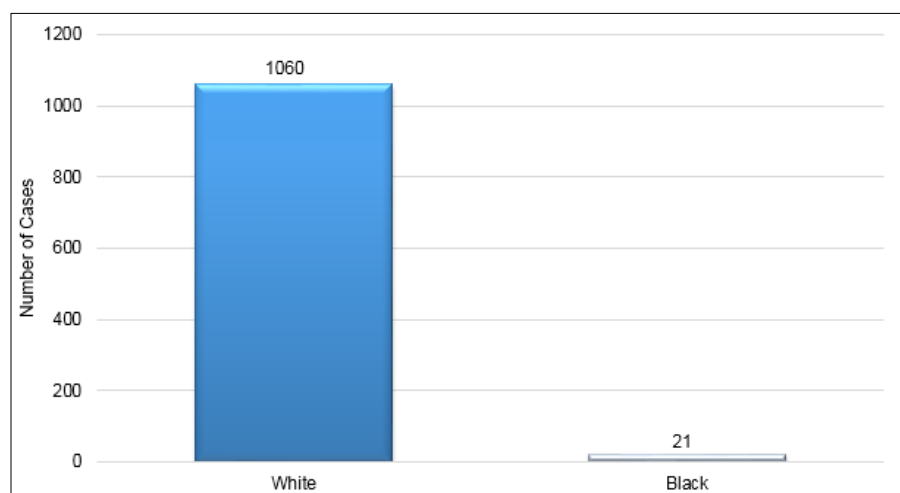
Who is at risk in Kentucky?

- ♦ From 2006 to 2015, the number of Kentucky resident newborns with NAS has increased from 179 to 1,092; a more than six-fold increase.
- ♦ In 2015, a higher number of White infants were diagnosed with NAS compared to Black Infants, 1060 vs. 21, respectfully.

NAS Hospitalizations of Kentucky Resident Newborns by Gender, Kentucky, 2015*



NAS Hospitalizations of Kentucky Resident Newborns by Race, Kentucky, 2015*



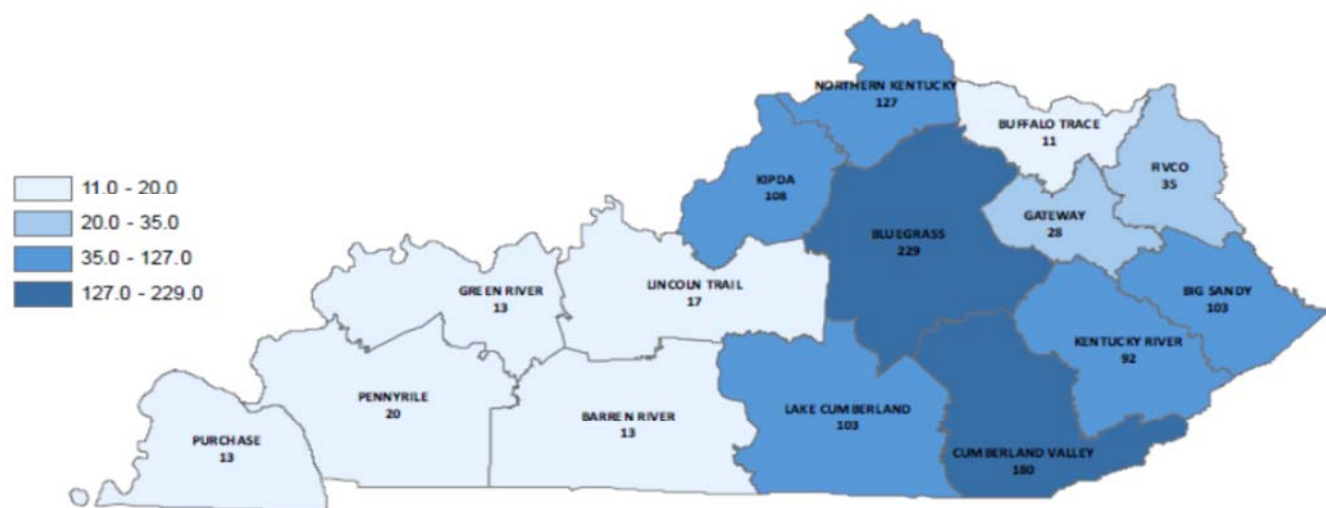
Data provided by Kentucky Injury Prevention Research Center, February, 2017

Source: Kentucky Inpatient Hospitalization Claims Files, 2001-2015; Cabinet for Health and Family Services, Office of Health Policy

*Data for 2010-2015 are provisional and subject to change.

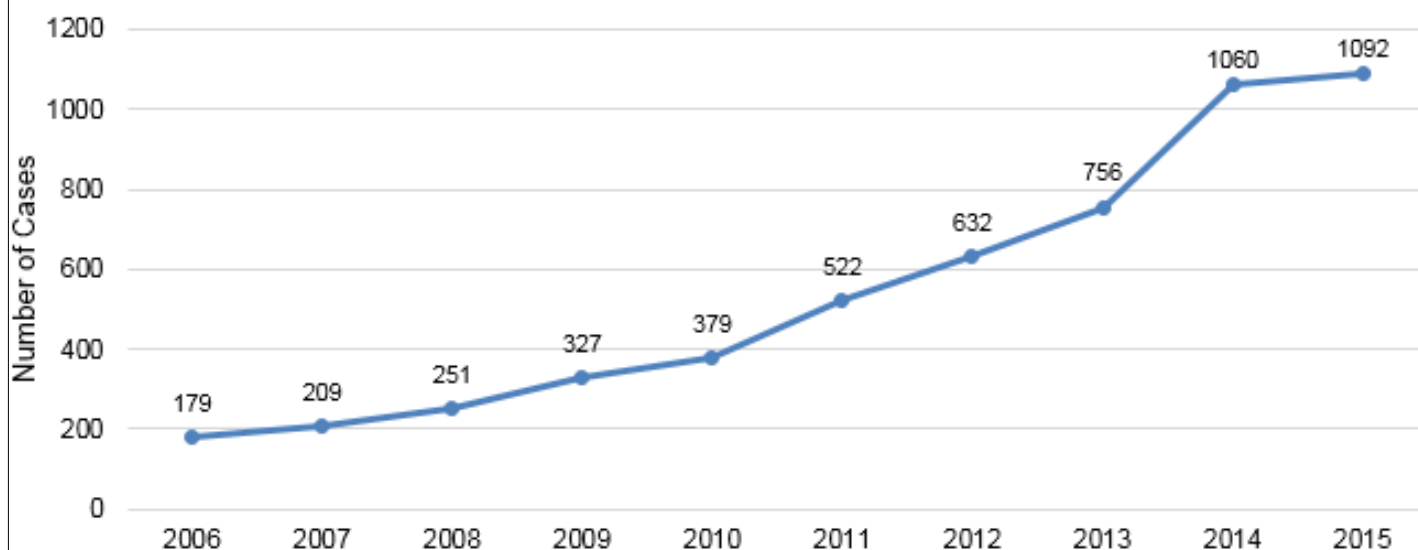
For discharges occurring prior to Oct 1, 2015, NAS was defined as any mention of both ICD-9-CM codes 779.5 ("Drug withdrawal syndrome in newborn") and V30-V39 ("Liveborn infant"); for discharges occurring on or after Oct 1, 2015, NAS was defined as any mention of both ICD-10-CM codes P96.1 ("Neonatal withdrawal symptoms from maternal use of drugs of addiction") and Z38 ("Liveborn infant"). NAS cases for a given year were selected based on the newborn's year of birth, not year of discharge. Non-Kentucky resident newborns were excluded.

NAS Hospitalizations of Kentucky Resident Newborns, by Area Development District, 2015*



Statewide NAS Hospitalizations: 1,092

NAS Hospitalizations of Kentucky Resident Newborns, 2006-2015*



Data provided by Kentucky Injury Prevention Research Center, February, 2017

Source: Kentucky Inpatient Hospitalization Claims Files, 2001-2015; Cabinet for Health and Family Services, Office of Health Policy

*Data for 2010-2015 are provisional and subject to change.

For discharges occurring prior to Oct 1, 2015, NAS was defined as any mention of both ICD-9-CM codes 779.5 ("Drug withdrawal syndrome in newborn") and V30-V39 ("Liveborn infant"); for discharges occurring on or after Oct 1, 2015, NAS was defined as any mention of both ICD-10-CM codes P96.1 ("Neonatal withdrawal symptoms from maternal use of drugs of addiction") and Z38 ("Liveborn infant"). NAS cases for a given year were selected based on the newborn's year of birth, not year of discharge. Non-Kentucky resident newborns were excluded.

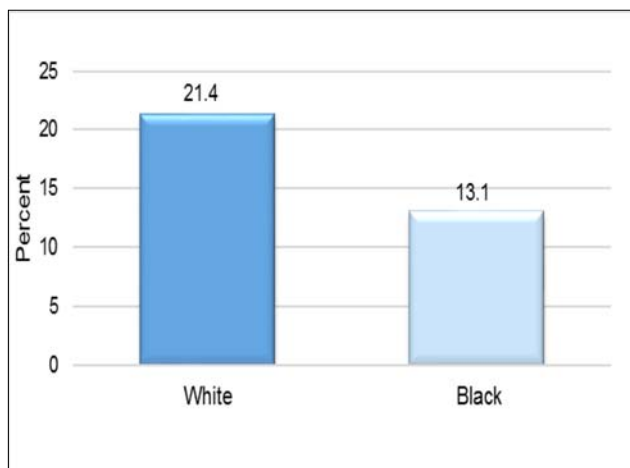
SMOKING DURING PREGNANCY

Definition of Indicator: Smoking during pregnancy includes smoking any amount of cigarettes at any time during pregnancy. This indicator is consistently reported as a predictor of adverse birth outcomes including preterm births, low birth weight, and infant mortality. Data provided are for Kentucky residents only.

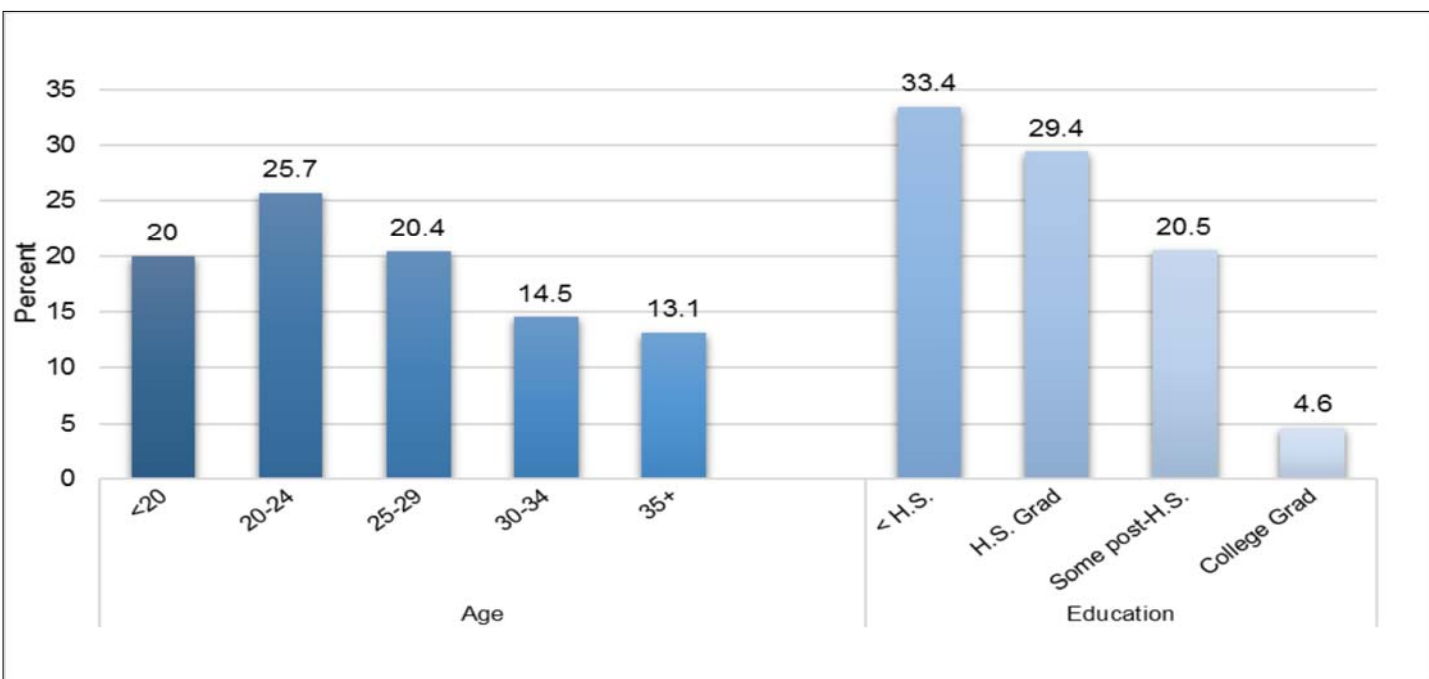
Who is at risk in Kentucky?

- ◆ From 2006 to 2015, the percent of Kentucky residents births with mothers who smoked during pregnancy has declined from 26.1% to 19.5%. This is significantly higher than the most recent national data in 2014 in which 8.4% of mothers reported smoking during pregnancy.
- ◆ In 2015, 21.4% of White infants had mothers who smoked during pregnancy compared to 13.1% among Black infants.
- ◆ In 2015, mothers with less than or the equivalent of a high school diploma were more likely to smoke during pregnancy than mothers with more education.
- ◆ In 2015, mothers in eastern Kentucky were more likely to smoke during pregnancy than in other areas of the state.

Percent of Live Births to Women who Smoked During Pregnancy by Race, Kentucky, 2015*



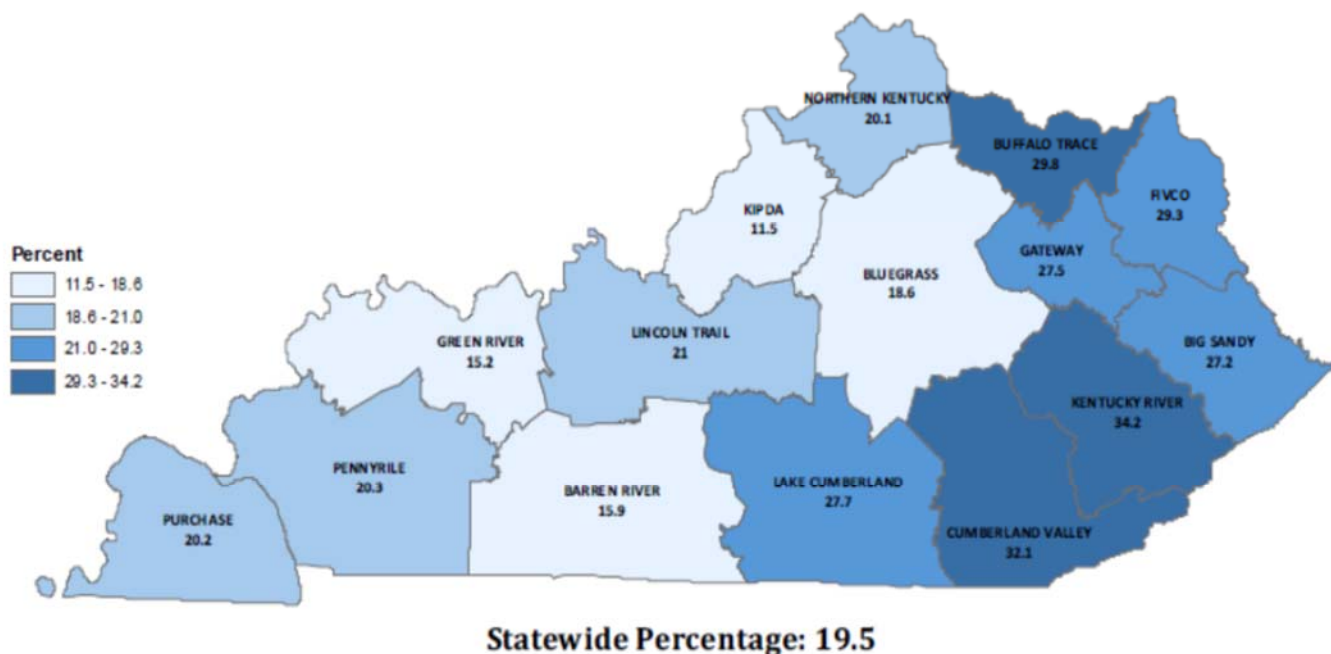
Percent of Live Births to Women who Smoked During Pregnancy, Kentucky, 2015*



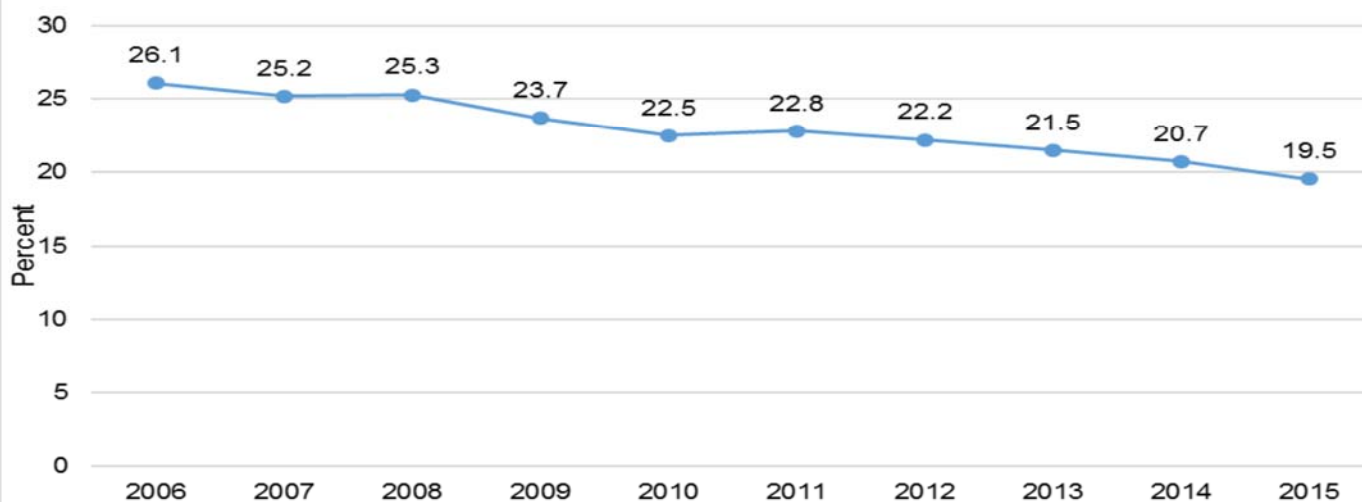
Source: KY Vital Statistics Files, Live Birth Certificate Files, 2015

* Note: 2015 data are preliminary and numbers may change.

Percent of Live Births to Women who Smoked During Pregnancy by Area Development District, Kentucky, 2015*



Percent of Live Births to Women who Smoked During Pregnancy, Kentucky, 2006-2015*



Source: KY Vital Statistics Files, Live Birth Certificate Files, Years 2006-2015

*Note: 2008-2015 data are preliminary and numbers may change.

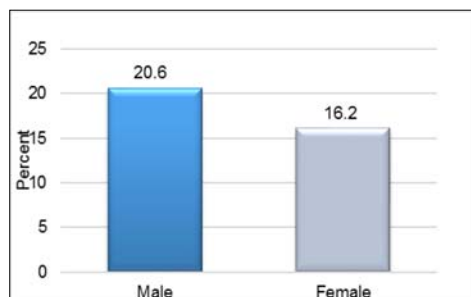
OBESITY IN YOUTH

Definition of Indicator: Percentage of students who were obese ($\geq$ 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth chart). Overweight and Obese indicators are only reported for high school students.

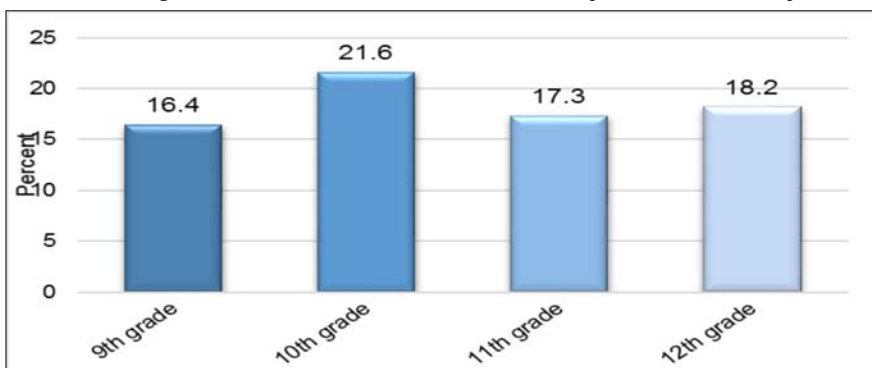
Who is at risk in Kentucky?

- ◆ In 2015, male high school students were more likely to be obese than female high school students.
- ◆ From 2007 to 2015, the percentage of high school students who were obese increased from 15.4% to 18.5%.

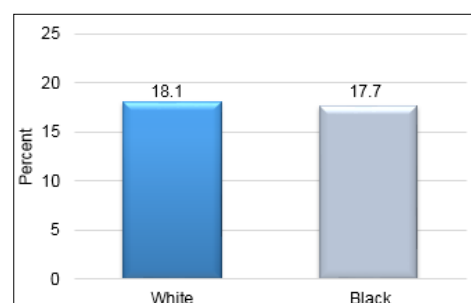
Percent of High School Students Who Are Obese by Gender, Kentucky, 2015



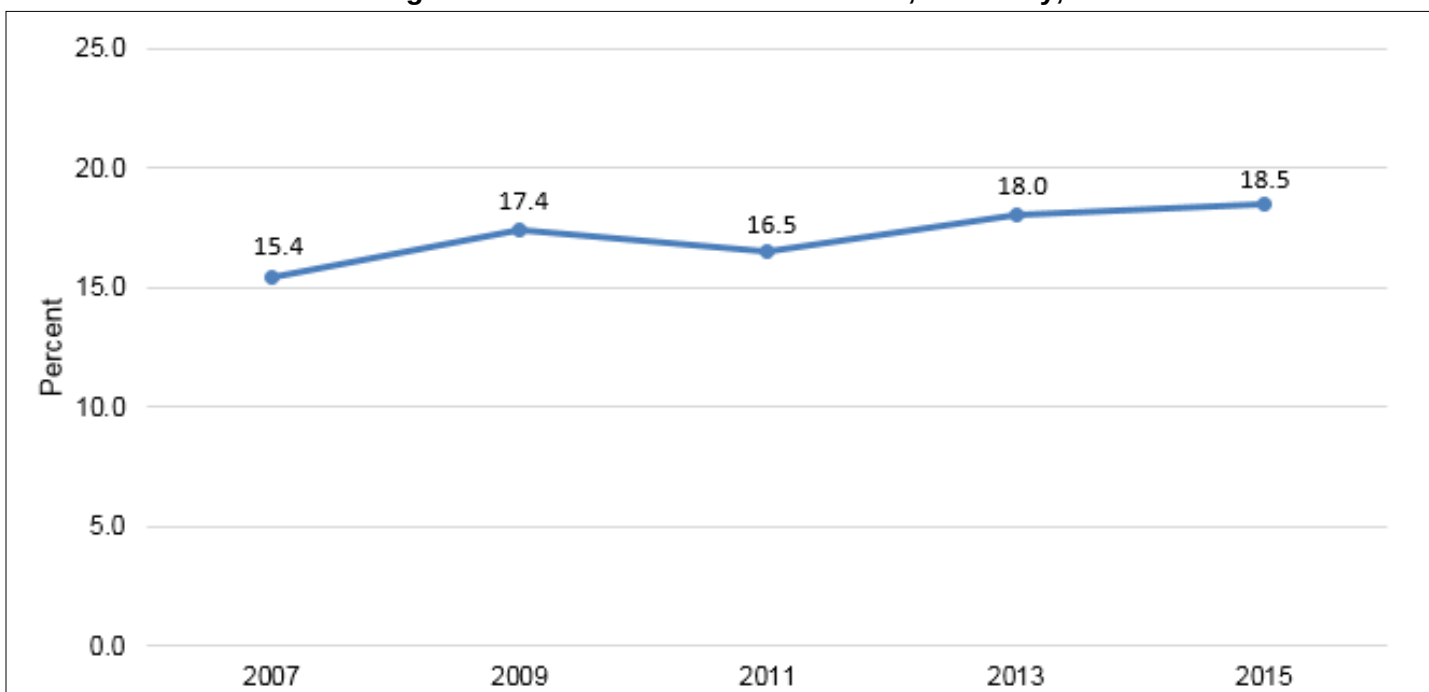
Percent of High School Students Who Are Obese by Grade, Kentucky, 2015



Percent of High School Students Who Are Obese by Race, Kentucky, 2015



Percent of High School Students Who Are Obese, Kentucky, 2007-2015



Source: Youth Risk Behavior Survey, Year 2007, 2009, 2011, 2013, 2015. The Youth Risk Behavior Survey is conducted every two years on the odd year.

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