Executive Report

2015 Community Health Needs Assessment

Boone County, Indiana

Prepared for:
Witham Health Services

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Professional Research Consultants, Inc.

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Introduction

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Project Overview

Project Goals

This Community Health Needs Assessment, a follow-up to a similar study conducted in 2012, is a systematic, data-driven approach to determining the health status, behaviors and needs of residents in the service area of Witham Health Services. Subsequently, this information may be used to inform decisions and guide efforts to improve community health and wellness.

A Community Health Needs Assessment provides information so that communities may identify issues of greatest concern and decide to commit resources to those areas, thereby making the greatest possible impact on community health status. This Community Health Needs Assessment will serve as a tool toward reaching three basic goals:

- **To improve residents' health status, increase their life spans, and elevate their overall quality of life.** A healthy community is not only one where its residents suffer little from physical and mental illness, but also one where its residents enjoy a high quality of life.
- **To reduce the health disparities among residents.** By gathering demographic information along with health status and behavior data, it will be possible to identify population segments that are most at-risk for various diseases and injuries. Intervention plans aimed at targeting these individuals may then be developed to combat some of the socio-economic factors which have historically had a negative impact on residents' health.
- **To increase accessibility to preventive services for all community residents.** More accessible preventive services will prove beneficial in accomplishing the first goal (improving health status, increasing life spans, and elevating the quality of life), as well as lowering the costs associated with caring for late-stage diseases resulting from a lack of preventive care.

This assessment was conducted on behalf of Witham Health Services by Professional Research Consultants, Inc. (PRC). PRC is a nationally recognized healthcare consulting firm with extensive experience conducting Community Health Needs Assessments such as this in hundreds of communities across the United States since 1994.

Methodology

This assessment incorporates data from both quantitative and qualitative sources. Quantitative data input includes primary research (the PRC Community Health Survey) and secondary research (vital statistics and other existing health-related data); these quantitative components allow for trending and comparison to benchmark data at the state and national levels. Qualitative data input includes primary research gathered through an Online Key Informant Survey.

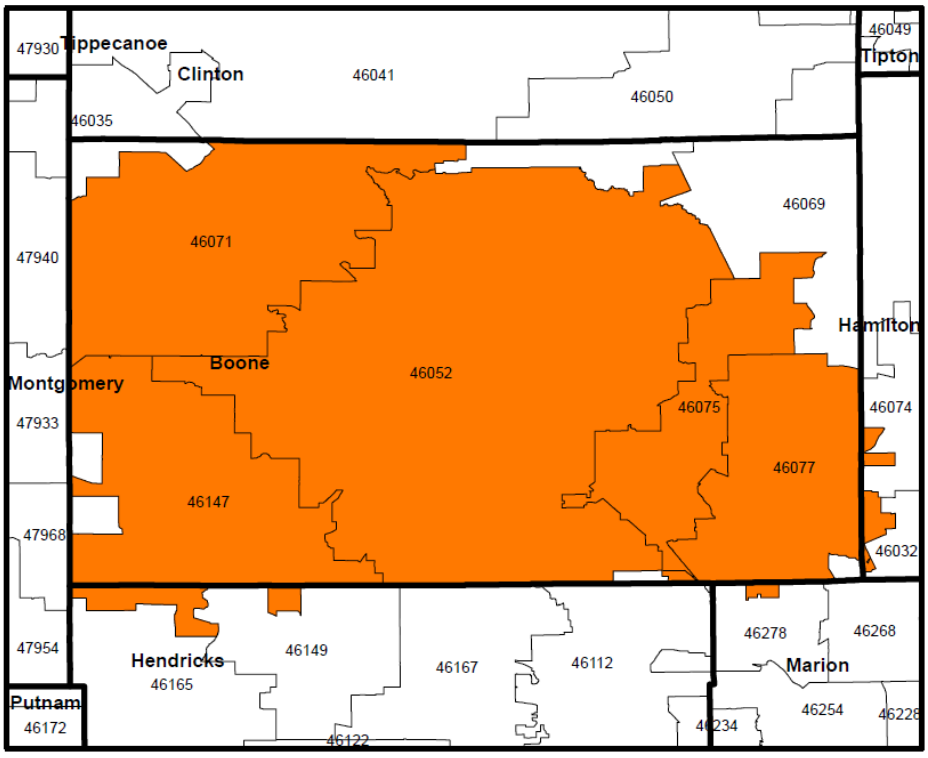
PRC Community Health Survey

Survey Instrument

The survey instrument used for this study is based largely on the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS), as well as various other public health surveys and customized questions addressing gaps in indicator data relative to health promotion and disease prevention objectives and other recognized health issues. The final survey instrument was developed by the Witham Health Services and PRC and is similar to the previous survey used in the region, allowing for data trending.

Community Defined for This Assessment

The study area for the survey effort (referred to as the "Boone County" in this report) is defined as each of the residential ZIP Codes principally associated with the county. This community definition, determined based on the residence of recent patients of Witham Health Services, is illustrated in the following map.



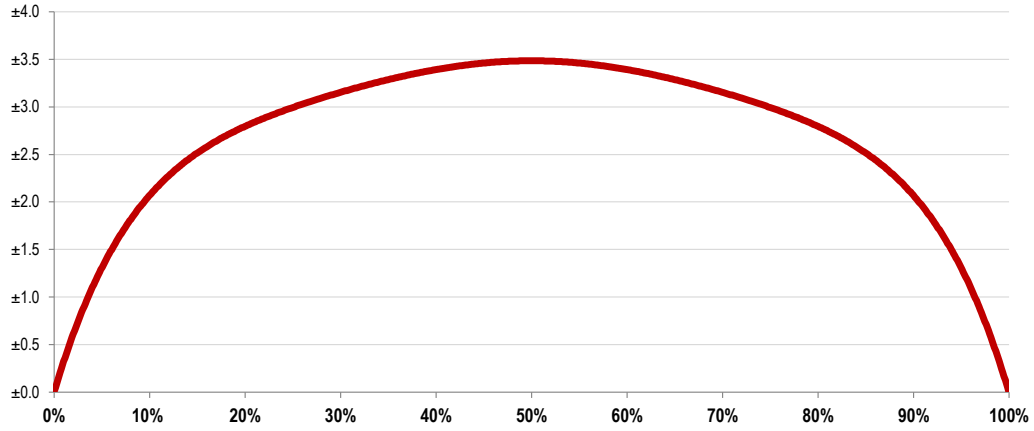
Sample Approach & Design

A precise and carefully executed methodology is critical in asserting the validity of the results gathered in the *PRC Community Health Survey*. Thus, to ensure the best representation of the population surveyed, a telephone interview methodology — one that incorporates both landline and cell phone interviews — was employed. The primary advantages of telephone interviewing are timeliness, efficiency, and random-selection capabilities.

The sample design used for this effort consisted of a random sample of 750 individuals age 18 and older in Boone County. Once the interviews were completed, these were weighted in proportion to the actual population distribution so as to appropriately represent the county as a whole. All administration of the surveys, data collection and data analysis was conducted by Professional Research Consultants, Inc. (PRC).

For statistical purposes, the maximum rate of error associated with a sample size of 750 respondents is ±3.5% at the 95 percent level of confidence.

Expected Error Ranges for a Sample of 750 Respondents at the 95 Percent Level of Confidence



Note:
- The "response rate" (the percentage of a population giving a particular response) determines the error rate associated with that response. A "95 percent level of confidence" indicates that responses would fall within the expected error range on 95 out of 100 trials.

Examples:
- If 10% of the sample of 750 respondents answered a certain question with a "yes," it can be asserted that between 7.9% and 12.1% (10% ± 2.1%) of the total population would offer this response.
- If 50% of respondents said "yes," one could be certain with a 95 percent level of confidence that between 46.5% and 53.5% (50% ± 3.5%) of the total population would respond "yes" if asked this question.

Sample Characteristics

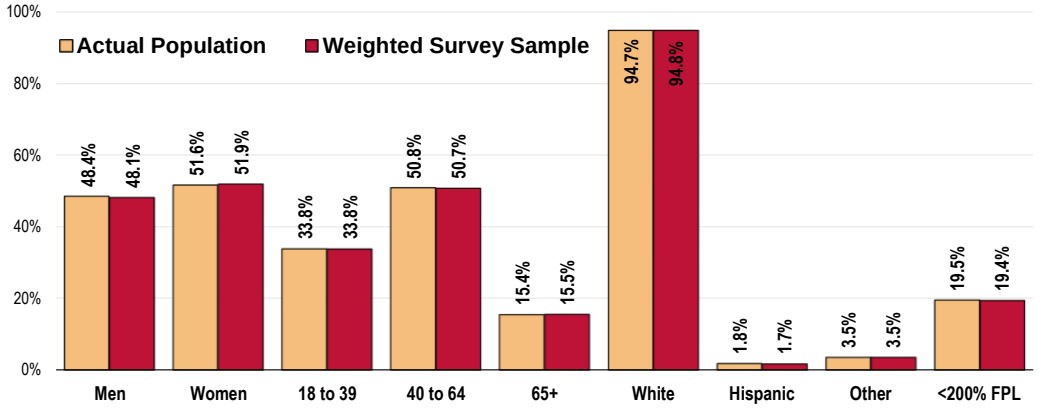
To accurately represent the population studied, PRC strives to minimize bias through application of a proven telephone methodology and random-selection techniques. And, while this random sampling of the population produces a highly representative sample, it is a common and preferred practice to “weight” the raw data to improve this representativeness even further. This is accomplished by adjusting the results of a random sample to match the geographic distribution and demographic characteristics of the population surveyed (poststratification), so as to eliminate any naturally occurring bias. Specifically, once the raw

data are gathered, respondents are examined by key demographic characteristics (namely gender, age, race, ethnicity, and poverty status) and a statistical application package applies weighting variables that produce a sample which more closely matches the population for these characteristics. Thus, while the integrity of each individual's responses is maintained, one respondent's responses may contribute to the whole the same weight as, for example, 1.1 respondents. Another respondent, whose demographic characteristics may have been slightly oversampled, may contribute the same weight as 0.9 respondents.

The following chart outlines the characteristics of the Boone County sample for key demographic variables, compared to actual population characteristics revealed in census data. [Note that the sample consisted solely of area residents age 18 and older; data on children were given by proxy by the person most responsible for that child's healthcare needs, and these children are not represented demographically in this chart.]

Population & Survey Sample Characteristics

(Boone County, 2015)



Sources:
- Census 2010, Summary File 3 (SF 3). US Census Bureau.
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc.

Further note that the poverty descriptions and segmentation used in this report are based on administrative poverty thresholds determined by the US Department of Health & Human Services. These guidelines define poverty status by household income level and number of persons in the household *(e.g., the 2014 guidelines place the poverty threshold for a family of four at $23,850 annual household income or lower)*. In sample segmentation: "**low income**" refers to community members living in a household with defined poverty status or living just above the poverty level, earning up to twice the poverty threshold; "**mid/high income**" refers to those households living on incomes which are twice or more the federal poverty level.

The sample design and the quality control procedures used in the data collection ensure that the sample is representative. Thus, the findings may be generalized to the total population of community members in the defined area with a high degree of confidence.

Online Key Informant Survey

To solicit input from key informants, those individuals who have a broad interest in the health of the community, an Online Key Informant Survey was also implemented as part of this process. A list of recommended participants was provided by Witham Health Services; this list included names and contact information for physicians, public health representatives, other health professionals, social service providers, and a variety of other community leaders. Potential participants were chosen because of their ability to identify primary concerns of the populations with whom they work, as well as of the community overall.

Key informants were contacted by email, introducing the purpose of the survey and providing a link to take the survey online; reminder emails were sent as needed to increase participation. In all, 48 community stakeholders took part in the Online Key Informant Survey, as outlined below:

Online Key Informant Survey Participation

Key Informant Type	Number Invited	Number Participating
Community/Business Leader	34	20
Other Health Provider	16	13
Physician	8	5
Public Health Representative	3	3
Social Services Provider	9	7

- Alzheimer's Association
- American Health Network
- Boone Commissioners
- Boone County Cancer Society
- Boone County Child Advocacy Center
- Boone County Circuit Court
- Boone County Community Clinic
- Boone County Health Department
- Boone County Probation
- Boone County Prosecutor's Office
- Boone County Sheriff's Office
- Boone County WIC
- Caring Center
- CICOA Aging and In-Home Solutions
- City of Lebanon
- Community Foundation of Boone County

- Cummins Behavioral Health
- Drug Free Boone County
- Excel Home Healthcare, LLC
- Integrative Wellness, LLC
- Lebanon Area Boys and Girls Club
- Mental Health America of Boone County
- Ossip at Witham Hospital
- Parr Richey Law Firm
- Purdue Extension Boone County
- The Arc of Greater Boone County
- Traders Point Christian Schools
- United Way of Central Indiana
- Witham Health Services
- Zionsville Community Schools

Through this process, input was gathered from several individuals whose organizations work with low-income, minority populations, or other medically underserved populations.

Minority populations represented:

> *African-American, Asian, Burmese, children, disabled, elderly, ethnic minorities, Hispanic, homeless, immigrants, LGBT, low education, low income, men in recovery, mentally ill, Middle Eastern, non-English speaking, previously incarcerated, Russian, Slavic, teens, unemployed, uninsured/ underinsured, veterans.*

Medically underserved populations represented:

> *Adult Transitional House, children, disabled, elderly, family caregivers, homeless, LGBT, low income, Medicaid/Medicare, mentally ill, non-English speaking, substance abusers, teens, those at risk for STDs, undocumented, unemployed, uninsured/underinsured, veterans, young adults.*

In the online survey, key informants were asked to rate the degree to which various health issues are a problem in their own community. Follow-up questions asked them to describe why they identify problem areas as such, and how these might be better addressed. Results of their ratings, as well as their verbatim comments, are included throughout this report as they relate to the various other data presented.

NOTE: These findings represent qualitative rather than quantitative data. The Online Key Informant Survey was designed to gather input from participants regarding their opinions and perceptions of the health of the residents in the area. Thus, these findings are based on perceptions, not facts.

Public Health, Vital Statistics & Other Data

A variety of existing (secondary) data sources was consulted to complement the research quality of this Community Health Needs Assessment. Data for the Boone County were obtained from the following sources (specific citations are included with the graphs throughout this report):

- Center for Applied Research and Environmental Systems (CARES)
- Centers for Disease Control & Prevention, Office of Infectious Disease, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
- Centers for Disease Control & Prevention, Office of Public Health Science Services, Center for Surveillance, Epidemiology and Laboratory Services, Division of Health Informatics and Surveillance (DHIS)
- Centers for Disease Control & Prevention, Office of Public Health Science Services, National Center for Health Statistics
- Community Commons
- ESRI ArcGIS Map Gallery
- National Cancer Institute, State Cancer Profiles
- OpenStreetMap (OSM)
- US Census Bureau, American Community Survey
- US Census Bureau, County Business Patterns
- US Census Bureau, Decennial Census
- US Department of Agriculture, Economic Research Service
- US Department of Health & Human Services
- US Department of Health & Human Services, Health Resources and Services Administration (HRSA)
- US Department of Justice, Federal Bureau of Investigation
- US Department of Labor, Bureau of Labor Statistics

Benchmark Data

Trending

A similar survey was administered in Boone County in 2012 by PRC on behalf of Witham Health Services. Trending data, as revealed by comparison to prior survey results, are provided throughout this report whenever available. Historical data for secondary data indicators are also included for the purposes of trending.

Indiana Risk Factor Data

Statewide risk factor data are provided where available as an additional benchmark against which to compare local survey findings; these data are reported in the most recent *BRFSS (Behavioral Risk Factor Surveillance System) Prevalence and Trend Data* published by the Centers for Disease Control and Prevention and the US Department of Health & Human Services. State-level vital statistics are also provided for comparison of secondary data

indicators.

Nationwide Risk Factor Data

Nationwide risk factor data, which are also provided in comparison charts, are taken from the *2013 PRC National Health Survey*; the methodological approach for the national study is identical to that employed in this assessment, and these data may be generalized to the US population with a high degree of confidence. National-level vital statistics are also provided for comparison of secondary data indicators.

Healthy People 2020

Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. The Healthy People initiative is grounded in the principle that setting national objectives and monitoring progress can motivate action. For three decades, Healthy People has established benchmarks and monitored progress over time in order to:

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

Healthy People 2020 is the product of an extensive stakeholder feedback process that is unparalleled in government and health. It integrates input from public health and prevention experts, a wide range of federal, state and local government officials, a consortium of more than 2,000 organizations, and perhaps most importantly, the public. More than 8,000 comments were considered in drafting a comprehensive set of Healthy People 2020 objectives.

Determining Significance

Differences noted in this report represent those determined to be significant. For survey-derived indicators (which are subject to sampling error), statistical significance is determined based on confidence intervals (at the 95 percent confidence level) using question-specific samples and response rates. For secondary data indicators (which do not carry sampling error, but might be subject to reporting error), "significance," for the purpose of this report, is determined by a 5% variation from the comparative measure.

Information Gaps

While this assessment is quite comprehensive, it cannot measure all possible aspects of health in the community, nor can it adequately represent all possible populations of interest. It must be recognized that these information gaps might in some ways limit the ability to assess all of the community's health needs.

For example, certain population groups — such as the homeless, institutionalized persons, or those who only speak a language other than English or Spanish — are not represented in the survey data. Other population groups — for example, pregnant women, lesbian/gay/bisexual/transgender residents, undocumented residents, and members of certain racial/ethnic or immigrant groups — might not be identifiable or might not be represented in numbers sufficient for independent analyses.

In terms of content, this assessment was designed to provide a comprehensive and broad picture of the health of the overall community. However, there are certainly a great number of medical conditions that are not specifically addressed.

Summary of Findings

Significant Health Needs of the Community

The following "areas of opportunity" represent the significant health needs of the community, based on the information gathered through this Community Health Needs Assessment and the guidelines set forth in Healthy People 2020. From these data, opportunities for health improvement exist in the area with regard to the following health issues (see also the summary tables presented in the following section).

Areas of Opportunity Identified Through This Assessment	
Access to Healthcare Services	• Appointment Availability • Ongoing Source of Medical Care • Routine Medical Care (Children)
Cancer	• Cancer Deaths ○ Including Lung Cancer, Prostate Cancer, Female Breast Cancer Deaths • Female Breast Cancer Incidence
Chronic Kidney Disease	• Kidney Disease Deaths
Dementia, Including Alzheimer's Disease	• Alzheimer's Disease Deaths
Diabetes	• Prevalence of Borderline/Pre-Diabetes
Heart Disease & Stroke	• Heart Disease Deaths • Stroke Deaths
Injury & Violence	• Unintentional Injury Deaths • Firearm-Related Deaths
Mental Health	• Symptoms of Chronic Depression • Suicide Deaths
Nutrition, Physical Activity & Weight	• Difficulty Accessing Fresh Produce • Obesity [Adults] • Year-Round Recreational Opportunities for Youth • Children's Computer Screen Time • Meeting Physical Activity Guidelines
Oral Health	• Children's Dental Care
Respiratory Diseases	• Chronic Lower Respiratory Disease (CLRD) Deaths • Flu Vaccination
Sexually Transmitted Diseases	• Chlamydia Incidence • Condom Use
Substance Abuse	• Drug-Induced Deaths • Seeking Help for Alcohol/Drug Issues • *Substance Abuse ranked as a top concern in the Online Key Informant Survey.*
Tobacco Use	• Awareness of Indiana Quit Line • *Tobacco Use ranked as a top concern in the Online Key Informant Survey.*

Summary Tables: Comparisons With Benchmark Data

The following tables provide an overview of indicators in Boone County. These data are grouped to correspond with the Focus Areas presented in Healthy People 2020.

Reading the Summary Tables

TREND SUMMARY (Current vs. Baseline Data)

Survey Data Indicators: Trends for survey-derived indicators represent significant changes since 2012. Note that survey data reflect the ZIP Code-defined Boone County.

Other (Secondary) Data Indicators: Trends for other indicators (e.g., public health data) represent point-to-point changes between the most current reporting period and the earliest presented in this report (typically representing the span of roughly a decade). Note that secondary data reflect Boone County.

In the following charts, Boone County results are shown in the larger, blue column.

The columns to the right of the Boone County column provide trending, as well as comparisons between local data and any available state and national findings, and Healthy People 2020 targets. Symbols indicate whether the service area compares favorably (), unfavorably (), or comparably () to these external data.

Note that blank table cells signify that data are not available or are not reliable for that area and/or for that indicator.

Social Determinants	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Linguistically Isolated Population (Percent)	0.4	2.0	4.8		
Population in Poverty (Percent)	7.5	15.4	15.4		
Population Below 200% FPL (Percent)	19.5	34.9	34.2		
Children Below 200% FPL (Percent)	20.9	45.1	43.8		
No High School Diploma (Age 25+, Percent)	6.5	12.8	14.0		
Unemployment Rate (Age 16+, Percent)	4.4	6.0	6.3		3.9
		better	similar	worse	

Overall Health	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% "Fair/Poor" Physical Health	12.9	18.1	15.3		12.0
% Activity Limitations	20.5	20.4	21.5		16.7
		better	similar	worse	

Access to Health Services	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% [Age 18-64] Lack Health Insurance	7.4	20.9	15.1	0.0	8.9
% [65+] With Medicare Supplement Insurance	80.7		68.1		86.6
% [Insured] Insurance Covers Prescriptions	93.5		93.6		94.0
% [Insured] Went Without Coverage in Past Year	3.5		8.1		2.7
% Difficulty Accessing Healthcare in Past Year (Composite)	32.6		39.9		30.0
% Inconvenient Hrs Prevented Dr Visit in Past Year	12.2		15.4		11.1

Access to Health Services (continued)	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% Cost Prevented Getting Prescription in Past Year	**10.8**		15.8		11.6
% Cost Prevented Physician Visit in Past Year	**7.0**		18.2		9.8
% Difficulty Getting Appointment in Past Year	**14.2**		17.0		10.4
% Difficulty Finding Physician in Past Year	**5.5**		11.0		4.9
% Transportation Hindered Dr Visit in Past Year	**3.2**		9.4		3.0
% Skipped Prescription Doses to Save Costs	**11.0**		15.3		11.0
% Difficulty Getting Child's Healthcare in Past Year	**2.1**		6.0		3.1
Primary Care Doctors per 100,000	**193.4**	65.9	74.5		130.5
% [Age 18+] Have a Specific Source of Ongoing Care	**88.8**		76.3	95.0	92.0
% [Age 18-64] Have a Specific Source of Ongoing Care	**88.1**		75.6	89.4	91.8

Access to Health Services (continued)	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% [Age 65+] Have a Specific Source of Ongoing Care	**90.9**		80.0	100.0	91.9
% Have Had Routine Checkup in Past Year	**73.4**	64.7	65.0		71.1
% Child Has Had Checkup in Past Year	**87.1**		84.1		95.0
% Two or More ER Visits in Past Year	**7.1**		8.9		5.3
% Rate Local Healthcare "Fair/Poor"	**5.9**		16.5		6.1
Live in a Health Professional Shortage Area (Percent)	**0.0**	41.0	34.1		
% Aware of Local Palliative Programs	**32.4**				28.5
		better	similar	worse	

Arthritis, Osteoporosis & Chronic Back Conditions	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% [50+] Arthritis/Rheumatism	32.9		37.3		30.3
% [50+] Osteoporosis	7.6		13.5	5.3	7.2
% Sciatica/Chronic Back Pain	19.2		18.4		16.7
		better	similar	worse	

Cancer	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Cancer (Age-Adjusted Death Rate)	173.9	181.2	163.6	161.4	180.1
Lung Cancer (Age-Adjusted Death Rate)	50.8	54.1	43.4	45.5	
Prostate Cancer (Age-Adjusted Death Rate)	29.1	20.4	19.2	21.8	
Female Breast Cancer (Age-Adjusted Death Rate)	22.4	21.5	20.9	20.7	
Colorectal Cancer (Age-Adjusted Death Rate)	11.6	16.0	14.6	14.5	

Cancer (continued)	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Prostate Cancer Incidence per 100,000	**99.4**	117.4	142.3		
Female Breast Cancer Incidence per 100,000	**131.1**	118.5	122.7		
Lung Cancer Incidence per 100,000	**64.5**	76.5	64.9		
Colorectal Cancer Incidence per 100,000	**43.1**	46.3	43.3		
% [Women 50-74] Mammogram in Past 2 Years	**81.9**	69.5	83.6	81.1	78.2
% [Women 21-65] Pap Smear in Past 3 Years	**83.0**	73.2	83.9	93.0	82.3
% [Age 50+] Sigmoid/Colonoscopy Ever	**78.6**	62.5	75.2		71.3
% Aware That Many Screenings Are Covered by Insurance	**66.9**				63.3
		better	similar	worse	

Chronic Kidney Disease	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Kidney Disease (Age-Adjusted Death Rate)	16.9	19.0	13.6		14.1
% Kidney Disease	2.5	2.5	3.0		2.7
		better	similar	worse	

Dementias, Including Alzheimer's Disease	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Alzheimer's Disease (Age-Adjusted Death Rate)	43.6	28.6	24.2		32.3
		better	similar	worse	

Diabetes	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Diabetes Mellitus (Age-Adjusted Death Rate)	20.4	25.5	21.1	20.5	23.4
% Diabetes/High Blood Sugar	11.4	11.0	11.7		9.2
% Borderline/Pre-Diabetes	7.5		5.1		
% [Non-Diabetes] Blood Sugar Tested in Past 3 Years	59.4		49.2		
		better	similar	worse	

Educational & Community-Based Programs	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% Attended Health Event in Past Year	27.4		23.8		27.4
		better	similar	worse	

Family Planning	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Teen Births per 1,000 (Age 15-19)	20.4	38.9	36.6		26.2
		better	similar	worse	

Heart Disease & Stroke	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Diseases of the Heart (Age-Adjusted Death Rate)	186.2	185.8	169.1	156.9	235.1
Stroke (Age-Adjusted Death Rate)	53.3	41.7	36.5	34.8	38.5
% Heart Disease (Heart Attack, Angina, Coronary Disease)	6.1		6.1		6.5
% Stroke	3.4	3.1	3.9		1.8
% Blood Pressure Checked in Past 2 Years	97.9		91.0	92.6	97.2
% Told Have High Blood Pressure (Ever)	34.4	33.5	34.1	26.9	32.8
% [HBP] Taking Action to Control High Blood Pressure	96.1		89.2		96.2

Heart Disease & Stroke (continued)	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% Cholesterol Checked in Past 5 Years	91.8		86.6	82.1	92.0
% Told Have High Cholesterol (Ever)	27.8		29.9	13.5	32.9
% [HBC] Taking Action to Control High Blood Cholesterol	86.2		81.4		88.0
% 1+ Cardiovascular Risk Factor	81.3		82.3		80.9
		better	similar	worse	

HIV	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
HIV Prevalence per 100,000	53.4	159.4	340.4		
		better	similar	worse	

Immunization & Infectious Diseases	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% [Age 65+] Flu Vaccine in Past Year	**55.9**	57.6	57.5	70.0	69.5
% [High-Risk 18-64] Flu Vaccine in Past Year	**33.6**		45.9	70.0	44.5
% [Age 65+] Pneumonia Vaccine Ever	**78.4**	70.0	68.4	90.0	70.5
% [High-Risk 18-64] Pneumonia Vaccine Ever	**43.1**		41.9	60.0	34.9
% Aware That Many Immunizations Are Covered by Insurance	**67.8**				67.8
% Have Completed Hepatitis B Vaccination Series	**47.2**		44.7		
		better	similar	worse	

Injury & Violence Prevention	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Unintentional Injury (Age-Adjusted Death Rate)	40.8	42.8	39.7	36.4	34.9
Motor Vehicle Crashes (Age-Adjusted Death Rate)	10.7	11.4	10.6	12.4	12.8
% Child [Age 5-17] "Always" Wears Bicycle Helmet	41.7		48.7		37.0
Firearm-Related Deaths (Age-Adjusted Death Rate)	9.0	11.6	10.3	9.3	7.2
Violent Crime per 100,000	28.7	359.1	395.5		
		better	similar	worse	

Maternal, Infant & Child Health	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Low Birthweight Births (Percent)	6.5	8.2	8.2	7.8	6.7
Infant Death Rate	2.3	7.0	5.9	6.0	4.6
		better	similar	worse	

Mental Health & Mental Disorders	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% "Fair/Poor" Mental Health	8.2		11.9		9.6
% Diagnosed Depression	19.6		20.4		
% Symptoms of Chronic Depression (2+ Years)	26.2		30.4		20.0
Suicide (Age-Adjusted Death Rate)	16.0	14.3	12.7	10.2	13.5
% [Those With Diagnosed Depression] Seeking Help	76.7		76.6		
% Typical Day Is "Extremely/Very" Stressful	9.8		11.9		9.3
		better	similar	worse	

Nutrition, Physical Activity & Weight	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% Eat 5+ Servings of Fruit or Vegetables per Day	40.8		39.5		45.8
% "Very/Somewhat" Difficult to Buy Fresh Produce	14.1		24.4		6.1
Population With Low Food Access (Percent)	17.0	26.1	23.6		
% Worried About Food Running Out in the Past Year	10.0				
% Ran Out of Food at Least Once in the Past Year	6.7				
% Have to Choose Between Food and Household Bills	13.0				16.7
% Used a Food Bank/Received a Free Meal in the Past Year	6.4				
% Medical Advice on Nutrition in Past Year	43.4		39.2		42.2
% “Always” Purchase Organic Food When Available	2.7				4.3
% Local Grocery or Convenience Stores Offer Organic Options	95.9				97.1
% Healthy Weight (BMI 18.5-24.9)	34.0	31.1	34.4	33.9	36.4

Nutrition, Physical Activity & Weight (continued)	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% Overweight (BMI 25+)	65.7	67.2	63.1		61.9
% Obese (BMI 30+)	32.4	31.8	29.0	30.5	26.9
% Medical Advice on Weight in Past Year	23.8		23.7		25.2
% [Overweights] Counseled About Weight in Past Year	31.6		31.8		33.8
% [Obese Adults] Counseled About Weight in Past Year	47.9		48.3		51.3
% [Overweights] Trying to Lose Weight Both Diet/Exercise	38.6		39.5		39.2
% Child [Age 5-17] Healthy Weight	59.2		56.7		
% Children [Age 5-17] Overweight (85th Percentile)	29.8		31.5		26.4
% Children [Age 5-17] Obese (95th Percentile)	16.2		14.8	14.5	16.1
% No Leisure-Time Physical Activity	19.4	31.1	20.7	32.6	18.4
% Meeting Physical Activity Guidelines	45.0		50.3		45.5

Nutrition, Physical Activity & Weight (continued)	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% Moderate Physical Activity	25.9		30.6		24.7
% Vigorous Physical Activity	33.2		38.0		34.3
Recreation/Fitness Facilities per 100,000	10.6	9.1	9.7		
% Medical Advice on Physical Activity in Past Year	46.4		44.0		46.3
% Child [Age 2-17] Physically Active 1+ Hours per Day	43.2		48.6		
% Child [Age 5-17] Watches TV 3+ Hours per Day	5.4				6.6
% Child [Age 5-17] Uses Computer 3+ Hours per Day	29.4				6.6
% Child [Age 5-17] 3+ Hours per Day of Total Screen Time	33.6				26.0
% Community Needs More Indoor Recreational Space	36.3				35.6
% Community Provides Enough Recreation for Youth Year-Round	69.0				76.2
		better	similar	worse	

Oral Health	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% [Age 18+] Dental Visit in Past Year	78.8	62.6	65.9	49.0	78.1
% Child [Age 2-17] Dental Visit in Past Year	88.7		81.5	49.0	94.2
% Have Dental Insurance	73.5		65.6		70.6
		better	similar	worse	

Respiratory Diseases	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
CLRD (Age-Adjusted Death Rate)	61.5	56.0	41.4		37.5
Pneumonia/Influenza (Age-Adjusted Death Rate)	10.8	14.9	15.2		14.3
% COPD (Lung Disease)	8.8	8.0	8.6		6.6
% [Adult] Currently Has Asthma	8.5	10.3	9.4		6.7
% [Child 0-17] Currently Has Asthma	5.8		7.1		6.8
		better	similar	worse	

Sexually Transmitted Diseases	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Gonorrhea Incidence per 100,000	13.9	112.6	107.5		16.2
Chlamydia Incidence per 100,000	248.8	452.7	456.7		89.1
% [Unmarried 18-64] 3+ Sexual Partners in Past Year	0.0		11.7		4.2
% [Unmarried 18-64] Using Condoms	17.8		33.6		33.8
		better	similar	worse	

Substance Abuse	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Cirrhosis/Liver Disease (Age-Adjusted Death Rate)	4.8	8.7	9.5	8.2	
% Current Drinker	58.1	51.5	56.5		58.5
% Excessive Drinker	16.3		23.2	25.4	14.9
% Drinking & Driving in Past Month	2.0		5.0		0.9

Substance Abuse (continued)	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
Drug-Induced Deaths (Age-Adjusted Death Rate)	14.4	16.8	14.2	11.3	9.2
% Illicit Drug Use in Past Month	1.6		4.0	7.1	1.2
% Member of HH Used IV Drugs in the Past Year	1.0				
% Ever Sought Help for Alcohol or Drug Problem	3.0		4.9		2.0
% Unable to Obtain Substance Abuse Help in the Past Year	0.2				0.2
		better	similar	worse	

Tobacco Use	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% Current Smoker	12.8	21.9	14.9	12.0	17.8
% Someone Smokes at Home	10.1		12.7		13.7
% [Nonsmokers] Someone Smokes in the Home	3.5		6.3		3.3
% [Household With Children] Someone Smokes in the Home	5.8		9.7		8.2
% [Smokers] Received Advice to Quit Smoking	87.1		67.8		69.7
% [Smokers] Have Quit Smoking 1+ Days in Past Year	46.0		55.9	80.0	40.0
% Aware of the Indiana Tobacco Quit Line	48.4				54.9
% Smoke Cigars	2.9		4.1	0.2	
% Use Smokeless Tobacco	4.4	4.9	4.0	0.3	
		better	similar	worse	

Vision	Boone County	Boone County vs. Benchmarks			
		vs. IN	vs. US	vs. HP2020	TREND
% Eye Exam in Past 2 Years	**64.9**		56.8		65.4
% Have Vision Insurance	**75.2**				74.5
		better	similar	worse	

Community Description

Professional Research Consultants, Inc.

Population Characteristics

Total Population

Boone County, the focus of this Community Health Needs Assessment, encompasses 422.80 square miles and houses a total population of 58,009 residents, according to latest census estimates.

Total Population
(Estimated Population, 2009-2013)

	Total Population	Total Land Area (Square Miles)	Population Density (Per Square Mile)
Boone County	58,009	422.80	137.2
Indiana	6,514,861	35,816.65	181.89
United States	311,536,591	3,530,997.6	88.23

Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

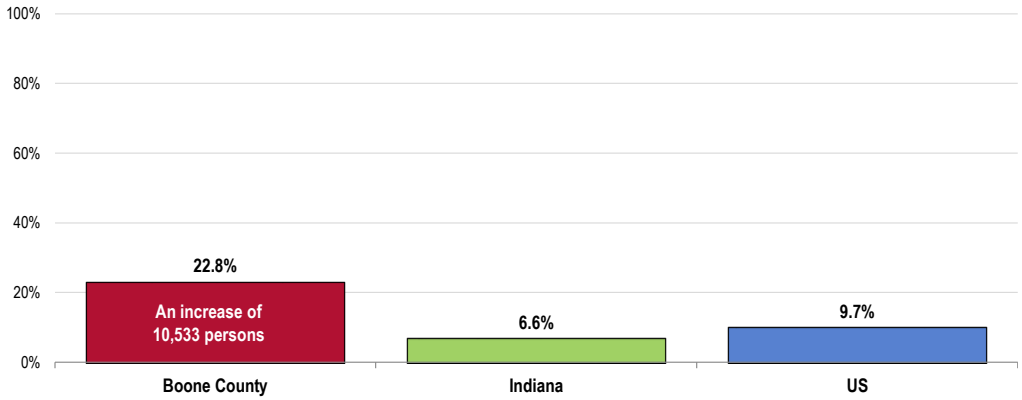
Population Change 2000-2010

A significant positive or negative shift in total population over time impacts healthcare providers and the utilization of community resources.

Between the 2000 and 2010 US Censuses, the population of Boone County increased by 10,533 persons, or 22.8%.

- A greater proportional increase than seen across Indiana and the US overall.

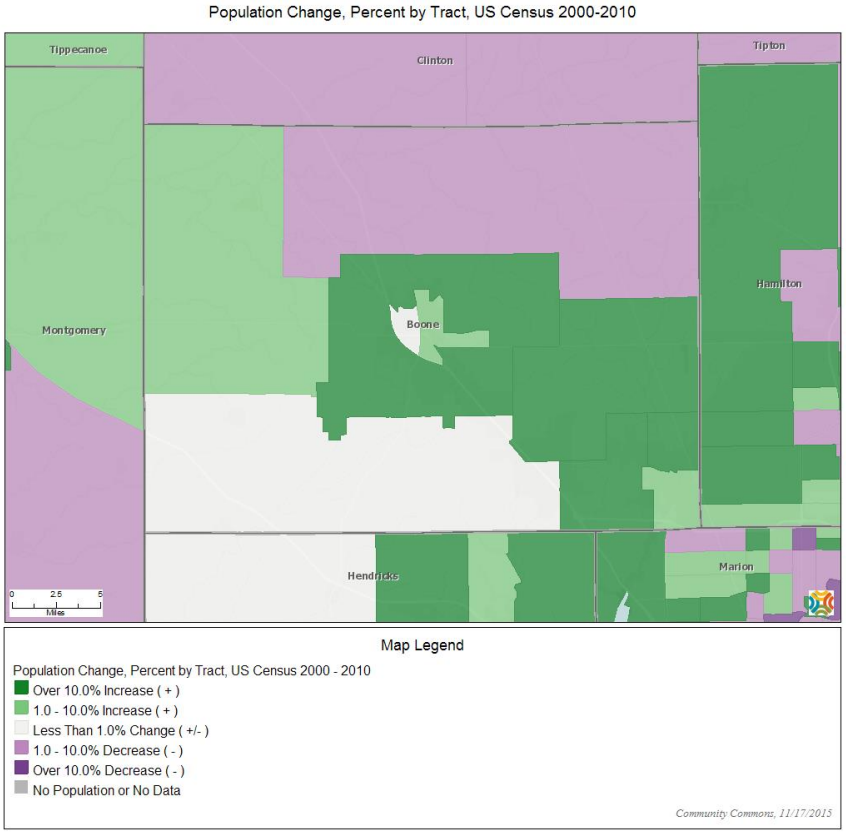
Change in Total Population
(Percentage Change Between 2000 and 2010)



Sources:
- Retrieved December 2015 from Community Commons at http://www.chna.org.
- US Census Bureau Decennial Census (2000-2010).

Notes:
- A significant positive or negative shift in total population over time impacts healthcare providers and the utilization of community resources.

Note the increases in population in the central and eastern portions of the county.



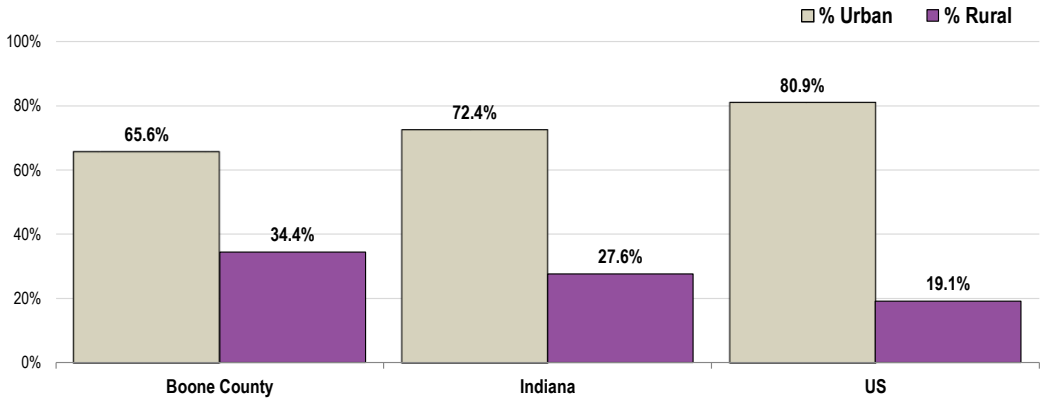
Urban/Rural Population

Urban areas are identified using population density, count, and size thresholds. Urban areas also include territory with a high degree of impervious surface (development). Rural areas are all areas that are not urban.

Boone County is predominantly urban, with 65.6% of the population living in areas designated as urban.

- The percentage is lower, however, than state and national percentages.

Urban and Rural Population
(2010)

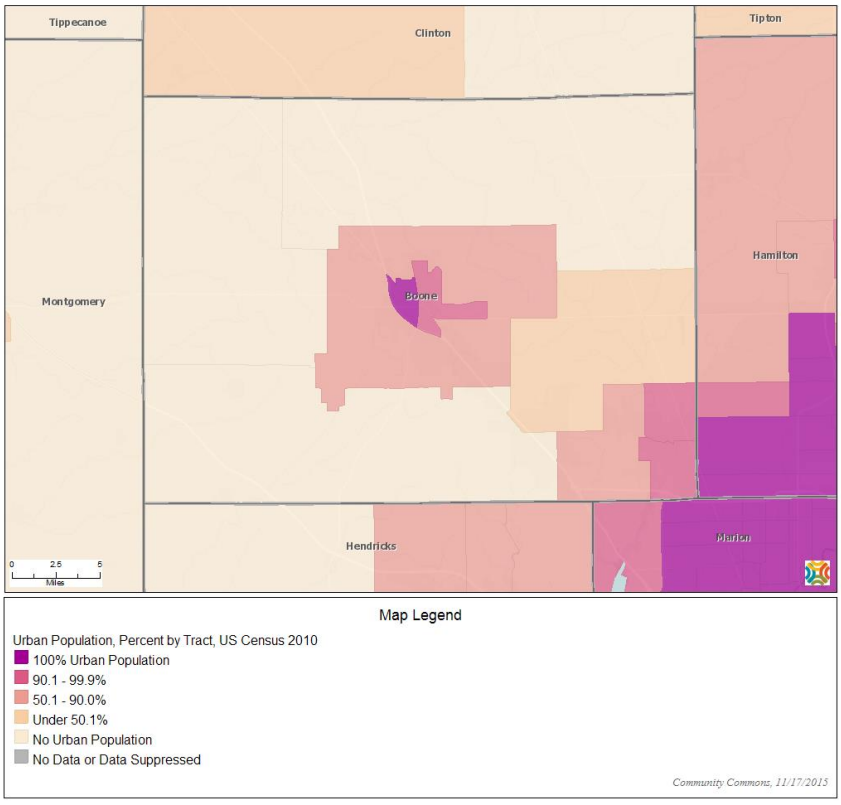


Sources:
- US Census Bureau Decennial Census (2010).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the percentage of population living in urban and rural areas. Urban areas are identified using population density, count, and size thresholds. Urban areas also include territory with a high degree of impervious surface (development). Rural areas are all areas that are not urban.

- Note the following map outlining the urban population in Boone County census tracts as of 2010.

Urban Population, Percent by Tract, US Census 2010

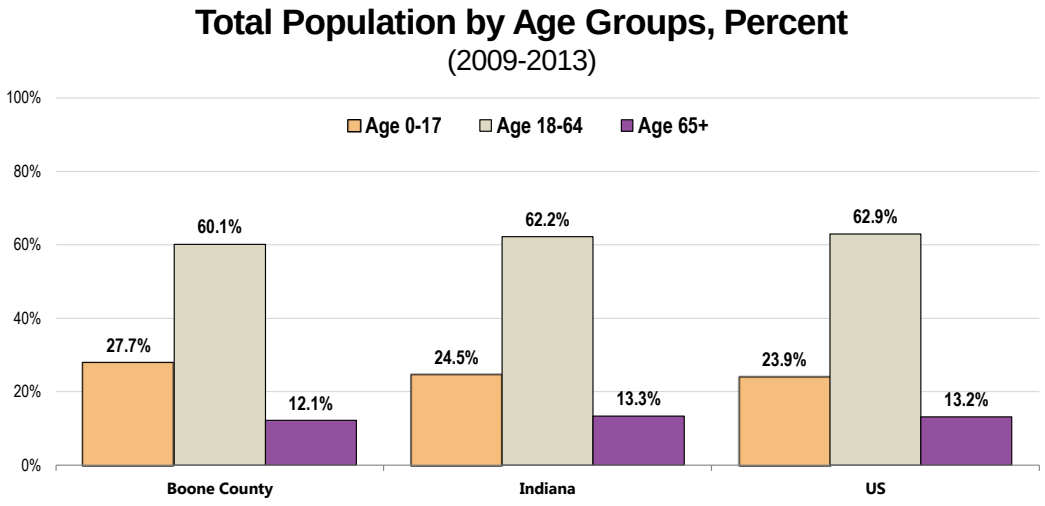


Age

It is important to understand the age distribution of the population as different age groups have unique health needs which should be considered separately from others along the age spectrum.

In Boone County, 27.7% of the population are infants, children or adolescents (age 0-17); another 60.1% are age 18 to 64, while 12.1% are age 65 and older.

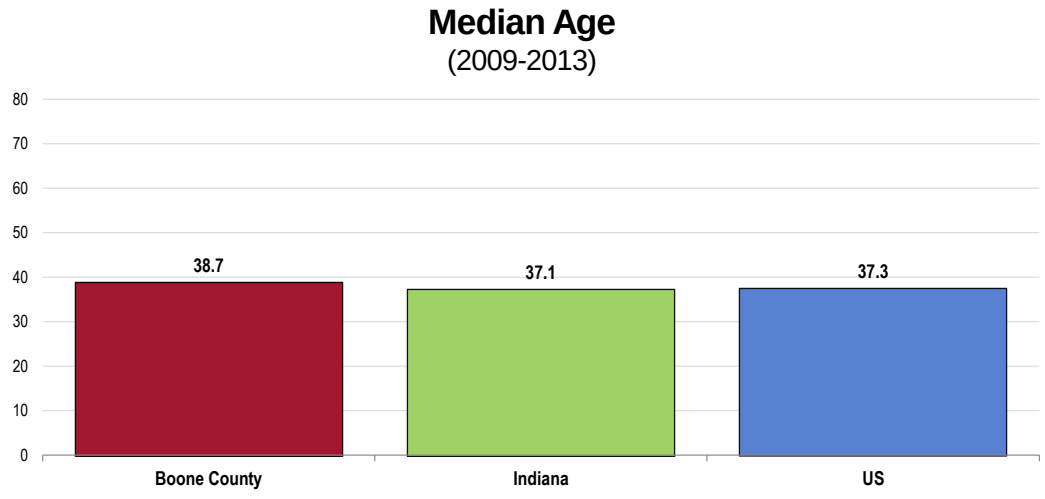
- The percentage of older adults (65+) is lower than the state and US figures.



Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Median Age

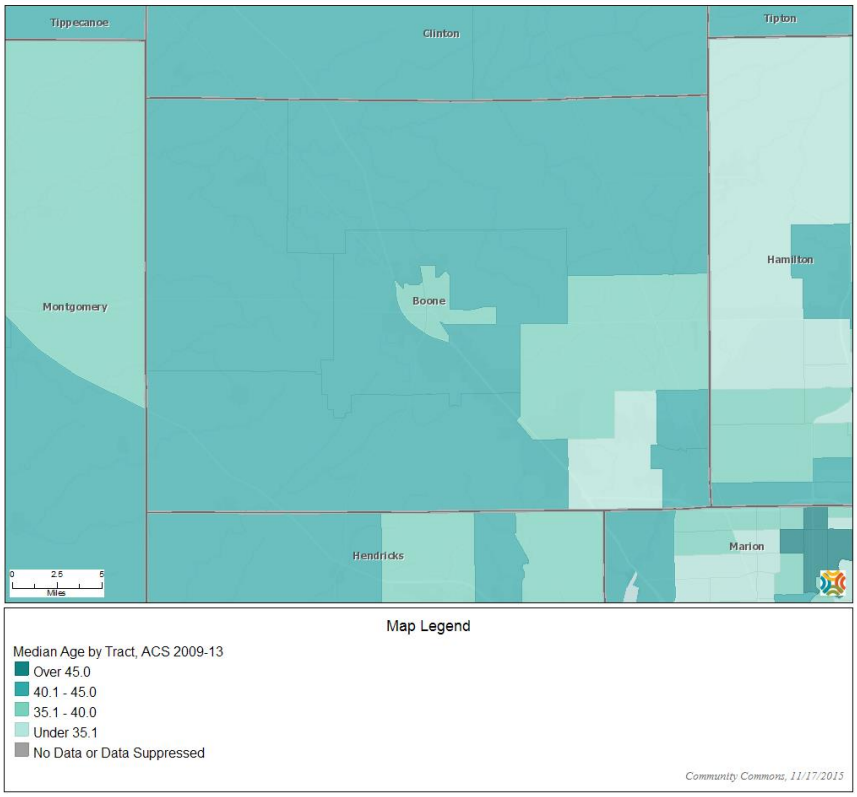
Boone County is "older" than the state and the nation in that the median age is higher.



Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

- The following map provides an illustration of the median age in Boone County, segmented by census tract.

Median Age, by Tract, ACS 2009-2013



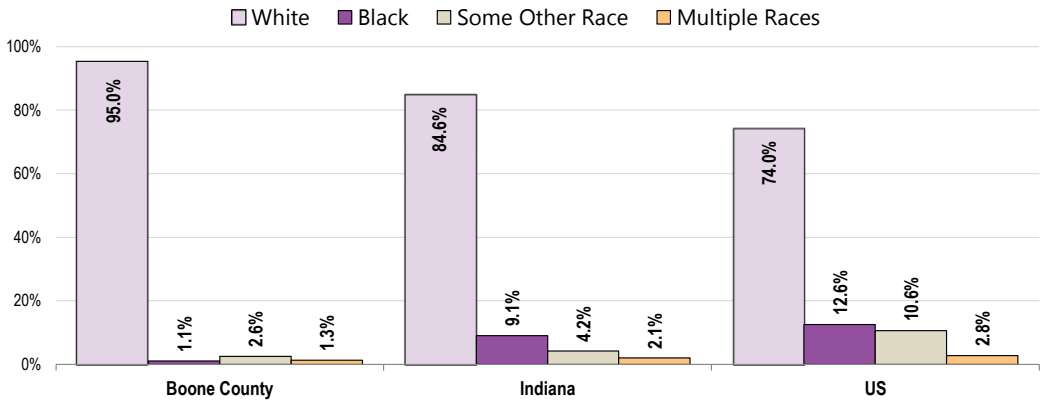
Race & Ethnicity

Race

In looking at race independent of ethnicity (Hispanic or Latino origin), 95.0% of residents of Boone County are White and 1.1% are Black.

- Across Indiana and the US, the population is less White, more Black, and more "Other" race.

Total Population by Race Alone, Percent
(2009-2013)



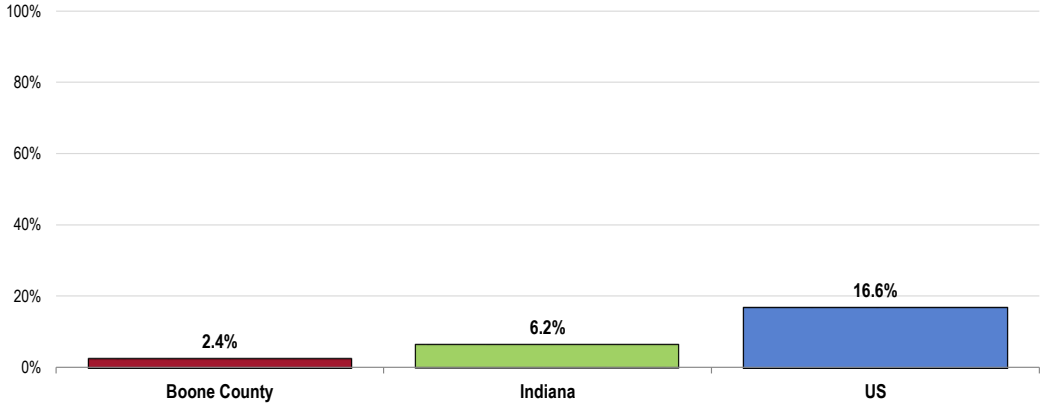
Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Ethnicity

A total of 2.4% of Boone County residents are Hispanic or Latino.

- Lower than found statewide.
- Much lower than found nationally.

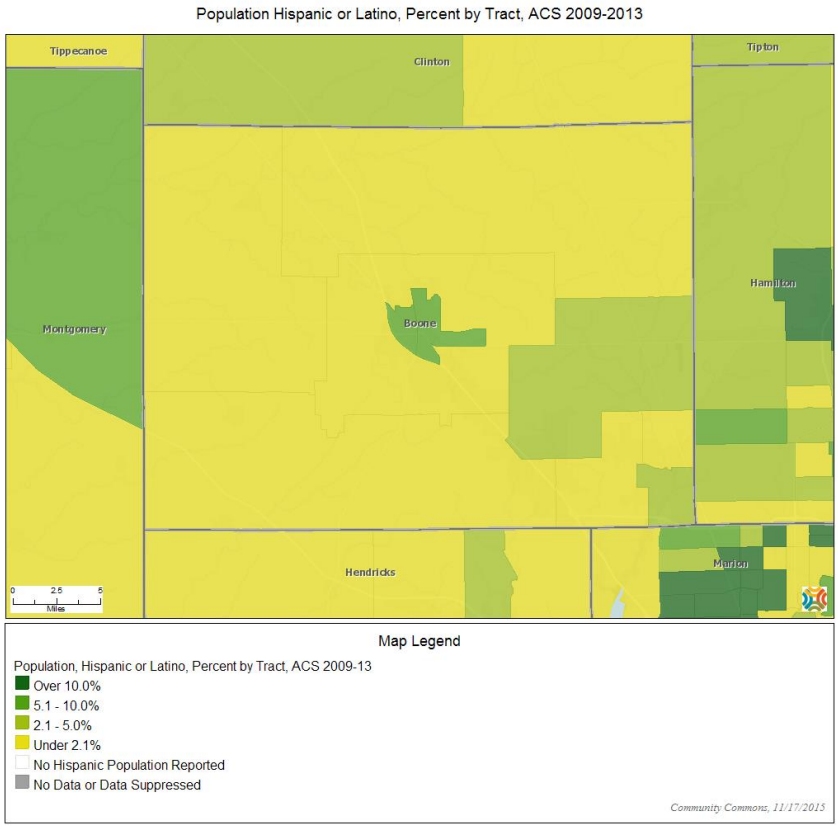
Percent Population Hispanic or Latino
(2009-2013)



Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- Origin can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Hispanic, Latino, or Spanish may be of any race.

- The Hispanic population appears to be most concentrated in central Boone County.

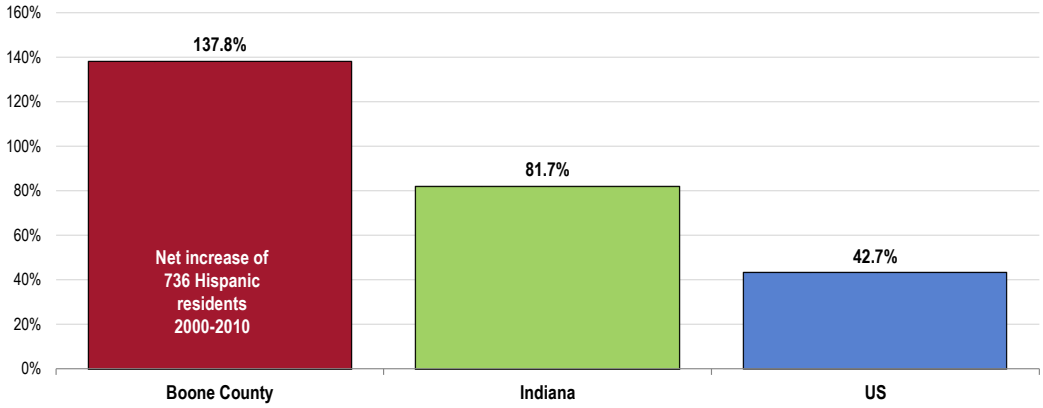


Between 2000 and 2010, the Hispanic population in Boone County increased by 736 or 137.8%.

- Higher (in terms of percentage growth) than found statewide.
- Much higher (in terms of percentage growth) than found nationally.

Hispanic Population Change

(Percentage Change in Hispanic Population Between 2000 and 2010)



Sources:
- US Census Bureau Decennial Census (2000-2010).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

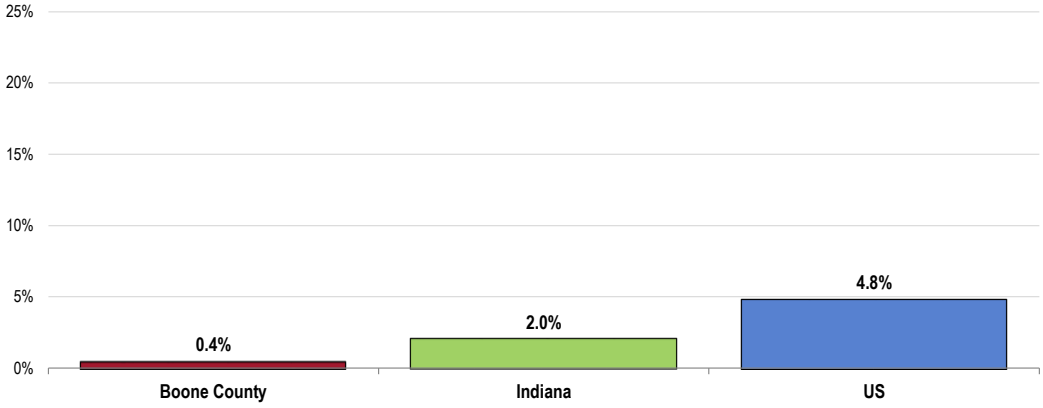
Linguistic Isolation

Just 0.4% of the Boone County population age 5 and older live in a home in which no persons age 14 or older is proficient in English (speaking only English, or speaking English "very well").

- Below the percentage found statewide.
- Well below the percentage found nationally.

Linguistically Isolated Population

(2009-2013)

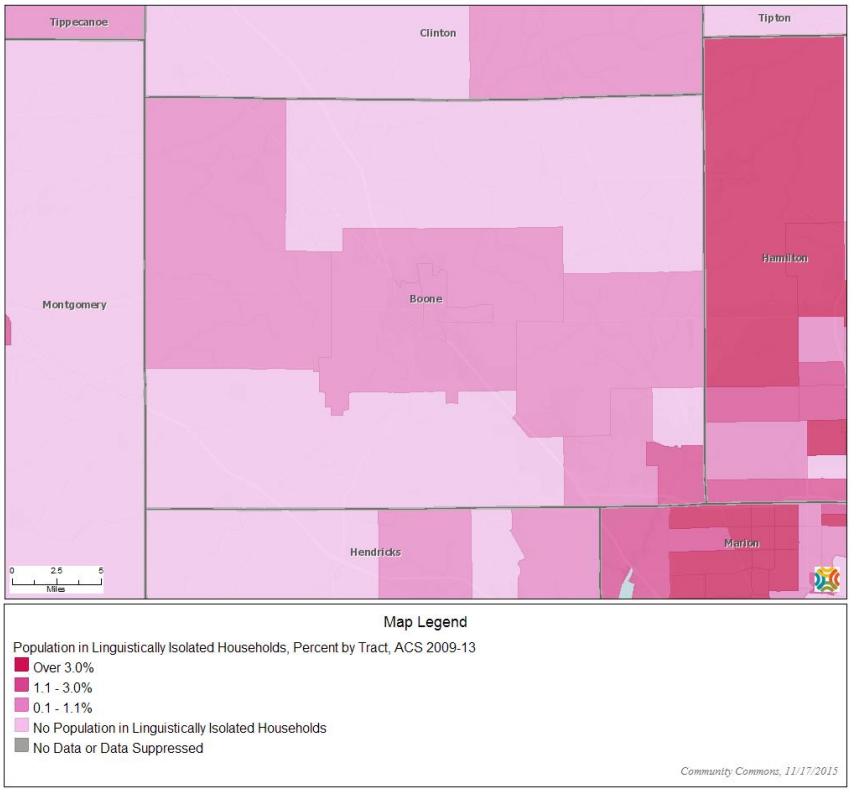


Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the percentage of the population aged 5 and older who live in a home in which no person 14 years old and over speaks only English, or in which no person 14 years old and over speak a non-English language and speak English "very well."

- Note the following map illustrating linguistic isolation in Boone County.

Population in Linguistically Isolated Households, Percent by Tract, ACS 2009-2013



Social Determinants of Health

About Social Determinants

Health starts in our homes, schools, workplaces, neighborhoods, and communities. We know that taking care of ourselves by eating well and staying active, not smoking, getting the recommended immunizations and screening tests, and seeing a doctor when we are sick all influence our health. Our health is also determined in part by access to social and economic opportunities; the resources and supports available in our homes, neighborhoods, and communities; the quality of our schooling; the safety of our workplaces; the cleanliness of our water, food, and air; and the nature of our social interactions and relationships. The conditions in which we live explain in part why some Americans are healthier than others and why Americans more generally are not as healthy as they could be.

- Healthy People 2020 (www.healthypeople.gov)

Poverty

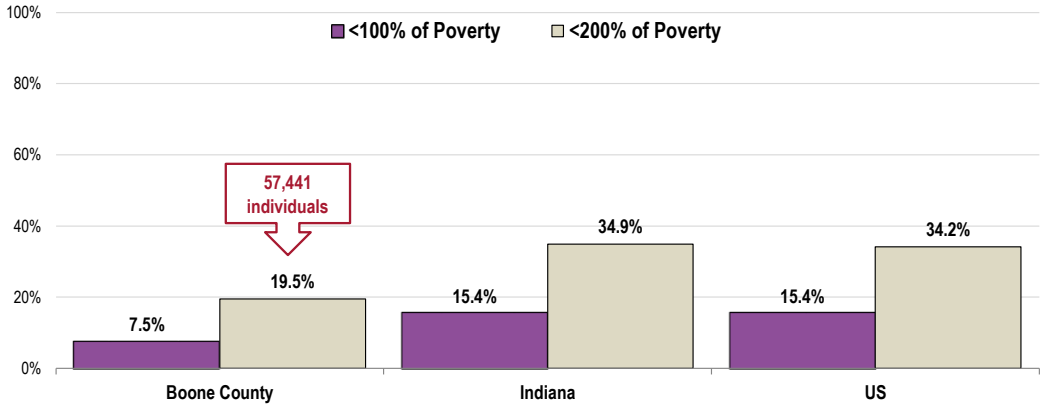
The latest census estimate shows 7.5% of Boone County population living below the federal poverty level.

In all, 19.5% of Boone County residents (an estimated 57,441 individuals) live below 200% of the federal poverty level.

- Lower than the proportion reported statewide.
- Lower than found nationally.

Population in Poverty

(Populations Living Below 100% and Below 200% of the Poverty Level; 2009-2013)

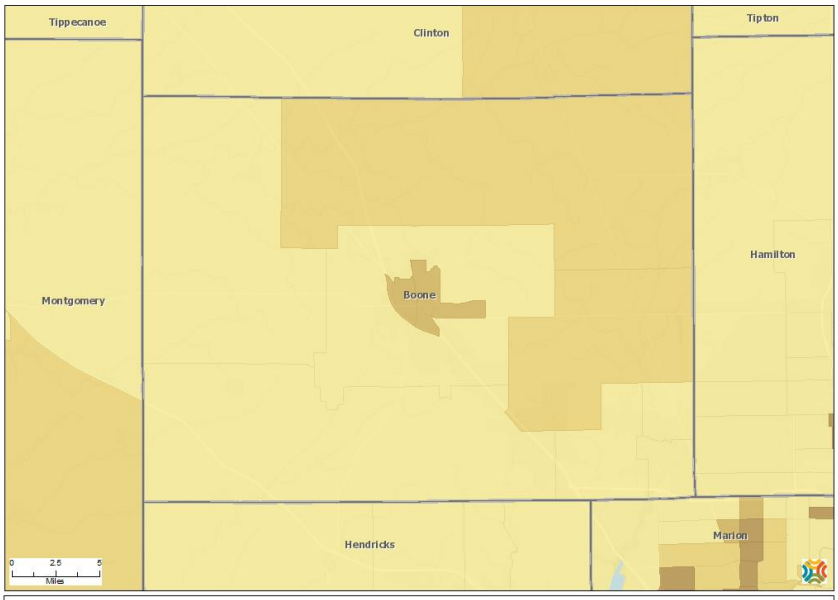


Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- Poverty is considered a key driver of health status. This indicator is relevant because poverty creates barriers to access including health services, healthy food, and other necessities that contribute to poor health status.

- The following maps illustrates the concentration of Boone County residents living in poverty.

Population Below the Poverty Level, Percent by Tract, ACS 2009-2013

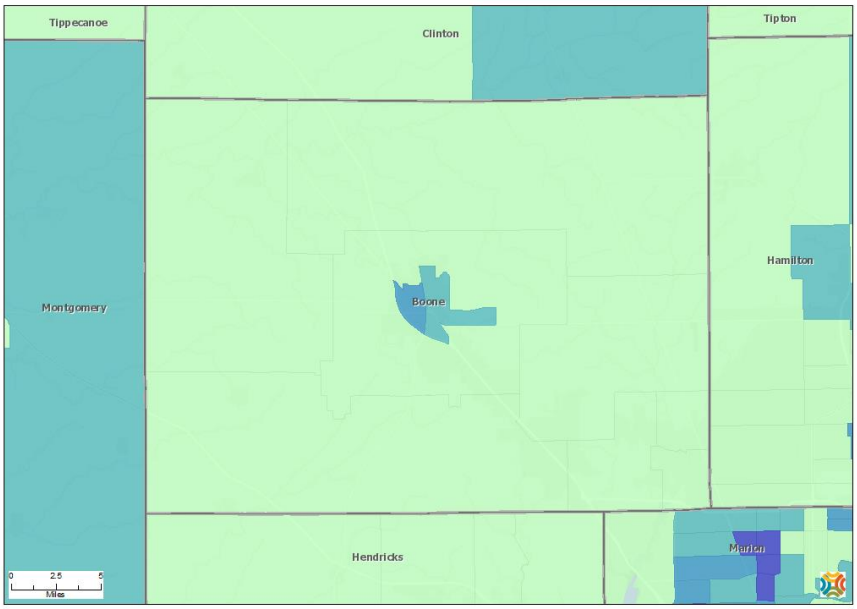


Map Legend

Population Below the Poverty Level, Percent by Tract, ACS 2009-13
- Over 20.0%
- 15.1 - 20.0%
- 10.1 - 15.0%
- Under 10.1%
- No Data or Data Suppressed

Community Commons, 11/17/2015

Population Below 200% of Poverty, Percent by Tract, ACS 2009-2013



Map Legend

Population Below 200% Poverty Level, Percent by Tract, ACS 2009-13
- Over 50.0%
- 38.1 - 50.0%
- 26.1 - 38.0%
- Under 26.1%
- No Data or Data Suppressed

Community Commons, 11/17/2015

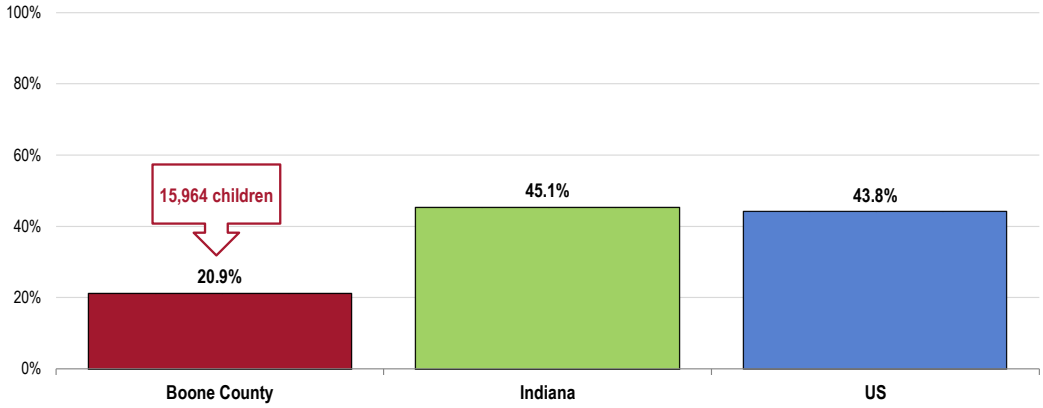
Children in Low-Income Households

Additionally, 20.9% of Boone County children age 0-17 (representing nearly 16,000 children) live below the 200% poverty threshold.

- Well below the proportion found statewide.
- Well below the proportion found nationally.

Percent of Children in Low-Income Households

(Children 0-17 Living Below 200% of the Poverty Level, 2009-2013)

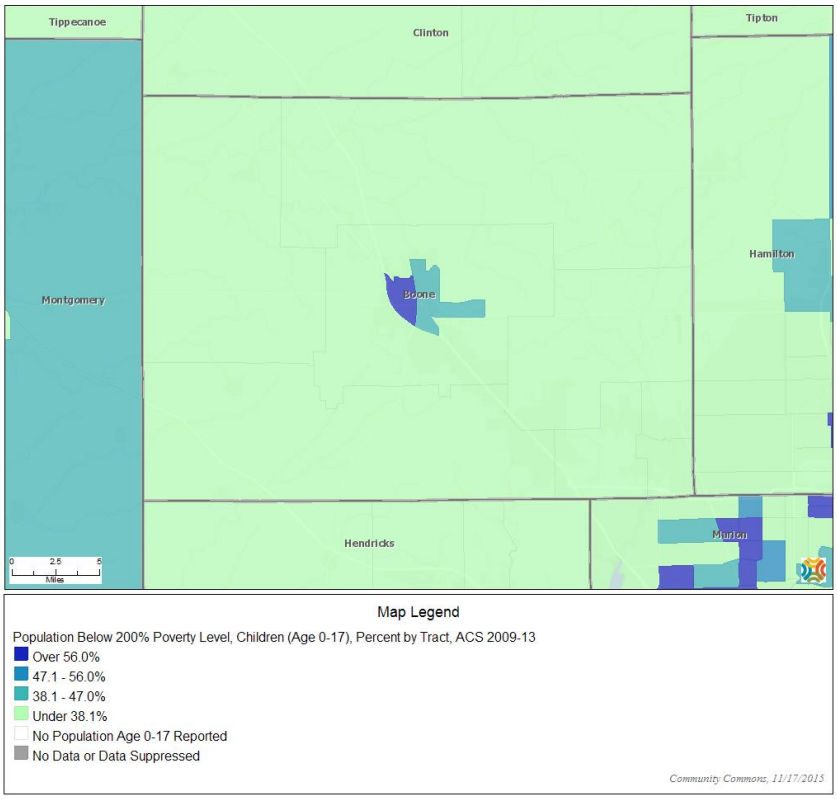


Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the percentage of children aged 0-17 living in households with income below 200% of the Federal Poverty Level (FPL). This indicator is relevant because poverty creates barriers to access including health services, healthy food, and other necessities that contribute to poor health status.

- Geographically, a notably higher concentration of children in lower-income households is found in the center of the county.

Children (0-17) Living Below 200% of Poverty, Percent by Tract, ACS 2009-2013



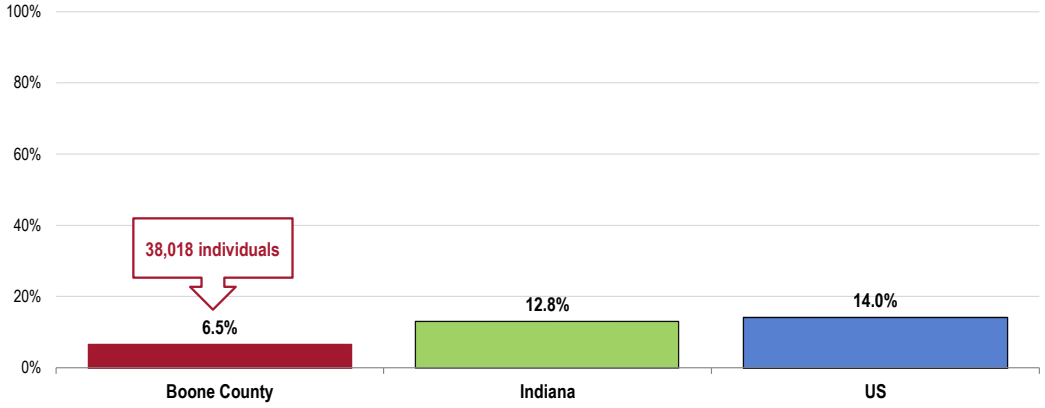
Education

Among the Boone County population age 25 and older, an estimated 6.5% (over 38,000 people) do not have a high school education.

- More favorable than found statewide and nationally.

Population With No High School Diploma

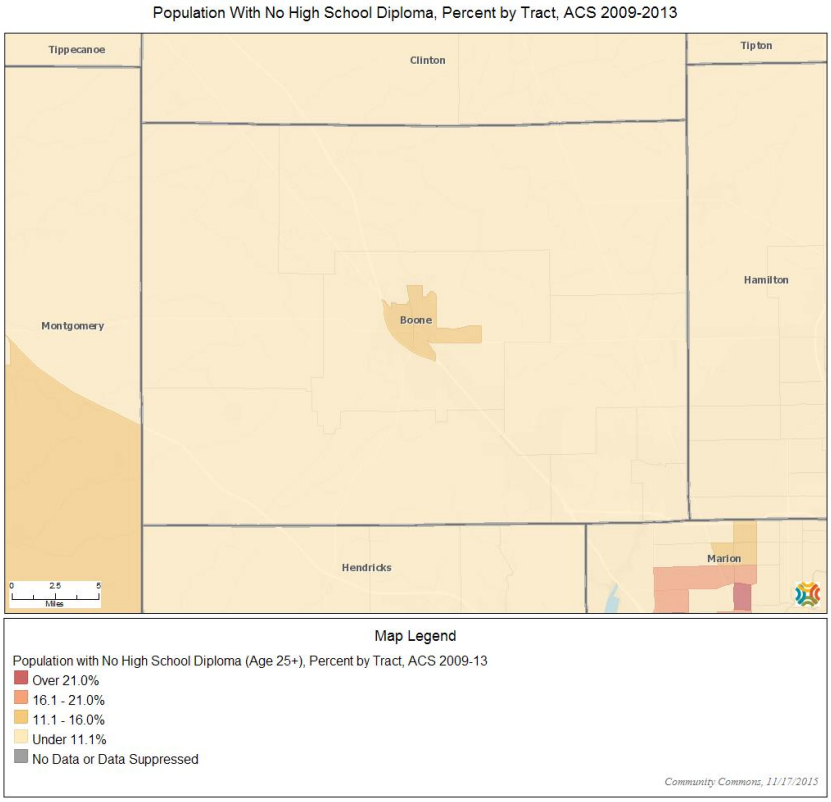
(Population Age 25+ Without a High School Diploma or Equivalent, 2009-2013)



Sources:
- US Census Bureau American Community Survey 5-year estimates (2009-2013).
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because educational attainment is linked to positive health outcomes.

- Note the following visual depiction:



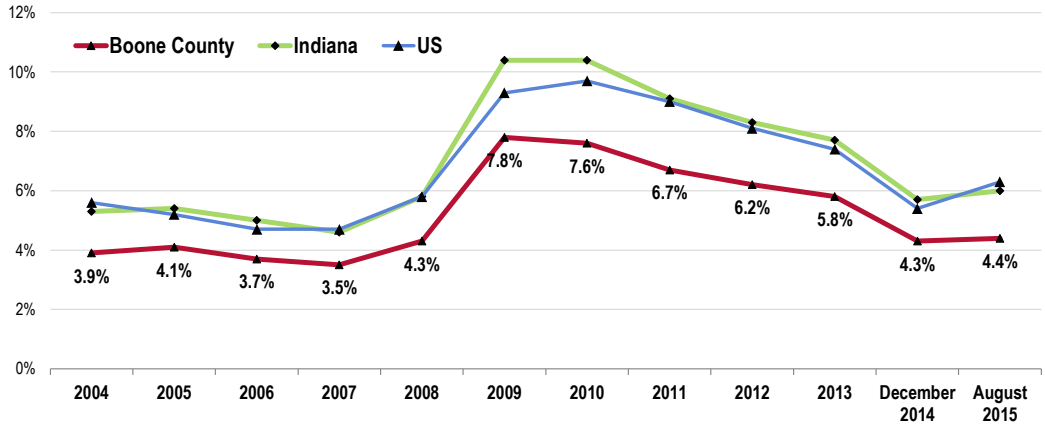
Employment

According to data derived from the US Department of Labor, the unemployment rate in Boone County as of August 2015 was 4.4%.

- More favorable than the statewide unemployment rate.
- More favorable than the national unemployment rate.
- TREND: Unemployment for Boone County has trended downward since 2009, echoing the state and national trends (but higher than the figures reported before 2009).

Unemployment Rate

(Percent of Non-Institutionalized Population Age 16+ Unemployed, Not Seasonally-Adjusted)



Sources:
- US Department of Labor, Bureau of Labor Statistics.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because unemployment creates financial instability and barriers to access including insurance coverage, health services, healthy food, and other necessities that contribute to poor health status.

General Health Status

Professional Research Consultants, Inc.

Overall Health Status

Self-Reported Health Status

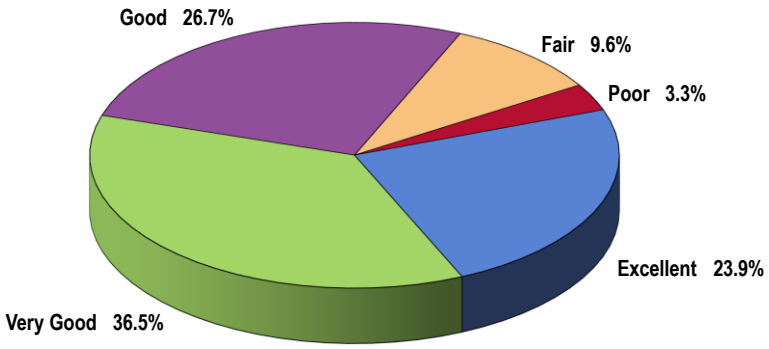
The initial inquiry of the PRC Community Health Survey asked respondents the following:

"Would you say that in general your health is: excellent, very good, good, fair or poor?"

A total of 60.4% of Boone County adults rate their overall health as "excellent" or "very good."

- Another 26.7% gave "good" ratings of their overall health.

Self-Reported Health Status
(Boone County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 5]
Notes: • Asked of all respondents.

NOTE:

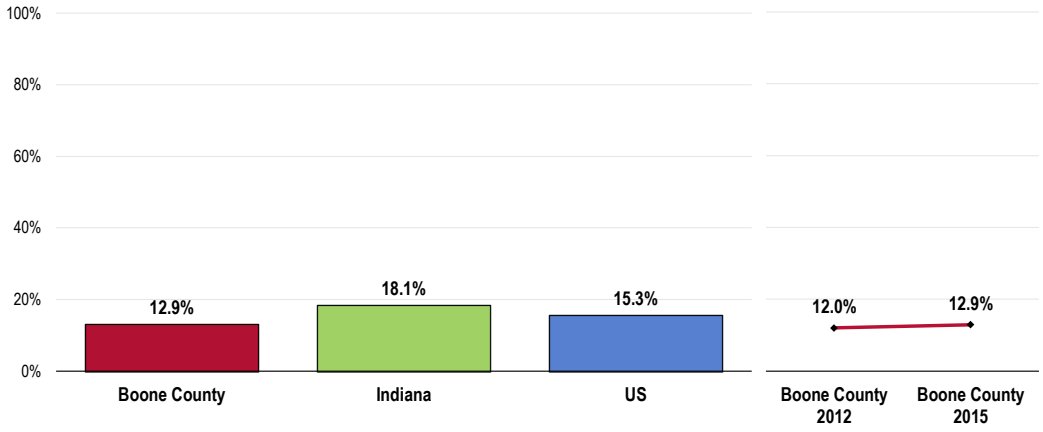
Differences noted in the text represent significant differences determined through statistical testing.

Trends are measured against baseline data – i.e., the earliest year that data are available or that is presented in this report.

However, 12.9% of service area adults believe that their overall health is "fair" or "poor."

- Better than statewide findings.
- Similar to the national percentage.
- TREND: No statistically significant change has occurred when comparing "fair/poor" overall health reports to previous (2012) survey results.

Experience "Fair" or "Poor" Overall Health



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 5]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

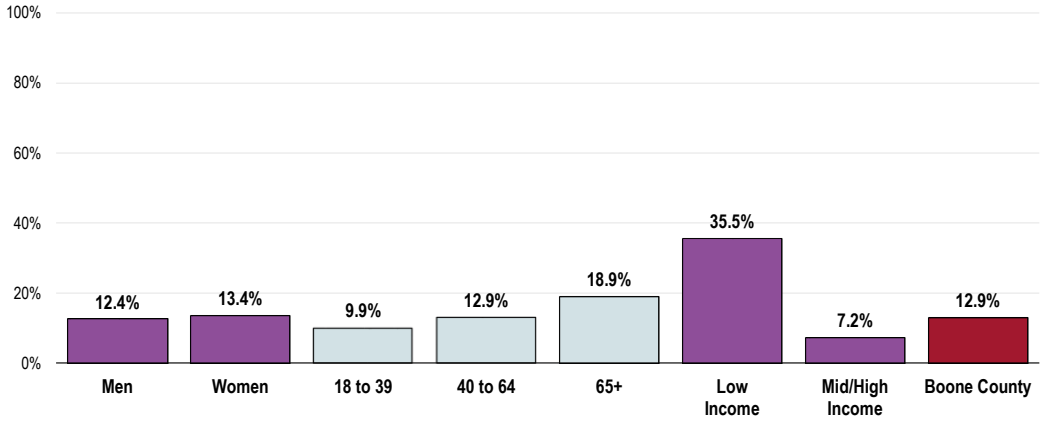
Notes:
- Asked of all respondents.

Adults more likely to report experiencing "fair" or "poor" overall health include:

- Seniors (note the positive correlation with age).
- Residents living at lower incomes (very wide disparity).
- Other differences within demographic groups, as illustrated in the following chart, are not statistically significant.

Charts throughout this report (such as that here) detail survey findings among key demographic groups – namely by gender, age groupings, and income (based on poverty status).

Experience "Fair" or "Poor" Overall Health
(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 5]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Activity Limitations

RELATED ISSUE: See also *Potentially Disabling Conditions* in the **Death, Disease & Chronic Conditions** section of this report.

About Disability & Health

An individual can get a disabling impairment or chronic condition at any point in life. Compared with people without disabilities, people with disabilities are more likely to:

- Experience difficulties or delays in getting the health care they need.
- Not have had an annual dental visit.
- Not have had a mammogram in past 2 years.
- Not have had a Pap test within the past 3 years.
- Not engage in fitness activities.
- Use tobacco.
- Be overweight or obese.
- Have high blood pressure.
- Experience symptoms of psychological distress.
- Receive less social-emotional support.
- Have lower employment rates.

There are many social and physical factors that influence the health of people with disabilities. The following three areas for public health action have been identified, using the International Classification of Functioning, Disability, and Health (ICF) and the three World Health Organization (WHO) principles of action for addressing health determinants.

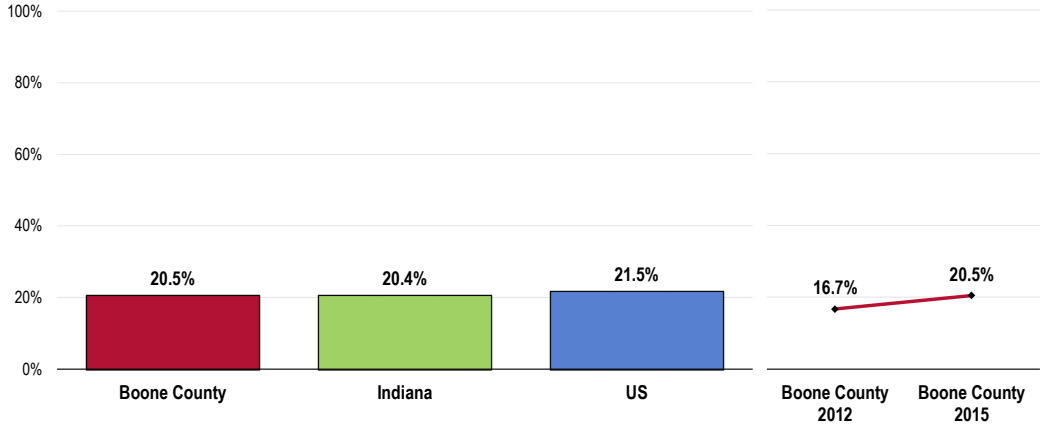
- **Improve the conditions of daily life** by: encouraging communities to be accessible so all can live in, move through, and interact with their environment; encouraging community living; and removing barriers in the environment using both physical universal design concepts and operational policy shifts.
- **Address the inequitable distribution of resources among people with disabilities and those without disabilities** by increasing: appropriate health care for people with disabilities; education and work opportunities; social participation; and access to needed technologies and assistive supports.
- **Expand the knowledge base and raise awareness about determinants of health for people with disabilities** by increasing: the inclusion of people with disabilities in public health data collection efforts across the lifespan; the inclusion of people with disabilities in health promotion activities; and the expansion of disability and health training opportunities for public health and health care professionals.

- Healthy People 2020 (www.healthypeople.gov)

A total of 20.5% of Boone County adults are limited in some way in some activities due to a physical, mental or emotional problem.

- Similar to the prevalence statewide.
- Similar to the national prevalence.
- TREND: Statistically unchanged over time.

Limited in Activities in Some Way Due to a Physical, Mental or Emotional Problem



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 105]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

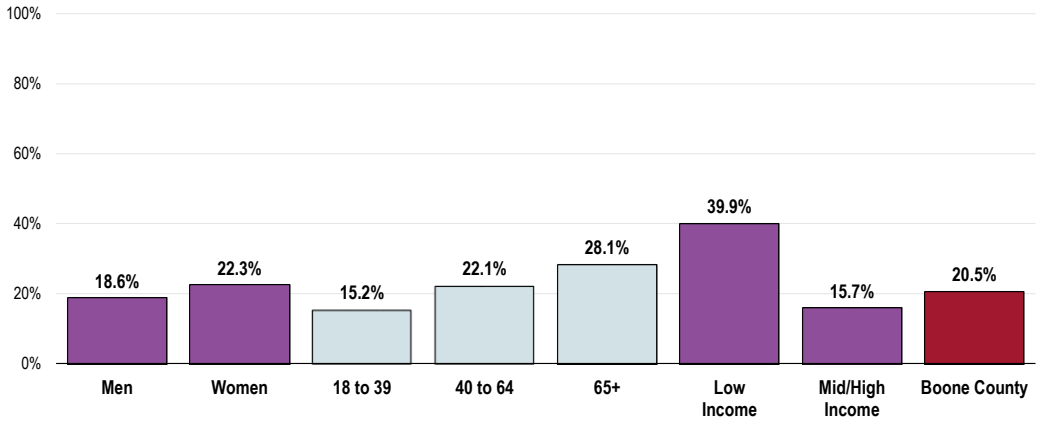
Notes:
- Asked of all respondents.

In looking at responses by key demographic characteristics, note the following:

- Adults age 40 and older are much more often limited in activities (note the positive correlation with age).
- Low-income residents are also more likely to report activity limitations.

Limited in Activities in Some Way Due to a Physical, Mental or Emotional Problem

(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 105]

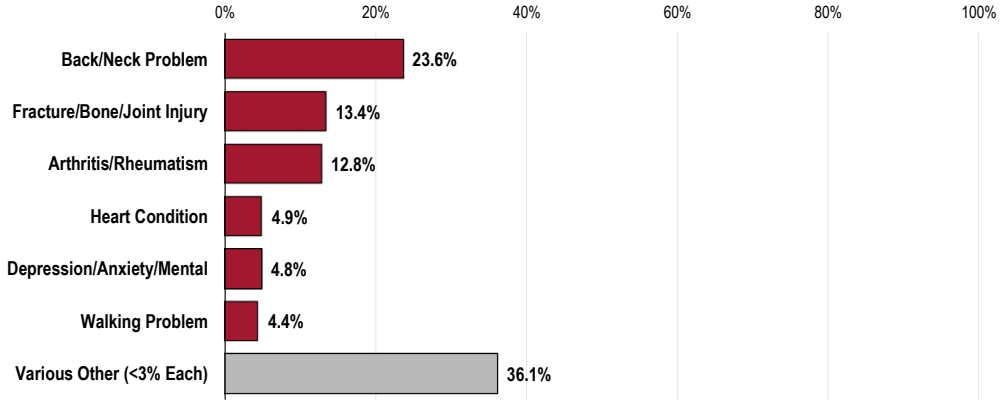
Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Among persons reporting activity limitations, these are most often attributed to musculo-skeletal issues, such as back/neck problems, fractures or bone/joint injuries, arthritis/ rheumatism, or difficulty walking.

Other limitations noted with some frequency include those related to heart conditions and mental health (depression, anxiety).

Type of Problem That Limits Activities

(Among Those Reporting Activity Limitations; Boone County, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 106]
Notes: ● Asked of those respondents reporting activity limitations.

Mental Health

RELATED ISSUE:

See also *Potentially Disabling Conditions* in the **Death, Disease & Chronic Conditions** section of this report.

About Mental Health & Mental Disorders

Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with challenges. Mental health is essential to personal well-being, family and interpersonal relationships, and the ability to contribute to community or society. Mental disorders are health conditions that are characterized by alterations in thinking, mood, and/or behavior that are associated with distress and/or impaired functioning. Mental disorders contribute to a host of problems that may include disability, pain, or death. Mental illness is the term that refers collectively to all diagnosable mental disorders. Mental disorders are among the most common causes of disability. The resulting disease burden of mental illness is among the highest of all diseases.

Mental health and physical health are closely connected. Mental health plays a major role in people's ability to maintain good physical health. Mental illnesses, such as depression and anxiety, affect people's ability to participate in health-promoting behaviors. In turn, problems with physical health, such as chronic diseases, can have a serious impact on mental health and decrease a person's ability to participate in treatment and recovery.

The existing model for understanding mental health and mental disorders emphasizes the interaction of social, environmental, and genetic factors throughout the lifespan. In behavioral health, researchers identify: **risk factors**, which predispose individuals to mental illness; and **protective factors**, which protect them from developing mental disorders. Researchers now know that the prevention of mental, emotional, and behavioral (MEB) disorders is inherently interdisciplinary and draws on a variety of different strategies. Over the past 20 years, research on the prevention of mental disorders has progressed. The major areas of progress include evidence that:

- MEB disorders are common and begin early in life.
- The greatest opportunity for prevention is among young people.
- There are multiyear effects of multiple preventive interventions on reducing substance abuse, conduct disorder, antisocial behavior, aggression, and child maltreatment.
- The incidence of depression among pregnant women and adolescents can be reduced.
- School-based violence prevention can reduce the base rate of aggressive problems in an average school by 25 to 33%.
- There are potential indicated preventive interventions for schizophrenia.
- Improving family functioning and positive parenting can have positive outcomes on mental health and can reduce poverty-related risk.
- School-based preventive interventions aimed at improving social and emotional outcomes can also improve academic outcomes.
- Interventions targeting families dealing with adversities, such as parental depression or divorce, can be effective in reducing risk for depression in children and increasing effective parenting.
- Some preventive interventions have benefits that exceed costs, with the available evidence strongest for early childhood interventions.
- Implementation is complex, it is important that interventions be relevant to the target audiences.
- In addition to advancements in the prevention of mental disorders, there continues to be steady progress in treating mental disorders as new drugs and stronger evidence-based outcomes become available.

- Healthy People 2020 (www.healthypeople.gov)

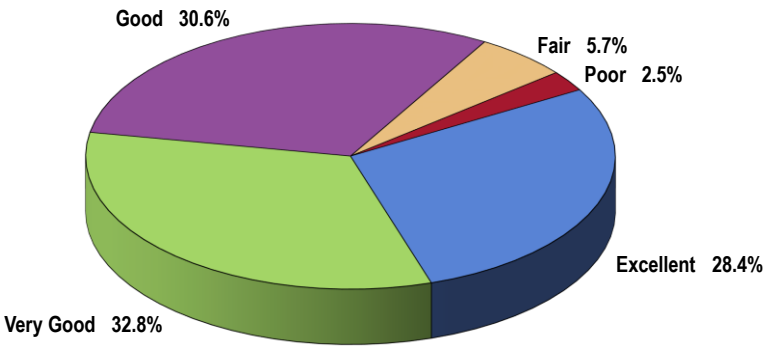
Self-Reported Mental Health Status

"Now thinking about your mental health, which includes stress, depression and problems with emotions, would you say that, in general, your mental health is: excellent, very good, good, fair or poor?"

A total of 61.2% of Boone County adults rate their overall mental health as "excellent" or "very good."

- Another 30.6% gave "good" ratings of their own mental health status.

Self-Reported Mental Health Status
(Boone County, 2015)

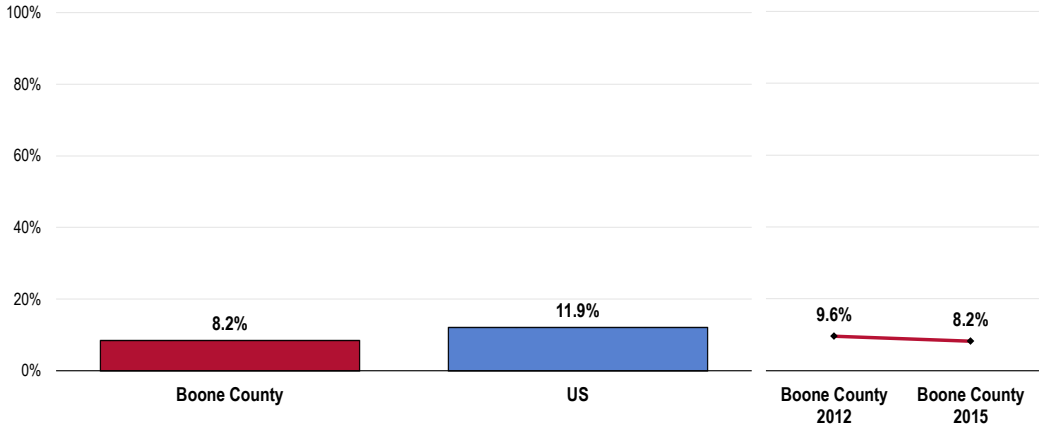


Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 100]
Notes: ● Asked of all respondents.

A total of 8.2% of service area adults, however, believe that their overall mental health is "fair" or "poor."

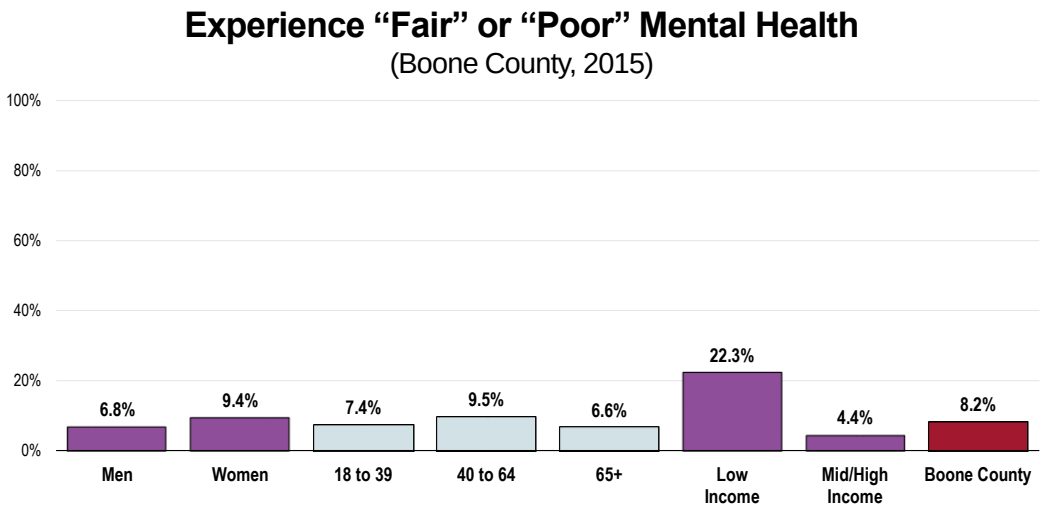
- More favorable than the "fair/poor" response reported nationally.
- TREND: Statistically unchanged since 2012.

Experience "Fair" or "Poor" Mental Health



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 100]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

- Adults living in lower-income households are much more likely to report experiencing "fair/poor" mental health than their demographic counterpart.



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 100]

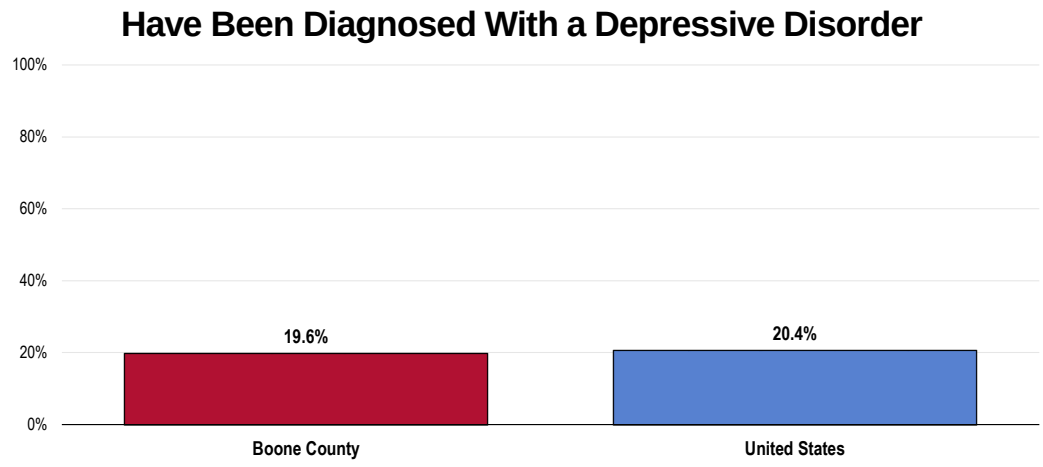
Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Depression

Diagnosed Depression

A total of 19.6% of adults have been diagnosed by a physician as having a depressive disorder (such as depression, major depression, dysthymia, or minor depression).

- Similar to the national finding.



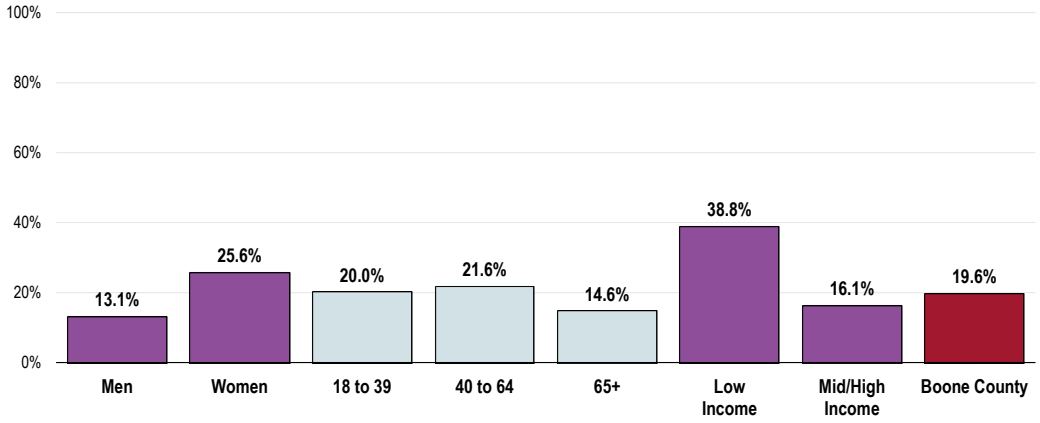
Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 103]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Depressive disorders include depression, major depression, dysthymia, or minor depression.

The prevalence of diagnosed depression is notably higher among:

- Women.
- Adults under 65.
- Community members living at lower incomes.

Have Been Diagnosed With a Depressive Disorder
(Boone County, 2015)



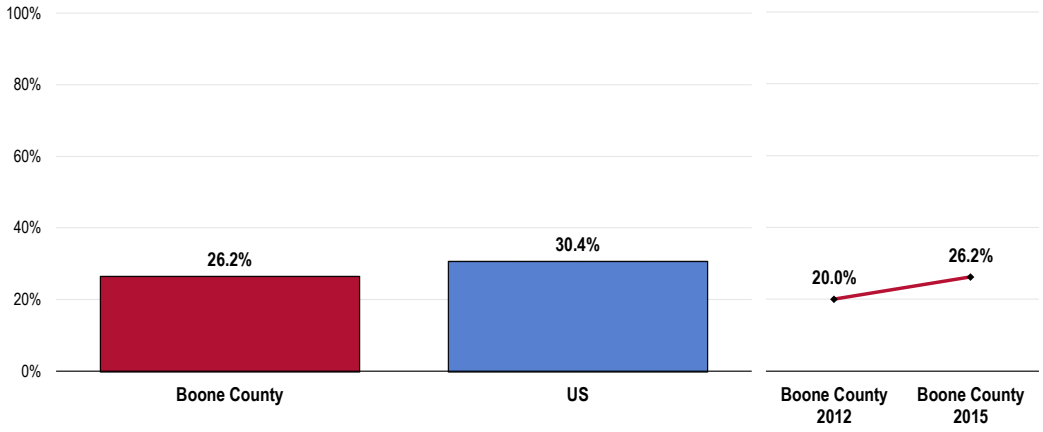
Sources: 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 103]
Notes:
- Asked of all respondents.
- Depressive disorders include depression, major depression, dysthymia, or minor depression.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Symptoms of Chronic Depression

A total of 26.2% of Boone County adults have had two or more years in their lives when they felt depressed or sad on most days, although they may have felt okay sometimes (symptoms of chronic depression).

- More favorable than national findings.
- TREND: Marks a statistically significant increase over time.

Have Experienced Symptoms of Chronic Depression



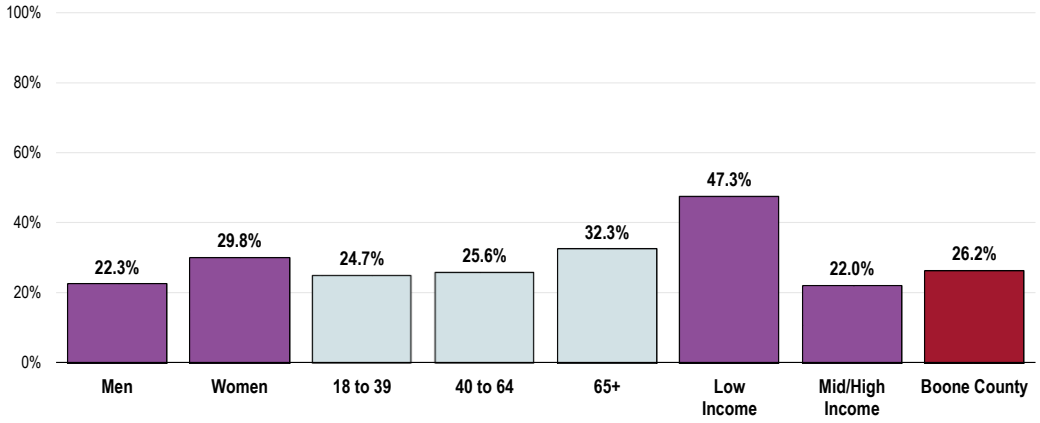
Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 101]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Chronic depression includes periods of two or more years during which the respondent felt depressed or sad on most days, even if (s)he felt okay sometimes.

Note that the prevalence of chronic depression is notably higher among:

- Women.
- Adults with lower incomes.

Have Experienced Symptoms of Chronic Depression
(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 101]

Notes:
- Asked of all respondents.
- Chronic depression includes periods of two or more years during which the respondent felt depressed or sad on most days, even if (s)he felt okay sometimes.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Stress

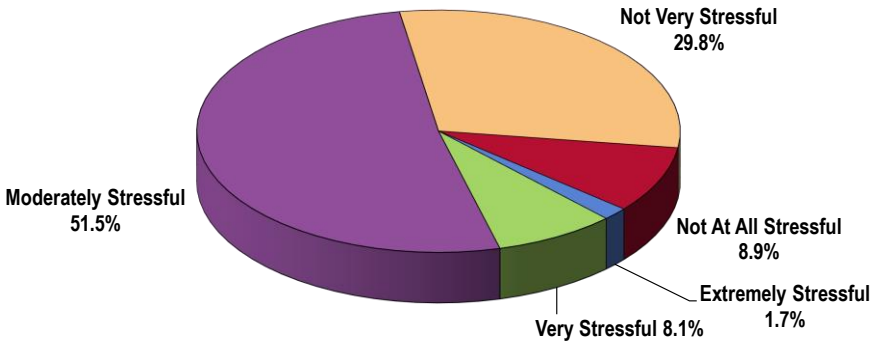
More than one-third of Boone County adults consider their typical day to be "not very stressful" (29.8%) or "not at all stressful" (8.9%).

RELATED ISSUE:

See also *Substance Abuse* in the **Modifiable Health Risks** section of this report.

- Another 51.5% of survey respondents characterize their typical day as "moderately stressful."

Perceived Level of Stress On a Typical Day
(Boone County, 2015)

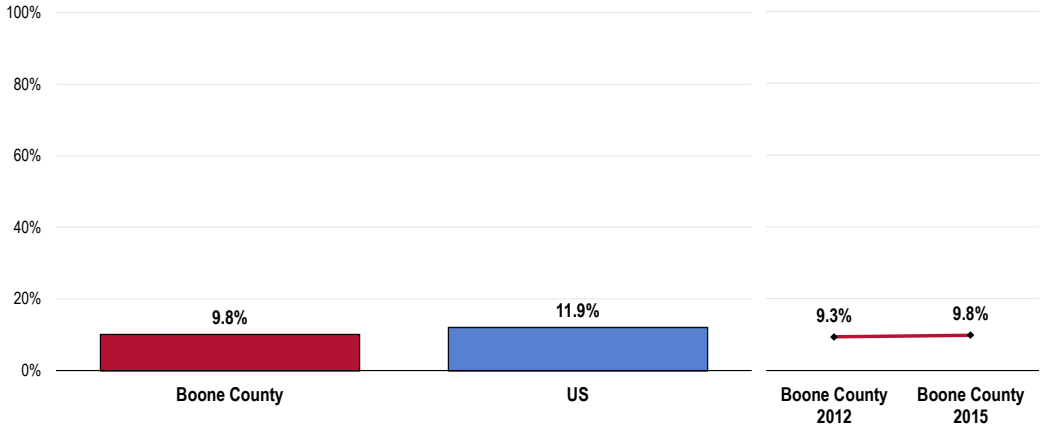


Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 102]
Notes: • Asked of all respondents.

In contrast, 9.8% of service area adults experience "very" or "extremely" stressful days on a regular basis.

- Comparable to national findings.
- TREND: Statistically similar to the 2012 findings.

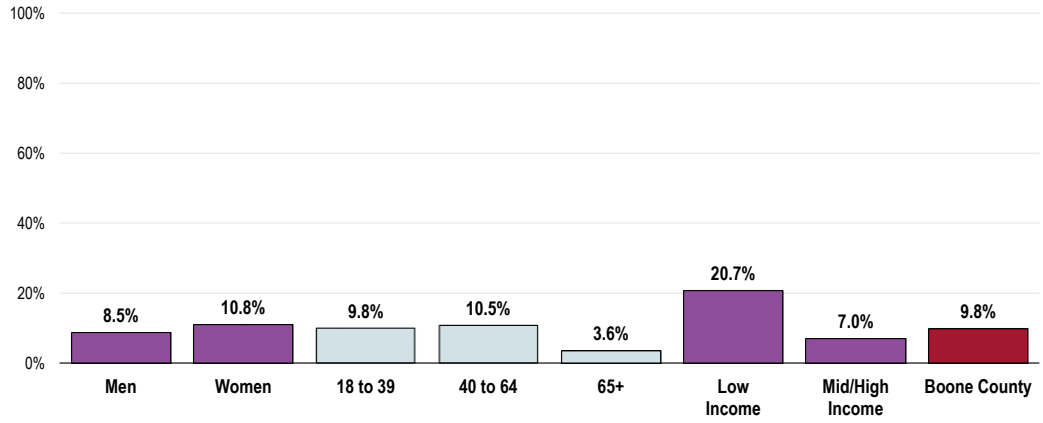
Perceive Most Days As "Extremely" or "Very" Stressful



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 102]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

- Note that high stress levels are more prevalent among adults under 65 and low-income residents.

Perceive Most Days as "Extremely" or "Very" Stressful
(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 102]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Suicide

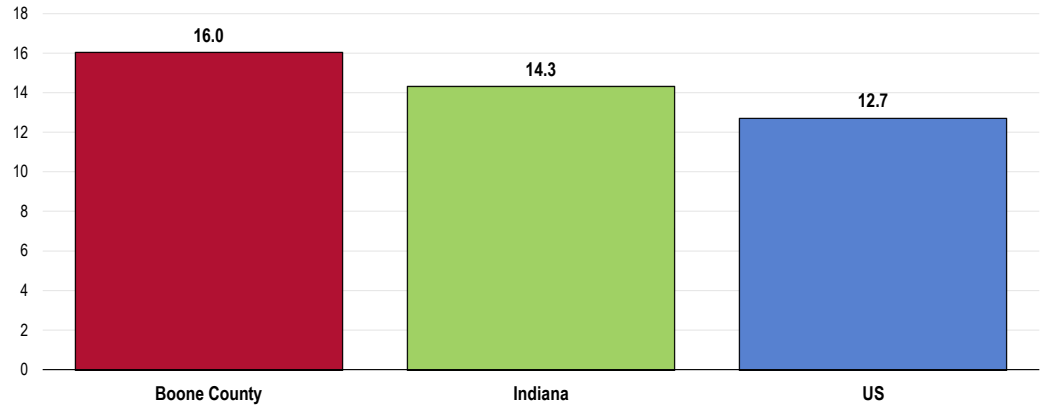
Between 2012 and 2014, there was an annual average age-adjusted suicide rate of 16.0 deaths per 100,000 population in Boone County.

- Worse than the statewide rate.
- Worse than the national rate.
- Fails to satisfy the Healthy People 2020 target of 10.2 or lower.

Suicide: Age-Adjusted Mortality

(2012-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 10.2 or Lower



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MHMD-1]

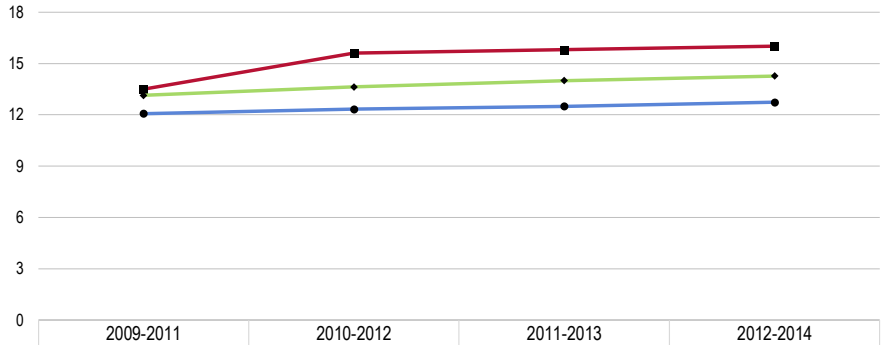
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: The area suicide rate has overall trended upward.

Suicide: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 10.2 or Lower



	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	13.5	15.6	15.8	16.0
Indiana	13.1	13.6	14.0	14.3
US	12.1	12.3	12.5	12.7

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MHMD-1]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

Mental Health Treatment

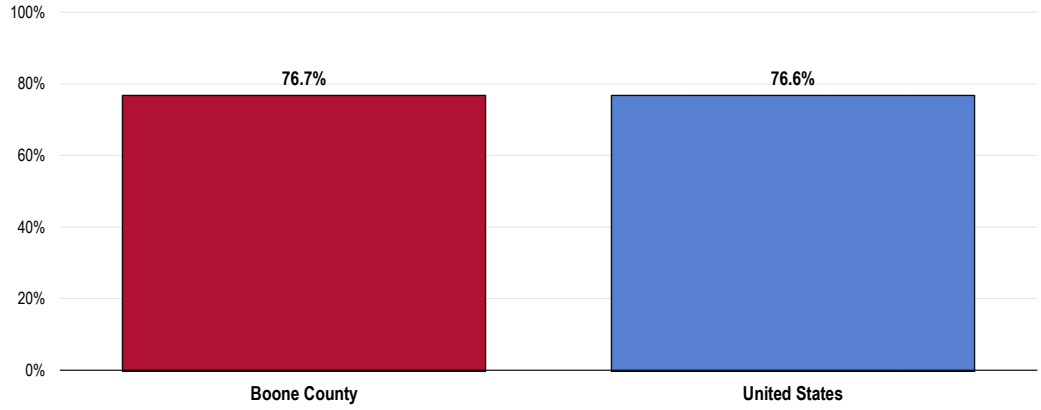
"Diagnosed depressive disorder" includes respondents reporting a past diagnosis of a depressive disorder by a physician (such as depression, major depression, dysthymia, or minor depression).

Among service area adults with a diagnosed depressive disorder, 76.7% acknowledge that they have sought professional help for a mental or emotional problem.

- Similar to national findings.

Adults With Diagnosed Depression Who Have Ever Sought Professional Help for a Mental or Emotional Problem

(Among Adults With Diagnosed Depressive Disorder)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 123]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

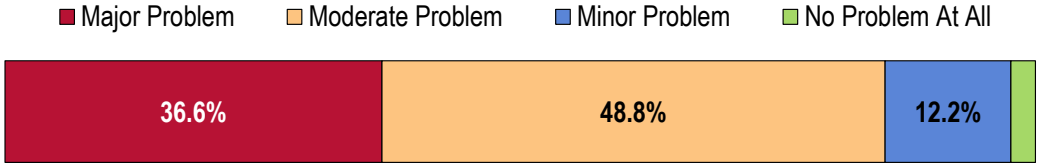
Notes:
- Reflects those respondents with a depressive disorder diagnosed by a physician (such as depression, major depression, dysthymia, or minor depression).

Key Informant Input: Mental Health

The greatest share of key informants taking part in an online survey characterized *Mental Health* as a "moderate problem" in the community.

Perceptions of Mental Health as a Problem in the Community

(Key Informants, 2015)



Sources:
- PRC Online Key Informant Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

Challenges

Among those rating this issue as a "major problem," the following represent what key informants see as the main challenges for persons with mental illness:

Access to Care/Services

Access to services. – Public Health Representative

Accessing services long-term. – Social Services Provider

We have a substance abuse and mental health correlation in the community. However, mental health issues can and do exist on their own. We do not have ample services to prevent or treat issues. We have two primary companies that are not serving any one well. Depression is a huge issue in the community. – Other Health Provider

Getting caregiver support. – Other Health Provider

No local inpatient facilities. – Other Health Provider

Finding providers. – Community Business Leader

Wait time to see a therapist. Poor or no insurance coverage, especially for addiction services including inpatient detox. No physicians using suboxone for detox. Minimal efforts or lack of priority to assist with detoxing clients. – Other Health Provider

Stigma

My role allows me to see intergenerational examples of untreated/unaided mental health issues. There is a fair amount of denial in our midst and there is a very high cost to services in this regard. Thus, availability is an issue whether because of cost or because of avoidance due to social stigma. – Community Business Leader

There is still a high volume of stigma towards mental health illness and it is difficult to get immediate service at our designated community mental health center. – Social Services Provider

Stigma, side effects of medications, desire for treatment, cost of treatment. – Community Business Leader

Lack of Diagnosis/Treatment

Lack of diagnosis and negative stigma that keep people from getting help. Lack of primary doctors knowing how to diagnose. – Community Business Leader

Untreated depression and anxiety. – Other Health Provider

Treatment in Prison

Dealing with them from a law enforcement perspective. If incarcerated, how do we deal with them? – Community Business Leader

Staying on a path of sobriety if it is an addiction issue. Many people in our jail are there because of illegal drug use. Are they successfully enrolled and engaged in programs that deal with their addictions? – Community Business Leader

Co-Occurrences

Mental health issues, often co-occurring with substance abuse and other illnesses. – Public Health Representative

Medication Management

Personal understanding and commitment to staying on a medication. – Social Services Provider

Death, Disease & Chronic Conditions

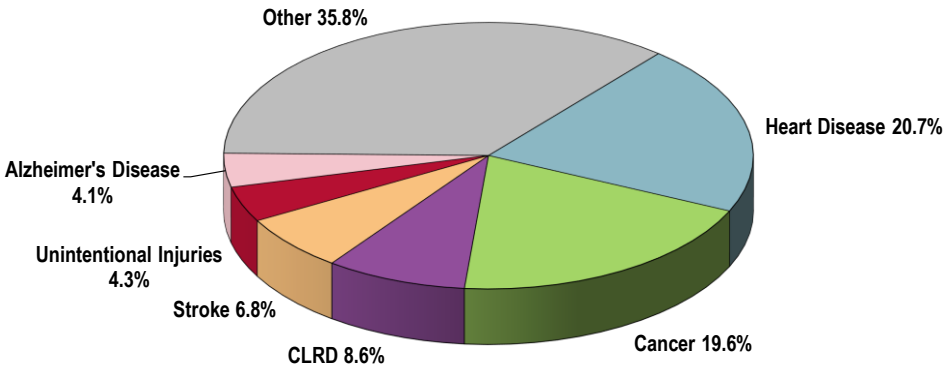
Professional Research Consultants, Inc.

Leading Causes of Death

Distribution of Deaths by Cause

Together, cardiovascular disease (heart disease and stroke) and cancers accounted for nearly half of all deaths in Boone County in 2014.

Leading Causes of Death
(Boone County, 2014)



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- CLRD is chronic lower respiratory disease.

Age-Adjusted Death Rates for Selected Causes

In order to compare mortality in the region with other localities (in this case, Indiana and the United States), it is necessary to look at *rates* of death — these are figures which represent the number of deaths in relation to the population size (such as deaths per 100,000 population, as is used here).

Furthermore, in order to compare localities without undue bias toward younger or older populations, the common convention is to adjust the data to some common baseline age distribution. Use of these "age-adjusted" rates provides the most valuable means of gauging mortality against benchmark data, as well as *Healthy People 2020* targets.

The following chart outlines 2012-2014 annual average age-adjusted death rates per 100,000 population for selected causes of death in Boone County.

For infant mortality data, see *Birth Outcomes & Risks* in the **Births** section of this report.

Note that age-adjusted mortality rates in Boone County are worse than national rates for suicide, heart disease, stroke, cancer, chronic lower respiratory disease (CLRD), Alzheimer's disease, and kidney disease.

Of the causes outlined in the following chart for which Healthy People 2020 objectives have been established, Boone County rates fail to satisfy the related 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

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov.

Note:
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population and coded using ICD-10 codes.
- *The Healthy People 2020 Heart Disease target is adjusted to account for all diseases of the heart; the Diabetes target is adjusted to reflect only diabetes mellitus-coded deaths.

Cardiovascular Disease

About Heart Disease & Stroke

Heart disease is the leading cause of death in the United States, with stroke following as the third leading cause. Together, heart disease and stroke are among the most widespread and costly health problems facing the nation today, accounting for more than $500 billion in healthcare expenditures and related expenses in 2010 alone. Fortunately, they are also among the most preventable.

The leading modifiable (controllable) risk factors for heart disease and stroke are:

- High blood pressure
- High cholesterol
- Cigarette smoking
- Diabetes
- Poor diet and physical inactivity
- Overweight and obesity

The risk of Americans developing and dying from cardiovascular disease would be substantially reduced if major improvements were made across the US population in diet and physical activity, control of high blood pressure and cholesterol, smoking cessation, and appropriate aspirin use.

The burden of cardiovascular disease is disproportionately distributed across the population. There are significant disparities in the following based on gender, age, race/ethnicity, geographic area, and socioeconomic status:

- Prevalence of risk factors
- Access to treatment
- Appropriate and timely treatment
- Treatment outcomes
- Mortality

Disease does not occur in isolation, and cardiovascular disease is no exception. Cardiovascular health is significantly influenced by the physical, social, and political environment, including: maternal and child health; access to educational opportunities; availability of healthy foods, physical education, and extracurricular activities in schools; opportunities for physical activity, including access to safe and walkable communities; access to healthy foods; quality of working conditions and worksite health; availability of community support and resources; and access to affordable, quality healthcare.

- Healthy People 2020 (www.healthypeople.gov)

Age-Adjusted Heart Disease & Stroke Deaths

Heart Disease Deaths

The greatest share of cardiovascular deaths is attributed to heart disease.

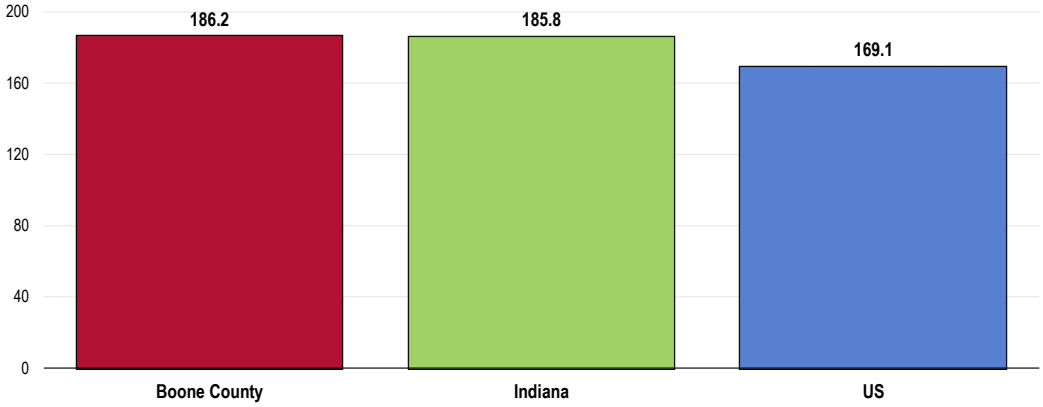
Between 2012 and 2014 there was an annual average age-adjusted heart disease mortality rate of 186.2 deaths per 100,000 population in Boone County.

- Comparable to the statewide rate.
- Higher than the national rate.
- Fails to satisfy the Healthy People 2020 target of 156.9 or lower (as adjusted to account for all diseases of the heart).

Heart Disease: Age-Adjusted Mortality

(2012-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 156.9 or Lower (Adjusted)



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-2]

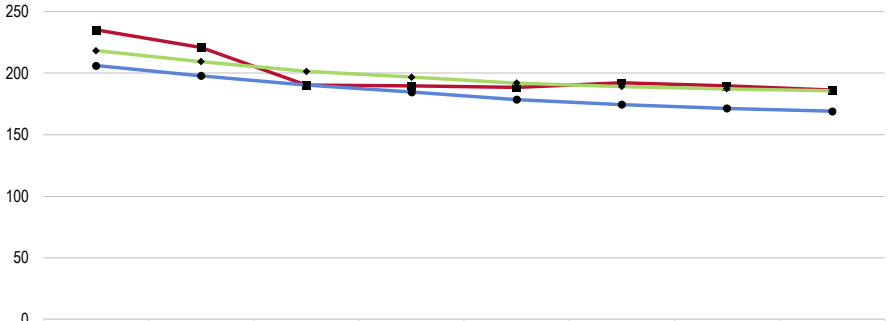
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.
- The Healthy People 2020 Heart Disease target is adjusted to account for all diseases of the heart.

- TREND: The heart disease mortality rate has decreased in Boone County, echoing the decreasing trends across Indiana and the US overall.

Heart Disease: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 156.9 or Lower (Adjusted)



	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	235.1	220.9	190.3	189.5	188.3	192.1	189.6	186.2
Indiana	218.2	209.4	201.4	196.7	191.9	189.1	187.3	185.8
US	206.1	197.9	190.3	184.7	178.5	174.4	171.3	169.1

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-2]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.
- The Healthy People 2020 Heart Disease target is adjusted to account for all diseases of the heart.

Stroke Deaths

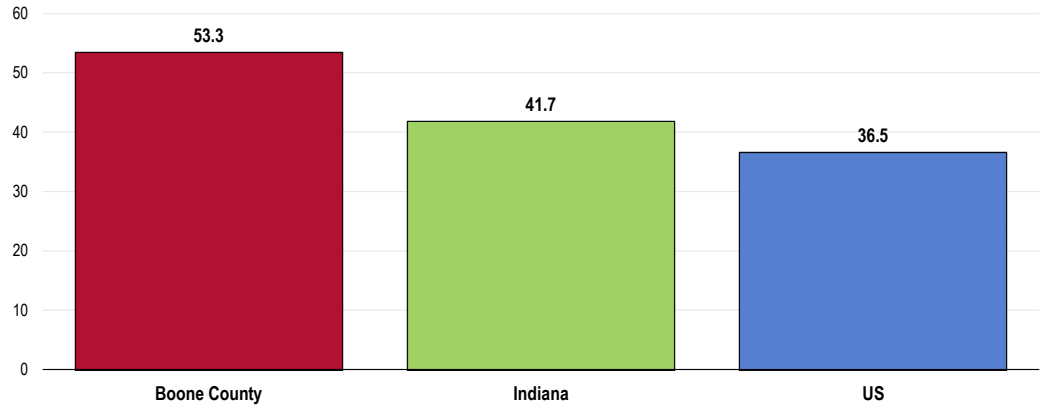
Between 2012 and 2014, there was an annual average age-adjusted stroke mortality rate of 53.3 deaths per 100,000 population in Boone County.

- Less favorable than the Indiana rate.
- Less favorable than the national rate.
- Fails to satisfy the Healthy People 2020 target of 34.8 or lower.

Stroke: Age-Adjusted Mortality

(2012-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 34.8 or Lower



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-3]

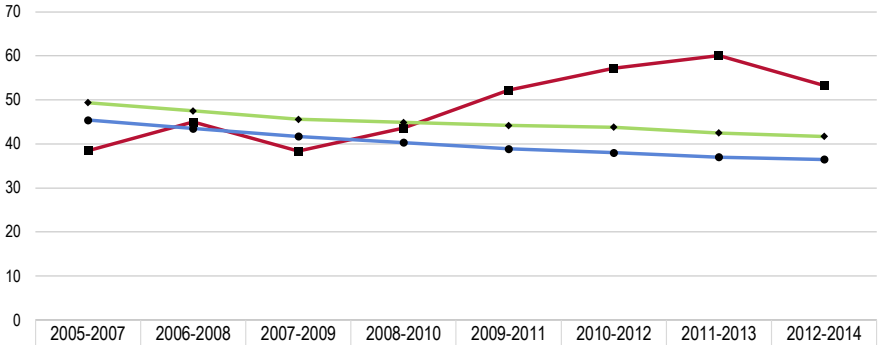
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: The stroke rate has increased over much of the past decade, in contrast to the trends reported across Indiana and the US overall.

Stroke: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 34.8 or Lower



	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	38.5	45.0	38.4	43.6	52.2	57.2	60.1	53.3
Indiana	49.4	47.5	45.6	44.9	44.2	43.8	42.5	41.7
US	45.4	43.5	41.7	40.3	38.9	38.0	37.0	36.5

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-3]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

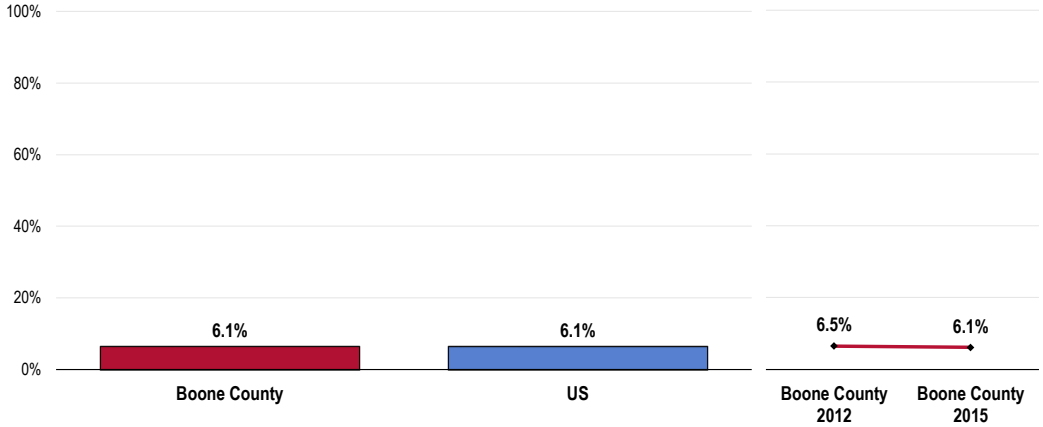
Prevalence of Heart Disease & Stroke

Prevalence of Heart Disease

A total of 6.1% of surveyed adults report that they suffer from or have been diagnosed with heart disease, such as coronary heart disease, angina or heart attack.

- Identical to the national prevalence.
- TREND: Statistically unchanged since 2012.

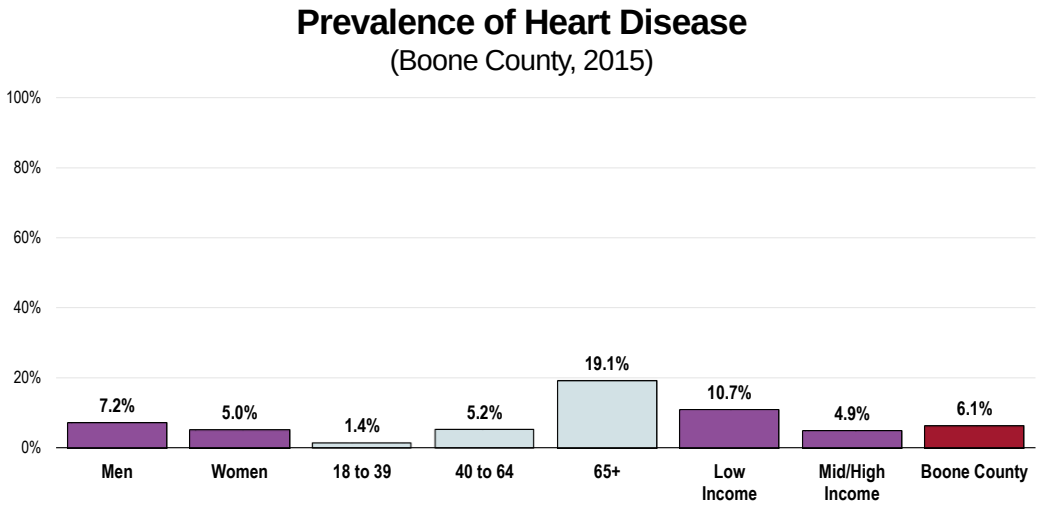
Prevalence of Heart Disease



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 124]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Includes diagnoses of heart attack, angina or coronary heart disease.

- Note the positive correlation between age and heart disease in Boone County.



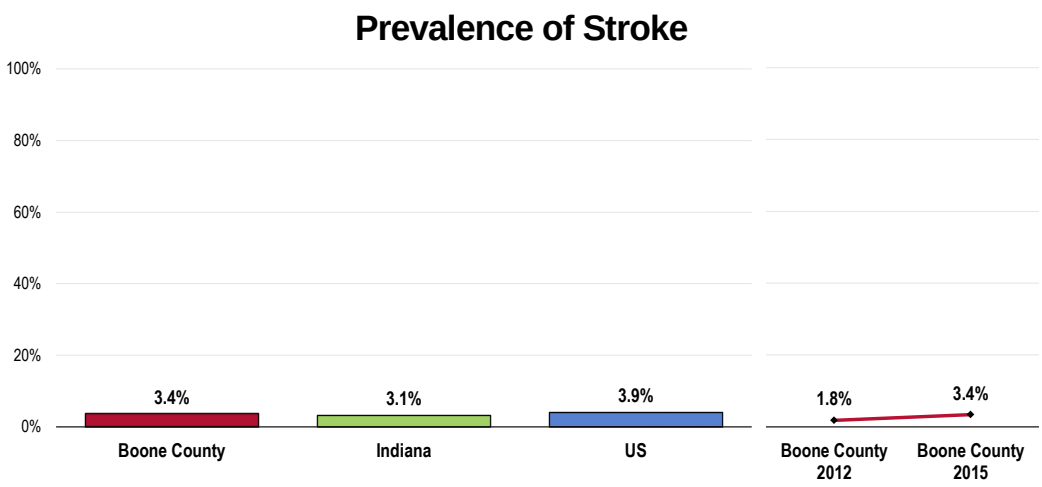
Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 124]

Notes:
- Asked of all respondents.
- Includes diagnoses of heart attack, angina or coronary heart disease.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Prevalence of Stroke

A total of 3.4% of surveyed adults report that they suffer from or have been diagnosed with cerebrovascular disease (a stroke).

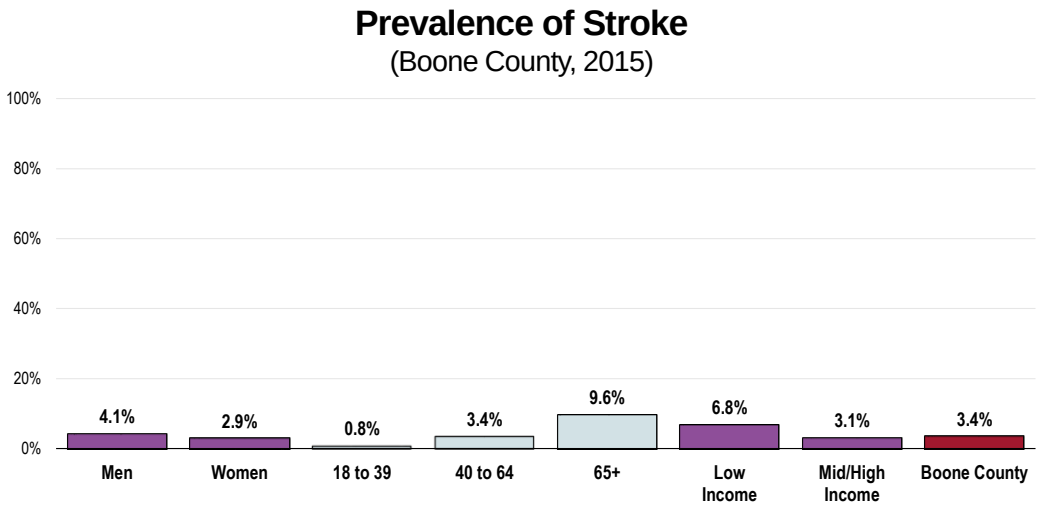
- Similar to statewide findings.
- Similar to national findings.
- TREND: Statistically unchanged over time.



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 36]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.

Notes:
- Asked of all respondents.

- Note the positive correlation between age and stroke in Boone County.



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 36]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Cardiovascular Risk Factors

About Cardiovascular Risk

Controlling risk factors for heart disease and stroke remains a challenge. High blood pressure and cholesterol are still major contributors to the national epidemic of cardiovascular disease. High blood pressure affects approximately 1 in 3 adults in the United States, and more than half of Americans with high blood pressure do not have it under control. High sodium intake is a known risk factor for high blood pressure and heart disease, yet about 90% of American adults exceed their recommendation for sodium intake.

- Healthy People 2020 (www.healthypeople.gov)

Hypertension (High Blood Pressure)

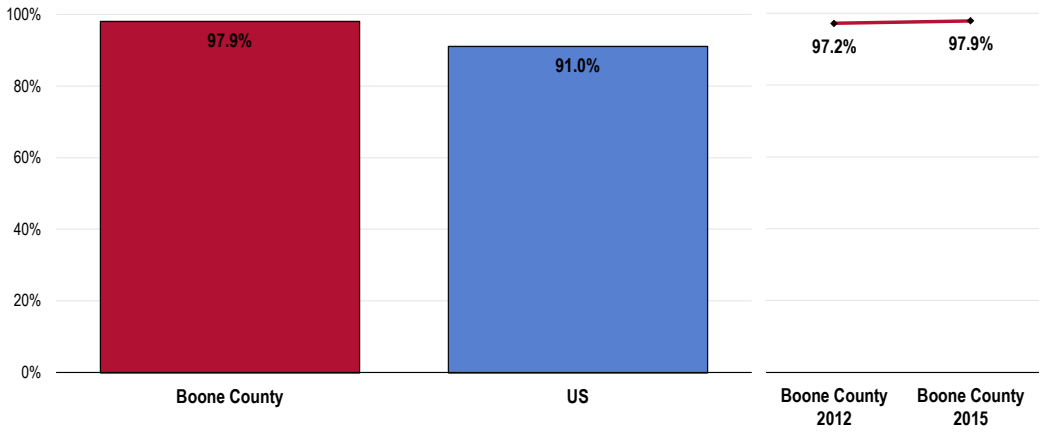
High Blood Pressure Testing

A total of 97.9% of Boone County adults have had their blood pressure tested within the past two years.

- Better than national findings.
- Satisfies the Healthy People 2020 target (92.6% or higher).
- TREND: Statistically unchanged since 2012.

Have Had Blood Pressure Checked in the Past Two Years

Healthy People 2020 Target = 92.6% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 45]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-4]

Notes:
- Asked of all respondents.

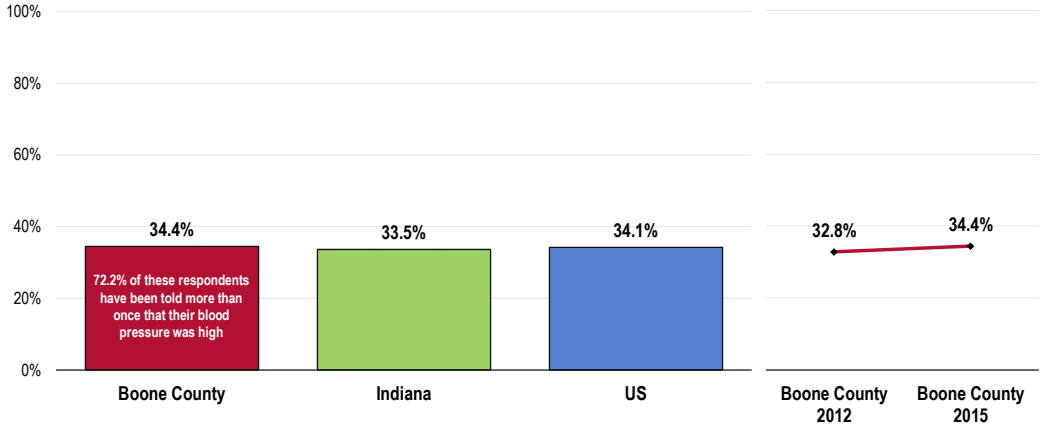
Prevalence of Hypertension

A total of 34.4% of service area adults have been told at some point that their blood pressure was high.

- Comparable to the state and national figures.
- Fails to satisfy the Healthy People 2020 target (26.9% or lower).
- TREND: Statistically unchanged since 2012.
- Among hypertensive adults, 72.2% have been diagnosed with high blood pressure more than once.

Prevalence of High Blood Pressure

Healthy People 2020 Target = 26.9% or Lower



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Items 43, 125]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-5.1]

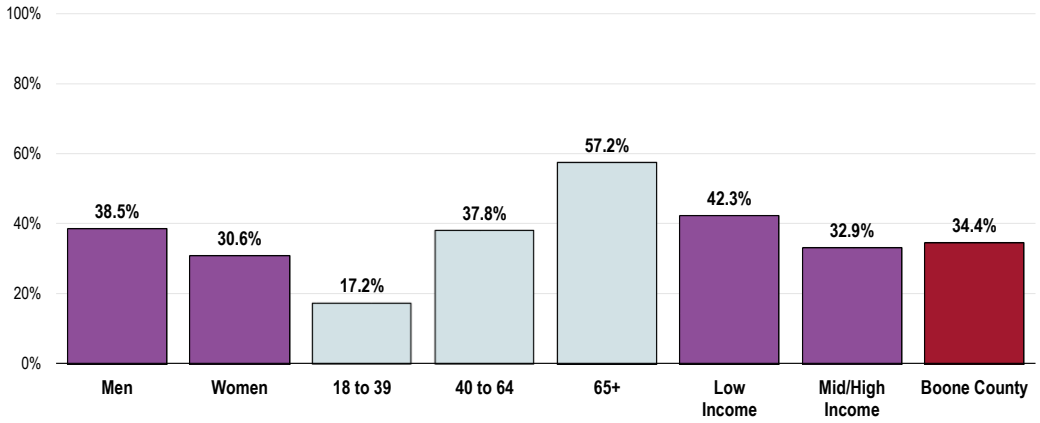
Notes:
- Asked of all respondents.

- Hypertension diagnoses are higher among men and adults age 40 and older (especially seniors).

Prevalence of High Blood Pressure

(Boone County, 2015)

Healthy People 2020 Target = 26.9% or Lower



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 125]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-5.1]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Hypertension Management

Among service area respondents who have been told that their blood pressure was high, 96.1% report that they are currently taking actions to control their condition.

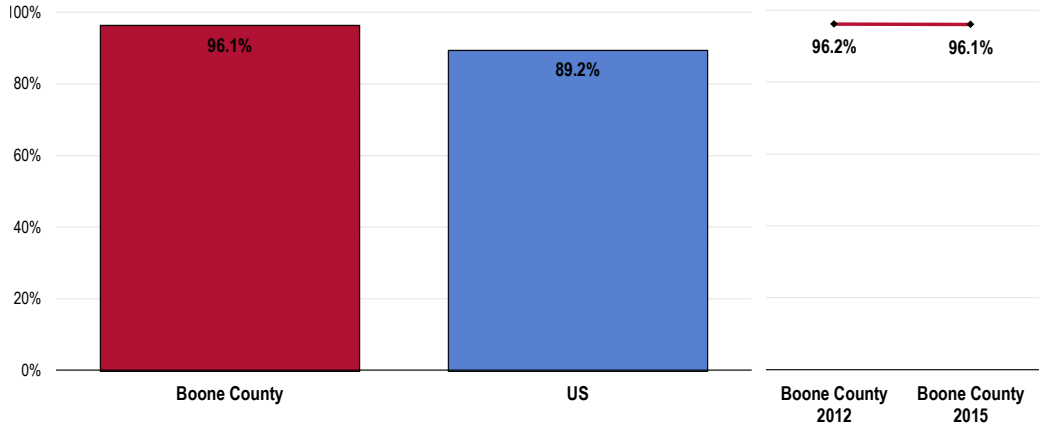
- Better than national findings.
- TREND: Statistically unchanged since 2012.

Respondents reporting high blood pressure were further asked:

"Are you currently taking any action to help control your high blood pressure, such as taking medication, changing your diet, or exercising?"

Taking Action to Control Hypertension

(Among Adults With High Blood Pressure)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 44]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents who have been diagnosed with high blood pressure.
- In this case, the term "action" refers to medication, change in diet, and/or exercise.

High Blood Cholesterol

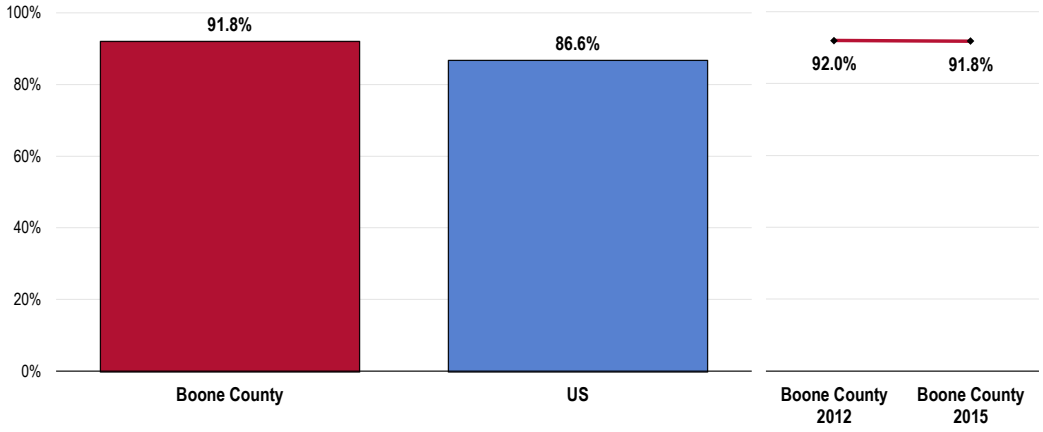
Blood Cholesterol Testing

A total of 91.8% of Boone County adults have had their blood cholesterol checked within the past five years.

- More favorable than the national findings.
- Satisfies the Healthy People 2020 target (82.1% or higher).
- TREND: Statistically unchanged over time.

Have Had Blood Cholesterol Levels Checked in the Past Five Years

Healthy People 2020 Target = 82.1% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 48]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-6]

Notes:
- Asked of all respondents.

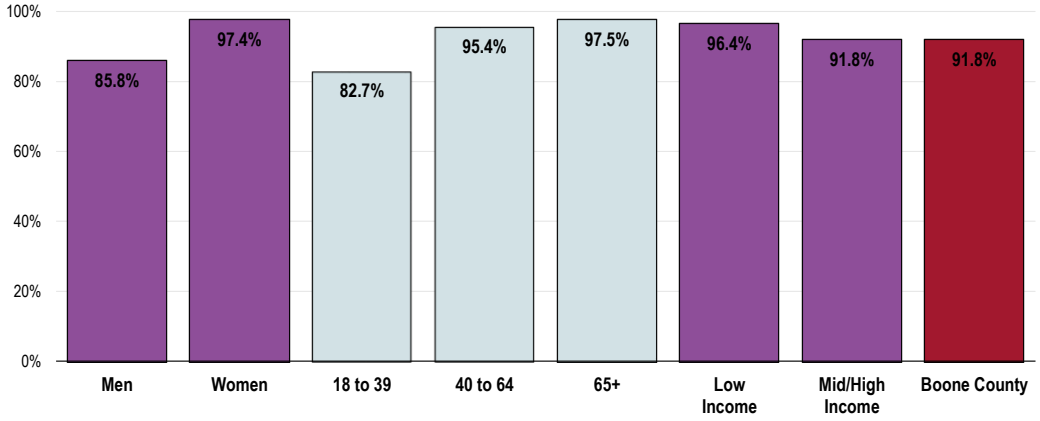
The following demographic segments report lower screening levels:

- Men.
- Adults under age 65, and especially those under 40 (note the positive correlation with age).
- Residents with higher incomes.

Have Had Blood Cholesterol Levels Checked in the Past Five Years

(Boone County, 2015)

Healthy People 2020 Target = 82.1% or Higher



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 48]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-6]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

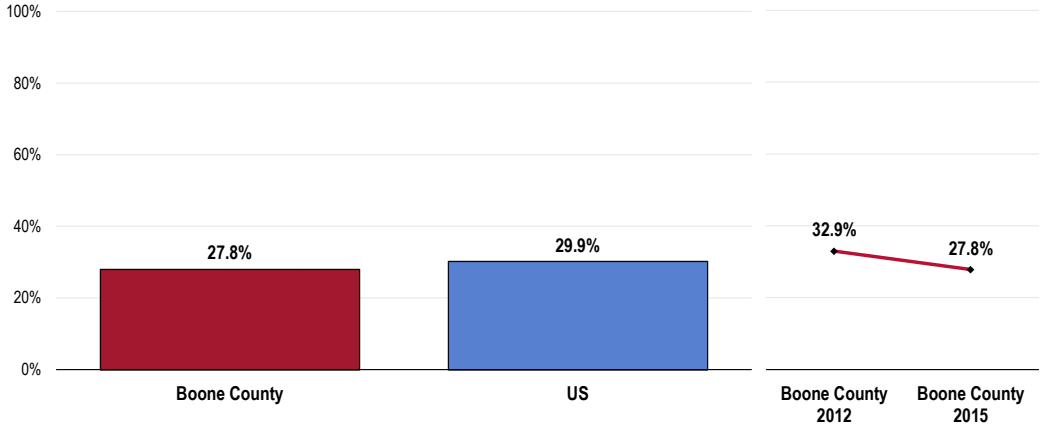
Self-Reported High Blood Cholesterol

A total of 27.8% of adults have been told by a health professional that their cholesterol level was high.

- Similar to the national prevalence.
- Twice the Healthy People 2020 target (13.5% or lower).
- TREND: Marks a statistically significant decrease over time.

Prevalence of High Blood Cholesterol

Healthy People 2020 Target = 13.5% or Lower



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 126]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-7]

Notes:
- Asked of all respondents.

Note that 13.1% of service area adults report not having high blood cholesterol, but: 1) have never had their blood cholesterol levels tested; 2) have not been screened in the past 5 years; or 3) do not recall when their last screening was. For these individuals, current prevalence is unknown.

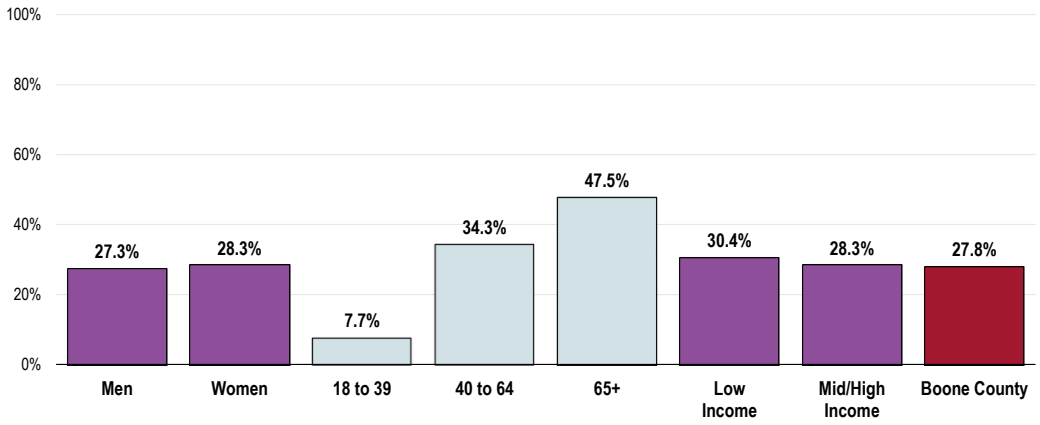
Further note the following:

- There is a positive correlation between age and high blood cholesterol.
- Keep in mind that "unknowns" are relatively high in men and young adults.

Prevalence of High Blood Cholesterol

(Boone County, 2015)

Healthy People 2020 Target = 13.5% or Lower



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 126]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-7]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

High Cholesterol Management

Respondents reporting high cholesterol were further asked:

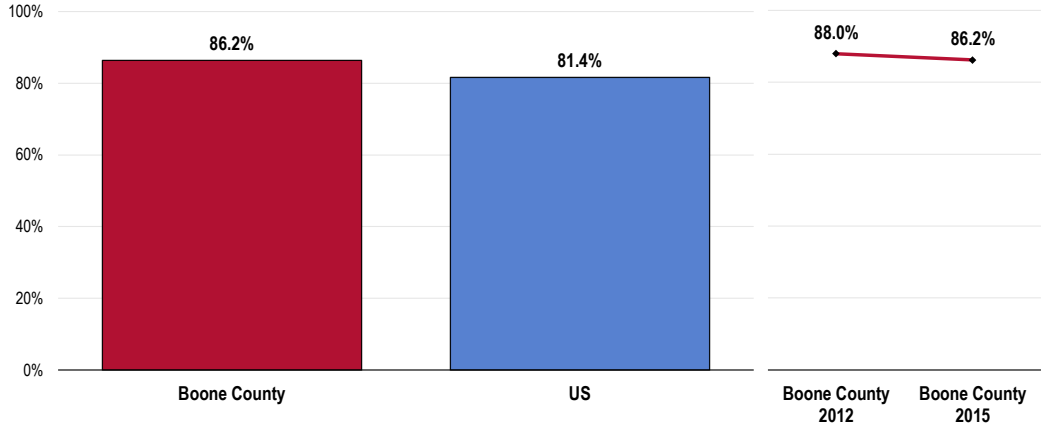
"Are you currently taking any action to help control your high cholesterol, such as taking medication, changing your diet, or exercising?"

Among adults who have been told that their blood cholesterol was high, 86.2% report that they are currently taking actions to control their cholesterol levels.

- Comparable to that found nationwide.
- TREND: Statistically unchanged since 2012.

Taking Action to Control High Blood Cholesterol Levels

(Among Adults With High Cholesterol)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 47]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents who have been diagnosed with high blood cholesterol levels.
- In this case, the term "action" refers to medication, change in diet, and/or exercise.

About Cardiovascular Risk

Individual level risk factors which put people at increased risk for cardiovascular diseases include:

- High Blood Pressure
- High Blood Cholesterol
- Tobacco Use
- Physical Inactivity
- Poor Nutrition
- Overweight/Obesity
- Diabetes

- National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention

Three health-related behaviors contribute markedly to cardiovascular disease:

Poor nutrition. People who are overweight have a higher risk for cardiovascular disease. Almost 60% of adults are overweight or obese. To maintain a proper body weight, experts recommend a well-balanced diet which is low in fat and high in fiber, accompanied by regular exercise.

Lack of physical activity. People who are not physically active have twice the risk for heart disease of those who are active. More than half of adults do not achieve recommended levels of physical activity.

Tobacco use. Smokers have twice the risk for heart attack of nonsmokers. Nearly one-fifth of all deaths from cardiovascular disease, or about 190,000 deaths a year nationally, are smoking-related. Every day, more than 3,000 young people become daily smokers in the US

Modifying these behaviors is critical both for preventing and for controlling cardiovascular disease. Other steps that adults who have cardiovascular disease should take to reduce their risk of death and disability include adhering to treatment for high blood pressure and cholesterol, using aspirin as appropriate, and learning the symptoms of heart attack and stroke.

- National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention

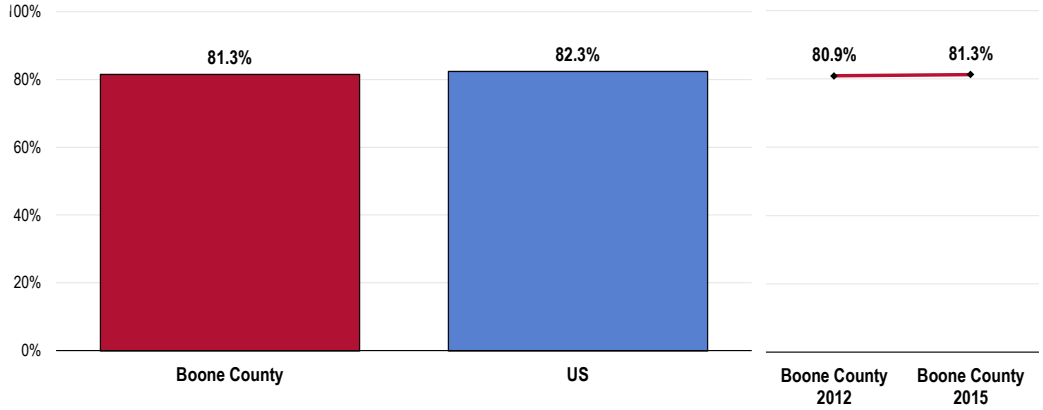
Total Cardiovascular Risk

RELATED ISSUE: See also Nutrition & Overweight, Physical Activity & Fitness and Tobacco Use in the Modifiable Health Risk section of this report.

A total of 81.3% of Boone County adults report one or more cardiovascular risk factors, such as being overweight, smoking cigarettes, being physically inactive, or having high blood pressure or cholesterol.

- Similar to national findings.
- TREND: Statistically similar to the 2012 findings.

Present One or More Cardiovascular Risks or Behaviors

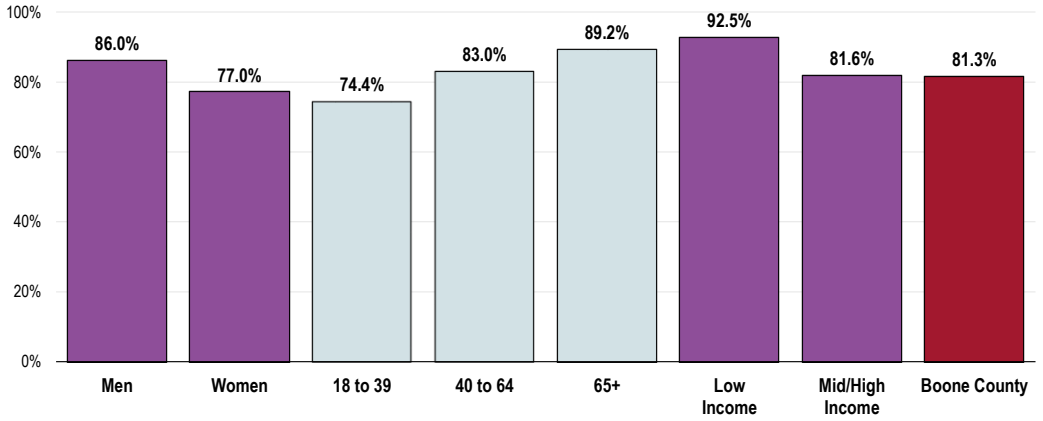


Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 127]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Cardiovascular risk is defined as exhibiting one or more of the following: 1) no leisure-time physical activity; 2) regular/occasional cigarette smoking; 3) hypertension; 4) high blood cholesterol; and/or 5) being overweight/obese.

- Adults more likely to exhibit cardiovascular risk factors include men, adults age 40+ (positive correlation with age), and residents living in lower-income households.

Present One or More Cardiovascular Risks or Behaviors
(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 127]

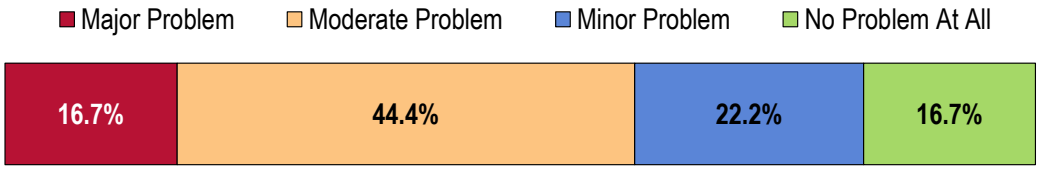
Notes:
- Asked of all respondents.
- Cardiovascular risk is defined as exhibiting one or more of the following: 1) no leisure-time physical activity; 2) regular/occasional cigarette smoking; 3) hypertension; 4) high blood cholesterol; and/or 5) being overweight/obese.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Key Informant Input: Heart Disease & Stroke

The greatest share of key informants taking part in an online survey characterized *Heart Disease & Stroke* as a "moderate problem" in the community.

Perceptions of Heart Disease and Stroke as a Problem in the Community

(Key Informants, 2015)



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Lifestyle

Obesity, diet and smoking. – Community Business Leader

In spite of prior comments about other maladies being at the forefront, anytime we have people smoking, practicing unhealthy lifestyles, and ignoring the "early inevitable" of such behavior, we will have unnecessary early disease and death from these certain killers. – Community Business Leader

Obesity and healthy eating habits contribute to these issues. – Community Business Leader

Prevalence/Incidence

There seem to be many adults who are battling heart disease or die from heart disease due to many factors including obesity, smoking, lack of exercise and lack of appropriate nutrition. – Public Health Representative

Frequency. – Other Health Provider

Heart disease is major issue everywhere. Too many overweight people who have hypertension and/or diabetes. – Other Health Provider

Weight Status

Overweight, this is one of the major reasons for heart problems and diabetes. – Community Business Leader

Cancer

About Cancer

Continued advances in cancer research, detection, and treatment have resulted in a decline in both incidence and death rates for all cancers. Among people who develop cancer, more than half will be alive in five years. Yet, cancer remains a leading cause of death in the United States, second only to heart disease.

Many cancers are preventable by reducing risk factors such as: use of tobacco products; physical inactivity and poor nutrition; obesity; and ultraviolet light exposure. Other cancers can be prevented by getting vaccinated against human papillomavirus and hepatitis B virus. In the past decade, overweight and obesity have emerged as new risk factors for developing certain cancers, including colorectal, breast, uterine corpus (endometrial), and kidney cancers. The impact of the current weight trends on cancer incidence will not be fully known for several decades. Continued focus on preventing weight gain will lead to lower rates of cancer and many chronic diseases.

Screening is effective in identifying some types of cancers (see US Preventive Services Task Force [USPSTF] recommendations), including:

- Breast cancer (using mammography)
- Cervical cancer (using Pap tests)
- Colorectal cancer (using fecal occult blood testing, sigmoidoscopy, or colonoscopy)

- Healthy People 2020 (www.healthypeople.gov)

Age-Adjusted Cancer Deaths

All Cancer Deaths

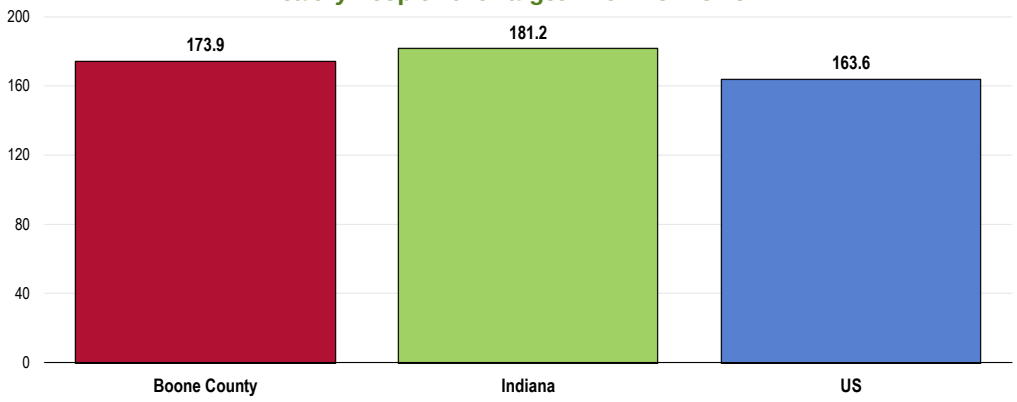
Between 2012 and 2014, there was an annual average age-adjusted cancer mortality rate of 173.9 deaths per 100,000 population in Boone County.

- Similar to the statewide rate.
- Less favorable than the national rate.
- Fails to satisfy the Healthy People 2020 target of 161.4 or lower.

Cancer: Age-Adjusted Mortality

(2012-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 161.4 or Lower



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-1]

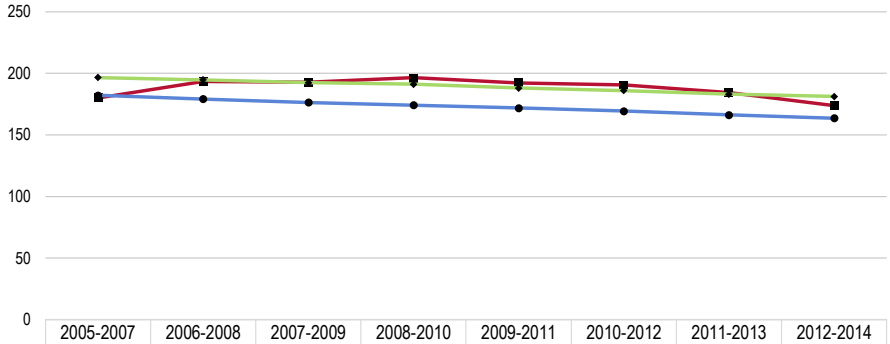
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: Cancer mortality has decreased over the past decade in Boone County; the same trend is apparent both statewide and nationwide.

Cancer: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 161.4 or Lower



	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	180.1	193.5	192.9	196.5	192.2	190.6	184.3	173.9
Indiana	196.6	194.8	192.4	191.1	188.1	186.1	183.1	181.2
US	182.1	179.2	176.4	174.2	171.8	169.4	166.2	163.6

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-1]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

Cancer Deaths by Site

Lung cancer is by far the leading cause of cancer deaths in Boone County.

Other leading sites include prostate cancer among men, breast cancer among women, and colorectal cancer (both genders).

As can be seen in the following chart (referencing 2012-2014 annual average age-adjusted death rates):

- The Boone County **lung cancer** death rate is lower than the state rate but higher than the national rate.
- The Boone County **prostate cancer** death rate is higher than both the state and national rates.
- The Boone County **female breast cancer** death rate is similar to the Indiana rate but higher than the US rate.
- The Boone County **colorectal cancer** death rate is lower than both the state and national rates.

Note that each of the Boone County cancer death rates detailed below fails to satisfy the related Healthy People 2020 target, with the exception of colorectal cancer (satisfies its goal).

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

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov

Cancer Incidence

Incidence rates reflect the number of newly diagnosed cases in a given population in a given year, regardless of outcome. Here, these rates are also age-adjusted.

"Incidence rate" or "case rate" is the number of new cases of a disease occurring during a given period of time.

It is usually expressed as cases per 100,000 population per year.

Between 2007 and 2011, there was an annual average age-adjusted incidence rate of 131.1 female breast cancer cases per 100,000 residents in Boone County.

- Worse than the statewide incidence rate.
- Worse than the national incidence rate.

Boone County had an annual average age-adjusted prostate cancer incidence rate of 99.4 cases per 100,000 population.

- Better than the statewide incidence rate.
- Better than the national incidence rate.

The service area reported an age-adjusted lung cancer incidence rate of 64.5 cases per 100,000 population.

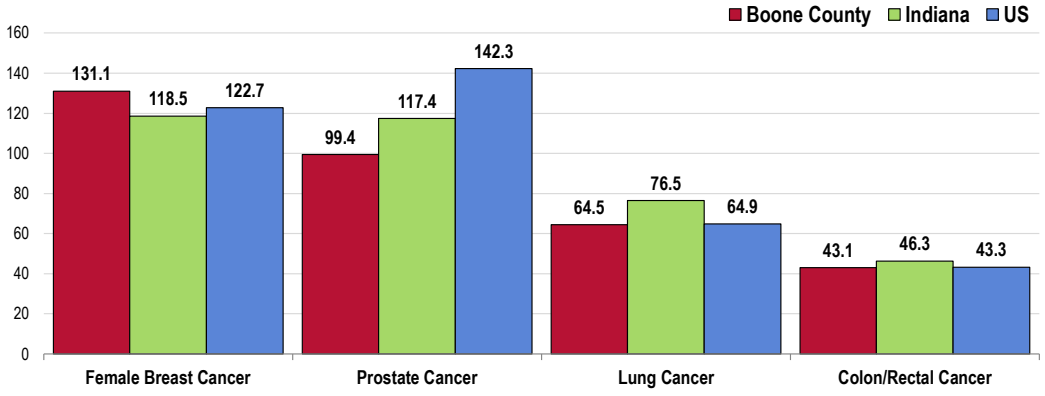
- Better than the statewide incidence rate.
- Similar to the national incidence rate.

The 2007-2011 Boone County age-adjusted incidence rate of colorectal cancer was 43.1 cases per 100,000 residents.

- Better than the statewide incidence rate.
- Comparable to the national incidence rate.

Cancer Incidence Rates by Site

(Annual Average Age-Adjusted Incidence per 100,000 Population, 2007-2011)



Sources:
- State Cancer Profiles: 2007-11.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the age adjusted incidence rate (cases per 100,000 population per year) of cancers, adjusted to 2000 US standard population age groups (under age 1, 1-4, 5-9, ..., 80-84, 85 and older). This indicator is relevant because cancer is a leading cause of death and it is important to identify cancers separately to better target interventions.

Cancer Risk

RELATED ISSUE: See also *Nutrition & Overweight*, *Physical Activity & Fitness* and *Tobacco Use* in the **Modifiable Health Risk** section of this report.

About Cancer Risk

Reducing the nation's cancer burden requires reducing the prevalence of behavioral and environmental factors that increase cancer risk.

- All cancers caused by cigarette smoking could be prevented. At least one-third of cancer deaths that occur in the United States are due to cigarette smoking.
- According to the American Cancer Society, about one-third of cancer deaths that occur in the United States each year are due to nutrition and physical activity factors, including obesity.

- National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention

Cancer Screenings

The American Cancer Society recommends that both men and women get a cancer-related checkup during a regular doctor's checkup. It should include examination for cancers of the thyroid, testicles, ovaries, lymph nodes, oral cavity, and skin, as well as health counseling about tobacco, sun exposure, diet and nutrition, risk factors, sexual practices, and environmental and occupational exposures.

Screening levels in the community were measured in the PRC Community Health Survey relative to three cancer sites: female breast cancer (mammography); cervical cancer (Pap smear testing); and colorectal cancer (sigmoidoscopy and fecal occult blood testing).

Female Breast Cancer Screening

About Screening for Breast Cancer

The US Preventive Services Task Force (USPSTF) recommends screening mammography, with or without clinical breast examination (CBE), every 1-2 years for women age 40 and older.

Rationale: The USPSTF found fair evidence that mammography screening every 12-33 months significantly reduces mortality from breast cancer. Evidence is strongest for women age 50-69, the age group generally included in screening trials. For women age 40-49, the evidence that screening mammography reduces mortality from breast cancer is weaker, and the absolute benefit of mammography is smaller, than it is for older women. Most, but not all, studies indicate a mortality benefit for women undergoing mammography at ages 40-49, but the delay in observed benefit in women younger than 50 makes it difficult to determine the incremental benefit of beginning screening at age 40 rather than at age 50.

The absolute benefit is smaller because the incidence of breast cancer is lower among women in their 40s than it is among older women. The USPSTF concluded that the evidence is also generalizable to women age 70 and older (who face a higher absolute risk for breast cancer) if their life expectancy is not compromised by comorbid disease. The absolute probability of benefits of regular mammography increase along a continuum with age, whereas the likelihood of harms from screening (false-positive results and unnecessary anxiety, biopsies, and cost) diminish from ages 40-70. The balance of benefits and potential harms, therefore, grows more favorable as women age. The precise age at which the potential benefits of mammography justify the possible harms is a subjective choice. The USPSTF did not find sufficient evidence to specify the optimal screening interval for women age 40-49.

- US Preventive Services Task Force, Agency for Healthcare Research and Quality, US Department of Health & Human Services

Note that other organizations (e.g., American Cancer Society, American Academy of Family Physicians, American College of Physicians, National Cancer Institute) may have slightly different screening guidelines.

Mammography

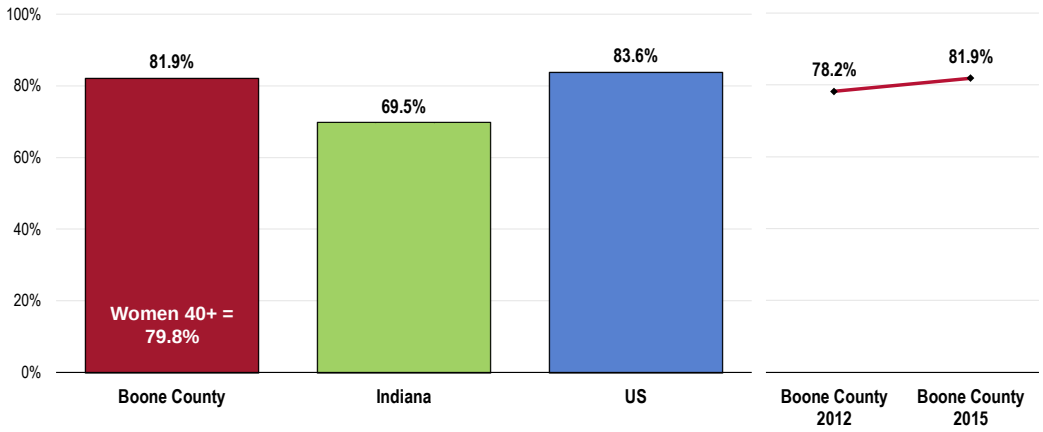
Among women age 50-74, 81.9% have had a mammogram within the past 2 years.

- Higher than statewide findings (which represent all women 50+).
- Similar to national findings.
- Similar to the Healthy People 2020 target (81.1% or higher).
- Among women 40+, 79.8% have had a mammogram in the past two years.
- TREND: Statistically unchanged since 2012.

Have Had a Mammogram in the Past Two Years

(Among Women Age 50-74)

Healthy People 2020 Target = 81.1% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Items 128-129]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-17]

Notes:
- Reflects female respondents 50-74.
- *Note that state data reflects all women 50 and older (vs. women 50-74 in local, US and Healthy People data).

Cervical Cancer Screenings

About Screening for Cervical Cancer

The US Preventive Services Task Force (USPSTF) strongly recommends screening for cervical cancer in women who have been sexually active and have a cervix.

Rationale: The USPSTF found good evidence from multiple observational studies that screening with cervical cytology (Pap smears) reduces incidence of and mortality from cervical cancer. Direct evidence to determine the optimal starting and stopping age and interval for screening is limited. Indirect evidence suggests most of the benefit can be obtained by beginning screening within 3 years of onset of sexual activity or age 21 (whichever comes first) and screening at least every 3 years. The USPSTF concludes that the benefits of screening substantially outweigh potential harms.

The USPSTF recommends against routinely screening women older than age 65 for cervical cancer if they have had adequate recent screening with normal Pap smears and are not otherwise at high risk for cervical cancer.

Rationale: The USPSTF found limited evidence to determine the benefits of continued screening in women older than 65. The yield of screening is low in previously screened women older than 65 due to the declining incidence of high-grade cervical lesions after middle age. There is fair evidence that screening women older than 65 is associated with an increased risk for potential harms, including false-positive results and invasive procedures. The USPSTF concludes that the potential harms of screening are likely to exceed benefits among older women who have had normal results previously and who are not otherwise at high risk for cervical cancer.

The USPSTF recommends against routine Pap smear screening in women who have had a total hysterectomy for benign disease.

Rationale: The USPSTF found fair evidence that the yield of cytologic screening is very low in women after hysterectomy and poor evidence that screening to detect vaginal cancer improves health outcomes. The USPSTF concludes that potential harms of continued screening after hysterectomy are likely to exceed benefits.

- US Preventive Services Task Force, Agency for Healthcare Research and Quality, US Department of Health & Human Services

Note that other organizations (e.g., American Cancer Society, American Academy of Family Physicians, American College of Physicians, National Cancer Institute) may have slightly different screening guidelines.

Pap Smear Testing

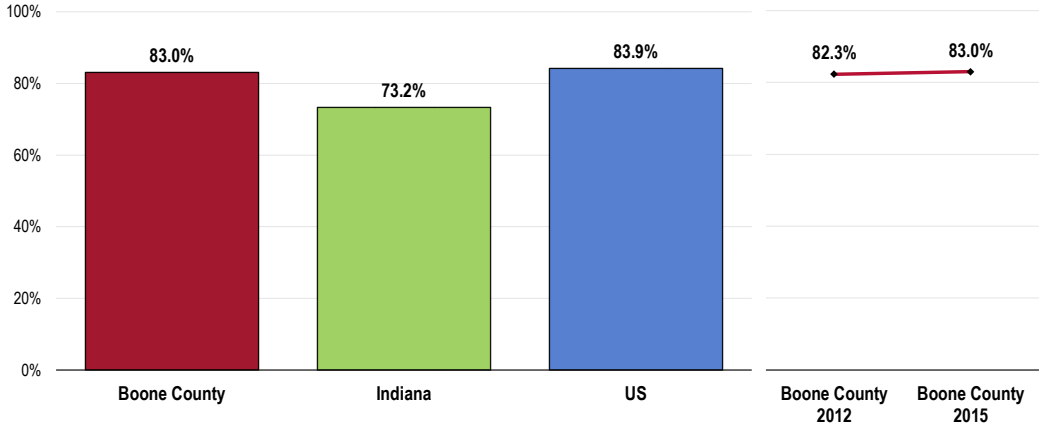
Among service area women age 21 to 65, 83.0% have had a Pap smear within the past 3 years.

- Better than Indiana findings (which represents all women 18+).
- Comparable to national findings.
- Fails to satisfy the Healthy People 2020 target (93% or higher).
- TREND: Statistically unchanged since 2012.

Have Had a Pap Smear in the Past Three Years

(Among Women Age 21-65)

Healthy People 2020 Target = 93.0% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 130]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-15]

Notes:
- Reflects female respondents age 21 to 65.
- *Note that the Indiana percentage represents all women age 18 and older.

Colorectal Cancer Screenings

About Screening for Colorectal Cancer

The USPSTF recommends screening for colorectal cancer using fecal occult blood testing, sigmoidoscopy, or colonoscopy in adults, beginning at age 50 years and continuing until age 75 years.

The evidence is convincing that screening for colorectal cancer with fecal occult blood testing, sigmoidoscopy, or colonoscopy detects early-stage cancer and adenomatous polyps. There is convincing evidence that screening with any of the three recommended tests (FOBT, sigmoidoscopy, colonoscopy) reduces colorectal cancer mortality in adults age 50 to 75 years. Follow-up of positive screening test results requires colonoscopy regardless of the screening test used.

- US Preventive Services Task Force, Agency for Healthcare Research and Quality, US Department of Health & Human Services

Note that other organizations (e.g., American Cancer Society, American Academy of Family Physicians, American College of Physicians, National Cancer Institute) may have slightly different screening guidelines.

Colorectal Cancer Screening

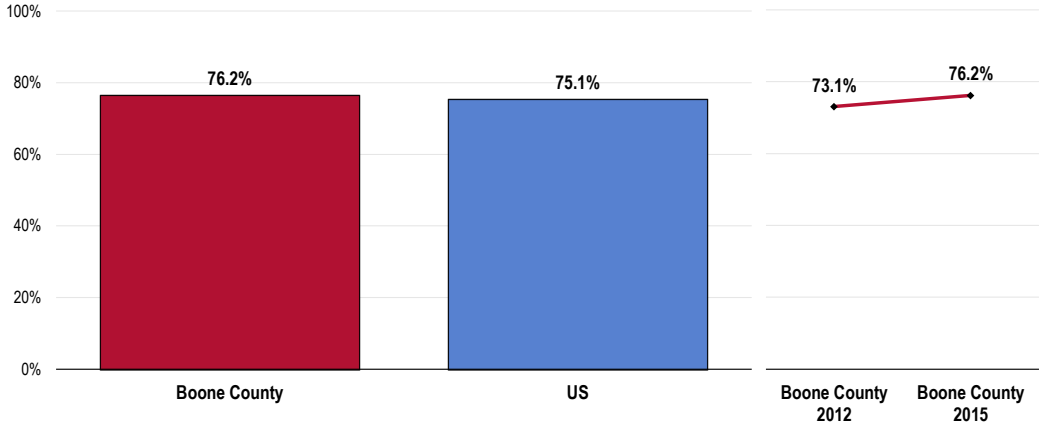
Among adults age 50-75, 76.2% have had an appropriate colorectal cancer screening (fecal occult blood testing within the past year and/or sigmoidoscopy/colonoscopy [lower endoscopy] within the past 10 years).

- Similar to national findings.
- Satisfies the Healthy People 2020 target (70.5% or higher).
- TREND: Statistically unchanged over time.

Have Had a Colorectal Cancer Screening

(Among Adults Age 50-75)

Healthy People 2020 Target = 70.5% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 133]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-16]

Notes:
- Asked of all respondents age 50 through 75.
- In this case, the term "colorectal screening" refers to adults age 50-75 receiving a FOBT (fecal occult blood test) in the past year and/or a lower endoscopy (sigmoidoscopy/colonoscopy) in the past 10 years.

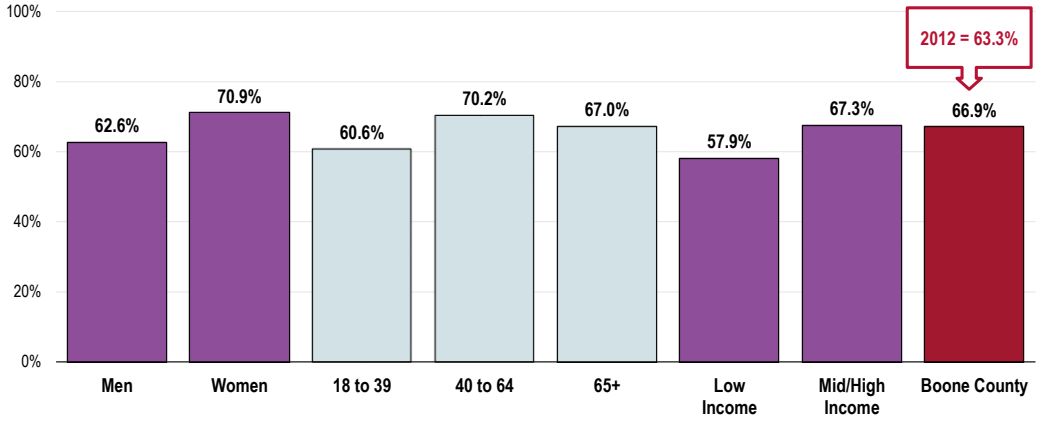
Cancer Screening & Insurance

Two in three survey respondents (66.9%) are aware that many preventive cancer screenings are now covered by most health insurance plans due to new federal requirements.

- Awareness is statistically higher among women.
- TREND: Statistically unchanged since 2012.

Aware That Many Screenings Are Now Covered by Most Health Insurance Plans Due to New Federal Requirements

(Boone County, 2015)



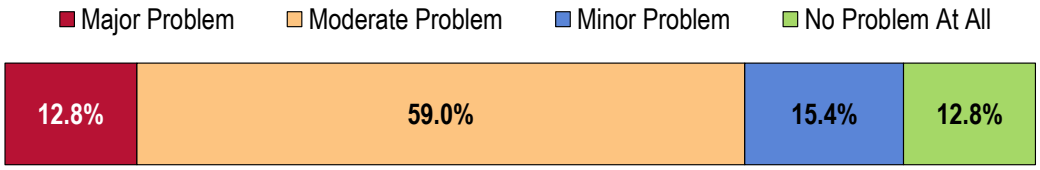
Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 319]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Key Informant Input: Cancer

Most key informants taking part in an online survey characterized *Cancer* as a "moderate problem" in the community.

Perceptions of Cancer as a Problem in the Community
(Key Informants, 2015)



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Prevalence/Incidence

> *It seems like at least someone in every family is affected. – Other Health Provider*
>
> *We have many employees. The incidence of cancer seems much higher than other causes of catastrophic health decline and/or death. Perhaps this is because our population is educated, has good health care and does not seem to succumb to the normal "kill leaders" like heart disease, stroke and lung issues from smoking. – Community Business Leader*
>
> *Cancer is an issue everywhere. We have a high incidence of breast cancer mortality in our county which indicates a late stage diagnosis. – Other Health Provider*

Lifestyle/Environment

> *Smoking, diet and obesity, environmental concerns such as air pollution. – Community Business Leader*
>
> *Smoking. – Social Services Provider*

Respiratory Disease

About Asthma & COPD

Asthma and chronic obstructive pulmonary disease (COPD) are significant public health burdens. Specific methods of detection, intervention, and treatment exist that may reduce this burden and promote health.

Asthma is a chronic inflammatory disorder of the airways characterized by episodes of reversible breathing problems due to airway narrowing and obstruction. These episodes can range in severity from mild to life threatening. Symptoms of asthma include wheezing, coughing, chest tightness, and shortness of breath. Daily preventive treatment can prevent symptoms and attacks and enable individuals who have asthma to lead active lives.

COPD is a preventable and treatable disease characterized by airflow limitation that is not fully reversible. The airflow limitation is usually progressive and associated with an abnormal inflammatory response of the lung to noxious particles or gases (typically from exposure to cigarette smoke). Treatment can lessen symptoms and improve quality of life for those with COPD.

The burden of respiratory diseases affects individuals and their families, schools, workplaces, neighborhoods, cities, and states. Because of the cost to the healthcare system, the burden of respiratory diseases also falls on society; it is paid for with higher health insurance rates, lost productivity, and tax dollars. Annual healthcare expenditures for asthma alone are estimated at $20.7 billion.

Asthma. The prevalence of asthma has increased since 1980. However, deaths from asthma have decreased since the mid-1990s. The causes of asthma are an active area of research and involve both genetic and environmental factors.

Risk factors for asthma currently being investigated include:

- Having a parent with asthma
- Sensitization to irritants and allergens
- Respiratory infections in childhood
- Overweight

Asthma affects people of every race, sex, and age. However, significant disparities in asthma morbidity and mortality exist, in particular for low-income and minority populations. Populations with higher rates of asthma include: children; women (among adults) and boys (among children); African Americans; Puerto Ricans; people living in the Northeast United States; people living below the Federal poverty level; and employees with certain exposures in the workplace.

While there is not a cure for asthma yet, there are diagnoses and treatment guidelines that are aimed at ensuring that all people with asthma live full and active lives.

- Healthy People 2020 (www.healthypeople.gov)

[NOTE: COPD was changed to chronic lower respiratory disease (CLRD) with the introduction of ICD-10 codes. CLRD is used in vital statistics reporting, but COPD is still widely used and commonly found in surveillance reports.]

Age-Adjusted Respiratory Disease Deaths

Note: COPD was changed to chronic lower respiratory disease (CLRD) in 1999 with the introduction of ICD-10 codes. CLRD is used in vital statistics reporting, but COPD is still widely used and commonly found in surveillance reports.

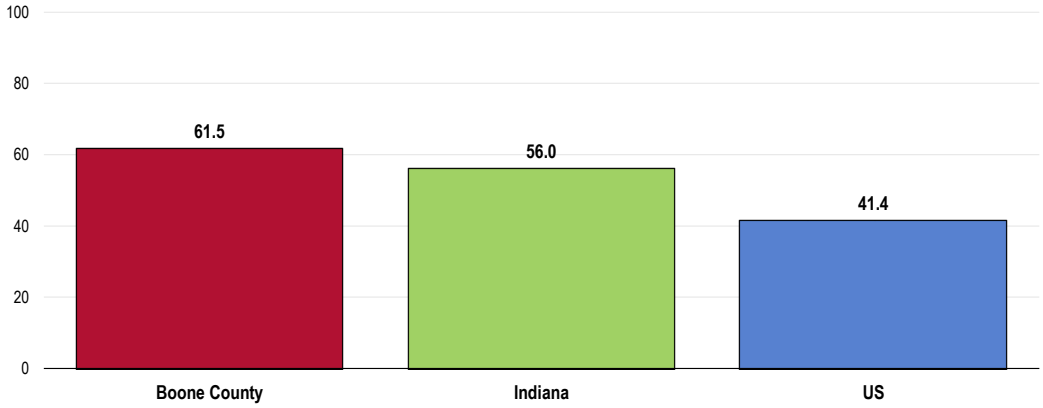
Chronic Lower Respiratory Disease Deaths (CLRD)

Between 2012 and 2014, there was an annual average age-adjusted CLRD mortality rate of 61.5 deaths per 100,000 population in Boone County.

- Higher than found statewide.
- Much higher than the national rate.

CLRD: Age-Adjusted Mortality

(2012-2014 Annual Average Deaths per 100,000 Population)



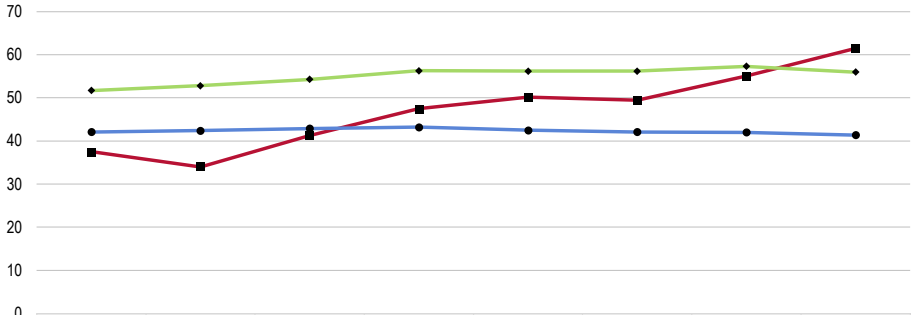
Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.
- CLRD is chronic lower respiratory disease.

- TREND: CLRD mortality in Boone County has increased over time.

CLRD: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)



	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	37.5	34.0	41.3	47.5	50.2	49.5	55.1	61.5
Indiana	51.7	52.8	54.3	56.3	56.2	56.2	57.3	56.0
US	42.1	42.4	42.9	43.2	42.5	42.1	42.0	41.4

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.
- CLRD is chronic lower respiratory disease.

Pneumonia/Influenza Deaths

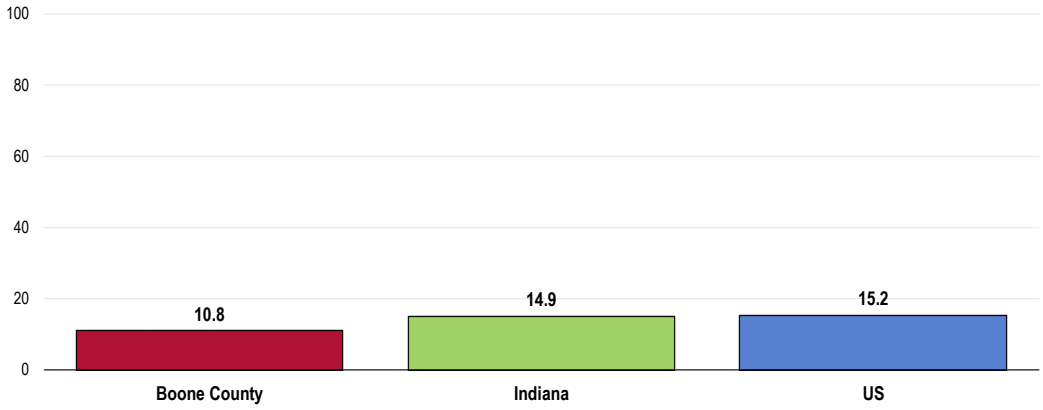
Between 2010 and 2014, Boone County reported an annual average age-adjusted pneumonia influenza mortality rate of 10.8 deaths per 100,000 population.

- Better than found statewide.
- Better than the national rate.

For prevalence of vaccinations for pneumonia and influenza, see also *Immunization & Infectious Disease*.

Pneumonia/Influenza: Age-Adjusted Mortality

(2010-2014 Annual Average Deaths per 100,000 Population)



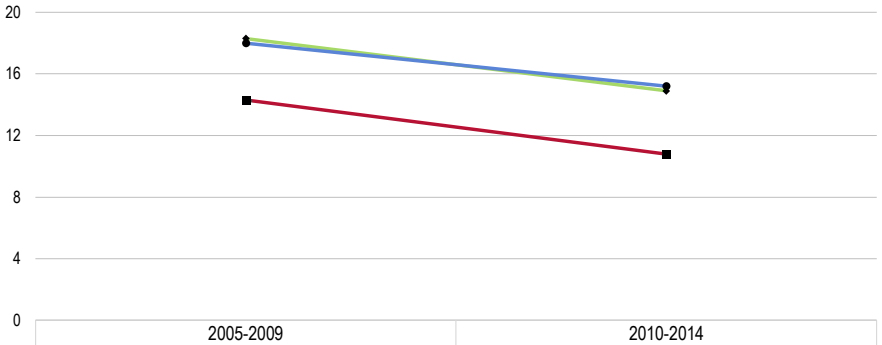
Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: Note the decreasing trend in Boone County pneumonia/influenza mortality. Across Indiana and the US overall, pneumonia/influenza death rates have decreased as well.

Pneumonia/Influenza: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)



	2005-2009	2010-2014
Boone County	14.3	10.8
Indiana	18.3	14.9
US	18.0	15.2

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

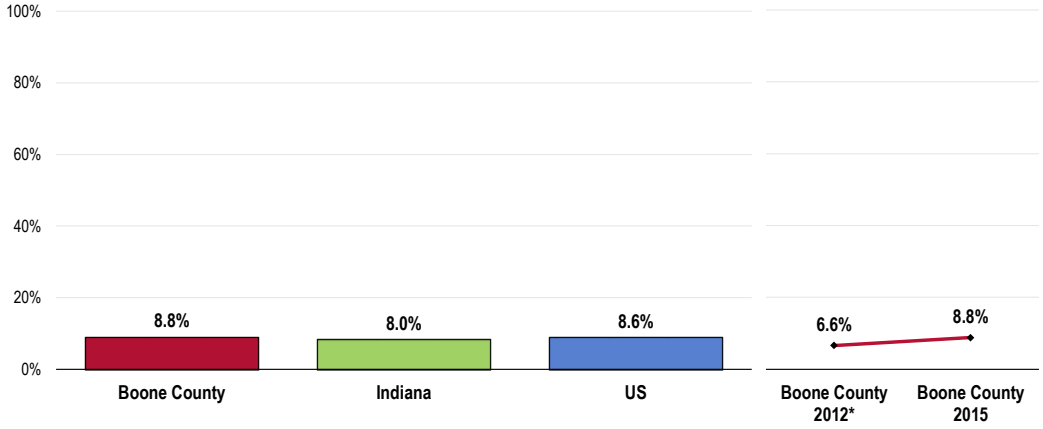
Chronic Obstructive Pulmonary Disease (COPD)

Survey respondents were next asked to indicate whether they suffer from or have been diagnosed with various respiratory conditions, including asthma and COPD.

A total of 8.8% of Boone County adults suffer from chronic obstructive pulmonary disease (COPD, including emphysema and bronchitis).

- Similar to the state prevalence.
- Similar to the national prevalence.
- TREND: In comparing to 2012 data, the change in prevalence is not statistically significant.
- *NOTE: in prior data, this question was asked slightly differently; respondents in 2012 were asked if they had ever been diagnosed with "chronic lung disease, including bronchitis or emphysema," rather than "COPD or chronic obstructive pulmonary disease, including bronchitis or emphysema" as is asked currently.*

Prevalence of Chronic Obstructive Pulmonary Disease (COPD)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 25]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Includes those having ever suffered from or been diagnosed with COPD or chronic obstructive pulmonary disease, including bronchitis or emphysema.
- * In prior data, the term "chronic lung disease" was used, which also included bronchitis or emphysema.

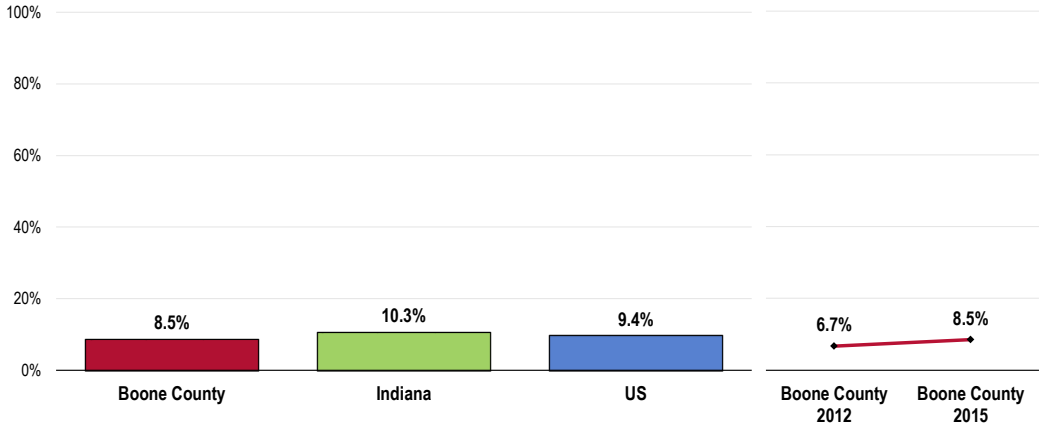
Asthma

Adults

A total of 8.5% of Boone County adults currently suffer from asthma.

- Similar to the statewide prevalence.
- Similar to the national prevalence.
- TREND: No statistically significant change since 2012.

Adult Asthma: Current Prevalence



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 134]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.

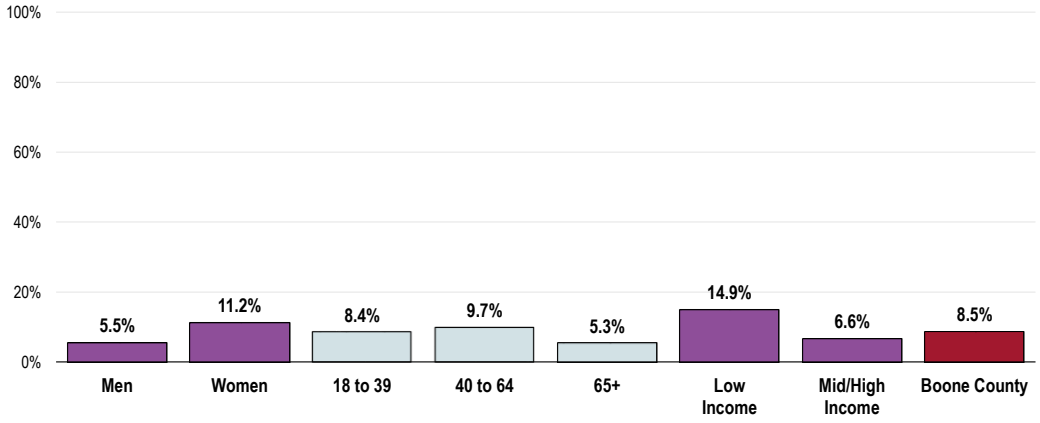
Notes:
- Asked of all respondents.
- Includes those who have ever been diagnosed with asthma, and who report that they still have asthma.

The following adults are more likely to suffer from asthma:

- Women.
- Adults under 65.
- Low-income residents.

Currently Have Asthma

(Boone County, 2015)

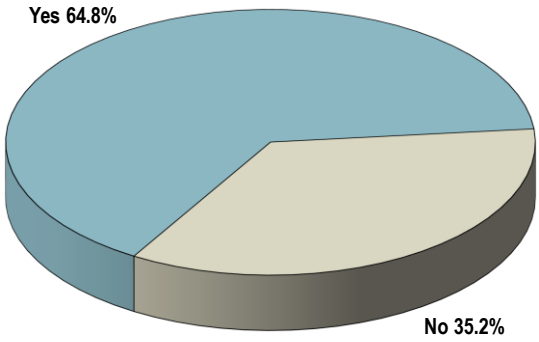


Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 134]
Notes: ● Asked of all respondents.
● Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Among county asthmatics, 64.8% report that their asthma is currently being treated by a healthcare professional.

Asthma is Currently Being Treated by a Healthcare Professional

(Among Boone County Adults w/Asthma, 2015)

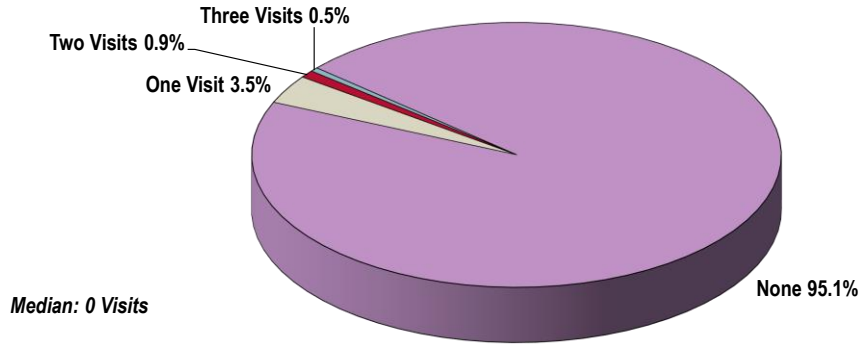


Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 304]
Notes: ● Asked of all respondents with asthma.

While most area asthmatics have not visited a hospital ER or urgent-care center for an asthma-related problem in the past year, note that 4.9% did so, including 0.5% reporting 3 asthma-related visits.

Number of Asthma-Related Visits to a Hospital ER or Urgent Care Center in the Past Year

(Among Boone County Adults w/Asthma, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 305]
Notes: ● Asked of all respondents with asthma.

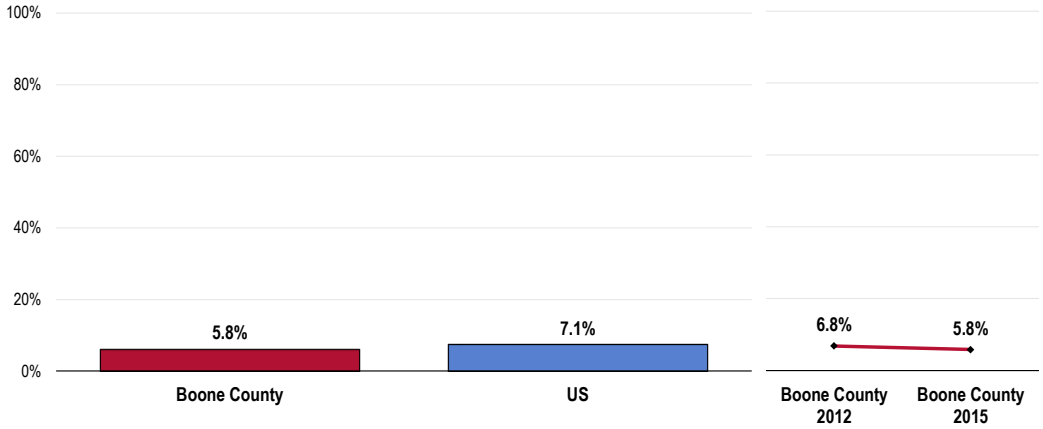
Children

Among service area children under age 18, 5.8% currently have asthma.

- Similar to national findings.
- TREND: Statistically unchanged over time.

Childhood Asthma: Current Prevalence

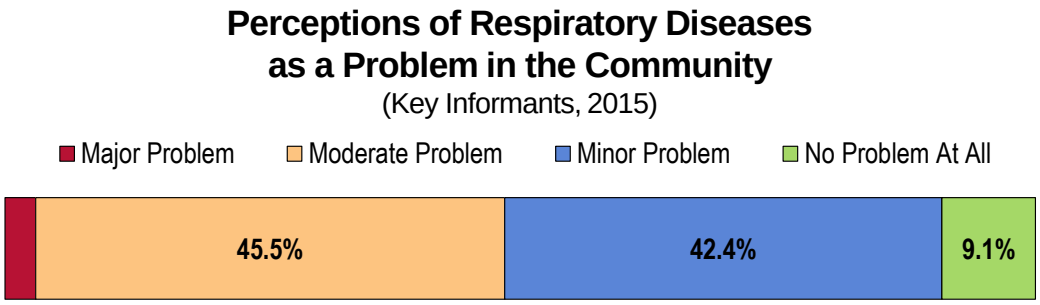
(Among Parents of Children Age 0-17)



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 135]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents with children 0 to 17 in the household.
● Includes children who have ever been diagnosed with asthma, and whom are reported to still have asthma.

Key Informant Input: Respiratory Disease

The greatest share of key informants taking part in an online survey characterized *Respiratory Disease* as a "moderate problem" in the community.



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Note the following comment from one key informant rating this as a "major problem":

Prevalence/Incidence

> *Higher rates in Boone County of smoking, asthma and other respiratory diseases like COPD and emphysema. – Public Health Representative*

Injury & Violence

About Injury & Violence

Injuries and violence are widespread in society. Both unintentional injuries and those caused by acts of violence are among the top 15 killers for Americans of all ages. Many people accept them as "accidents," "acts of fate," or as "part of life." However, most events resulting in injury, disability, or death are predictable and preventable.

Injuries are the leading cause of death for Americans ages 1 to 44, and a leading cause of disability for all ages, regardless of sex, race/ethnicity, or socioeconomic status. More than 180,000 people die from injuries each year, and approximately 1 in 10 sustains a nonfatal injury serious enough to be treated in a hospital emergency department.

Beyond their immediate health consequences, injuries and violence have a significant impact on the well-being of Americans by contributing to:

- Premature death
- Disability
- Poor mental health
- High medical costs
- Lost productivity

The effects of injuries and violence extend beyond the injured person or victim of violence to family members, friends, coworkers, employers, and communities.

Numerous factors can affect the risk of unintentional injury and violence, including individual behaviors, physical environment, access to health services (ranging from pre-hospital and acute care to rehabilitation), and social environment (from parental monitoring and supervision of youth to peer group associations, neighborhoods, and communities).

Interventions addressing these social and physical factors have the potential to prevent unintentional injuries and violence. Efforts to prevent unintentional injury may focus on:

- Modifications of the environment
- Improvements in product safety
- Legislation and enforcement
- Education and behavior change
- Technology and engineering

Efforts to prevent violence may focus on:

- Changing social norms about the acceptability of violence
- Improving problem-solving skills (for example, parenting, conflict resolution, coping)
- Changing policies to address the social and economic conditions that often give rise to violence

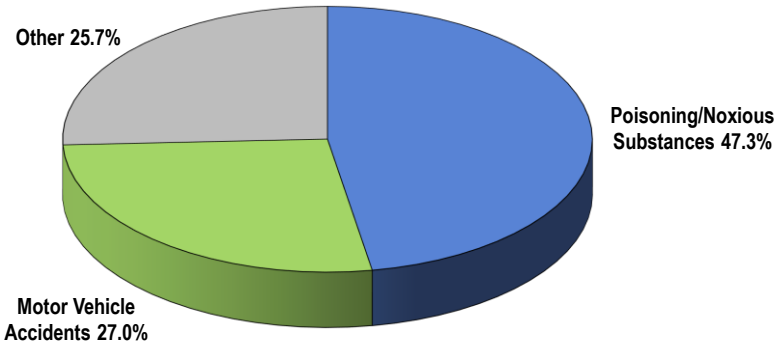
- Healthy People 2020 (www.healthypeople.gov)

Leading Causes of Accidental Death

Poisoning (including accidental drug overdoses) and motor vehicle accidents accounted for nearly 3 in 4 accidental deaths in Boone County between 2012 and 2014.

Leading Causes of Accidental Death

(Boone County, 2012-2014)



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).

Unintentional Injury

Age-Adjusted Unintentional Injury Deaths

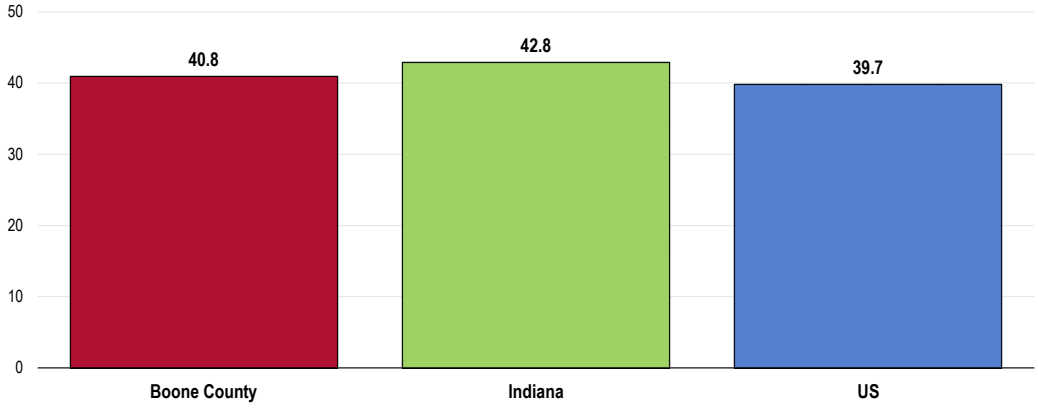
Between 2012 and 2014, there was an annual average age-adjusted unintentional injury mortality rate of 40.8 deaths per 100,000 population in Boone County.

- Similar to the Indiana rate.
- Similar to the national rate.
- Fails to satisfy the Healthy People 2020 target (36.4 or lower).

Unintentional Injuries: Age-Adjusted Mortality

(2012-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 36.4 or Lower



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IVP-11]

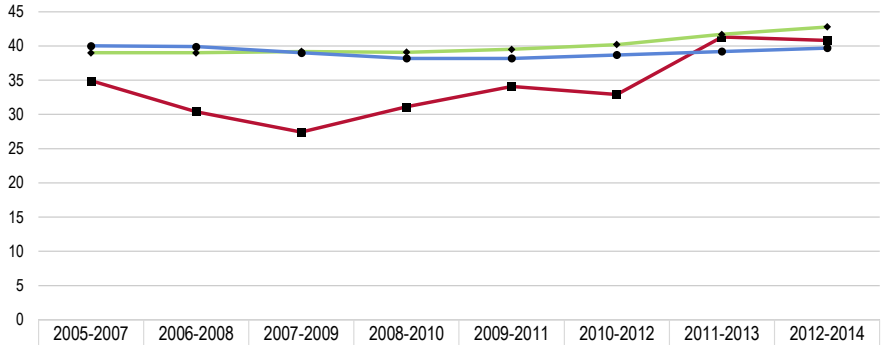
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: There has been an overall upward trend in the unintentional injury mortality rate in Boone County in recent years.

Unintentional Injuries: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 36.4 or Lower



	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	34.9	30.4	27.4	31.1	34.1	32.9	41.3	40.8
Indiana	39.0	39.0	39.2	39.1	39.5	40.2	41.7	42.8
US	40.0	39.9	39.0	38.2	38.2	38.7	39.2	39.7

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IVP-11]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

Motor Vehicle Safety

Age-Adjusted Motor-Vehicle Related Deaths

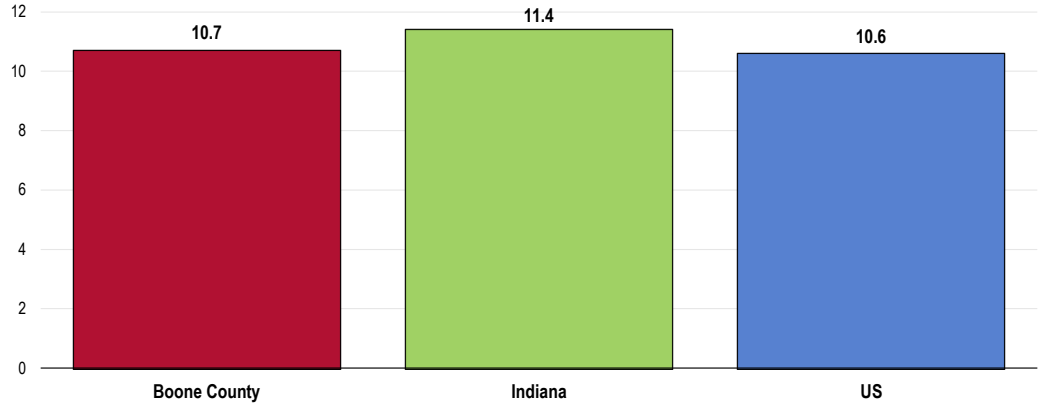
Boone County reported an annual average age-adjusted motor vehicle crash mortality rate of 10.7 deaths per 100,000 population between 2010 and 2014.

- Better than found statewide.
- Similar to that found nationally.
- Satisfies the Healthy People 2020 target (12.4 or lower).

Motor Vehicle Crashes: Age-Adjusted Mortality

(2010-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 12.4 or Lower



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IVP-13.1]

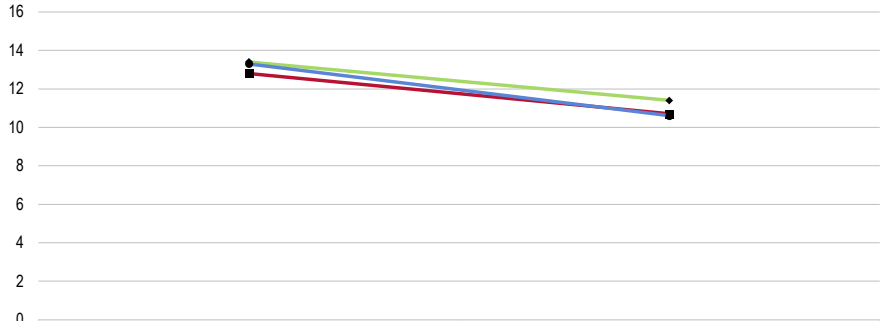
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: The mortality rate in Boone County decreased over the past decade.

Motor Vehicle Crashes: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 12.4 or Lower



	2005-2009	2010-2014
Boone County	12.8	10.7
Indiana	13.4	11.4
US	13.3	10.6

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IVP-13.1]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

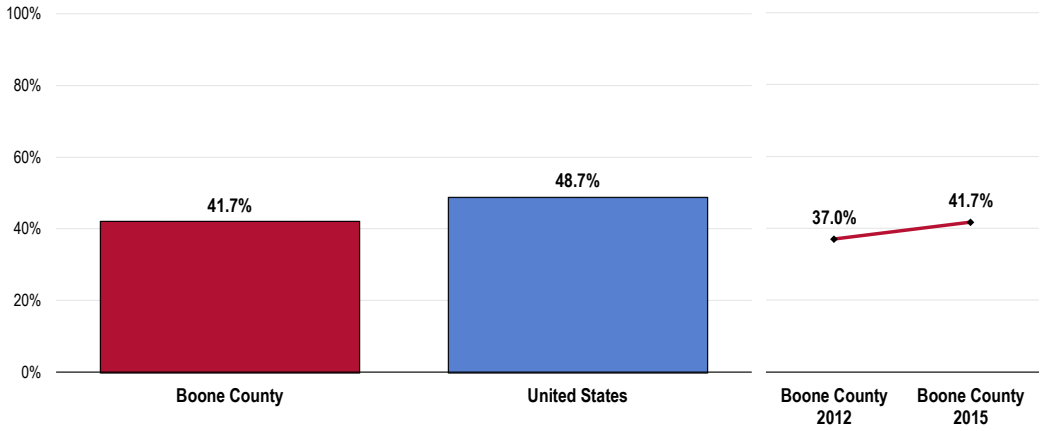
Bicycle Safety

Just over 4 in 10 service area children age 5 to 17 (41.7%) are reported to "always" wear a helmet when riding a bicycle.

- Statistically similar to the national prevalence.
- TREND: Statistically unchanged over time.

Child "Always" Wears a Helmet When Riding a Bicycle

(Among Parents of Children Age 5-17)



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 121]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents with children age 5 to 17 at home.

Firearm Safety

Age-Adjusted Firearm-Related Deaths

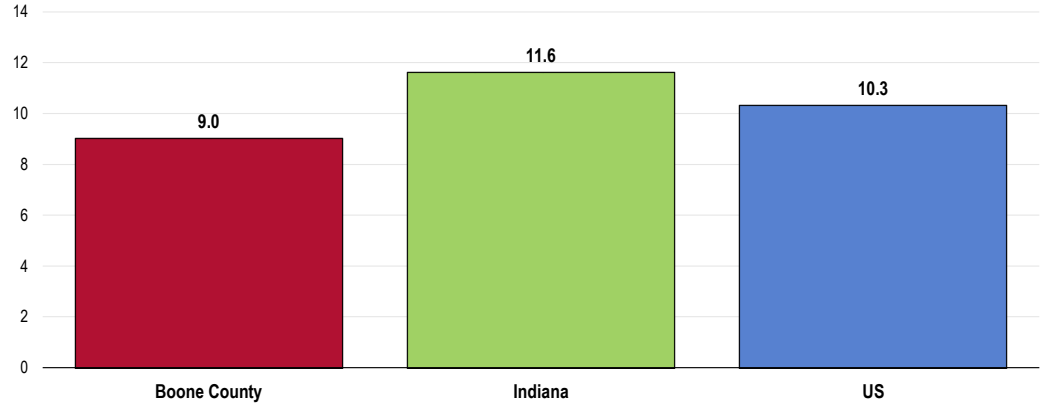
Between 2010 and 2014, there was an annual average age-adjusted rate of 9.0 deaths per 100,000 population due to firearms in Boone County.

- Lower than found statewide.
- Lower than found nationally.
- Similar to the Healthy People 2020 objective (9.3 or lower).

Firearms-Related Deaths: Age-Adjusted Mortality

(2010-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 9.3 or Lower



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IVP-30]

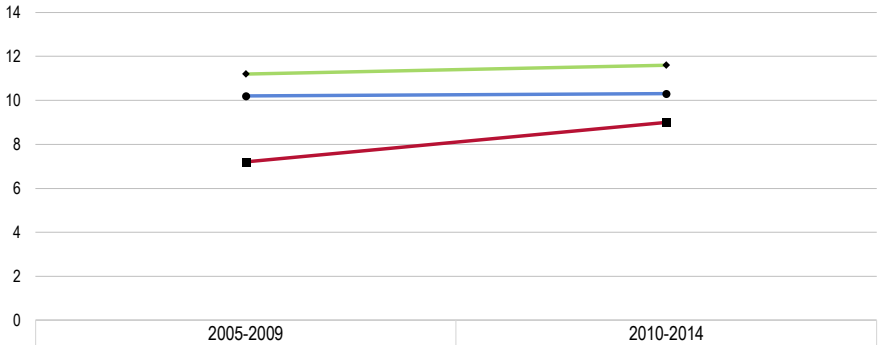
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: The mortality rate in Boone County increased over the past decade.

Firearms-Related Deaths: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 9.3 or Lower



	2005-2009	2010-2014
Boone County	7.2	9.0
Indiana	11.2	11.6
US	10.2	10.3

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IVP-30]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

Intentional Injury (Violence)

Violent Crime

Violent Crime Rates

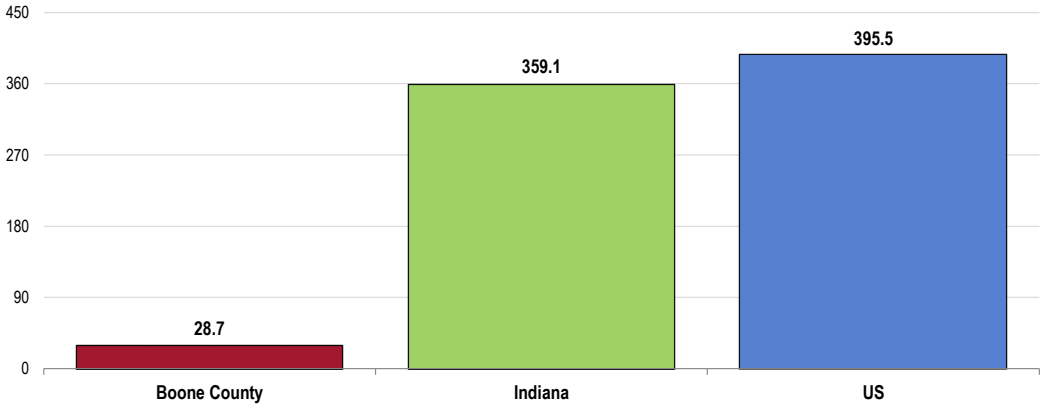
Violent crime is composed of four offenses (FBI Index offenses): murder and non-negligent manslaughter; forcible rape; robbery; and aggravated assault.

Note that the quality of crime data can vary widely from location to location, depending on the consistency and completeness of reporting among various jurisdictions.

Between 2010 and 2012, there were a reported 28.7 violent crimes per 100,000 population in Boone County.

- Well below the Indiana rate for the same period.
- Well below the national rate.

Violent Crime
(Rate per 100,000 Population, 2010-2012)



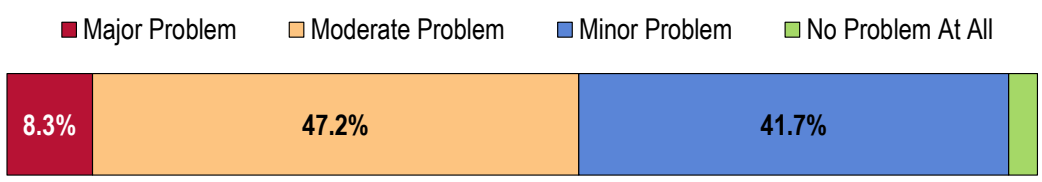
Sources:
- Federal Bureau of Investigation, FBI Uniform Crime Reports: 2010-2012.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the rate of violent crime offenses reported by the sheriff's office or county police department per 100,000 residents. Violent crime includes homicide, rape, robbery, and aggravated assault. This indicator is relevant because it assesses community safety.
- Participation by law enforcement agencies in the UCR program is voluntary. Sub-state data do not necessarily represent an exhaustive list of crimes due to gaps in reporting. Also, some institutions of higher education have their own police departments, which handle offenses occurring within campus grounds; these offenses are not included in the violent crime statistics, but can be obtained from the Uniform Crime Reports Universities and Colleges data tables.

Key Informant Input: Injury & Violence

The largest share of key informants taking part in an online survey characterized *Injury & Violence* as a "moderate problem" in the community.

Perceptions of Injury and Violence as a Problem in the Community
(Key Informants, 2015)



Sources:
- PRC Online Key Informant Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

Top Concerns

Among those rating this issue as a “major problem,” reasons related to the following:

Low-Income Residents

> *The economic, substance disorder position of our community has led to an influx of DV situations. – Social Services Provider*
>
> *Among the economically depressed population we serve services for violence is minimal and shelters are not locally available. – Public Health Representative*

Prevalence/Incidence

> *Police reports and client shared stories in a behavioral health setting. – Other Health Provider*

Diabetes

About Diabetes

Diabetes mellitus occurs when the body cannot produce or respond appropriately to insulin. Insulin is a hormone that the body needs to absorb and use glucose (sugar) as fuel for the body's cells. Without a properly functioning insulin signaling system, blood glucose levels become elevated and other metabolic abnormalities occur, leading to the development of serious, disabling complications. Many forms of diabetes exist; the three common types are Type 1, Type 2, and gestational diabetes. Effective therapy can prevent or delay diabetic complications.

Diabetes mellitus:

- Lowers life expectancy by up to 15 years.
- Increases the risk of heart disease by 2 to 4 times.
- Is the leading cause of kidney failure, lower limb amputations, and adult-onset blindness.

The rate of diabetes mellitus continues to increase both in the United States and throughout the world. Due to the steady rise in the number of persons with diabetes mellitus, and possibly earlier onset of type 2 diabetes mellitus, there is growing concern about the possibility that the increase in the number of persons with diabetes mellitus and the complexity of their care might overwhelm existing healthcare systems.

People from minority populations are more frequently affected by type 2 diabetes. Minority groups constitute 25% of all adult patients with diabetes in the US and represent the majority of children and adolescents with type 2 diabetes.

Lifestyle change has been proven effective in preventing or delaying the onset of type 2 diabetes in high-risk individuals.

- Healthy People 2020 (www.healthypeople.gov)

Age-Adjusted Diabetes Deaths

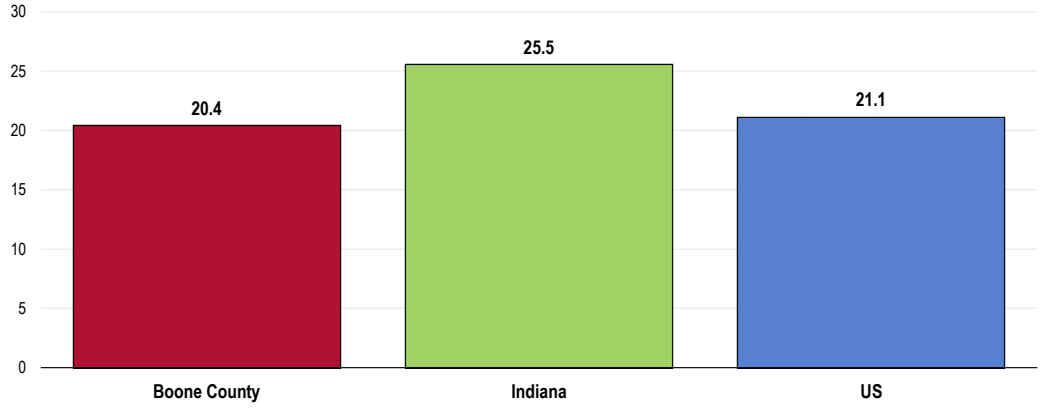
Between 2012 and 2014, there was an annual average age-adjusted diabetes mortality rate of 20.4 deaths per 100,000 population in Boone County.

- More favorable than that found statewide.
- Comparable to the national rate.
- Comparable to the Healthy People 2020 target (20.5 or lower, adjusted to account for diabetes mellitus-coded deaths).

Diabetes: Age-Adjusted Mortality

(2012-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 20.5 or Lower (Adjusted)



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective D-3]

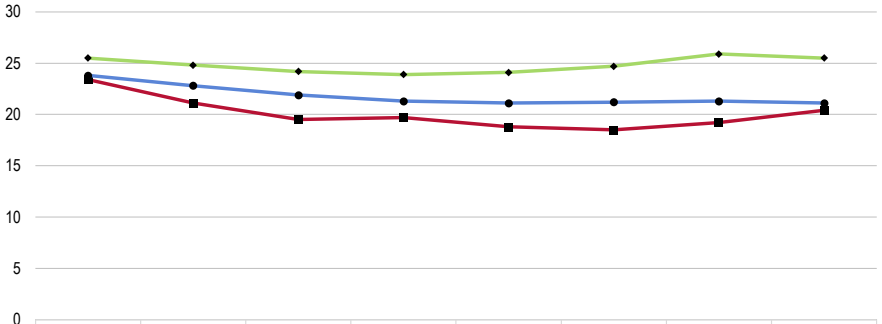
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.
- The Healthy People 2020 target for Diabetes is adjusted to account for only diabetes mellitus coded deaths.

- TREND: Diabetes mortality has remained below state and national rates over the past decade.

Diabetes: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 20.5 or Lower (Adjusted)



	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	23.4	21.1	19.5	19.7	18.8	18.5	19.2	20.4
Indiana	25.5	24.8	24.2	23.9	24.1	24.7	25.9	25.5
US	23.8	22.8	21.9	21.3	21.1	21.2	21.3	21.1

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective D-3]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.
- The Healthy People 2020 target for Diabetes is adjusted to account for only diabetes mellitus coded deaths.

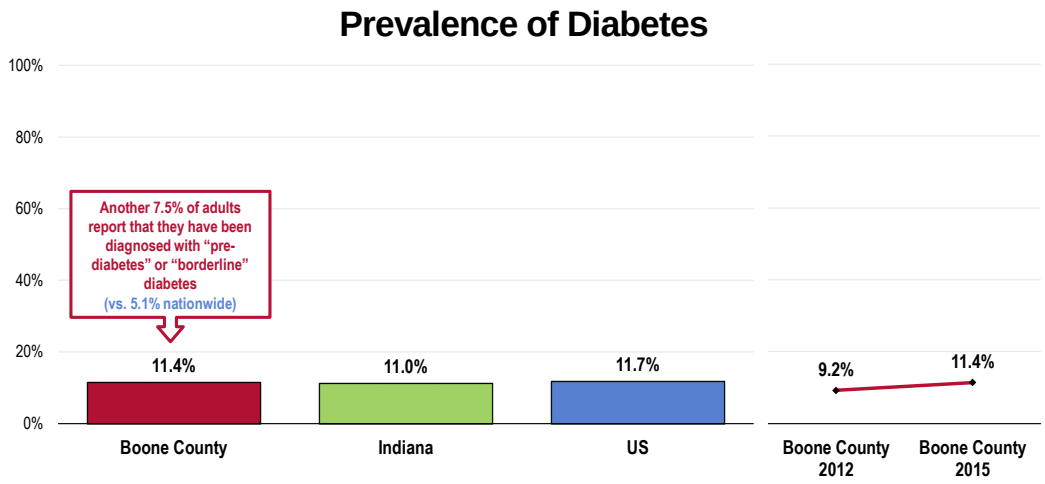
Prevalence of Diabetes

A total of 11.4% of Boone County adults report having been diagnosed with diabetes.

- Similar to the statewide proportion.
- Similar to the national proportion.
- TREND: Statistically unchanged since 2012.

In addition to the prevalence of diagnosed diabetes referenced above, another 7.5% of service area adults report that they have "pre-diabetes" or "borderline diabetes."

- Less favorable than the US prevalence.



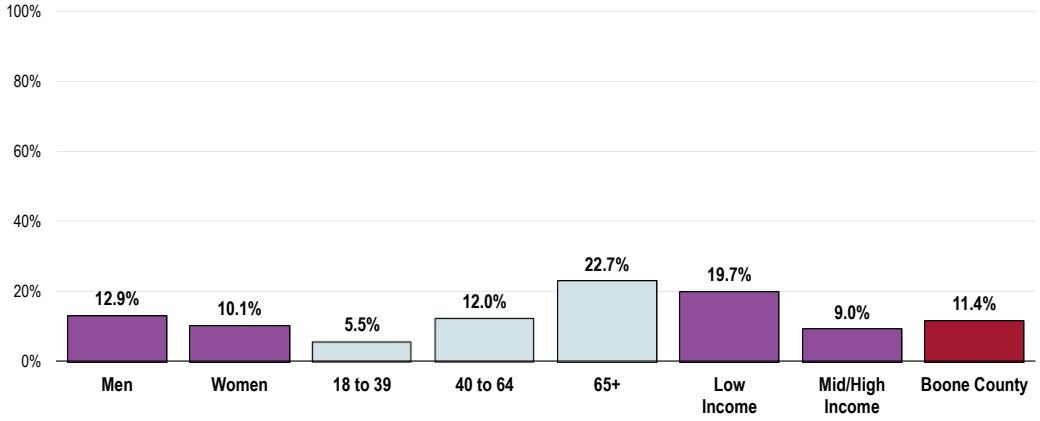
Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 136]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.

Notes:
- Asked of all respondents.
- Local and national data exclude gestation diabetes (occurring only during pregnancy).

A higher prevalence of diagnosed diabetes (excluding pre-diabetes or borderline diabetes) is reported among:

- Older adults (note the strong positive correlation between diabetes and age, with 22.7% of seniors with diabetes).
- Low-income residents.

Prevalence of Diabetes
(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 136]

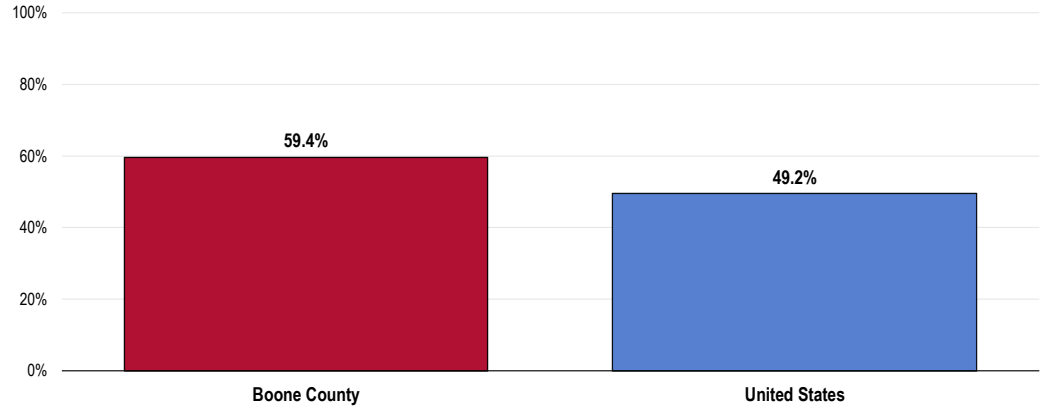
Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.
- Excludes gestation diabetes (occurring only during pregnancy).

Diabetes Testing

Of area adults who have <u>not</u> been diagnosed with diabetes, 59.4% report having had their blood sugar level tested within the past three years.

- Well above the national proportion.

Have Had Blood Sugar Tested in the Past Three Years
(Among Non-Diabetics)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 40]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of respondents who have not been diagnosed with diabetes.

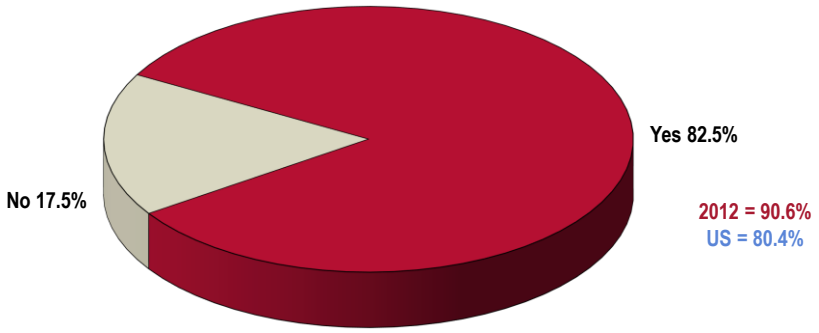
Diabetes Treatment

Among adults with diabetes, most (82.5%) are currently taking insulin or some type of medication to manage their condition.

- Comparable to the prevalence reported among diabetics nationally.
- TREND: Denotes a statistically significant decrease over time.

Taking Insulin or Other Medication for Diabetes

(Among Boone County Diabetics)

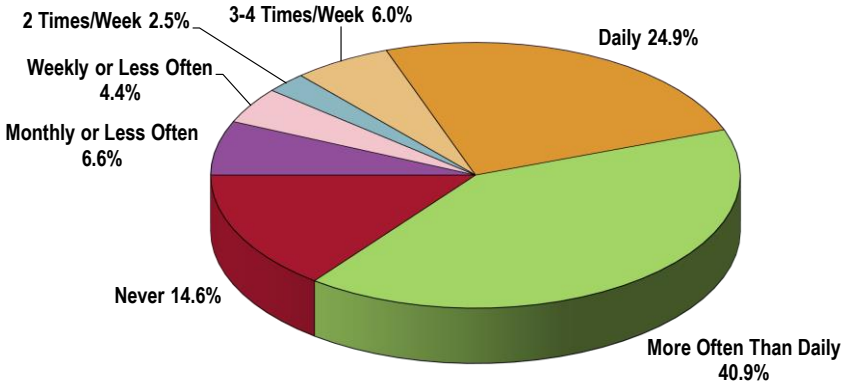


Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 306]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all diabetic respondents.

The majority of diabetics in the county check their blood for glucose or sugar either daily (24.9%) or multiple times a day (40.9%). Conversely, 14.6% never perform self-checks.

Frequency of Self-Checks for Glucose or Sugar

(Boone County Diabetics, 2015)



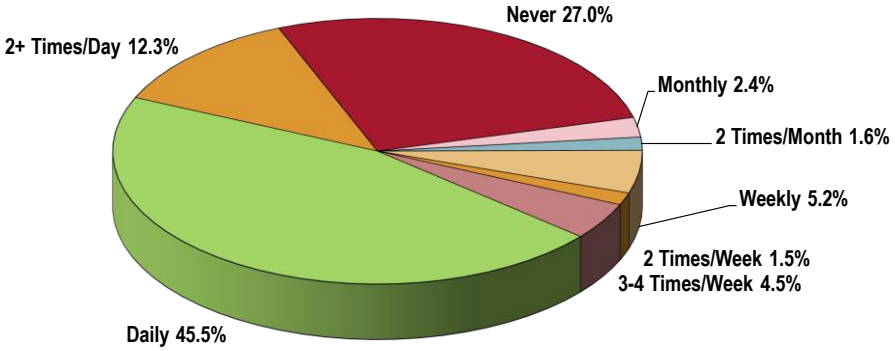
Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 307]
Notes: ● Asked of all respondents with diabetes.

Nearly half of diabetic adults (45.5%) check their feet for sores or irritations daily, while another 12.3% check their feet two or more times daily.

- On the other hand, a total of 27.0% never check their feet for sores or irritations.

Frequency of Self-Checks for Foot Sores/Irritations

(Boone County Diabetics, 2015)



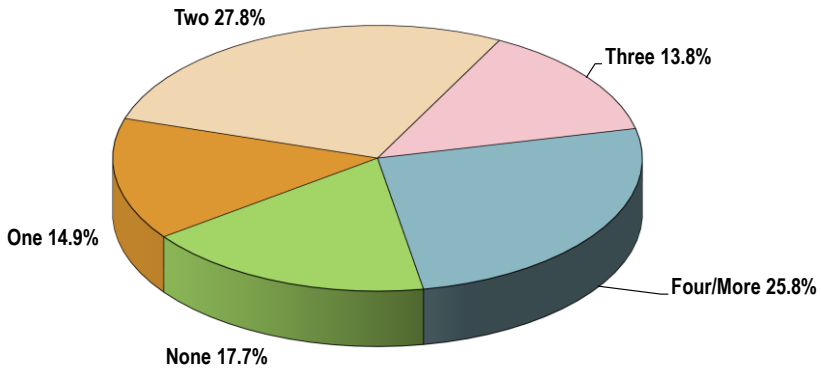
Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 308]
Notes: ● Asked of all respondents with diabetes.

In the past year, 14.9% of diabetic adults saw a health professional about their diabetes on one occasion, while 27.8% had two diabetes-related visits, 13.8% had three visits, and 25.8% had four or more visits with a health professional for their diabetes.

- Note that 17.7% of diabetics did not see a professional about their diabetes in the past year.

Number of Diabetes-Related Visits to a Health Professional in the Past Year

(Boone County Diabetics, 2015)

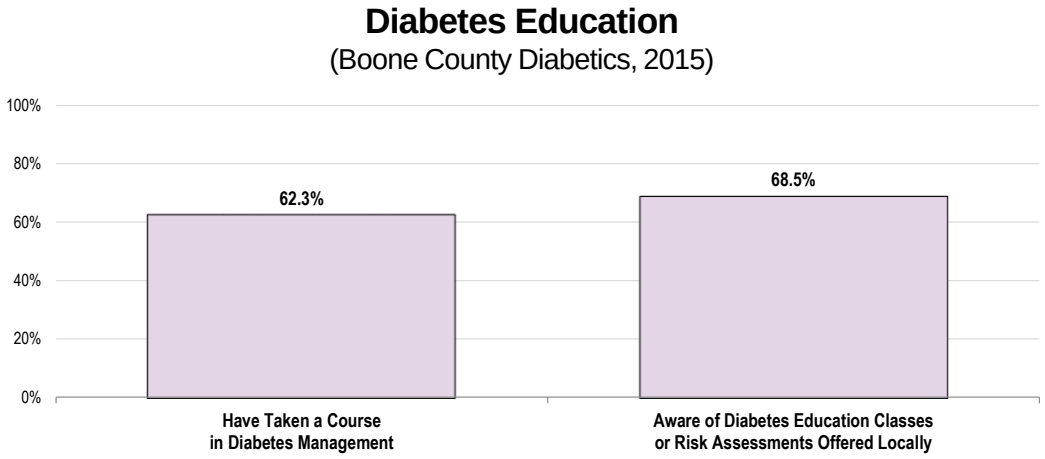


Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 309]
Notes: ● Asked of all respondents with diabetes.

Diabetes Education

Boone County diabetics were also asked about their experience with diabetes education.

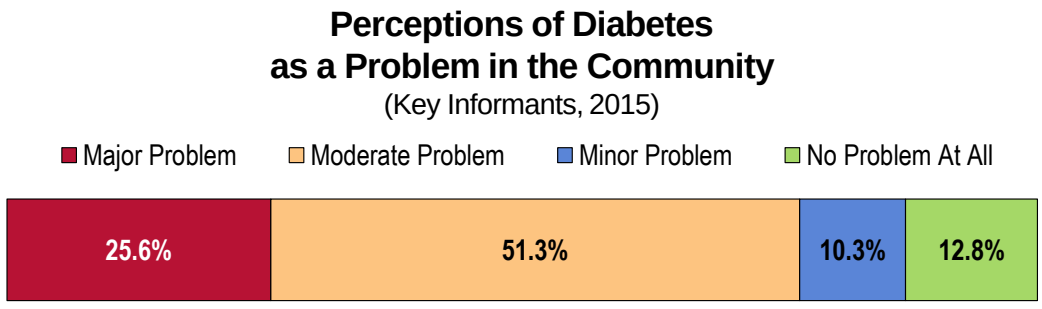
As shown, 62.3% have <u>taken a course</u> in diabetes management, and 68.5% are <u>aware of diabetes education classes or risk assessments</u> offered in the community.



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Items 310-311]
Notes: ● Asked of all diabetic respondents.

Key Informant Input: Diabetes

A high percentage of key informants taking part in an online survey characterized *Diabetes* as a "moderate problem" in the community.



Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Challenges

Among those rating this issue as a "major problem," the biggest challenges for people with diabetes are seen as:

Education

> *Education on the food we are eating and how it contributes to diabetes and weight, which contributes to so many other health problems. – Community Business Leader*
>
> *Access to a dietician and education regarding necessary dietary changes and support groups to navigate new issues for newly diagnosed diabetics. – Physician*
>
> *Lack of nutritional education, generational poverty and their environment, poor eating habits, no exercise. – Other Health Provider*
>
> *Prevention. A community of fat people who are clueless. – Other Health Provider*

Lack of Resources

> *There is not enough resources and education related to diabetes. We have an obesity problem that is highly correlated with the diabetes problem. One major factor is a lack of healthy food choices in the community. There is not even a good salad bar in the county. – Other Health Provider*
>
> *Healthy choices. Low income people or people who are trying to stretch a dollar eat cheaper foods which include poor choices most of the time such as McDonalds, fast food, mac and cheese and pots of stuff. Along with sweets, no exercise, a lot because people are working hard to make a living and have no time and can't afford a gym membership. Video games. – Other Health Provider*

Cost of Medications

> *Funds to buy medication and the proper diet. – Social Services Provider*

Lifestyle

> *Following a healthy lifestyle, lack of access to low cost healthy food, lack of time or desire to exercise, insight into cause. – Community Business Leader*

Weight Status

> *Overweight, this is one of the major reasons for heart problems and diabetes. – Community Business Leader*

Alzheimer's Disease

About Dementia

Dementia is the loss of cognitive functioning—thinking, remembering, and reasoning—to such an extent that it interferes with a person's daily life. Dementia is not a disease itself, but rather a set of symptoms. Memory loss is a common symptom of dementia, although memory loss by itself does not mean a person has dementia. Alzheimer's disease is the most common cause of dementia, accounting for the majority of all diagnosed cases.

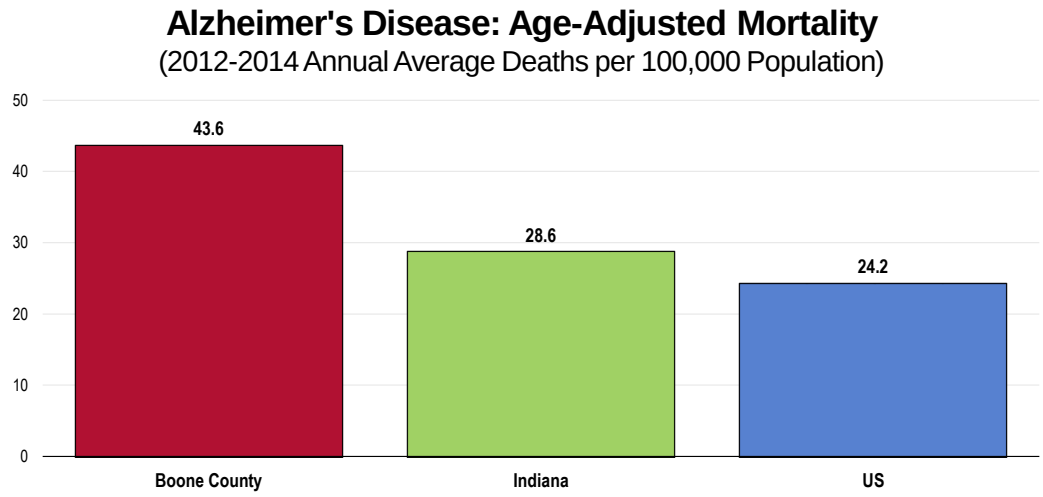
Alzheimer's disease is the 6th leading cause of death among adults age 18 years and older. Estimates vary, but experts suggest that up to 5.1 million Americans age 65 years and older have Alzheimer's disease. These numbers are predicted to more than double by 2050 unless more effective ways to treat and prevent Alzheimer's disease are found.

- Healthy People 2020 (www.healthypeople.gov)

Age-Adjusted 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.

- Well above the statewide rate.
- Well above the national rate.



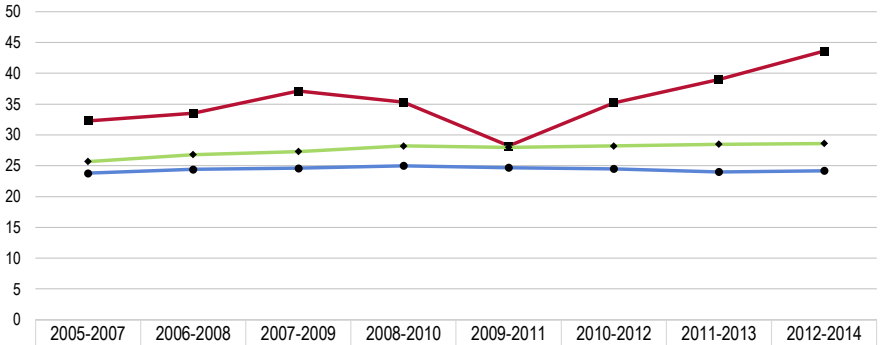
Sources: • CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

Notes: • Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
• Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: Overall, the Alzheimer's disease mortality rate has increased considerably over time in Boone County. Across Indiana and the US, rates have increased somewhat in recent years.

Alzheimer's Disease: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)



	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	32.3	33.5	37.1	35.3	28.2	35.2	39.0	43.6
Indiana	25.7	26.8	27.3	28.2	28.0	28.2	28.5	28.6
US	23.8	24.4	24.6	25.0	24.7	24.5	24.0	24.2

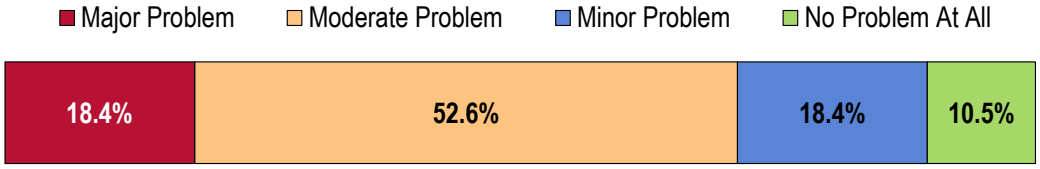
Sources: ● CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
Notes: ● Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
● Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

Key Informant Input: Dementias, Including Alzheimer's Disease

Key informants taking part in an online survey are most likely to consider *Dementias, Including Alzheimer's Disease* as a "moderate problem" in the community.

Perceptions of Dementia/Alzheimer's Disease as a Problem in the Community

(Key Informants, 2015)



Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Prevalence/Incidence

> *Statistic show we have a high incidence of Alzheimer's and/or dementia in Boone County. – Other Health Provider*
>
> *Frequency, same nationally. – Other Health Provider*

> *The rate of dementia in the community is severe and only projected to continue to increase. The availability of treatments is minimal so the community needs awareness of resources of how to best manage dementia for the patient and also for those caring for the patient. – Other Health Provider*
>
> *Could be age-related, given that so many of my friends, family members and employees are touched by this devastating decline and demise. Additionally, there is heightened awareness of this malady due to media coverage. – Community Business Leader*

Lack of Resources

> *There appears to be a lack of formal medically based information available to all community members. – Community Business Leader*
>
> *No dedicated facility for adult day care. Limited resources devoted to caregiver support. – Physician*

Lack of Cure

> *No real effective treatment or cure, lack of insight. – Community Business Leader*

Kidney Disease

About Chronic Kidney Disease

Chronic kidney disease and end-stage renal disease are significant public health problems in the United States and a major source of suffering and poor quality of life for those afflicted. They are responsible for premature death and exact a high economic price from both the private and public sectors. Nearly 25% of the Medicare budget is used to treat people with chronic kidney disease and end-stage renal disease.

Genetic determinants have a large influence on the development and progression of chronic kidney disease. It is not possible to alter a person's biology and genetic determinants; however, environmental influences and individual behaviors also have a significant influence on the development and progression of chronic kidney disease. As a result, some populations are disproportionately affected. Successful behavior modification is expected to have a positive influence on the disease.

Diabetes is the most common cause of kidney failure. The results of the Diabetes Prevention Program (DPP) funded by the national Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) show that moderate exercise, a healthier diet, and weight reduction can prevent development of type 2 diabetes in persons at risk.

- Healthy People 2020 (www.healthypeople.gov)

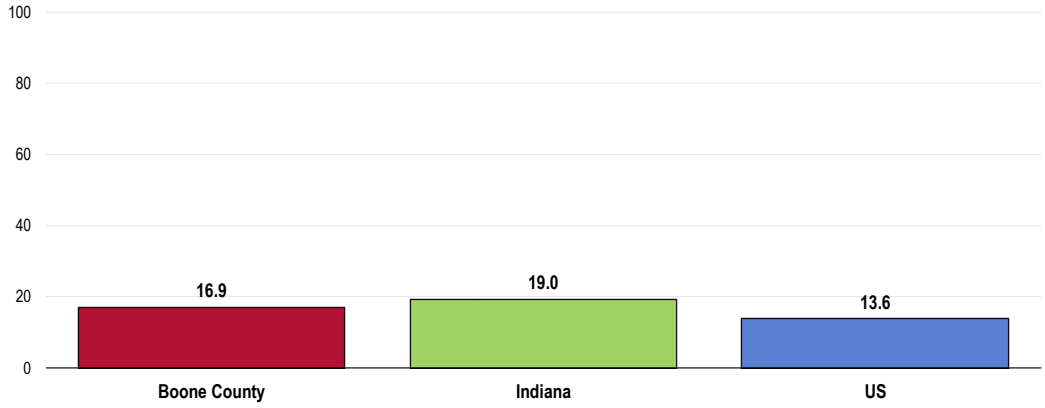
Age-Adjusted Kidney Disease Deaths

Between 2010 and 2014 there was an annual average age-adjusted kidney disease mortality rate of 16.9 deaths per 100,000 population in Boone County.

- Lower than the rate found statewide.
- Higher than the national rate.

Kidney Disease: Age-Adjusted Mortality

(2010-2014 Annual Average Deaths per 100,000 Population)



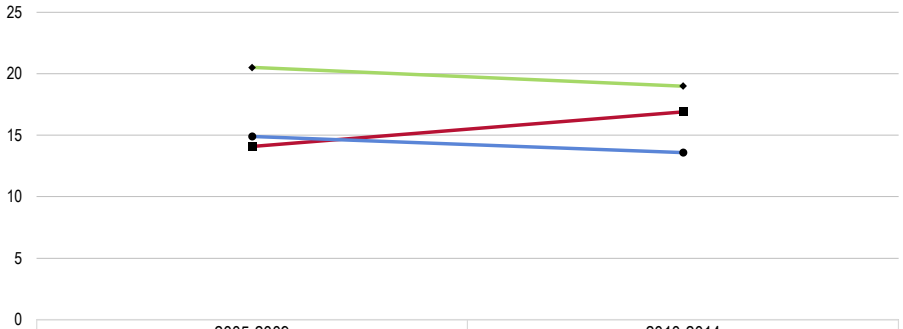
Sources: • CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

Notes: • Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
• Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: The death rate has increased over the past decade in Boone County, in contrast to the decreasing trends reported across Indiana and the US overall.

Kidney Disease: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)



	2005-2009	2010-2014
Boone County	14.1	16.9
Indiana	20.5	19.0
US	14.9	13.6

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.

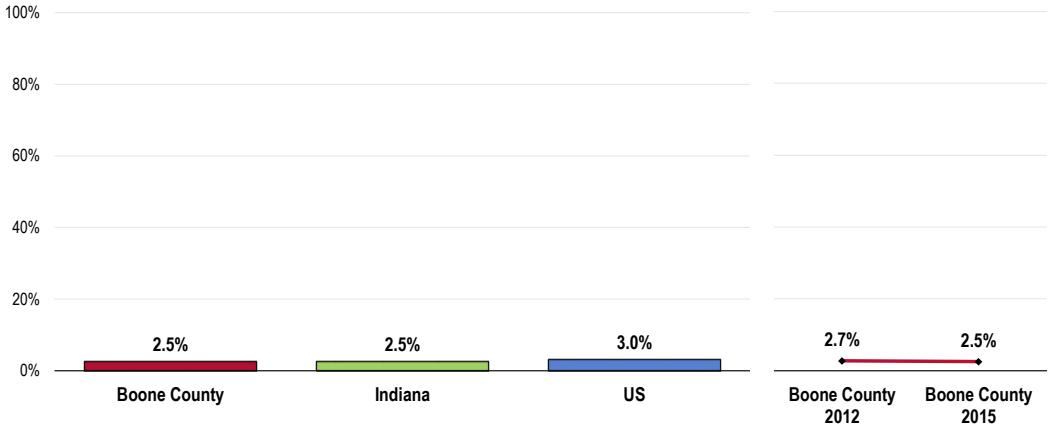
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

Prevalence of Kidney Disease

A total of 2.5% of Boone County adults report having been diagnosed with kidney disease.

- Identical to the state proportion.
- Similar to the national proportion.
- TREND: Statistically unchanged since 2012.

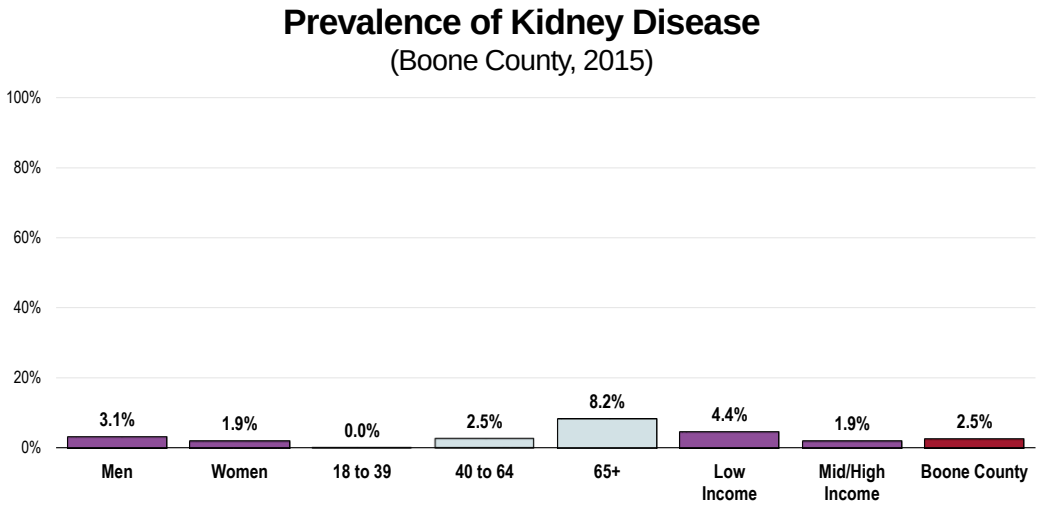
Prevalence of Kidney Disease



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 33]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

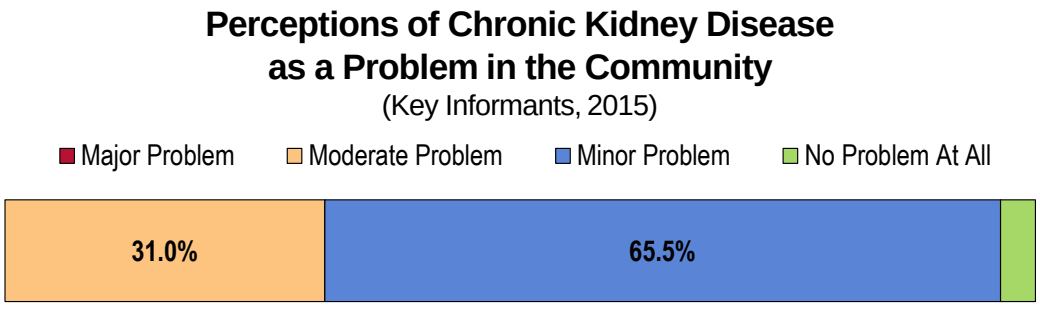
- Note the positive correlation between age and kidney disease in Boone County.



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 33]
Notes: ● Asked of all respondents.
● Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Key Informant Input: Chronic Kidney Disease

Key informants taking part in an online survey generally characterized *Chronic Kidney Disease* as a "minor problem" in the community.



Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Potentially Disabling Conditions

About Arthritis, Osteoporosis & Chronic Back Conditions

There are more than 100 types of arthritis. Arthritis commonly occurs with other chronic conditions, such as diabetes, heart disease, and obesity. Interventions to treat the pain and reduce the functional limitations from arthritis are important, and may also enable people with these other chronic conditions to be more physically active. Arthritis affects 1 in 5 adults and continues to be the most common cause of disability. It costs more than $128 billion per year. All of the human and economic costs are projected to increase over time as the population ages. There are interventions that can reduce arthritis pain and functional limitations, but they remain underused. These include: increased physical activity; self-management education; and weight loss among overweight/obese adults.

Osteoporosis is a disease marked by reduced bone strength leading to an increased risk of fractures (broken bones). In the United States, an estimated 5.3 million people age 50 years and older have osteoporosis. Most of these people are women, but about 0.8 million are men. Just over 34 million more people, including 12 million men, have low bone mass, which puts them at increased risk for developing osteoporosis. Half of all women and as many as 1 in 4 men age 50 years and older will have an osteoporosis-related fracture in their lifetime.

Chronic back pain is common, costly, and potentially disabling. About 80% of Americans experience low back pain in their lifetime. It is estimated that each year:

- 15%-20% of the population develop protracted back pain.
- 2-8% have chronic back pain (pain that lasts more than 3 months).
- 3-4% of the population is temporarily disabled due to back pain.
- 1% of the working-age population is disabled completely and permanently as a result of low back pain.

Americans spend at least $50 billion each year on low back pain. Low back pain is the:

- 2nd leading cause of lost work time (after the common cold).
- 3rd most common reason to undergo a surgical procedure.
- 5th most frequent cause of hospitalization.

Arthritis, osteoporosis, and chronic back conditions all have major effects on quality of life, the ability to work, and basic activities of daily living.

- Healthy People 2020 (www.healthypeople.gov)

Arthritis, Osteoporosis, & Chronic Back Conditions

Prevalence of Arthritis/Rheumatism

RELATED ISSUE:

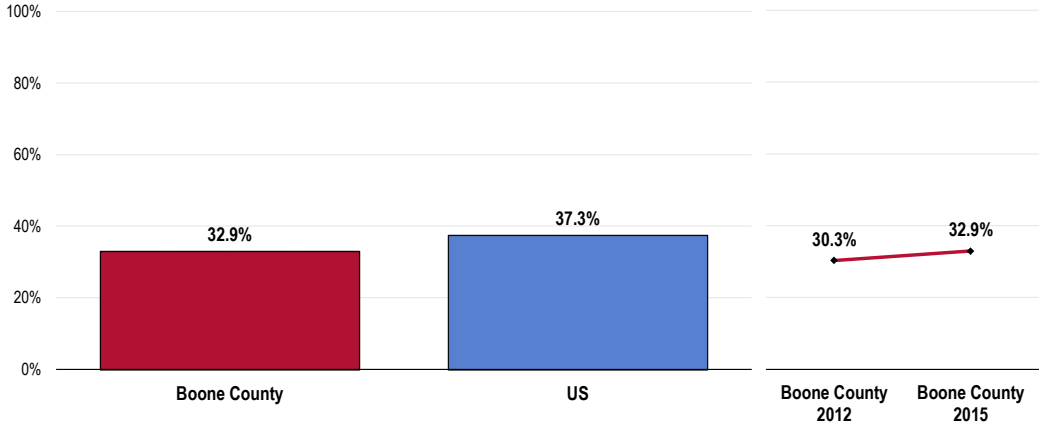
See also *Activity Limitations* in the **General Health Status** section of this report.

Nearly one-third of Boone County adults age 50 and older (32.9%) reports suffering from arthritis or rheumatism.

- Similar to that found nationwide.
- TREND: The prevalence of arthritis/rheumatism is similar to that reported in 2012.

Prevalence of Arthritis/Rheumatism

(Among Adults Age 50 and Older)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 139]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Reflects respondents age 50 and older.

Prevalence of Osteoporosis

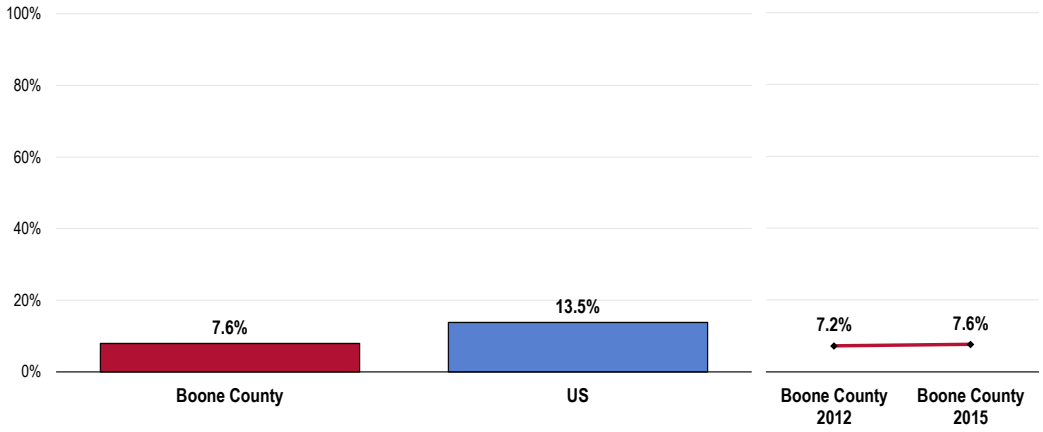
A total of 7.6% of survey respondents age 50 and older have osteoporosis.

- More favorable than that found nationwide.
- Fails to satisfy the Healthy People 2020 target of 5.3% or lower.
- TREND: Statistically unchanged over time.

Prevalence of Osteoporosis

(Among Adults Age 50 and Older)

Healthy People 2020 Target = 5.3% or Lower



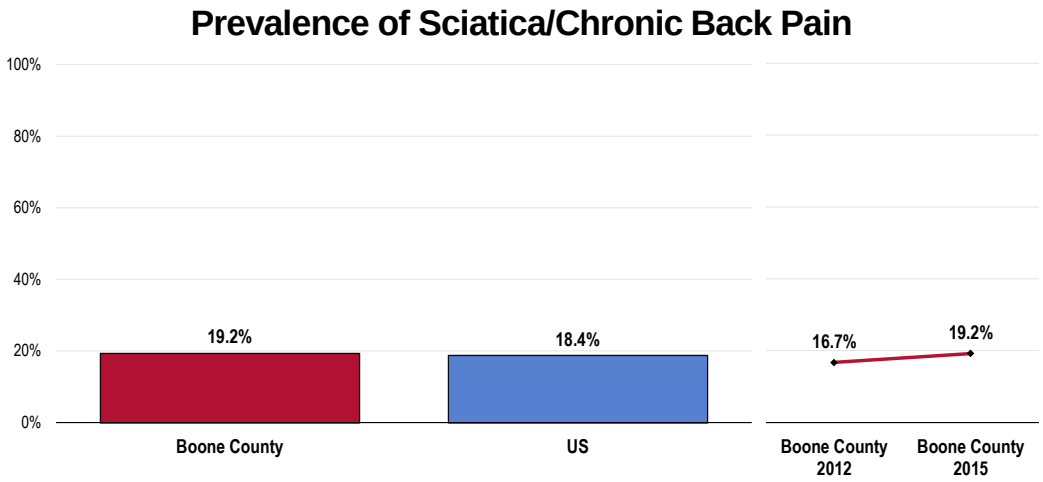
Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 140]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective AOCBC-10]

Notes:
- Reflects respondents age 50 and older.

Prevalence of Sciatica/Chronic Back Pain

A total of 19.2% of service area residents suffer from chronic back pain or sciatica.

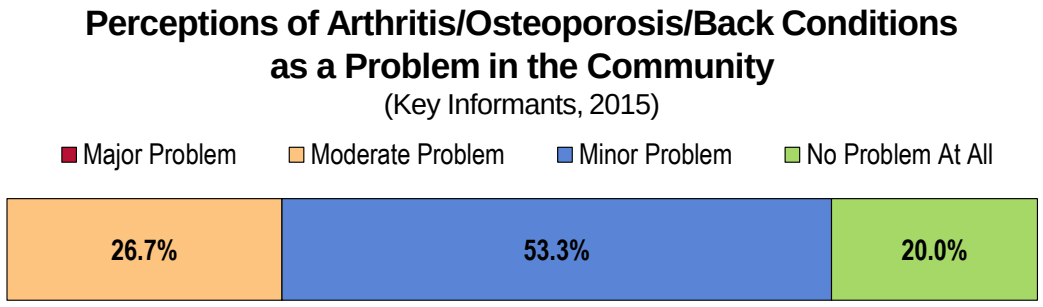
- Similar to that found nationwide.
- TREND: Statistically unchanged over time.



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 29]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Key Informant Input: Arthritis, Osteoporosis & Chronic Back Conditions

Most key informants taking part in an online survey characterized *Arthritis, Osteoporosis & Chronic Back Conditions* as a "minor problem" in the community.

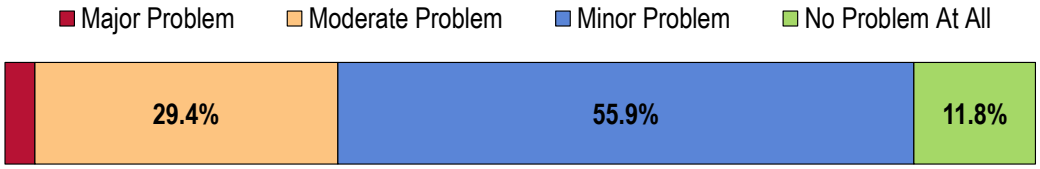


Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Key Informant Input: Vision & Hearing

More than half of key informants taking part in an online survey characterized *Vision & Hearing* as a "minor problem" in the community.

Perceptions of Hearing and Vision as a Problem in the Community
(Key Informants, 2015)



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Note the following comment from one key informant rating this as a "major problem":

Lack Coverage

> *We have a lack of coverage for emergent or urgent hearing and vision problems. There is no after-hours care anywhere in the county. – Other Health Provider*

Infectious Disease

Professional Research Consultants, Inc.

Influenza & Pneumonia Vaccination

About Influenza & Pneumonia

Acute respiratory infections, including pneumonia and influenza, are the 8th leading cause of death in the nation, accounting for 56,000 deaths annually. Pneumonia mortality in children fell by 97% in the last century, but respiratory infectious diseases continue to be leading causes of pediatric hospitalization and outpatient visits in the US. On average, influenza leads to more than 200,000 hospitalizations and 36,000 deaths each year. The 2009 H1N1 influenza pandemic caused an estimated 270,000 hospitalizations and 12,270 deaths (1,270 of which were of people younger than age 18) between April 2009 and March 2010.

- Healthy People 2020 (www.healthypeople.gov)

Flu Vaccinations

FluMist® is a vaccine that is sprayed into the nose to help protect against influenza; it is an alternative to traditional flu shots.

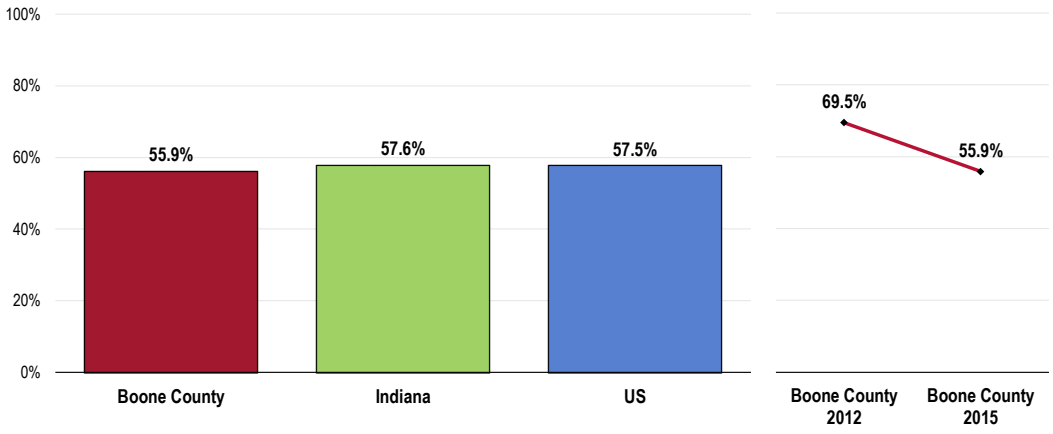
Among Boone County seniors, 55.9% received a flu shot (or FluMist®) within the past year.

- Statistically comparable to the Indiana finding.
- Comparable to the national finding.
- Fails to satisfy the Healthy People 2020 target (70% or higher).
- TREND: Marks a statistically significant decrease since 2012.

Older Adults: Have Had a Flu Vaccination in the Past Year

(Among Adults Age 65+)

Healthy People 2020 Target = 70.0% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 141]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IID-12.12]

Notes:
- Reflects respondents 65 and older.
- Includes FluMist as a form of vaccination.

High-Risk Adults

"High-risk" includes adults who report having been diagnosed with heart disease, diabetes or respiratory disease.

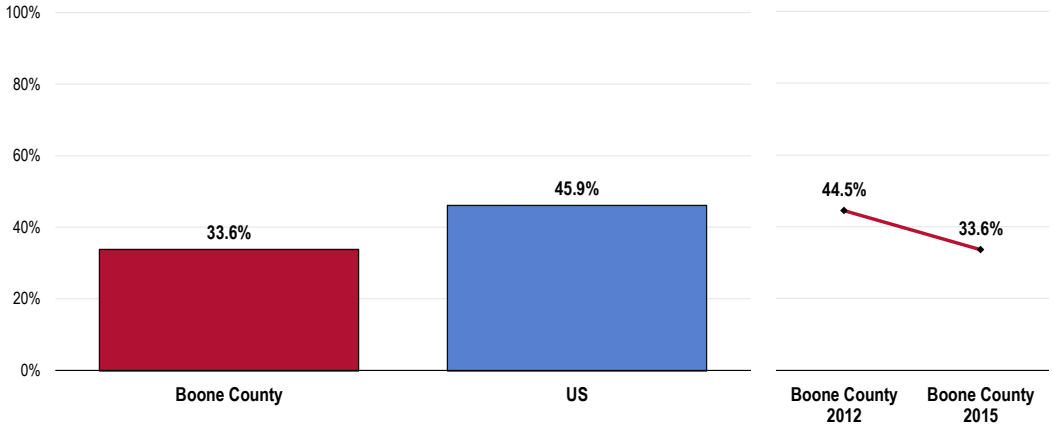
One-third of high-risk adults age 18 to 64 (33.6%) received a flu vaccination (flu shot or FluMist®) within the past year.

- Less favorable than national findings.
- Fails to satisfy the Healthy People 2020 target (70% or higher).
- TREND: Statistically unchanged since 2012.

High-Risk Adults: Have Had a Flu Vaccination in the Past Year

(Among High-Risk Adults Age 18-64)

Healthy People 2020 Target = 70.0% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 142]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IID-12.12]

Notes:
- Reflects high-risk respondents age 18-64.
- "High-Risk" includes adults age 18 to 64 who have been diagnosed with heart disease, diabetes or respiratory disease.
- Includes FluMist as a form of vaccination.

Pneumonia Vaccination

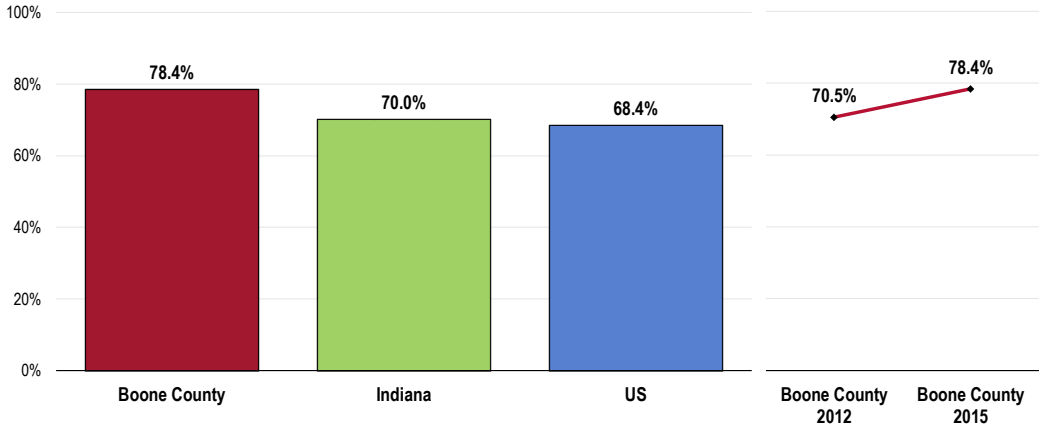
Among service area adults age 65 and older, 78.4% have received a pneumonia vaccination at some point in their lives.

- Higher than the Indiana finding.
- Higher than the national finding.
- Fails to satisfy the Healthy People 2020 target of 90% or higher.
- TREND: Statistically unchanged since 2012.

Older Adults: Have Ever Had a Pneumonia Vaccine

(Among Adults Age 65+)

Healthy People 2020 Target = 90.0% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 143]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IID-13.1]

Notes:
- Reflects respondents 65 and older.

High-Risk Adults

"High-risk" includes adults who report having been diagnosed with heart disease, diabetes or respiratory disease.

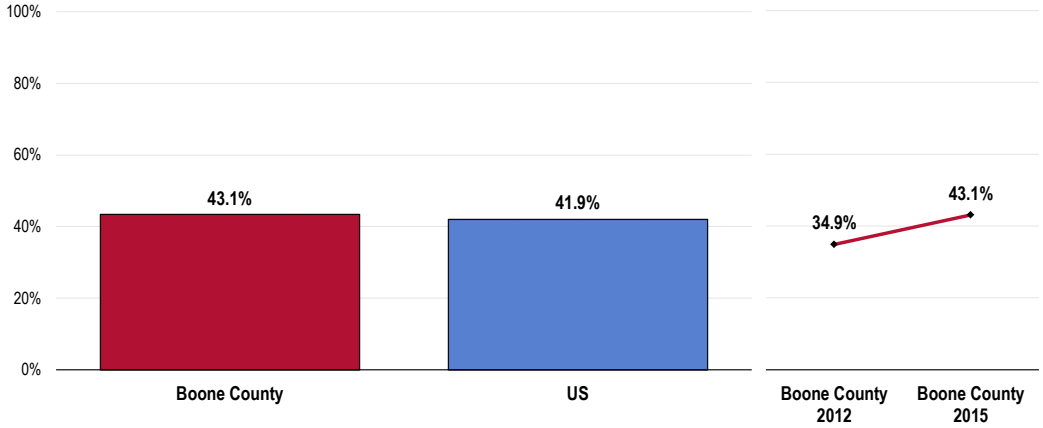
A total of 43.1% of high-risk adults age 18 to 64 have ever received a pneumonia vaccination.

- Similar to national findings.
- Fails to satisfy the Healthy People 2020 target (60% or higher).
- TREND: Statistically unchanged since 2012.

High-Risk Adults: Have Ever Had a Pneumonia Vaccine

(Among High-Risk Adults Age 18-64)

Healthy People 2020 Target = 60.0% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 144]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective IID-13.2]

Notes:
- Asked of all high-risk respondents under 65.
- "High-Risk" includes adults age 18 to 64 who have been diagnosed with heart disease, diabetes or respiratory disease.

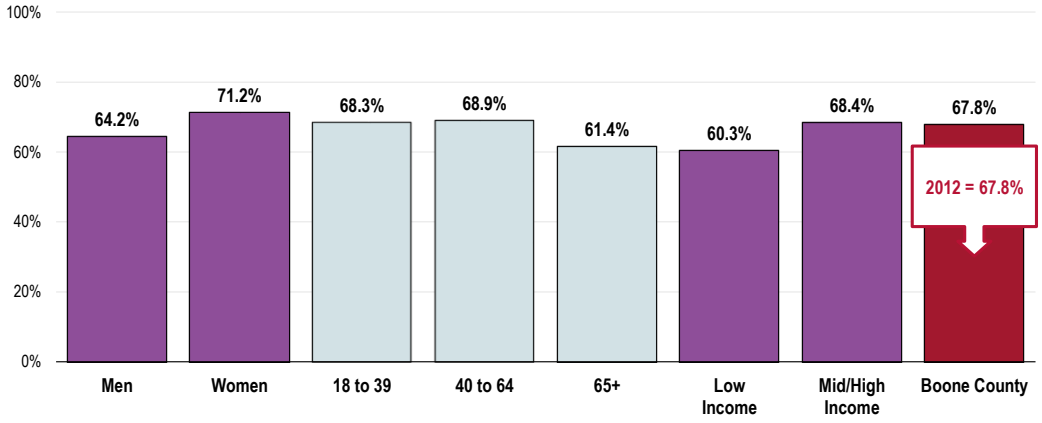
Immunization & Insurance

Two-thirds (67.8%) of survey respondents are aware that many immunizations are now covered by most health insurance plans due to new federal requirements.

- Awareness is lowest among Boone County seniors.
- TREND: Awareness is unchanged from 2012 survey findings.

Aware That Many Immunizations Are Now Covered by Most Health Insurance Plans Due to New Federal Requirements

(Boone County, 2015)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 316]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

HIV

About HIV

The HIV epidemic in the United States continues to be a major public health crisis. An estimated 1.1 million Americans are living with HIV, and 1 in 5 people with HIV do not know they have it. HIV continues to spread, leading to about 56,000 new HIV infections each year.

HIV is a preventable disease, and effective HIV prevention interventions have been proven to reduce HIV transmission. People who get tested for HIV and learn that they are infected can make significant behavior changes to improve their health and reduce the risk of transmitting HIV to their sex or drug-using partners. More than 50% of new HIV infections occur as a result of the 21% of people who have HIV but do not know it.

In the era of increasingly effective treatments for HIV, people with HIV are living longer, healthier, and more productive lives. Deaths from HIV infection have greatly declined in the United States since the 1990s. As the number of people living with HIV grows, it will be more important than ever to increase national HIV prevention and healthcare programs.

There are gender, race, and ethnicity disparities in new HIV infections:

- Nearly 75% of new HIV infections occur in men.
- More than half occur in gay and bisexual men, regardless of race or ethnicity.
- 45% of new HIV infections occur in African Americans, 35% in whites, and 17% in Hispanics.

Improving access to quality healthcare for populations disproportionately affected by HIV, such as persons of color and gay and bisexual men, is a fundamental public health strategy for HIV prevention. People getting care for HIV can receive:

- Antiretroviral therapy
- Screening and treatment for other diseases (such as sexually transmitted infections)
- HIV prevention interventions
- Mental health services
- Other health services

As the number of people living with HIV increases and more people become aware of their HIV status, prevention strategies that are targeted specifically for HIV-infected people are becoming more important. Prevention work with people living with HIV focuses on:

- Linking to and staying in treatment.
- Increasing the availability of ongoing HIV prevention interventions.
- Providing prevention services for their partners.

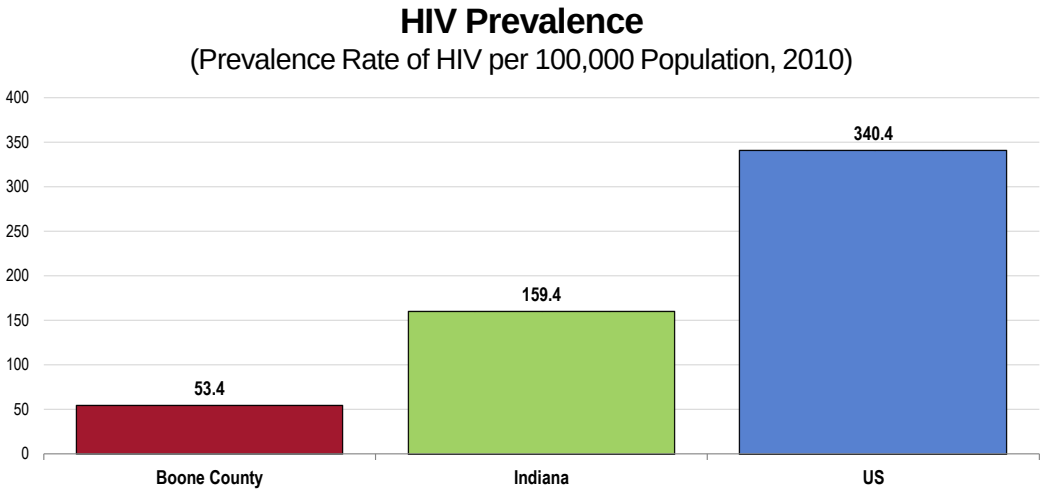
Public perception in the US about the seriousness of the HIV epidemic has declined in recent years. There is evidence that risky behaviors may be increasing among uninfected people, especially gay and bisexual men. Ongoing media and social campaigns for the general public and HIV prevention interventions for uninfected persons who engage in risky behaviors are critical.

- Healthy People 2020 (www.healthypeople.gov)

HIV Prevalence

In 2010, there was a prevalence of 53.4 HIV cases per 100,000 population in Boone County.

- More favorable than the statewide prevalence.
- Much more favorable than the national prevalence.

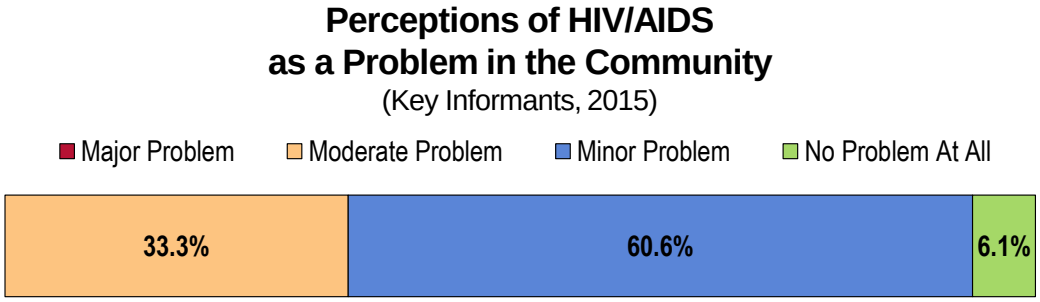


Sources:
- Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention: 2010.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because HIV is a life-threatening communicable disease that disproportionately affects minority populations and may also indicate the prevalence of unsafe sex practices.

Key Informant Input: HIV/AIDS

A total of 6 in 10 key informants taking part in an online survey characterized *HIV/AIDS* as a "minor problem" in the community.



Sources:
- PRC Online Key Informant Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

Sexually Transmitted Diseases

About Sexually Transmitted Diseases

STDs refer to more than 25 infectious organisms that are transmitted primarily through sexual activity. Despite their burdens, costs, and complications, and the fact that they are largely preventable, STDs remain a significant public health problem in the United States. This problem is largely unrecognized by the public, policymakers, and health care professionals. STDs cause many harmful, often irreversible, and costly clinical complications, such as: reproductive health problems; fetal and perinatal health problems; cancer; and facilitation of the sexual transmission of HIV infection.

Because many cases of STDs go undiagnosed—and some common viral infections, such as human papillomavirus (HPV) and genital herpes, are not reported to CDC at all—the reported cases of chlamydia, gonorrhea, and syphilis represent only a fraction of the true burden of STDs in the US. Untreated STDs can lead to serious long-term health consequences, especially for adolescent girls and young women. Several factors contribute to the spread of STDs.

Biological Factors. STDs are acquired during unprotected sex with an infected partner. Biological factors that affect the spread of STDs include:

- **Asymptomatic nature of STDs**. The majority of STDs either do not produce any symptoms or signs, or they produce symptoms so mild that they are unnoticed; consequently, many infected persons do not know that they need medical care.
- **Gender disparities**. Women suffer more frequent and more serious STD complications than men do. Among the most serious STD complications are pelvic inflammatory disease, ectopic pregnancy (pregnancy outside of the uterus), infertility, and chronic pelvic pain.
- **Age disparities**. Compared to older adults, sexually active adolescents ages 15 to 19 and young adults ages 20 to 24 are at higher risk for getting STDs.
- **Lag time between infection and complications**. Often, a long interval, sometimes years, occurs between acquiring an STD and recognizing a clinically significant health problem.

Social, Economic and Behavioral Factors. The spread of STDs is directly affected by social, economic, and behavioral factors. Such factors may cause serious obstacles to STD prevention due to their influence on social and sexual networks, access to and provision of care, willingness to seek care, and social norms regarding sex and sexuality. Among certain vulnerable populations, historical experience with segregation and discrimination exacerbates these factors. Social, economic, and behavioral factors that affect the spread of STDs include: racial and ethnic disparities; poverty and marginalization; access to healthcare; substance abuse; sexuality and secrecy (stigma and discomfort discussing sex); and sexual networks (persons “linked” by sequential or concurrent sexual partners).

- Healthy People 2020 (www.healthypeople.gov)

Chlamydia & Gonorrhea

In 2012, the chlamydia incidence rate in Boone County was 248.8 cases per 100,000 population.

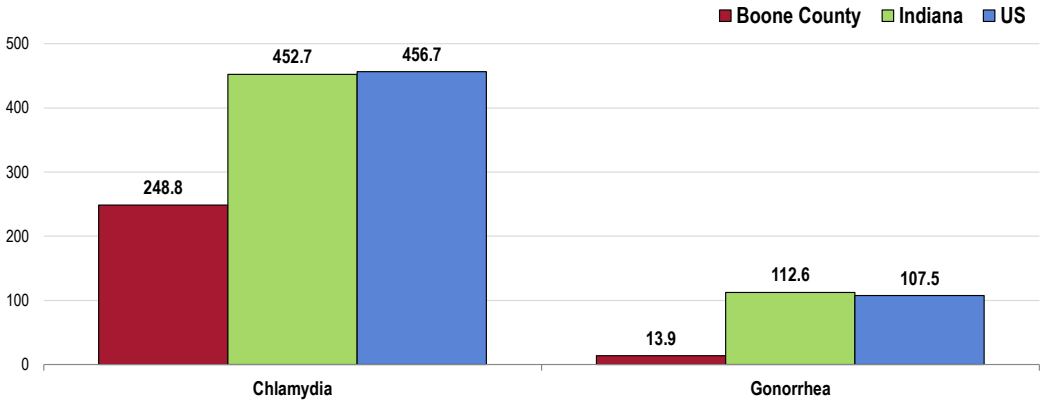
- Notably lower than the Indiana incidence rate.
- Notably lower than the national incidence rate.

The service area gonorrhea incidence rate in 2012 was 13.9 cases per 100,000 population.

- Notably lower than the Indiana incidence rate.
- Notably lower than the national incidence rate.

Chlamydia & Gonorrhea Incidence

(Incidence Rate per 100,000 Population, 2012)



Sources:
- Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention: 2011.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because it is a measure of poor health status and indicates the prevalence of unsafe sex practices.

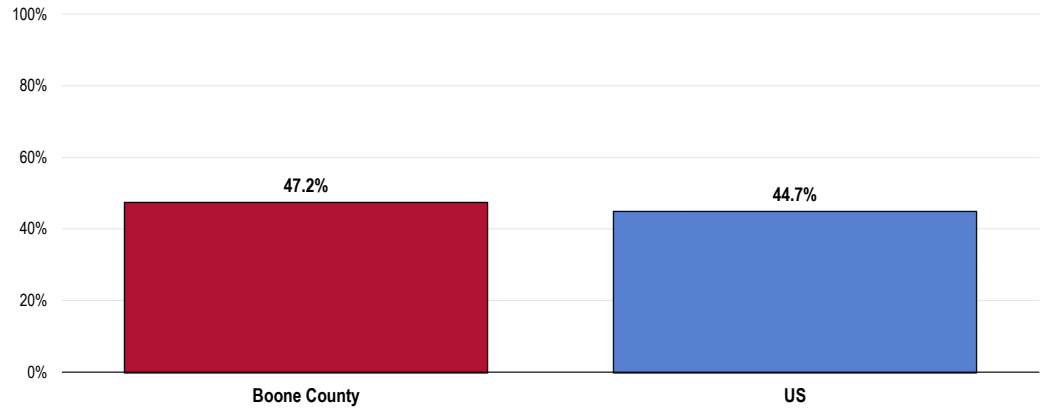
Hepatitis B Vaccination

Based on survey data, nearly half of Boone County adults (47.2%) report having received the hepatitis B vaccination series.

- Similar to what is reported nationwide.

Respondents were told that, to be vaccinated against hepatitis B, a series of three shots must be administered, usually at least one month between shots. They were then asked if they had completed this vaccination series.

Have Completed the Hepatitis B Vaccination Series



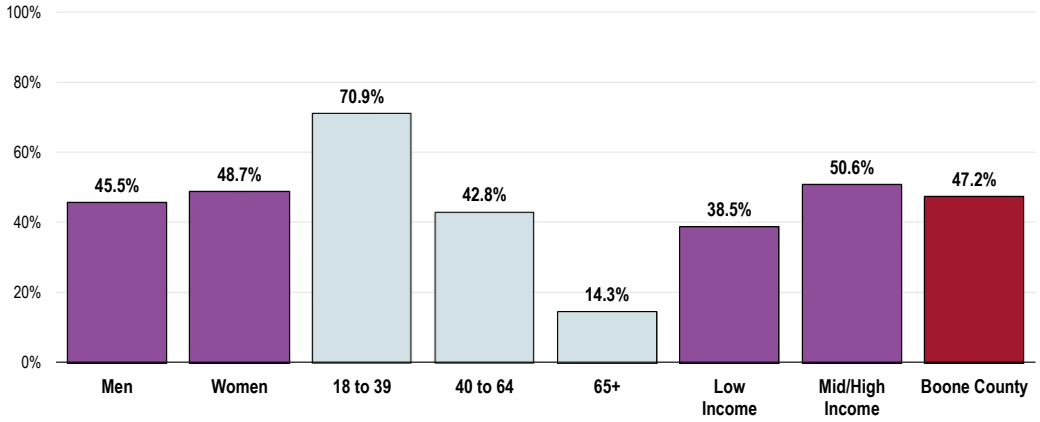
Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 70]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Includes a series of three shots, usually administered at least one month between shots

- Note the negative correlation between age and hepatitis B vaccination.
- In addition, residents living at higher incomes are more likely than those with lower incomes to have received the hepatitis B vaccine.

Have Completed the Hepatitis B Vaccination Series

(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 70]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

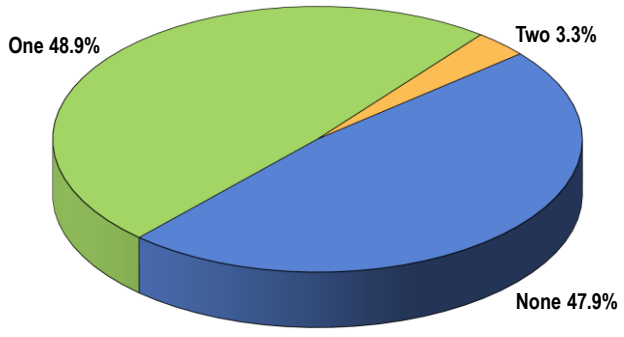
Safe Sexual Practices

Sexual Partners

Among unmarried Boone County adults under 65, the vast majority cites having one (48.9%) or no (47.9%) sexual partners in the past 12 months.

Number of Sexual Partners in Past 12 Months

(Among Unmarried Adults Age 18-64; Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 86]

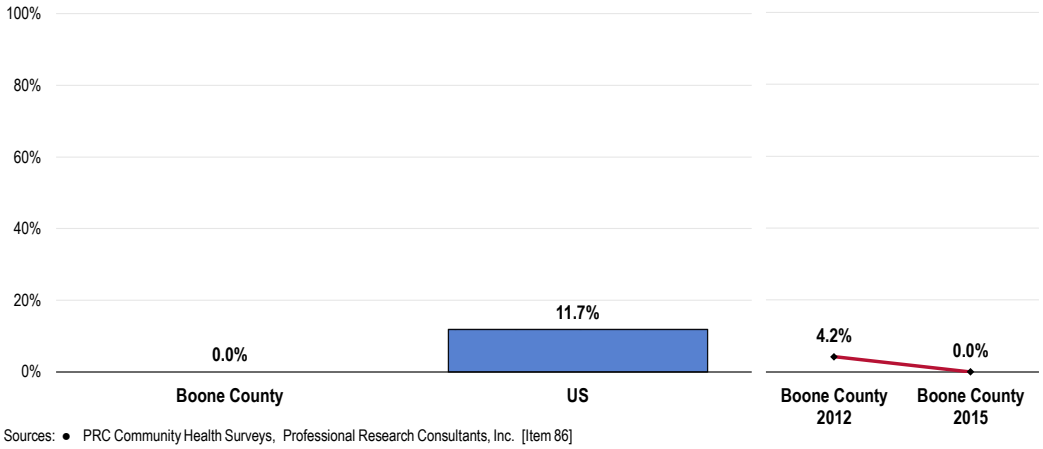
Notes:
- Asked of all unmarried respondents under the age of 65.

No survey respondents report having three or more sexual partners in the past year.

- The national prevalence is much higher.
- TREND: Marks a statistically significant decrease since 2012.

Had Three or More Sexual Partners in the Past Year

(Among Unmarried Adults Age 18-64)



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 86]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all unmarried respondents under the age of 65.

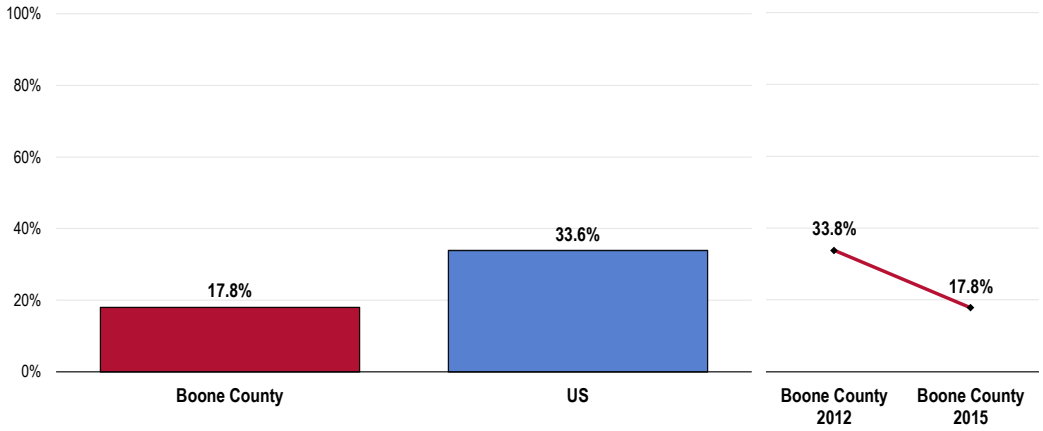
Condom Use

Among service area adults who are under age 65 and unmarried, 17.8% report that a condom was used during their last sexual intercourse.

- Statistically lower than national findings.
- TREND: Denotes a statistically significant decrease in condom use since 2012.

Condom Was Used During Last Sexual Intercourse

(Among Unmarried Adults Age 18-64)

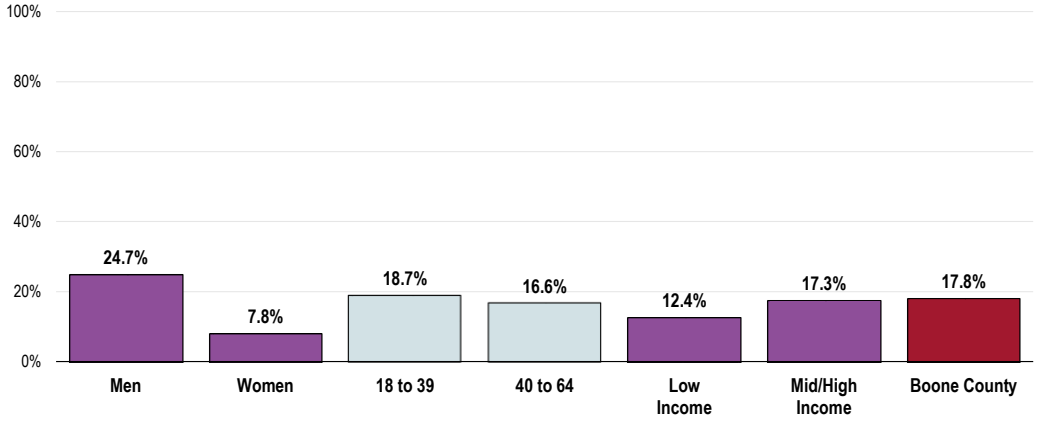


Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 87]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all unmarried respondents under the age of 65.

- Boone County women are less likely to report that a condom was used during their last sexual intercourse.

Condom Was Used During Last Sexual Intercourse

(Among Unmarried Adults Age 18-64; Boone County, 2015)



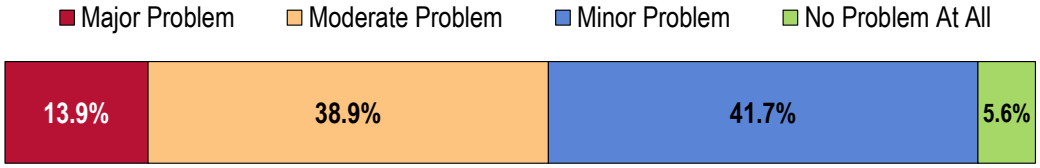
Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 87]
Notes: • Asked of all unmarried respondents under the age of 65.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Key Informant Input: Sexually Transmitted Diseases

A plurality of key informants taking part in an online survey characterized *Sexually Transmitted Diseases* as a "minor problem" in the community.

Perceptions of Sexually Transmitted Diseases as a Problem in the Community

(Key Informants, 2015)



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons related to the following:

Prevalence/Incidence

> *Because the results of the STD clinic show that and I'm sure all people are being tested. – Other Health Provider*
>
> *The health department sees many of the STDs in the area. – Public Health Representative*

Injection Drug Use

> *The heroin and needle use epidemic. – Other Health Provider*

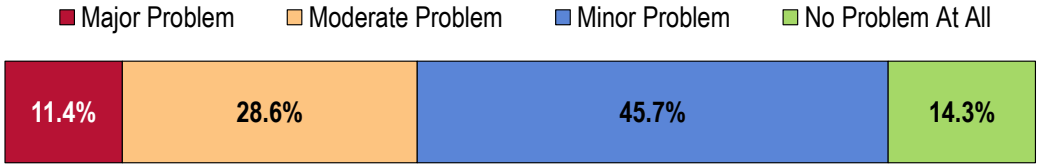
Immunization & Infectious Diseases

Key Informant Input: Immunization & Infectious Diseases

The largest share of key informants taking part in an online survey characterized *Immunization & Infectious Diseases* as a "minor problem" in the community.

Perceptions of Immunization and Infectious Diseases as a Problem in the Community

(Key Informants, 2015)



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Children

> *Children spreading illness at daycare and some aren't getting proper immunizations or wellness check-ups. – Community Business Leader*

Education

> *Education to the population on the importance of immunizations and resources available to them to get both children and adult immunizations as well as resources for adult immunizations for those who cannot afford to get them. – Public Health Representative*

Lack of Resources

> *Some families may not have the means to protect their families with needed immunizations. – Community Business Leader*

Injection Drug Use

> *The heroin and needle use epidemic in Boone County contributes to infectious diseases ranking as a major problem. – Other Health Provider*

Births

Professional Research Consultants, Inc.

Birth Outcomes & Risks

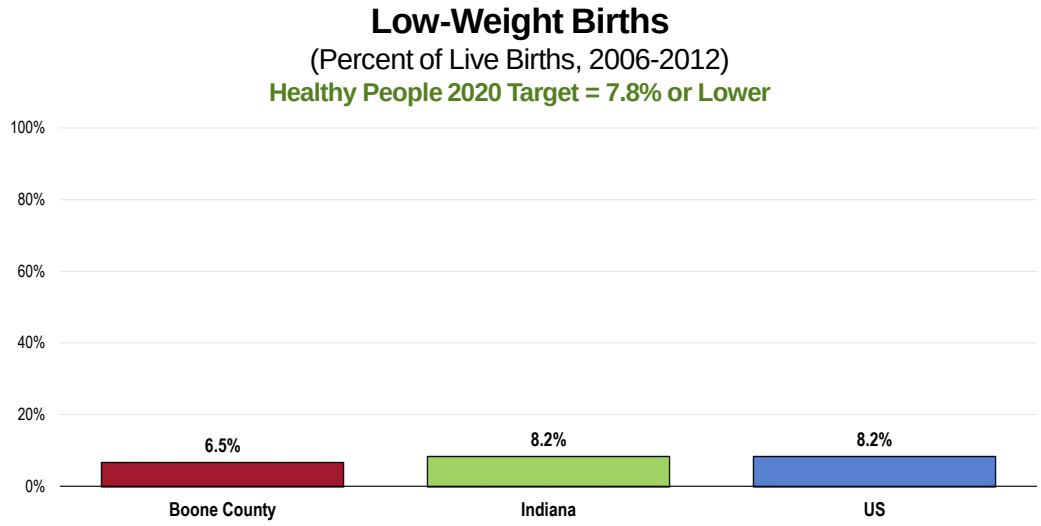
Low-Weight Births

Low birthweight babies, those who weigh less than 2,500 grams (5 pounds, 8 ounces) at birth, are much more prone to illness and neonatal death than are babies of normal birthweight.

Largely a result of receiving poor or inadequate prenatal care, many low-weight births and the consequent health problems are preventable.

A total of 6.5% of 2006-2012 Boone County births were low-weight.

- Better than the Indiana proportion.
- Better than the national proportion.
- Satisfies the Healthy People 2020 target (7.8% or lower).



Sources:
- Centers for Disease Control and Prevention, National Vital Statistics System: 2006-12. Accessed using CDC WONDER.
- Retrieved December 2015 from Community Commons at http://www.chna.org.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MICH-8.1]

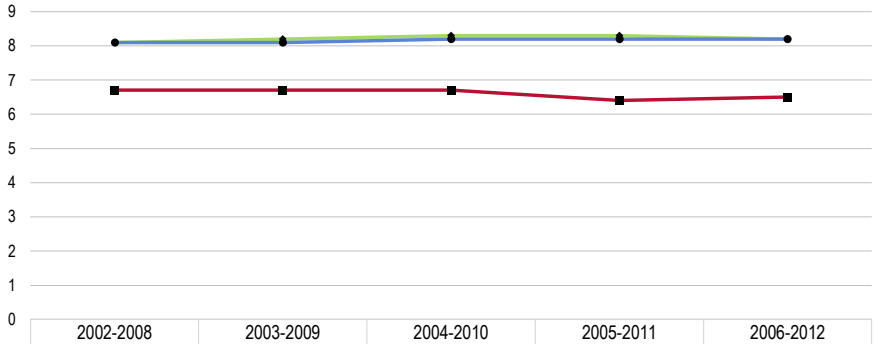
Note:
- This indicator reports the percentage of total births that are low birth weight (under 2500g). This indicator is relevant because low birth weight infants are at high risk for health problems. This indicator can also highlight the existence of health disparities.

- TREND: Low-weight births have been stable in recent years.

Low-Weight Births

(Percent of Live Births)

Healthy People 2020 Target = 7.8% or Lower



	2002-2008	2003-2009	2004-2010	2005-2011	2006-2012
Boone County	6.7	6.7	6.7	6.4	6.5
Indiana	8.1	8.2	8.3	8.3	8.2
US	8.1	8.1	8.2	8.2	8.2

Sources:
- Centers for Disease Control and Prevention, National Vital Statistics System. Accessed using CDC WONDER.
- Retrieved December 2015 from Community Commons at http://www.chna.org.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MICH-8.1]

Note:
- This indicator reports the percentage of total births that are low birth weight (Under 2500g). This indicator is relevant because low birth weight infants are at high risk for health problems. This indicator can also highlight the existence of health disparities.

Infant Mortality

Infant mortality rates reflect deaths of children less than one year old per 1,000 live births.

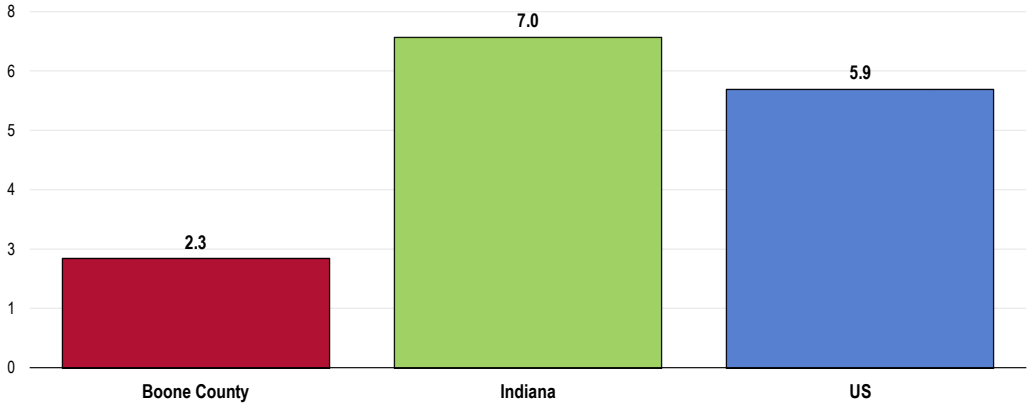
Between 2012 and 2014, there was an annual average of 2.3 infant deaths per 1,000 live births.

- More favorable than the Indiana rate.
- More favorable than the national rate.
- Satisfies the Healthy People 2020 target of 6.0 per 1,000 live births.

Infant Mortality Rate

(Annual Average Infant Deaths per 1,000 Live Births, 2012-2014)

Healthy People 2020 Target = 6.0 or Lower



Sources:
- Centers for Disease Control and Prevention, National Vital Statistics System: 2012-14. Accessed using CDC WONDER.
- Retrieved December 2015 from Community Commons at http://www.chna.org.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MICH-1.3]

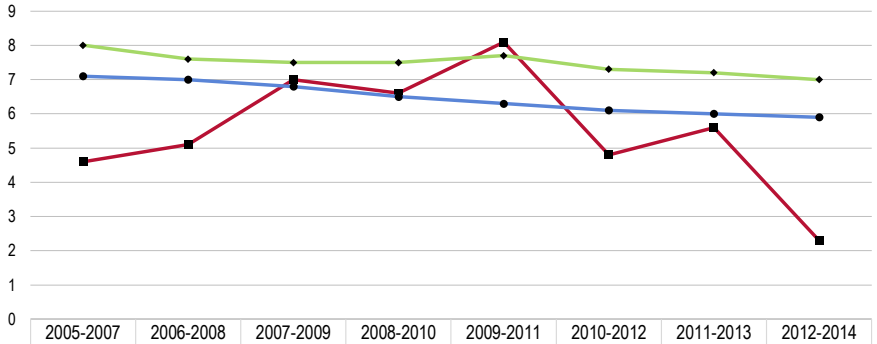
Notes:
- Infant deaths include deaths of children under 1 year old.
- This indicator is relevant because high rates of infant mortality indicate the existence of broader issues pertaining to access to care and maternal and child health.

- TREND: The infant mortality rate has fluctuated considerably over the past decade, decreasing overall; note the steadily decreasing trends both state- and nationwide.

Infant Mortality Rate

(Annual Average Infant Deaths per 1,000 Live Births)

Healthy People 2020 Target = 6.0 or Lower



	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
Boone County	4.6	5.1	7.0	6.6	8.1	4.8	5.6	2.3
Indiana	8.0	7.6	7.5	7.5	7.7	7.3	7.2	7.0
US	7.1	7.0	6.8	6.5	6.3	6.1	6.0	5.9

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- Centers for Disease Control and Prevention, National Center for Health Statistics.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MICH-1.3]

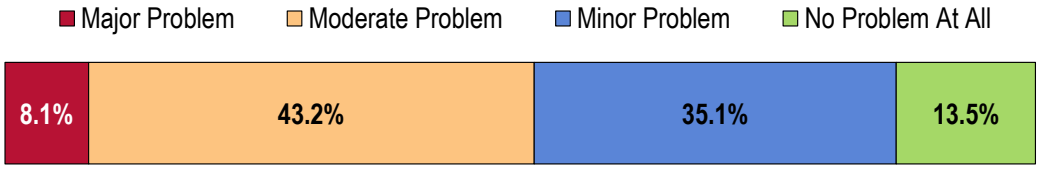
Notes:
- Rates are three-year averages of deaths of children under 1 year old per 1,000 live births.

Key Informant Input: Infant & Child Health

Key informants taking part in an online survey generally characterized *Infant & Child Health* as a "moderate problem" in the community.

Perceptions of Infant and Child Health as a Problem in the Community

(Key Informants, 2015)



Sources:
- PRC Online Key Informant Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Access to Care/Services

> *Access to services that need attention beyond basic services is minimal. – Public Health Representative*

Child Abuse/Neglect

> *Child abuse and neglect. I think there is a lack of resources for parents when they cannot support their children and need immediate assistance. – Other Health Provider*

Childhood Obesity

> *Childhood obesity. – Community Business Leader*

Nutrition

> *Good nutrition and education starts early, exercise versus video games and cell phones. If we get them early, it will make them healthy and aware adults. – Community Business Leader*

Births to Teen Mothers

About Teen Births

The negative outcomes associated with unintended pregnancies are compounded for adolescents. Teen mothers:

- Are less likely to graduate from high school or attain a GED by the time they reach age 30.
- Earn an average of approximately $3,500 less per year, when compared with those who delay childbearing.
- Receive nearly twice as much Federal aid for nearly twice as long.

Similarly, early fatherhood is associated with lower educational attainment and lower income. Children of teen parents are more likely to have lower cognitive attainment and exhibit more behavior problems. Sons of teen mothers are more likely to be incarcerated, and daughters are more likely to become adolescent mothers.

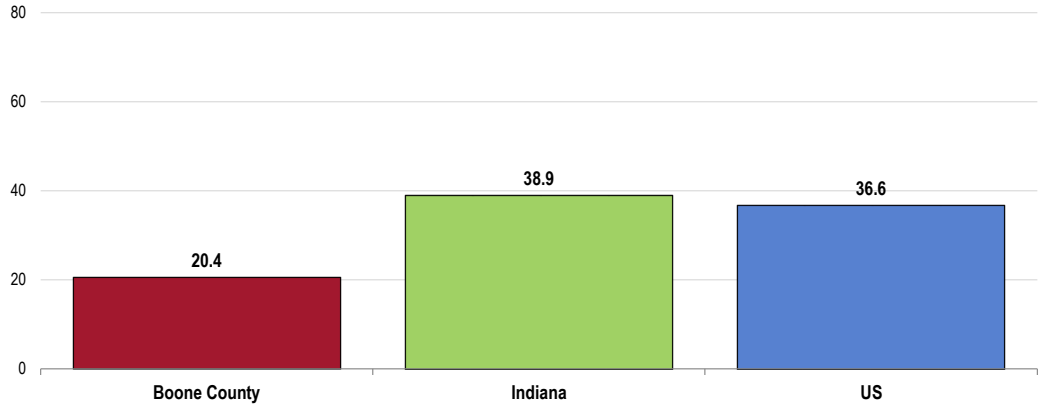
- Healthy People 2020 (www.healthypeople.gov)

Between 2006 and 2012, there was an annual average of 20.4 births to women age 15-19 per 1,000 population in that age group.

- Lower than the Indiana proportion.
- Lower than the national proportion.

Teen Birth Rate

(Births to Women Age 15-19 Per 1,000 Female Population Age 15-19, 2006-2012)



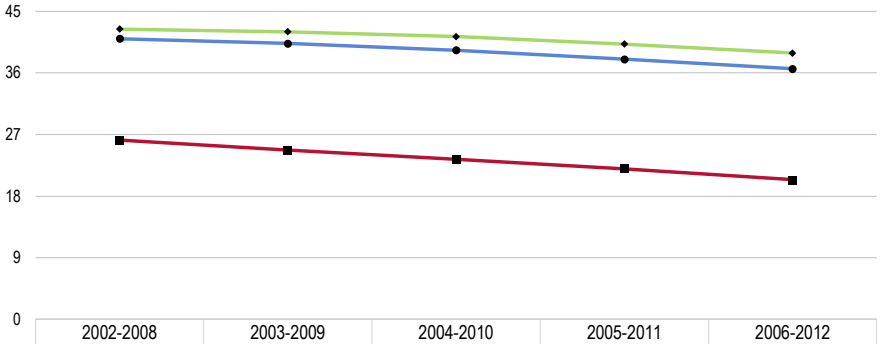
Sources:
- Centers for Disease Control and Prevention, National Vital Statistics System: 2006-2012. Accessed using CDC WONDER.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the rate of total births to women under the age of 15-19 per 1,000 female population age 15-9. This indicator is relevant because in many cases, teen parents have unique social, economic, and health support services. Additionally, high rates of teen pregnancy may indicate the prevalence of unsafe sex practices.

- TREND: This ratio has decreased over time; the same can be said both statewide and nationwide.

Teen Birth Rate

(Births to Women Age 15-19 Per 1,000 Female Population Age 15-19)



	2002-2008	2003-2009	2004-2010	2005-2011	2006-2012
Boone County	26.2	24.7	23.4	22.0	20.4
Indiana	42.4	42.0	41.3	40.2	38.9
US	41.0	40.3	39.3	38.0	36.6

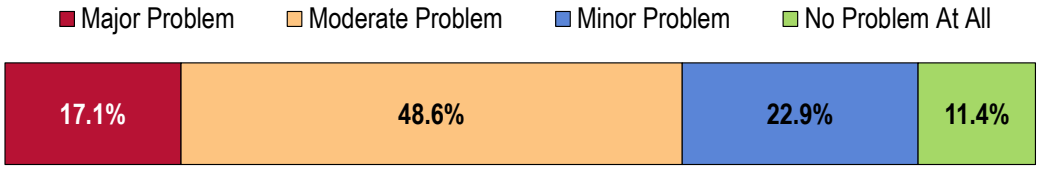
Sources:
- Centers for Disease Control and Prevention, National Vital Statistics System: 2006-2012. Accessed using CDC WONDER.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the rate of total births to women under the age of 15-19 per 1,000 female population age 15-19. This indicator is relevant because in many cases, teen parents have unique social, economic, and health support services. Additionally, high rates of teen pregnancy may indicate the prevalence of unsafe sex practices.

Key Informant Input: Family Planning

Key informants taking part in an online survey largely characterized *Family Planning* as a "moderate problem" in the community.

Perceptions of Family Planning as a Problem in the Community
(Key Informants, 2015)



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Prevalence/Incidence

Too many young people or addicted people are having babies. – Social Services Provider

Have a fair number of teen pregnancies that we encounter. – Public Health Representative

Too many people having kids who are either poor parents or ill-prepared. – Other Health Provider

Too many unplanned pregnancies and people living in generational poverty. – Other Health Provider

Poverty

I see many young mothers and/or children growing up in divided families. Many of these individuals seem to be stuck in a cycle of poverty. The parents don't have or don't make use of access to parenting resources. Young people don't take into account all of the life-changing aspects of parenthood and the responsibilities that come with it. – Community Business Leader

Insurance, an understanding in the poverty culture. – Social Services Provider

Modifiable Health Risks

Professional Research Consultants, Inc.

Actual Causes Of Death

While causes of death are typically described as the diseases or injuries immediately precipitating the end of life, a few important studies have shown that the actual causes of premature death (reflecting underlying risk factors) are often preventable.

About Contributors to Mortality

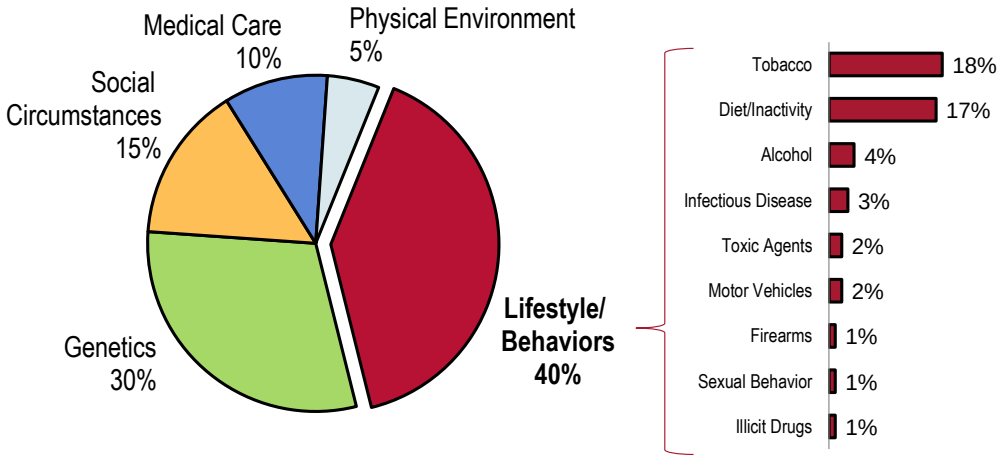
A 1999 study (an update to a landmark 1993 study), estimated that as many as 40% of premature deaths in the United States are attributed to behavioral factors. This study found that behavior patterns represent the single-most prominent domain of influence over health prospects in the United States. The daily choices we make with respect to diet, physical activity, and sex; the substance abuse and addictions to which we fall prey; our approach to safety; and our coping strategies in confronting stress are all important determinants of health.

The most prominent contributors to mortality in the United States in 2000 were **tobacco** (an estimated 435,000 deaths), **diet and activity** patterns (400,000), **alcohol** (85,000), **microbial agents** (75,000), **toxic agents** (55,000), **motor vehicles** (43,000), **firearms** (29,000), **sexual behavior** (20,000), and **illicit use of drugs** (17,000). Socioeconomic status and access to medical care are also important contributors, but difficult to quantify independent of the other factors cited. Because the studies reviewed used different approaches to derive estimates, the stated numbers should be viewed as first approximations.

These analyses show that smoking remains the leading cause of mortality. However, poor diet and physical inactivity may soon overtake tobacco as the leading cause of death. These findings, along with escalating healthcare costs and aging population, argue persuasively that the need to establish a more preventive orientation in the US healthcare and public health systems has become more urgent.

- Ali H. Mokdad, PhD; James S. Marks, MD, MPH; Donna F. Stroup, Phd, MSc; Julie L. Gerberding, MD, MPH. "Actual Causes of Death in the United States." JAMA, 291(2004):1238-1245.

Factors Contributing to Premature Deaths in the United States



Sources: ● "The Case For More Active Policy Attention to Health Promotion"; (McGinnis, Williams-Russo, Knickman) Health Affairs. Vol. 32. No. 2. March/April 2002. "Actual Causes of Death in the United States": (Ali H. Mokdad, PhD; James S. Marks, MD, MPH; Donna F. Stroup, PhD, MSc; Julie L. Gerberding, MD, MPH.) JAMA. 291 (2000) 1238-1245.

Leading Causes of Death	Underlying Risk Factors (Actual Causes of Death)	
Cardiovascular Disease	Tobacco use Elevated serum cholesterol High blood pressure	Obesity Diabetes Sedentary lifestyle
Cancer	Tobacco use Improper diet	Alcohol Occupational/environmental exposures
Cerebrovascular Disease	High blood pressure Tobacco use	Elevated serum cholesterol
Accidental Injuries	Safety belt noncompliance Alcohol/substance abuse Reckless driving	Occupational hazards Stress/fatigue
Chronic Lung Disease	Tobacco use	Occupational/environmental exposures

Source: National Center for Health Statistics/US Department of Health and Human Services, Health United States: 1987. DHHS Pub. No. (PHS) 88–1232.

Nutrition

About Healthful Diet & Healthy Weight

Strong science exists supporting the health benefits of eating a healthful diet and maintaining a healthy body weight. Efforts to change diet and weight should address individual behaviors, as well as the policies and environments that support these behaviors in settings such as schools, worksites, healthcare organizations, and communities.

The goal of promoting healthful diets and healthy weight encompasses increasing household food security and eliminating hunger.

Americans with a healthful diet:

- Consume a variety of nutrient-dense foods within and across the food groups, especially whole grains, fruits, vegetables, low-fat or fat-free milk or milk products, and lean meats and other protein sources.
- Limit the intake of saturated and trans fats, cholesterol, added sugars, sodium (salt), and alcohol.
- Limit caloric intake to meet caloric needs.

Diet and body weight are related to health status. Good nutrition is important to the growth and development of children. A healthful diet also helps Americans reduce their risks for many health conditions, including: overweight and obesity; malnutrition; iron-deficiency anemia; heart disease; high blood pressure; dyslipidemia (poor lipid profiles); type 2 diabetes; osteoporosis; oral disease; constipation; diverticular disease; and some cancers.

Diet reflects the variety of foods and beverages consumed over time and in settings such as worksites, schools, restaurants, and the home. Interventions to support a healthier diet can help ensure that:

- Individuals have the knowledge and skills to make healthier choices.
- Healthier options are available and affordable.

Social Determinants of Diet. Demographic characteristics of those with a more healthful diet vary with the nutrient or food studied. However, most Americans need to improve some aspect of their diet.

Social factors thought to influence diet include:

- Knowledge and attitudes
- Skills
- Social support
- Societal and cultural norms
- Food and agricultural policies
- Food assistance programs
- Economic price systems

Physical Determinants of Diet. Access to and availability of healthier foods can help people follow healthful diets. For example, better access to retail venues that sell healthier options may have a positive impact on a person's diet; these venues may be less available in low-income or rural neighborhoods.

The places where people eat appear to influence their diet. For example, foods eaten away from home often have more calories and are of lower nutritional quality than foods prepared at home.

Marketing also influences people's—particularly children's—food choices.

- Healthy People 2020 (www.healthypeople.gov)

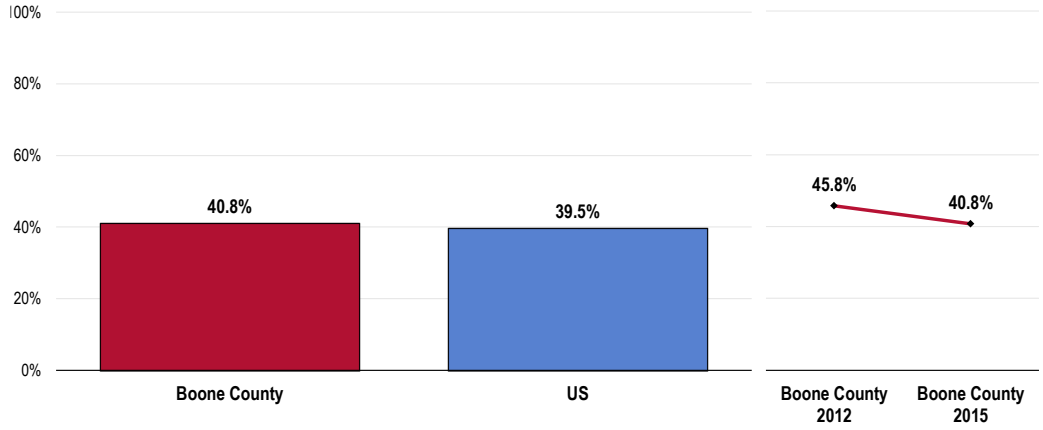
Daily Recommendation of Fruits/Vegetables

A total of 40.8% of Boone County adults report eating five or more servings of fruits and/or vegetables per day.

To measure fruit and vegetable consumption, survey respondents were asked multiple questions, specifically about the foods and drinks they consumed on the day prior to the interview.

- Similar to national findings.
- TREND: Fruit/vegetable consumption has not changed significantly since 2012.

Consume Five or More Servings of Fruits/Vegetables Per Day

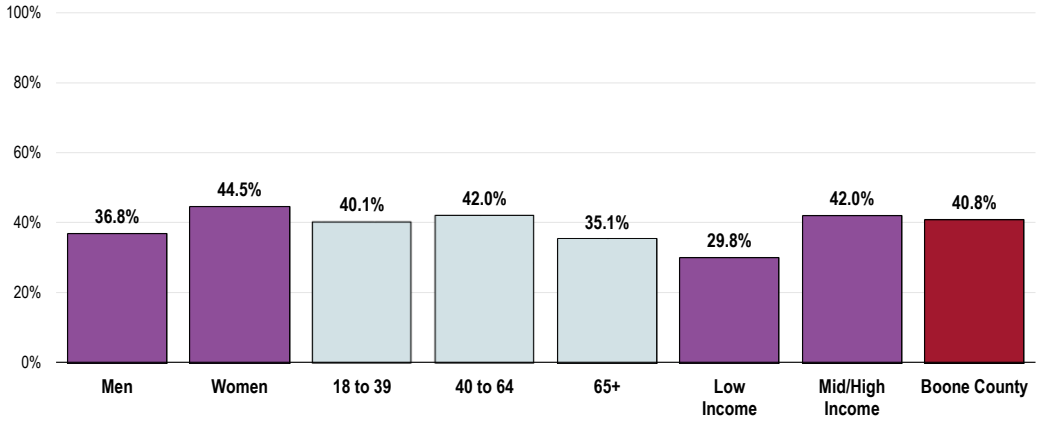


Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 146]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- For this issue, respondents were asked to recall their food intake on the previous day.

- Area men are less likely to get the recommended servings of daily fruits/vegetables, as are seniors and low-income adults.

Consume Five or More Servings of Fruits/Vegetables Per Day
(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 146]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.
- For this issue, respondents were asked to recall their food intake on the previous day.

Access to Fresh Produce

Difficulty Accessing Fresh Produce

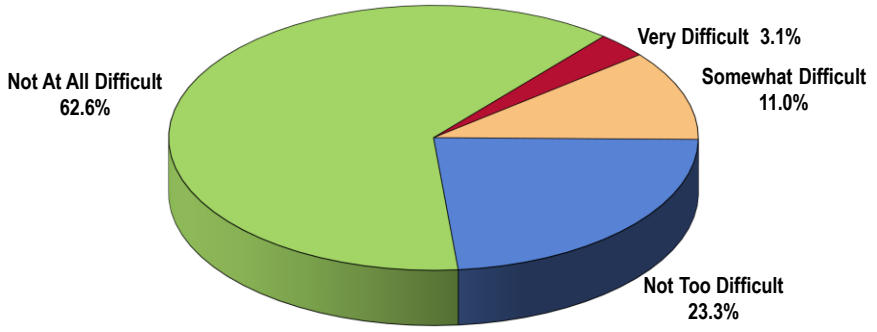
While most report little or no difficulty, 14.1% of Boone County adults report that it is "very" or "somewhat" difficult for them to access affordable, fresh fruits and vegetables.

Respondents were asked:

"How difficult is it for you to buy fresh produce like fruits and vegetables at a price you can afford? Would you say: Very Difficult, Somewhat Difficult, Not Too Difficult, or Not At All Difficult?"

Level of Difficulty Finding Fresh Produce at an Affordable Price

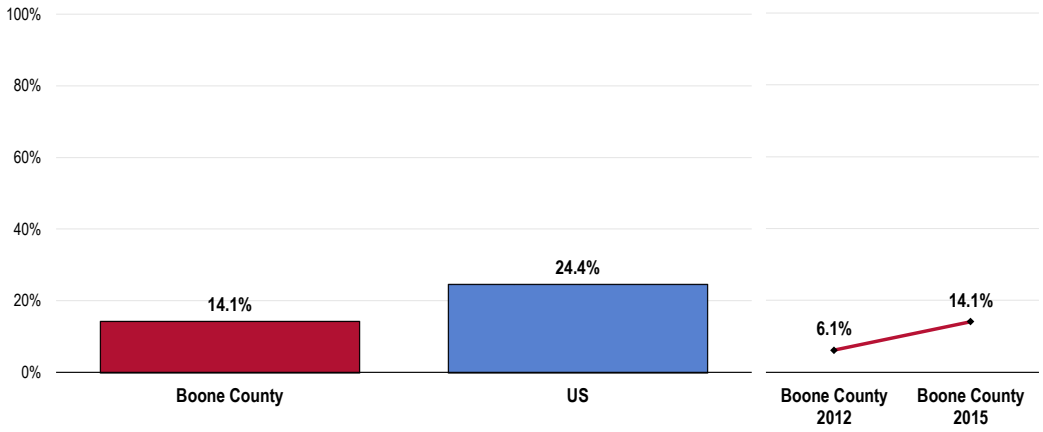
(Boone County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 91]
Notes: • Asked of all respondents.

- More favorable than national findings.
- TREND: Marks a statistically significant increase since 2012.

Find It "Very" or "Somewhat" Difficult to Buy Affordable Fresh Produce

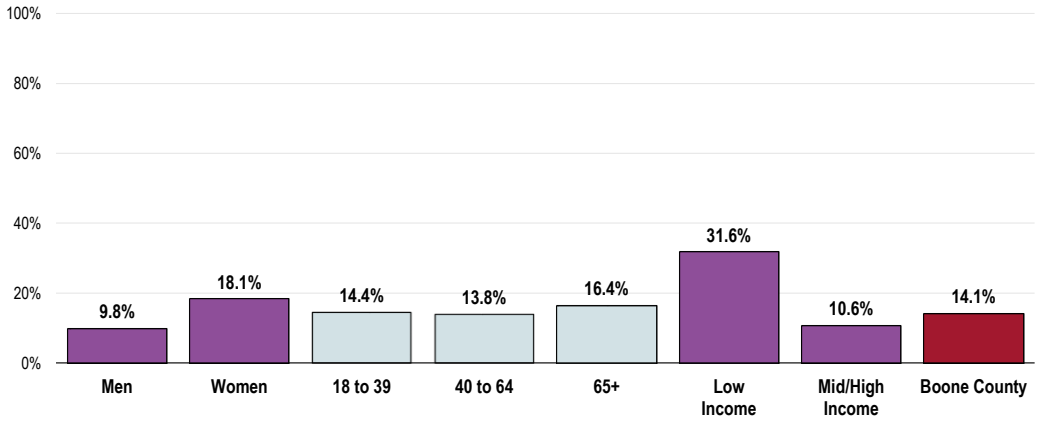


Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 91]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Those more likely to report difficulty getting fresh fruits and vegetables include:

- Women.
- Lower-income residents.

Find It "Very" or "Somewhat" Difficult to Buy Affordable Fresh Produce
(Boone County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 91]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Low Food Access (Food Deserts)

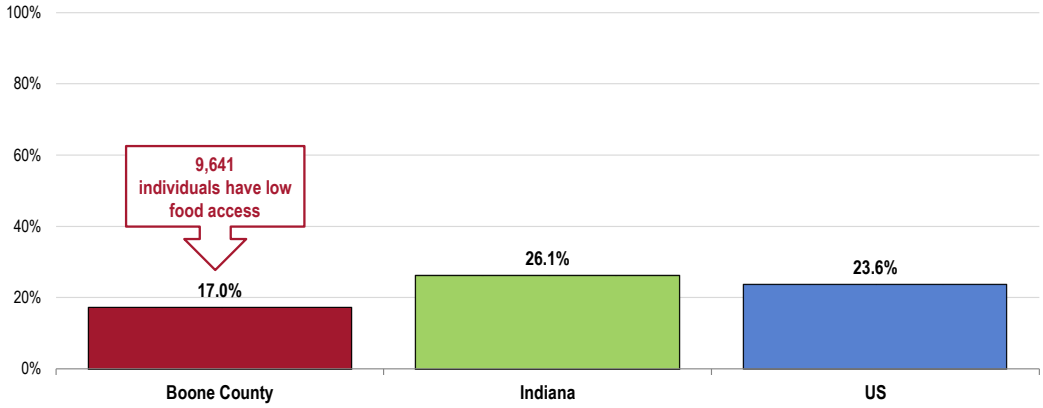
A food desert is defined as a low-income area where a significant number or share of residents is far from a supermarket, where "far" is more than 1 mile in urban areas and more than 10 miles in rural areas.

US Department of Agriculture data show that 17.0% of the Boone County population (representing over 9,600 residents) have low food access or live in a "food desert," meaning that they do not live near a supermarket or large grocery store.

- More favorable than statewide findings.
- More favorable than national findings.

Population With Low Food Access

(Percent of Population That Is Far From a Supermarket or Large Grocery Store, 2010)

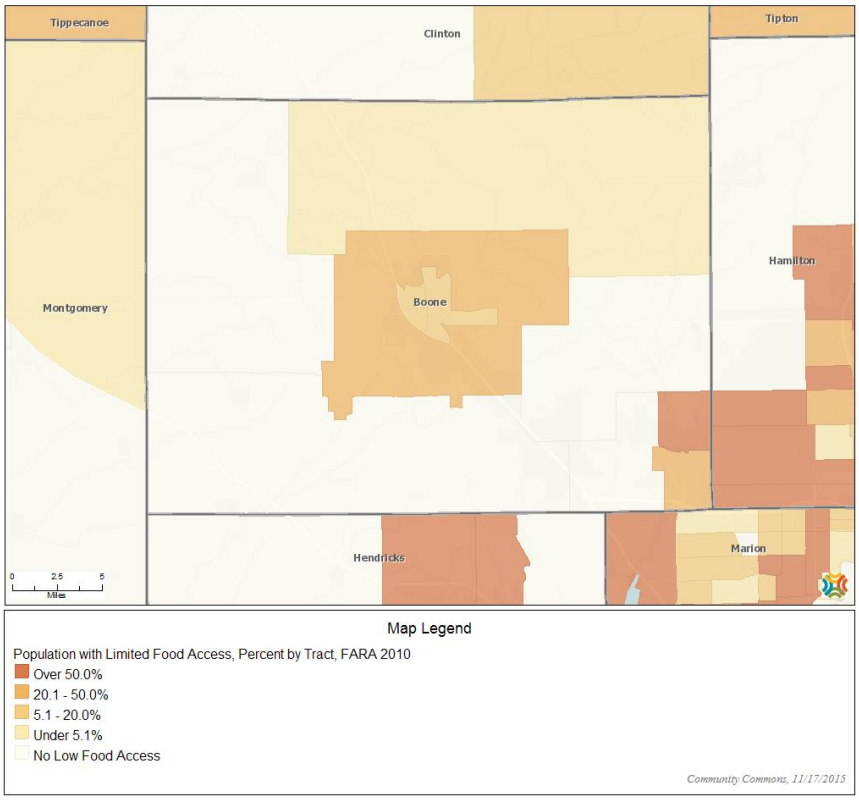


Sources:
- US Department of Agriculture, Economic Research Service, USDA - Food Access Research Atlas (FARA): 2010.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the percentage of the population living in census tracts designated as food deserts. A food desert is defined as low-income areas where a significant number or share of residents is far from a supermarket, where "far" is more than 1 mile in urban areas and more than 10 miles in rural areas. This indicator is relevant because it highlights populations and geographies facing food insecurity.

- The following map provides an illustration of food deserts by census tract.

Population with Limited Food Access, Percent by Tract, FARA 2010



Food Insecurity

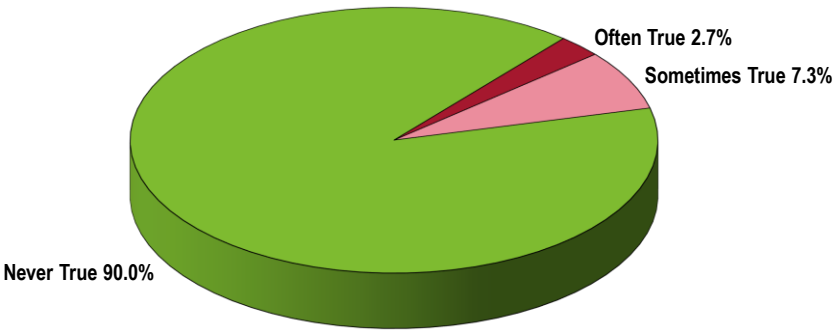
Running Out of Food

Respondents were asked about their level of agreement with the statement:

"In the past year, I worried about whether our food would run out before we had money to buy more."

While 9 in 10 survey respondents never worried about running out of food in the past year, 7.3% report that they "sometimes" worried that their food would run out before there was money for more, and 2.7% "often" had this concern over the past year.

"In the past year, I worried about whether our food would run out before we had money to buy more."
(Boone County, 2015)



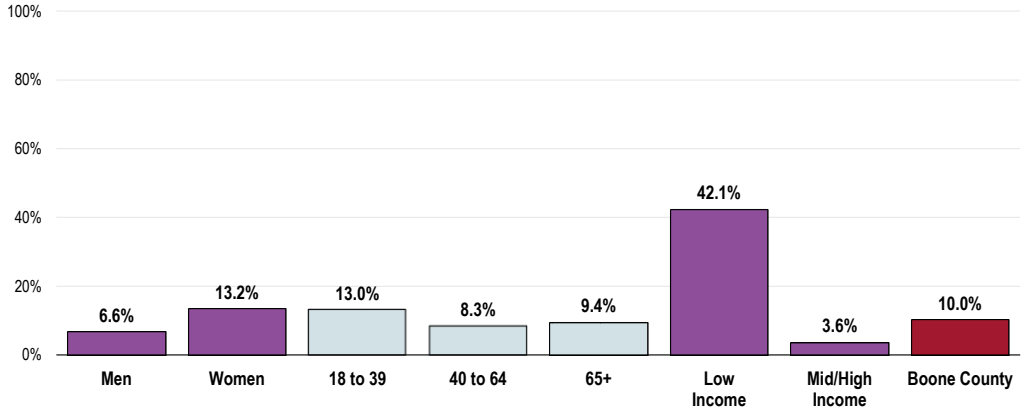
Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 324]
Notes: • Asked of all respondents.

Residents more likely to have worried about running out of food in the past year include:

- Women.
- Lower-income residents.

"Often/Sometimes" Worried About Running Out of Food

(Boone County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 324]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

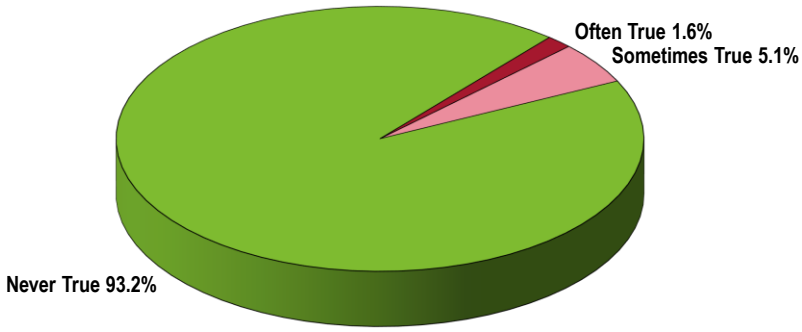
While most survey respondents (93.2%) did not run out of food last year, 5.1% report that they "sometimes" ran out of food before there was money for more, and 1.6% said this "often" happened in the past year.

Respondents were asked about their level of agreement with the statement:

"In the past year, the food we bought just did not last, and we did not have money for more."

"*In the past year, the food we bought just did not last, and we did not have money for more*."

(Boone County, 2015)



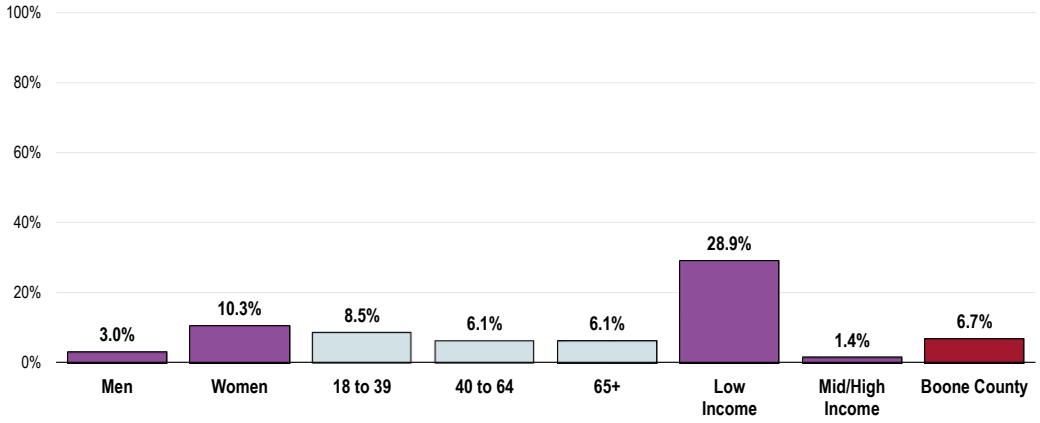
Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 325]
Notes: • Asked of all respondents.

Adults more likely to have run out of food in the past year include:

- Women.
- Lower-income residents.

"Often/Sometimes" Ran Out of Food in the Past Year

(Boone County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 325]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

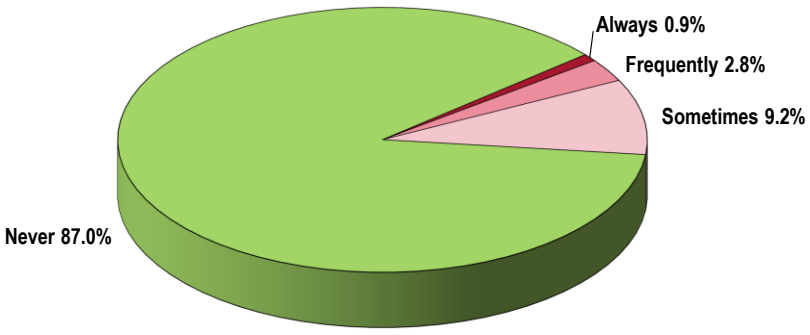
Budgeting for Food

While most county residents "never" have to choose between buying food and paying household bills, 9.2% report "sometimes" having to make this choice, and 2.8% "frequently" have to choose between food and paying bills.

- Note that 0.9% "always" face this decision.

Have to Choose Between Food and Paying Household Bills

(Boone County, 2015)

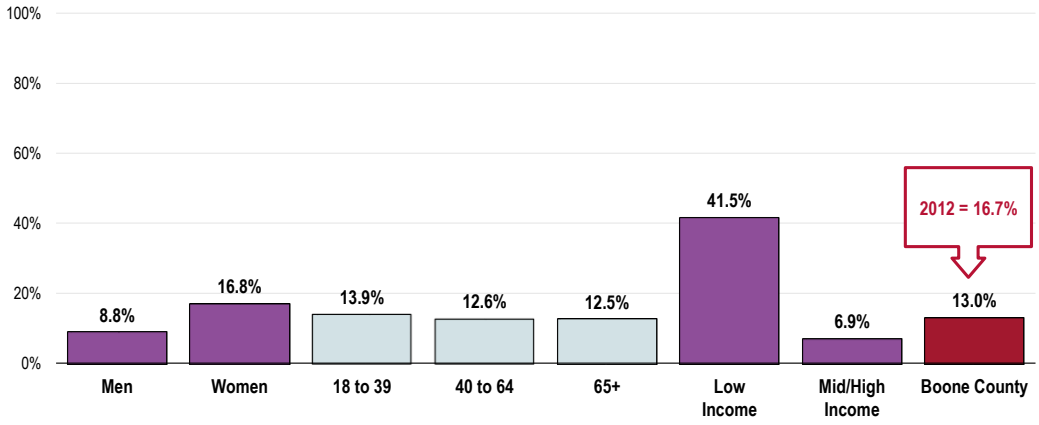


Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 326]
Notes: • Asked of all respondents.

- The prevalence is higher among women and especially lower-income adults.
- TREND: Marks a statistically significant decrease over time.

"Always/Frequently/Sometimes" Have to Choose Between Food and Paying Household Bills

(Boone County, 2015)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 326]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

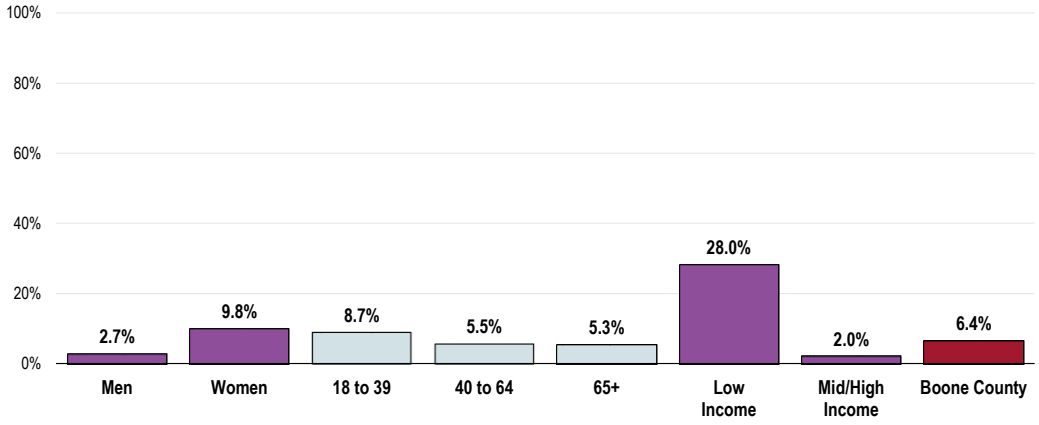
Use of Food Banks/Free Meals

A total of 6.4% of county residents used a food bank or received a free meal in the past year.

- The prevalence is highest among women and especially low-income adults.

Used a Food Bank or Received a Free Meal in the Past Year

(Boone County, 2015)



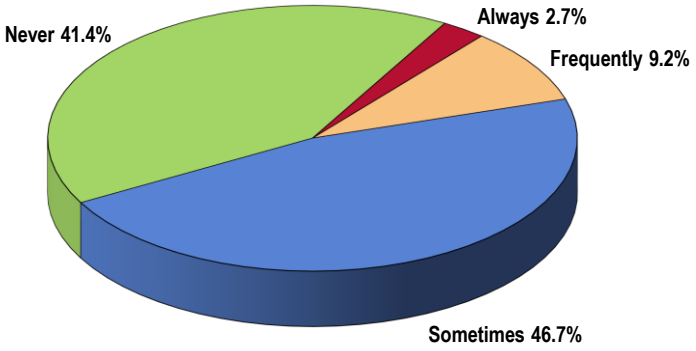
Sources: • 2015 PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 327]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Organic Food

Asked about the frequency with which they purchase organic food when available, 41.4% of survey respondents said "never" and 46.7% said "sometimes."

- On the other hand, 9.2% of respondents "frequently" purchase organic food when available, and 2.7% "always" do.

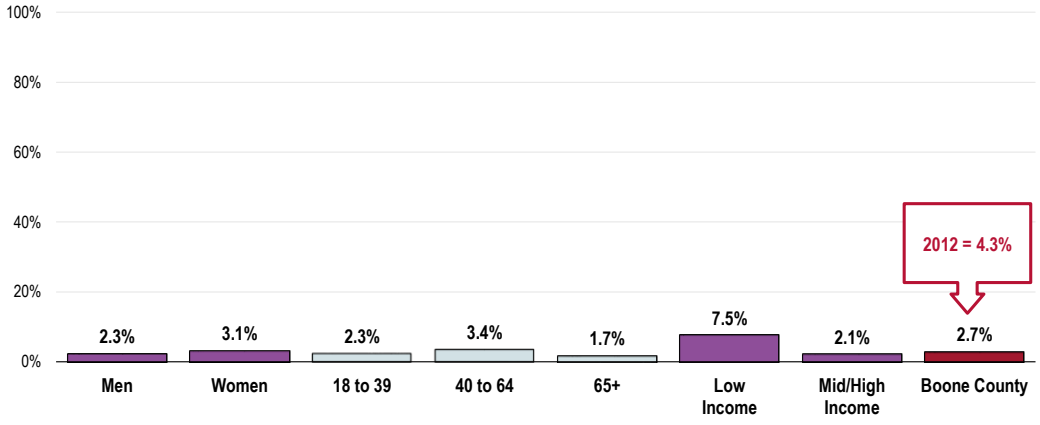
Frequency of Purchasing Organic Food When Available
(Boone County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 322]
Notes: • Asked of all respondents.

- Adults with lower incomes are more likely to "always" purchase organic food when available.
- TREND: The proportion of "always" responses is statistically unchanged over time.

"Always" Purchase Organic Food When Available
(Boone County, 2015)



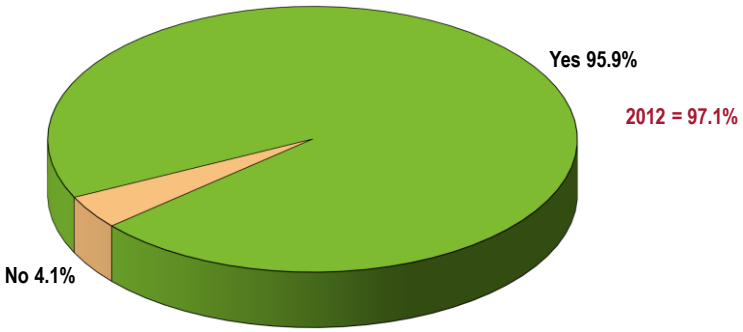
Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 322]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Most county residents (95.9%) report having local grocery or convenience stores that offer organic food options.

- Statistically unchanged since 2012.

Have Grocery Stores or Convenience Stores Offering Organic Food Options in the Community

(Boone County, 2015)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 323]
Notes: • Asked of all respondents.

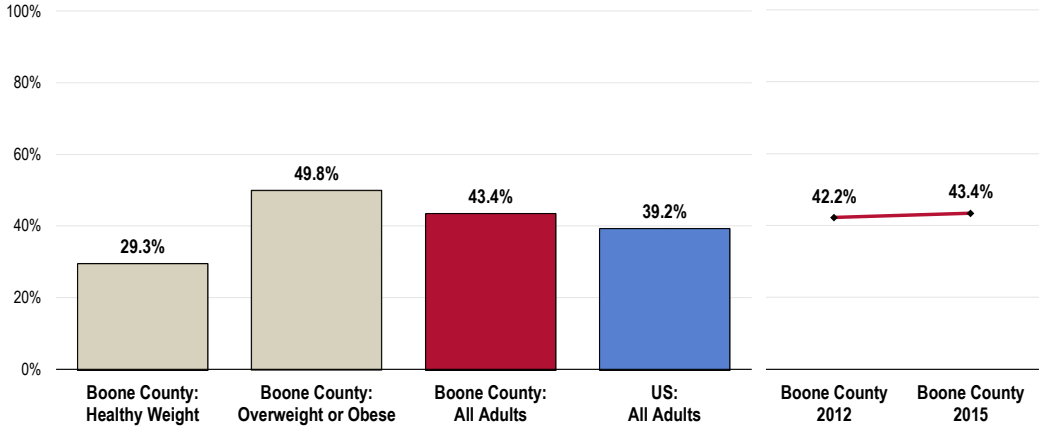
Health Advice About Diet & Nutrition

A total of 43.4% of survey respondents acknowledge that a physician counseled them about diet and nutrition in the past year.

- Comparable to national findings.
- TREND: Statistically unchanged since 2012.
- Note: Among overweight/obese respondents, 49.8% report receiving diet/nutrition advice (meaning that half did not).

Have Received Advice About Diet and Nutrition in the Past Year From a Physician, Nurse, or Other Health Professional

(By Weight Classification)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 18]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

Physical Activity

About Physical Activity

Regular physical activity can improve the health and quality of life of Americans of all ages, regardless of the presence of a chronic disease or disability. Among adults and older adults, physical activity can lower the risk of: early death; coronary heart disease; stroke; high blood pressure; type 2 diabetes; breast and colon cancer; falls; and depression. Among children and adolescents, physical activity can: improve bone health; improve cardiorespiratory and muscular fitness; decrease levels of body fat; and reduce symptoms of depression. For people who are inactive, even small increases in physical activity are associated with health benefits.

Personal, social, economic, and environmental factors all play a role in physical activity levels among youth, adults, and older adults. Understanding the barriers to and facilitators of physical activity is important to ensure the effectiveness of interventions and other actions to improve levels of physical activity.

Factors **positively** associated with adult physical activity include: postsecondary education; higher income; enjoyment of exercise; expectation of benefits; belief in ability to exercise (self-efficacy); history of activity in adulthood; social support from peers, family, or spouse; access to and satisfaction with facilities; enjoyable scenery; and safe neighborhoods.

Factors **negatively** associated with adult physical activity include: advancing age; low income; lack of time; low motivation; rural residency; perception of great effort needed for exercise; overweight or obesity; perception of poor health; and being disabled. Older adults may have additional factors that keep them from being physically active, including lack of social support, lack of transportation to facilities, fear of injury, and cost of programs.

Among children ages 4 to 12, the following factors have a positive association with physical activity: gender (boys); belief in ability to be active (self-efficacy); and parental support.

Among adolescents ages 13 to 18, the following factors have a positive association with physical activity: parental education; gender (boys); personal goals; physical education/school sports; belief in ability to be active (self-efficacy); and support of friends and family.

Environmental influences positively associated with physical activity among children and adolescents include:

- Presence of sidewalks
- Having a destination/walking to a particular place
- Access to public transportation
- Low traffic density
- Access to neighborhood or school play area and/or recreational equipment

People with disabilities may be less likely to participate in physical activity due to physical, emotional, and psychological barriers. Barriers may include the inaccessibility of facilities and the lack of staff trained in working with people with disabilities.

- Healthy People 2020 (www.healthypeople.gov)

Leisure-Time Physical Activity

Leisure-time physical activity includes any physical activities or exercises (such as running, calisthenics, golf, gardening, walking, etc.) which take place outside of one's line of work.

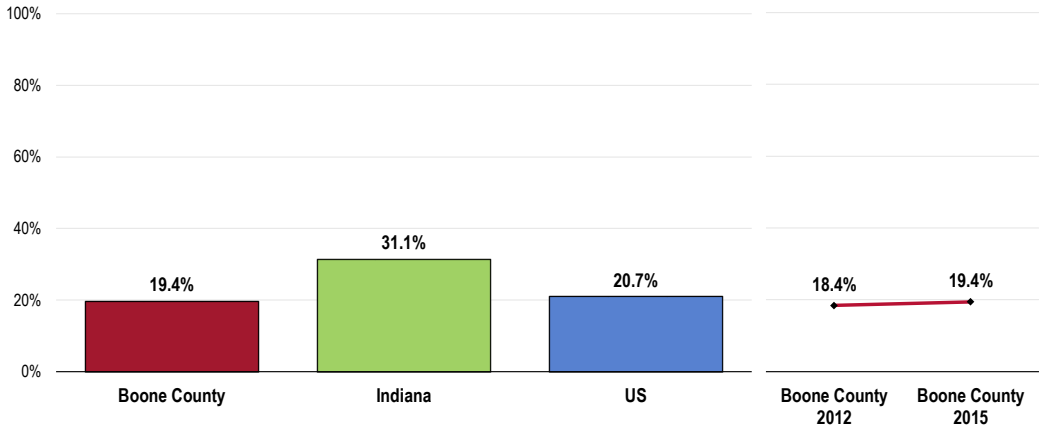
A total of 19.4% of Boone County adults report no leisure-time physical activity in the past month.

- More favorable than statewide findings.
- Similar to national findings.

- Satisfies the Healthy People 2020 target (32.6% or lower).
- TREND: Statistically unchanged since 2012.

No Leisure-Time Physical Activity in the Past Month

Healthy People 2020 Target = 32.6% or Lower



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 92]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective PA-1]

Notes:
- Asked of all respondents.

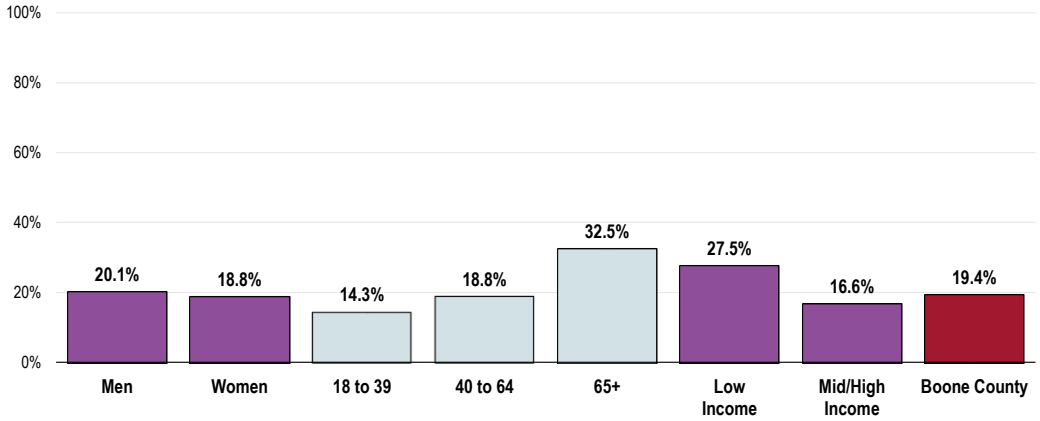
Lack of leisure-time physical activity in the area is higher among:

- Seniors (positive correlation with age).
- Lower-income residents.

No Leisure-Time Physical Activity in the Past Month

(Boone County, 2015)

Healthy People 2020 Target = 32.6% or Lower



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 92]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective PA-1]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Activity Levels

Recommended Levels of Physical Activity

Adults (age 18–64) should do 2 hours and 30 minutes a week of moderate-intensity, or 1 hour and 15 minutes (75 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic physical activity. Aerobic activity should be performed in episodes of at least 10 minutes, preferably spread throughout the week.

Additional health benefits are provided by increasing to 5 hours (300 minutes) a week of moderate-intensity aerobic physical activity, or 2 hours and 30 minutes a week of vigorous-intensity physical activity, or an equivalent combination of both.

Older adults (age 65 and older) should follow the adult guidelines. If this is not possible due to limiting chronic conditions, older adults should be as physically active as their abilities allow. They should avoid inactivity. Older adults should do exercises that maintain or improve balance if they are at risk of falling.

For all individuals, some activity is better than none. Physical activity is safe for almost everyone, and the health benefits of physical activity far outweigh the risks.

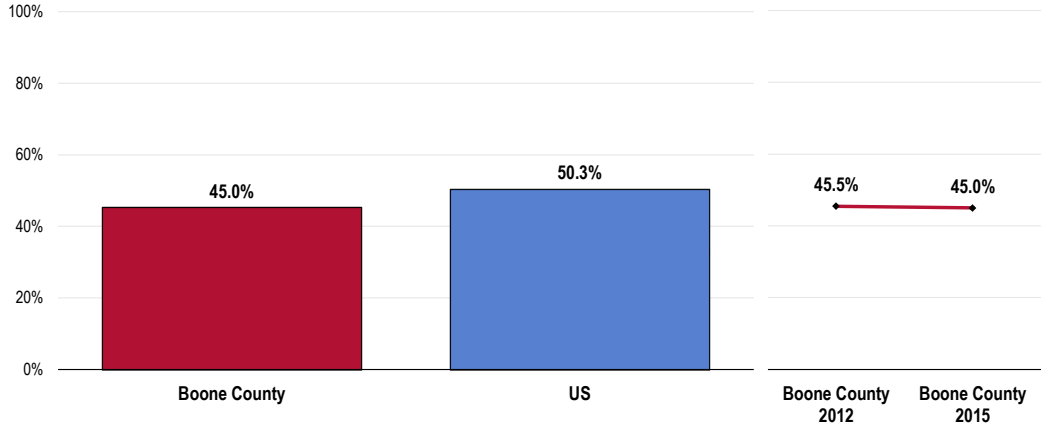
- 2008 Physical Activity Guidelines for Americans, U.S. Department of Health and Human Services. www.health.gov/PAGuidelines

Recommended Levels of Physical Activity

A total of 45.0% of Boone County adults participate in regular, sustained moderate or vigorous physical activity (meeting physical activity recommendations).

- Less favorable than national findings.
- TREND: Statistically unchanged since 2012.

Meets Physical Activity Recommendations



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 147]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

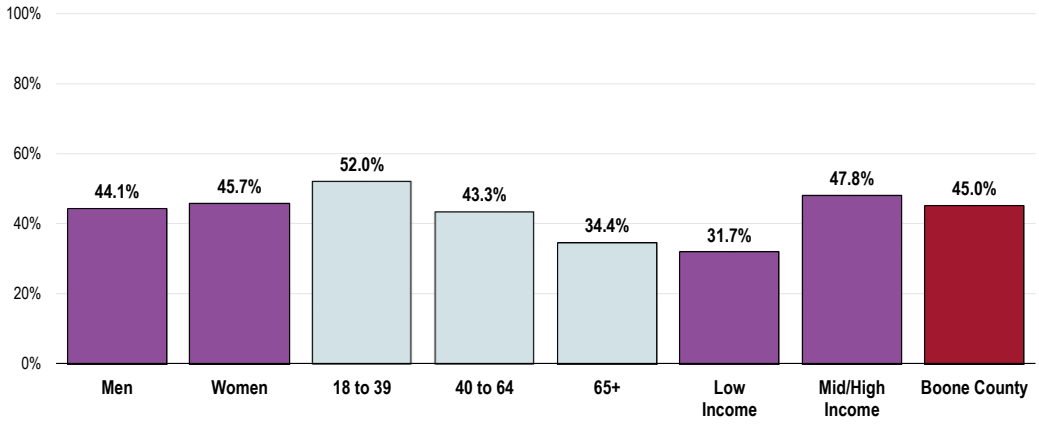
Notes:
- Asked of all respondents.
- In this case the term "meets physical activity recommendations" refers to participation in moderate physical activity (exercise that produces only light sweating or a slight to moderate increase in breathing or heart rate) at least 5 times a week for 30 minutes at a time, and/or vigorous physical activity (activities that cause heavy sweating or large increases in breathing or heart rate) at least 3 times a week for 20 minutes at a time.

Those less likely to meet physical activity requirements include:

- Older residents (negative correlation with age).
- Adults in lower-income households.

Meets Physical Activity Recommendations

(Boone County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 147]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.
• In this case the term "meets physical activity recommendations" refers to participation in moderate physical activity (exercise that produces only light sweating or a slight to moderate increase in breathing or heart rate) at least 5 times a week for 30 minutes at a time, and/or vigorous physical activity (activities that cause heavy sweating or large increases in breathing or heart rate) at least 3 times a week for 20 minutes at a time.

Moderate & Vigorous Physical Activity

In the past month:

The individual indicators of moderate and vigorous physical activity are shown here.

A total of 25.9% of adults participated in moderate physical activity (5 times a week, 30 minutes at a time).

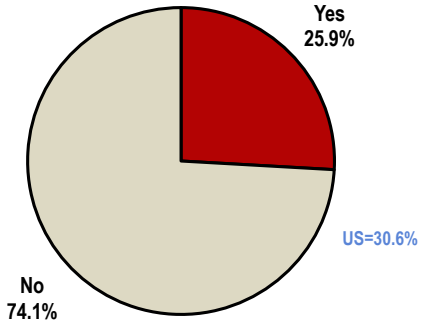
- Less favorable than the national level.
- TREND: Statistically unchanged since 2012 (not shown).

A total of 33.2% participated in vigorous physical activity (3 times a week, 20 minutes at a time).

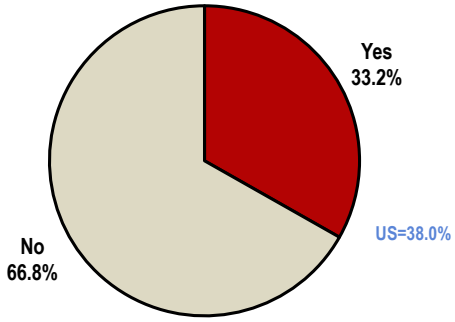
- Less favorable than the nationwide figure.
- TREND: Statistically similar to 2012 findings (not shown).

Moderate & Vigorous Physical Activity

(Boone County, 2015)



Moderate Physical Activity



Vigorous Physical Activity

Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Items 148-149]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Moderate Physical Activity: Takes part in exercise that produces only light sweating or a slight to moderate increase in breathing or heart rate at least 5 times per week for at least 30 minutes per time.
- Vigorous Physical Activity: Takes part in activities that cause heavy sweating or large increases in breathing or heart rate at least 3 times per week for at least 20 minutes per time.

Access to Physical Activity

Access to Recreation & Fitness Facilities

Here, recreation/fitness facilities include establishments engaged in operating facilities which offer "exercise and other active physical fitness conditioning or recreational sports activities."

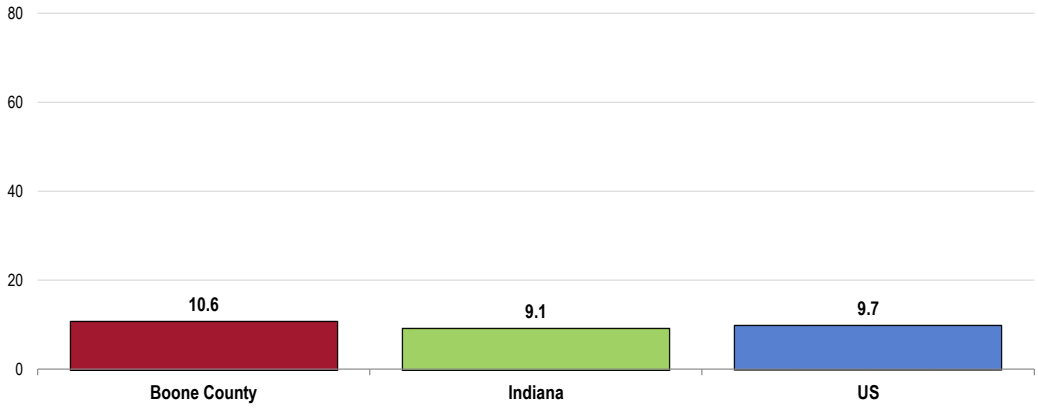
Examples include athletic clubs, gymnasiums, dance centers, tennis clubs, and swimming pools.

In 2013, there were 10.6 recreation/fitness facilities for every 100,000 population in Boone County.

- Above what is found statewide.
- Above what is found nationally.

Population With Recreation & Fitness Facility Access

(Number of Recreation & Fitness Facilities per 100,000 Population, 2013)



Sources:
- US Census Bureau, County Business Patterns: 2013. Additional data analysis by CARES.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- Recreation and fitness facilities are defined by North American Industry Classification System (NAICS) Code 713940 , which include *Establishments engaged in operating facilities which offer "exercise and other active physical fitness conditioning or recreational sports activities". Examples include athletic clubs, gymnasiums, dance centers, tennis clubs, and swimming pools.* This indicator is relevant because access to recreation and fitness facilities encourages physical activity and other healthy behaviors.

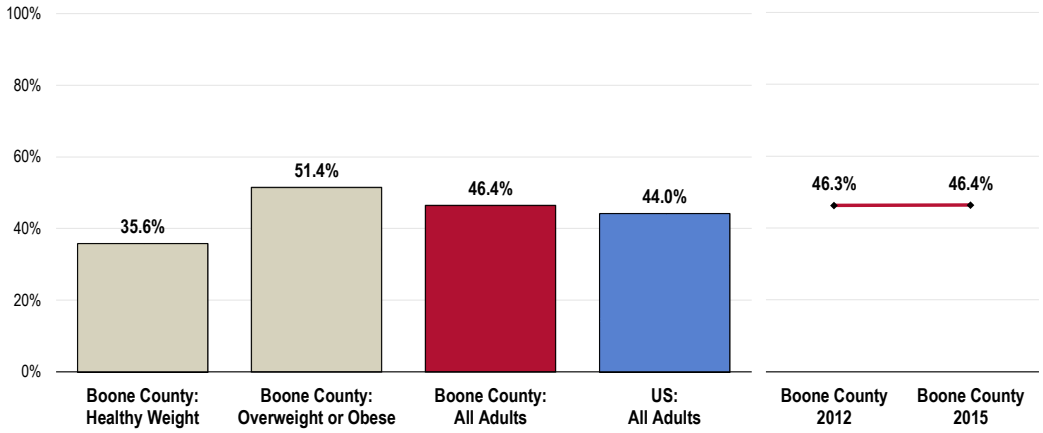
Health Advice About Physical Activity & Exercise

A total of 46.4% of Boone County adults report that their physician has asked about or given advice to them about physical activity in the past year.

- Similar to the national average.
- TREND: Unchanged from 2012 survey findings.
- Note: 51.4% of overweight/obese respondents say that they have talked with their doctor about physical activity/exercise in the past year.

Have Received Advice About Exercise in the Past Year From a Physician, Nurse, or Other Health Professional

(By Weight Classification)



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 19]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

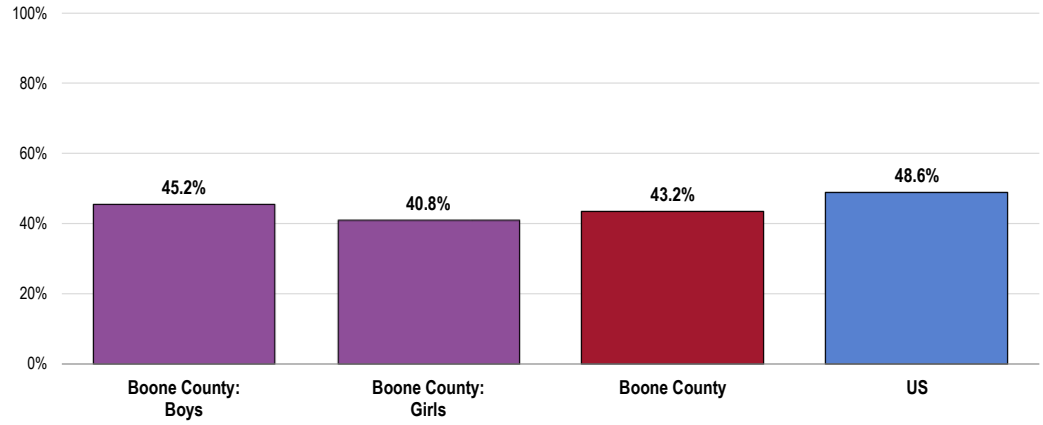
Children's Physical Activity

Among service area children age 2 to 17, 43.2% are reported to have had 60 minutes of physical activity on <u>each</u> of the seven days preceding the interview (1+ hours per day).

- Comparable to the national prevalence.
- Comparable findings by child's gender.

Child Is Physically Active for One or More Hours per Day

(Among Children Age 2-17)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 117]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents with children age 2-17 at home.
● Includes children reported to have one or more hours of physical activity on each of the seven days preceding the survey.

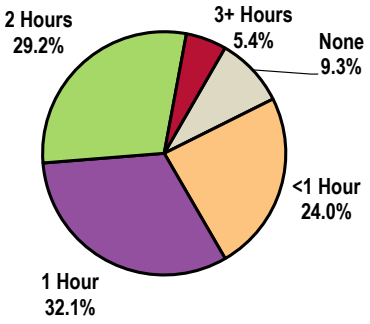
Television Watching & Other Screen Time

Among children aged 5 through 17, 5.4% are reported to watch three or more hours of <u>television</u> per day; 29.4% are reported to spend three or more hours on <u>other types of screen time</u> for entertainment (video games, Internet, etc.).

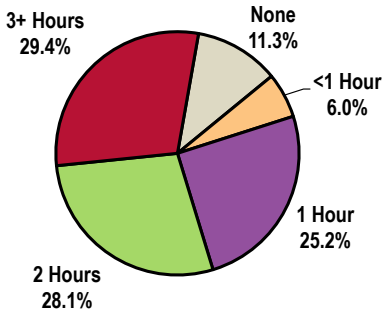
- TREND: The prevalence of television watching is similar to the 2012 figure; the prevalence of other screen use is much <u>higher</u> compared to 2012 findings (not shown).

Children's Screen Time

(Among Parents of Children Age 5-17; Boone County, 2015)



Hours per Day of Television



Hours per Day of Other Screen Time
(i.e., video games, computer/Internet for entertainment)

Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Items 335-336]
Notes: ● Asked of respondents with a child aged 5 to 17 in the household.

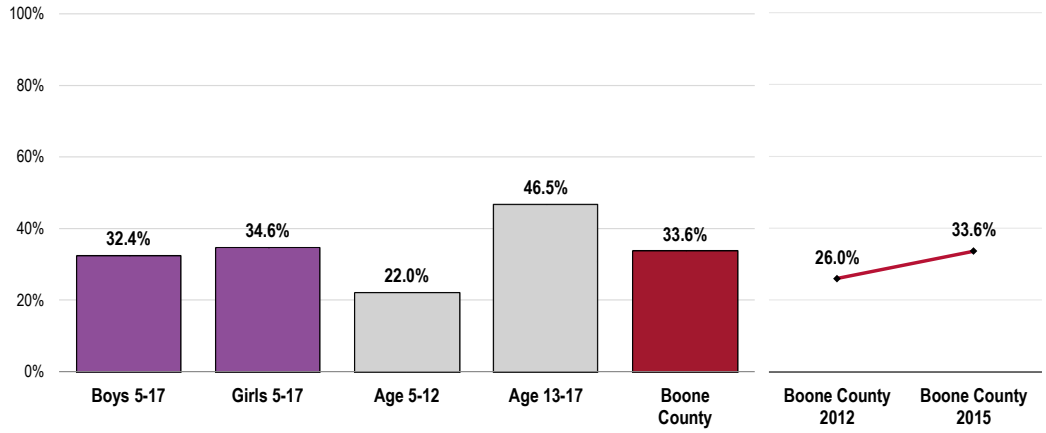
Total Screen Time

When combined, 33.6% of Boone County children aged 5 to 17 spend three or more hours on screen time (whether television or computer, Internet, video games, etc.) per day.

- Similar findings by gender; much higher among teens than among younger children.
- TREND: Statistically unchanged from the 2012 survey findings.

Children With Three or More Hours per School Day of Total Screen Time [TV, Computer, Video Games, Etc. for Entertainment]

(Among Parents of Children Age 5-17)



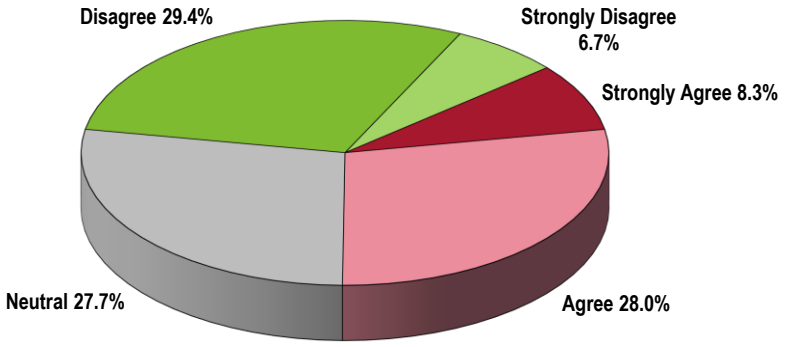
Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 180]
Notes: ● Asked of all respondents with children 5-17 at home.
● For this issue, respondents with children who are not in school were asked about "weekdays," while parents of children in school were asked about typical "school days."
● "Three or more hours" includes reported screen time of 180 minutes or more per day.

Recreational Opportunities

A total of 36.3% of Boone County adults "strongly agree" or "agree" with the statement, "*to meet the health and wellness needs of its residents, my community needs more indoor public physical activity spaces such as gyms, recreation centers, or indoor pools*."

- 27.7% feel neutral about the statement.
- 36.1% "disagree" or "strongly disagree" with the statement.

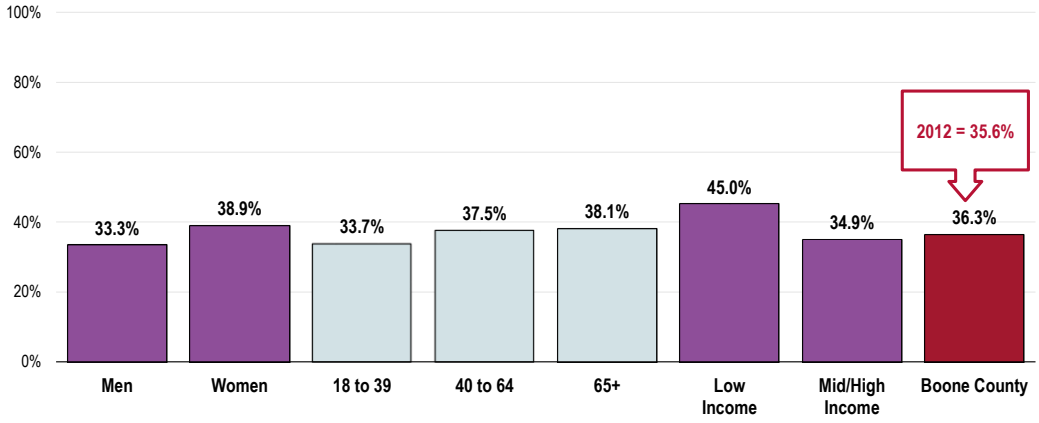
"*My Community Needs More Indoor Public Physical Activity Spaces Such as Gyms, Recreation Centers, or Indoor Pools*."
(Boone County, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 328]
Notes: ● Asked of all respondents.

- Agreement with the statement is highest among low-income residents.
- TREND: Agreement is statistically unchanged over time.

Agree That Community Needs More Indoor Activity Spaces
(Boone County, 2015)



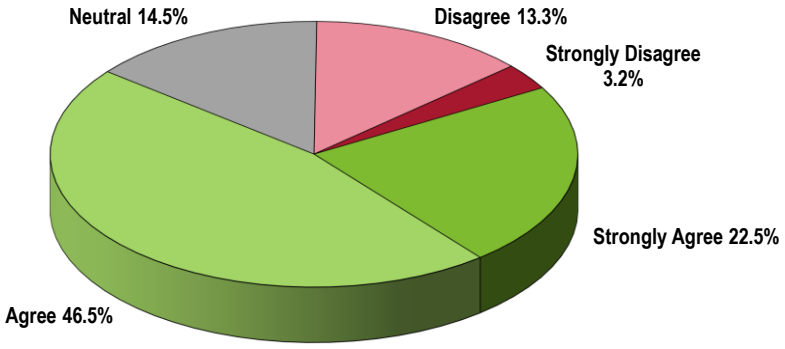
Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 328]
Notes: ● Asked of all respondents.
● Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

A total of 69.0% of Boone County adults "strongly agree" or "agree" with the statement, "*my community provides the facilities and programs needed for children and youth to be physically active year-round*."

- 14.5% feel neutral about the statement.
- 16.5% "disagree" or "strongly disagree" with the statement.

"*My Community Provides the Facilities and Programs Needed for Children and Youth to be Physically Active Year-Round*."

(Boone County, 2015)

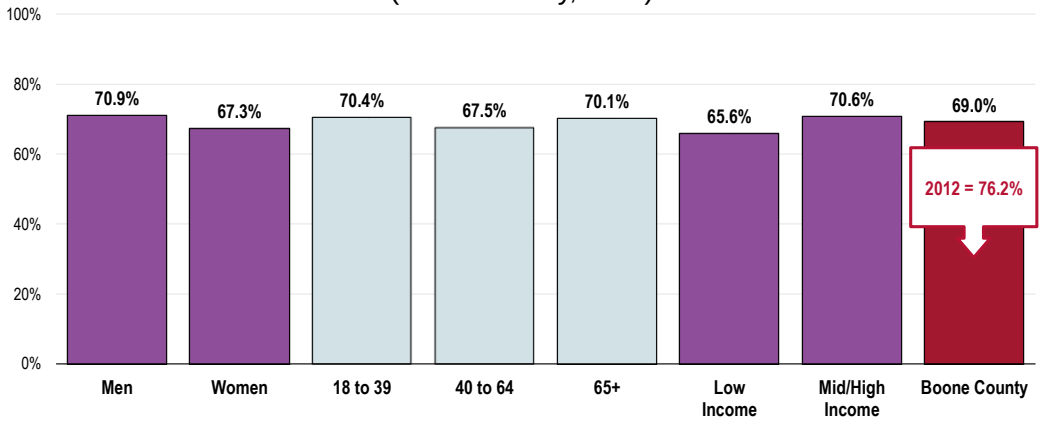


Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 329]
Notes: • Asked of all respondents.

- Agreement is statistically comparable by demographic characteristic.
- TREND: Agreement has decreased significantly over time.

Agree That Community Provides Facilities and Programs for Youth to be Active Year-Round

(Boone County, 2015)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 329]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Weight Status

About Overweight & Obesity

Because weight is influenced by energy (calories) consumed and expended, interventions to improve weight can support changes in diet or physical activity. They can help change individuals' knowledge and skills, reduce exposure to foods low in nutritional value and high in calories, or increase opportunities for physical activity. Interventions can help prevent unhealthy weight gain or facilitate weight loss among obese people. They can be delivered in multiple settings, including healthcare settings, worksites, or schools.

The social and physical factors affecting diet and physical activity (see Physical Activity topic area) may also have an impact on weight. Obesity is a problem throughout the population. However, among adults, the prevalence is highest for middle-aged people and for non-Hispanic black and Mexican American women. Among children and adolescents, the prevalence of obesity is highest among older and Mexican American children and non-Hispanic black girls. The association of income with obesity varies by age, gender, and race/ethnicity.

- Healthy People 2020 (www.healthypeople.gov)

Body Mass Index (BMI), which describes relative weight for height, is significantly correlated with total body fat content. The BMI should be used to assess overweight and obesity and to monitor changes in body weight. In addition, measurements of body weight alone can be used to determine efficacy of weight loss therapy. BMI is calculated as weight (kg)/height squared (m^2). To estimate BMI using pounds and inches, use: [weight (pounds)/height squared ($inches^2$)] x 703.

In this report, overweight is defined as a BMI of 25.0 to 29.9 kg/m^2 and obesity as a BMI ≥30 kg/m^2. The rationale behind these definitions is based on epidemiological data that show increases in mortality with BMIs above 25 kg/m^2. The increase in mortality, however, tends to be modest until a BMI of 30 kg/m^2 is reached. For persons with a BMI ≥30 kg/m^2, mortality rates from all causes, and especially from cardiovascular disease, are generally increased by 50 to 100 percent above that of persons with BMIs in the range of 20 to 25 kg/m^2.

- Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report. National Institutes of Health. National Heart, Lung, and Blood Institute in Cooperation With The National Institute of Diabetes and Digestive and Kidney Diseases. September 1998.

Classification of Overweight and Obesity by BMI	BMI (kg/m^2)
Underweight	<18.5
Normal	18.5 – 24.9
Overweight	25.0 – 29.9
Obese	≥30.0

Source: Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report. National Institutes of Health. National Heart, Lung, and Blood Institute in Cooperation With The National Institute of Diabetes and Digestive and Kidney Diseases. September 1998.

Adult Weight Status

Healthy Weight

Based on self-reported heights and weights, 34.0% of Boone County adults are at a healthy weight.

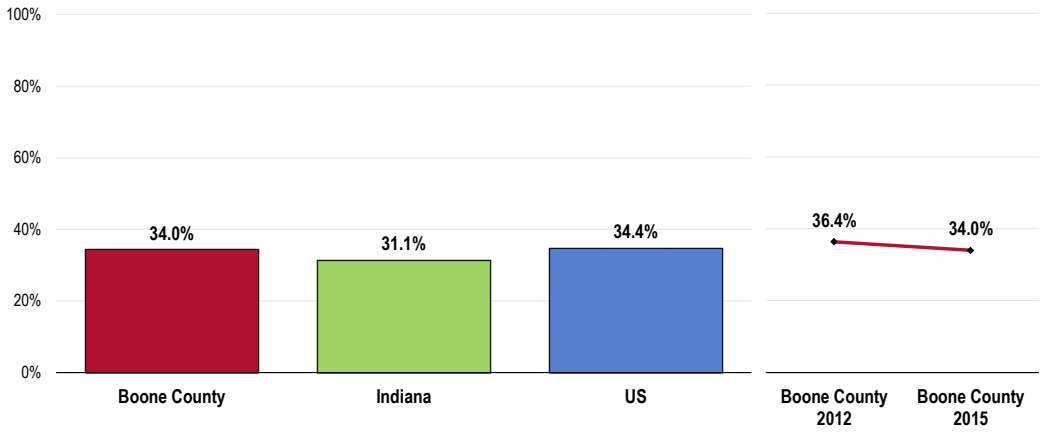
"Healthy weight "means neither underweight, nor overweight (BMI = 18.5-24.9).

- Similar to state findings.
- Similar to national findings.
- Similar to the Healthy People 2020 target (33.9% or higher).
- TREND: Statistically unchanged since 2012.

Healthy Weight

(Percent of Adults With a Body Mass Index Between 18.5 and 24.9)

Healthy People 2020 Target = 33.9% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 151]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective NWS-8]

Notes:
- Based on reported heights and weights, asked of all respondents.
- The definition of healthy weight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), between 18.5 and 24.9.

Overweight Status

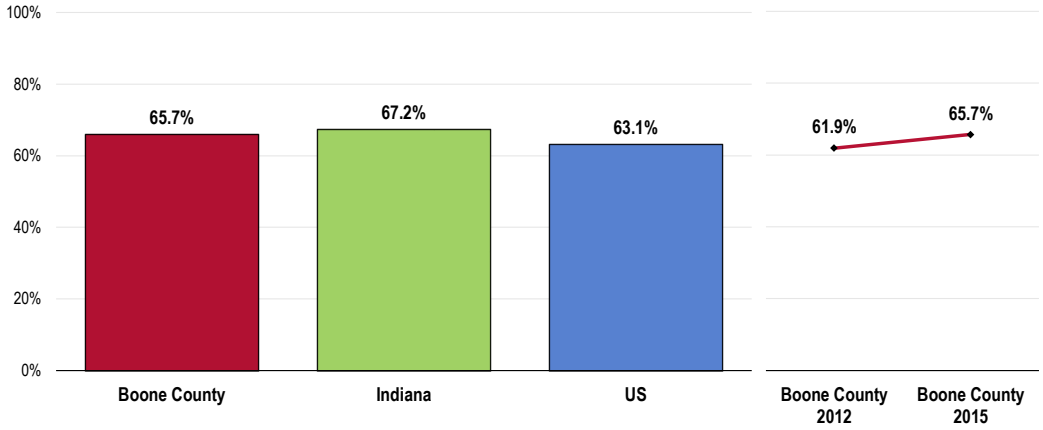
Nearly 2 in 3 Boone County adults (65.7%) are overweight.

Here, "overweight" includes those respondents with a BMI value ≥25.

- Comparable to the Indiana prevalence.
- Comparable to the US overweight prevalence.
- TREND: Statistically unchanged since 2012.

Prevalence of Total Overweight

(Percent of Adults With a Body Mass Index of 25.0 or Higher)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 151]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.

Notes:
- Based on reported heights and weights, asked of all respondents.
- The definition of overweight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 25.0, regardless of gender. The definition for obesity is a BMI greater than or equal to 30.0.

Further, 32.4% of service area adults are obese.

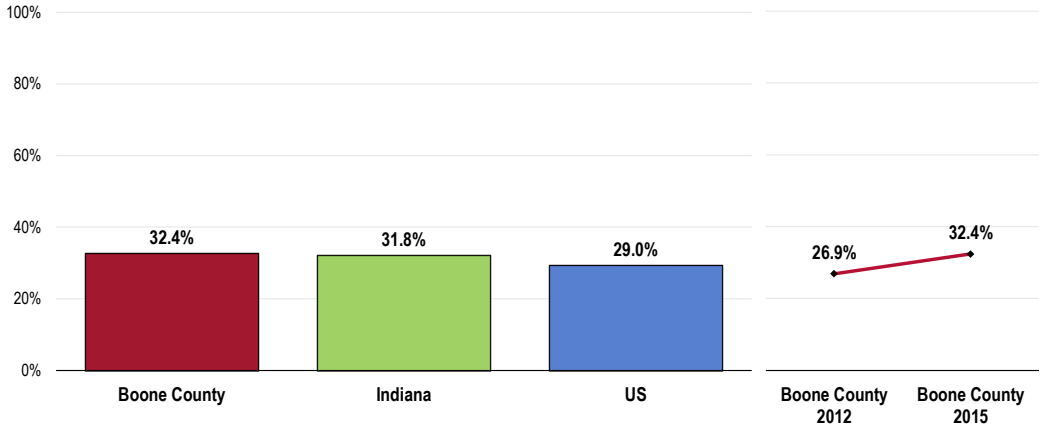
"Obese" (also included in overweight prevalence discussed previously) includes respondents with a BMI value ≥30.

- Similar to Indiana findings.
- Similar to US findings.
- Similar to the Healthy People 2020 target (30.5% or lower).
- TREND: Denotes a statistically significant increase in obesity since 2012.

Prevalence of Obesity

(Percent of Adults With a Body Mass Index of 30.0 or Higher)

Healthy People 2020 Target = 30.5% or Lower



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 151]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective NWS-9]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.

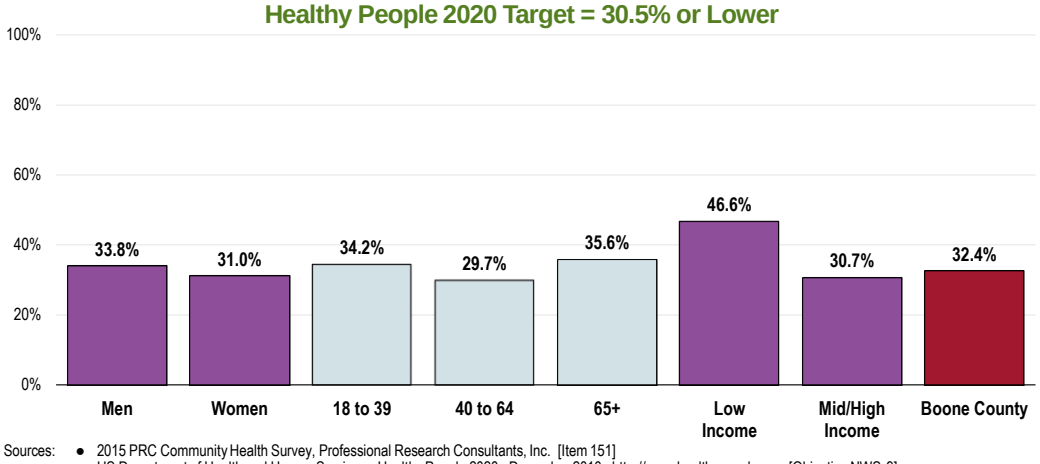
Notes:
- Based on reported heights and weights, asked of all respondents.
- The definition of obesity is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 30.0, regardless of gender.

- Obesity is notably more prevalent among respondents with lower incomes.

Prevalence of Obesity

(Percent of Adults With a BMI of 30.0 or Higher; Boone County, 2015)

Healthy People 2020 Target = 30.5% or Lower



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 151]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective NWS-9]

Notes:
- Based on reported heights and weights, asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.
- The definition of obesity is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 30.0, regardless of gender.

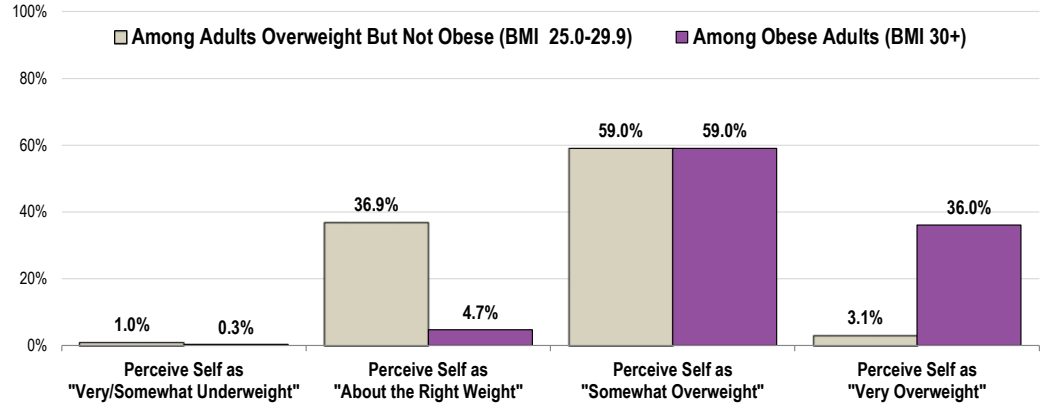
Actual vs. Perceived Body Weight

A total of 4.7% of obese adults and 36.9% of overweight (but not obese) adults feel that their current weight is "about right."

- 59.0% of overweight (not obese) adults see themselves as "somewhat overweight."
- 36.0% of obese adults see themselves as "very overweight."

Actual vs. Perceived Weight Status

(Among Overweight/Obese Adults Based on BMI; Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 99]

Notes:
- BMI is based on reported heights and weights, asked of all respondents.
- The definition of overweight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 25.0, regardless of gender. The definition for obesity is a BMI greater than or equal to 30.0.

Relationship of Overweight With Other Health Issues

Overweight and obese adults are more likely to report a number of adverse health conditions. Among these are:

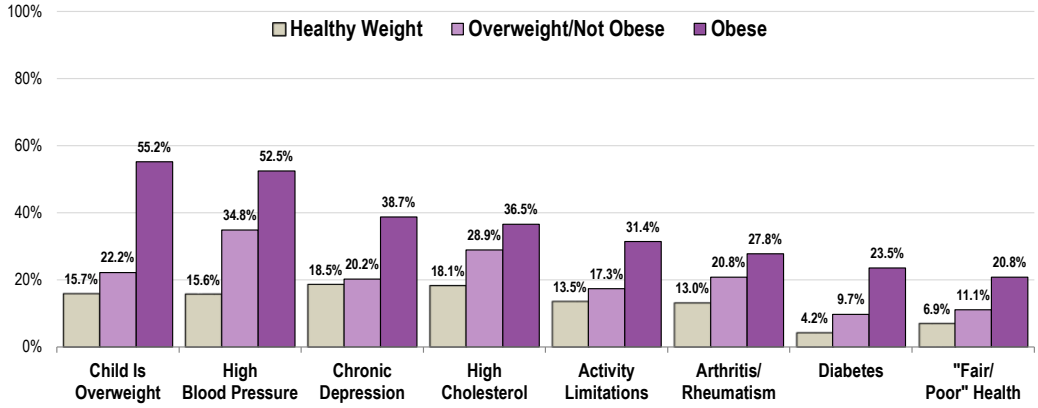
The correlation between overweight and various health issues cannot be disputed.

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

Overweight/obese residents are also more likely to have overweight children.

Relationship of Overweight With Other Health Issues

(By Weight Classification; Boone County, 2015)



Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Items 5, 28, 29, 39, 101, 105, 125, 126, 155]
Notes: • Based on reported heights and weights, asked of all respondents.

Weight Management

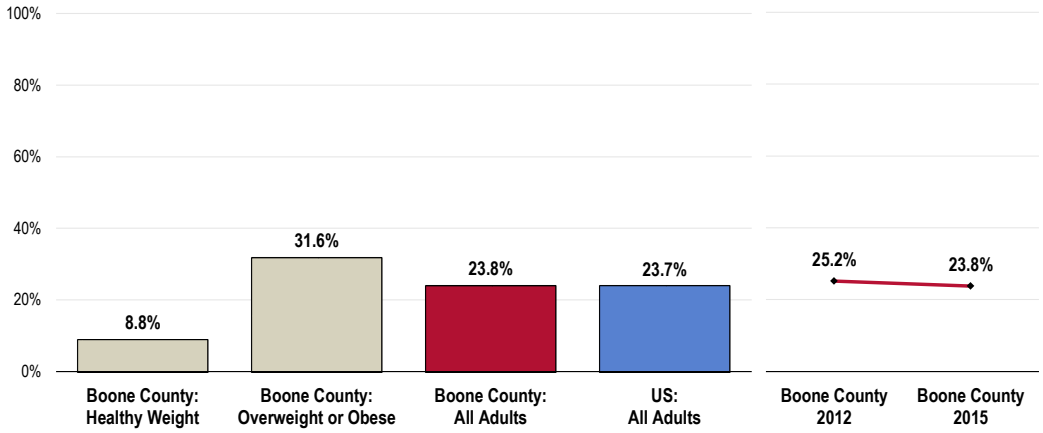
Health Advice

A total of 23.8% of adults have been given advice about their weight by a doctor, nurse or other health professional in the past year.

- Nearly identical to the national findings.
- TREND: Statistically unchanged from that reported in 2012.
- Note that 31.6% of overweight/obese adults have been given advice about their weight by a health professional in the past year (while most have not).

Have Received Advice About Weight in the Past Year From a Physician, Nurse, or Other Health Professional

(By Weight Classification)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 98]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

Weight Control

About Maintaining a Healthy Weight

Individuals who are at a healthy weight are less likely to:

- Develop chronic disease risk factors, such as high blood pressure and dyslipidemia.
- Develop chronic diseases, such as type 2 diabetes, heart disease, osteoarthritis, and some cancers.
- Experience complications during pregnancy.
- Die at an earlier age.

All Americans should avoid unhealthy weight gain, and those whose weight is too high may also need to lose weight.

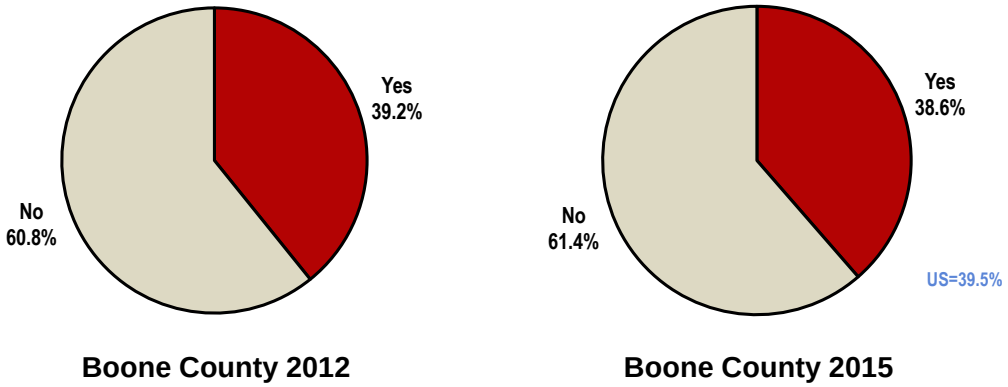
- Healthy People 2020 (www.healthypeople.gov)

A total of 38.6% of Boone County adults who are overweight say that they are both modifying their diet and increasing their physical activity to try to lose weight.

- Similar to national findings.
- TREND: Statistically similar to that reported among overweight adults in 2012.

Trying to Lose Weight by Both Modifying Diet and Increasing Physical Activity

(Among Overweight or Obese Respondents)



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 152]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Reflects respondents who are overweight or obese based on reported heights and weights.

Childhood Overweight & Obesity

About Weight Status in Children & Teens

In children and teens, body mass index (BMI) is used to assess weight status – underweight, healthy weight, overweight, or obese. After BMI is calculated for children and teens, the BMI number is plotted on the CDC BMI-for-age growth charts (for either girls or boys) to obtain a percentile ranking. Percentiles are the most commonly used indicator to assess the size and growth patterns of individual children in the United States. The percentile indicates the relative position of the child's BMI number among children of the same sex and age.

BMI-for-age weight status categories and the corresponding percentiles are shown below:

- Underweight — <5th percentile
- Healthy Weight — ≥5th and <85th percentile
- Overweight — ≥85th and <95th percentile
- Obese — ≥95th percentile

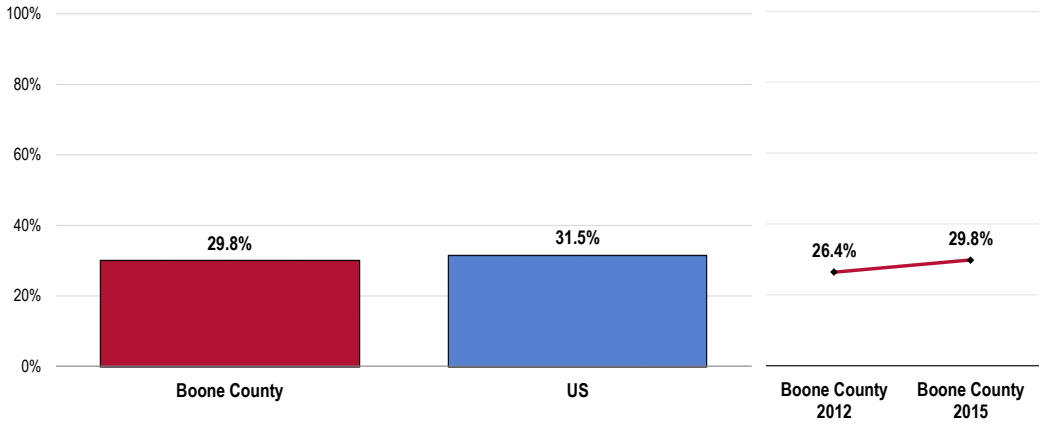
- Centers for Disease Control and Prevention

Based on the heights/weights reported by surveyed parents, 29.8% of Boone County children age 5 to 17 are overweight or obese (≥85th percentile).

- Comparable to that found nationally.
- TREND: Statistically unchanged since 2012.

Child Total Overweight Prevalence

(Percent of Children Age 5-17 Who Are Overweight/Obese; Body Mass Index in the 85th Percentile or Higher)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 155]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents with children age 5-17 at home.
- Overweight among children is determined by children's Body Mass Index status at or above the 85th percentile of US growth charts by gender and age.

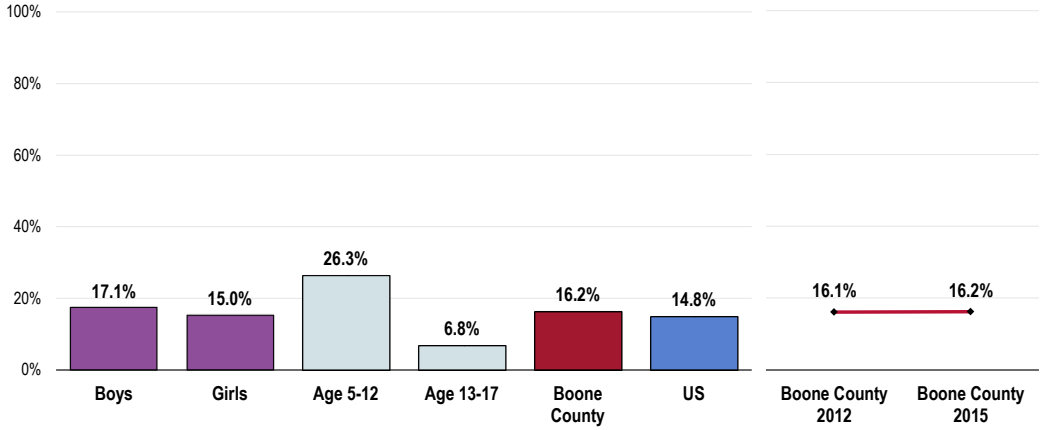
Further, 16.2% of area children age 5 to 17 are obese (≥95th percentile).

- Similar to the national percentage.
- Similar to the Healthy People 2020 target (14.5% or lower for children age 2-19).
- TREND: Statistically unchanged since 2012.
- Statistically similar by child's gender; obesity is much higher among younger children than among teens.

Child Obesity Prevalence

(Percent of Children Age 5-17 Who Are Obese; BMI in the 95th Percentile or Higher)

Healthy People 2020 Target = 14.5% or Lower



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 155]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective NWS-10.4]

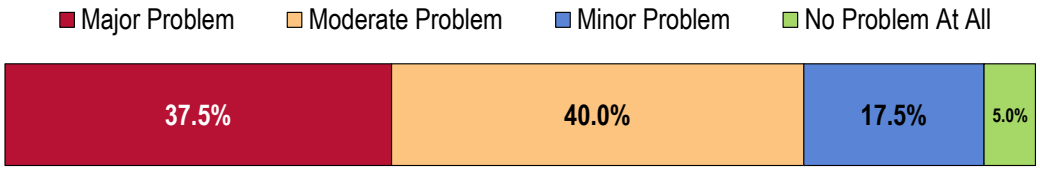
Notes:
- Asked of all respondents with children age 5-17 at home.
- Obesity among children is determined by children's Body Mass Index status equal to or above the 95th percentile of US growth charts by gender and age.

Key Informant Input: Nutrition, Physical Activity & Weight

A plurality of key informants taking part in an online survey characterized *Nutrition, Physical Activity & Weight* as a "moderate problem" in the community.

Perceptions of Nutrition, Physical Activity, and Weight as a Problem in the Community

(Key Informants, 2015)



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Lack of Motivation

Motivation and finances. - Other Health Provider

Fat community, no exercise, no motivation. - Other Health Provider

Difficulty motivating the public regarding the health risk of obesity, high cholesterol, high salt intake and smoking. – Physician

Obesity rate, lack of physical activity of individuals. - Community Business Leader

Access to Affordable Healthy Foods

Not having enough income to buy nutritious food and low self-esteem. - Social Services Provider

Limited access to fresh foods at reasonable prices. Lack of inexpensive options to exercise in inclement weather. Lack of outdoor trails or exercise paths. - Social Services Provider

Cost of healthy food, time to prepare healthy food, lack of time to exercise, support groups. - Community Business Leader

Lack of Education

By focusing in on these issues you can impact mental health and diabetes. There is a lack of nutritional awareness and healthy food choices in the county. It would be ideal to have a yoga studio and more offering available in the county for children. - Other Health Provider

Lack of easily accessible and reasonably priced facilities and training or coaching for a healthy lifestyle of exercise and eating. - Community Business Leader

Lack of education about proper nutrition, sugar laden drinks, lack of physical activity. - Physician

Nutrition

Poor dietary habits of those living in the community. Available and affordable access to physical activities. - Public Health Representative

Eating properly. Having our kids eat properly. - Community Business Leader

Built Environment

Community that is not friendly to walking. Hospital is so far from the population center of the town that

> *almost no one walks there. - Physician*

Root Cause

> *This to me is the root of the majority of all other illness. Instead of "first do no harm" we should be better equipped to achieve maximum health. - Community Business Leader*

Substance Abuse

About Substance Abuse

Substance abuse has a major impact on individuals, families, and communities. The effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems. These problems include:

- Teenage pregnancy
- Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)
- Other sexually transmitted diseases (STDs)
- Domestic violence
- Child abuse
- Motor vehicle crashes
- Physical fights
- Crime
- Homicide
- Suicide

Substance abuse refers to a set of related conditions associated with the consumption of mind- and behavior-altering substances that have negative behavioral and health outcomes. Social attitudes and political and legal responses to the consumption of alcohol and illicit drugs make substance abuse one of the most complex public health issues. In addition to the considerable health implications, substance abuse has been a flash-point in the criminal justice system and a major focal point in discussions about social values: people argue over whether substance abuse is a disease with genetic and biological foundations or a matter of personal choice.

Advances in research have led to the development of evidence-based strategies to effectively address substance abuse. Improvements in brain-imaging technologies and the development of medications that assist in treatment have gradually shifted the research community's perspective on substance abuse. There is now a deeper understanding of substance abuse as a disorder that develops in adolescence and, for some individuals, will develop into a chronic illness that will require lifelong monitoring and care.

Improved evaluation of community-level prevention has enhanced researchers' understanding of environmental and social factors that contribute to the initiation and abuse of alcohol and illicit drugs, leading to a more sophisticated understanding of how to implement evidence-based strategies in specific social and cultural settings.

A stronger emphasis on evaluation has expanded evidence-based practices for drug and alcohol treatment. Improvements have focused on the development of better clinical interventions through research and increasing the skills and qualifications of treatment providers.

- Healthy People 2020 (www.healthypeople.gov)

Age-Adjusted Cirrhosis/Liver Disease Deaths

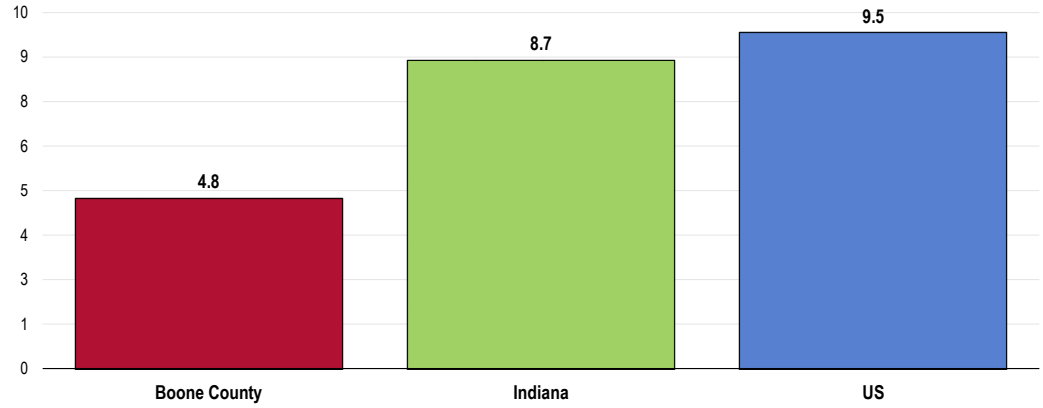
Between 2004 and 2013, Boone County reported was an annual average age-adjusted cirrhosis/liver disease mortality rate of 4.8 deaths per 100,000 population.

- Better than the statewide rate.
- Better than the national rate.
- Satisfies the Healthy People 2020 target (8.2 or lower).

Cirrhosis/Liver Disease: Age-Adjusted Mortality

(2004-2013 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 8.2 or Lower



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-11]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

High-Risk Alcohol Use

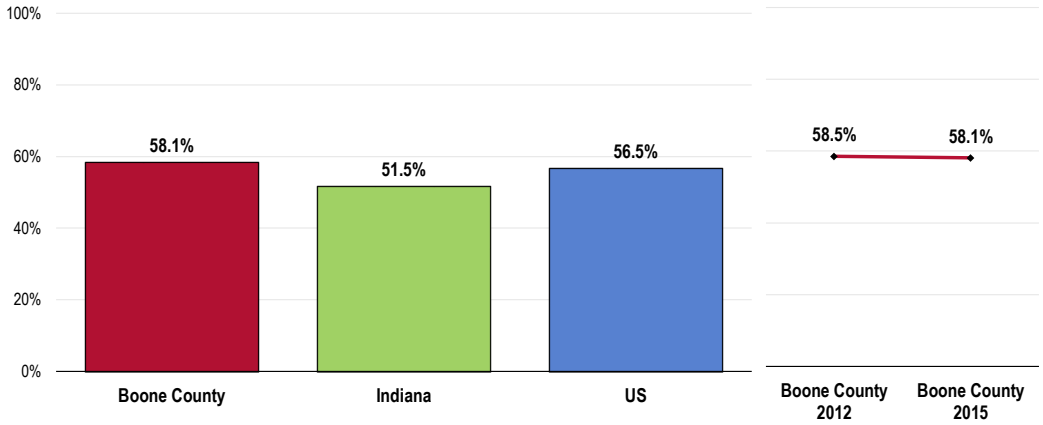
Current Drinking

A total of 58.1% of area adults had at least one drink of alcohol in the past month (current drinkers).

- Higher than the statewide proportion.
- Comparable to the national proportion.
- TREND: Statistically unchanged since 2012.

"Current drinkers" include survey respondents who had at least one drink of alcohol in the month preceding the interview. For the purposes of this study, a "drink" is considered one can or bottle of beer, one glass of wine, one can or bottle of wine cooler, one cocktail, or one shot of liquor.

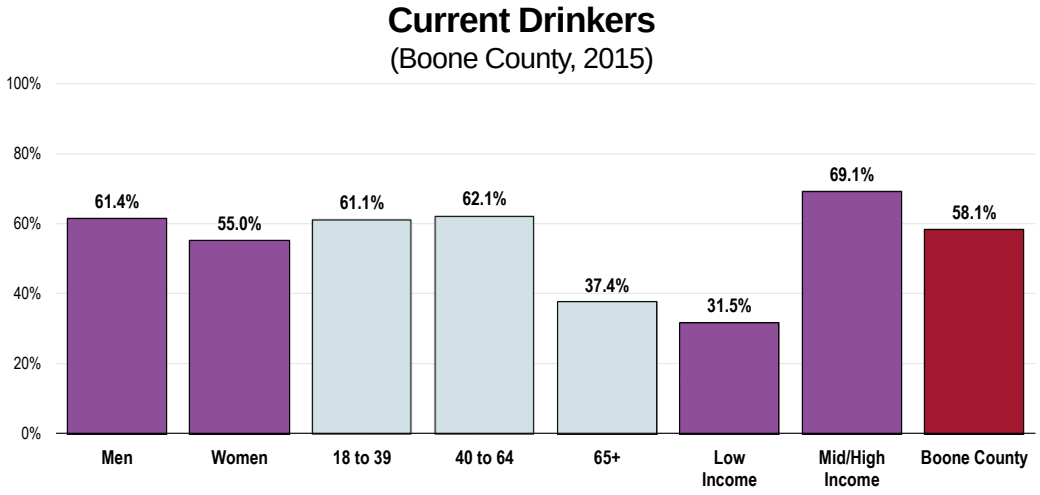
Current Drinkers



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 160]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Current drinkers had at least one alcoholic drink in the past month.

- Current drinking is more prevalent among adults under 65 and upper-income residents.



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 160]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.
- Current drinkers had at least one alcoholic drink in the past month.

Excessive Drinking

A total of 16.3% of area adults are excessive drinkers (heavy and/or binge drinkers).

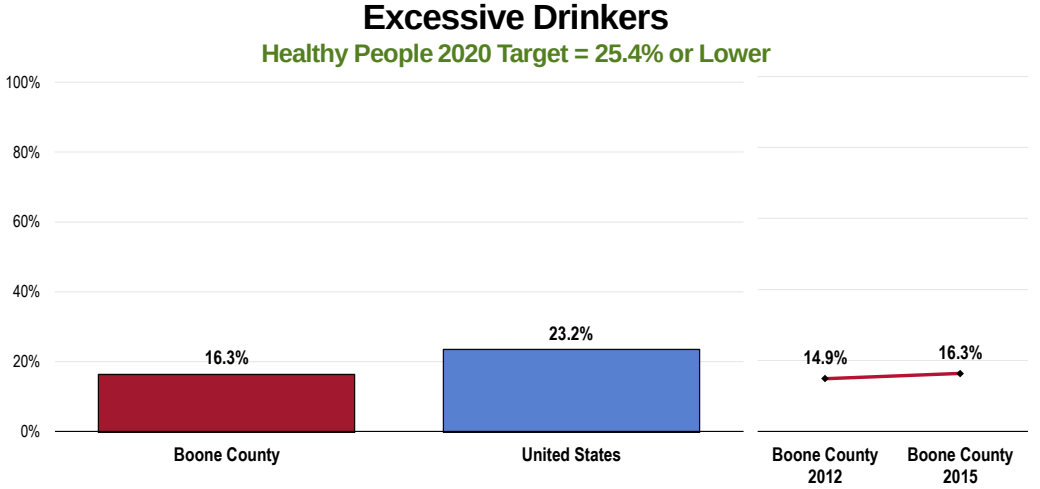
- More favorable than the national proportion.
- Satisfies the Healthy People 2020 target (25.4% or lower).
- TREND: Statistically unchanged since 2012.

"Excessive drinking" includes heavy and/or binge drinkers:

Heavy drinkers include men reporting 2+ alcoholic drinks per day or women reporting 1+ alcoholic drink per day in the month preceding the interview; and

Binge drinkers include men reporting 5+ alcoholic drinks or women reporting 4+ alcoholic drinks on any single occasion during the past month.

RELATED ISSUE: See also Stress in the Mental Health & Mental Disorders section of this report.



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 164]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-15]

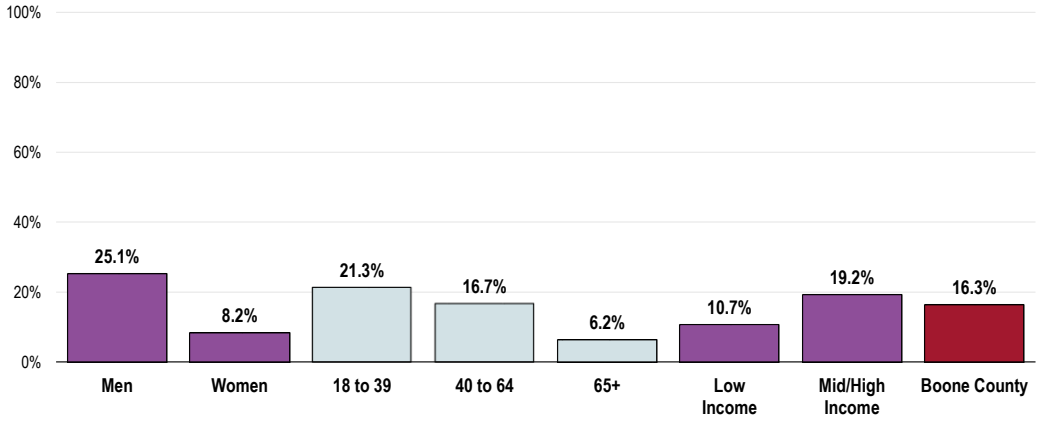
Notes:
- Asked of all respondents.
- Excessive drinking reflects the number of persons aged 18 years and over who drank more than two drinks per day on average (for men) or more than one drink per day on average (for women) OR who drank 5 or more drinks during a single occasion (for men) or 4 or more drinks during a single occasion (for women) during the past 30 days.

- Excessive drinking is more prevalent among men, younger adults (negative correlation with age), and upper-income residents.

Excessive Drinkers

(Total Area, 2015)

Healthy People 2020 Target = 25.4% or Lower



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 164]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-15]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.
- Excessive drinking reflects the number of persons aged 18 years and over who drank more than two drinks per day on average (for men) or more than one drink per day on average (for women) OR who drank 5 or more drinks during a single occasion (for men) or 4 or more drinks during a single occasion (for women) during the past 30 days.

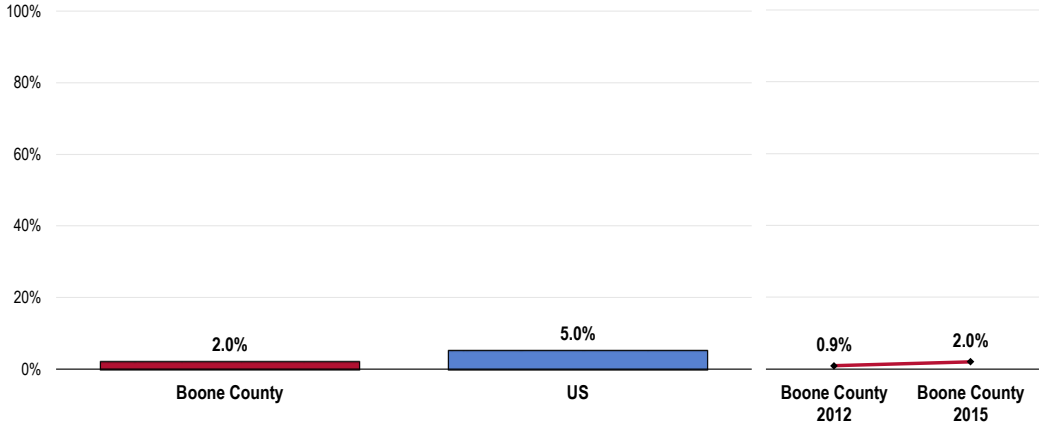
Drinking & Driving

A total of 2.0% of Boone County adults acknowledge having driven a vehicle in the past month after they had perhaps too much to drink.

Note: As a self-reported measure – and because this indicator reflects potentially illegal behavior – it is reasonable to expect that it might be underreported, and that the actual incidence of drinking and driving in the community is likely higher.

- Below the national findings.
- TREND: The drinking and driving prevalence has not changed significantly since 2012.

Have Driven in the Past Month After Perhaps Having Too Much to Drink



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 65]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

Age-Adjusted Drug-Induced Deaths

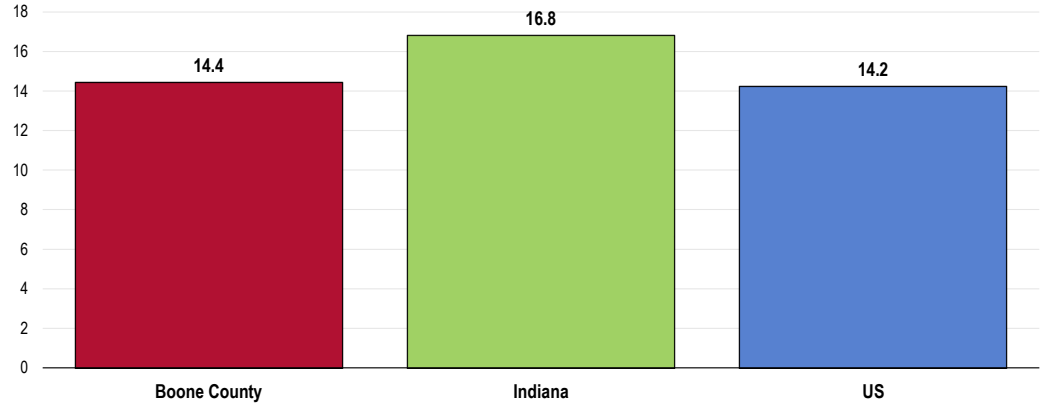
Between 2010 and 2014, there was an annual average age-adjusted drug-induced mortality rate of 14.4 deaths per 100,000 population in Boone County.

- Lower than the statewide rate.
- Similar to the national rate.
- Fails to satisfy the Healthy People 2020 target (11.3 or lower).

Drug-Induced Deaths: Age-Adjusted Mortality

(2010-2014 Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 11.3 or Lower



Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-12]

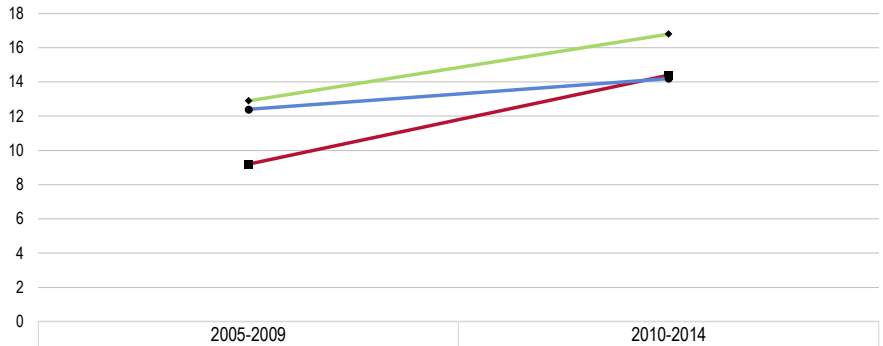
Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

- TREND: Drug-induced mortality rates have increased over time.

Drug-Induced Deaths: Age-Adjusted Mortality Trends

(Annual Average Deaths per 100,000 Population)

Healthy People 2020 Target = 11.3 or Lower



	2005-2009	2010-2014
Boone County	9.2	14.4
Indiana	12.9	16.8
US	12.4	14.2

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted December 2015.
- UD Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-12].

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population.

Illicit Drug Use

For the purposes of this survey, "illicit drug use" includes use of illegal substances or of prescription drugs taken without a physician's order.

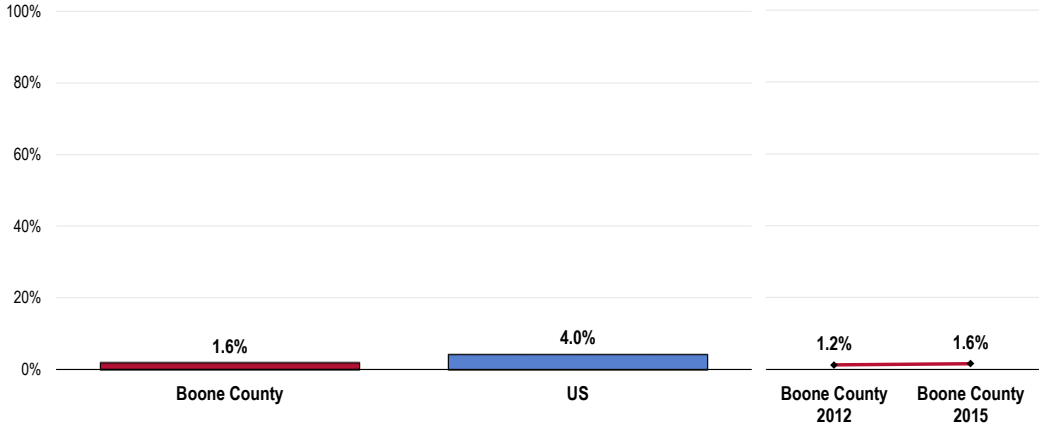
Note: As a self-reported measure – and because this indicator reflects potentially illegal behavior – it is reasonable to expect that it might be underreported, and that actual illicit drug use in the community is likely higher.

A total of 1.6% of area adults acknowledge using an illicit drug in the past month.

- Better than the proportion found nationally.
- Satisfies the Healthy People 2020 target of 7.1% or lower.
- TREND: Statistically unchanged over time.

Illicit Drug Use in the Past Month

Healthy People 2020 Target = 7.1% or Lower



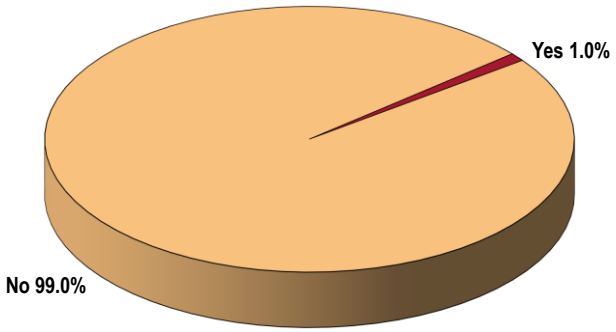
Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 66]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-13.3]

Notes:
- Asked of all respondents.

Just 1.0% of survey respondents acknowledge that they or a member of their household used intravenous drugs at least once in the past year.

Member of Household Used IV Drugs at Least Once in the Past Year

(Boone County, 2015)



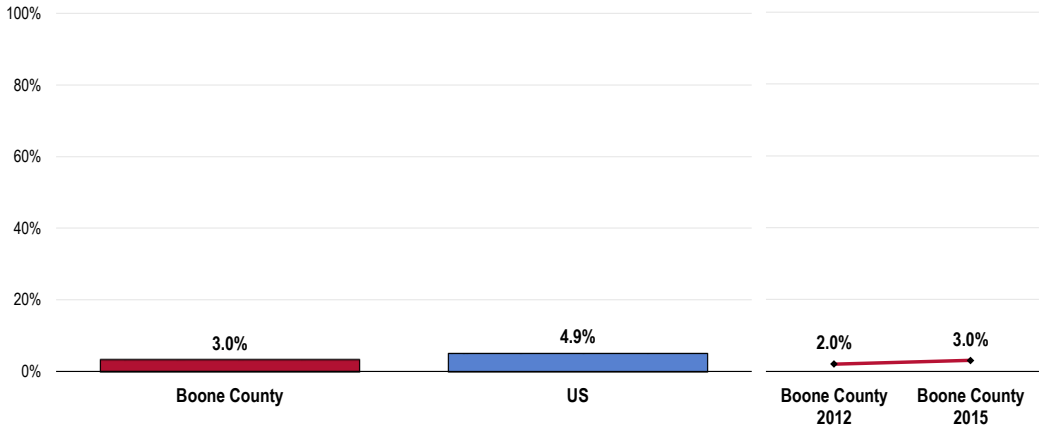
Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 313]
Notes: ● Asked of all respondents.

Alcohol & Drug Treatment

A total of 3.0% of Boone County adults report that they have sought professional help for an alcohol or drug problem at some point in their lives.

- Lower than national findings.
- TREND: Statistically unchanged over time.

Have Ever Sought Professional Help for an Alcohol/Drug-Related Problem



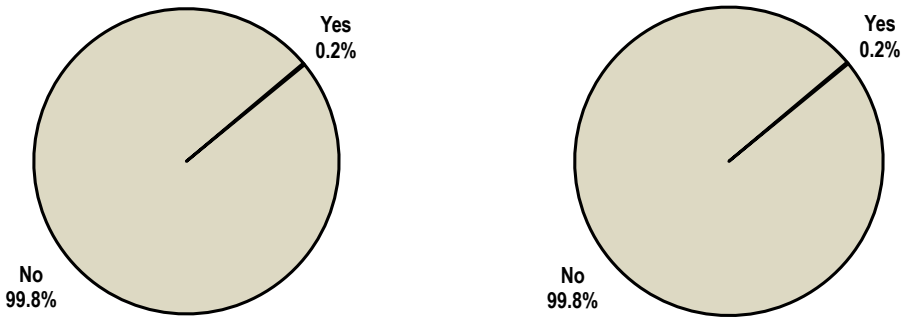
Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 67]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

In the past year, just 0.2% of survey respondents tried to obtain professional help for substance abuse problems but were unable to obtain it.

- TREND: The percentage is unchanged from 2012 survey findings.

Tried to Obtain Professional Help in the Past Year for Substance Abuse But Was Unable to Obtain It

(Boone County)



Boone County 2012 **Boone County 2015**

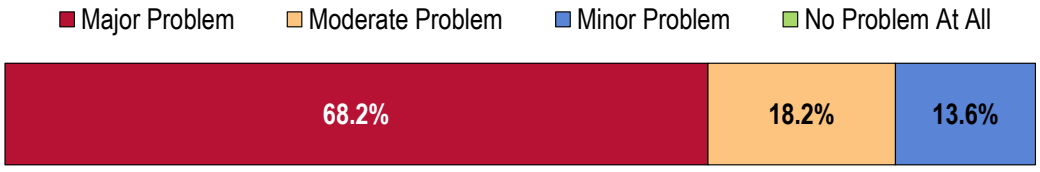
Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 314]
Notes: ● Reflects the total sample of respondents.

Key Informant Input: Substance Abuse

The greatest share of key informants taking part in an online survey characterized *Substance Abuse* as a "major problem" in the community.

Perceptions of Substance Abuse as a Problem in the Community

(Key Informants, 2015)



Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Barriers to Treatment

Among those rating this issue as a "major problem," the greatest barriers to accessing substance abuse treatment are viewed as:

Lack of Treatment/Services

Not enough rehab options or community support or recognition of the issue. – Other Health Provider

Money and no real treatment centers in Boone County. – Community Business Leader

There is not a lot of help offered in our community. There is only help once you have been in trouble. Then once you seek help you are still learning how to score bigger and better in the facilities that offer help. The barriers are they must want help and not be forced into it. The community must work together to get the drugs out of town and stop making it so easy for the younger generation. Start at the younger levels of middle school and high school. Kids have access to too many drugs. – Community Business Leader

The programs available often treat the symptoms and are not equipped to treat the underlying causes. Programs need to be expanded that deal with heart as well as habit. – Community Business Leader

There are no facilities in the county for inpatient treatment. Mental health providers are overwhelmed with other issues and lack resources needed for addiction services. Additionally, physicians lack interest in running a suboxone clinic for multiple reasons. – Other Health Provider

We have no inpatient treatment centers. – Social Services Provider

Addiction/Motivation to Change

They either do not care to or do not have the money. – Other Health Provider

No desire to change and lack of resources and support to begin recovery. – Community Business Leader

Do not want to stop smoking. – Physician

Lack of desire to be helped. – Physician

They don't want treatment, so it's hard to treat it. – Other Health Provider

It's an addiction, people often don't realize they aren't in control. – Community Business Leader

People have lost hope and the addiction is very strong. Many come from poverty or start at a young age. – Community Business Leader

Easy access, fear of arrest, fear of stigma, acceptance within peer group. – Community Business Leader

Access to Affordable Care

Cost of treatment, lack of group resources, lack of affordable treatment centers. – Social Services Provider

Cost, not thinking there is a problem, don't know where to seek help. – Community Business Leader

Affordability. – Public Health Representative

Accessibility to affordable treatment. – Social Services Provider

Financial barriers and limited ability to provide detox services, including medication assisted and supportive withdrawal. – Other Health Provider

Money for treatment, insurance, maybe afraid of repercussions if they come forward and no facilities. – Other Health Provider

Lack of Resources

Lack of resources for youth and adults, particularly long-term, residential care. – Public Health Representative

A barrier is the knowledge of the programs. Marketing and advertisement of programs is limited. Resources to supply the programs are limited. – Other Health Provider

Knowing who to call for help. – Community Business Leader

Lack of quality programs. Generational abuse. – Social Services Provider

Prevalence/Incidence

Heroin and meth are still too big of a problem in Boone County, as well as prescription drug abuse. –

> *Physician*
>
> *From a law enforcement perspective we continue to see addition on the rise. Heroin is killing our youth. Cost of treatment is a concern. – Community Business Leader*
>
> *Every community has substance abuse issues. – Community Business Leader*

Most Problematic Substances

Key informants (who rated this as a "major problem") most often identified heroin or other opioids, alcohol, and prescription medications as the most problematic substances abused in the community.

	Most Problematic	Second-Most Problematic	Third-Most Problematic	Total Mentions
Heroin or Other Opioids	55.6%	29.6%	7.4%	25
Alcohol	33.3%	22.2%	22.2%	21
Prescription Medications	11.1%	33.3%	22.2%	18
Methamphetamines or Other Amphetamines	0.0%	0.0%	25.9%	7
Marijuana	0.0%	11.1%	11.1%	6
Synthetic Drugs (e.g. Bath Salts, K2/Spice)	0.0%	3.7%	7.4%	3
Cocaine or Crack	0.0%	0.0%	3.7%	1

Tobacco Use

About Tobacco Use

Tobacco use is the single most preventable cause of death and disease in the United States. Scientific knowledge about the health effects of tobacco use has increased greatly since the first Surgeon General's report on tobacco was released in 1964.

Tobacco use causes:

- Cancer
- Heart disease
- Lung diseases (including emphysema, bronchitis, and chronic airway obstruction)
- Premature birth, low birth weight, stillbirth, and infant death

There is no risk-free level of exposure to secondhand smoke. Secondhand smoke causes heart disease and lung cancer in adults and a number of health problems in infants and children, including: severe asthma attacks; respiratory infections; ear infections; and sudden infant death syndrome (SIDS).

Smokeless tobacco causes a number of serious oral health problems, including cancer of the mouth and gums, periodontitis, and tooth loss. Cigar use causes cancer of the larynx, mouth, esophagus, and lung.

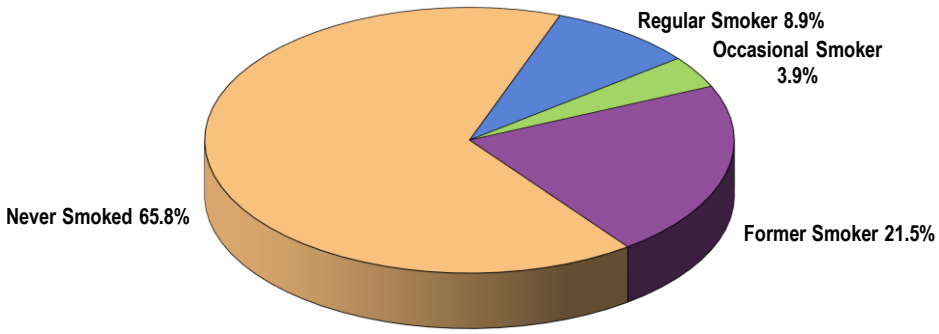
- Healthy People 2020 (www.healthypeople.gov)

Cigarette Smoking

Cigarette Smoking Prevalence

A total of 12.8% of Boone County adults currently smoke cigarettes, either regularly (8.9% every day) or occasionally (3.9% on some days).

Cigarette Smoking Prevalence
(Boone County, 2015)



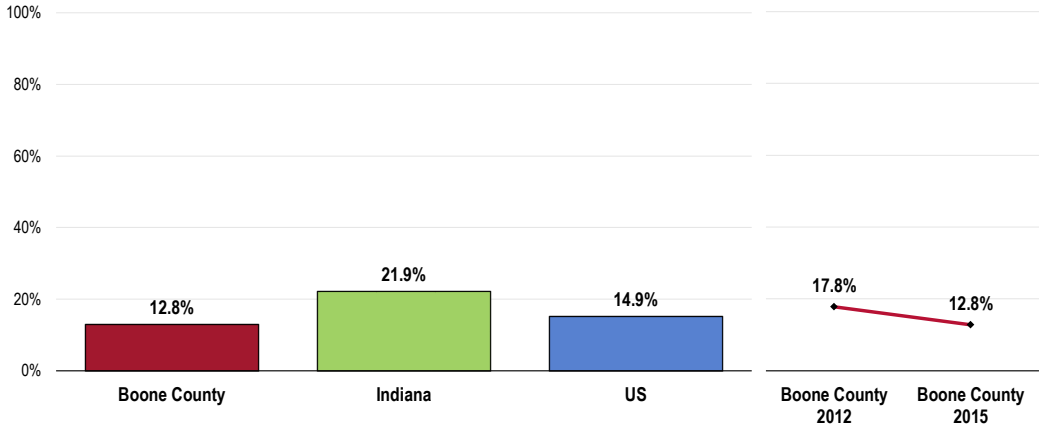
Sources: • 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 156]
Notes: • Asked of all respondents.

- Lower than statewide findings.
- Similar to national findings.
- Similar to the Healthy People 2020 target (12% or lower).

- TREND: The current smoking percentage has decreased significantly since 2012.

Current Smokers

Healthy People 2020 Target = 12.0% or Lower



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 156]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective TU-1.1]

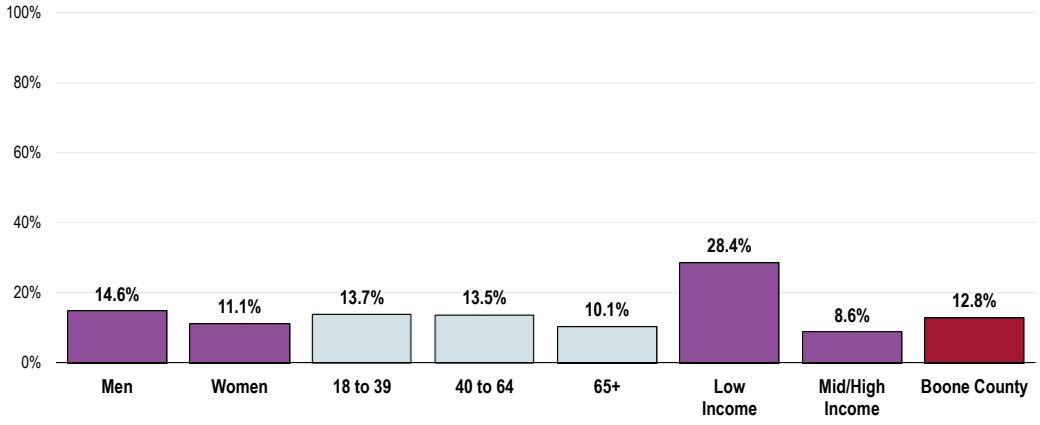
Notes:
- Asked of all respondents.
- Includes regular and occasional smokers (those who smoke cigarettes everyday or on some days).

- Cigarette smoking in Boone County is much more prevalent among lower-income residents.

Current Smokers

(Boone County, 2015)

Healthy People 2020 Target = 12.0% or Lower



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 156]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective TU-1.1]

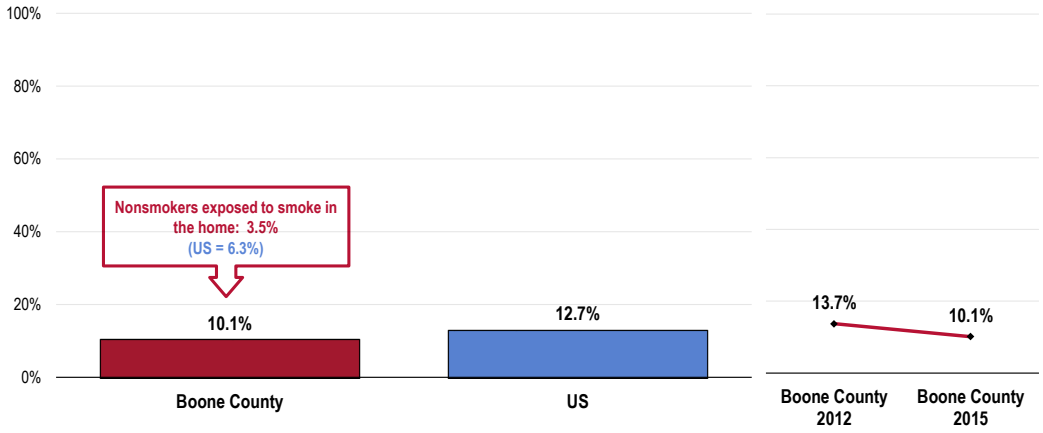
Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.
- Includes regular and occasion smokers (everyday and some days).

Environmental Tobacco Smoke

A total of 10.1% of Boone County adults (including smokers and nonsmokers) report that a member of their household has smoked cigarettes in the home an average of 4+ times per week over the past month.

- Comparable to national findings.
- TREND: Marks a statistically significant decrease over time.
- Note that 3.5% of service area nonsmokers are exposed to cigarette smoke at home, more favorable than what is found nationally.

Member of Household Smokes at Home

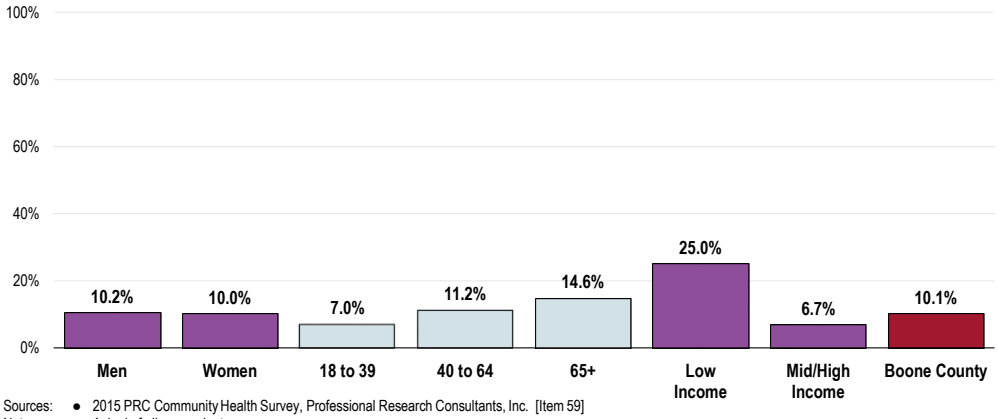


Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Items 59, 158]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- "Smokes at home" refers to someone smoking cigarettes, cigars, or a pipe in the home an average of four or more times per week in the past month.

- Note the positive correlation between age and smoke in the home, as well as the much higher prevalence among residents with lower incomes.

Member of Household Smokes At Home
(Boone County, 2015)



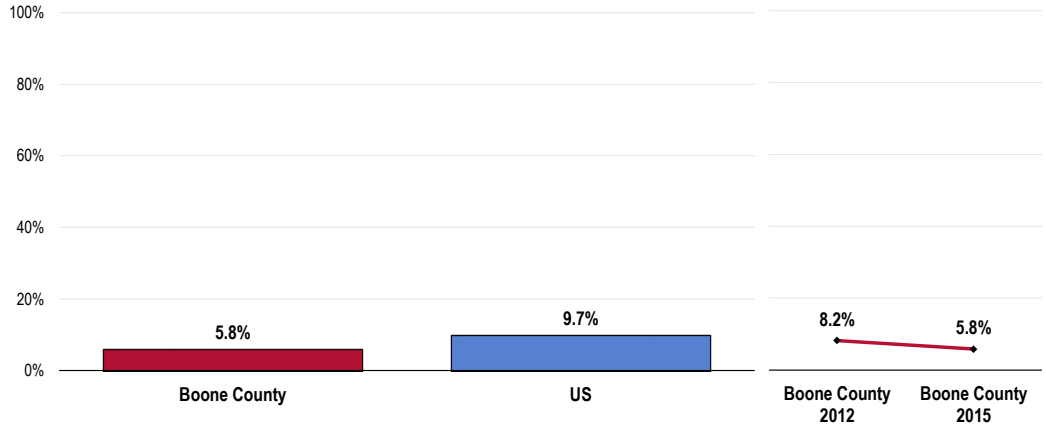
Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 59]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.
- "Smokes at home" refers to someone smoking cigarettes, cigars, or a pipe in the home an average of four or more times per week in the past month.

Among households with children, 5.8% have someone who smokes cigarettes in the home.

- Comparable to national findings.
- TREND: Statistically unchanged over time.

Percentage of Households With Children In Which Someone Smokes in the Home
(Among Households With Children)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 159]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Reflects respondents with children 0 to 17 in the household.
- "Smokes at home" refers to someone smoking cigarettes, cigars, or a pipe in the home an average of four or more times per week in the past month.

Smoking Cessation

About Reducing Tobacco Use

Preventing tobacco use and helping tobacco users quit can improve the health and quality of life for Americans of all ages. People who stop smoking greatly reduce their risk of disease and premature death. Benefits are greater for people who stop at earlier ages, but quitting tobacco use is beneficial at any age.

Many factors influence tobacco use, disease, and mortality. Risk factors include race/ethnicity, age, education, and socioeconomic status. Significant disparities in tobacco use exist geographically; such disparities typically result from differences among states in smoke-free protections, tobacco prices, and program funding for tobacco prevention.

- Healthy People 2020 (www.healthypeople.gov)

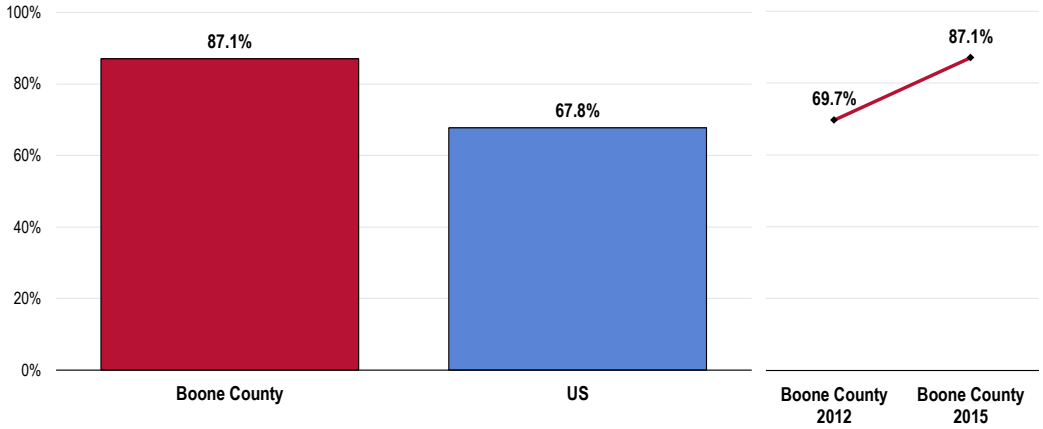
Health Advice About Smoking Cessation

A total of 87.1% of smokers say that a doctor, nurse or other health professional has recommended in the past year that they quit smoking.

- Higher than the national percentage.
- TREND: Marks a statistically significant increase since 2012.

Advised by a Healthcare Professional in the Past Year to Quit Smoking

(Among Current Smokers)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 58]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all current smokers.

Smoking Cessation Attempts

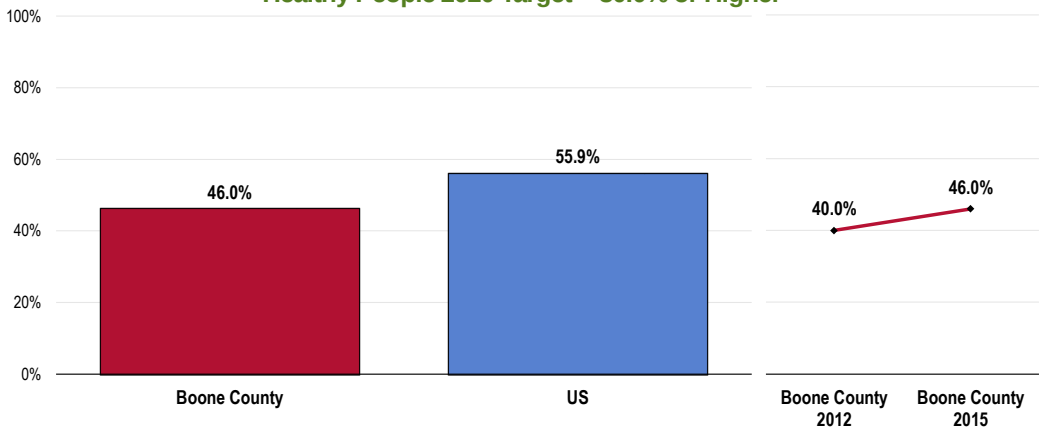
A total of 46.0% of regular smokers went without smoking for one day or longer in the past year because they were trying to quit smoking.

- Statistically similar to the national percentage.
- Fails to satisfy the Healthy People 2020 target (80% or higher).
- TREND: No statistically significant change since 2012.

Have Stopped Smoking for One Day or Longer in the Past Year in an Attempt to Quit Smoking

(Among Everyday Smokers)

Healthy People 2020 Target = 80.0% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 57]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective TU-4.1]

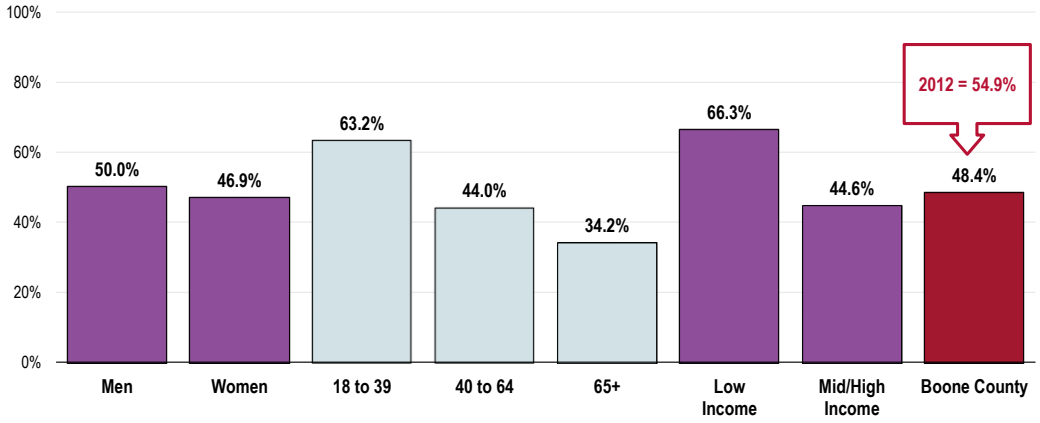
Notes:
- Asked of respondents who smoke cigarettes every day.

Awareness of the Indiana Quit Line

Nearly half of survey respondents (48.4%) are aware of the Indiana tobacco quit line (1-800-QUIT-NOW).

- Awareness is lower among older residents (negative correlation with age) and upper-income residents.
- TREND: Marks a statistically significant decrease in awareness over time.

Aware of the Indiana Tobacco Quit Line: 1-800-QUIT-NOW
(Boone County, 2015)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 312]
Notes: • Asked of all respondents.
• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Other Tobacco Use

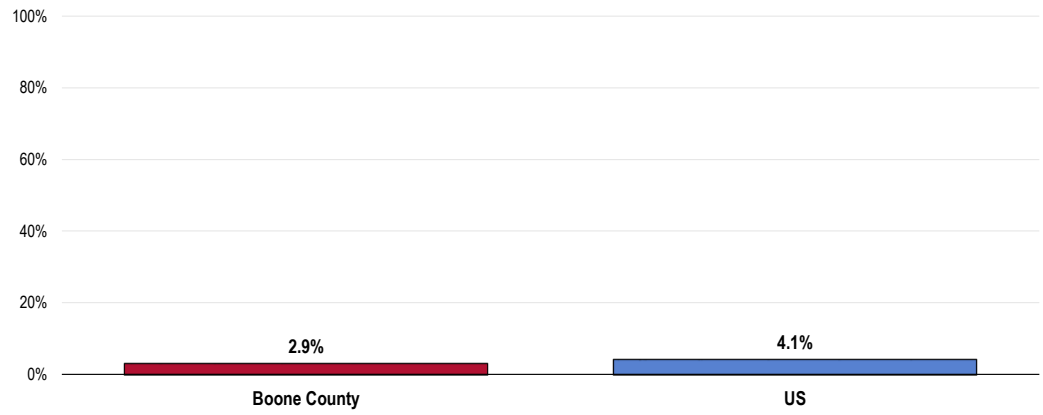
Cigars

A total of 2.9% of Boone County adults use cigars every day or on some days.

- Similar to the national percentage.
- Fails to satisfy the Healthy People 2020 target (0.2% or lower).

Use of Cigars

Healthy People 2020 Target = 0.2% or Lower



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 61]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective TU-1.3]

Notes:
- Asked of all respondents.

Smokeless Tobacco

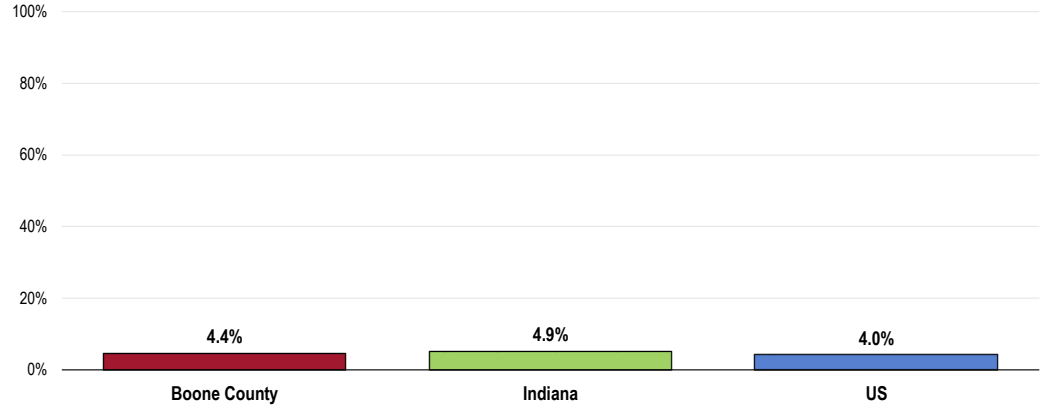
A total of 4.4% of Boone County adults use some type of smokeless tobacco every day or on some days.

Examples of smokeless tobacco include chewing tobacco, snuff, or "snus."

- Comparable to the state percentage.
- Comparable to the national percentage.
- Fails to satisfy the Healthy People 2020 target (0.3% or lower).

Use of Smokeless Tobacco

Healthy People 2020 Target = 0.3% or Lower

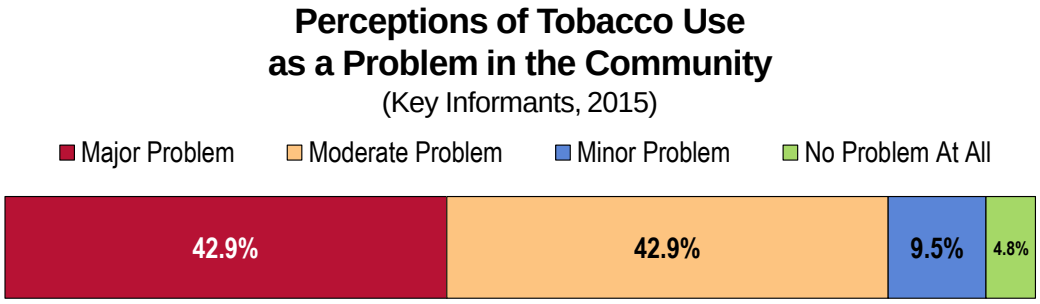


Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 60]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective TU-1.2]

Notes:
- Asked of all respondents.
- Smokeless tobacco includes chewing tobacco or snuff.

Key Informant Input: Tobacco Use

Key informants taking part in an online survey were equally likely to characterize *Tobacco Use* as a "major problem" and a "moderate problem" in the community.



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Prevalence/Incidence

I continue to see nicotine used in various ways now, including vapor. – Community Business Leader

High rates of tobacco use. – Physician

Multi-smokers. – Physician

Higher rates of youth and adult smoking than other Indiana communities. – Public Health Representative

This county should be no-smoking. Far too many children and adults smoke in this community. – Other Health Provider

There are too many people that smoke and are not trying to quit. – Other Health Provider

I continue to see clients daily who have an addiction and frankly they cannot afford it. – Social Services Provider

Many smokers, have a program through the judicial system for those underage smokers who are caught smoking. – Public Health Representative

Tobacco use in poor areas is still too high. – Physician

Tobacco is a huge concern for our community. We have increased co-morbidities and dental issues related to this. It drives up healthcare costs. Smoking cessation programs are not reaching the people that need them the most. – Other Health Provider

Tobacco use is a major problem everywhere. Tobacco companies are finding new ways to market new harmful products to teens and younger adults which will continue to have people becoming addicted to nicotine. – Other Health Provider

Many young kids use tobacco. It appears the numbers have not dropped significantly. Same with older adults. – Community Business Leader

E-Cigarettes

Need education on vaping and other smoking alternatives. We seem to just trade one vice for another. – Community Business Leader

Any use of this is insane and vapor marketing to youth is unconscionable, but very real. – Community Business Leader

Cancer

> *Cancer rates. – Social Services Provider*

Cause of Death

> *It is a killer, a poison, enough said. – Physician*

Youth

> *Youth acceptance, lack local ordinance, lack of support groups, existing public acceptance. – Community Business Leader*

Access to Health Services

Professional Research Consultants, Inc.

Health Insurance Coverage

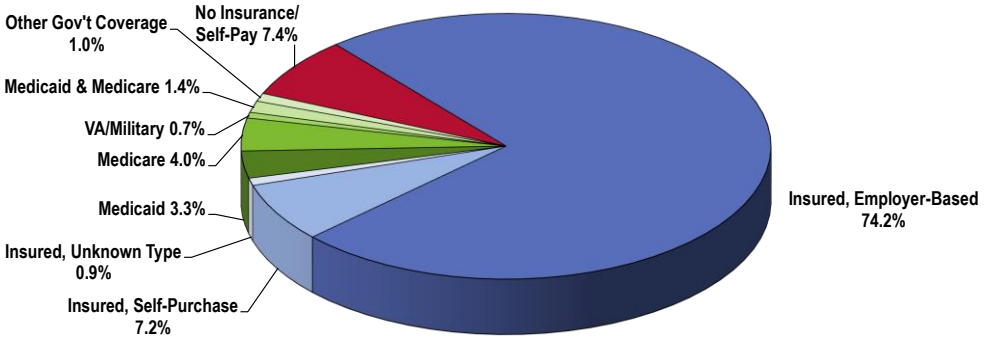
Type of Healthcare Coverage

A total of 82.3% of Boone County adults age 18 to 64 report having healthcare coverage through private insurance. Another 10.4% report coverage through a government-sponsored program (e.g., Medicaid, Medicare, military benefits).

Survey respondents were asked a series of questions to determine their healthcare insurance coverage, if any, from either private or government-sponsored sources.

Healthcare Insurance Coverage

(Among Adults Age 18-64; Boone County, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 165]
Notes: ● Reflects respondents age 18 to 64.

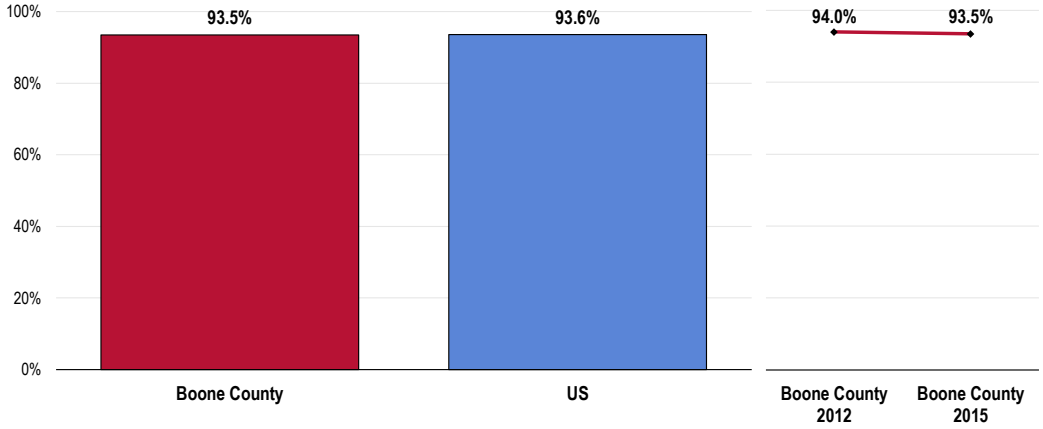
Prescription Drug Coverage

Among insured adults, 93.5% report having prescription coverage as part of their insurance plan.

- Nearly identical to the national prevalence.
- TREND: Statistically unchanged over time.

Health Insurance Covers Prescriptions at Least in Part

(Among Insured Respondents)



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 318]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents with healthcare insurance coverage.

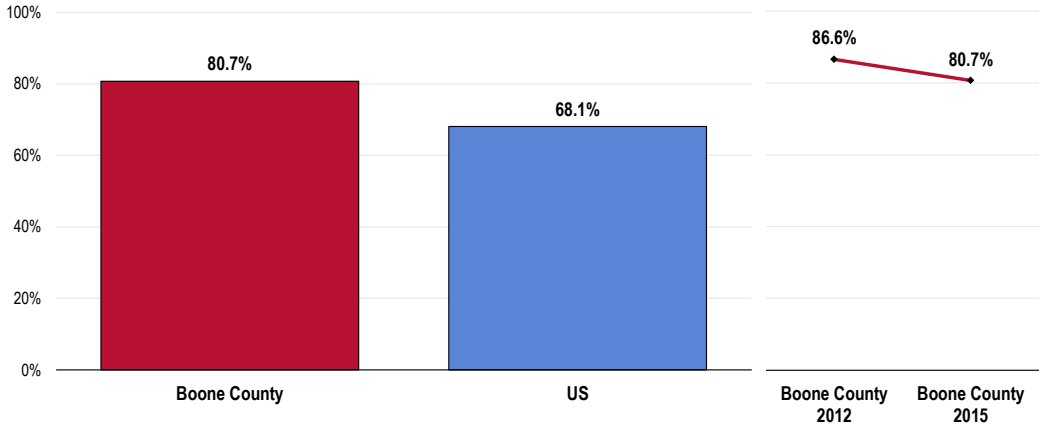
Supplemental Coverage

Among Medicare recipients, the majority (80.7%) has additional, supplemental healthcare coverage.

- Better than that reported among Medicare recipients nationwide.
- TREND: Statistically similar to the proportion reported in 2012.

Have Supplemental Coverage in Addition to Medicare

(Among Adults Age 65+)



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 317]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of respondents age 65+.

Lack of Health Insurance Coverage

Among adults age 18 to 64, 7.4% report having no insurance coverage for healthcare expenses.

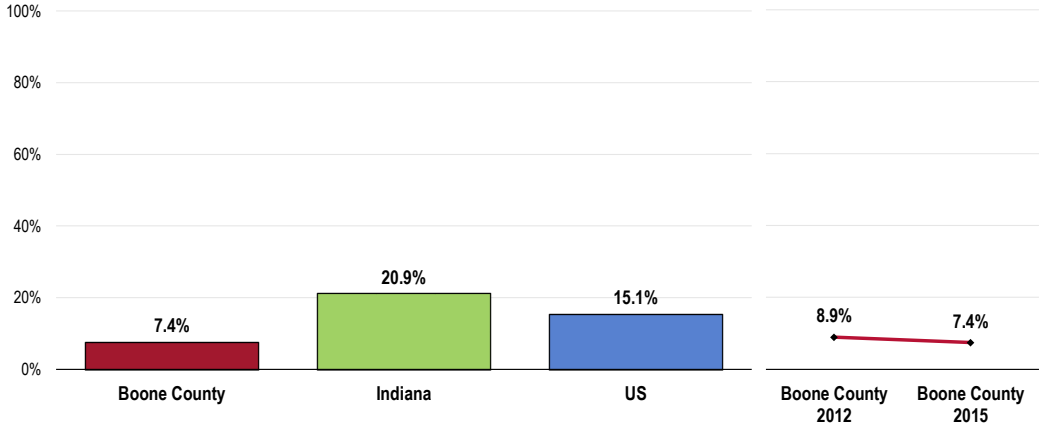
Here, lack of health insurance coverage reflects respondents age 18 to 64 (thus, excluding the Medicare population) who have no type of insurance coverage for healthcare services – neither private insurance nor government-sponsored plans (e.g., Medicaid).

- Far below the latest state and national benchmarks; note, however, that state and national data predate the implementation of the health insurance marketplace.
- The Healthy People 2020 target is universal coverage (0% uninsured).
- TREND: Statistically similar to 2012 findings.

Lack of Healthcare Insurance Coverage

(Among Adults Age 18-64)

Healthy People 2020 Target = 0.0% (Universal Coverage)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 165]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective AHS-1]

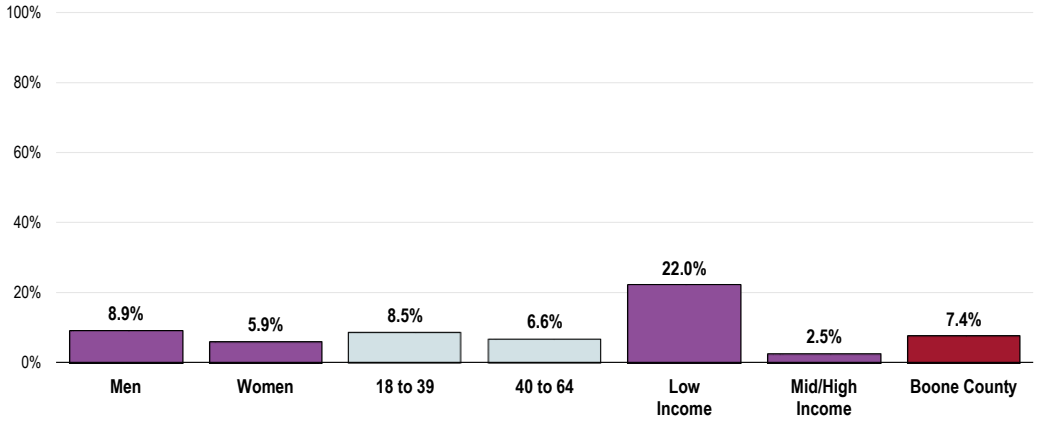
Notes:
- Asked of all respondents under the age of 65.

- Residents living at lower incomes are more likely to be without healthcare insurance coverage (note the 22.0% uninsured prevalence among low-income adults).

Lack of Healthcare Insurance Coverage

(Among Adults Age 18-64; Boone County, 2015)

Healthy People 2020 Target = 0.0% (Universal Coverage)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 165]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective AHS-1]

Notes:
- Asked of all respondents under the age of 65.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

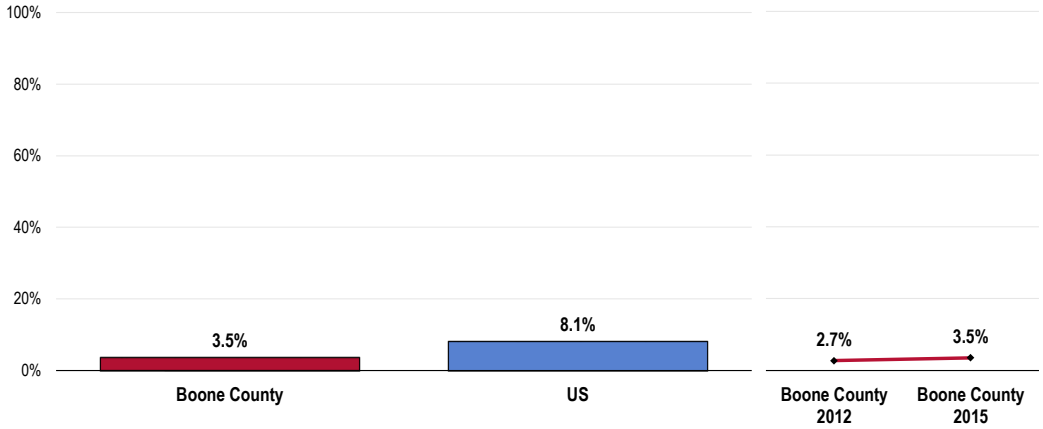
Recent Lack of Coverage

Among currently insured adults in Boone County, 3.5% report that they were without healthcare coverage at some point in the past year.

- Better than US findings.
- TREND: Insurance instability is statistically unchanged since 2012.

Went Without Healthcare Insurance Coverage At Some Point in the Past Year

(Among Insured Adults)

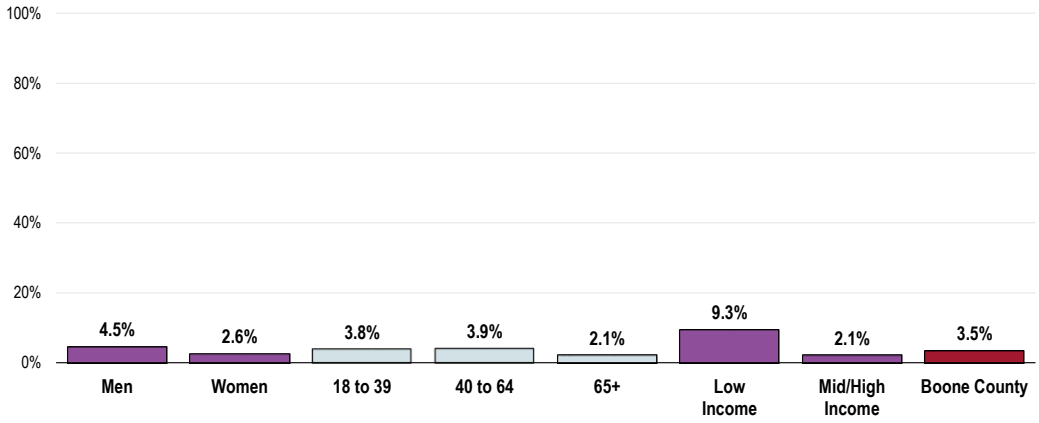


Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 79]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all insured respondents.

- Among insured adults, lower-income residents are more likely to have gone without healthcare coverage at some point in the past year.

Went Without Healthcare Insurance Coverage At Some Point in the Past Year
(Among Insured Adults; Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 79]

Notes:
- Asked of all insured respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Difficulties Accessing Healthcare

About Access to Healthcare

Access to comprehensive, quality health care services is important for the achievement of health equity and for increasing the quality of a healthy life for everyone. It impacts: overall physical, social, and mental health status; prevention of disease and disability; detection and treatment of health conditions; quality of life; preventable death; and life expectancy.

Access to health services means the timely use of personal health services to achieve the best health outcomes. It requires three distinct steps: 1) Gaining entry into the health care system; 2) Accessing a health care location where needed services are provided; and 3) Finding a health care provider with whom the patient can communicate and trust.

- Healthy People 2020 (www.healthypeople.gov)

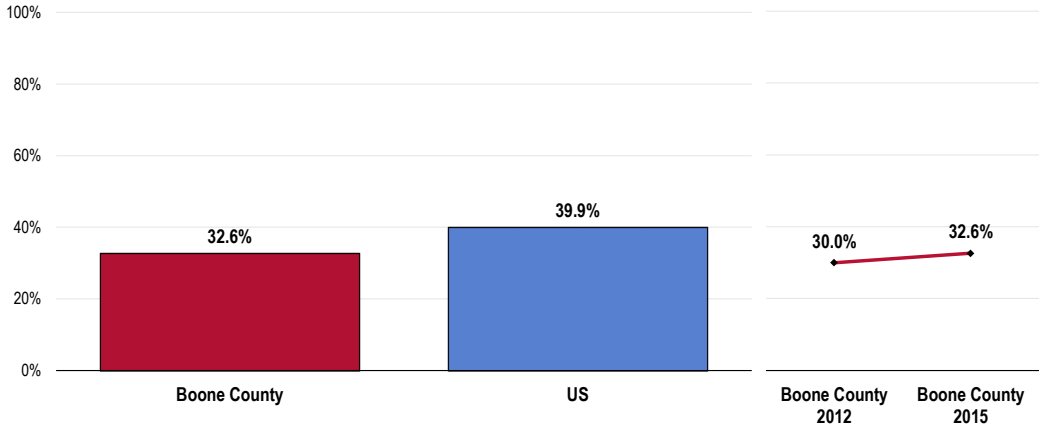
Difficulties Accessing Services

A total of 32.6% of Boone County adults report some type of difficulty or delay in obtaining healthcare services in the past year.

This indicator reflects the percentage of the total population experiencing problems accessing healthcare in the past year, regardless of whether they needed or sought care.

- More favorable than national findings.
- TREND: Similar to the percentage reported in 2012.

Experienced Difficulties or Delays of Some Kind in Receiving Needed Healthcare in the Past Year



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 169]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

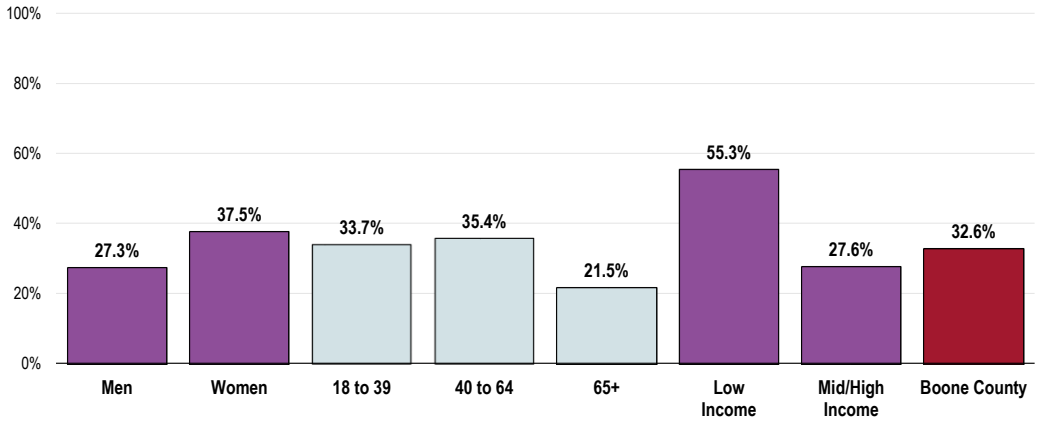
Notes:
- Asked of all respondents.
- Represents the percentage of respondents experiencing one or more barriers to accessing healthcare in the past 12 months.

Note that the following demographic groups more often report difficulties accessing healthcare services:

- Women.
- Adults under the age of 65.
- Lower-income residents.

Experienced Difficulties or Delays of Some Kind in Receiving Needed Healthcare in the Past Year

(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 169]

Notes:
- Asked of all respondents.
- Represents the percentage of respondents experiencing one or more barriers to accessing healthcare in the past 12 months.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Barriers to Healthcare Access

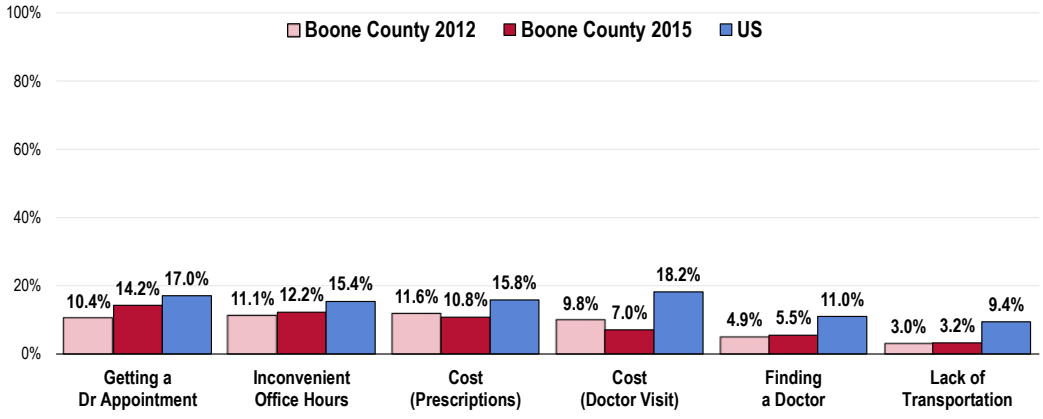
Of the tested barriers, difficulty getting a medical appointment impacted the greatest share of adults (14.2% say they had difficulty getting a physician appointment in the past year).

- The proportion of Boone County adults impacted was statistically comparable to or better than that found nationwide for each of the tested barriers.
- TREND: Compared to baseline 2012 data, Boone County has seen a significant increase with regard to the barrier of **difficulty getting a physician appointment**.

To better understand healthcare access barriers, survey participants were asked whether any of six types of barriers to access prevented them from seeing a physician or obtaining a needed prescription in the past year.

Again, these percentages reflect the total population, regardless of whether medical care was needed or sought.

Barriers to Access Have Prevented Medical Care in the Past Year



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Items 7-12]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

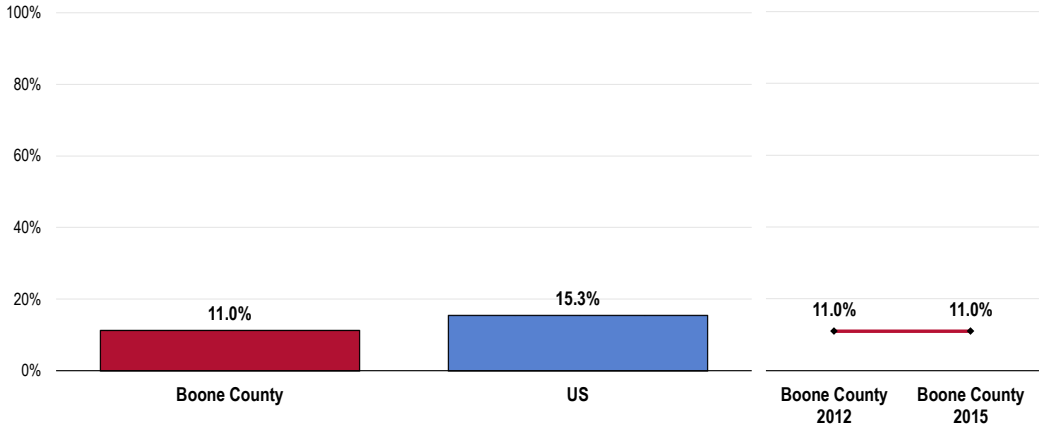
Notes:
- Asked of all respondents.

Prescriptions

Among all Boone County adults, 11.0% skipped or reduced medication doses in the past year in order to stretch a prescription and save money.

- More favorable than national findings.
- TREND: Unchanged over time.

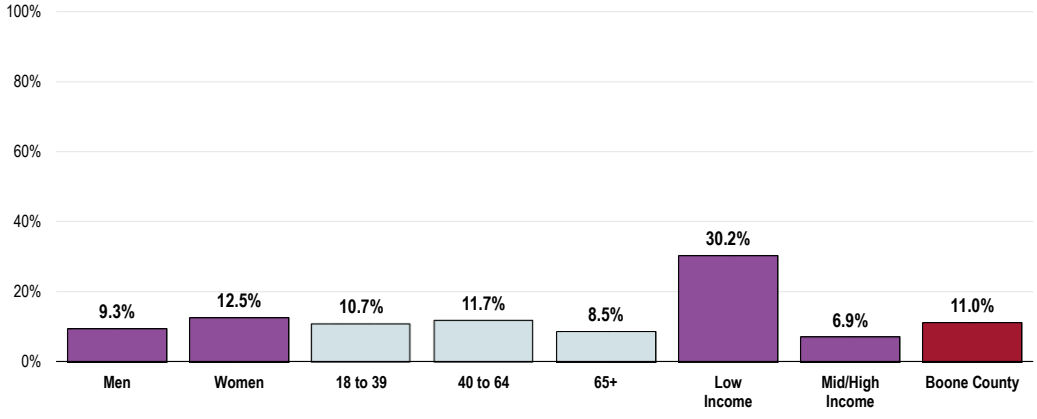
Skipped or Reduced Prescription Doses in Order to Stretch Prescriptions and Save Money



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 13]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

- Respondents with lower incomes are more likely to have skipped or reduced their prescription doses.

Skipped or Reduced Prescription Doses in Order to Stretch Prescriptions and Save Money
(Boone County, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 13]
Notes: ● Asked of all respondents.
● Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Accessing Healthcare for Children

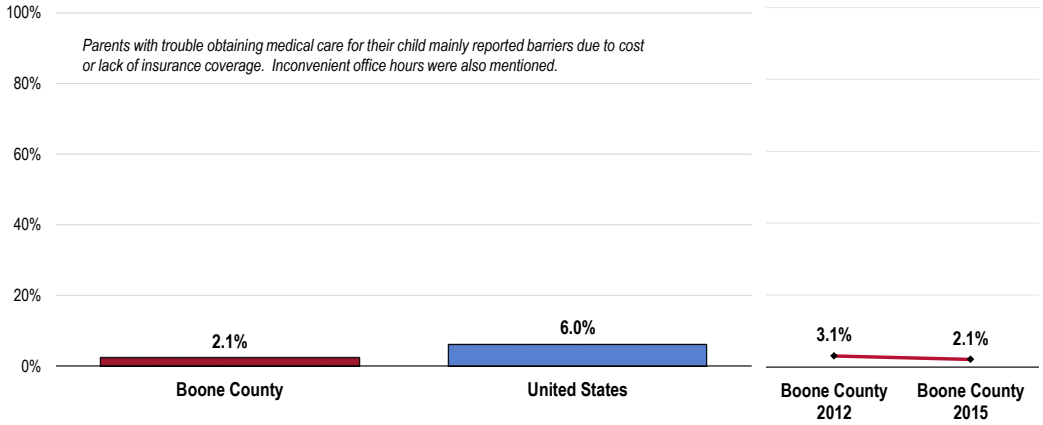
Surveyed parents were also asked if, within the past year, they experienced any trouble receiving medical care for a randomly-selected child in their household.

A total of 2.1% of parents say there was a time in the past year when they needed medical care for their child, but were unable to get it.

- More favorable than what is reported nationwide.
- TREND: Statistically unchanged since 2012.

Had Trouble Obtaining Medical Care for Child in the Past Year

(Among Parents of Children 0-17)



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Items 111-112]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents with children 0 to 17 in the household.

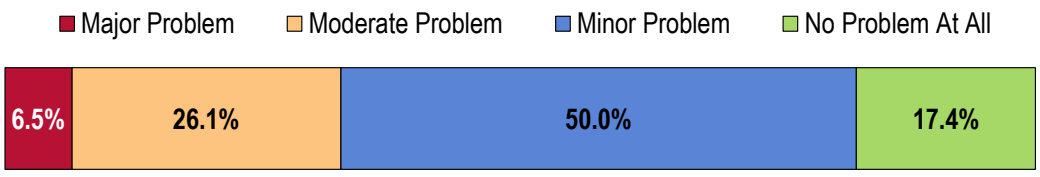
Among the parents experiencing difficulties, the majority cited **cost or a lack of insurance** as the primary reason; others cited inconvenient office hours.

Key Informant Input: Access to Healthcare Services

Half of key informants taking part in an online survey characterized *Access to Healthcare Services* as a "minor problem" in the community.

Perceptions of Access to Healthcare Services as a Problem in the Community

(Key Informants, 2015)



Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons frequently related to the following:

Transportation

> *Transportation and money, insurance. – Social Services Provider*
>
> *Lack of transportation, obligations of parents, particularly mothers who have no one to watch their children and money to pay for transportation. Many primary care offices do not encourage accepting Medicaid or under insured patients which limits access to proper care. – Other Health Provider*

Elderly

> *Many elderly people do not know the resources available to them. – Other Health Provider*

Cognitive Disabilities

> *Understanding the needs of individuals with cognitive disabilities for many services. – Social Services Provider*

Type of Care Most Difficult to Access

Key informants (who rated this as a "major problem") most often identified dental care, substance abuse treatment, and chronic disease care as the most difficult to access in the community.

	Most Difficult to Access	Second-Most Difficult to Access	Third-Most Difficult to Access	Total Mentions
Dental Care	33.3%	33.3%	0.0%	2
Substance Abuse Treatment	33.3%	0.0%	33.3%	2
Chronic Disease Care	0.0%	0.0%	66.7%	2
Primary Care	33.3%	0.0%	0.0%	1
Mental Healthcare	0.0%	33.3%	0.0%	1
Specialty Care	0.0%	33.3%	0.0%	1

Primary Care Services

About Primary Care

Improving health care services depends in part on ensuring that people have a usual and ongoing source of care. People with a usual source of care have better health outcomes and fewer disparities and costs. Having a primary care provider (PCP) as the usual source of care is especially important. PCPs can develop meaningful and sustained relationships with patients and provide integrated services while practicing in the context of family and community. Having a usual PCP is associated with:

- Greater patient trust in the provider
- Good patient-provider communication
- Increased likelihood that patients will receive appropriate care

Improving health care services includes increasing access to and use of evidence-based preventive services. Clinical preventive services are services that: **prevent** illness by detecting early warning signs or symptoms before they develop into a disease (primary prevention); or **detect** a disease at an earlier, and often more treatable, stage (secondary prevention).

- Healthy People 2020 (www.healthypeople.gov)

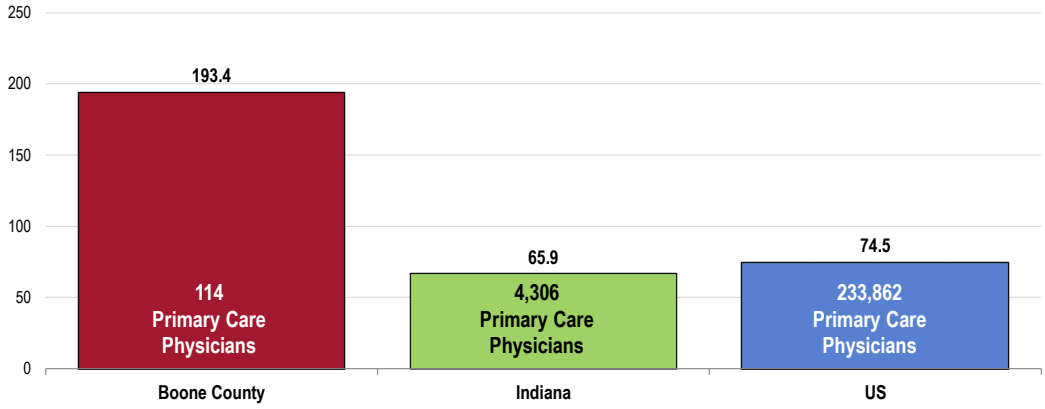
Access to Primary Care

In Boone County in 2012, there were 114 primary care physicians, translating to a rate of 193.4 primary care physicians per 100,000 population.

- Well above the primary care physician-to-population ratio found statewide.
- Well above the ratio found nationally.

Access to Primary Care

(Number of Primary Care Physicians per 100,000 Population, 2012)



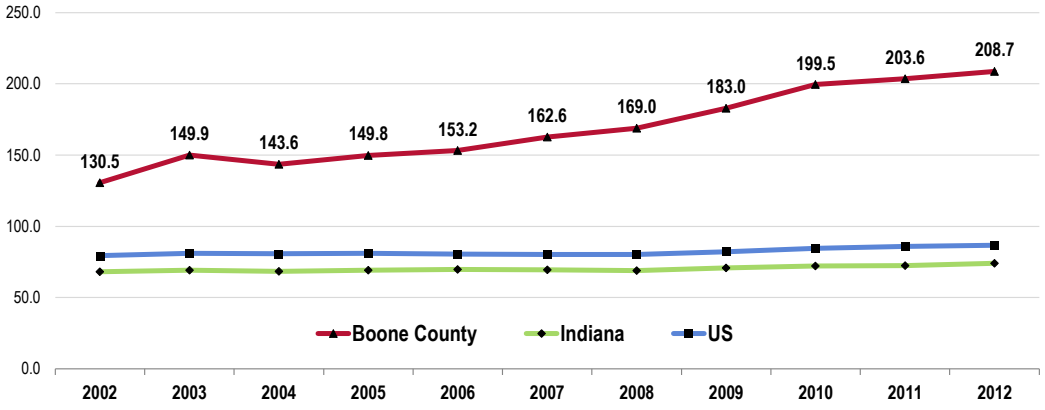
Sources:
- US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File: 2012.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because a shortage of health professionals contributes to access and health status issues.

- TREND: Access to primary care (in terms of the ratio of primary care physicians to population) has increased steadily over time in Boone County.

Trends in Access to Primary Care

(Number of Primary Care Physicians per 100,000 Population)



Sources:
- US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File: 2012.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because a shortage of health professionals contributes to access and health status issues.
- These figures represent all primary care physicians practicing patient care, including hospital residents. In counties with teaching hospitals, this figure may differ from the rate reported in the previous chart.

Specific Source of Ongoing Care

A total of 88.8% of Boone County adults were determined to have a specific source of ongoing medical care.

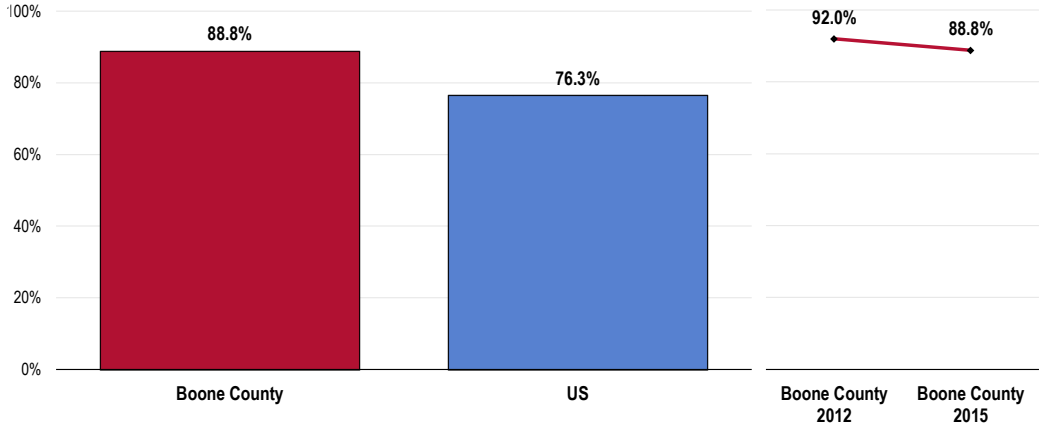
- Higher than national findings.
- Fails to satisfy the Healthy People 2020 objective (95% or higher).
- TREND: Marks a statistically significant decrease since 2012.

Having a specific source of ongoing care includes having a doctor's office, clinic, urgent care center, walk-in clinic, health center facility, hospital outpatient clinic, HMO or prepaid group, military/VA clinic, or some other kind of place to go if one is sick or needs advice about his or her health. This resource is crucial to the concept of "patient-centered medical homes" (PCMH).

A hospital emergency room is not considered a specific source of ongoing care in this instance.

Have a Specific Source of Ongoing Medical Care

Healthy People 2020 Target = 95.0% or Higher [All Ages]



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 166]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective AHS-5.1]

Notes:
- Asked of all respondents.

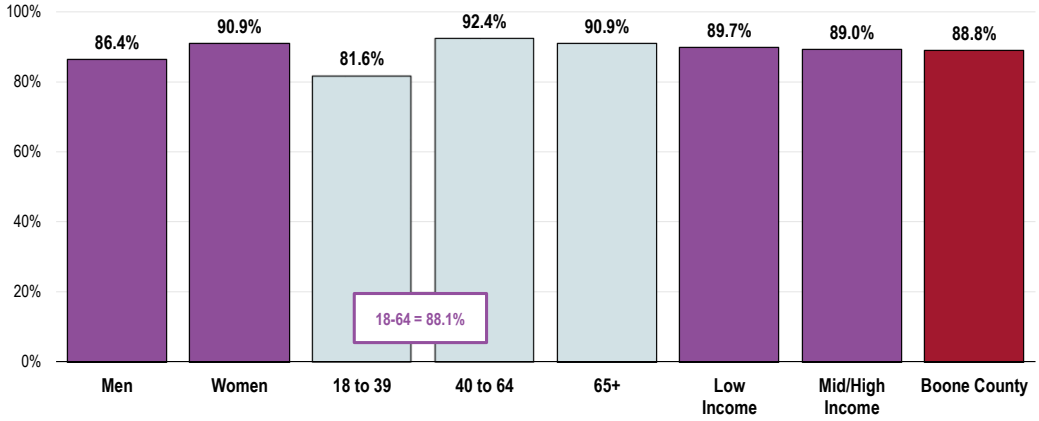
When viewed by demographic characteristics, the following population segments are less likely to have a specific source of care:

- Adults under age 40.
- Among adults age 18-64, 88.1% have a specific source for ongoing medical care, more favorable than national findings.
    - Similar to the Healthy People 2020 target for this age group (89.4% or higher).
- Among adults 65+, 90.9% have a specific source for care, more favorable than the percentage reported among seniors nationally.
    - Fails to satisfy the Healthy People 2020 target of 100% for seniors.

Have a Specific Source of Ongoing Medical Care

(Boone County, 2015)

Healthy People 2020 Target = 95.0% or Higher [All Ages]; ≥89.4% [18-64]; 100% [65+]



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Items 166-168]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objectives AHS-5.1, 5.3, 5.4]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

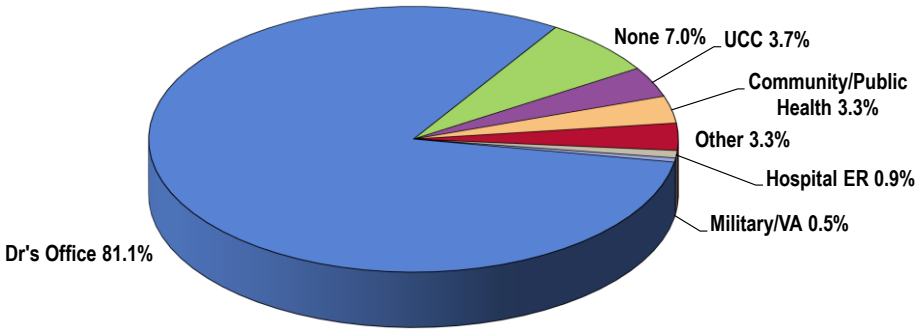
Type of Place Used for Medical Care

When asked where they usually go if they are sick or need advice about their health, the greatest share of respondents (81.1%) identified a particular doctor's office, followed by references to urgent-care centers (mentioned by 3.7%) and public or community health centers (3.3%).

Note that 0.9% of respondents rely on a hospital emergency room, and 0.5% use some type of military/VA facility.

Particular Place Utilized for Medical Care

(Boone County, 2015)

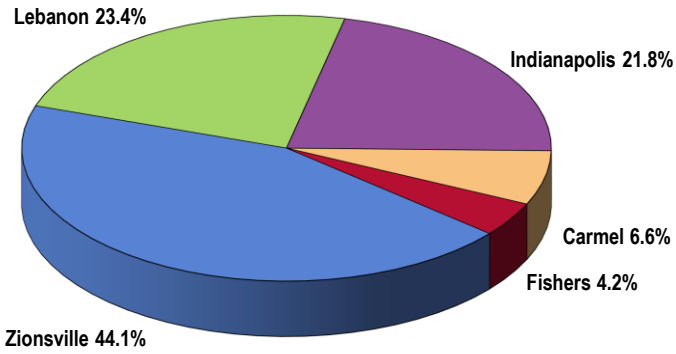


Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Items 15-16]
Notes: ● Asked of all respondents.

Among respondents with a particular place for their medical care, 44.1% mentioned a facility in Zionsville, followed by mention of Lebanon (23.4%), Indianapolis (21.8%), Carmel (6.6%), and Fishers (4.2%).

Community Location of Particular Place Utilized for Medical Care

(Among Boone County Adults With a Particular Place for Care, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 301]
Notes: ● Asked of all respondents with a particular place they visit for their medical care.

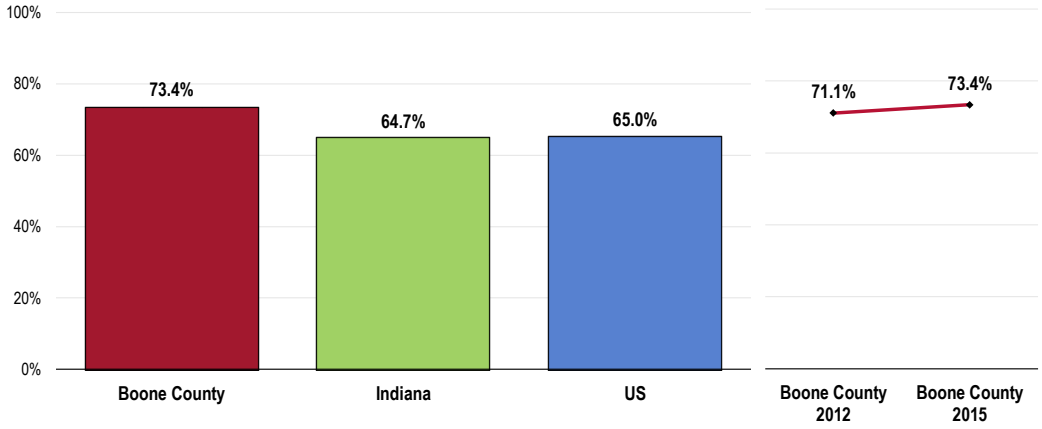
Utilization of Primary Care Services

Adults

Nearly 3 in 4 adults (73.4%) visited a physician for a routine checkup in the past year.

- Higher than state findings.
- Higher than national findings.
- TREND: Statistically similar to 2012 findings.

Have Visited a Physician for a Checkup in the Past Year

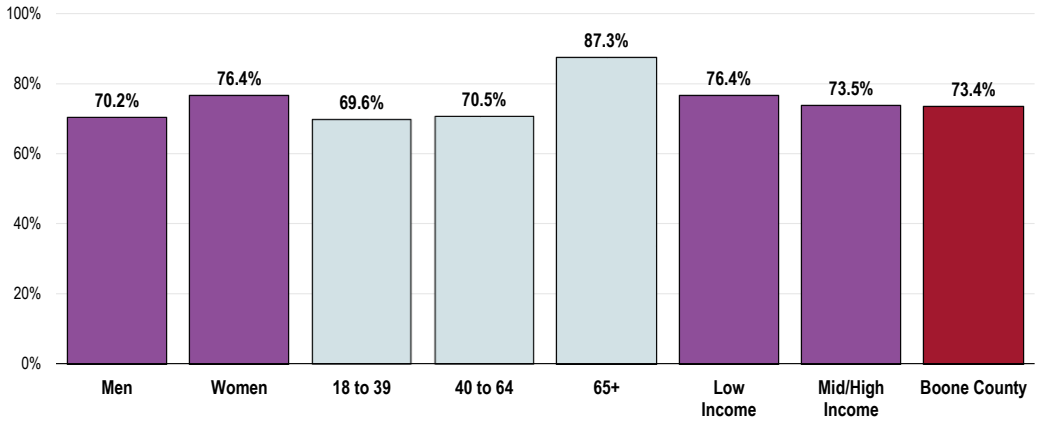


Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 17]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

- Adults under age 65 are less likely to have received routine care in the past year.

Have Visited a Physician for a Checkup in the Past Year
(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 17]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

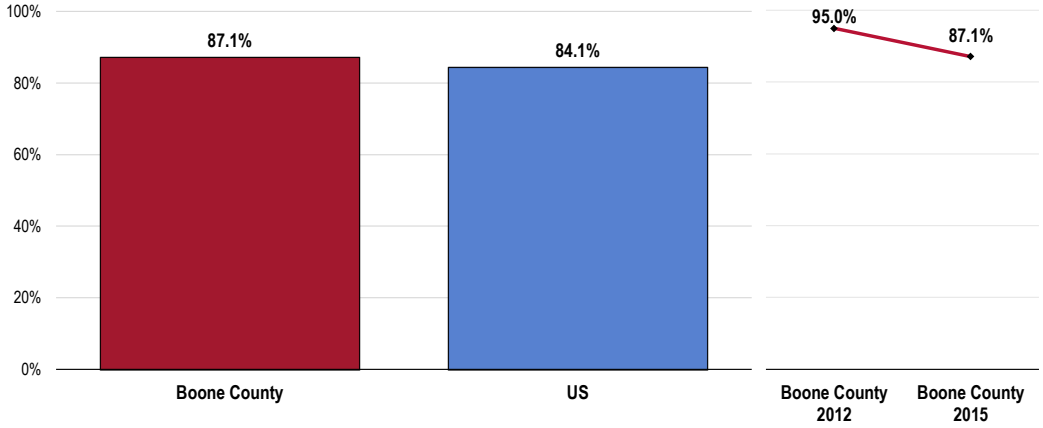
Children

Among surveyed parents, 87.1% report that their child has had a routine checkup in the past year.

- Similar to national findings.
- TREND: Denotes a statistically significant decrease from 2012 findings.

Child Has Visited a Physician for a Routine Checkup in the Past Year

(Among Parents of Children 0-17)



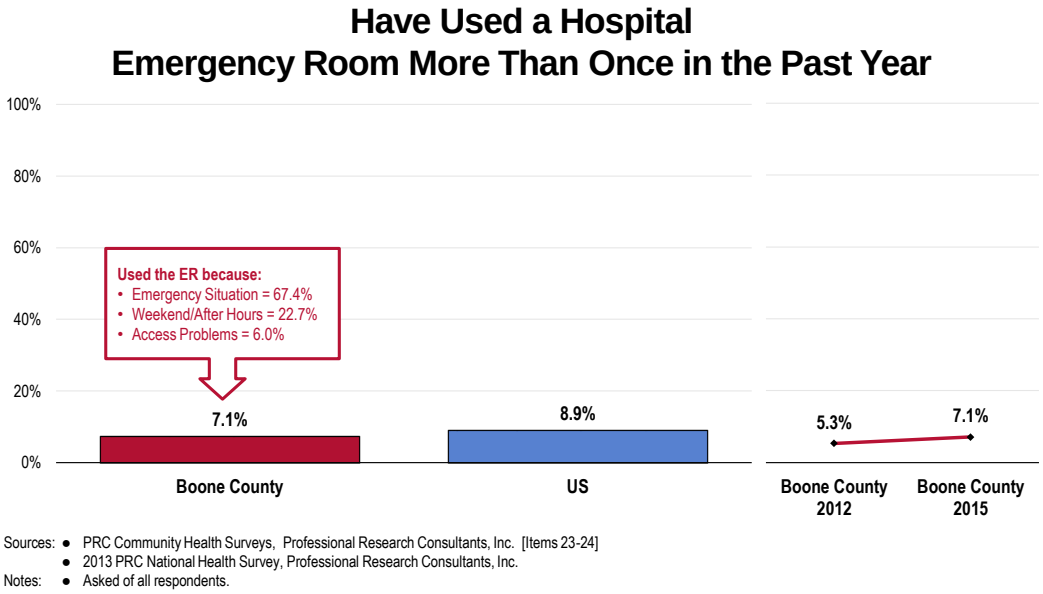
Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 113]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents with children 0 to 17 in the household.

Emergency Room Utilization

A total of 7.1% of Boone County adults have gone to a hospital emergency room more than once in the past year about their own health.

- Comparable to national findings.
- TREND: Statistically unchanged over time.



Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Items 23-24]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

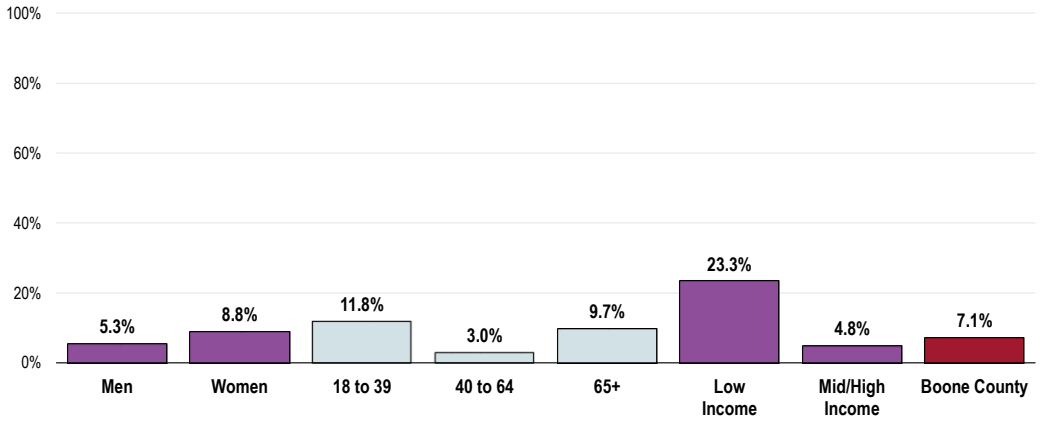
Of those using a hospital ER, 67.4% say this was due to an **emergency or life-threatening situation**, while 22.7% indicated that the visit was during **after-hours or on the weekend**. A total of 6.0% cited **difficulties accessing primary care** for various reasons.

These population segments are more likely to have used an ER for their medical care more than once in the past year:

- Young adults, as well as seniors.
- Residents in low-income households.

Have Used a Hospital Emergency Room More Than Once in the Past Year

(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 23]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Palliative Care

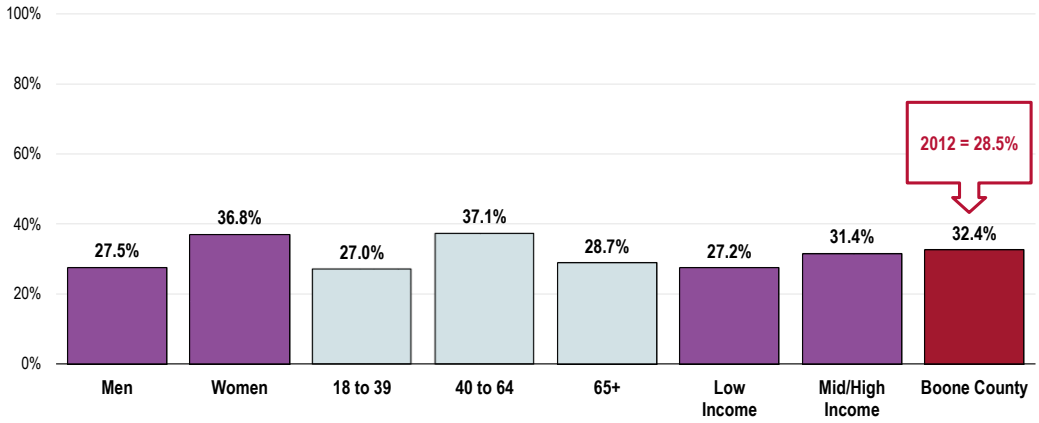
Nearly one-third of Boone County survey respondents (32.4%) are aware of local programs providing palliative care.

Palliative care is an area of healthcare that focuses on relieving and preventing the suffering of patients with a terminal or chronic disease.

- Awareness is lower among men and adults at either end of the age spectrum.
- TREND: Awareness has not changed significantly since 2012.

Aware of Local Programs Providing Palliative Care

(Boone County, 2015)



Sources: • PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 333]

Notes: • Asked of all respondents.

• Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Oral Health

About Oral Health

Oral health is essential to overall health. Good oral health improves a person's ability to speak, smile, smell, taste, touch, chew, swallow, and make facial expressions to show feelings and emotions. However, oral diseases, from cavities to oral cancer, cause pain and disability for many Americans. Good self-care, such as brushing with fluoride toothpaste, daily flossing, and professional treatment, is key to good oral health. Health behaviors that can lead to poor oral health include: **tobacco use; excessive alcohol use;** and **poor dietary choices**.

The significant improvement in the oral health of Americans over the past 50 years is a public health success story. Most of the gains are a result of effective prevention and treatment efforts. One major success is community water fluoridation, which now benefits about 7 out of 10 Americans who get water through public water systems. However, some Americans do not have access to preventive programs. People who have the least access to preventive services and dental treatment have greater rates of oral diseases. A person's ability to access oral healthcare is associated with factors such as education level, income, race, and ethnicity.

Barriers that can limit a person's use of preventive interventions and treatments include: limited access to and availability of dental services; lack of awareness of the need for care; cost; and fear of dental procedures.

There are also social determinants that affect oral health. In general, people with lower levels of education and income, and people from specific racial/ethnic groups, have higher rates of disease. People with disabilities and other health conditions, like diabetes, are more likely to have poor oral health.

Potential strategies to address these issues include:

- Implementing and evaluating activities that have an impact on health behavior.
- Promoting interventions to reduce tooth decay, such as dental sealants and fluoride use.
- Evaluating and improving methods of monitoring oral diseases and conditions.
- Increasing the capacity of State dental health programs to provide preventive oral health services.
- Increasing the number of community health centers with an oral health component.

- Healthy People 2020 (www.healthypeople.gov)

Dental Care

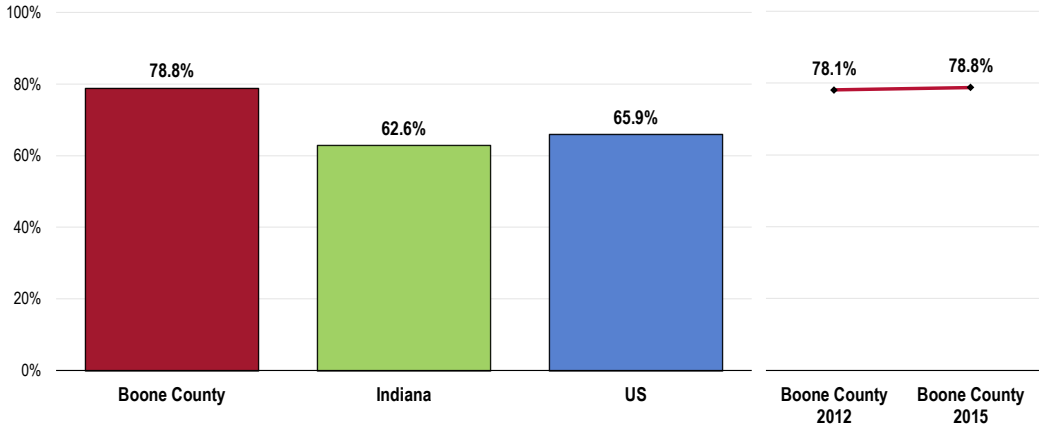
Adults

A total of 78.8% of Boone County adults have visited a dentist or dental clinic (for any reason) in the past year.

- More favorable than statewide findings.
- More favorable than national findings.
- Satisfies the Healthy People 2020 target (49% or higher).
- TREND: Statistically unchanged since 2012.

Have Visited a Dentist or Dental Clinic Within the Past Year

Healthy People 2020 Target = 49.0% or Higher



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 21]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective OH-7]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): Indiana 2013 Indiana data.

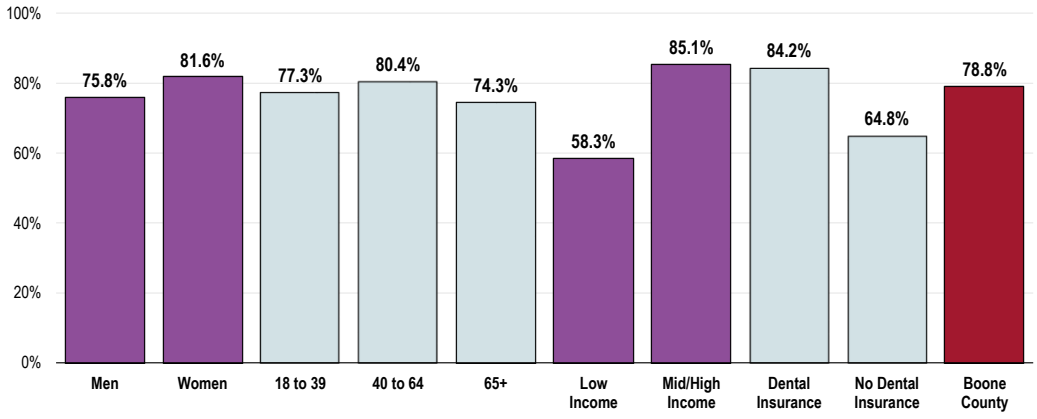
Notes:
- Asked of all respondents.

- Persons living in the higher income category report much higher utilization of oral health services.
- As might be expected, persons without dental insurance report much lower utilization of oral health services than those with dental coverage.

Have Visited a Dentist or Dental Clinic Within the Past Year

(Boone County, 2015)

Healthy People 2020 Target = 49.0% or Higher



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 21]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective OH-7]

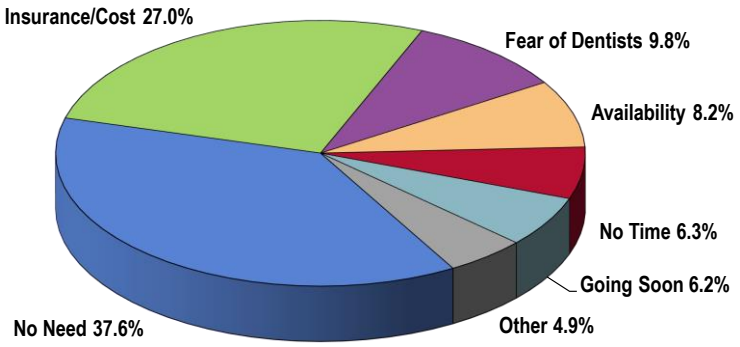
Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Among residents without recent dental care, 37.6% do not feel a dental visit is necessary, while 27.0% did not obtain dental care because of insurance or cost.

- Another 9.8% mentioned a fear of dentists, followed by references to availability (8.2%), no time (6.3%), and references to impending visits (6.2%).

Main Reason for Not Visiting a Dentist in the Past Year

(Among Boone County Residents Without a Dental Visit in the Past Year, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 303]
Notes: ● Asked of those respondents without a dental visit in the past year.

Children

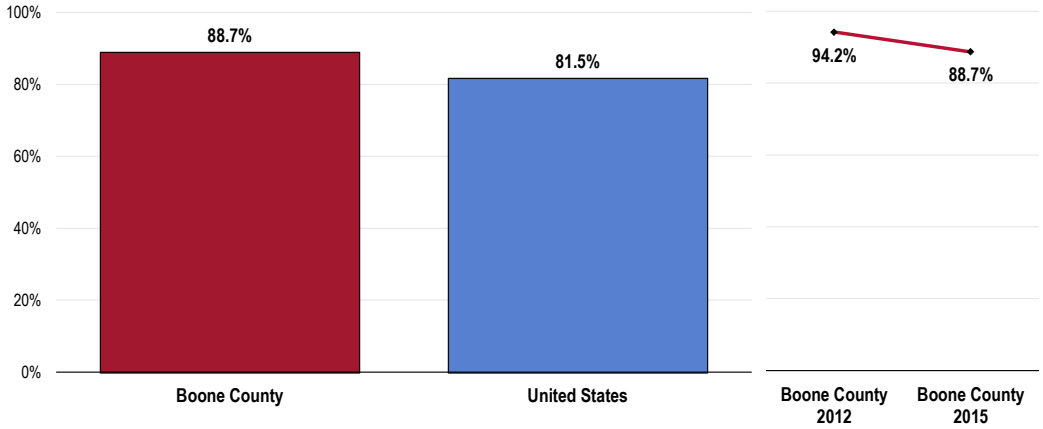
A total of 88.7% of parents report that their child (age 2 to 17) has been to a dentist or dental clinic within the past year.

- More favorable than national findings.
- Satisfies the Healthy People 2020 target (49% or higher).
- TREND: Marks a statistically significant decrease in children's dental care since 2012.

Child Has Visited a Dentist or Dental Clinic Within the Past Year

(Among Parents of Children Age 2-17)

Healthy People 2020 Target = 49.0% or Higher



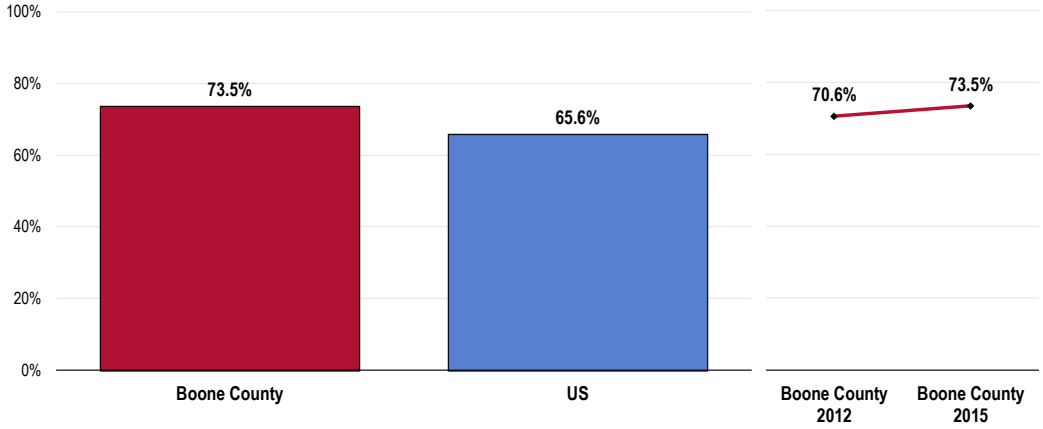
Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 116]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
● US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective OH-7]
Notes: ● Asked of all respondents with children age 2 through 17.

Dental Insurance

Nearly 3 in 4 Boone County adults (73.5%) have dental insurance that covers all or part of their dental care costs.

- Higher than the national finding.
- TREND: Statistically unchanged since 2012.

Have Insurance Coverage That Pays All or Part of Dental Care Costs

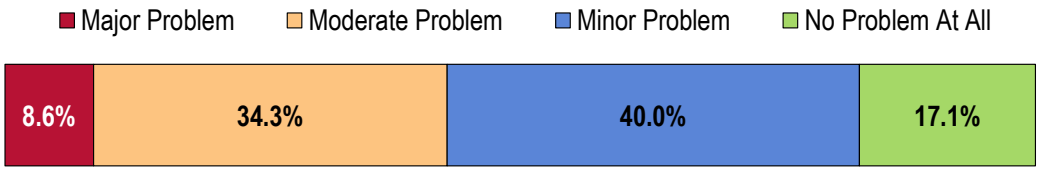


Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 22]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Key Informant Input: Oral Health

Key informants taking part in an online survey most often characterized *Oral Health* as a "minor problem" in the community.

Perceptions of Oral Health as a Problem in the Community
(Key Informants, 2015)



Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Top Concerns

Among those rating this issue as a "major problem," reasons related to the following:

Affordable Care

> *Affordability and those dentists accepting Medicaid. – Public Health Representative*
>
> *Accessibility to affordable dental care. – Social Services Provider*

Vision Care

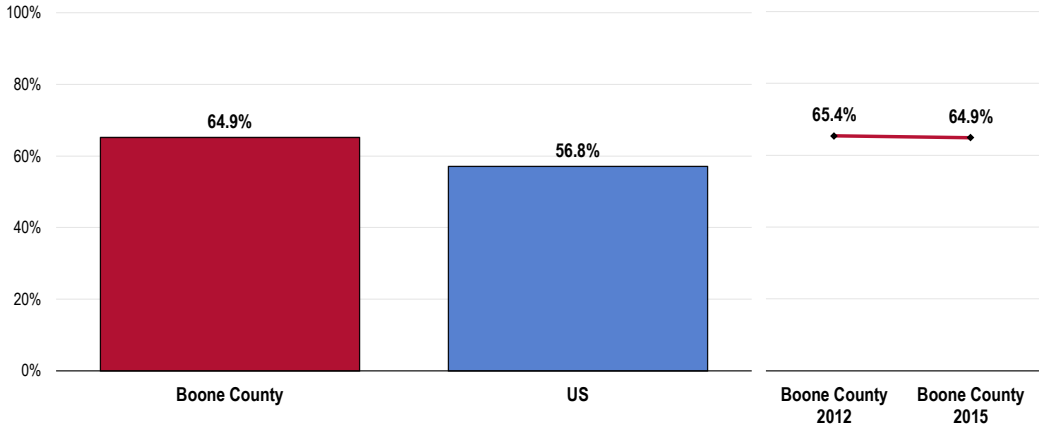
A total of 64.9% of service area residents had an eye exam in the past two years during which their pupils were dilated.

RELATED ISSUE:

See also Vision & Hearing in the **Death, Disease & Chronic Conditions** section of this report.

- Statistically higher than national findings.
- TREND: Unchanged from 2012 survey findings.

Had an Eye Exam in the Past Two Years During Which the Pupils Were Dilated



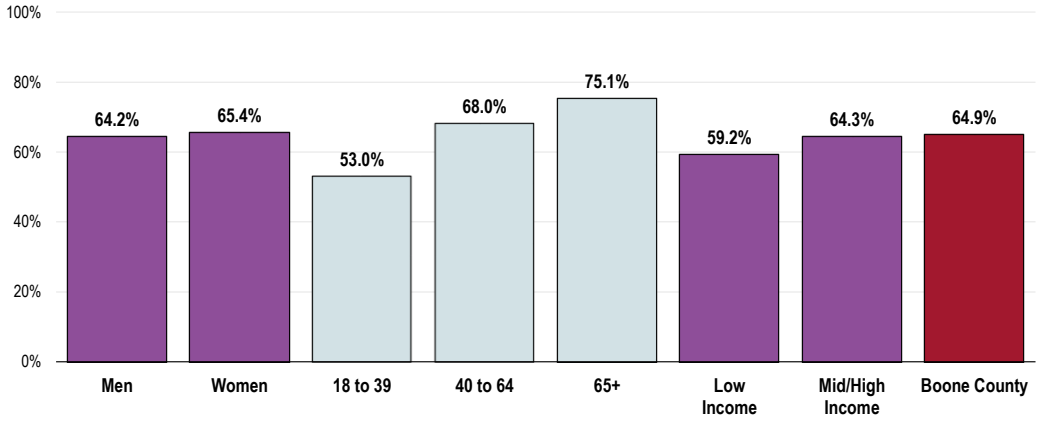
Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 20]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

- Note the positive correlation between age and recent eye exams.

Had an Eye Exam in the Past Two Years During Which the Pupils Were Dilated

(Boone County, 2015)



Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 20]

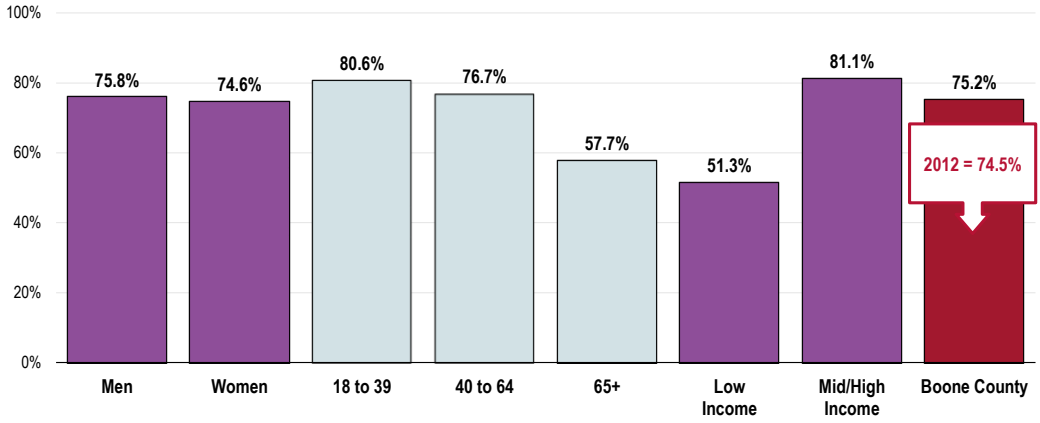
Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

A total of 3 in 4 Boone County residents (75.2%) have some type of health insurance coverage that pays for vision care.

- Note the negative correlation with age.
- The prevalence is much lower among residents in low-income households.
- TREND: Statistically unchanged over time.

Have Some Type of Health Insurance Coverage That Pays for Vision Care

(Boone County, 2015)



Sources:
- PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 302]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Health Education & Outreach

Professional Research Consultants, Inc.

Healthcare Information Sources

Family physicians and the Internet are residents' primary sources of healthcare information.

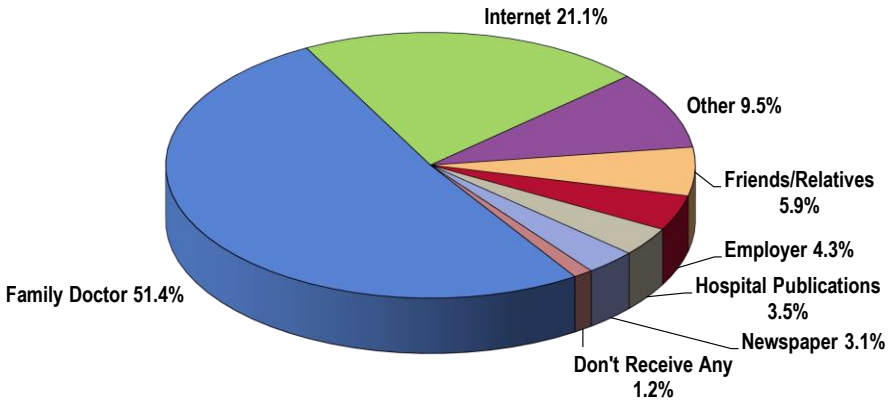
- 51.4% of Boone County adults cited their **family physician** as their primary source of healthcare information.
- The **Internet** received the second-highest response, with 21.1%.

Other sources mentioned include friends and relatives (5.9%), employers (4.3%), hospital publications (3.5%), and newspapers (3.1%).

- Just 1.2% of survey respondents say that they do not receive any healthcare information.

Primary Source of Healthcare Information

(Boone County, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 330]
Notes: ● Asked of all respondents.

Participation in Health Promotion Events

About Educational & Community-Based Programs

Educational and community-based programs play a key role in preventing disease and injury, improving health, and enhancing quality of life.

Health status and related-health behaviors are determined by influences at multiple levels: personal, organizational/institutional, environmental, and policy. Because significant and dynamic interrelationships exist among these different levels of health determinants, educational and community-based programs are most likely to succeed in improving health and wellness when they address influences at all levels and in a variety of environments/settings.

Education and community-based programs and strategies are designed to reach people outside of traditional healthcare settings. These settings may include schools, worksites, healthcare facilities, and/or communities.

Using nontraditional settings can help encourage informal information sharing within communities through peer social interaction. Reaching out to people in different settings also allows for greater tailoring of health information and education.

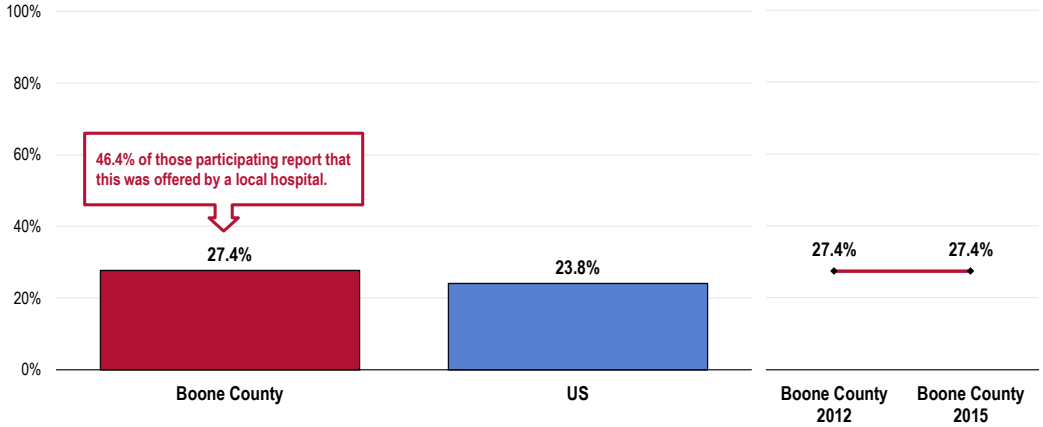
Educational and community-based programs encourage and enhance health and wellness by educating communities on topics such as: chronic diseases; injury and violence prevention; mental illness/behavioral health; unintended pregnancy; oral health; tobacco use; substance abuse; nutrition; and obesity prevention.

- Healthy People 2020 (www.healthypeople.gov)

A total of 27.4% of area adults participated in some type of organized health promotion activity in the past year, such as health fairs, health screenings, or seminars.

- Similar to the national prevalence.
- TREND: Unchanged since the 2012 survey was conducted.
- Note that 46.4% of adults who participated in a health promotion activity in the past year indicate that it was offered by a local hospital.

Participated in a Health Promotion Activity in the Past Year



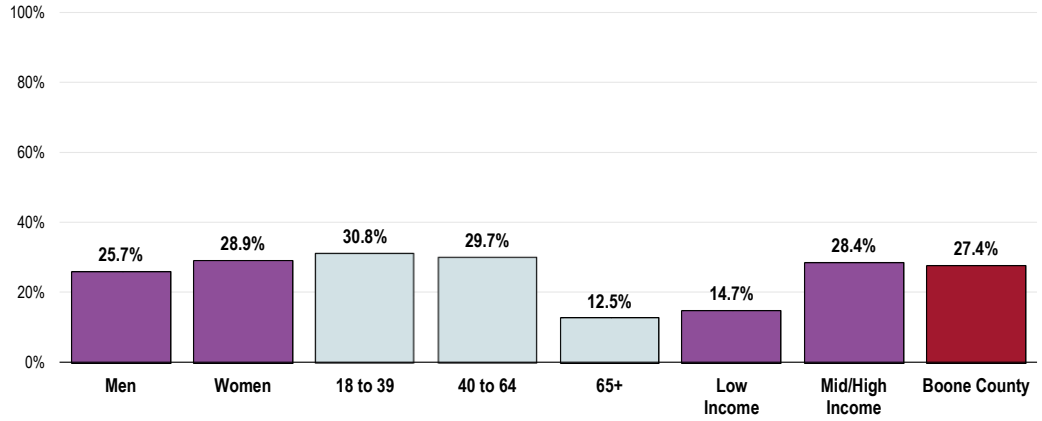
Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Items 331-332]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

The following chart outlines participation by various demographic characteristics.

- Note that seniors and residents with lower incomes less often report participation in health promotion activities.

Participated in a Health Promotion Activity in the Past Year

(Boone County, 2015)



Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 331]
Notes: ● Asked of all respondents.
● Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Local Resources

Professional Research Consultants, Inc.

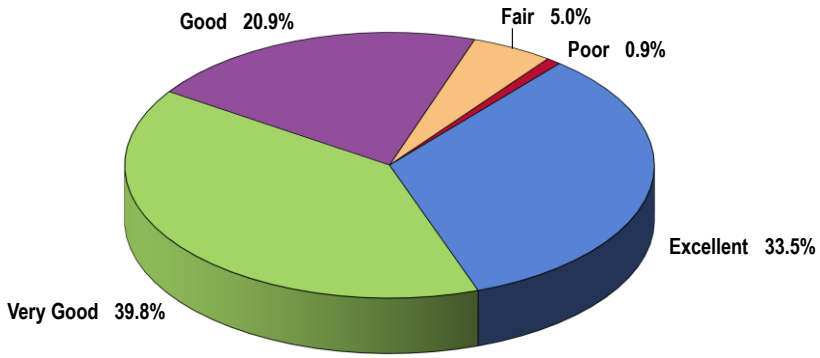
Perceptions of Local Healthcare Services

More than 7 in 10 Boone County adults (73.3%) rate the overall healthcare services available in their community as "excellent" or "very good."

- Another 20.9% gave "good" ratings.

Rating of Overall Healthcare Services Available in the Community

(Boone County, 2015)

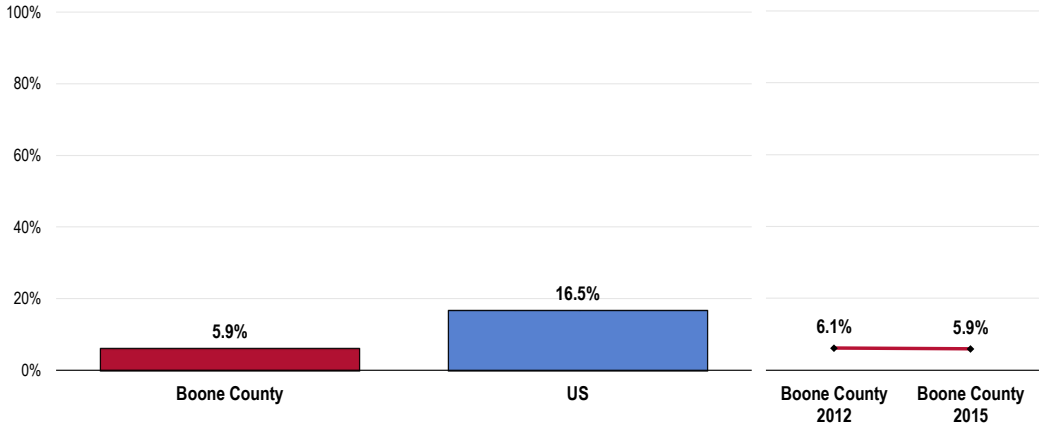


Sources: ● 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 6]
Notes: ● Asked of all respondents.

However, 5.9% of residents characterize local healthcare services as "fair" or "poor."

- More favorable than reported nationally.
- TREND: Unchanged from 2012 survey findings.

Perceive Local Healthcare Services as "Fair/Poor"



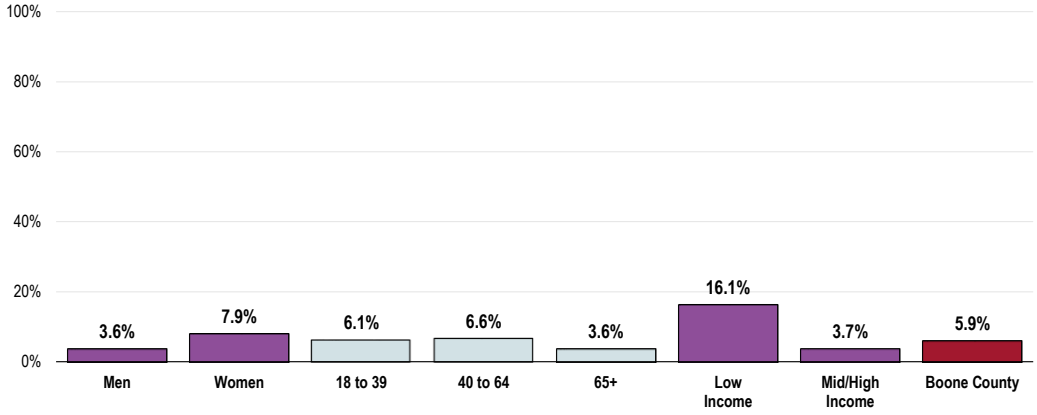
Sources: ● PRC Community Health Surveys, Professional Research Consultants, Inc. [Item 6]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

The following residents are more critical of local healthcare services:

- Women.
- Residents with lower incomes.

Perceive Local Healthcare Services as "Fair/Poor"

(Boone County, 2015)



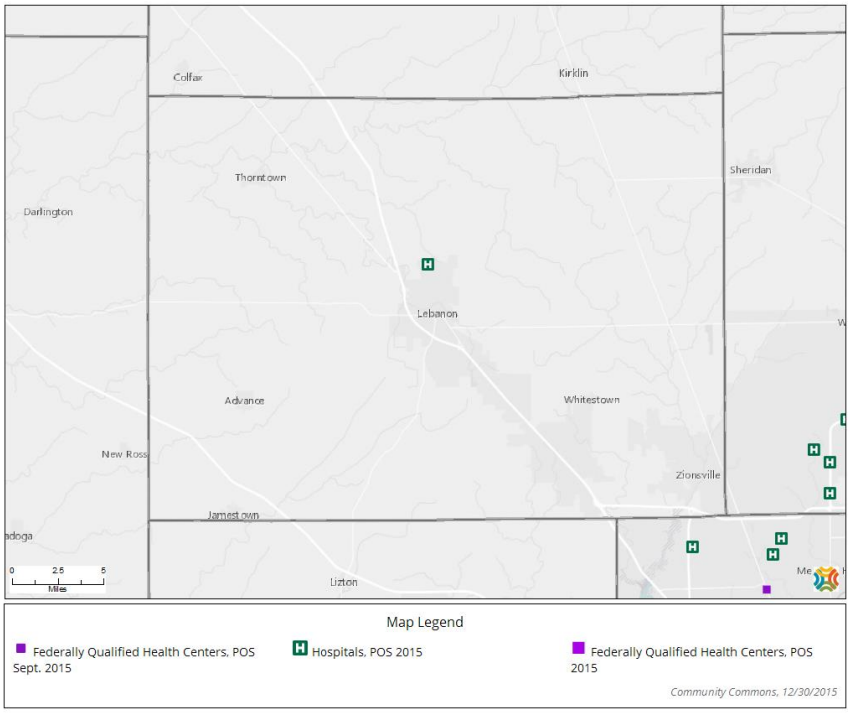
Sources:
- 2015 PRC Community Health Survey, Professional Research Consultants, Inc. [Item 6]

Notes:
- Asked of all respondents.
- Income categories reflect respondent's household income as a ratio to the federal poverty level (FPL) for their household size. "Low Income" includes households with incomes up to 200% of the federal poverty level; "Mid/High Income" includes households with incomes at 200% or more of the federal poverty level.

Healthcare Resources & Facilities

Hospitals & Federally Qualified Health Centers (FQHCs)

The following map details the hospitals and Federally Qualified Health Centers (FQHCs) within Boone County as of 2015 (one hospital, no FQHCs).



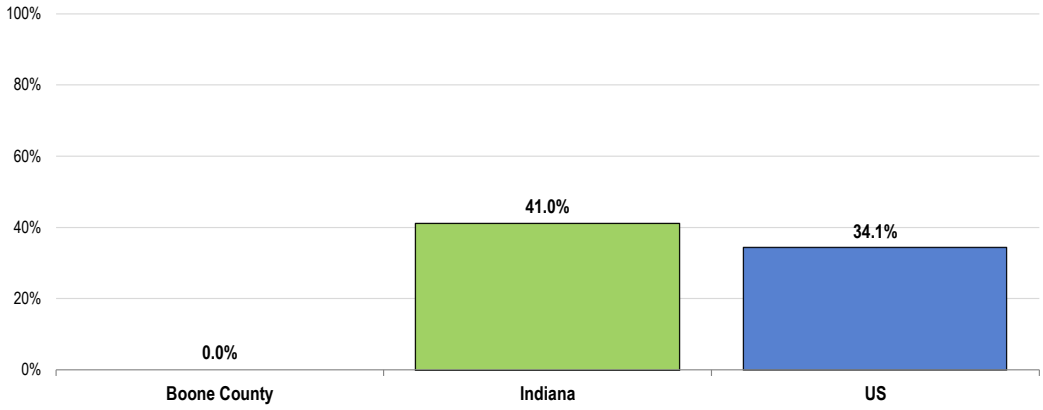
Health Professional Shortage Areas (HPSAs)

Note that no areas in Boone County have been designated by the US Department of Health and Human Services as a health professional shortage area (HPSA).

A "health professional shortage area" (HPSA) is defined as having a shortage of primary medical care, dental or mental health professionals.

Population Living in a Health Professional Shortage Area (HPSA)

(Percent of Total Population Living in a Geographic Area Designated as Having a Shortage of Primary Medical Care, Dental or Mental Health Professionals, 2015)



Sources:
- US Department of Health & Human Services, Health Resources and Services Administration, Health Professional Shortage Areas: Oct. 2013.
- Retrieved December 2015 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the percentage of the population that is living in a geographic area designated as a "Health Professional Shortage Area" (HPSA), defined as having a shortage of primary medical care, dental or mental health professionals. This indicator is relevant because a shortage of health professionals contributes to access and health status issues.

Resources Available to Address the Significant Health Needs

The following represent potential measures and resources (such as programs, organizations, and facilities in the community) available to address the significant health needs identified in this report. This list is not exhaustive, but rather outlines those resources identified in the course of conducting this Community Health Needs Assessment.

Access to Healthcare Services

- Boone County Community Clinic
- CVS
- Emergency Room
- Health Department
- Immediate Care
- Medicaid
- Senior Services
- Witham Health Services

Cancer

- American Cancer Society
- Boone County Cancer Society
- Boone County Community Clinic
- Boone County Health Department
- Fundraising Agencies
- General Education About Health Lifestyles
- Healthcare Providers
- Hospitals
- Research Universities
- Senior Services
- Support Groups
- Tobacco Free Boone County
- Witham Health Services

Dementias, Including Alzheimer's Disease

- Alzheimer's Association of Indiana
- Aspire
- Boone County Mental Health
- CICOA
- Healthcare Providers
- Hospitals
- Long-Term Healthcare Facilities
- Nursing Home Care
- Research Universities
- Senior Services
- Support Groups
- United Way
- Witham Health Services
- Zionsville Meadows

Diabetes

- ALDI
- Boone County Community Clinic
- Caring Center
- Clinic
- Community Clinic
- Healthcare Providers
- Live Light Clinic
- Parks and Recreation
- Schools
- Witham Health Services
- YMCA

Family Planning

- Boone County Community Clinic
- Clinic
- Community Clinic
- Family Services
- Healthcare Providers
- Health Department
- Healthy Families
- Love Inc.
- Pregnancy Crisis Center
- WIC
- Witham Health Services

Hearing & Vision

- Local Physicians

Heart Disease & Stroke

- Agencies
- Boone County Community Clinic
- Caring Center
- County Health Department
- Educational Institutions
- Grocery Stores
- Healthcare Providers
- Hospitals
- Parks and Recreation
- Purdue Extension "Be Heart Smart" Program
- Research Universities
- Schools
- Witham Cardiac Rehab
- Witham Health Services
- YMCA

Immunization & Infectious Diseases

- Boone County Community Clinic
- Boone County Health Department
- Community Clinic
- Healthcare Providers
- Health Department
- Infectious Disease Doctors
- STD Clinic

Infant & Child Health

- Healthcare Providers

- *Purdue Extension Programs/Publications*
- *WIC*
- *Witham Health Services*
- *YMCA*

Injury & Violence

- *Aspire*
- *Community Partners*
- *Cummins Behavioral Health*
- *DCFS*
- *Integrated Wellness*
- *Mental Health America of Boone County*
- *Mental Health Association*
- *The Cabin*
- *Witham Health Services*

Mental Health

- *Aspire*
- *Boone County Community Clinic*
- *Boone County Mental Health*
- *Cabin Counseling Zionsville*
- *County Jail*
- *Cummins Behavioral Health*
- *Families First*
- *Healthcare Providers*
- *Hospitals*
- *Integrated Wellness*
- *In-Well*
- *Men's New Life*
- *Mental Health America of Boone County*
- *Mental Health Association*
- *Mental Health of Indiana*
- *Pharmaceuticals*
- *Private Facility*
- *Research Universities*
- *Witham Health Services*

Nutrition, Physical Activity & Weight

- *Caring Center*
- *Clinic*
- *Community Activities*
- *During Special Events*
- *CrossFit 180*
- *Food Pantry*
- *Healthcare Providers*
- *Health Department*
- *Hospitals*
- *In-Well*
- *Lebanon Area Boys and Girls Club*
- *Nutrition*
- *Parks and Recreation*
- *Purdue Extension Programs/Publications*
- *Schools*
- *WIC*
- *Witham Health Services*
- *YMCA*

Oral Health

- *Primary Care Providers*

Respiratory Diseases

- *County Health Department Tobacco Cessation Program*
- *Witham Health Services*
- *Youth VOICE Tobacco Program*

Sexually Transmitted Diseases

- *Boone County Community Clinic*
- *Boone County Health Department*
- *Healthcare Providers*
- *Health Department*
- *Infectious Disease Doctors*
- *Pregnancy Crisis Center*
- *STD Clinic*

Substance Abuse

- *12 Step Program*
- *AA/NA*
- *Agencies*
- *Aspire*
- *Behavior Corp*
- *Boone County Community Clinic*
- *Boone County Health Department*
- *Boone County Mental Health*
- *Celebrate Recovery Traders Point Christian Church*
- *Clinic*
- *Community Clinic Vivitrol Program*
- *Community Hospital*
- *County Treatment Programs*
- *Cummins Behavioral Health*
- *DARE*
- *Drug Free Boone County*
- *Educational Institutions*
- *Fairbanks*
- *Families First*
- *Harbor Lights*
- *Healthcare Providers*
- *Health Department*
- *Hospitals*
- *Integrated Wellness*
- *In-Well*
- *Jail Treatment Programs*
- *Law Enforcement*
- *Mental Health America of Boone County*
- *New Life Men's Recovery*
- *Primary Care Providers*
- *Prime for Life*
- *Steered Straight Indiana*
- *Support Groups*
- *Teen Challenge - Girls Recovery Program*
- *The Cabin*
- *Witham Health Services*

Tobacco Use

- *1-800-Quit-Now*
- *American Cancer Society*
- *Angie Dickerson's Program*
- *Boone County Cancer Society*
- *Boone County Community Clinic*
- *Boone County Health Department*

Clinic

Community Clinic

County Health Department Tobacco Cessation Program

Drug Free Boone County

Healthcare Providers

Health Department

Healthy Coalition

Hospitals

Integrated Wellness

Judicial System

Primary Care Providers

Schools

Tobacco Free Boone County

UNK

Witham Health Services

Youth VOICE Tobacco Program