

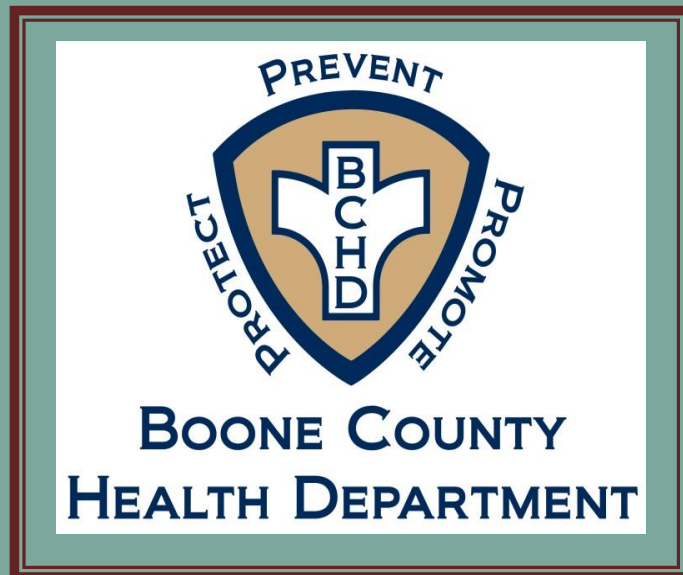
2018-2020



*"Mobilize community  
partners to provide  
collaborative services  
through a coordinated  
public health system  
and to promote  
healthy lifestyles"*

***bchc06@gmail.com***

# BOONE COUNTY COMMUNITY HEALTH IMPROVEMENT PLAN (CHIP)



Boone County, Indiana  
2018-2020

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## ACKNOWLEDGEMENTS

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The Boone County Health Department sincerely appreciates the following agencies that participated with prioritizing the focus areas and contributed to the planning process of the Boone County Community Health Improvement Plan.

- Alzheimer's Association  
Greater Indiana Chapter
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- Boone County Commissioners
- Boone County Council
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- Boone County Food Pantry  
Coalition
- Boone County Health Board
- Boone County Health  
Department
- Boone County Residents
- Boone County Senior Services,  
Inc.
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- Community Foundation of  
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- Indiana State Department of  
Health
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- Lebanon Community Schools
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- Tobacco Free Boone County
- Witham Family YMCA
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## EXECUTIVE SUMMARY

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The Community Health Improvement Plan (CHIP) is the result of a collaborative effort among various community partners to prioritize the areas with opportunity for health improvements identified from the Community Health Assessment (CHA). Community partners were surveyed to help prioritize the focus areas for the CHIP and identify key stakeholders. These key stakeholders and the Boone County Health Department got together and developed goals, objects, and strategies for each priority area.

There were seven focus areas from the CHA: Substance Use, Chronic Conditions, Mental Health, Jail Recidivism, Obesity and Physical Activity, Nutrition and Food Security, and Tobacco and Nicotine Use.

32.4 percent of service area adults in Boone County are obese. This is similar to state and national findings, but misses the Healthy People 2020 target of 30.5 percent. There has been a statistically significant increase in obesity in Boone County since 2012. Additionally, 29.8 percent of Boone County children age 5 to 17 are overweight or obese ( $\geq 85$ th percentile). This is comparable to that found nationally and remains statistically unchanged since 2012. In 2016, 5,860 people in Boone County were food insecure, accounting for a 9.5 percent food insecurity rate. This is lower than the state food insecurity rate of 13.7 percent. A total of 19.6 percent of adults have been diagnosed by a physician as having a depressive disorder (such as depression, major depression, dysthymia, or minor depression), which is similar to national findings. Between 2012 and 2014, there was an annual average age-adjusted suicide rate of 16.0 deaths per 100,000 population in Boone County. This is higher than both state and national rates and fails to satisfy the Healthy People 2020 target of 10.2 or lower.

According to the Health Rankings, Boone County's adult smoking rate is 17 percent, which is slightly lower than Indiana's average of 21 percent. While Boone County continues to battle excessive drinking, drug use has skyrocketed in the county, resulting in increased deaths, non-fatal ED visits due to opioid overdoses, and soft tissue infections associated with drug abuse. Prescription drug misuse includes taking a drug in a manner other than prescribed and taking drugs prescribed to another person. The rate for opioid use for Indiana is 7.99 percent as

compared to Boone County at 9.47 percent. Likewise, the rate for unspecified substance use for Indiana is 12.13 percent compared to 15.79 percent for Boone.

Between 2012 and 2014, there was an annual average age-adjusted cancer mortality rate of 173.9 deaths per 100,000 people. This is similar to the statewide rate but worse than the national rate and fails to satisfy the Healthy People 2020 target of 161.4 or lower. Between 2012 and 2014, there was an annual average age-adjusted Alzheimer's disease mortality rate of 43.6 deaths per 100,000 population in Boone County. This is well above both the state and national rates. Efforts from this plan are intended to improve the overall the health and well-being, as well as improve the quality of life for the county residents. The two year plan (2018-2020) was developed in accordance with the Health People 2020 plan and the County Health Rankings.

The table below shows the goals for each priority area in this plan.

<b>Priority Areas</b>	<b>Targeted Health Improvement Goal 2018-2020</b>
<b>Obesity and Physical Activity</b>	Reduce obesity rates, increase physical activity, and promote healthy lifestyles
<b>Nutrition and Food Security</b>	Increase the consumption of nutritious foods and reduce the food insecurity rate in Boone County
<b>Mental Health</b>	Reduce the stigma of mental health conditions by collaborating to increase awareness and encourage use of existing services
<b>Tobacco and Nicotine Use</b>	Eliminate second hand smoke exposure and reduce the use of nicotine and tobacco products
<b>Substance Use</b>	Reduce youth and adult substance use and decrease the number of overdose deaths in Boone County
<b>Jail Recidivism</b>	Decrease jail recidivism rate
<b>Chronic Conditions</b>	Decrease cancer-related deaths Decrease Alzheimer's-related deaths

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## PLAN OVERVIEW

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The Boone County Community Health Improvement Plan (CHIP) was developed by community partners who will assist with the implementation of activities for each priority area.

The plan contains goals, outcome objectives, strategies and activities to help accomplish the goals, timelines, responsible partners, and resources.

The plan is intended to serve as a roadmap to improve the overall health and well-being as well as improve the quality of life of the county residents.

The Healthy People 2020 and County Health Ranking were used as standards to indicate where we are now and where we intend to be over the course of the Plan cycle (2018-2020).

These standards were used to either identify or address social determinants of health and causes of poor health outcomes.

The action plan for this document involves community partners who would assist with the implementation and evaluation of activities.

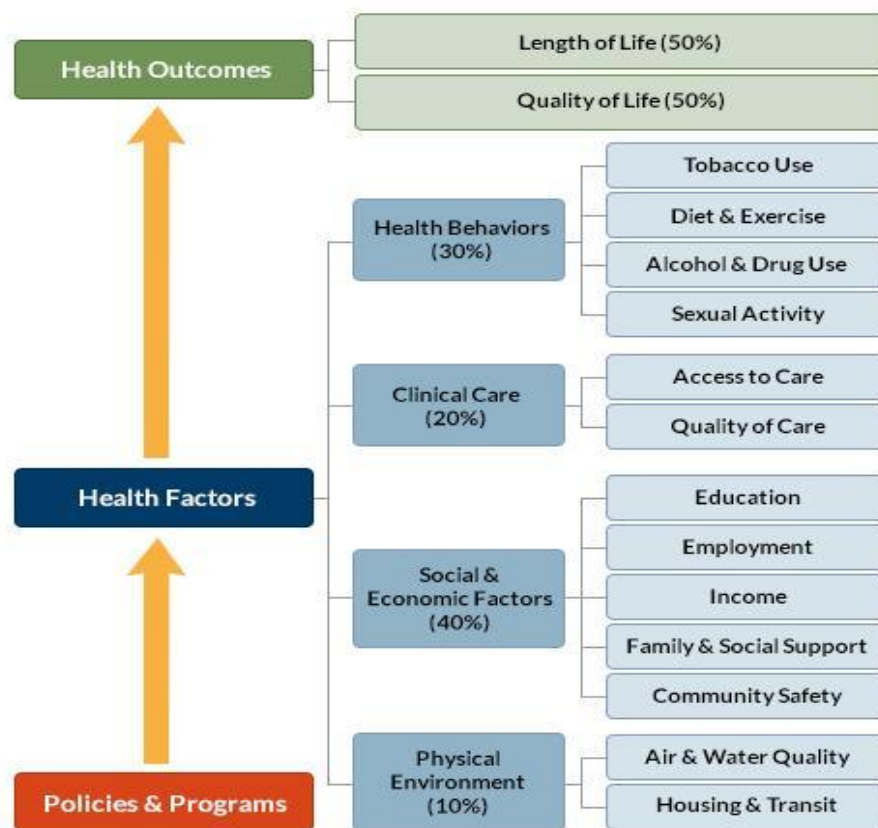
The plan would be evaluated annually and updated as goals and objectives are achieved for each priority area.

## NATIONAL STANDARDS

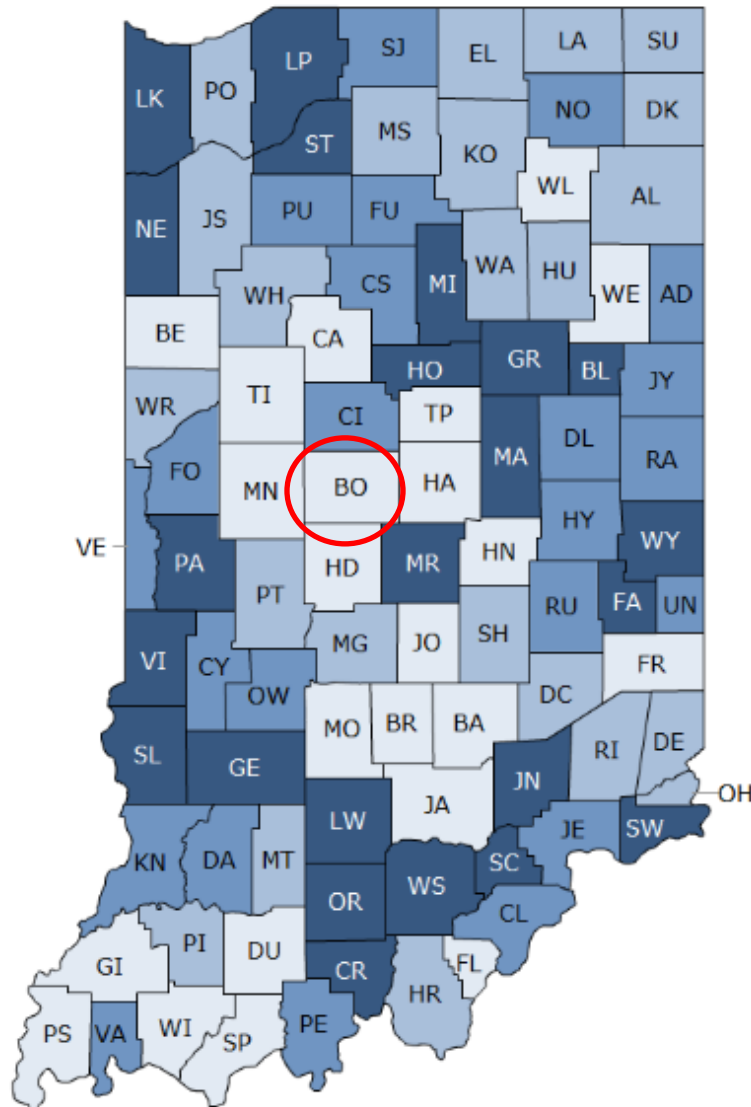
### COUNTY HEALTH RANKING MODEL

The County Health Rankings measure the health of nearly all counties in the nation and rank them within their respective states. The Rankings are compiled using county-level measures from a variety of national and state data sources. These measures are standardized and combined using scientifically-informed weights. They are based on a model of population health that emphasizes the many factors that, if improved, can help make communities healthier places to live, learn, work and play.

The County Health Rankings are based on summary composite scores calculated from the individual measures below.



## 2018 Health Factors – Indiana



Rank 1-23   Rank 24-46   Rank 47-69   Rank 70-92



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## COMMUNITY DESCRIPTION

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Boone County is located in the metropolitan Indianapolis region of Indiana. It includes 12 civil townships as follows: Center, Clinton, Eagle, Harrison, Jackson, Jefferson, Marion, Perry, Sugar Creek, Union, Washington, and Worth.

Lebanon is the county seat. According to STATS Indiana, the 2017 population of Boone County was 65,875 residents.

The median age is 38.9 years, with 20.5 percent of the population below 18 years and 12.7 percent over 65 years. Boone County has experienced a 16.3 percent growth in population since 2010.

The population is predominantly White (94.1 percent); Asian alone (2.4 percent); more than one race (1.8 percent); Black or African American alone (1.3 percent); and American Indian and Alaska Native alone (0.2 percent). The Hispanic or Latino population (of any race) is 2.6 percent.

The median household income in Boone County was \$80,634 in 2016, with poverty rate of 7.7 percent for children under 18 and 7.0 percent for families.

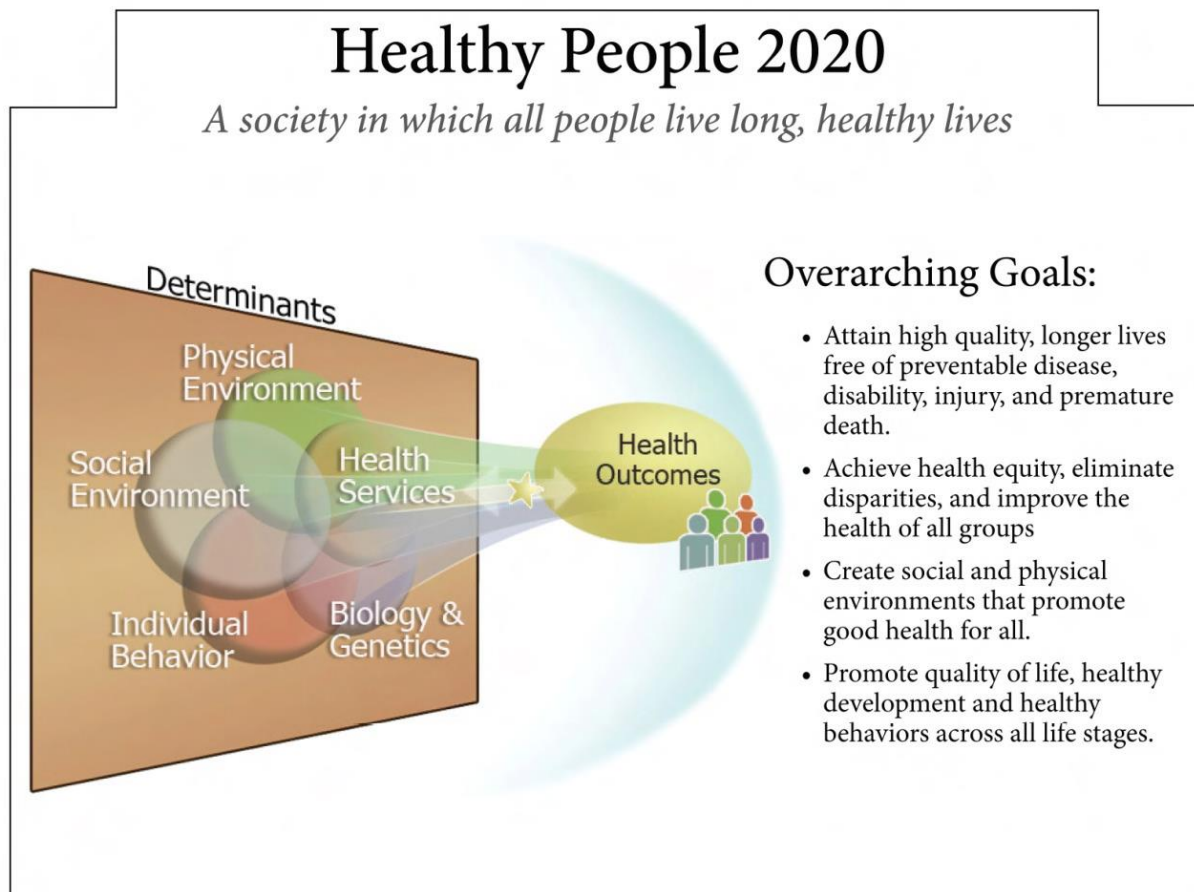
The unemployment rate reported by the US Department of Labor in 2016 was 2.8 percent.

In 2016/17, 93.2 percent of Boone County residents 25 years and older held a high school diploma or higher and 44.5 percent held a bachelor's degree or higher degrees. There were 773 births and 527 deaths in 2015 in Boone County.

## HEALTHY PEOPLE 2020 MODEL

Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. Healthy People has established benchmarks and monitored progress over time in order to:

- Encourage collaborations across communities and sectors.
- Empower individuals toward making informed health decisions.
- Measure the impact of prevention activities.



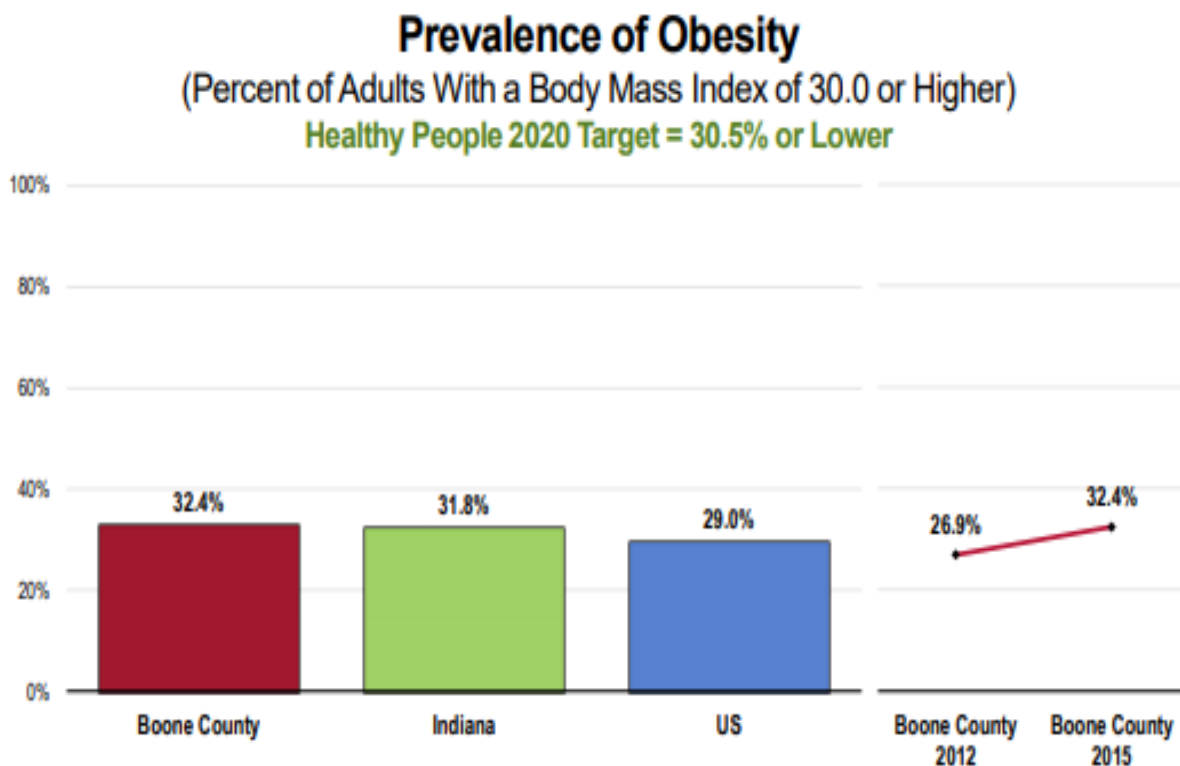
Health People 2020 Framework: <https://www.healthypeople.gov/sites/default/files/HP2020Framework.pdf>

## OBESITY AND PHYSICAL ACTIVITY

### OBESITY

Indiana ranks 7<sup>th</sup> highest in the nation for obesity with over 66 percent of adults and 33 percent of children being overweight or obese.

According to the Witham Health Services 2015 Community Health Needs Assessment, 32.4 percent of service area adults are obese. This is similar to state and national findings but misses the Healthy People 2020 target of 30.5 percent. There has been a significant increase in obesity in the county since 2012.



Source: Witham Health Services 2015 Community Health Needs Assessment

According to the County Health Rankings and Ratings, Boone County obesity rates held steady at 28 percent in 2016 and 2017, but increased in 2018.

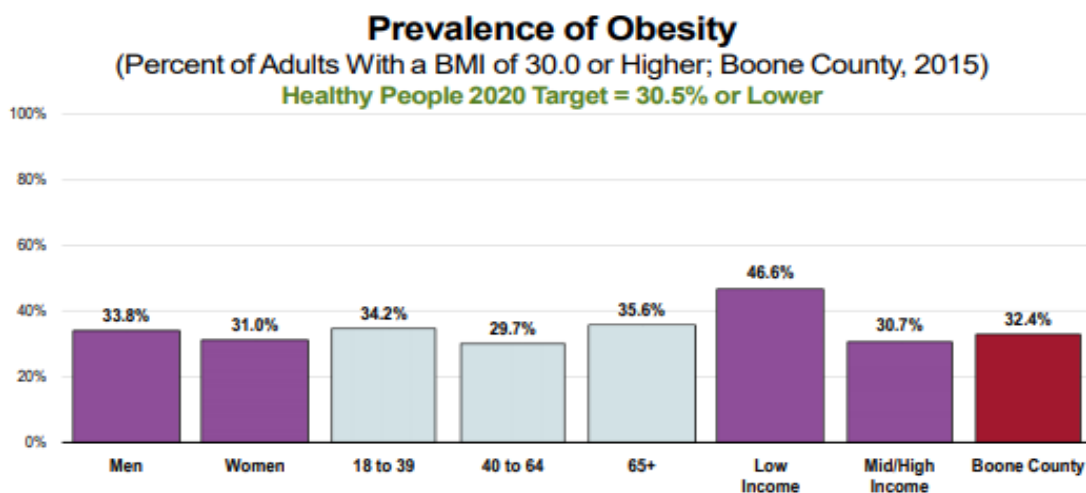
2016	2017	2018
28 percent	28 percent	29 percent

Source: Witham Health Services 2015 Community Health Needs Assessment

The 2015 Community Health Needs Assessment indicates a nearly doubled increase in obesity in the 18-39 range. Obesity is notably more prevalent among the lower income population.

Overweight and obese adults are more likely to have adverse conditions including:

- Hypertension (high blood pressure)
- Chronic depression
- High cholesterol
- Activity limitations
- Arthritis/rheumatism
- Diabetes
- “Fair” or “poor” physical health

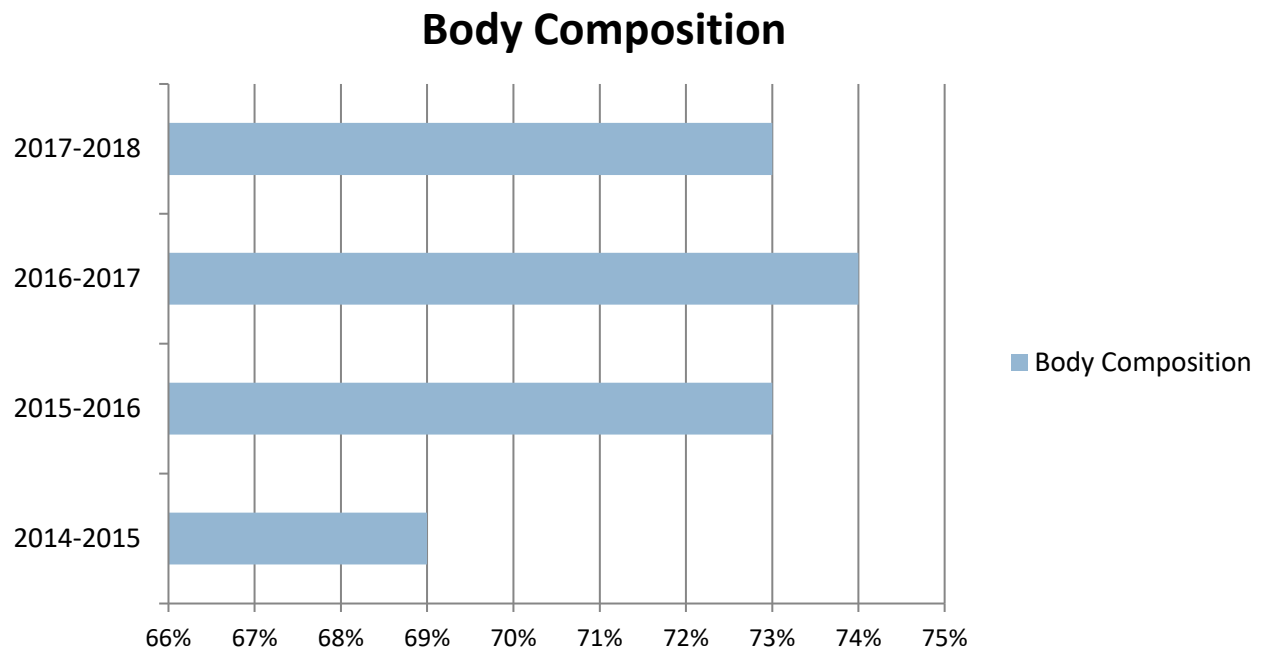


Source: Witham Health Services 2015 Community Health Needs Assessment

## CHILDHOOD OBESITY

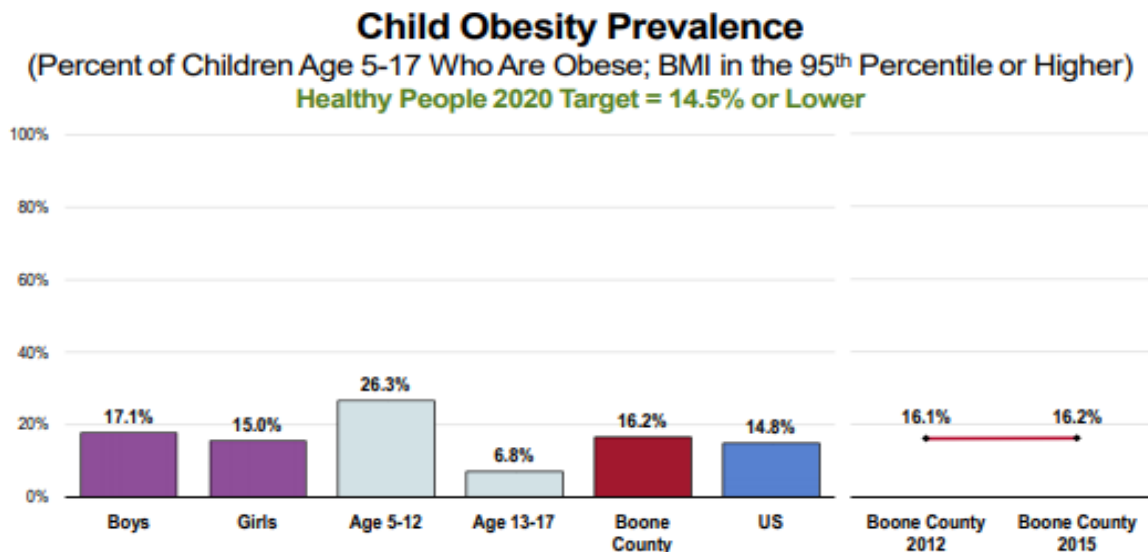
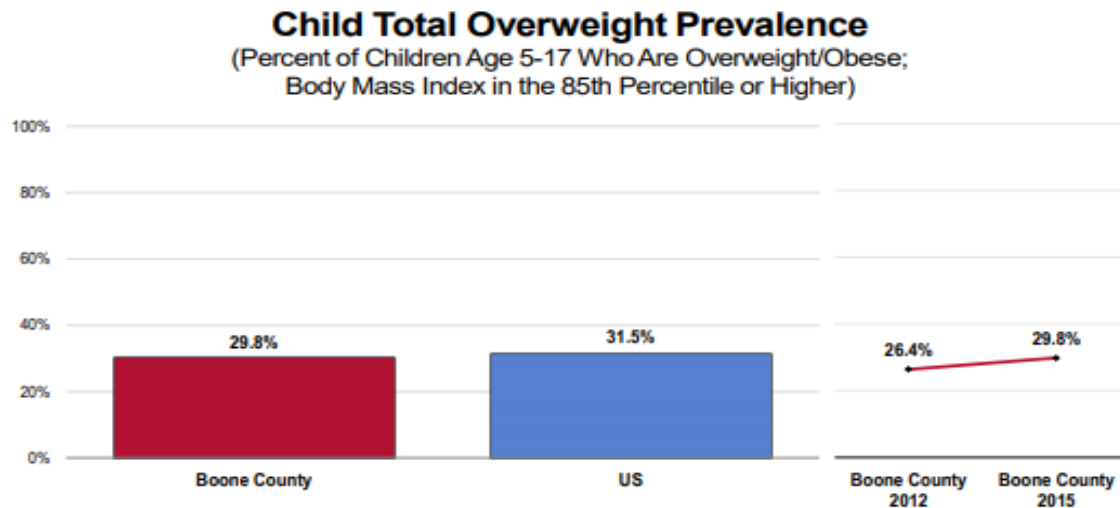
Witham Health Services implemented the FitnessGram tool in 2014 to gather health data on almost 5,000 elementary-age children in Boone County. FitnessGram measured body composition, muscular strength and endurance, flexibility, and cardiovascular fitness.

Body composition is the percentage of fat on a child. This is used as an indicator of obesity and is more reliable than BMI because children develop at different rates. The following graph shows that 73 percent of children were in the desired Healthy Fitness Zone for body composition, meaning 27 percent of children are overweight or obese. The Healthy Fitness Zone is an indicator of good health but does not refer to athletic ability or fitness.



Source: Witham Health Services 2014 FitnessGram Tool

According to the 2015 Community Health Needs Assessment, 29.8 percent of Boone County children age 5 to 17 are overweight or obese ( $\geq 85^{\text{th}}$  percentile). This is comparable to that found nationally and remains unchanged since 2012.



Source: Witham Health Services 2015 Community Health Needs Assessment

Further, 16.2 percent of area children age 5 to 17 are obese ( $\geq 95^{\text{th}}$  percentile). This is similar to the national percentage and the Healthy People 2020 target (14.5 percent or lower for children age 2-19). This trend is statistically unchanged since 2012. Obesity is much higher among younger children than among teens.

## PHYSICAL ACTIVITY

In Indiana, less than 46 percent of adults and 24.2 percent of youth meet overall physical activity guidelines (Center for Disease Control).

- To maximize health benefits, adults should try to be active daily and do at least 150 minutes (2 hours and 30 minutes) a week of moderate-intensity aerobic activity, like cycling or brisk walking.
- Strength exercises that engage all major muscle groups should be completed on two or more days a week.
- Aerobic activity should be performed in episodes of at least 10 minutes, preferably spread throughout the week.
- Children and adolescents should do 60 minutes (1 hour) or more of physical activity daily.

In Boone County, 21 percent of adults reported they participate in no leisure time physical activity, down from 22 percent in 2017 as reported in the physical activity metric in the County Health Rankings and Ratings. This metric is nearing the 20 percent met by top U.S. performers.

2016	2017	2018
25 percent	22 percent	21 percent

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## OBESITY AND PHYSICAL ACTIVITY

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### GOAL

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- Reduce obesity rates, increase physical activity, and promote healthy lifestyles

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### OBJECTIVES

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- Reduce the adult obesity rate from 29% to 27% by 2020
- Increase the percentage of children in the healthy fitness zone from 73% to 80% by 2020
- Support efforts to begin a community bike share program by 2020
- Implement one neighborhood walking club per year through 2020

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### STRATEGIES

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- Evolve the childhood obesity task force into a Boone County obesity taskforce
  - Host events to promote healthy behaviors, like 5K walks/runs
  - Evolve #BeWellBoone into a communitywide health campaign by 2020
  - Promote the #BeWellBoone
  - Support the completion of the Big 4 Trail system
  - Bring sidewalks to neighborhoods lacking them and replace damaged sidewalks to promote physical activity
  - Support bringing a bike share program to Boone County to promote physical activity and provide a transportation option
  - Promote community specific health campaigns
  - Educate community on alternative physical activity methods
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## NUTRITION AND FOOD SECURITY

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### NUTRITION

In 2015, the Surgeon General issued a call to action to promote walking and walkable communities due to the obesity epidemic in the United States.

In Indiana, one in ten adults eat the recommended amount of fruits and vegetables. Depending on age and sex, federal guidelines recommend adults eat at least 1 ½ to 2 cups of fruit and 2 to 3 cups per day of vegetables as part of a healthy eating pattern. (Center for Disease Control, Nov. 16, 2017)

Indiana Grown estimates 90 percent of the food consumed in Indiana is locally sourced, though we are the 10<sup>th</sup> largest farming state in the nation.

The demand for locally grown fruits and vegetables is at an all-time high with new farmers markets opening throughout the state.

The 2017 Purdue Extension Change Tool Assessment identified a demand for more local fruits and vegetables and for nutrition education and food preparation. Boone County has re-launched or added three new farmers markets in the past several years.

According to the United States Department of Agriculture (USDA). The proliferation of fast food restaurants in Boone County per 1,000 residents has increased 22.56 percent from 2009 to 2014.

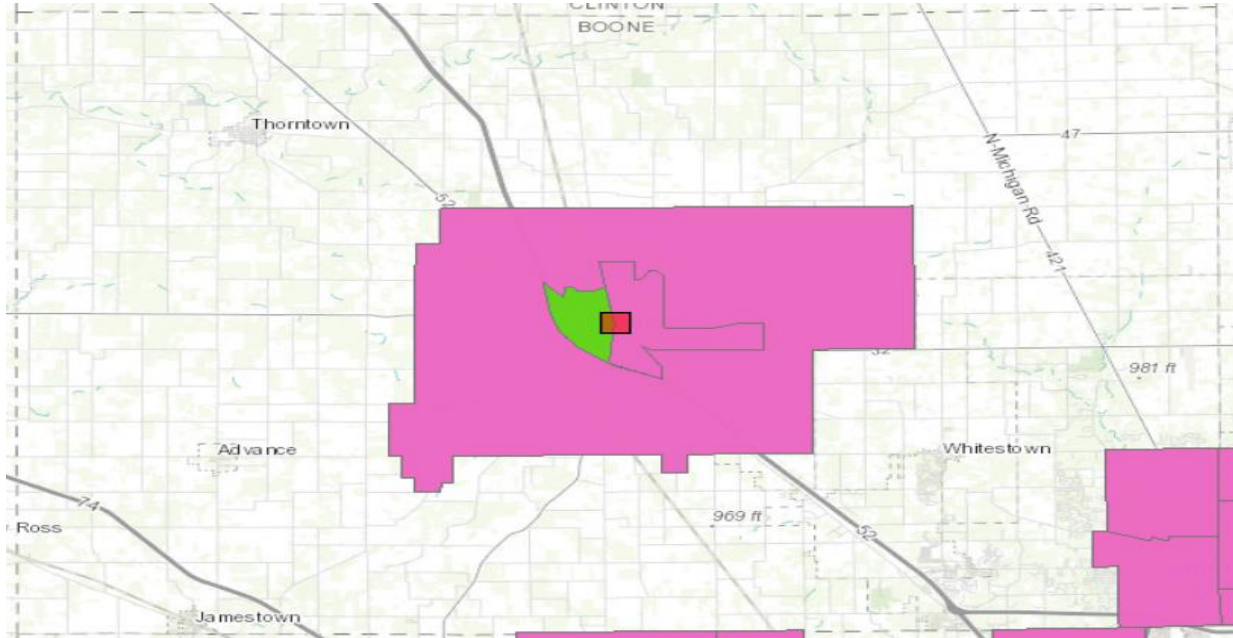
The percentage of sit-down restaurants per 1,000 residents has decreased by 1.09 percent in that same time period. A 2010 study concluded limited but consistent evidence suggests that increased geographic density of fast food restaurants is related to increased BMI.

## FOOD SECURITY

Access to nutritious food is a key factor in healthy eating. Food insecurity exists in every county and congressional district in the country, but not everyone struggling with hunger qualifies for federal nutrition assistance.

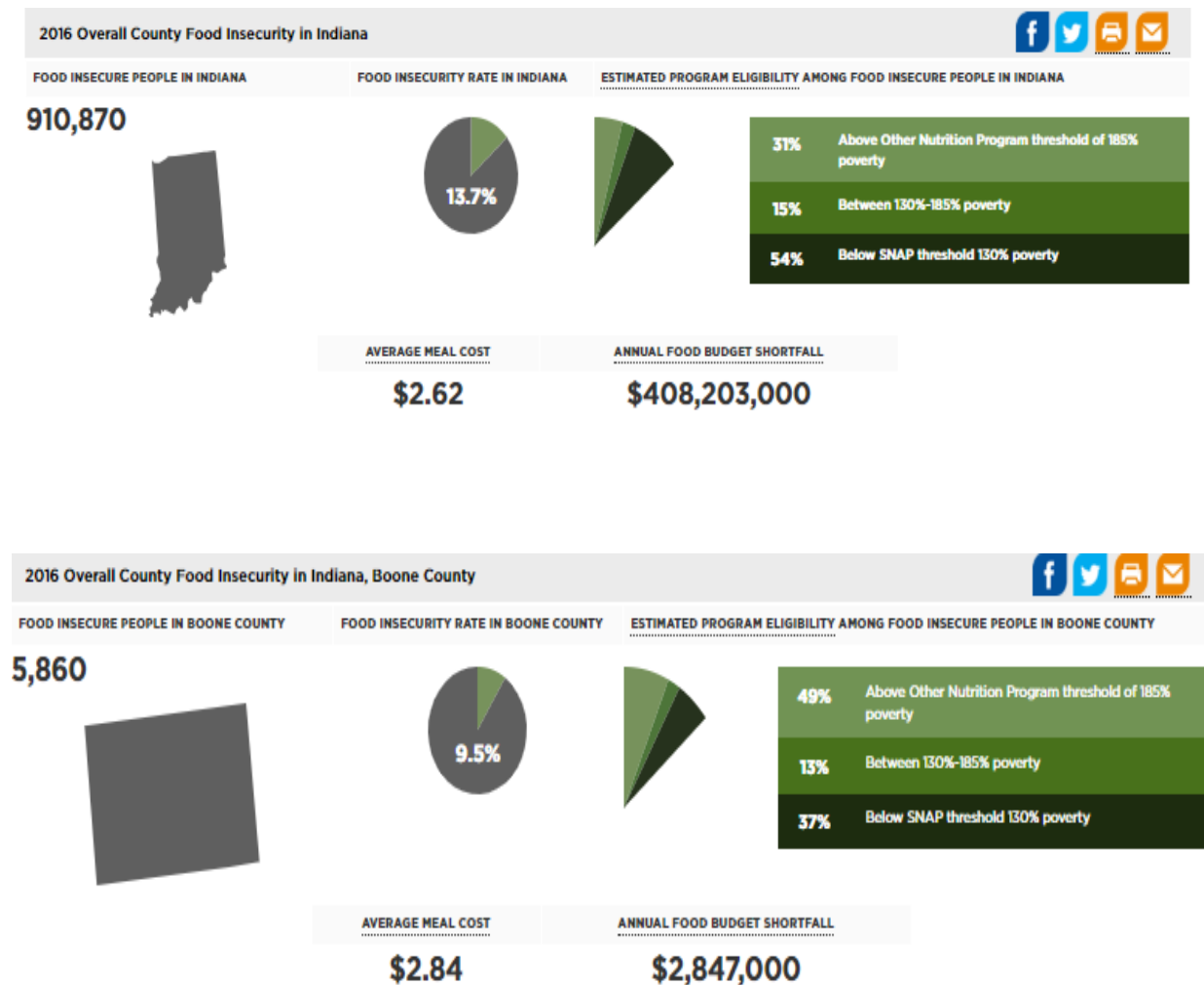
According to the USDA, a food desert is an urban or rural area where there is little availability of affordable, healthy, and fresh foods. Low access to a healthy food retail outlet is defined as living more than one mile from a supermarket or large grocery store in urban areas and more than 10 in rural areas. Where a person lives can have an impact on health and quality of life. In food deserts, residents often experience food insecurity or limited availability of nutritionally adequate and safe foods. In Indiana, 26 of 91 counties have food deserts and 33 percent of Hoosiers cite limited access to grocery stores as the reason for food insecurity.

This map depicts areas of Boone County with low food access (food desert), requiring a trip of greater than one mile (urban) or 10 miles (rural) to the nearest grocery story. The green overlay area is a low-income census tract.



There is a link between access to food and obesity. The USDA reports moderately strong evidence to indicate that a person's food environment is associated with dietary intake, especially less consumption of vegetables and fruits, and higher body weight. The presence of supermarkets in local neighborhoods and other sources of vegetables and fruits is associated with lower BMI, especially for low-income Americans. The lack of supermarkets and long distances to supermarkets are associated with higher BMI.

In 2016, 5,860 people in Boone County were food insecure, accounting for a 9.5 percent food insecurity rate. This is lower than the state food insecurity rate of 13.7 percent.



Source: Feeding America

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## NUTRITION & FOOD SECURITY

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### GOAL

- Increase the consumption of nutritious foods and reduce the food insecurity rate in Boone County

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### OBJECTIVES

- Reduce the food insecurity rate from 9.5% to 7.5 % by 2020
- Host quarterly awareness & education events throughout 2020

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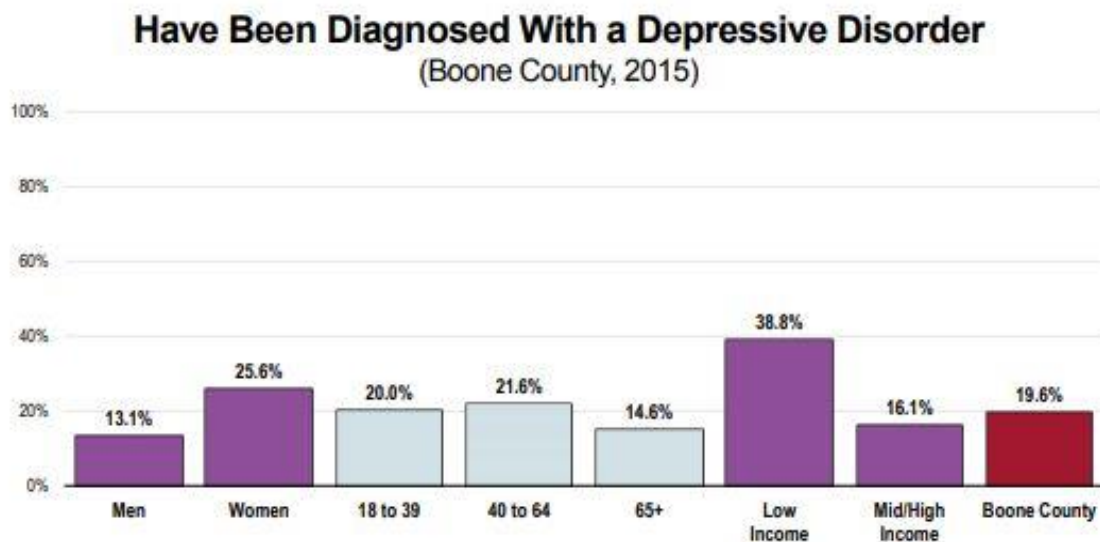
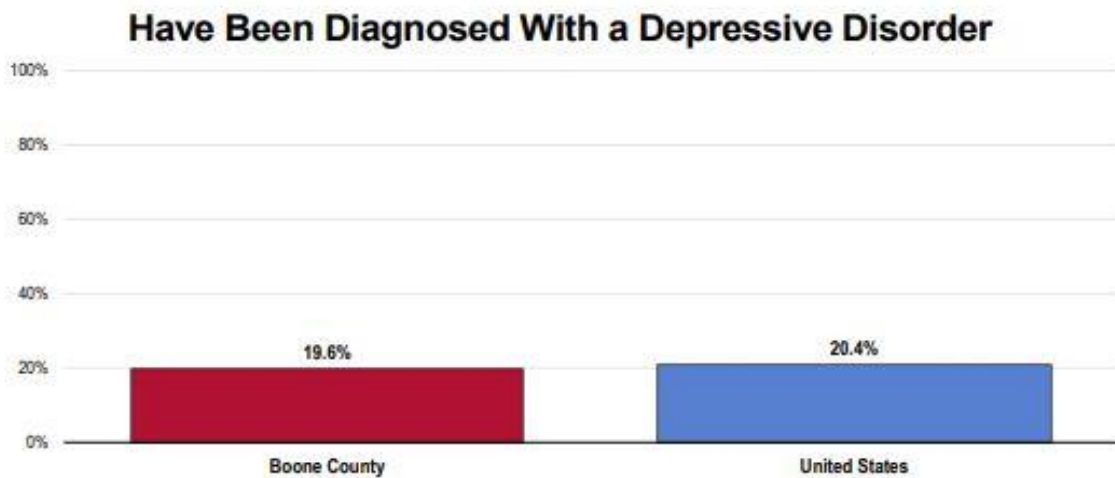
### STRATEGIES

- Educate youth on preparing fresh fruits and vegetables with free cooking classes
- Promote education on nutrient-dense foods and healthy lifestyles
- Ensure local food pantries and clients are educated on healthy food choices
- Educate the community on resources available for food needs
- Spread awareness of local community gardens
- Eliminate transportation barriers for food pantries and community gardens
- Promote the locations of food pantries
- Support existing and future mobile food pantries
- Increase donations of fresh produce to food pantries
- Promote the Meijer Simply Give program to food pantries across Boone County
- Work to bring grant funding for nutritional food to BASE program
- Promote the availability of SNAP (food stamps) and WIC at farmers markets
- Encourage the collaboration of churches in Boone County to provide food assistance in their communities

## MENTAL HEALTH

### DEPRESSION

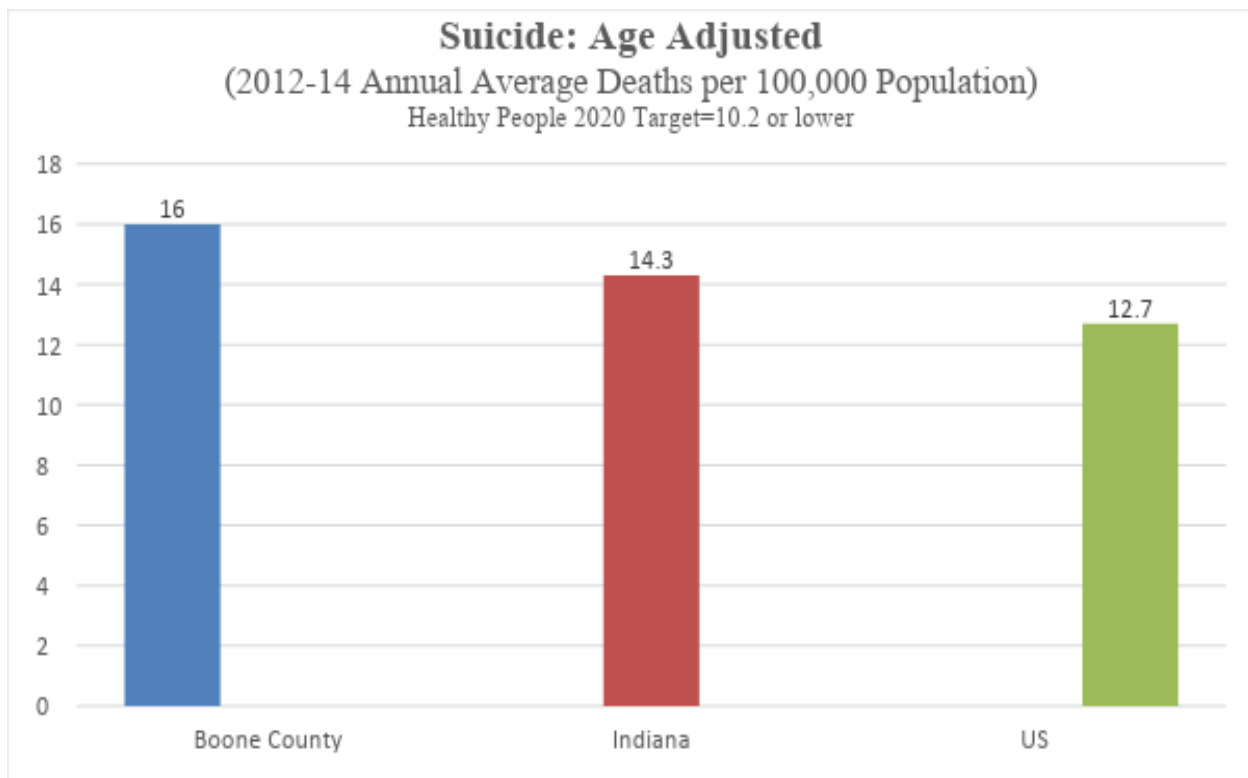
A total of 19.6 percent of adults in Boone County have been diagnosed by a physician as having a depressive disorder. Depression disorders include depression, major depression, dysthymia, or minor depression. This is similar to national findings.



Source: Witham Health Services 2015 Community Health Needs Assessment

## SUICIDE DEATHS

Between 2012 and 2014, there was an annual average age-adjusted suicide rate of 16.0 deaths per 100,000 population in Boone County. This is higher than both state and national rates. Boone County's suicide rate fails to satisfy the Healthy People 2020 target of 10.2 or lower. Unfortunately, the area suicide rate is trending upward.



Source: Witham Health Services 2015 Community Health Needs Assessment

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## MENTAL HEALTH

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### GOAL

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- Reduce the stigma of mental health conditions by collaborating to increase awareness and encourage use of existing services

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### OBJECTIVES

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- Decrease percentage of individuals who identify access to mental health services as a disparity from 68% to 50% by 2020
- Reduce suicide rate in Boone County to 12.7 or lower by 2020 through implementation and promotion of evidence-based programs
- Conduct quarterly meetings with county-wide mental health providers to develop an annual report on ongoing programs and activities

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### STRATEGIES

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- Establish a Boone County Mental Health Workgroup, conduct quarterly meetings along with program reports to ensure follow-up.
  - Develop quarterly reports on programs being conducted and status of services being provided
  - Compile an annual report to legislators, highlight successes and identifying needs
- Promote existing community outreach and local mental health programs including:
  - Mental Health First-Aid Program (Purdue Extension)
  - QPR – Question, Persuade, Refer (InWell)
  - 2018 Judge David’s in-service on Suicide Prevention
  - Social media groups
- Promote and increase available support groups and peer to peer support
- Eliminate barriers to transportation for mental health services
- Promote existing hotlines to mental health services by including them on the Boone County website including the Suicide Prevention lifeline number
- Collaborate with School Resource Officers in Boone County to identify at-risk persons
- Conduct quarterly community awareness events for suicide prevention
- Research evidence-based programs to reduce suicides
- Conduct an annual Boone County Healthy Coalition Provider Survey to gather updates responses on disparities in behavioral health.

## TOBACCO AND NICOTINE USE

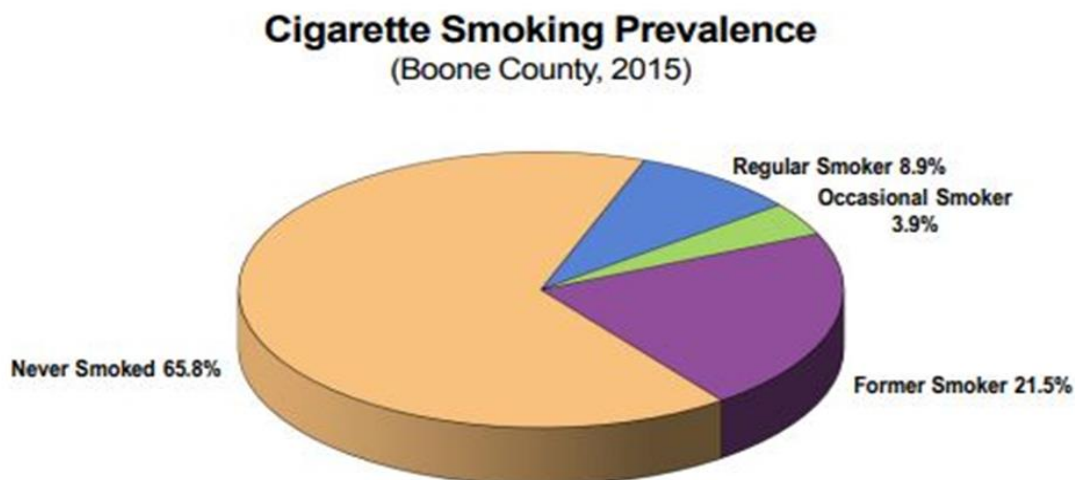
### SMOKING PREVALENCE

Tobacco use is the number one preventable cause of death in the United States causing 480,000 deaths annually. It is a leading cause of multiple forms of cancer, heart disease, birth defects, and chronic lung diseases. Tobacco products include cigarettes, smokeless tobacco, cigar products, and electronic cigarettes (e-cigarettes/vapes).

Boone County is also heavily affected by tobacco marketing in retail settings. Research supports that tobacco marketing can influence youth to initiate tobacco use, enable low income users to continue use, and make quitting more difficult.

According to the Health Rankings, Boone County's adult smoking rate is 17 percent, which is slightly lower than Indiana's average of 21 percent. About 2,781 Boone County residents suffer from smoking-related illnesses. Smoking caused 93 deaths in 2017.

According to the Community Health Needs Assessment, a total of 12.8 percent of Boone County adults currently smoke cigarettes, either regularly (8.9 percent daily) or occasionally (3.9 percent on some days).



Source: Witham Health Services 2015 Community Health Needs Assessment



## TOBACCO MARKETING IN BOONE COUNTY

### What is point-of-sale tobacco marketing?

Point-of-sale marketing targets consumers in retail settings. It often includes:

- Tobacco advertisements
- Price discounts on tobacco products
- Tobacco product displays and placement

### Why does point-of-sale matter? <sup>1</sup>

Point-of-sale tobacco marketing:

- Encourages youth to start using tobacco
- Makes quitting tobacco more difficult
- Disproportionately targets some communities

### Tobacco Retailer Density

**52** tobacco retailers in Boone County

**0.9** tobacco retailers per 1,000 residents

### Products Sold

Among tobacco retailers in Boone County:

100% sold cigarettes  
100% sold little cigars or cigarillos  
52% sold premium large cigars  
92% sold smokeless tobacco  
76% sold e-cigarettes

### Price Promotions

**64%** of retailers offered a price promotion on any type of tobacco product.

*62% in Indiana\**

#### Price Promotions on Tobacco Products Among Retailers Selling Each Product Type



### Spending on Tobacco Marketing

- The tobacco industry spent over \$8.9 billion on tobacco marketing in the United States in 2015 – over **one million dollars per hour**.<sup>2</sup>
- In Indiana, the tobacco industry spends about **\$277.2 million** on tobacco marketing each year – over \$42 for every Hoosier.<sup>3</sup>
- About 95% of the tobacco industry's marketing budget is spent on point-of-sale marketing.<sup>2</sup>

### Tobacco Advertising

**69%** of retailers in Boone County displayed exterior ads for tobacco products.

*62% in Indiana*

### Youth Targeting

#### Location

**12%** of tobacco retailers in Boone County are within 1,000 feet of a school.

*18% in Indiana*

#### Flavored Tobacco Products

**96%** of retailers sold any flavored tobacco product, such as candy or fruit flavored products that may appeal to youth.\*\*

*91% in Indiana*

#### Tobacco Product and Ad Placement

**28%** of retailers had a tobacco product placed within 12 inches of child-appealing products such as candy, gum, soda, ice cream, or toys.

*24% in Indiana*

**44%** of retailers displayed a tobacco ad within 3 feet of the floor (about child's eye level).

*32% in Indiana*

#### Cheap Cigarillos (among Cigarillo Retailers)

**52%** of retailers sold cigarillos for less than \$1.

*66% in Indiana*

**60%** of retailers sold single-packaged cigarillos.

*73% in Indiana*

\*County-level data in this fact sheet (excluding data on tobacco retailer density and proximity to schools) are based on 26 tobacco retail assessments in Boone County. Indiana results (excluding proximity to schools) are based on 2,370 retail assessments conducted in 36 Indiana Counties and are not necessarily representative of Indiana statewide. Data were collected between February and April in 2016 and 2017. Retailer density and location data are based on Indiana Alcohol and Tobacco Commission tobacco retailer licensing records as of October 18, 2016.

† Specific menthol sales data were missing for 2016. Data on menthol price promotions for 2016 were therefore not conditioned on menthol sales data.

\*\*Excludes menthol cigarettes.

References

1. Center for Public Health Systems Science. Point-of-Sale Strategies: A Tobacco Control Guide. St. Louis: Center for Public Health Systems Science, George Warren Brown School of Social Work at Washington University in St. Louis and the Tobacco Control Legal Consortium; 2014.

2. Federal Trade Commission. Cigarette and Smokeless Tobacco Reports for 2015. Issued 2017.

3. Campaign for Tobacco Free Kids. The Toll of Tobacco in Indiana. Accessed 11/27/2017. (Per capita costs based on the 2010 Census population.)

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## TOBACCO AND NICOTINE USE

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### GOAL

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- Eliminate second hand smoke exposure and reduce the use of nicotine and tobacco products

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### OBJECTIVE

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- Decrease adult smoking rate from 12% to 7% by 2020
- Decrease number of smoking-related deaths by 20% by 2020
- Increase the number of in-school presentation on tobacco and nicotine use by 50% by 2020
- Begin presenting tobacco marketing strategy information to two new groups or venues annually by 2020

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### STRATEGIES

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- Implement a comprehensive smoke free air ordinance for Boone County
- Encourage and support smoke free multi-unit housing
- Work to embed the Indiana Tobacco Quitline, 1(800)QUIT-NOW referral process within electronic medical records in Boone County
- Continue advocating promotion of 1(800)QUIT-NOW
- Support an increase in taxes on tobacco and electronic nicotine delivery systems (ENDS)
- Continue educating the public and providing awareness of the health consequences of tobacco products, nicotine, and ENDS
- Promote, encourage, and support T21, a policy that increases the legal age of possession and consumption of tobacco/nicotine products to 21 years of age
- Continue local coalition building efforts of the Tobacco Free Boone County coalition
- Participate in the Counter Tools Survey and Youth Tobacco Survey (Indiana State Department of Health)

## SUBSTANCE USE

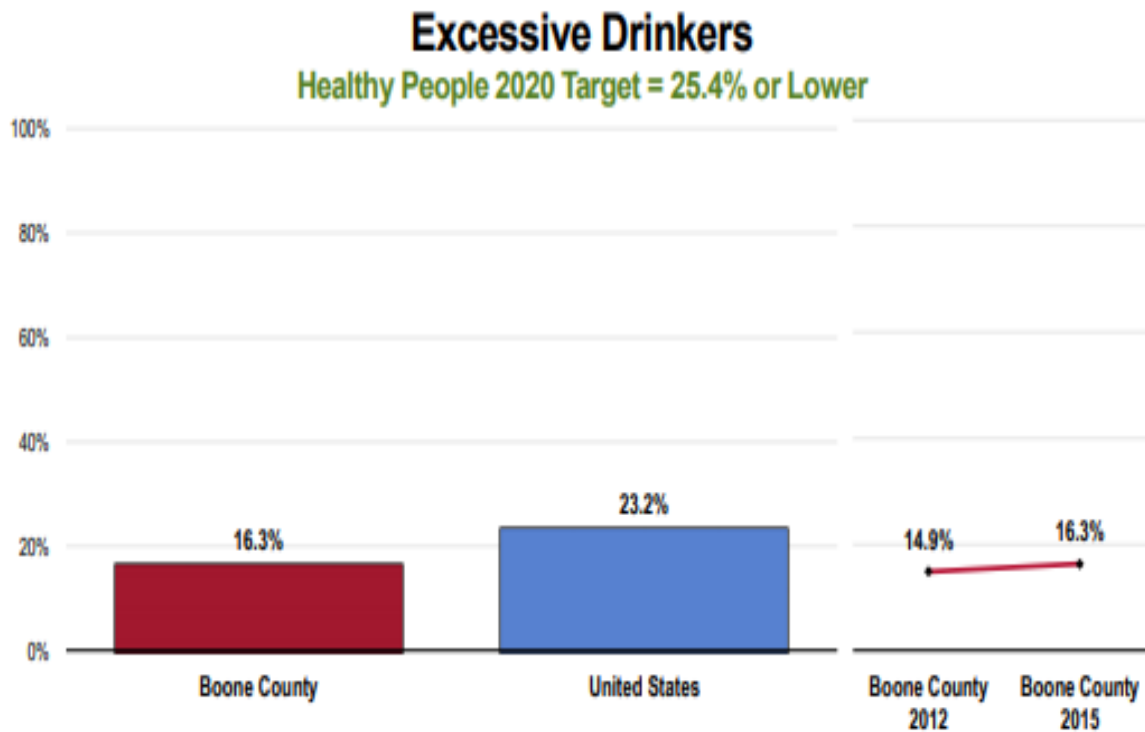
### EXCESSIVE DRINKING

Excessive alcohol consumption considers both the amount of alcohol consumed and the frequency of drinking. Although moderate alcohol use is associated with health benefits such as reduced risk of heart disease and diabetes, excessive alcohol use causes approximately 88,000 deaths in the US each year.

2018 County Health Rankings and Ratings data defines top performers achieving a 13 percent excessive drinking metric with the Indiana metric at 19 percent. Boone County ranks in the middle at 16.3 percent. Excessive drinking is more prevalent among men, younger adults (negative correlation with age), and upper-income residents.



A total of 16.3 percent of area adults are excessive drinkers (heavy and/or binge drinkers). This is a more favorable rate than the national proportion and satisfies the Healthy People 2020 target (25.4 percent or lower). This is statistically unchanged since 2012.



Source: Witham Health Services 2015 Community Health Needs Assessment

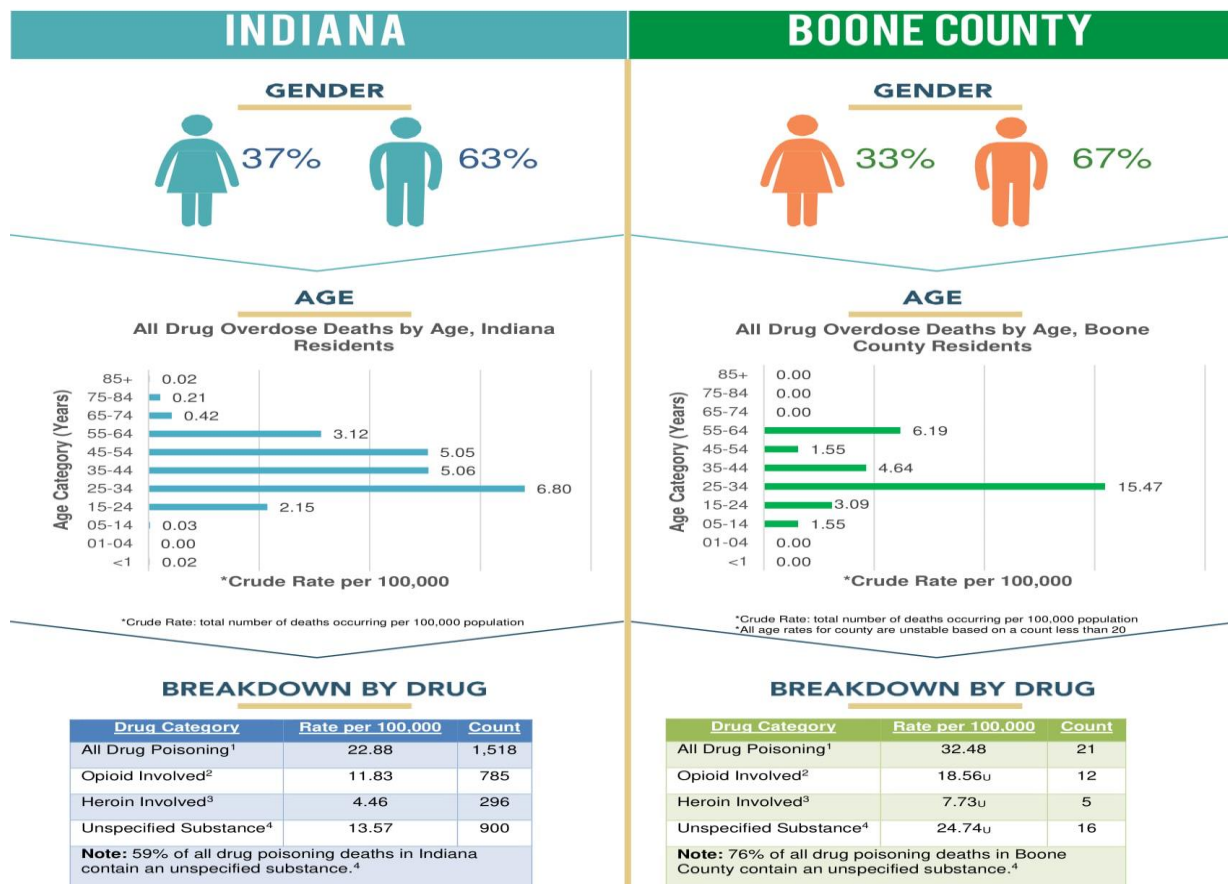
## DRUG-RELATED DEATHS

Boone County's increased drug rate has resulted in increased deaths, non-fatal emergency department visits, and soft tissue infections associated with drug abuse.

Prescription drug misuse includes taking a drug in a manner other than prescribed and taking drugs prescribed to another person. Drug overdose deaths were the leading cause of injury death in the US in 2013. President Trump declared the Opioid Crisis as a national emergency in August 2017.

The following chart shows that the rate of drug overdose deaths in Boone County involving opioids and unspecified substances exceeds the statewide rate.

### 2016 FATAL DRUG OVERDOSE DEMOGRAPHICS



\*Rates with a subscript U indicate an unstable rate based on a count less than 20. ICD-10 codes were used to identify drug overdoses. All Drug Poisoning<sup>1</sup>: underlying cause of death X40-X44, X60-X64, X85, or Y10-Y14. Opioid involved<sup>2</sup>: underlying cause of death X40-X44, X60-X64, X85, or Y10-Y14 with contributing cause of death T40.0-T40.4, T40.6. Heroin involved<sup>3</sup>: underlying cause of death X40-X44, X60-X64, X85, or Y10-Y14 with contributing cause of death T40.1. Unspecified substance<sup>4</sup>: underlying cause of death X40-X44, X60-X64, X85, or Y10-Y14 with contributing cause of death T50.9. Note that death counts may be included in more than one category which can result in category counts that are higher than the total.

INDIANA STATE DEPARTMENT OF HEALTH



### Drug Poisoning Deaths by County of Residence, 2012-2016

**Crude Rate per 100,000**

Crude Rate Range	Count
4.7 - 10.1	10
10.2 - 15.3	15
15.4 - 21.0	15
21.1 - 32.0	15
32.1 - 47.9	5

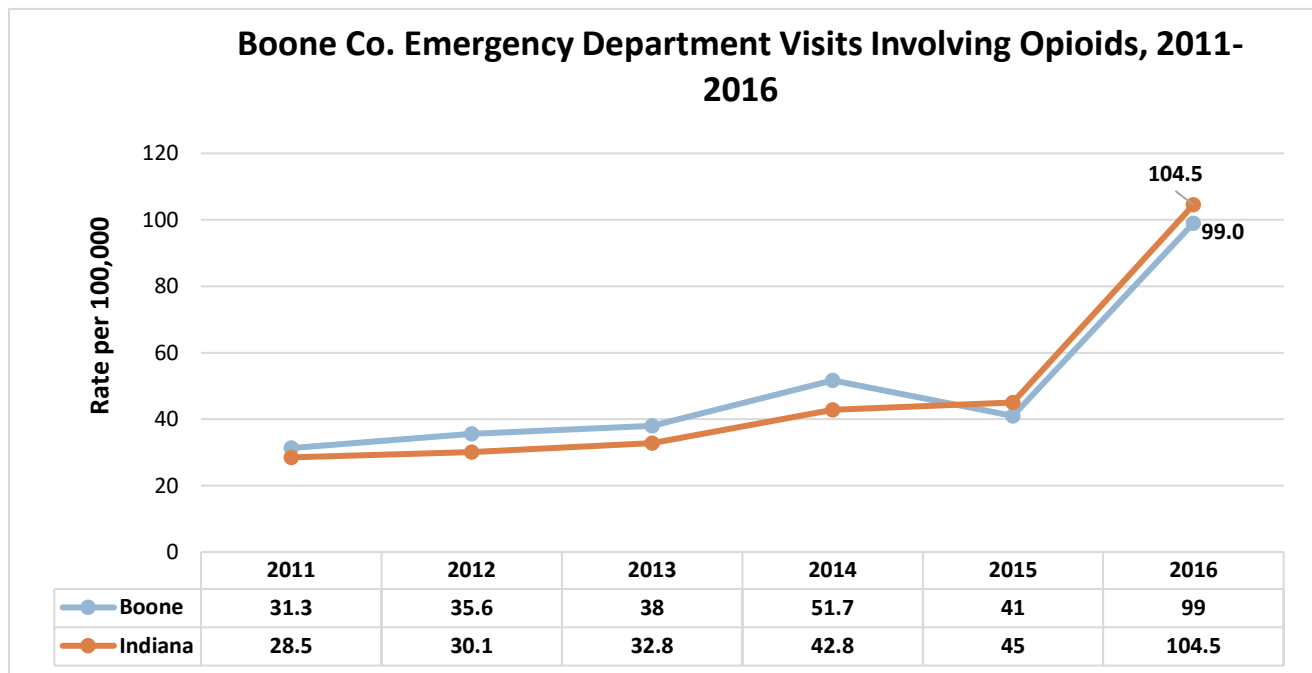
Overdose deaths identified through underlying cause of death coded on death certificate as drug overdose fatality or "acute drug overdose" (ICD-10 codes X40-X44, X60-X64, X85, Y10-Y14). Rates based on counts less than 20 are considered unstable (u) and should be interpreted with caution.

County	Rate
Akron	10.7
Allen	15.5
Anderson	17.7
Armstrong	10.1
Benton	16.1u
Berkeley	10.1
Bethel	10.1
Bloomington	10.1
Cass	6.3u
Champaign	10.1
Clinton	13.4
Daviess	5.5u
DeKalb	10.8
Delaware	24.6
Fayette	44.9
Gibson	7.1u
Hancock	20.8
Hamilton	9.4
Howard	26.4
Jackson	25.6
Knox	11.6
Lake	12.4
LaGrange	4.7u
Lawrence	10.1
Martin	5.9u
Marshall	8.5
Madison	26.5
Montgomery	21.0
Noble	10.1
Owen	12.4u
Pike	9.5u
Ripley	22.4
Schwartz	10.1
St. Joseph	16.9
Tipton	22.0u
Vanderburgh	10.1
Warrick	5.5u
Washington	26.6
Wayne	32.0
Whitley	7.2u
Wells	16.5
Xenia	10.1

There has been an upward trend in emergency department visits involving opioids in Boone County since 2016.

The U.S transitioned from ICD-9-CM to ICD-10-CM on October 1, 2015. The red line indicates the switch from ICD-9-CM to ICD-10-CM. The reader should consider the change in coding systems when comparing results from analysis of ICD-10-CM coded data to those from ICD-9-CM coded data. Data consists of patients who remain in a hospital less than 24 hours and is reported by county of residence.

**Codes used:** ICD-10-CM Diagnostic Code: T40.0, T40.1 T40.2; T40.3; T40.4; T40.6. ICD-9-CM Diagnostic Code: 965.00-965.09.



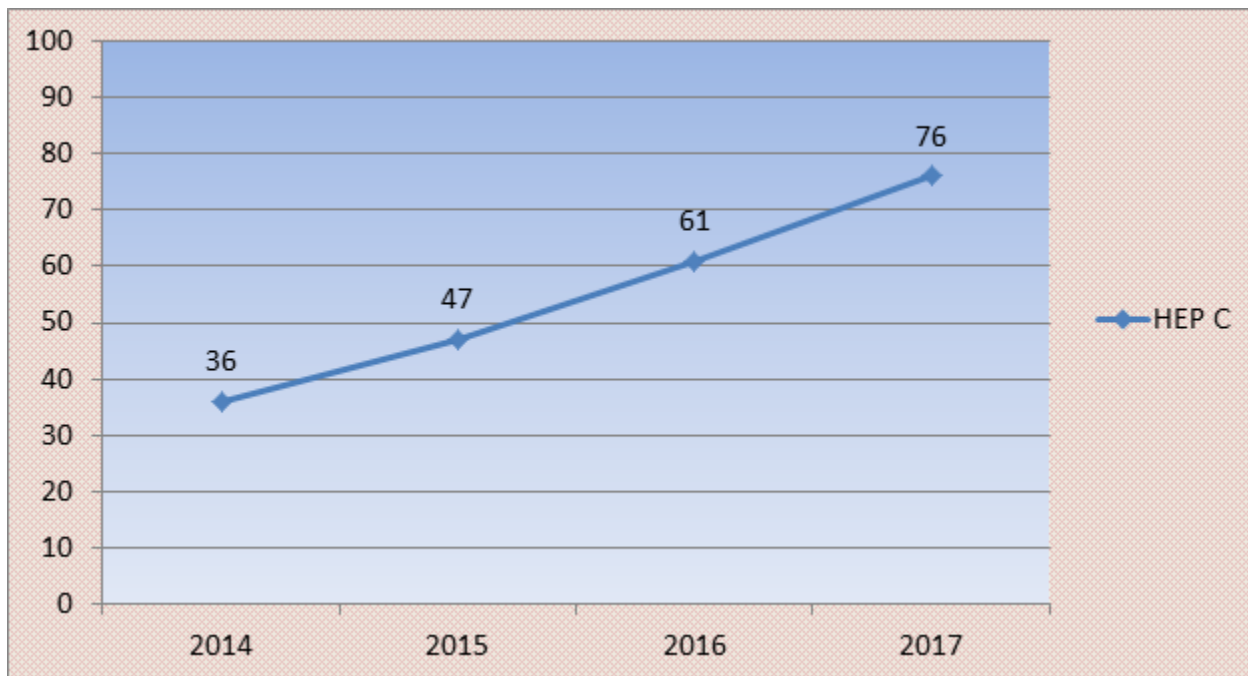
Source: Indiana State Department of Health, Division of Trauma and Injury Prevention, Data Analysis Team, Indiana Hospital Association. Hospital Discharge Files.

## HEPATITIS C

Hepatitis C is a viral infection of the liver transmitted from person to person via infected blood. Hepatitis C is one of the most common diseases associated with substance use because people who inject illicit substances often share needles.

According to the CDC, approximately 80 percent of people infected with the virus develop a lifelong infection that can result in liver damage, cancer, and failure.

In Boone County, newly identified cases of Hepatitis C have increased 111 percent from 2014 to 2017.





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## SUBSTANCE USE

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### GOAL

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- Reduce youth and adult substance use and decrease the number of overdose deaths in Boone County

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### OBJECTIVES

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- Provide substance use disorder education through annual community events and highlighted social media stories to reduce the stigma, measuring impact through annual pre/post community surveys
- Reduce drug poisoning deaths to 15 per 100,000 by 2020 by promoting existing resources and increasing available local services.
- Decrease the rate of adults engaging in excessive drinking from 16.3% to 13% by 2020

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### STRATEGIES

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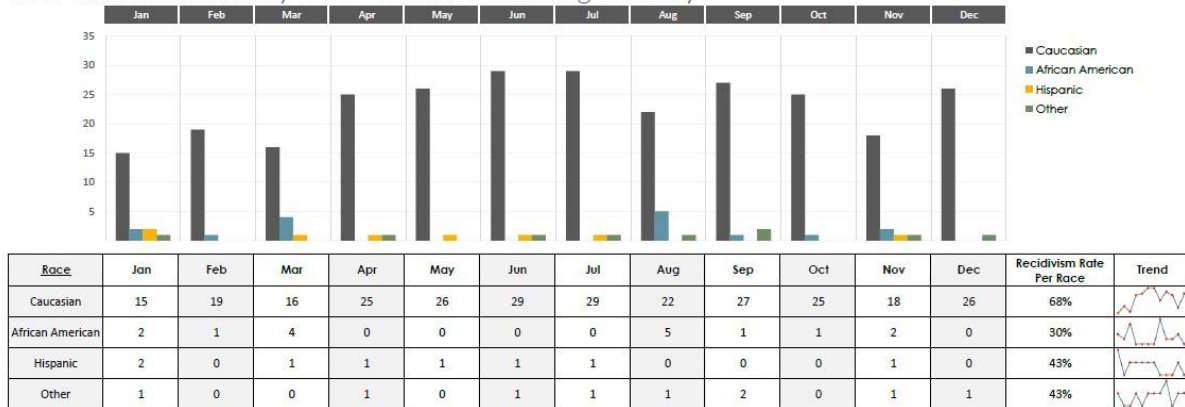
- Focus on all substances rather than one specific substance
- Provide person-centered treatment
- Increase local services for substance use in Boone County
- Utilize social media campaigns
  - Collaborate and share events and services via social media
  - Provide platform for individuals to share personal stories utilizing social media.
- Continue to use recovery coaches in area hospitals and promote recovery through community events.
- Reduce the stigma by integrating medical assisted treatment (MAT) into primary care
- Continue providing overdose education & Narcan training (Boone County Health Dept.)
- Educate on harm reduction practice including syringe services programs (SSP)
- Eliminate barriers to substance use disorder programs
- Collaborate with school resource officers to educate youth and reduce substance use
- Partner with township trustees to promote available services
- Educate the community to call 911 when a syringe is found in public
- Serve as a support resource for law enforcement efforts
- Explore funding opportunities for a Boone County drug czar and/or client navigator

## JAIL RECIDIVISM

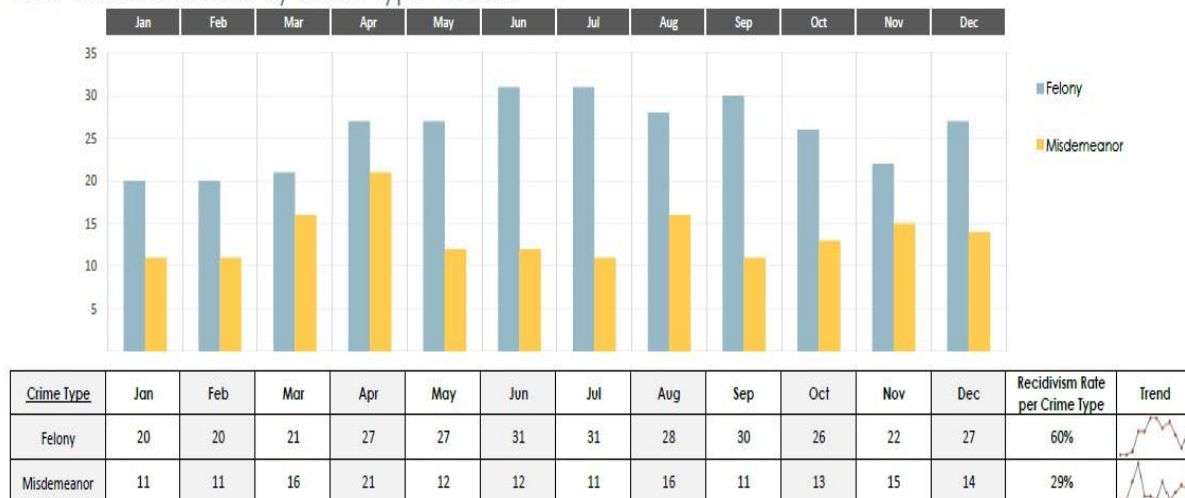
According to the National Institute of Justice, recidivism refers to a relapse in to criminal behavior within three years of a person's release from incarceration. Recidivists can strain the criminal justice system and their communities if the criminal justice system is not able to deter crime or rehabilitate offenders.

In 2017, the recidivism rate for both genders at all levels of crime at the Boone County Jail was 44.1 percent. The national recidivism rate was 67.8 percent. Caucasian males made up 71 percent of the jail's population and had a recidivism rate of 68.4 percent.

2017 Recidivism Rate by Race - Males Committing a Felony



2017 Recidivism Rate By Crime Type - Males



*Source: Boone County Jail*

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## JAIL RECIDIVISM

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### GOAL

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- Reduce jail recidivism rates within the Boone County Jail

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### OBJECTIVES

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- Reduce the recidivism rate for caucasian males committing a felony by 18% from 68% to 50% by the end of 2020

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### STRATEGIES

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- Serve as a support resource for law enforcement efforts
- Maintain mental health care for inmates at 40 hours per week
- Bridge aftercare for inmates for substance use disorder and other mental health disorders
- Provide Boone County Resource Guide to all inmates upon release
- Provide recovery coaches for incarcerated population to reduce recidivism rates
- Collaborate for improved employment and housing availability for inmates upon release

## CHRONIC CONDITIONS

Age-adjusted mortality rates in Boone County are higher than national rates for suicide, heart disease, stroke, cancer, chronic lower respiratory disease (CLRD), Alzheimer's disease, and kidney disease and fail to satisfy the Healthy People 2020 goals for suicide, heart disease, stroke, cancer, unintentional injury, and drug-induced deaths.

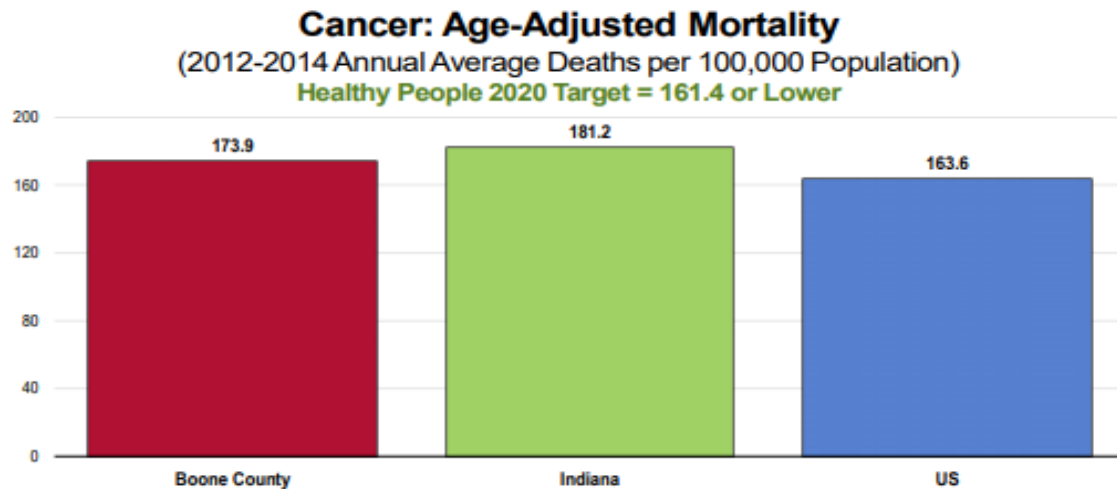
### Age-Adjusted Death Rates for Selected Causes (2012-2014 Deaths per 100,000 Population)

	Boone County	Indiana	US	HP2020
Diseases of the Heart	186.2	185.8	169.1	156.9*
Malignant Neoplasms (Cancers)	173.9	181.2	163.6	161.4
Chronic Lower Respiratory Disease (CLRD)	61.5	56.0	41.4	n/a
Cerebrovascular Disease (Stroke)	53.3	41.7	36.5	34.8
Alzheimer's Disease	43.6	28.6	24.2	n/a
Unintentional Injuries	40.8	42.8	39.7	36.4
Diabetes Mellitus	20.4	25.5	21.1	20.5*
Kidney Diseases (2010-2014)	16.9	19.0	13.6	n/a
Intentional Self-Harm (Suicide)	16.0	14.3	12.7	10.2
Drug-Induced (2010-2014)	14.4	16.8	14.2	11.3
Pneumonia/Influenza (2010-2014)	10.8	14.9	15.2	n/a
Motor Vehicle Deaths (2010-2014)	10.7	11.4	10.6	12.4
Firearm-Related (2010-2014)	9.0	11.6	10.3	9.3
Cirrhosis/Liver Disease (2004-2013)	4.8	8.7	9.5	8.2

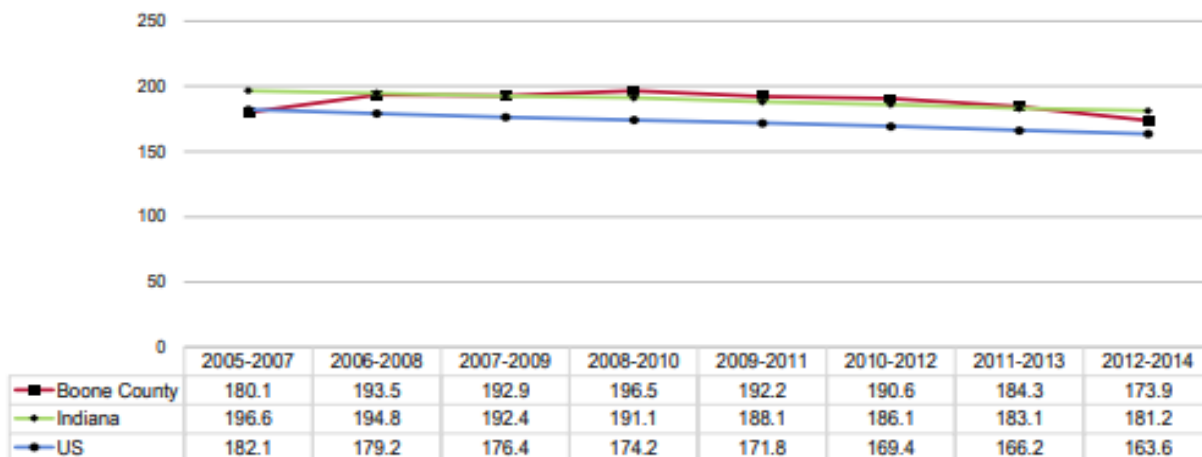
Source: Witham Health Services 2015 Community Health Needs Assessment

## CANCER-RELATED DEATHS

Between 2012 and 2014, there was an annual average age-adjusted cancer mortality rate of 173.9 deaths per 100,000 people. This is similar to the statewide rate but higher than the national rate, which fails to satisfy the Healthy People 2020 target of 161.4 or lower.



**Cancer: Age-Adjusted Mortality Trends**  
(Annual Average Deaths per 100,000 Population)  
Healthy People 2020 Target = 161.4 or Lower



Source: Witham Health Services 2015 Community Health Needs Assessment

Lung cancer is by far the leading cause of cancer deaths in Boone County. Other leading cancers include prostate cancer among men, breast cancer among women, and colorectal cancer (both genders). Each cancer's death rates failed to satisfy the related Healthy People 2020 target, with the exception of colorectal cancer.

**Age-Adjusted Cancer Death Rates by Site**  
(2012-2014 Annual Average Deaths per 100,000 Population)

	Boone County	Indiana	US	HP2020
Lung Cancer	50.8	54.1	43.4	45.5
Prostate Cancer	29.1	20.4	19.2	21.8
Female Breast Cancer	22.4	21.5	20.9	20.7
Colorectal Cancer	11.6	16.0	14.6	14.5

Source: Witham Health Services 2015 Community Health Needs Assessment

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## CANCER-RELATED DEATHS

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### GOAL

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- Continue decreasing cancer related deaths through early detection and preventative interventions

### OBJECTIVES

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- Decrease cancer related deaths in Boone County from 173.9 to 161.4 per 100,000 population or lower by 2020
- Educate 50% of first responders to become advocates for men's health by 2020

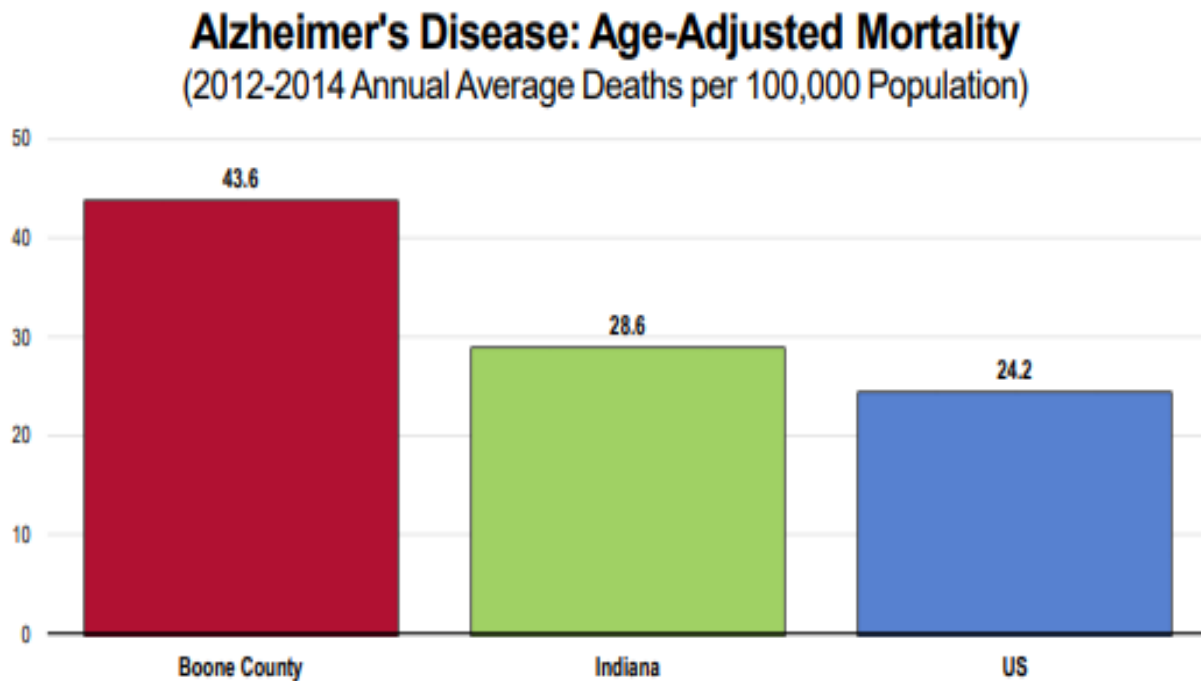
### STRATEGIES

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- Continue tobacco cessation efforts including a comprehensive smoke free air ordinance
- Promote the Boone County Cancer's Society's Fight Smart Campaign
- Incorporate cancer education and awareness in to all fundraising events
- Survey past and present clients on their perception of cancer services in the community to identify existing barriers
- Continue involvement with the Indiana Cancer Consortium
- Improve prevention efforts through awareness and education events

## ALZHEIMER'S DISEASE DEATHS

Between 2012 and 2014, there was an annual average age-adjusted Alzheimer's disease mortality rate of 43.6 deaths per 100,000 population in Boone County. This is well above both the state and national rates.



Source: Witham Health Services 2015 Community Health Needs Assessment



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## ALZHEIMER'S DISEASE DEATHS

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### GOAL

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- Provide and enhance care and support to those living with the disease
- Increase awareness in the community by partnering with local health professionals
- Improve the quality of life for patient and caregiver

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### OBJECTIVES

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- Conduct at least one quarterly community awareness event through
- Conduct at least one annual local fundraiser by 2020

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### STRATEGIES

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- Provide support to caregivers and family members through education
- Educate the public on symptoms for earlier detection
- Explore known risk factors for developing Alzheimer's disease
- Utilize Boone County Healthy Coalition to promote awareness
- Promote online resources for families and caregivers to access
- Support Boone County Senior Services, Inc (BCSSI) Alzheimer's Association: Greater Indiana Chapter, and others in community events and workshops
- Increase health professional referrals to services through Alzheimer's Association: Greater Indiana Chapter and BCSSI
- Provide training effectively communicating with persons with Alzheimer's
- Promote the Indiana Alzheimer's Association's helpline, 1(800)272-3900
- Strengthen partnerships with health professionals by conducting two informative meetings annually

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## NEXT STEPS

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Each priority area will have ongoing review and evaluation conducted by community partners involved with implementation.

Additionally, the Boone County Healthy Coalition Advisory Committee will meet annually to evaluate work plans by tracking progress made towards achieving listed goals and objectives. During the evaluation process, all ineffective strategies will be revised and the CHIP will be updated.

If you are interested in more information on how to get involved with the CHIP or Boone County Healthy Coalition, please contact:

Boone County Health Department  
Nursing & Vital Records Division  
116 W. Washington St.  
B 202  
Lebanon, IN 46052  
(765)482-3942

<http://www.boonecounty.in.gov/health>  
[bchc06@gmail.com](mailto:bchc06@gmail.com)