2017 Preble County Community Health Assessment

APPLIED POLICY RESEARCH INSTITUTE at WRIGHT STATE UNIVERSITY

Preble County Public Health
Prevent. Promote. Protect.

Acknowledgements

Preble County Public Health contracted with the Applied Policy Research Institute (APRI) to conduct the county's community health assessment. Preble County Public Health also played a key role in convening stakeholder meetings and collaborating with other health-related state agencies.

Applied Policy Research Institute

Authors

Carol Murray, Co-principal Investigator; Jane Dockery, Principal Investigator

Contributors

Megan Sullivan, Graduate Research Assistant; Jacqueline Gill, Graduate Research Assistant; Bree-Ann Hartley, Graduate Research Assistant; Elizabeth Williams, Graduate Research Assistant; Emily Bingham, Student Research Assistant; Jacqueline Danielle Hutchison, Student Research Assistant

Preble County Public Health (PCPH)

Contributors

Nan Smith, Director of Nursing; Scott Wilford, Epidemiologist; Erik Balster, Health Commissioner; Marilyn Wilson, WIC; Christine Maggard, Nursing

Preble County Steering Committee

- David Anderson, Preble County Emergency Management
- Erik Balster, Preble County Public Health
- Ashley Bowers, Preble County Council on Aging
- Janelle Caron, Community Action Partnership Greater Dayton Area
- Brittany Combs, Preble County Head Start
- Randy Earl, American Red Cross Greater Cincinnati-Dayton Area Region
- Joe Ferriell, City of Eaton
- Molly Gardner, Preble County Success Program
- Courtney Griffith, Dayton YWCA
- Lori Harmon, Preble County Head Start
- Chris Maggard, Preble County Public Health
- Tracey Mikesell, Preble County Head Start
- Sarah Miller, National Trail Schools
- Becky Morin, Preble County YMCA
- Shelley Ratliff, Preble County Council on Aging
- Amy Raynes, Preble County Mental Health & Recovery Board
- Ginger Roth, HIT Foundation
- Dean Smith, Essence of Wellness
- Jane Smith, Essence of Wellness
- Nan Smith, Preble County Public Health
- Rebecah Sorrell, Preble County Job & Family Services
- Shannon Steele, Preble County Medical Reserve Corps, CareSource
- Marilyn Wilson, Preble County Public Health, WIC
- Vicki Unger, Twin Valley Schools
- Scott Wilford, Preble County Public Health

Non-profit, local, state, and federal agencies referenced in this report

Non-profit Agencies

- IHME – Institute for Health Metrics and Evaluation
- PHAB – Public Health Accreditation Board
- RWJ – Robert Wood Johnson Foundation
    - CHR – County Health Rankings

Local Agencies and Departments

- CORS – Council on Rural Services
- GCPH – Greene County Public Health
- MCPH – Miami County Public Health
- PCPH – Preble County Public Health
- WSU – Wright State University
    - APRI – Applied Policy Research Institute

State of Ohio Agencies and Departments

- OCJS – Ohio Criminal Justice Services
- ODA – Ohio Department of Aging
- ODE – Ohio Department of Education
- ODH – Ohio Department of Health
- ODJFS – Ohio Department of Job and Family Services
- ODM – Ohio Department of Medicaid
- ODOT – Ohio Department of Transportation
- ODPS – Ohio Department of Public Safety
- ODSA – Ohio Development Services Agency
- OFCF – Ohio Family and Children First
- OLMI – Ohio Labor Market Information
- OMHAS – Ohio Department of Mental Health and Addiction Services

Federal Agencies and Departments

- DOC – Department of Commerce
    - BEA – Bureau of Economic Analysis
    - Census – U.S. Census Bureau
        - ACS – American Community Survey
- HHS – U.S. Department of Health & Human Services
    - ACF – Administration for Children & Families
    - AHRQ – Agency for Healthcare Research and Quality
    - ATSDR – Agency for Toxic Substances and Disease Registry
    - CMS – Centers for Medicare & Medicaid Services
    - Office of Disease Prevention and Health Promotion
        - Healthy People 2020
    - U.S. Public Health Service
        - CDC – Centers for Disease Control and Prevention
        - FDA – Food and Drug Administration
        - HRSA – Health Resources and Services Administration
        - NIH – National Institutes of Health
        - SAMHSA – Substance Abuse and Mental Health Services Administration
- USDA – U.S. Department of Agriculture

Table of Contents

Table of Figures

Tables

Introduction

Purpose

The Community Health Assessment (CHA) describes the health of Preble County residents by presenting a broad analysis of factors which impact health status, as well as the context for the health status. The CHA also captures the social determinants of health that contribute to health status, including housing costs, access to healthy food, availability of recreational space, and physical activity. Community members and partners are engaged to collect and analyze health-related data and information from a variety of sources. The goal is to inform community decision-making, prioritize health problems, improve collaborative efforts, and assist in the development and implementation of planning, policy, and actions to improve the health status of all Preble County residents.

Mobilizing for Action through Planning and Partnerships

The process used to develop this Preble County Community Health Assessment is Mobilizing for Action through Planning and Partnerships (MAPP). Facilitated by public health leadership and Wright State University, the MAPP process helps communities prioritize health issues and identify resources for addressing them. MAPP defines "health" as more than the absence of illness; it is a "dynamic state of complete physical, mental, spiritual, and social well-being."

The framework provided by MAPP is truly a community-driven initiative. Broad community participation is essential since a wide range of organizations and individuals contribute to the public's health. Public, private, and voluntary organizations join community members and informal associations in the provision of local public health services. The MAPP process brings these diverse interests together to collaboratively determine the most effective way to conduct public health activities.

During the MAPP process, four assessments were conducted to provide critical insights on the challenges and opportunities affecting health throughout Preble County. The results from the four assessments comprise the Community Health Assessment. The four assessments are:

- Community Themes and Strengths Assessment
- Local Public Health System Assessment
- Community Health Status Assessment
- Forces of Change Assessment

Following recommendations outlined in the MAPP model, the steering committee selected indicators specific to local conditions including, but not limited to: maternal and child heath, chronic disease, and mental health and addiction. Community involvement was actively pursued throughout multiple stages of the CHA development process, including the selection of indicators and the development of an effective process to conduct and receive feedback from the community regarding the CHA.

Report Structure

This report illustrates the key health issues faced by Preble County residents along with relevant health disparities affecting community health. "Health disparities are differences in population health status (incidence, prevalence, mortality, and burden of adverse health conditions) that can result from

environmental, social and/or economic conditions, as well as public policy. These differences exist among specific population groups in the United States and are often preventable. (Adapted from: National Association of County and City Health Officials (US)."[1] The intended audiences include community organizations, civic leaders, public health professionals, and healthcare providers. Data in this report is organized into topical areas, which can be located by referring to the table of contents. The structure of this report includes the introduction and description of the process; a demographic discussion of the population; an analysis based on the Healthy People 2020 approach to the Social Determinants of Health (SDOH); a summary of population health issues, the existence and extent of health inequities between and among specific populations, and challenges; summaries of key informant focus groups sessions; and a summary of the key findings and conclusions.

This report compiles primary[2] and secondary[3] data in order to paint a detailed picture of Preble County and also compares the area's status to state and national data where possible, drawing out critical areas of concern. Narrative and graphics are used to highlight key findings. This research effort included:

- Demographic analysis based on secondary data collected form sources like the U.S. Census Bureau and the Ohio Development Services Agency
- Primary data collection involving a telephone survey of 401 adult Preble County residents selected at random
- Online surveys of Preble County residents and service providers, and focus group sessions with the Substance Abuse Prevention Partnership and Once Around Shop (food pantry and thrift store);
- Analysis of secondary data from the Ohio Department of Health, Ohio Department of Job and Family Services, the Center for Disease Control and Prevention, the Bureau of the Census' American Community Survey, the Ohio Department of Public Safety, the Ohio Development Services Agency, the Institute for Health Metrics and Evaluation, the Health Resources and Services Association, the Ohio Mental Health and Addiction Services, and the Robert Wood Johnson Foundation.

The study addresses secondary data for maternal and infant health data, clinical and preventive services, diseases, and leading causes of death. The steering committee has met four times over the past year to study the results and identify health priorities. In addition to that, a core planning team met multiple times to develop steering committee meetings agendas, to provide initial reactions to data, and to otherwise inform the process.

[1] (National Association of County and City Health Officials 2005)

[2] **P**rimary data: Data collected by the investigator (the Applied Policy Research Institute or the county health department) for a specific purpose.
Examples: Data collected by the researcher from telephone or online surveys, personal interviews, group discussions or interviews.

[3] Secondary data: Data collected by someone else or another organization for some other purpose (but being utilized by the investigators for their specific purpose).
Examples: Census data being used to conduct a demographic analysis of the County's population or public health data to summarize the health status of county residents.

Vision Statement and Values

Vision Statement

An independent community working collaboratively to form a healthy environment with safe housing, affordable health care, financial security, and access to resources and opportunities.

Values

An environment that promotes preparedness, health and wellness, and guides people to resources to assist them in meeting their basic needs to sustain mental and physical health.

Definition of the Community Served

Preble County is located in the southwestern part of the State of Ohio, just west of Montgomery County and in 2015, was estimated to be home to 41,682 residents.[4] Preble County is bordered on the north by Darke County and in the south by Butler County.

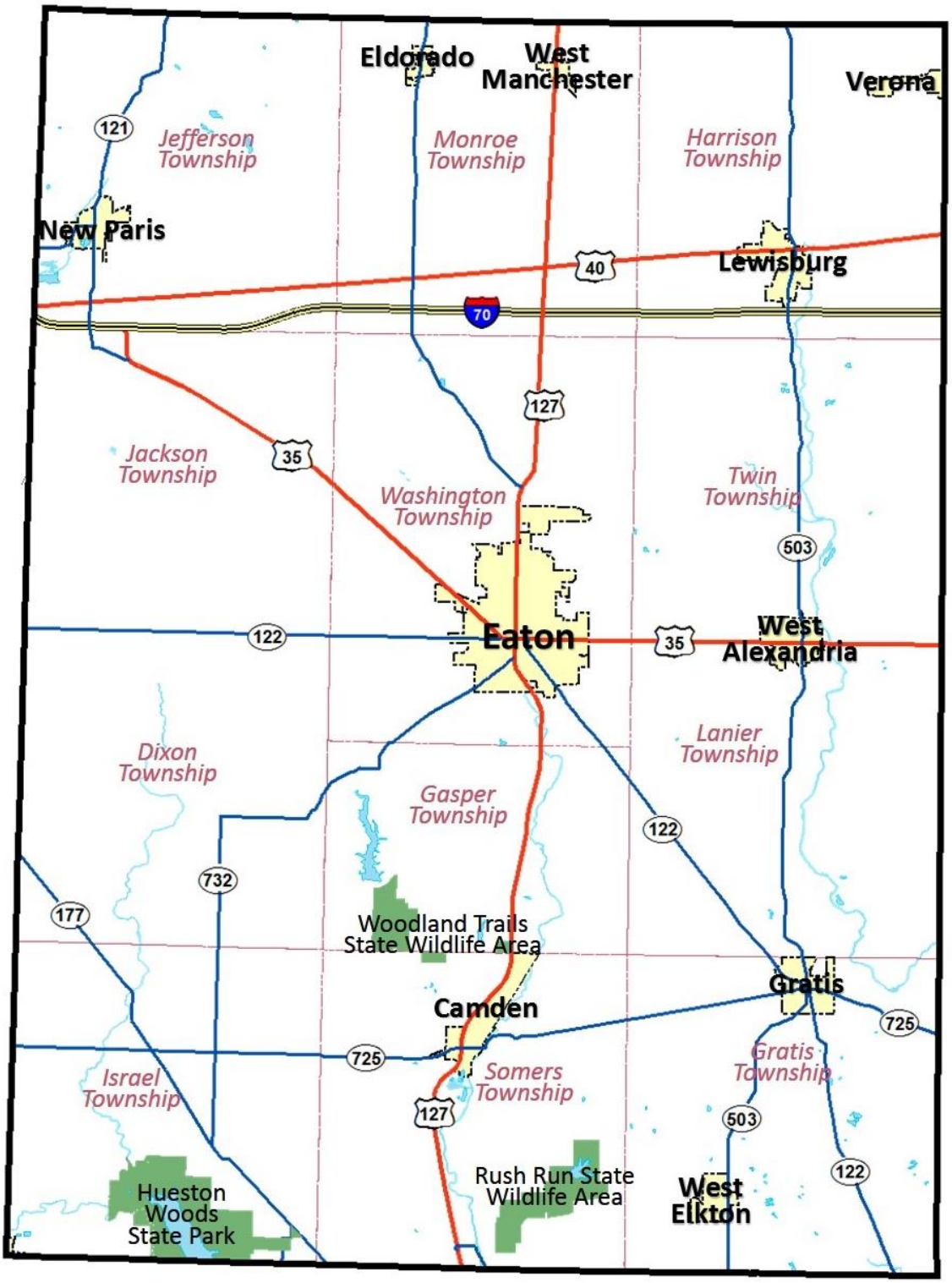
Preble County, located along the Indiana border, is primarily agricultural.[5] U.S. Route 35 bisects the county and the largest city is located along US 35. Preble County has a land area of 425 square miles. Land use within the county is arranged into five major categories and the largest use of land is for cropland (67.4%).[6]

Like other rural[7] counties in Ohio, Preble County's population is distributed across multiple communities (both cities/villages and townships – Refer to Figure 2), as opposed to having a large population centralized in one city. The county has one main city — Eaton (Figure 1), which is the county seat and the county's largest city with a population of 8,217.[8]

Figure 1: Preble County Public Health Department

[4] (U.S. Census Bureau 2015)
[5] (Ohio Development Services Agency 2016)
[6] (Ohio Development Services Agency 2016)
[7] (Ohio Department of Health 2015)
[8] (U.S. Census Bureau 2015)

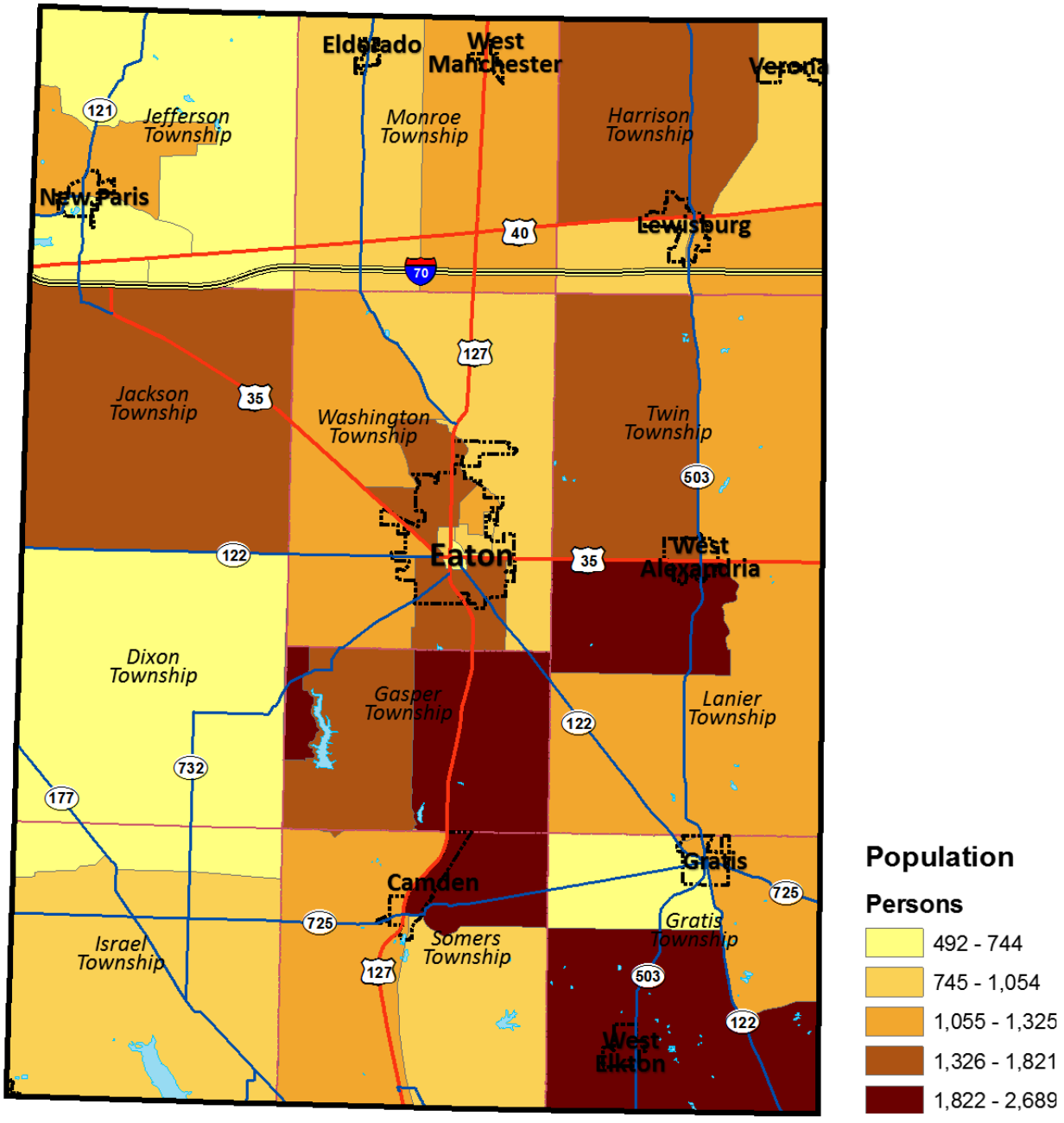
Figure 2: Preble County



Source: Ohio Department of Transportation

The Preble County population is more heavily concentrated in cities and townships along U.S. 35, U.S. 40, and State Route 122. The most heavily concentrated areas are in Eaton and the northwest corner of Gasper Township. Refer to the following figure.

Figure 3: Total Population, 2010-2015



Source: Ohio Department of Transportation
Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Demographics of the Population and Social Determinants of Health

Demographic Determinants of Health

Figure 4: Population Trends, 2010-2040

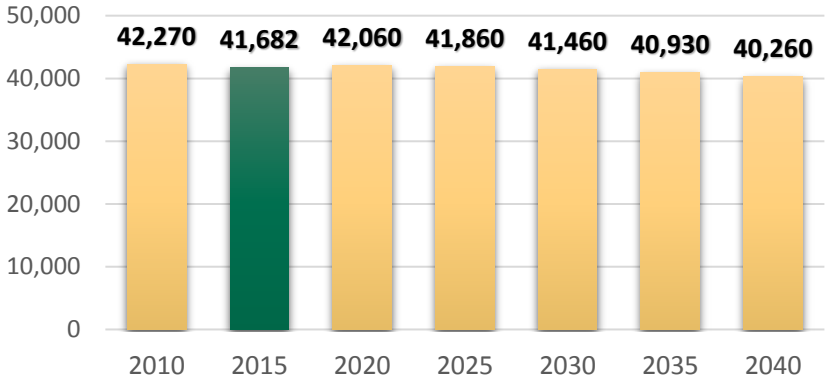


Figure 5: Child Population Trends, 2015-2040

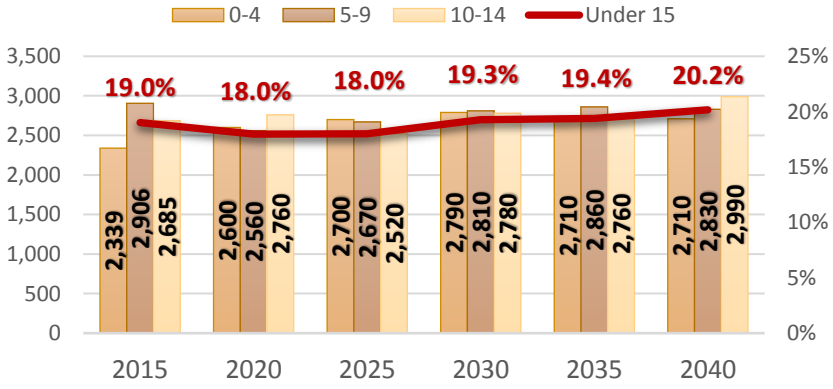
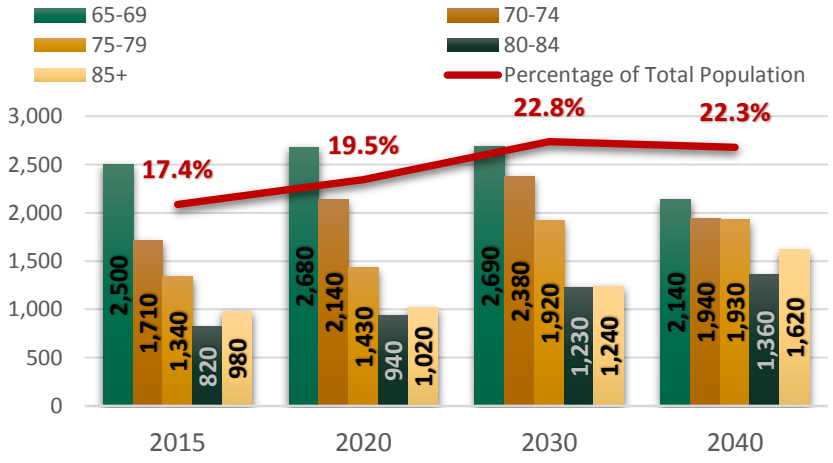


Figure 6: Senior Population Trends, 2015-2040



The Ohio Development Services Agency forecasts Preble County's population to remain fairly steady through 2040 – experiencing growth of 1% from 2015 to 2020, then decreasing by 4% by 2040.

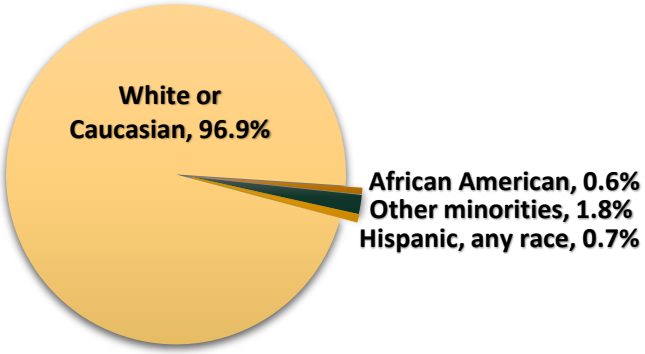
According to the 2011-2015 American Community Survey (ACS), Preble County's population is nearly evenly split between the sexes – 51.4% of the population is female, while 48.6% is male.[9] The ratio of males to females remains relatively consistent across all age cohorts.

Figure 4 shows that the child population, ages 0-15, will increase by the year 2040 – from 19.0% of the population in 2015 to 20.2% of the total population in 2040.[10]

Conversely, Figure 5 illustrates how the senior population will change over this same period. This population will be steadily increasing through 2030, when more than 1 out of every 5 residents of the county is expected to be over the age of 65.[11]

[9] (U.S. Census Bureau 2015)
[10] (Ohio Development Services Agency 2013)
[11] (Ohio Development Services Agency 2013)

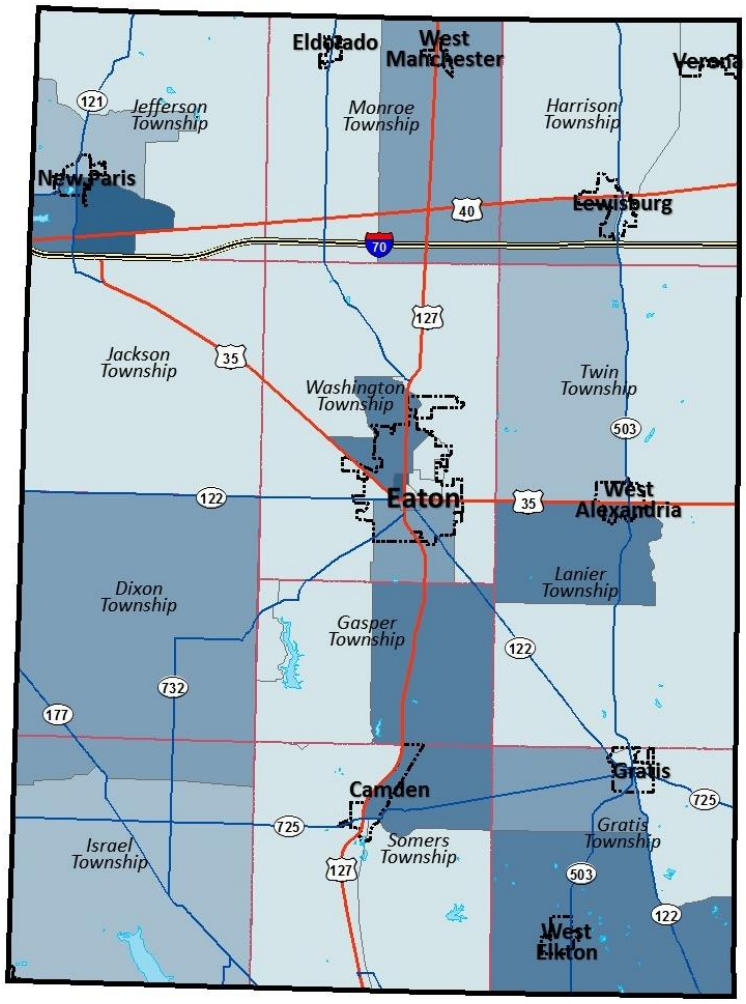
Figure 7: Race, 2011-2015



The minority population in Preble County (3.1%) is proportionally low when compared to Ohio (19.7%) and the nation (37.7%) in 2015.

The African American population and the Hispanic population are more heavily concentrated in areas of Eaton and New Paris. The following figures show that these populations are primarily distributed in cities and townships in close proximity to I-70/US 40 and US 35 and where these populations are more heavily concentrated.

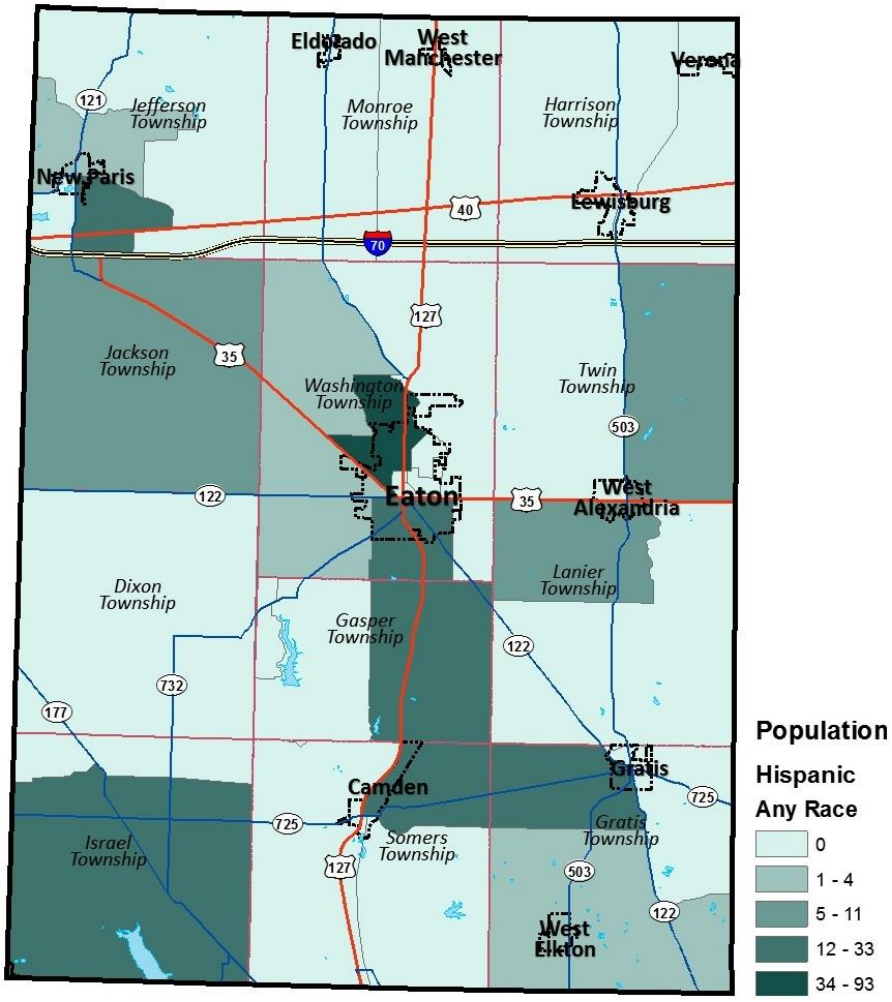
Figure 8: African American Population, 2010-2015



Source: Ohio Department of Transportation
Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Population
African American
Non-Hispanic
0
1 - 5
6 - 10
11 - 28
29 - 46

Figure 9: Hispanic Population, 2010-2015



Source: Ohio Department of Transportation

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Marital Status and Household Type

Approximately 68.3% of households in Preble County are without children and families with children account for the remaining 31.7% of households. Families consisting of two married adults who are the biological or adoptive parents of all children in the family were generally healthier, more likely to have access to health care, and less likely to have definite or severe emotional or behavioral difficulties than children living in nonnuclear families.[12] Married couples with children account for 21.4% of households. Single-parent families accounted for 9.7% of families with children in Preble County. Refer to following figures for more information on households.

[12] (Blackwell 2010)

Figure 10: Marital Status

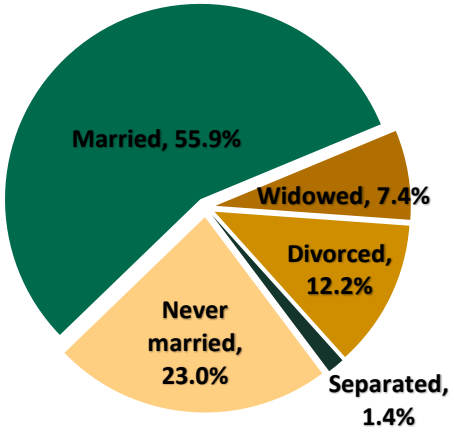
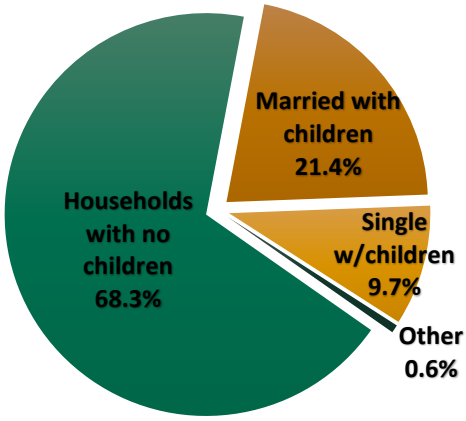


Figure 11: Household Type, 2010-2015



Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Disabled Population

According to the United States Census American Community Survey 2015 5-year estimates, approximately 6,695 individuals (or 16.2% of the population) in Preble County reported at least one disability. "Disability is part of human existence, occurring at any point in life,[13] with conditions ranging from mild to severe even among those with the same diagnosis."[14] Individuals with disabilities are more likely to experience challenges finding a job,[15] attending regular educational classrooms or college, receiving preventive health care services, accessing homes and businesses in the neighborhood, using fitness facilities, using health information technology, and obtaining sufficient social-emotional support.[16] HP 2020 also reports "that individuals with disabilities, as a group, experience health disparities in routine public health arenas such as health behaviors, clinical preventive services, and chronic conditions. Compared with individuals without disabilities, individuals with disabilities are:

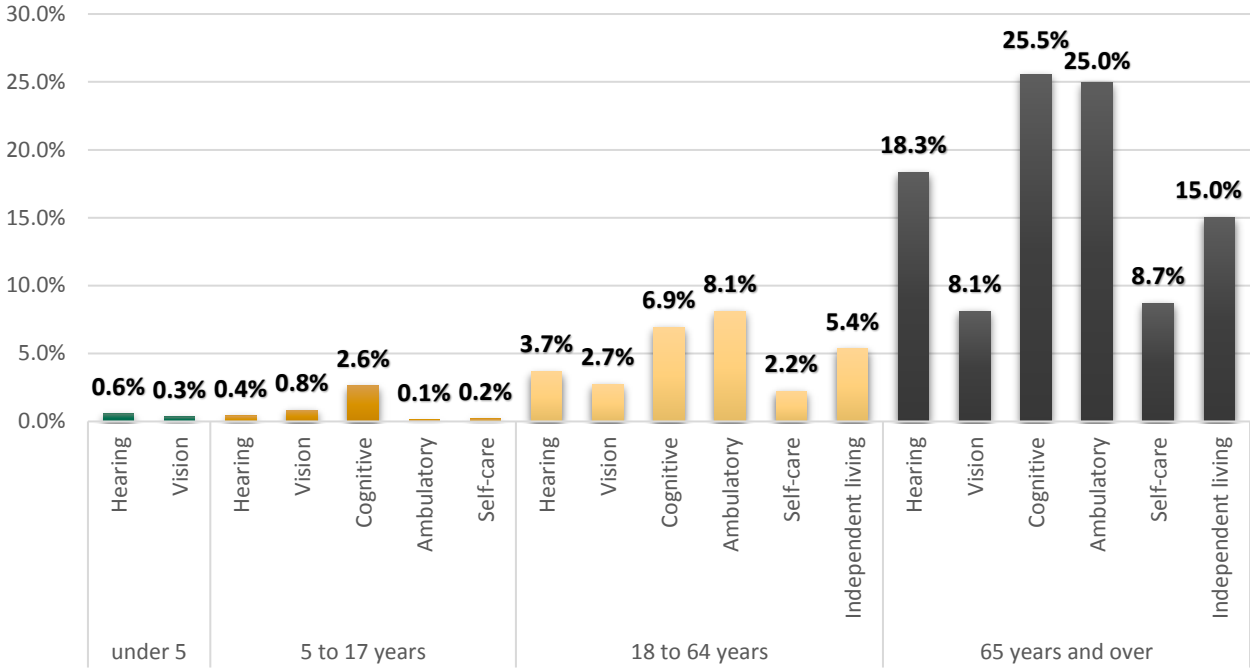
- Less likely to receive recommended preventive health care services, such as routine teeth cleanings and cancer screenings
- At a high risk for poor health outcomes such as obesity, hypertension, falls-related injuries, and mood disorders such as depression
- More likely to engage in unhealthy behaviors that put their health at risk, such as cigarette smoking and inadequate physical activity"

As age increases, so does the percentage of individuals with disabilities – 3.8% of the population between the ages of 5 and 17 has one or more reported disability, while 15.4% of the population between the ages of 18 and 64 and 38.3% of the population over the age of 65 report one or more disabilities. Just over two percent (2.4% or 1,155 individuals) report a self-care difficulty, while 7.1% of the population report an ambulatory difficulty. Approximately 15.4% of the population ages 18 to 64

[13] (World Health Organization (WHO) 2001)
[14] (U.S. Department of Health and Human Services 2017)
[15] (Institute on Disability 2013)
[16] (U.S. Department of Health and Human Services 2017)

years of age were disabled. 8.1% of individuals between the ages of 18 and 64 years of age report ambulatory difficulties, while 6.9% individuals ages 18-64 report cognitive disabilities. Seniors (adults 65 years and older) report the highest rate of disability – 38.3% report one or more total disabilities. Twenty-five percent (25.0%) of the population over the age of 65 report an ambulatory difficulty, which is three times that of individuals ages 18-64. For a detailed look of disability status by age cohort, refer to the following figure.

Figure 12: Population with Disabilities by Age Cohort, 2011-2015

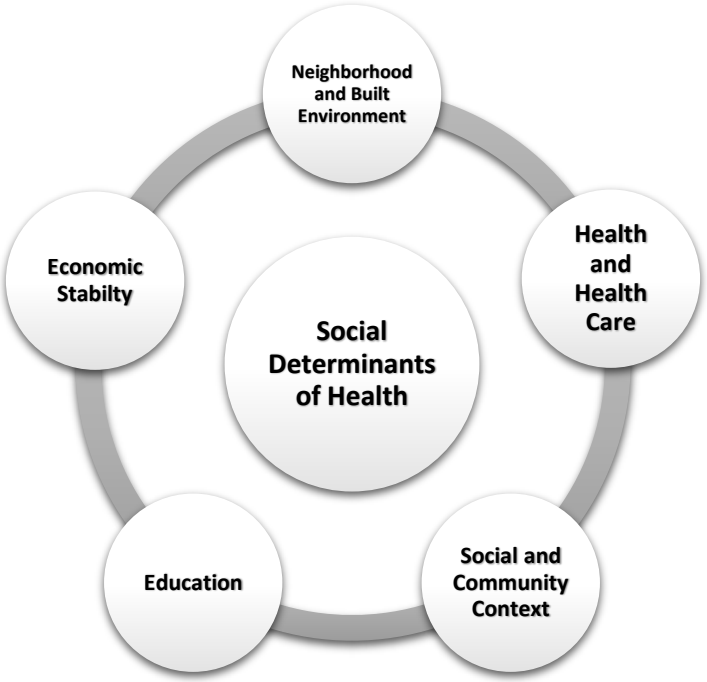


Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Social Determinants of Health

The following section discusses social determinants of health as they pertain to the Preble County population. The social determinants of health discussed in this section are based on a place-based framework constructed around the five key determinants. Four of the five key determinants of the Healthy People 2020 approach to the Social Determinants of Health (SDOH) are discussed here. The Health and Health Care topic is summarized in the following chapter – Population Health Issues. Refer to the following figure.

Figure 13: Healthy People 2020 Approach to Social Determinants of Health



According to the Office of Disease Prevention and Health Promotion (ODPHP) at the U.S. Department of Health and Human Services (HHS), health starts in our homes, schools, workplaces, neighborhoods, and communities. The social determinants of health (SDOH) are conditions in these environments that affect a wide range of health, functioning, and quality-of-life outcomes and risks. "Resources that enhance quality of life can have a significant influence on population health outcomes."[17]

Examples of social determinants discussed here include:

- Economic Stability
  - Poverty
  - Employment
  - Food Insecurity
  - Housing Instability

[17] (Office of Disease Prevention and Promotion 2017)

- Education
  - Early Childhood Education and Development
  - High School Graduation
  - Enrollment in Higher Education
  - Language and Literacy

- Social and Community Context
  - Social Cohesion

- Neighborhood and the Built Environment
  - Natural environment, such as green space (e.g., trees and grass) or weather (e.g., climate change)
  - Built environment, such as buildings, sidewalks, bike lanes, and roads
  - Access to Foods that Support Healthy Eating Patterns
  - Quality of Housing
  - Crime and Violence
  - Environmental Conditions
  - Incarceration

Economic Stability

"Education, employment, and health are linked. Without a good education, prospects for a stable and rewarding job with good earnings decrease. Education is associated with living longer, experiencing better health, and practicing health-promoting behaviors such as exercising regularly, refraining from smoking, and obtaining timely health checkups and screenings."[18]

Employment and Sustainable Wages

"The association between unemployment and poor physical and mental health is well established. Unemployed persons tend to have higher annual illness rates, lack health insurance and access to health care, and have an increased risk for death."[19] In Preble County, 21,000 individuals, 16 years of age and over, participate in the civilian labor force.[20] The unemployment rate has dropped from 11.0% in 2010 to 4.7% in 2016.[21] The median household income ($47,818) in Preble County is lower than the State of Ohio and lower than the median household income for the nation. Per capita income ($23,414) in Preble County is lower than the per capita income for the State of Ohio and the nation, refer to Figure 15.

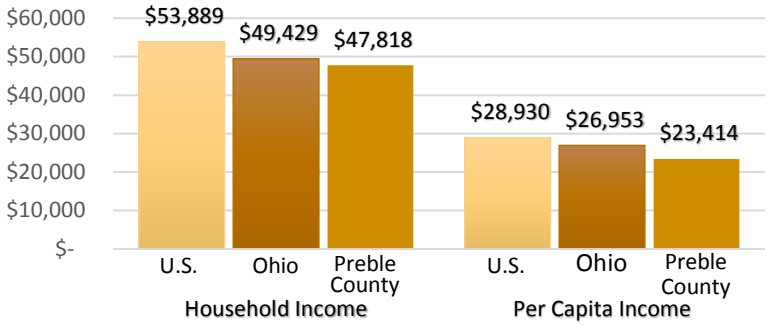
[18] (National Prevention Council 2011)
[19] (Centers for Disease Control and Prevention 2013)
[20] Civilian labor force. This is the sum of employment and unemployment. It comprises civilians 16 years of age and over who are working or seeking work. It excludes military personnel, persons in institutions, those studying or keeping house full-time, persons who are retired or unable to work, and volunteer workers.
[21] (Ohio Department of Job and Family Services 2016)

Table 1: Annual Unemployment Rate, 2011-2015

	2010	2011	2012	2013	2014	2015	2016
United States	9.6%	8.9%	8.1%	7.4%	6.2%	5.3%	4.9%
Ohio	10.3%	8.8%	7.4%	7.5%	5.8%	4.9%	4.9%
Preble	11.0%	9.6%	7.7%	7.5%	5.7%	4.8%	4.7%

Source: Ohio Department of Job and Family Services, Ohio Labor Market Information, Current Civilian Labor Force Estimates

Figure 14: Median Household and Per Capita Income, 2011-2015



Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-year Estimates

The median income of Preble County's resident civilian employed population is $30,370.[22] Although it is considered a livable wage for single earners, it is not considered a livable wage for a household with one wage earner and a child. According to a recent study by the Massachusetts Institute of Technology, the required annual income of a single adult before taxes to be considered a sustainable or living wage is $19,966. For a household with one adult and one child, a wage earner must earn $43,055 to be considered a living wage.[23] According to the ACS, one out of five (20.4%) Preble County residents is employed in food preparation and serving; building and grounds cleaning and maintenance; personal care; firefighting and prevention; healthcare support; farming, fishing, and forestry; and art, design, entertainment, sports, and media related occupations. None of these occupations pay what is considered to be a living wage (based on median income) for a single adult. An additional 11,304 (58.5%) individuals work in occupations where the median income is insufficient to be considered a sustainable wage for a household with one adult and one child.[24]

Poverty

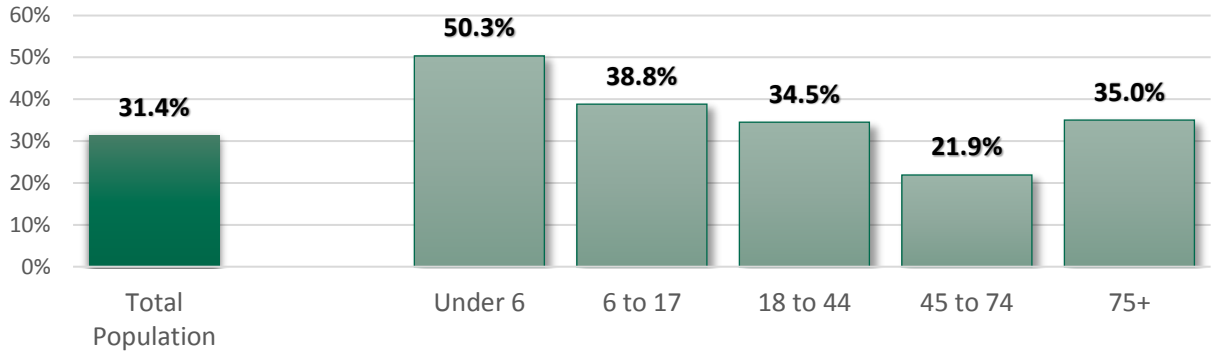
"Low-income and minority neighborhoods are less likely to have access to recreational facilities and full-service grocery stores and more likely to have higher concentrations of retail outlets for tobacco, alcohol, and fast foods."[25] "Adolescents who grow up in neighborhoods characterized by concentrated

[22] (U.S. Census Bureau 2015)
[23] (Massachusetts Institute of Technology 2016)
[24] (U.S. Census Bureau 2015)
[25] (U.S. Department of Health and Human Services, Administration for Children and Families 2010)

poverty are more likely to be a victim of violence; use tobacco, alcohol, and other substances; become obese; and engage in risky sexual behavior."[26]

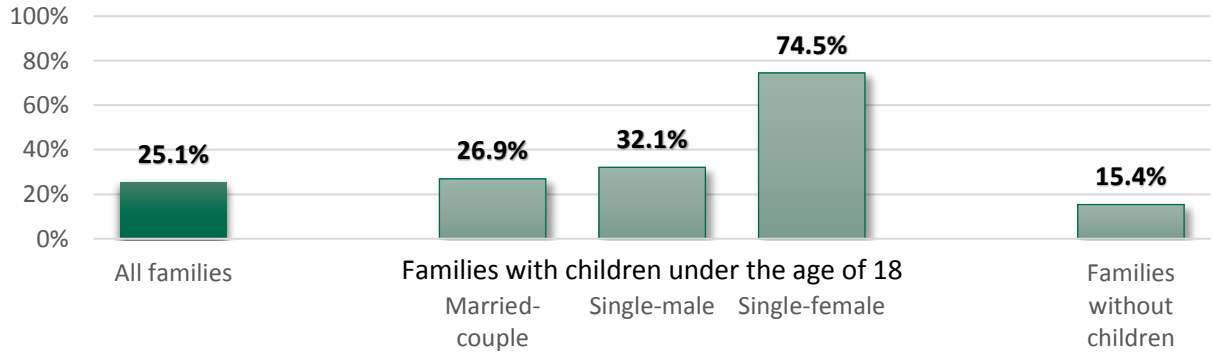
Examination of 2015 5-year American Community Survey data reveals that 12,882 Preble County residents (i.e., food and nutrition assistance programs, home energy assistance programs, and low-income Medicaid coverage, etc.). Income eligibility to qualify for these program benefits or entitlements is based around the 185% poverty rate. Using this metric, **31.4% of Preble County residents are considered low-income (below 185% of the poverty rate**). Half of Preble County's children under the age of 6 are low-income and this is higher than both the State of Ohio (46.2%) and the United States (44.4%). For a complete breakdown by age group, refer to the following figure. One-quarter of all families in Preble County also fell below this level. In regards to familes with children, 26.9% of married-couple families with children, 32.1% of single male-headed families with children, and 74.5% of single female-headed families with children met guidelines to qualify for many federal low-income assistance programs.

Figure 15: Preble County Low-Income Population, 2011-2015



Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-year Estimates

Figure 16: Preble County Low-Income Familes, 2011-2015

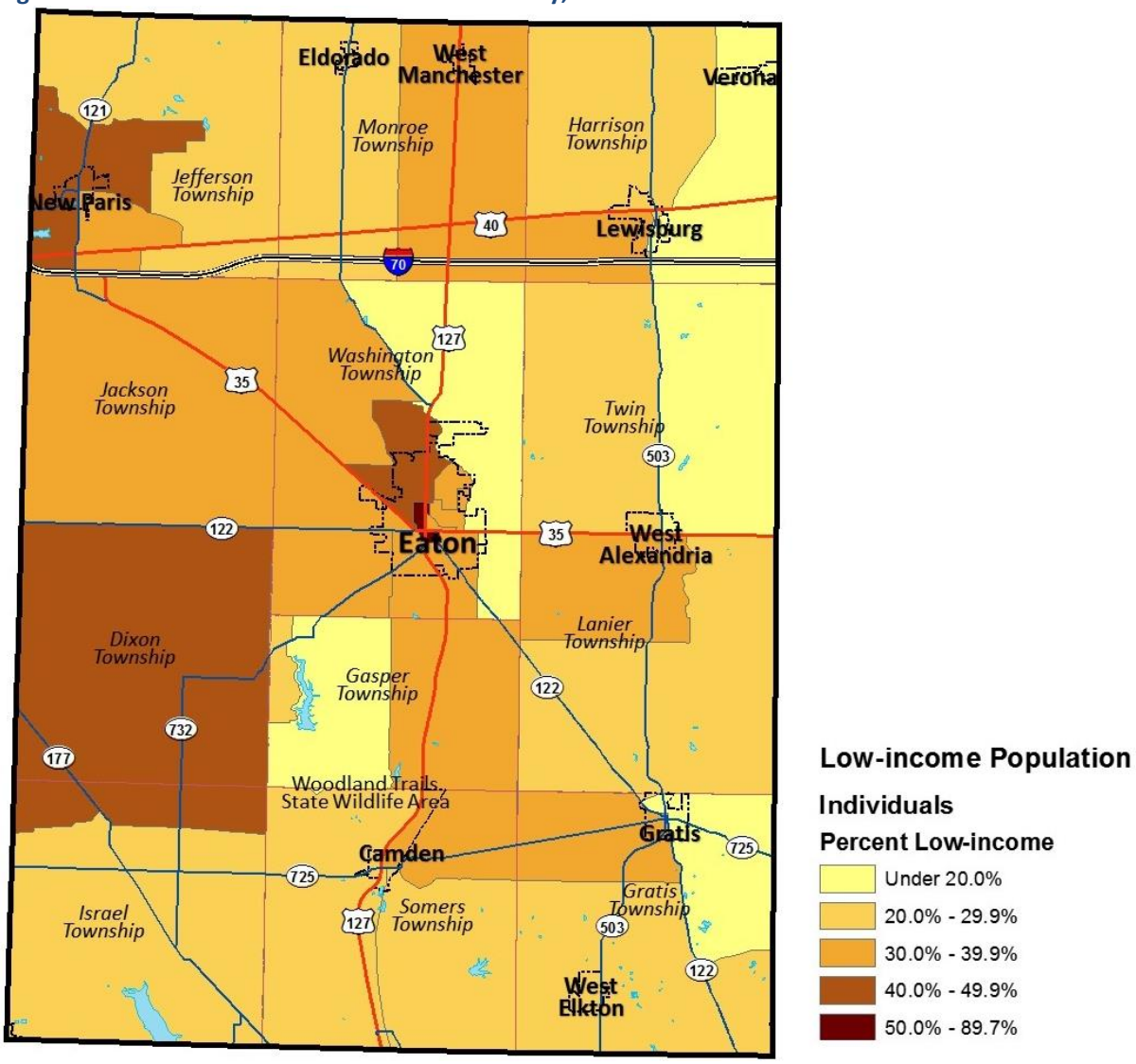


Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-year Estimates

[26] (National Prevention Council 2011)

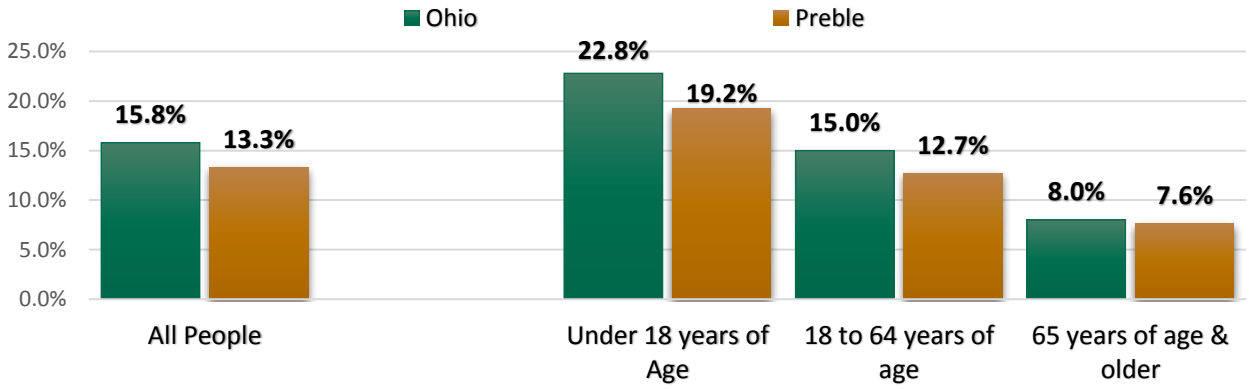
As illustrated in the following figure, low-income individuals are more heavily concentrated in Eaton, NewParis/Jefferson Township, and Dixon Township, where 40.0% or more of the residents are considered low-income (below 185% of the poverty rate).

Figure 17: Low-Income Individuals in Preble County, 2011-2015



The American Community Survey also estimates that 13.3% of the population (5,477 people) in Preble County lived below the poverty level in 2015. One out of every five children in Preble County live below the poverty level. However, there is a large disparity by the age of the child – 25.4% children under five years of age live below the poverty level and 17.3% of children between the ages of 5 and 17 live below the poverty level. In reference to the adult population, as age increases poverty rates decrease – 20.1% of 18-34 year old adults, 9.4% of adults ages 35-64, and 7.6% of adults 65 years of age or older live below the poverty level. Resdients living below the poverty level are spread throughout the county, but are most heavily concentrated in northern Eaton/Washington Township and New Paris.

Figure 18: Percentage of the Population below the Poverty Level, 2011-2015



Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Figure 19: Individual Poverty, 2011-2015

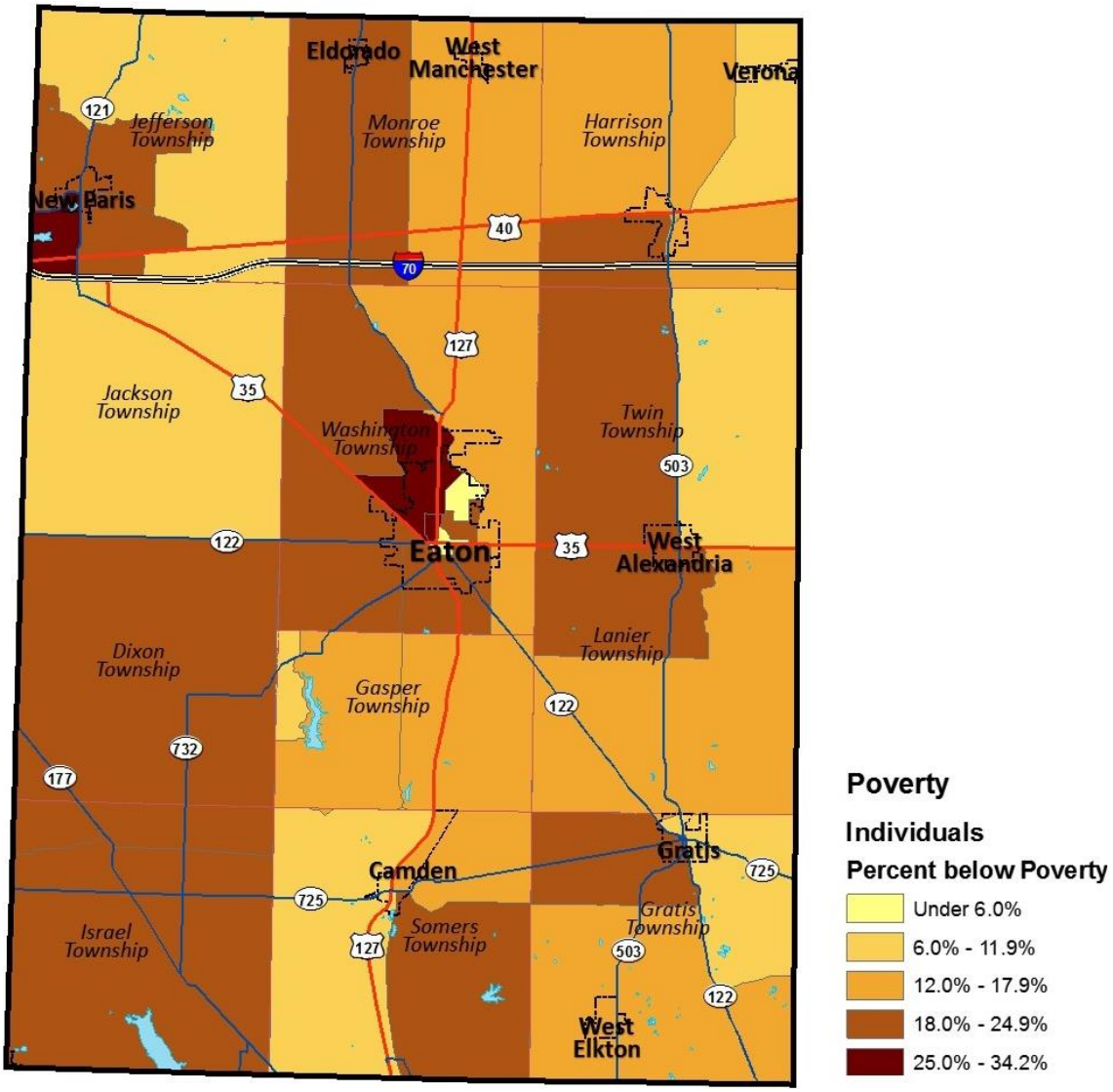


Table 2: Household Poverty, 2011-2015

	Households[27],[28] with children below Poverty Level
U.S.	18.0%
Ohio	19.6%
Preble County, Ohio	16.3%

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Food Security

The prevalence of low to very low food security in Ohio is 16.1% of households.[29] Only five other states have a more prevalent rate of food insecurity than Ohio—Kentucky, Alabama, Louisiana, Arkansas, and Mississippi.[30] For SNAP eligibility, adults who are not disabled and do not have custody of dependents are required to work at a paid job, be engaged in job training, or participate in a workfare (volunteer) program for 20 hours a week or 80 hours a month. Otherwise, food aid is limited to three months in any three-year period. According to the 2011-2015 American Community Survey 5-Year Estimates, 14.2% of households in Preble County received Supplemental Nutrition Assistance Program (SNAP) and over half (52.0%) of these households have children under the age of 18.

Table 3: Prevalence of Household Food Insecurity, 3-Year Average, 2013-2015

State	Number of households		Food insecurity (low or very low food security)			Very low food security		
	Average 2013-2015[1]	Interviewed	Prevalence		Margin of error[2]	Prevalence		Margin of error[2]
U.S.	*123,929,000*	*125,002*	*13.7%*		*0.19*	*5.4%*		*0.13*
KY	1,820,000	1,832	17.6%	*	2.36	7.3%	*	1.46
OH	**4,743,000**	**3,528**	**16.1%**	*	**1.19**	**6.6%**	*	**0.82**
MI	3,976,000	2,873	14.9%		1.54	6.4%	*	1.00
WV	763,000	2,225	15.0%		1.50	6.2%		0.91
IN	2,630,000	2,065	14.8%		1.65	6.1%		1.05

** Difference from U.S. average was statistically significant with 90 percent confidence (t > 1.645).*

[1] Total excludes households for which food security status is unknown because they did not give a valid response to any of the questions in the food security scale. These represented about 0.3 percent of all households in each year.

[2] Margin of error with 90 percent confidence (1.645 times the standard error of the estimated prevalence rate). Calculated by ERS, USDA, using data from the December 2013, 2014, and 2015 Current Population Survey Food Security Supplements.

Source: U.S. Department of Agriculture, Economic Research Service

[27] In general, family consists of those related to each other by birth, marriage or adoption.
[28] (U.S. Census Bureau 2015)
[29] (U.S. Department of Agriculture, Economic Research Service 2016)
[30] (U.S. Department of Agriculture, Economic Research Service 2016)

According to the U.S.D.A. data provided by Feeding America, 5,320 people, including 2,110 children, in Preble County were food insecure in 2015. That means 1 in 8 individuals (12.8%), and 1 in 5 children (21.5%), lived in households without consistent access to adequate food. One out of every four (24%) food insecure people in Preble County have incomes that do not qualify for nutrition assistance programs (income is at or above 185% poverty threshold) and another 19% are over the Supplemental Nutrition Assistance Program (SNAP) threshold limit 130% poverty.[31] Feeding America also estimated that 25% of the children experiencing food insecurity in Miami County are also likely ineligible for federal nutrition programs based on household income. Refer to the following table for the food insecurity rates from 2013 to 2015 for Preble County, the State of Ohio, and the nation.

Table 4: Food Insecurity Rate, Estimates 2013-2015

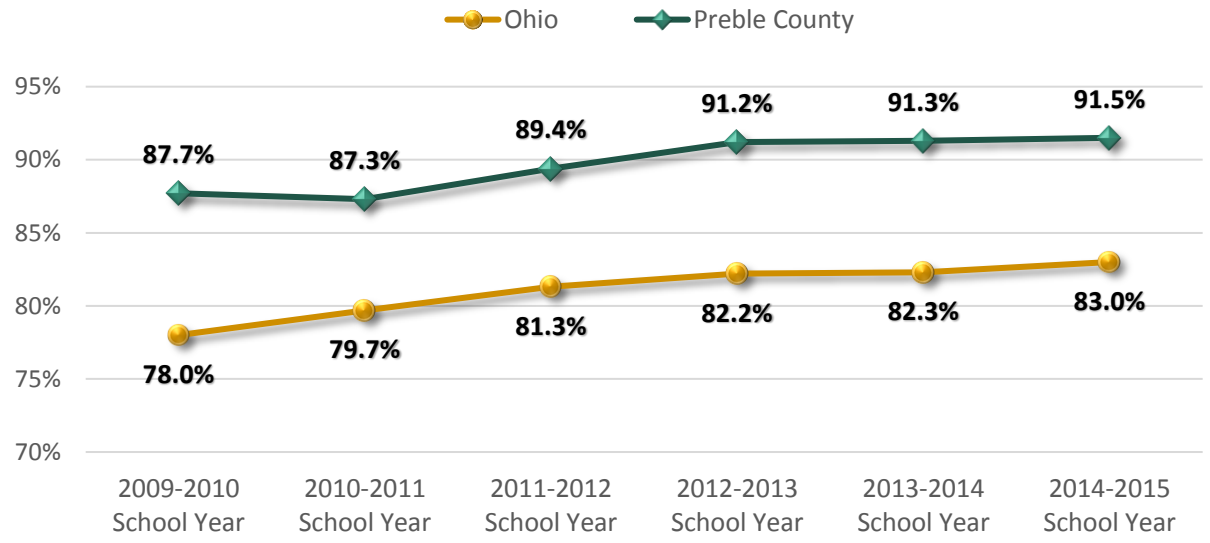
	Preble County		Ohio		U.S.	
	Adult	Child	Adult	Child	Adult	Child
Food Insecurity Rate 2013	14.1%	24.6%	16.8%	24.2%	15.8%	21.4%
Food Insecurity Rate 2014	13.1%	23.3%	16.8%	23.8%	15.4%	20.9%
Food Insecurity Rate 2015	12.8%	21.5%	16.0%	21.9%	13.4%	17.9%

Source: Feeding America

Education

At the county level, the public high school 4-year graduation rate ranged from 87.7% in 2009 to 91.5% in 2014, consistently outperforming the state. Refer to the following table for a complete breakdown by Preble County school district.

Figure 20: Preble County 4-year High School Graduation Rates, 2009-2014



Source: Ohio Department of Education

Table 5: Preble County School District 4-year High School Graduation Rates, 2009-2014

[31] (Feeding America 2017)

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Ohio	78.0%	79.7%	81.3%	82.2%	82.3%	83.0%
Preble County	87.7%	87.3%	89.4%	91.2%	91.3%	91.5%
Eaton Community City	87.7%	91.7%	88.1%	89.8%	86.5%	91.4%
National Trail Local	82.4%	85.7%	94.6%	94.3%	94.6%	98.5%
Preble Shawnee Local	90.3%	88.6%	94.1%	93.5%	98.2%	93.8%
Tri-County North Local	91.1%	87.8%	86.6%	91.8%	90.6%	87.8%
Twin Valley Community Local	87.3%	91.7%	94.3%	95.1%	98.4%	97.4%

Source: Ohio Department of Education

Early Childhood Education

There are many data points relevant to measuring the adequacy of education. Among the most frequently identified protective factors for child neglect is universal early childhood education and development. Therefore, researchers turned to the Kindergarten Readiness Assessment (KRA) to provide a snapshot of early childhood education and development in Preble County, Ohio.

At the beginning of each school year, children in public school kindergarten programs are assessed using Ohio's Kindergarten Readiness Assessment. This assessment includes ways for teachers to measure a child's readiness for engaging with instruction aligned to the kindergarten standards.[32] Ohio's Early Learning and Development Standards (birth to kindergarten entry) are the basis for the Kindergarten Readiness Assessment.

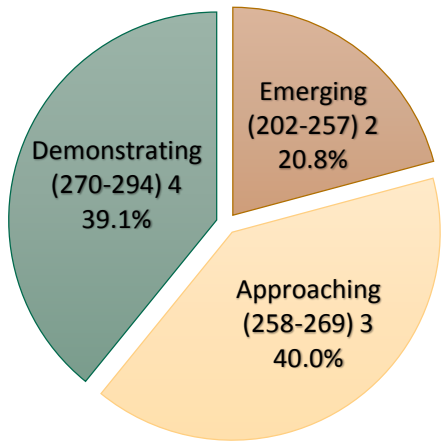
There are three performance levels to calculate the overall Kindergarten Readiness Assessment score: Demonstrating, Approaching and Emerging.

1. *Demonstrating Readiness* are students with overall scores of 270 to 298. These children demonstrated foundational skills and behaviors that prepare him or her for instruction based on kindergarten standards.
2. *Approaching Readiness* are students with overall scores of 258 to 269. These children demonstrated some of the foundational skills and behaviors that prepare him or her for instruction based on kindergarten standards.
3. *Emerging Readiness* are students who got an overall score of 202 to 257. These children demonstrated minimal skills and behaviors that prepare him or her for instruction based on kindergarten standards.

In Preble County, 60.8% of children assessed for Kindergarten are not demonstrating readiness in social foundations, math, language and literacy, and physical well-being and motor development – 20.8% show emerging (or the earliest signs) of readiness, and 40.0% are approaching readiness. Refer to the following figure for a more detailed look at kindergarten readiness.

[32] (Ohio Department of Education n.d.)

Figure 21: Kindergarten Readiness

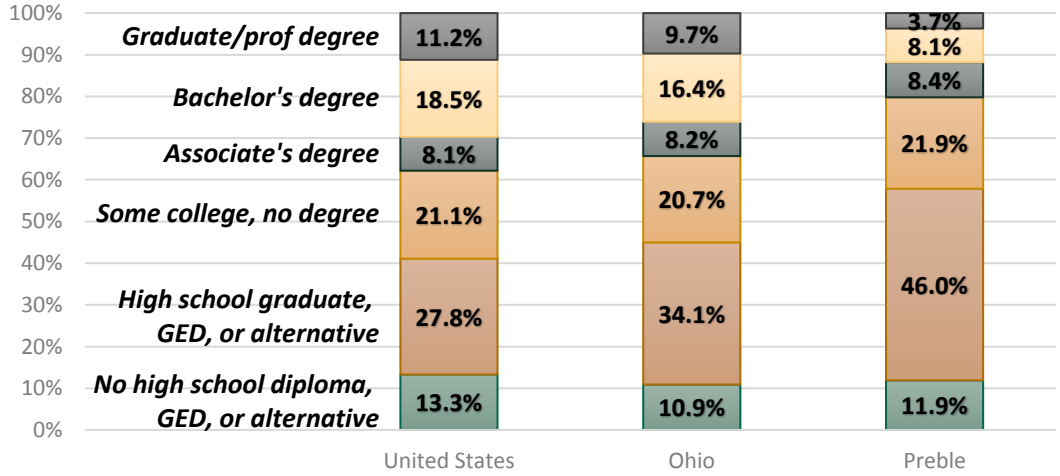


Source: Ohio Department of Education

Educational Attainment

Slightly more than 1 out of 10 (11.9%) of Preble County's population 25 years of age or older has no high school diploma. This is higher than the State of Ohio percentage (10.9%) but lower than the national percentage (13.3%). Lower educational attainment levels are directly associated with unemployment and lower pay.[33] One out of eight (11.8%) of Preble County's population currently holds a bachelor degree or higher, which is 14.3% lower than the State of Ohio and 17.9% lower than the nation. For a detailed look of the educational attainment of the population 25 years of age or older, refer to the following figure.

Figure 22: Educational Attainment of the Population 25+ Years of Age, 2011-2015



U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

[33] (U.S. Department of Labor, Bureau of Labor Statistics 2014)

Language

A common barrier to accessing quality health care is the ability to communicate well with medical professionals. In Preble County, where less than one percent of households have limited English capabilities, this is less of an issue than for the state or nation – 1.4% and 4.5%, respectively.

Table 6: Limited English Speaking Households

	Total Households	*Limited English Speaking Households*[34,35]	
		Households	Percent
U.S.	116,926,305	5,283,597	4.5%
Ohio	4,585,084	63,311	1.4%
Preble County	16,151	85	0.5%

U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Social and Community Context

Social Cohesion

"Social relationships are fundamental to emotional fulfillment, behavioral adjustment, and cognitive function. Social isolation predicts morbidity and mortality from cancer, cardiovascular disease, and a host of other causes."[36] Experts cite the lack of social connectedness and cohesion in communities as worsening more so than any other community aspect studied. In total, 72% of these experts believe that social connectedness and cohesion in communities has worsened over the last 5 years. According to the literature, social connectedness and cohesion are community development strategies. "People, groups and organizations within communities share responsibility for the safety and well-being of children and young people. Communities that are cohesive and in which people feel connected are less likely to experience social problems including child abuse and neglect and will have more capacity to resolve local problems and issues collectively."[37] Cohesive communities can also be a way of responding to issues experienced by smaller households including where people live alone or with one other person.

In a household survey conducted by APRI of Western Ohio households in 2016,

- 8% of adults have no one they can turn to when they are lonely
- 3% have no one to talk to when in a crisis
- From a neighborhood perspective, 26% of families never or rarely pull together in stressful times

[34] A "limited English speaking household" is one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English "very well." In other words, all members 14 years old and over have at least some difficulty with English.
[35] (U.S. Census Bureau 2015)
[36] (Hawkley and Cacioppo 2003)
[37] (Queensland Council of Social Service Inc 2006)

- Many families don't know where to turn, if the family needed it, for food (6%), housing (12%), or to make ends meet (13%)

Neighborhood and Built Environment

According to the CDC, physical environment metrics not only include the natural environment (air, water, and soil) but also include the built environment (safe and affordable housing, parks and recreational opportunities, transportation, and access to nutritious and affordable food). "The physical environment can directly affect health as well as influence choices and health behaviors (Fielding et al., 2010). Metrics of the physical environment include proposed or established causal factors in the natural and built environment that affects health outcomes (e.g., air and water quality, lead exposure, the design of neighborhoods) (Kindig, 2007)."[38]

Access to Public Transportation

Preble County Transportation is an informational service for all transportation resources that are available in the area, and is a provider of transportation for certain contracts in Preble County which include: Samaritan Behavioral Health, Premier Health, Veteran's Services, and the Preble County Mental Health and Recovery Board. Transportation is made possible in coordination with several agencies including Community Action Partnership, Preble County Council on Aging, Preble County Job & Family Services, Preble County Mental Health and Recovery Board, Preble County Board of Developmental Disabilities, and Veterans Affairs. Transportation is offered through several different programs to lower income, mentally or physically disabled, elderly, or veteran individuals. There is also the option of private pay for those who do not qualify for a specific program. Individuals interested in learning more about these transportation services can call Community Action Partnership Monday through Friday between 8 a.m. and 4 p.m.[39]

Through the Preble County Council on Aging, transportation service is available to Preble County residents age 60 and older who are most in need of the service, and who are without alternative means of transportation. Transportation is provided to medical appointments and treatment centers inside and outside of the county, within a 50-mile radius of Eaton. Need is determined by assessment and prioritization. Wheelchair lift equipped vehicles are used for this service as needed and/or available.[40]

Lastly, the Non-Emergency Transportation (NET) program provides transportation for Medicaid recipients to non-emergency Medicaid providers. The consumer must be eligible for Medicaid to use NET. Transportation is provided to advance-scheduled destinations within the county and areas within a 50-mile radius. All transportation appointments are made by the agency with the contracted transportation provider.[41]

[38] (U.S. Centers for Disease Control and Prevention 2013)
[39] (Community Action Partnership 2017)
[40] (Preble County Council on Aging 2017)
[41] (Board of Preble County Commissioners 2017)

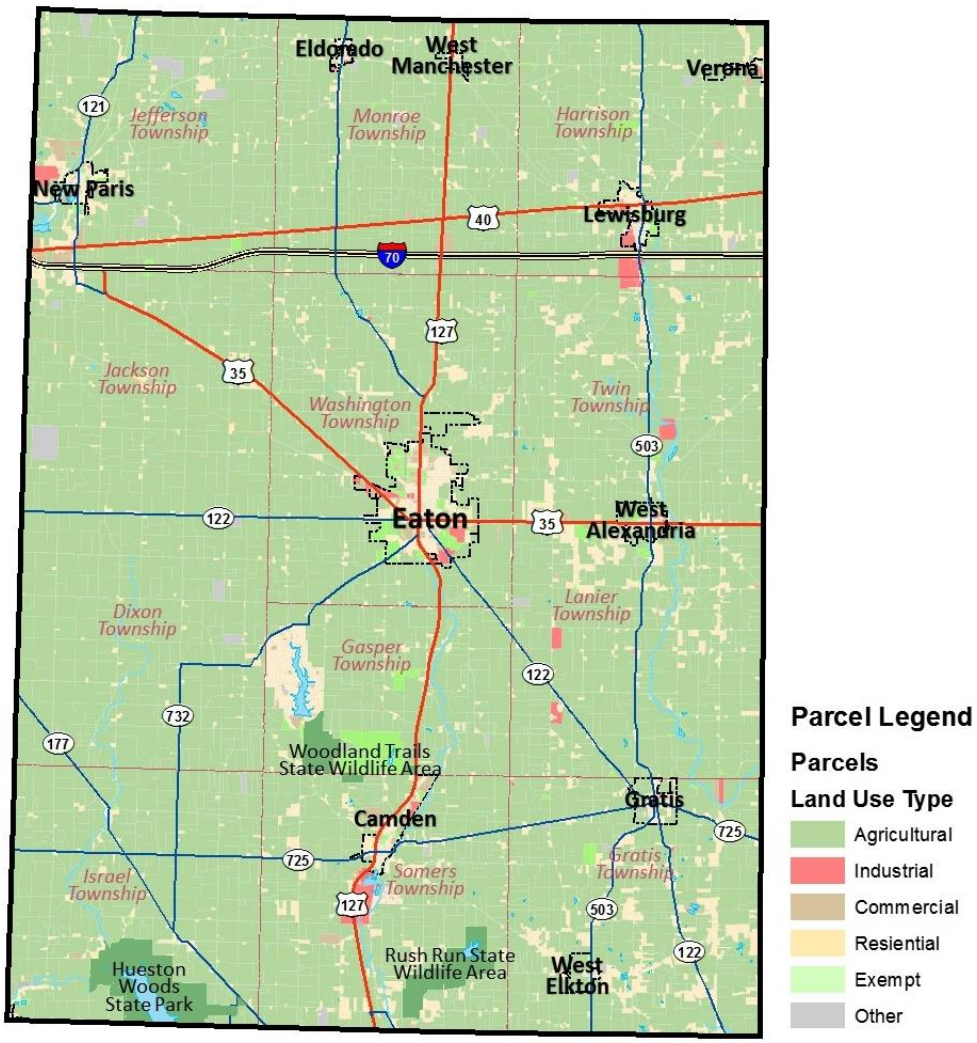
Land Use and Access to Green Space

The county is broken out in five major land uses, which include agricultural, industrial, commercial, residential, exempt (i.e., government, schools, religious, etc.), and other uses (i.e., utility and transportation). The greatest amount of land in Preble County is dedicated to agricultural (76.3%) and residential uses (9.5%).

According to the Department of Health and Human Services, "Safe, accessible, and affordable places for physical activity (e.g., parks, playgrounds, community centers, schools, fitness centers, trails, and gardens) can increase activity levels."[42] There is an abundance of green space in Preble County, but most of the green space is dedicated to agriculture and is not necessarily accessible to the general population. However, there are three state nature areas in the county – Woodland Trails and Rush Run Wildlife Areas, and Hueston Woods State Park (Preble and Butler Counties), which is nearly 3,000 acres of natural resources for outdoor recreation.

Figure 23: Land Use and Green Space

[42] (U.S. Department of Health and Human Services 2017)



Source: Ohio Department of Transportation
Source: Preble County Auditor
Source: Miami Valley Regional Planning Commission

Outdoor Air Quality

According to the HP 2020, poor air quality is linked to premature death, cancer, and long-term damage to respiratory and cardiovascular systems. Approximately 127 million people lived in U.S. counties that exceeded national air quality standards in 2008. Decreasing air pollution is an important step in creating a healthy environment.[43]

Air pollution can harm us when it accumulates in the air in high enough concentrations and people exposed to high enough levels of certain air pollutants may experience:

- *Irritation of the eyes, nose, and throat*
- *Wheezing, coughing, chest tightness, and breathing difficulties*

[43] (U.S. Department of Health and Human Services 2017)

- *Worsening of existing lung and heart problems, such as asthma*
- *Increased risk of heart attack*

In addition, long-term exposure to air pollution can cause cancer and damage to the immune, neurological, reproductive, and respiratory systems. In extreme cases, it can even cause death.

Ground level or "bad" ozone is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC. Breathing ozone can trigger a variety of health problems, particularly for children, the elderly, and people of all ages who have lung diseases such as asthma. Ground level ozone can also have harmful effects on sensitive vegetation and ecosystems.[44]

The Environmental Protection Agency (EPA) calculates the Air Quality Index (AQI) for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health. Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in this country.

Ozone is a gas found in the air we breathe. Good ozone is present naturally in the Earth's upper atmosphere and shields us from the sun's harmful ultraviolet rays. Bad ozone forms near the ground when pollutants (emitted by sources such as cars, power plants, industrial boilers, refineries, and chemical plants) react chemically in sunlight and is more likely to form during warmer months.[45]

"Several groups of people are particularly sensitive to ozone, especially when they are active outdoors. This is because ozone levels are higher outdoors, and physical activity causes faster and deeper breathing, drawing more ozone into the body.

- People with lung diseases, such as asthma, chronic bronchitis, and emphysema, can be particularly sensitive to ozone. They will generally experience more serious health effects at lower levels than those without these diseases. Ozone can aggravate their diseases, leading to increased medication use, doctor and emergency room visits, and hospital admissions.
- Children, including teenagers, are at higher risk from ozone exposure because they often play outdoors in warmer weather when ozone levels are higher. They are more likely to have asthma (which may be aggravated by ozone exposure), and their lungs are still developing.
- Older adults may be more affected by ozone exposure, possibly because they are more likely to have pre-existing lung disease.
- Active people of all ages who exercise or work vigorously outdoors are at increased risk.

[44] (U.S. Environmental Protection Agency 2017)
[45] (U.S. Environmental Protection Agency 2016)

- Some healthy people are more sensitive to ozone. They may experience health effects at lower ozone levels than the average person even though they have none of the risk factors listed above. There may be a genetic basis for this increased sensitivity."[46]

Ozone can cause the muscles in the airways to constrict, trapping air in the alveoli. This leads to wheezing and shortness of breath. Ozone can:

- Make it more difficult to breathe deeply and vigorously.
- Cause shortness of breath, and pain when taking a deep breath.
- Cause coughing and sore or scratchy throat.
- Inflame and damage the airways.
- Aggravate lung diseases such as asthma, emphysema, and chronic bronchitis.
- Increase the frequency of asthma attacks.
- Make the lungs more susceptible to infection.
- Continue to damage the lungs even when the symptoms have disappeared.
- Cause chronic obstructive pulmonary disease (COPD). [47]

"An AQI value of 100 generally corresponds to the national air quality standard for the pollutant, which is the level EPA has set to protect public health. AQI values below 100 are generally thought of as satisfactory. When AQI values are above 100, air quality is considered to be unhealthy, at first for certain sensitive groups of people, then for everyone as AQI values get higher. Each category corresponds to a different level of health concern. The six levels of health concern and what they mean are as follows:

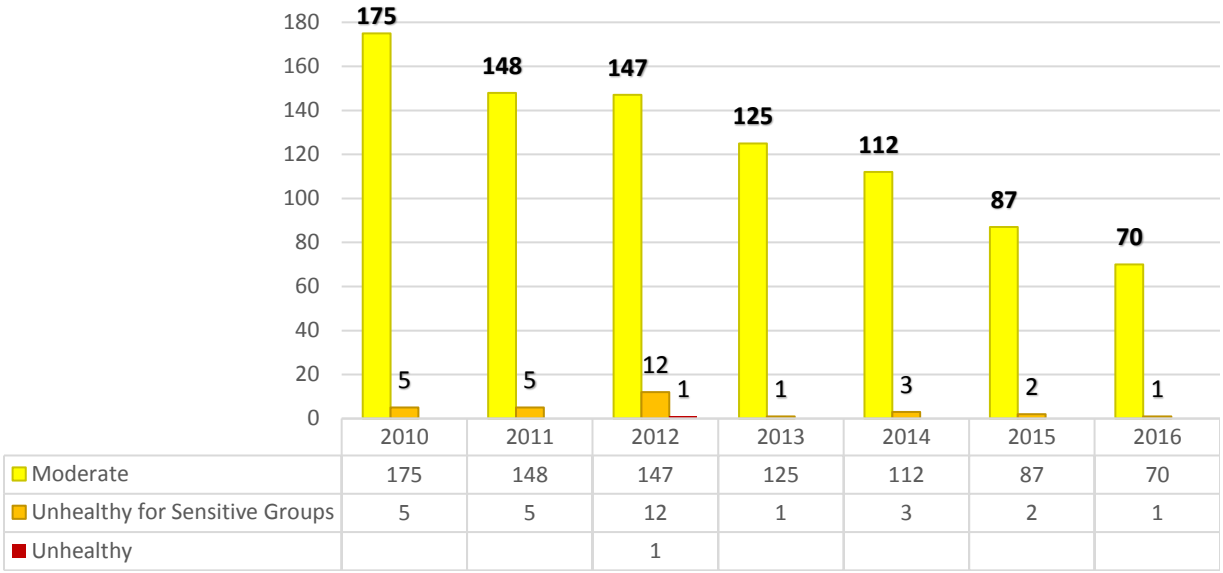
1. "Good" AQI is 0 to 50. Air quality is considered satisfactory, and air pollution poses little or no risk.
2. "Moderate" AQI is 51 to 100. Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people. For example, people who are unusually sensitive to ozone may experience respiratory symptoms.
3. "Unhealthy for Sensitive Groups" AQI is 101 to 150. Although general public is not likely to be affected at this AQI range, people with lung disease, older adults and children are at a greater risk from exposure to ozone, whereas persons with heart and lung disease, older adults and children are at greater risk from the presence of particles in the air.
4. "Unhealthy" AQI is 151 to 200. Everyone may begin to experience some adverse health effects, and members of the sensitive groups may experience more serious effects.
5. "Very Unhealthy" AQI is 201 to 300. This would trigger a health alert signifying that everyone may experience more serious health effects.
6. "Hazardous" AQI greater than 300. This would trigger health warnings of emergency conditions. The entire population is more likely to be affected."[48]

Since 2010, air quality in Preble County has been improving. The number of days that were rated as moderate has steadily declined from 175 days in 2010 to 70 days in 2016. A total of 29 days was

[46] (U.S. Environmental Protection Agency 2016)
[47] (U.S. Environmental Protection Agency 2016)
[48] (U.S. Environmental Protection Agency 2016)

reported to be unhealthy for sensitive groups (people with heart or lung disease and children or older adults should reduce prolonged or heavy outdoor exertion) and one day was reported as unhealthy for everyone (people with heart or lung disease and children or older adults should avoid prolonged or heavy outdoor exertion). The following figure presents the number of days since 2010 that the air quality in Preble County was rated at 101 or above potentially affecting the population's respiratory health at some level.

Figure 24: Preble County Annual Air Quality Index, 2010-2016



	2010	2011	2012	2013	2014	2015	2016
Moderate	175	148	147	125	112	87	70
Unhealthy for Sensitive Groups	5	5	12	1	3	2	1
Unhealthy			1				

Source: U.S. Environmental Protection Agency

The Air Quality Statistics Report displays air pollution values related to national standards for air quality and shows the area's maximum air quality statistics are above the level of the national standards for a particular year. Each row lists standards-related air pollution statistics for pollutants, for a single area, for one year. The values shown are the highest reported during the year by all monitoring sites in the county. If a statistic exceeds the level of an air quality standard, it is highlighted in red. The following table is presented as an overview of the outdoor air quality in Preble County since 2010. Ozone (O_3) levels in Preble County exceeded the daily 8-hour concentration in 2010, 2011, and 2012, but have not since. $PM_{2.5}$ provides data on particulate matter smaller than 2.5 micrometers and the weighted annual mean provides the average of all the sample values in the respective year. Only in 2010 did the particulate matter smaller than 2.5 microns exceed the established national air quality standards to protect public health.

Table 7: Outdoor Air Quality, 2010-2015

County	CO 1-hr (ppm)	CO 8-hr (ppm)	O_3 8-hr (ppm)	O_3 8-hr (ppm)	SO_2 99^{th} %	SO_2 1-hr (ppb)	SO_2 24-hr (ppb)	$PM_{2.5}$ 24-hr ($\mu g/m^3$)	$PM_{2.5}$ Wtd Mean

2010	.	.	0.08	0.071	.	.	.	30	12
2011	1.9	0.8	0.09	0.074	34	8	2	25	10.9
2012	1.5	0.4	0.09	0.077	26	7	2	20	9.3
2013	1.5	0.4	0.07	0.067	16	5	1	21	9.7
2014	0.4	0.4	0.08	0.065	26	7	1	25	9.2
2015	1	0.7	0.08	0.067	25	5	1	18	8.4
2016	0.5	0.3	0.08	0.069	16	3	0	16	7.5

EPA Air Quality Standards:

CO – Carbon Monoxide: 35 ppm (1-hour), 9 ppm (8-hour)
O3 – Ozone: 0.12 ppm (1-hour), 0.070 ppm (8-hour)
SO2 – Sulfur Dioxide: 75 ppb (1-hour), 140 ppb (24-hour), 30 ppb (annual)
PM2.5: 35 ug/m3 (24-hour), 12.0 ug/m3 (annual)
Statistics in red are above the level of the respective air quality standard.

ND - No Data
IN - Insufficient data to calculate summary statistic
µg/m3 - micrograms per cubic meter
ppm - parts per million
ppb - parts per billion

Source: U.S. Environmental Protection Agency

Access to Healthy Foods

Fresh fruits and vegetables are an important part of federal dietary guidelines. They are also good sources of fiber; low in sugar, fat and sodium; and nutrient-rich, yet low in calories.

The following table provides a snapshot of daily fruit and vegetable consumption and access to some of Preble County's healthier food options.

Table 8: Healthy Food Access, Ohio

Fruits and Vegetables	Ohio	Year	Data Source	Preble County	Year	Data Source
Adults who consume fruit < 1 time daily	25.0%	2014	BRFSS	54.3%	2017	Survey
Adults who consume vegetables < 1 time daily	49.5%	2013	BRFSS	73.7%	2017	Survey
Adolescents who consume fruit < 1 time daily	38.8%	2013	YRBSS	NA		
Adolescents who consume vegetables < 1 time daily	38.3%	2013	YRBSS	NA		
Census tracts with healthier food retailers	66.4%	2014	FVSS	NA		
Farmers markets per 100,000 residents	2.3%	2012	SIRFV	NA		
Farmers markets that accept SNAP benefits	21.5%	2012	SIRFV	NA		
Farmers markets that accept WIC coupons	22.6%	2012	SIRFV	NA		

Source: Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity and Obesity
BRFSS – Behavioral Risk Factor Surveillance System
YRBSS – Youth Risk Behavior Surveillance System
NA – Data not available
FVSS – Fruits and Vegetables Surveillance Sources
SIRFV – State Indicator Report on Fruits and Vegetables

Senior Farmers' Market Nutrition Program (SFMNP)

The Senior Farmers' Market Nutrition Program (SFMNP), a USDA funded program, includes a nutrition education component which provides participants with information about making healthy choices and the benefits of fruits and vegetables in their diets. The program also provides $50 worth of coupons (10-$5 coupons) to eligible seniors for the purchase of fresh fruits and vegetables and honey. There are three eligibility requirements for program participants. Each must be 60 years or older, live in a county served by a SFMNP, and have a combined household income of 185% or less of the federal poverty income level. Foods excluded are: any processed food or foods grown in states other than Ohio, Pennsylvania, West Virginia, Kentucky, Indiana or Michigan. The program operates through the growing season during which eligible seniors can exchange their coupons at farmers' markets or farm stands that display a SFMNP sign. The coupons will have dates printed on them that identify when the coupons are valid. The Department of Aging partners with area agencies on aging to offer the Senior Farmers' Market Nutrition Program in 45 counties. Area 2, which includes Preble County, does not participate in the Senior Farmers' Market Nutrition Program. Refer to the following figure for Area Agency on Aging regions and counties participating in the program.[49]

Figure 25: Ohio Senior Farmers' Market Nutrition Program

Source: Ohio Department of Aging

[49] (Ohio Department of Aging n.d.)

Housing Stability

"Quality housing is associated with positive physical and mental well-being. How homes are designed, constructed, and maintained, their physical characteristics, and the presence or absence of safety devices have many effects on injury, illness, and mental health."[50] "Affordability of housing is linked to the health and well-being of individuals and families. When a market lacks a sufficient supply of affordable housing, lower-income families are often forced to limit expenditures for food, medical care, and other necessities in order to pay rent."[51] According to the U.S. Department of Housing and Urban Development, a household is said to have a housing problem if it has any one or more of the following four problems: 1) housing units that lack complete kitchen facilities; 2) housing units that lack complete plumbing facilities; 3) household is overcrowded (more than one person per room); and 4) household is cost burdened (monthly housing costs, including utilities, exceed 30% of monthly income). A household is said to have a severe housing problem if they have severe overcrowding (more than 1.5 persons per room) or are severely cost burdened (monthly housing costs, including utilities, exceed 50% of monthly income).

In Preble County, 1,745 households experienced at least one of the four housing problems in 2013. For 38.3% of renters and 24.4% of homeowners, housing may not be stable or sustainable because the expense is more than 30% of their monthly income. For the County overall, 9.2% are severely cost burdened by housing and related expenses.

Table 9: County Severe Housing Problems, 2013

Overview	Owner		Renter		Total	
Household has 1 of 4 Housing Problems	935	7.4%	810	22.4%	1,745	10.7%
The four housing problems are: incomplete kitchen facilities; incomplete plumbing facilities, more than 1 person per room; and cost burden greater than 30%.						
Housing Cost Burden Overview	**Owner**		**Renter**		**Total**	
Cost Burden <=30%	9,485	75.1%	2,165	59.9%	11,650	71.7%
Cost Burden >30% to <=50%	2,280	18.1%	695	19.2%	2,975	18.3%
Cost Burden >50% (Severe)	800	6.3%	690	19.1%	1,490	9.2%
Cost Burden not available	60	0.5%	60	1.7%	120	0.7%
Total	12,625		3,615		16,240	

Source: U.S. Department of Housing and Urban Development (HUD) custom tabulations of American Community Survey (ACS) data from the U.S. Census Bureau. Comprehensive Housing Affordability Strategy Data Query Tool, CHAS data for the 2009-2013 period.

[50] (National Prevention Council 2011)
[51] (Freeman 2002)

Crime and Violence

Adverse Childhood Experiences (ACEs)

The ACE survey was first conducted with Kaiser Permanente and the Centers for Disease Control and Prevention. The CDC-Kaiser Permanente Adverse Childhood Experiences (ACE) Study is one of the largest investigations of how childhood abuse and neglect influence later-life health and well-being. "Witnessing or being a victim of violence (e.g., child maltreatment, youth violence, intimate partner and sexual violence, bullying, elder abuse) are linked to lifelong negative physical, emotional, and social consequences."[52]

The original ACE Study was conducted at Kaiser Permanente from 1995 to 1997 with two waves of data collection. Over 17,000 Health Maintenance Organization members from Southern California receiving physical exams completed confidential surveys regarding their childhood experiences and current health status and behaviors.

As a result, researchers had the ability to compare childhood trauma to adult health outcomes. They found a graded relationship between the number of categories of childhood exposure and each of the adult health risk behaviors and diseases that were studied ($P < .001$). Persons who had experienced four or more categories of childhood exposure, compared to those who had experienced none, had 4- to 12-fold increased health risks for alcoholism, drug abuse, depression, and suicide attempt.[53] The table below presents the results of a survey of 605 adults ages 18-60 in Western Ohio. This local study indicates that nearly 1 in 4 adults experienced 4+ ACEs in childhood, which puts them at much greater risk for alcoholism, drug abuse, depression, and suicide along with greater risk for heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease.

Table 10: Adverse Childhood Experiences in Western Ohio, 2016

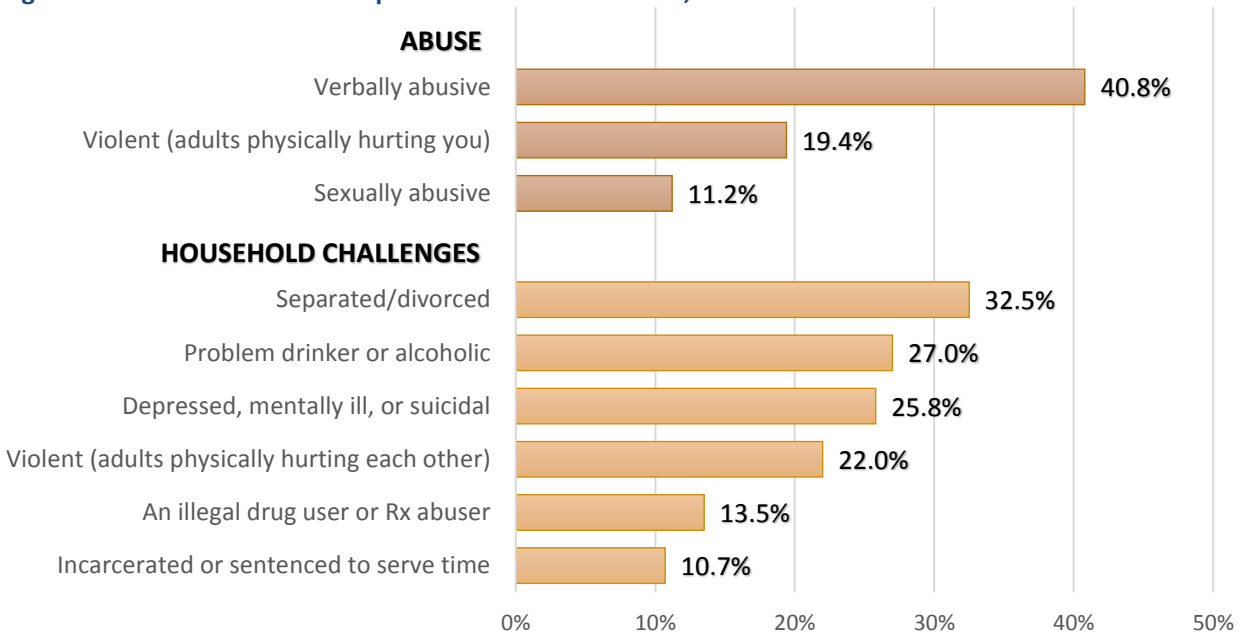
ACEs	Frequency	Valid Percent	Cumulative Percent
0	43	7%	7%
1	215	36%	44%
2	124	21%	65%
3	65	11%	76%
4 or more	145	24%	100%
Total	592	100%	

Source: WSU APRI Western Ohio Household Survey

A more detailed analysis of the factors included in the ACEs study shows that a substantial portion of adults in Western Ohio have grown up in households where violence and verbal abusiveness between adults or adults to children was experienced.

[52] (National Prevention Council n.d.)
[53] (Department of Preventive Medicine, Southern California Permanente Medical Group (Kaiser Permanente) 1998)

Figure 26: Adverse Childhood Experiences in Western Ohio, 2016



Source: WSU APRI Western Ohio Household Survey

In Ohio, each year 65,000 women between the ages of 18 and 64 are physically assaulted by a current or former partner, and 32,000 15-19 year old's experience physical dating violence, 29,000 (90.6%) of whom are forced to do sexual acts by someone they are dating. In Ohio, 48,000 children live in homes where an adult reports intimate partner violence.[54] The tables below present a snapshot of intimate partner and child abuse and neglect in Preble County and the State of Ohio.

Table 11: Domestic Violence 6-year Average Rate per 100,000, 2009-2014

County	Adults 18-64 years of age *per 100,000*
Ohio	624.8
Preble	372.7

Source: The Ohio Family Violence Prevention Project & the Ohio Department of Public Safety, Office of Criminal Justice, Domestic Violence in Ohio, 2014

Table 12: Reports of Child Abuse and Neglect, 2014

County	Reports of Child Abuse or Neglect	Number of Children Victims	Rate per 1,000 Children	Substantiated Reports of Neglect	Substantiated Reports Physical Abuse
Ohio	81,608	30,680	30.9	14,711	11,764
Preble	255	156	26.3	96	56

Source: Ohio Colleges of Medicine Government Resource Center, The Ohio Family Violence Prevention Project & the Ohio Department of Public Safety, Office of Criminal Justice, Domestic Violence in Ohio, 2014

[54] (Ohio Colleges of Medicine Government Resource Center 2014)

Table 13: Violent Crime, 5-year Average Rate per 100,000, 2010-2014

County	Violent Crime
U.S.	386.7
Ohio	299.5
Preble	76.8

Source: Ohio Department of Public Safety Office of Criminal Justice Services Crime Statistics and Crime Reports from the FBI's Ohio Master File for the Uniform Crime Reporting Program, 5-year Average, 2010-2014

Population Health Issues

The following chapter will address access to health care, the general health status, chronic health conditions of Preble County residents. This will include physical and mental health, as well as days with limitations in performing routine activities because of these conditions.

Maternal and Child Health

The HP 2020 goal is to improve the health and well-being of women, infants, children, and families, because improving the well-being of mothers, infants, and children not only affects their well-being and determines the health of the next generation, but can help predict future public health challenges for families, communities, and the health care system. The risk of maternal and infant mortality and pregnancy-related complications can be reduced by increasing access to quality preconception (before pregnancy), prenatal (during pregnancy), and interconception (between pregnancies) care.[55]

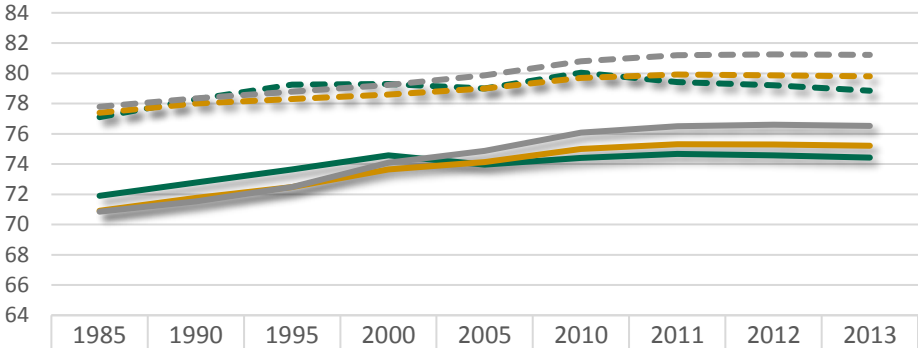
Other factors can affect a healthy pregnancy and childbirth, including age, race, poverty, and the mental health of the parents and/or caregivers. For example, "the social determinants that influence maternal health also affect pregnancy outcomes and infant health. Racial and ethnic disparities in infant mortality exist, particularly for African American infants and a child's health status varies by both race and ethnicity. Family income and related factors, including educational attainment among household members and health insurance coverage also affect prenatal and infant health outcomes."[56]

In addition, environmental factors can shape a woman's overall health status before pregnancy, and her and the child's health during and after pregnancy. Common barriers affecting her health directly and her ability to engage in healthy behaviors, such as exercise and eating healthy foods, can be influenced by the neighborhood, community, and other environmental factors.

The following figure presents life expectancy at birth (age in years) from 1985-2013. Life expectancy has increased for both males and females since 1985 – females into their early 80s and males into their late 70s. Refer to the following figure for a breakdown by sex for Preble County, the State of Ohio, and the United States.

[55] (U.S. Department of Health and Human Services 2017)
[56] (U.S. Department of Health and Human Services 2017)

Figure 27: Life Expectancy at Birth, 1985-2013



	1985	1990	1995	2000	2005	2010	2011	2012	2013
Female (Preble County)	77.1	78.3	79.3	79.3	79.0	80.0	79.4	79.2	78.9
Female (Ohio)	77.4	78.0	78.3	78.6	79.0	79.7	79.9	79.9	79.8
Female (U.S.)	77.8	78.4	78.8	79.2	79.9	80.8	81.2	81.3	81.2
Male (Preble County)	71.9	72.8	73.6	74.6	74.0	74.4	74.7	74.6	74.4
Male (Ohio)	70.9	71.8	72.5	73.7	74.1	75.0	75.3	75.3	75.2
Male (U.S.)	70.9	71.5	72.5	74.1	74.9	76.1	76.5	76.6	76.5

Source: Institute for Health Metrics and Evaluation

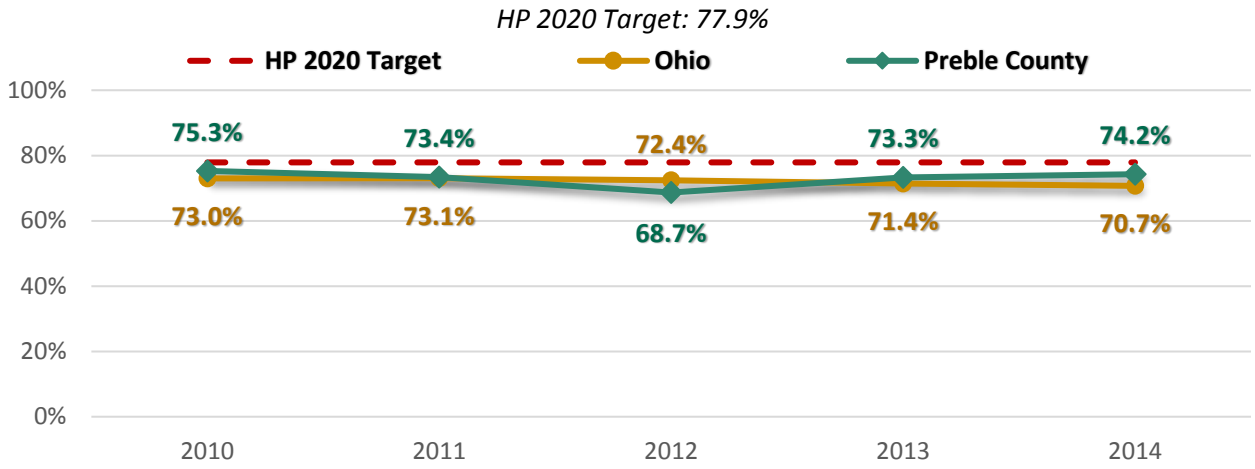
First Trimester Prenatal Care

In a survey conducted by the Applied Policy Research Institute in 2017, 66 women indicated that they had ever been pregnant and 53 of these women indicated that they had discussed ways to prepare for healthy pregnancy and baby by a doctor, nurse, or other healthcare worker.

"Common barriers to a healthy pregnancy and birth include lack of access to appropriate health care before and during pregnancy."[57] The figure below presents the percentage of mothers in Preble County who receive first trimester prenatal care versus the percentage in Ohio. Since 2010, Preble County's percentage was comparatively better than Ohio's, and more mothers in Preble County received first trimester prenatal care. However, the percentage of mothers receiving first trimester prenatal care still remains lower than the HP 2020 goal of 77.9% as of 2014. Please refer to the following figure.

[57] (U.S. Department of Health and Human Services 2017)

Figure 28: Percentage of Live Births Receiving First Trimester Care, 2010-2014

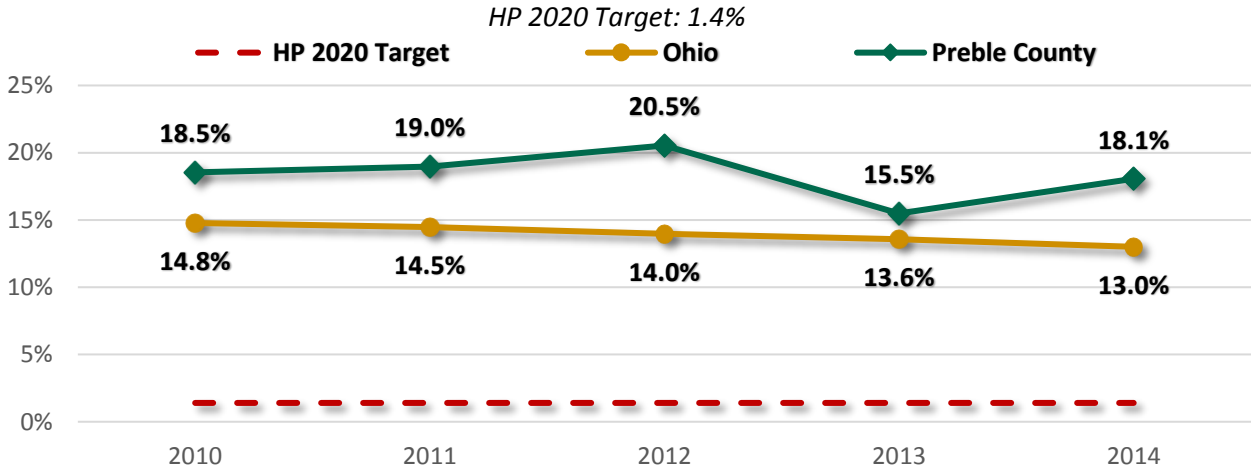


Source: Ohio Department of Health, Ohio Resident Live Births

Births to Mothers Who Smoke

Smoking during pregnancy can increase the risk that the infant is born prematurely and/or born with low birth weight, which creates additional dangers. Although the percentage of mothers who smoke while pregnant is decreasing over time, the rate for mothers in Preble County is higher than the national rate of 10.9% in 2014 and consistently higher than the rate for Ohio over the study period. In 2014, the percentage of women who did not abstain from smoking during pregnancy remains nearly 13 times higher than the HP 2020 goal to reduce the percentage to 1.4%.

Figure 29: Percentage of Births to Mothers Who Smoked, 2010-2014

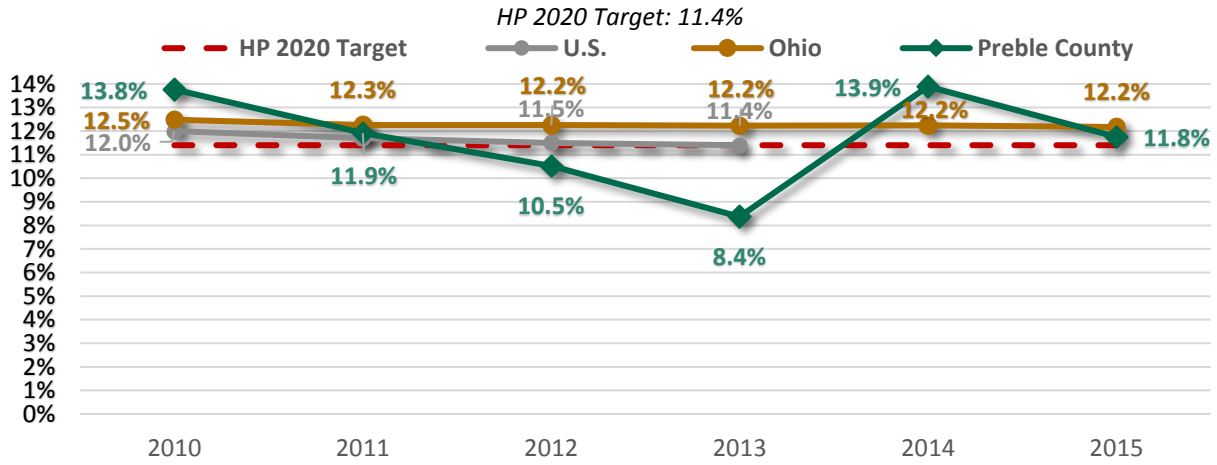


Source: Ohio Department of Health, Ohio Resident Live Births

Preterm Births

Preterm birth is when a baby is born too early – before the 37th complete week of pregnancy. Preterm birth is also a leading cause of long-term neurological disabilities in children, and preterm-related causes of death account for approximately 35% of all infant deaths.[58] According to the CDC, preterm birth affected about 1 of every 10 infants born in the United States in 2015. Preterm birth rates decreased from 2007 to 2014, and CDC research shows that this decline is due, in part, to declines in the number of births to teens and young mothers. The CDC also reports that the rate of preterm birth among African-American women (13%) was about 50 percent higher than the rate of preterm birth among white women (9%). The HP 2020 target for reduction is 11.4% annually. Preble County failed to meet this target in 2 out of 6 of the study years.

Figure 30: Preterm Live Births (Percent < 37 weeks gestation), 2010-2015



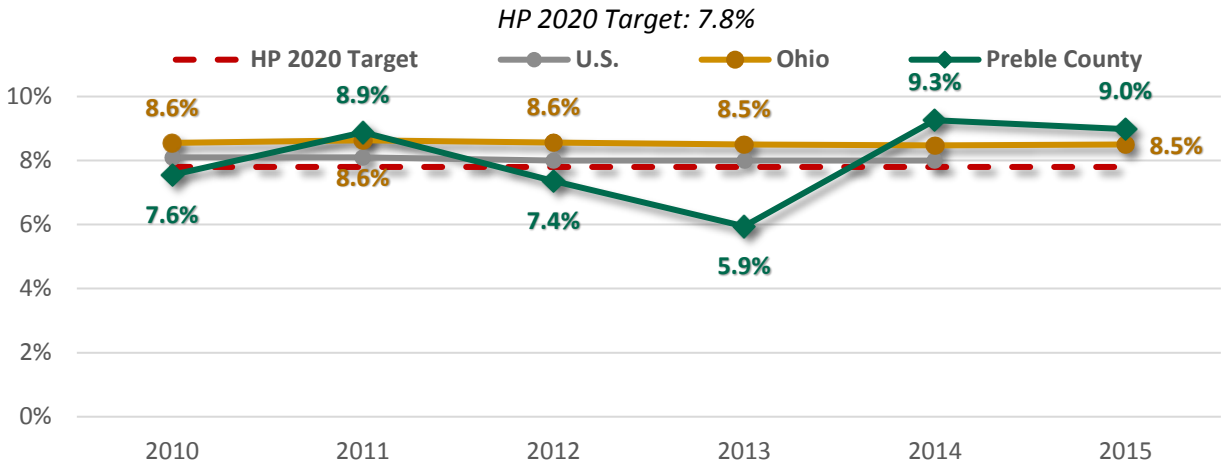
Source: Ohio Department of Health, Ohio Resident Live Births

Low Birth Weight Rate

The low birth weight rate in the State of Ohio is 8.5%, while the national rate is 8.2% with a national target for reduction to 7.8%. Preble County's rate was higher than the state rate in 2011, 2014, and 2015, and was higher than the HP 2020 target in those years as well.

[58] (U.S. Centers for Disease Control and Prevention 2013)

Figure 31: Low Birth Weight Infants (percent, < 2,500 grams), 2010-2015



Source: Ohio Department of Health, Ohio Resident Live Births

Teen Birth Rates

"Teen pregnancy and childbearing bring substantial social and economic costs through immediate and long-term impacts on teen parents and their children.

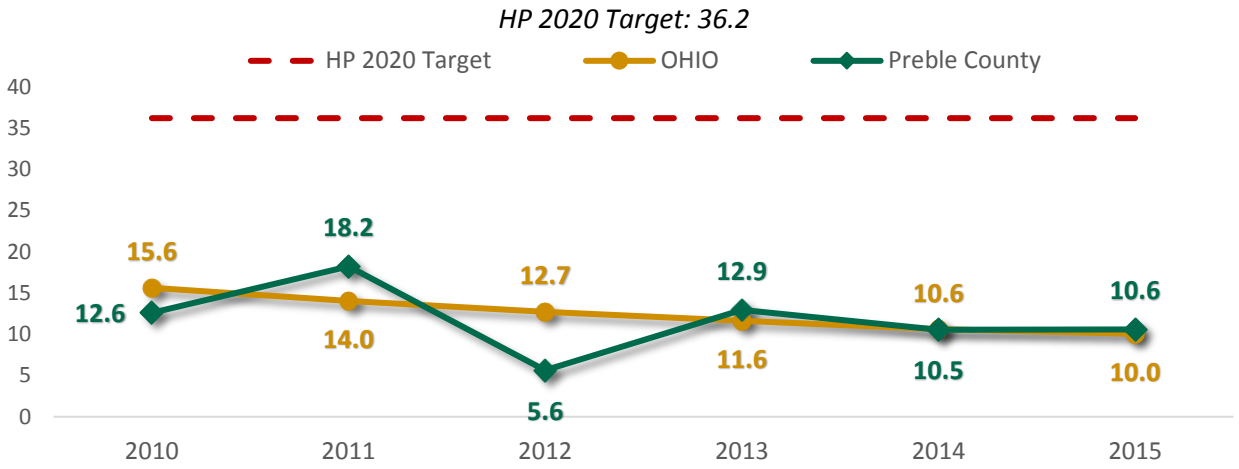
- In 2011, teen pregnancy and childbirth accounted for at least $9.4 billion in costs to U.S. taxpayers for increased health care and foster care, increased incarceration rates among children of teen parents, and lost tax revenue because of lower educational attainment and income among teen mothers.
- Pregnancy and birth are significant contributors to high school dropout rates among girls. Only about 50% of teen mothers receive a high school diploma by age 22 years, versus approximately 90% of women who had not given birth during adolescence.
- The children of teenage mothers are more likely to have lower school achievement and drop out of high school, have more health problems, be incarcerated at some time during adolescence, give birth as a teenager, and face unemployment as a young adult.

These effects remain for the teen mother and her child even after adjusting for those factors that increased the teenager's risk for pregnancy, such as growing up in poverty, having parents with low levels of education, growing up in a single-parent family, and having poor performance in school."[59]

The graph below presents the six-year trend in teenage birth rates from 2010-2015. The birth rate to teenage mothers is consistently lower than the HP 2020 target of 36.2 per 1,000, but is higher than the State of Ohio's rate in three out five years – 2011, 2013, 2015.

[59] (Centers for Disease Control and Prevention, Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion 2017)

Figure 32: Birth Rates per 1,000 Mothers 15-17 Years of Age, 2010-2015



Source: Ohio Department of Health, Ohio Resident Live Births

Neonatal Abstinence Syndrome

Health choices of mothers can affect the health of newborns in a variety of ways, which can lead to risk of harm to the infant or child later due to the difficulties that arise in the infant's or child's behavior. For example, Neonatal Abstinence Syndrome (NAS), also known as neonatal withdrawal syndrome, is a set of symptoms associated with the abrupt withdrawal of opioids and other drugs when infants are born to mothers who were taking these substances. The symptoms can range from mild to severe and include:

- Low birth weight
- Breathing problems
- Seizures
- Feeding difficulties
- Tremors (trembling)
- Irritability (excessive crying)
- Sleep problems
- High-pitched crying
- Yawning, stuffy nose, and sneezing
- Vomiting
- Diarrhea
- Dehydration
- Sweating
- Fever or unstable temperature

In childhood, infants with NAS were more likely to be re-hospitalized (1.6 times more likely than other children), die during hospitalization (3.3 times), and be hospitalized for assaults (15.2), maltreatment (21 times), poisoning (3.6 times), and mental/behavioral (2.6 times) and visual (2.9 times) disorders.[60]

Between 2004 and 2014 in Ohio, 9,498 hospitalizations resulted from Neonatal Abstinence Syndrome (NAS) in inpatient settings. In 2014 alone, there were 1,875 admissions, which equates to more than five admissions per day. The rate of NAS grew nearly ten times from 14 per 10,000 live births in 2004 to 134 per 10,000 live births in 2014.[61]

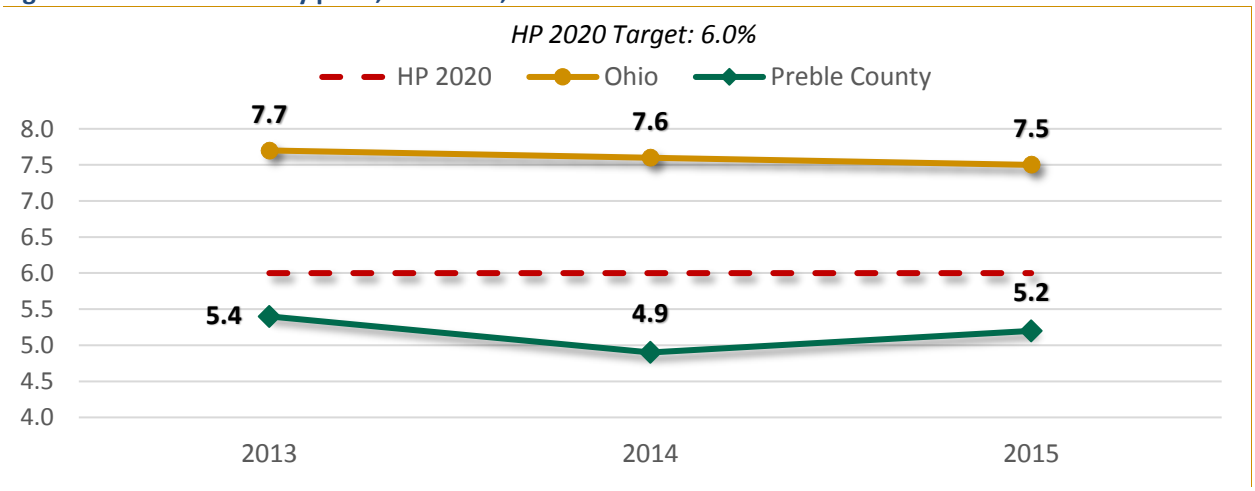
[60] (Uebel 2015)
[61] (Ohio Department of Health 2017)

Infant Mortality

Infant mortality refers to the number of deaths among children under one year of age and is calculated as a rate per 1,000 live births. Infant mortality is an important measure to inform communities about child health and well-being. According to the Center for Disease Control and Prevention (CDC), there are significant differences in infant mortality by race – the mortality rate for black infants is more than twice that of white infants.

The graph below presents the general trend of infant mortality in Preble County and the State of Ohio. The number of infant deaths in any given year is below the threshold for reporting (<20 reported cases); therefore, specific numbers are considered unstable and should be interpreted with caution, but the impression indicates a substantially lower rate in Preble County over the study period than witnessed at the state level. The HP 2020 national target for reduction is 6.0% and Preble County's rate has achieved or outperformed the HP 2020 target in 2013, 2014 and 2015. Refer to the following figure for more information.

Figure 33: Infant Mortality per 1,000 Births, 2013-2015

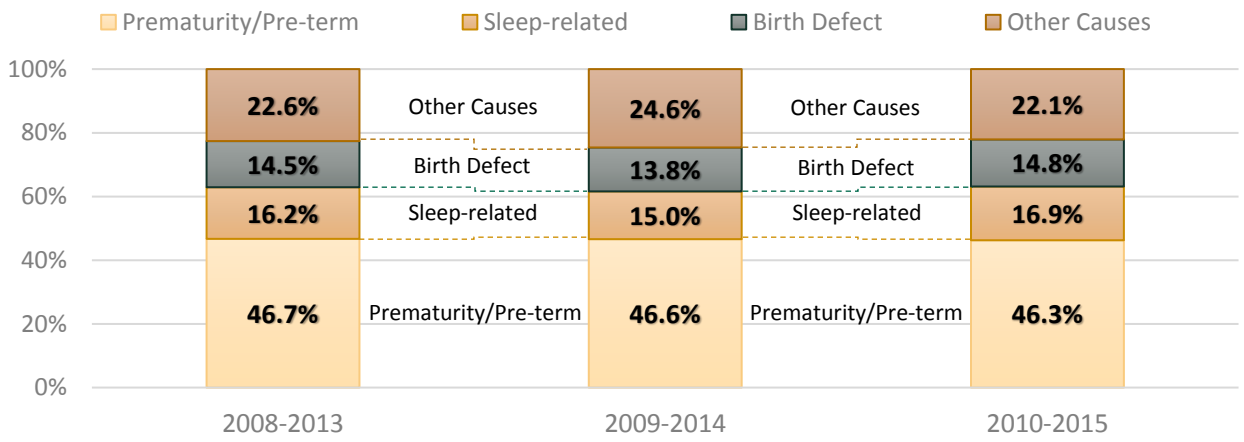


Source: Ohio Department of Health, Ohio Resident Live Births

The CDC reports that the top five leading causes of infant mortality together account for over half (57%) of all infant deaths that happened in the United States in 2014. The top five causes of infant death are birth defects, preterm and low birth weight complications, maternal complications of pregnancy, sleep disorders (i.e., Sudden Infant Death Syndrome (SIDS)), and injuries.

The CDC reports that 1 in 10 infant deaths nationally were due to preterm-related causes in 2015. The State of Ohio reports that just over 46% of infant deaths are due to preterm/low birth weight complications. Sleep-related causes account for 16.9% of infant related deaths over the study period, while birth defects account almost 15% of infant related deaths in Ohio.

Figure 34: Leading Cause of Infant Death, 5-year Average in Ohio, 2013-2015



Source: Ohio Department of Health, Ohio Resident Live Births

Childhood Asthma

Obtaining data pertaining to child physical health, beyond the pre- and post-natal stages, is a challenge. One measure of child health is asthma. Asthma remains one of the most prevalent chronic health problems facing American youth today. An estimated 14% of children and adolescents under the age of 18 are diagnosed with asthma at some point in their lives.

Asthma prevalence in Preble County, Ohio is difficult to come by. The national current asthma rate for children is 8.6% (2014) which is roughly the same percentage as in 2010. Children between 5-11 years old have the greatest prevalence; prevalence is much greater for African American children (13.4%). Impacts include: youth's psychological well-being, academic performance, and missed school days. Beyond physical pollutants, social "pollutants" such as childhood poverty, neighborhood violence, and familial stress, independently contribute to pediatric asthma outcomes.

3rd Grade Oral Health

Access to dental care means getting the dental care you need when you need it. According to the 2015 Ohio Medicaid Assessment Survey, getting dental care remains the number one unmet health care need among Ohio's children. The following figure presents these results.

Figure 35: 3rd Grade Oral Health Screening, 2013-2015

	Toothache in the Last Six Months	Untreated Cavities	History of Tooth Decay	One or More Sealants
Ohio	10.0%	17.0%	51.0%	49.0%
Preble	7.2%	16.7%	47.8%	39.0%

*Percentages have a relative standard error greater than or equal to 30% and have been deemed unreliable.
Source: Ohio Medicaid Assessment Survey

Kindergarten Immunizations

In Ohio, student must be immunized at the time of initial entry or at the beginning of each school year by a method of immunization approved by the department of health against mumps, poliomyelitis, diphtheria, pertussis, tetanus, rubeola, and rubella or is in the process of being immunized. In Preble County, 91.3% of kindergarten students were fully immunized (SY2012-2013).

Figure 36: Preble County Kindergarten Immunization Rates, SY2012-13

Kindergarten Immunization	Total Enrolled	Total Immunized	Percent fully Immunized	Total Exempt Religious / Philosophical	Percent Exempt
Preble	538	491	91.3%	14	2.6%

Source: Ohio Department of Health, published by the Springfield News-Sun

Infant and Child Safety

Motor vehicle injuries are a leading cause of death among children in the United States. But more than half of these deaths could be prevented by buckling children in age- and size-appropriate car seats, booster seats, and seat belts.[62]

In a survey of adult Preble County residents in 2017, 157 individuals indicated that they have children – 101 of these respondents have children ages birth to a height of 4'9". Of these respondents, 77.4% always transport their children in car or booster seat. Nine individuals indicated that they seldom or never transported their child(ren) in the appropriate safety seat.

According to the CDC, the exact causes of Sudden Infant Death Syndrome (SIDS) in unknown, but research shows that parents and caregivers can take the following actions to help reduce the risk of SIDS and other sleep-related causes of infant death:

- Always place babies on their backs to sleep for every sleep
- Babies should never sleep in an adult bed, on a couch, or on a chair alone, with their parent, or with anyone else[63]

In 2017, Preble County respondents with infants were asked how often the infant sleeps in their bed. Three-quarters (73.2%) of respondents indicated that the infant never sleeps in their bed. These respondents were also asked how often they put their infant to sleep on their back and 42.3% respondents indicated that they always put their infant to sleep on their back.

[62] (U.S. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention 2016)
[63] (U.S. Centers for Disease Control and Prevention 2017)

Maternal and Child Health Data Highlights

Ohio, U.S., and Healthy People 2020 Comparison

- Percentage of women in Preble County receiving 1st trimester prenatal care (65.7%) is lower than the U.S. (71.0%)
- Percentage of women in Preble County receiving 1st trimester prenatal care (65.7%) is lower than the HP 2020 target of 77.9%
- Percentage of low birth weight babies in Preble County (9.0%) is higher than the State of Ohio or the U.S.
- Percentage of low birth weight babies in Preble County (9.0%) is higher than the HP 2020 target of 7.8%
- 18.1% of births in Preble County is to mothers who smoke, which is higher than the State of Ohio (13.0%), the nation (10.4%), and the HP 2020 target of 1.4%
- Percentage of preterm births in Preble County (11.3%) is higher than the State of Ohio (10.3%)
- From 2008-2015, approximately 46.5% of infant deaths in Preble County were due to prematurity or preterm-related causes
- The average Preble County neonatal abstinence syndrome rate 16.7/1000 livebirths (2011-2015) is higher than the national rate of 6.0/1,000
- The average Preble County neonatal abstinence syndrome rate 16.7/1000 livebirths (2011-2015) is higher than HP 2020 target of 0.0/1,000
- In 2015, the infant mortality rate 11.5/1,000 live births in Preble County, which is higher than the State of Ohio (7.2/1,000), the nation (5.8/1,000), and the HP 2020 target of 6.0/1,000 live births
- 22.6% of Preble County respondents do not use age-appropriate booster or car seats when transporting their children
- 26.8% of respondents allow their infant to sleep in their bed
- 57.7% of Preble County respondents with infants **do not** put their infant to sleep on their back
- From 2008-2015, 15.0-16.9% of infant deaths in Preble County were due to sleep-related causes

Disparities

- The percentage of women between the ages of 15 and 24 receiving 1st trimester prenatal care is approximately 15% lower than women from other age groups
- The percentage of low birth weight infants in 2015 is highest among women 35 years of age or older in Preble County
- The percentage of low birth weight babies is higher than the HP 2020 target of 7.8% among women 15-19 years of age and women 25 years of age or older
- The percentage of preterm babies born to mothers 35 years of age or older (23.3%) is higherthan both the State of Ohio (9.7%) and the nation (9.2%)
- The percentage of preterm babies born to mothers 15-19 years of age is higher than the HP 2020 target of 11.4%
- The percentage of preterm babies born to mothers 35 years of age or older is also higher than the HP 2020 target of 7.8%

Table 14: State and National Comparison of Maternal and Child Health Indicators

Indicator	Preble County		Ohio		United States		HP 2020
	Year	Measure	Year	Measure	Year	Measure	Target
With 1st trimester prenatal care	2015	**65.7%**	2015	**64.8%**	2008	**71.0%**	77.9%
White or Caucasian	2015	**66.4%**	2015	**68.4%**	N/A		
Black or African American		N/A		**53.9%**			
Asian & Pacific Islander		N/A		**62.0%**			
Hispanic		N/A		**54.4%**			
<15 years of age	2015	0.0%	2015	**35.0%**	N/A		
15-19 years of age		**55.6%**		**51.9%**			
20-24 years of age		**57.0%**		**58.7%**			
25-29 years of age		**70.3%**		**66.6%**			
30-34 years of age		**69.9%**		**70.4%**			
35 years of age or older		**72.1%**		**67.0%**			
Low Birth Weight (<2500 grams)	2015	**9.0%**	2015	**8.5%**	2015	**8.1%**	7.8%
White or Caucasian	2015	**9.2%**	2015	7.3%	2015	7.0%	
Black or African American		N/A		**13.9%**		**13.0%**	
Asian & Pacific Islander		N/A		**8.3%**		**8.4%**	
Hispanic		N/A		7.7%		7.2%	
<15 years of age	2015	0.0%	2015	**18.9%**	2015	**12.6%**	
15-19 years of age		**8.3%**		**10.0%**		**9.5%**	
20-24 years of age		6.1%		**9.3%**		**8.4%**	
25-29 years of age		**8.7%**		**7.9%**		7.5%	
30-34 years of age		**9.7%**		7.4%		7.5%	
35 years of age or older		**16.3%**		**9.7%**		**9.2%**	
Births to Mothers Who Smoke during Pregnancy	2014	18.1%	2014	13.0%	2007	10.4%	1.4%
Preterm Births	2015	11.3%	2015	10.3%	2013	11.4%	11.4%
White or Caucasian	2015	**11.6%**	2015	9.4%	2013	10.5%	
Black or African American		N/A		**14.1%**		**16.0%**	
Asian & Pacific Islander		N/A		8.5%		10.2%	
Hispanic		N/A		10.5%		11.3%	
<15 years of age	2015	0.0%	2015	**17.9%**	2013	21.1%	
15-19 years of age		**13.9%**		10.9%		13.0%	
20-24 years of age		7.9%		10.4%		11.3%	
25-29 years of age		10.2%		9.7%		10.5%	
30-34 years of age		10.8%		9.6%		10.8%	
35 years of age or older		**23.3%**		**12.6%**		13.4%	
Neonatal Abstinence Syndrome (*2011-2015 5-yr average*)	2015	**16.7/1,000**	2015	**12.3/1,000**	2013	**6.0/1,000**	0.0/1,000
Infant Mortality	2015	**11.5/1,000**	2015	**7.2/1,000**	2014	5.8/1,000	6.0/1,000
Caucasian	2015	**9.4/1,000**	2015	5.5/1,000	2014	4.9/1,000	
Black or African American		**0.0/1,000**		**15.1/1,000**		**10.7/1,000**	
Asian & Pacific Islander		N/A		N/A		3.9/1,000	
Hispanic		N/A		6.0/1,000		5.0/1,000	

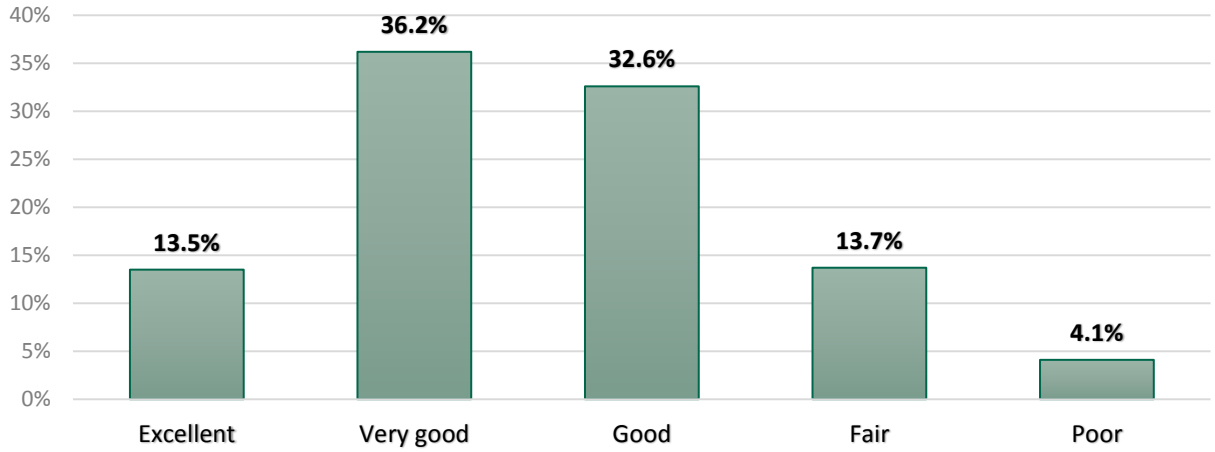
Adult Health

General Health

The general health status of respondents is a self-reported gauge of an individual's overall health condition. The first question of the survey asked respondents to rate their overall health to provide a measure of peoples' initial impression of their health status.

Eight out of ten respondents (82.3%) indicated that in general, their health is excellent (13.5%), very good (36.2%), or good (32.6%). The percentage of Preble County residents who rated their health as fair or poor (17.8%) is higher than the percentages for both the State of Ohio (16.5%) and the nation (16.4%).

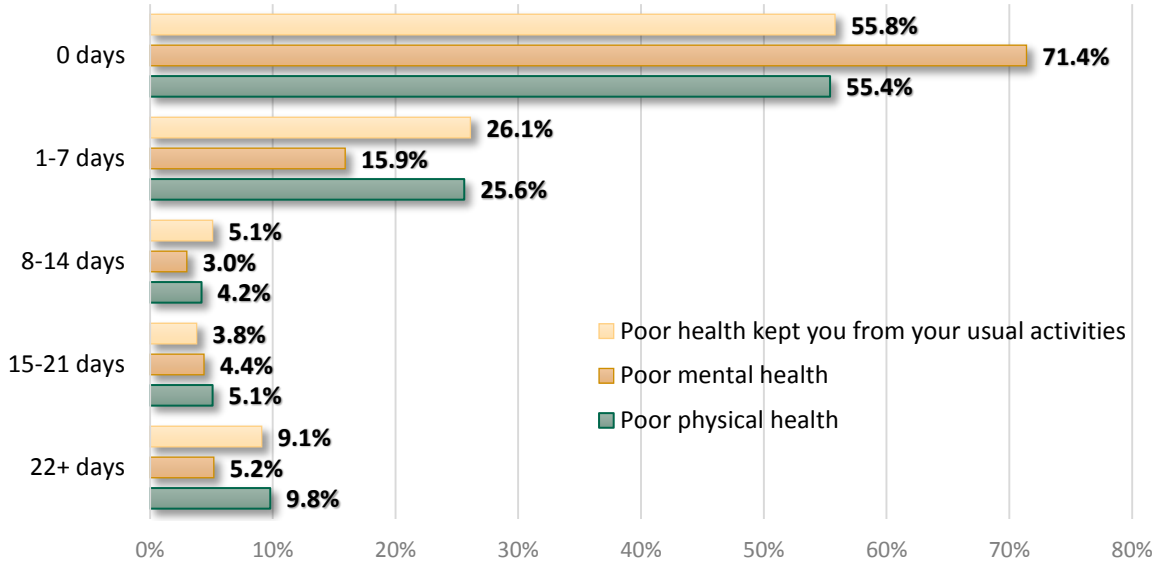
Figure 37: Would you say that in general your health is:



Source: 2017 Preble County Health Assessment Household Survey

Respondents were asked about their health status over the past 30 days, including physical health, mental health, and how many days poor health kept them from their usual activities. When asked how many days in the past 30 days they had poor health, approximately two out of five (44.6%) respondents indicated having at least one day in the past 30 with poor physical health and one out of four respondents (28.6%) indicated having at least one day in the past 30 with poor mental health. Of the respondents who had had at least one day in the past 30 with poor physical or mental health, 44.2% indicated that poor physical or mental health had kept them from performing their usual activities like self-care, work, or recreation at least one day in the past 30. Please refer to the following figure.

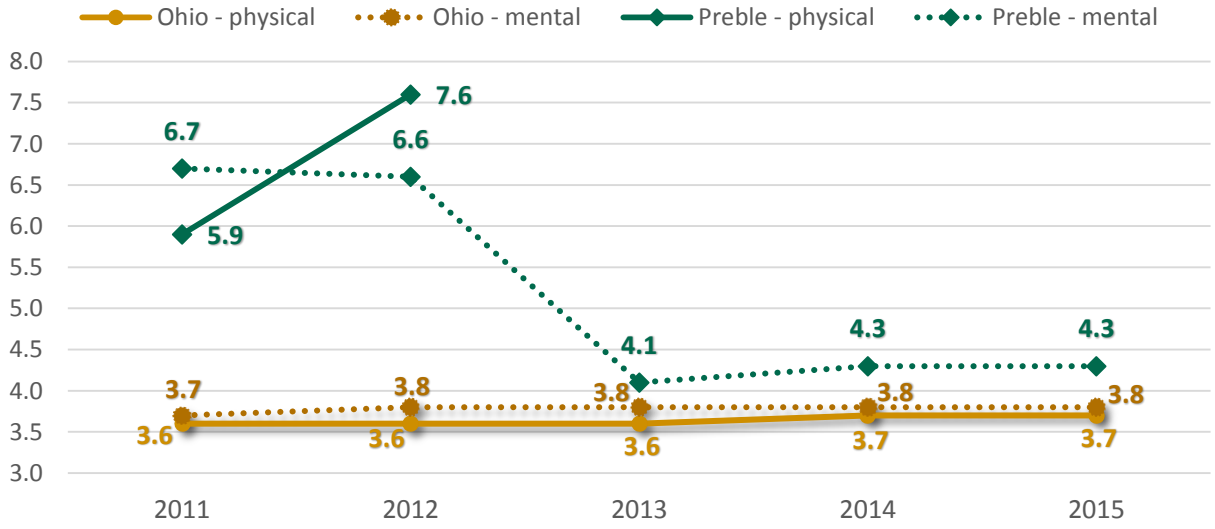
Figure 38: Health in the past 30 days



Source: 2017 Preble County Health Assessment Household Survey

As a comparison, the graph below provides the trend from 2011-2015 of the average number of days reported by adults that they experienced poor physical or mental health as modeled by the County Health Rankings. The percentage of adults reporting fair or poor physical health is available for 2011 and 2012 – data is not available for Preble County covering the years 2013-2015. The percentage of adults reporting fair or poor mental health has decreased from 6.7 days in 2011 to 4.3 days in 2015.

Figure 39: Overall Health Status, Number Poor Health Days Reported by Adults in the Past 30 Days, 2011-2015



Source: County Health Rankings and Roadmaps

Health Problems or Impairments Affecting Daily Activity

Respondents were posed several questions concerning impairments or health problems that may impact their daily activities. When asked if they are limited in any way in their daily activities because of an emotional, mental, or physical health problem, 25.0% of respondents indicated that they have one or more limitations. Significant differences are witnessed by age. As age increases, so does the likelihood that the respondent is physically limited in some way.

Respondents were also asked if they currently have any health problems that require them to use special equipment to address their physical difficulties such as a cane, wheelchair, special bed, or special telephone. Slightly less than ten percent (9.5%) of respondents have a health problem requiring them to use special equipment. Significant differences are witnessed by income. Individuals living in households with incomes below $15,000 are significantly more likely (29.2%) to indicate that they require the use of special equipment than individuals living in households reporting incomes at or above $15,000 (10.0%). Nearly eighteen percent (17.8%) of respondents indicated that they have difficulty walking or climbing stairs, 9.5% have difficulty running errands alone (i.e., shopping or going to the doctor), and 4.4% have difficulty dressing or bathing because of a physical, mental, or emotional condition.

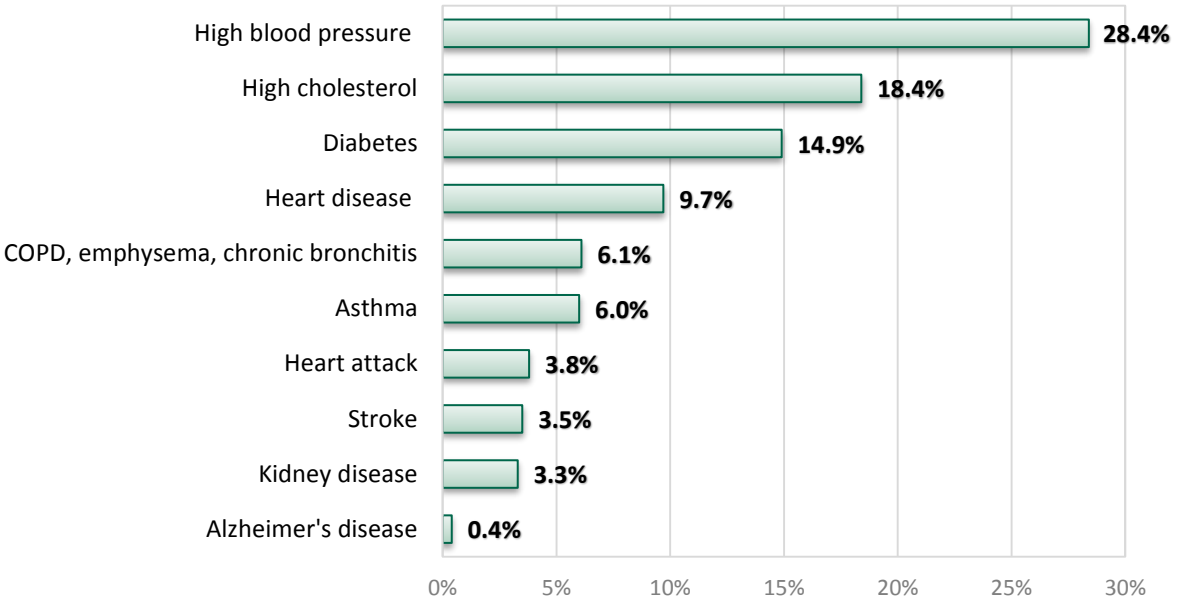
Chronic Disease & Injury

According to the CDC, about half of all adults have one or more chronic health conditions and one of four adults have two or more chronic health conditions.[64] Two of the top ten causes of death account for almost half (48 percent) of the deaths in the United States – heart disease and cancer. The CDC also reports that arthritis is the most common cause of disabilities limiting adults' usual activities, while diabetes is the leading cause of limb amputations (not caused by accidental causes) and new cases of blindness among adults. This chapter discusses the prevalence of chronic health conditions in Preble County, including asthma, cardiovascular diseases, diabetes, and cancer. The section also provides some details on attitudes, behaviors, and actions toward these diseases as well as disease prevention and early detection.

The three most frequently cited conditions are high blood pressure (28.4%), high blood cholesterol (18.4%), and diabetes (14.9%).

[64] (Ward, Schiller and Good 2014)

Figure 40: Has a doctor or health professional ever told you that you had any of the following diseases?



Source: 2017 Preble County Health Assessment Household Survey

Cardiovascular Conditions

High Blood Pressure

Uncontrolled high blood pressure can lead to stroke, heart attack, heart failure, or kidney failure. There are no symptoms. According to the American Heart Association, 85 million people adults have been diagnosed with high blood pressure and one in five adults are unaware of that they have high blood pressure. This is why high blood pressure is often called the "silent killer."

Preble County residents were first asked if a doctor, nurse, or other health care professional had ever told them that they have high blood pressure and 28.4% said that they have been told they have high blood pressure, which is significantly lower than the percentages for the State of Ohio (34.3%) and the nation (30.9%). Individuals 55 years of age or older or living in households with incomes below $15,000 a year are also significantly more likely to report they have high blood pressure.

Many people with high blood pressure rely on several different methods to help control their blood pressure, but the method most relied on is through medication. Nine out of ten Preble County adults (88.7%) with high blood pressure control their blood pressure with medication.

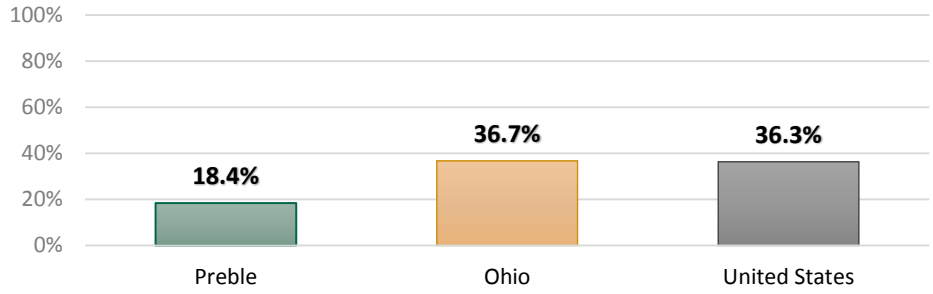
High Cholesterol

Cholesterol is a fat-like molecule found in all cells of the body that is essential for body functions, including the production of hormones. Too much cholesterol in the blood can be serious, causing atherosclerosis (plaque to build up in the walls of the arteries leading to narrowing of the arteries over time).

Lowering blood cholesterol levels decreases the chance for having plaque burst and causing a heart attack, and may also prevent plaque from building up. People with high blood cholesterol are at greater risk for heart attacks and heart disease.

When respondents were asked if they had ever been told by a doctor, nurse, or other health professional that their blood cholesterol is high, 18.4% of respondents indicated that a health care professional had told them that their blood cholesterol was high. This finding is significantly lower than the percentages for the State of Ohio (36.7%) and nation (36.3%). Significant differences are witnessed by age – as age increases so does the likelihood that the respondent has been diagnosed with high cholesterol.

Figure 41: High Blood Cholesterol County, State, and Nation Comparison



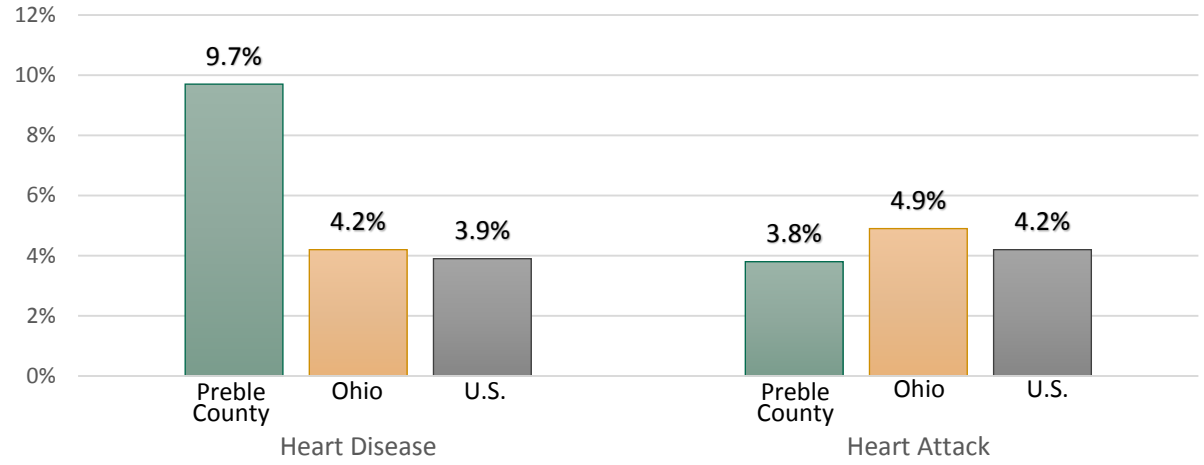
Source: 2017 Preble County Health Assessment Household Survey
Source: Centers for Disease Control and Prevention, BRFSS Prevalence & Trends Data

Coronary Heart Disease, Heart Attack, and Stroke

Coronary heart disease (CHD) is still the number one cause of death in the United States, outweighing cancer, stroke, and chronic lower respiratory disease. CHD is caused by a narrowing of the walls of the arteries, and often results in a heart attack. Each year, about 735,000 Americans suffer a heart attack and about 370,000 of those heart attacks are fatal (Centers for Disease Control and Prevention).

Approximately thirteen percent (12.9%) of Preble County respondents indicated they have been told by a doctor that they had at least one of the following conditions: heart attack or myocardial infarction (MI) (3.8%), angina or coronary heart disease (9.7%), and stroke (3.5%). The percentage of Preble County adults reporting that they have been told they have heart disease is twice as high as the percentage for the State of Ohio or the nation and this finding is significant. However, the percentage of Preble County (3.8%) respondents indicating that they have had a heart attack is significantly lower than the percentages for the state (4.9%) and the nation (4.2%). As age increases, so does the likelihood that respondents had been told they have heart disease or have had a heart attack.

Figure 42: Cardiovascular problems



Source: 2017 Preble County Health Assessment Household Survey
Source: Centers for Disease Control and Prevention, BRFSS Prevalence & Trends Data

Respiratory Conditions

COPD

Chronic Obstructive Pulmonary Disease (COPD) refers to a group of diseases that cause airflow blockage and breathing-related problems, which includes emphysema, chronic bronchitis, and in some cases asthma. Nearly 16 million Americans report that they have been diagnosed with COPD and it was the nation's 3rd leading cause of death in 2014.[65]

According to the American Lung Association:

- Chronic obstructive pulmonary disease (COPD) is a condition caused by prolonged exposure to irritants that damage the lungs and eventually obstruct the airways. Cigarette smoke is the most common culprit (firsthand and secondhand smoke), but long-term exposure to air pollution, dust, and chemicals or fumes are also contributors. Breathing difficulties and persistent shortness of breath while doing everyday activities, frequent respiratory infections, and chronic cough and wheezing are classic COPD symptoms.
- Emphysema involves the gradual damage of lung tissue, specifically thinning and destruction of the alveoli or air sacs, making it more difficult to breathe as the disease progresses. Cigarette smoke is the most common cause of the damaged lung tissue. Once the damage is done, it is not curable, but there are treatments and lifestyle changes that can help manage the disease.
- Bronchitis is a form of lower respiratory tract inflammation affecting the air tubes (bronchi) of the lungs. According to the American Lung Association, chronic bronchitis is a chronic inflammation of the medium-sized airways, also known as bronchi, in the lungs. A clinical definition of chronic bronchitis is a persistent cough that produces sputum, also known as phlegm, and mucus, for at least three months per year in two consecutive years.

[65] (National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. September 16, 2016. 2016)

About six percent of Preble County residents (6.1%) have been told that they have COPD, emphysema, or chronic bronchitis, which is significantly lower percentage than the percentage for the State of Ohio (7.9%), but higher than the national percentage (6.2%). As age increases, adults are significantly more likely to report that they have been told they have COPD, emphysema, or chronic bronchitis. Adults who have less than a high school degree or GED are also significantly more likely to report that they have been told they have COPD, emphysema, or chronic bronchitis.

Asthma

Asthma is a chronic respiratory disease in which the airways of the lungs become temporarily blocked due to inflammation. Symptoms associated with asthma include labored breathing, chest constriction, and coughing.

The CDC reports that over 22 million Americans have asthma – 8.4% of children and 7.6% of adults. Black children and adults have a higher prevalence of asthma than do other races – 13.4% of children and 9.1% of adults. Females are also more likely to report that they have asthma. Asthma is also higher among obese adults compared to adults with a normal weight or those who are overweight – 11.7% vs. 7.1% and 7.8%, respectively.

The Centers for Disease Control and Prevention (CDC) report that asthma self-management education is essential to reducing asthma-related effects and improves quality of life for asthma sufferers by reducing urgent care visits, emergency department visits, hospitalizations, and healthcare costs. Less than half of people with asthma reported being taught how to avoid triggers and 48 percent of adults taught to avoid triggers did not follow most of this advice.[66]

When respondents were asked if a doctor ever told them that they had asthma, 6.0% indicated that they had been diagnosed with asthma, and this percentage is significantly lower than the percentages for the State of Ohio (14.1%) and the nation (14.3%).

Diabetes

Diabetes is a disease in which the pancreas is unable to produce insulin or cannot properly use the insulin that it does produce. According to the American Diabetes Association, an estimated 29.1 million people in the United States have diabetes, although approximately 8.1 million were undiagnosed. About 1.4 million new cases of diabetes are diagnosed every year. There is a higher prevalence witnessed among African Americans (13.2%) and Hispanics (12.8%) than among Caucasians (7.6%) and Asian Americans (9.0%).

There are two main types of diabetes (although others do exist), Type 1 and Type 2. Only about 5 – 10 percent of people with diabetes have Type 1 diabetes, where the body fails to produce insulin. More common is Type 2 diabetes, where the cells are resistant to insulin and cells may also not produce enough insulin. Having diabetes dramatically increases the risk of heart attack and stroke, and 65

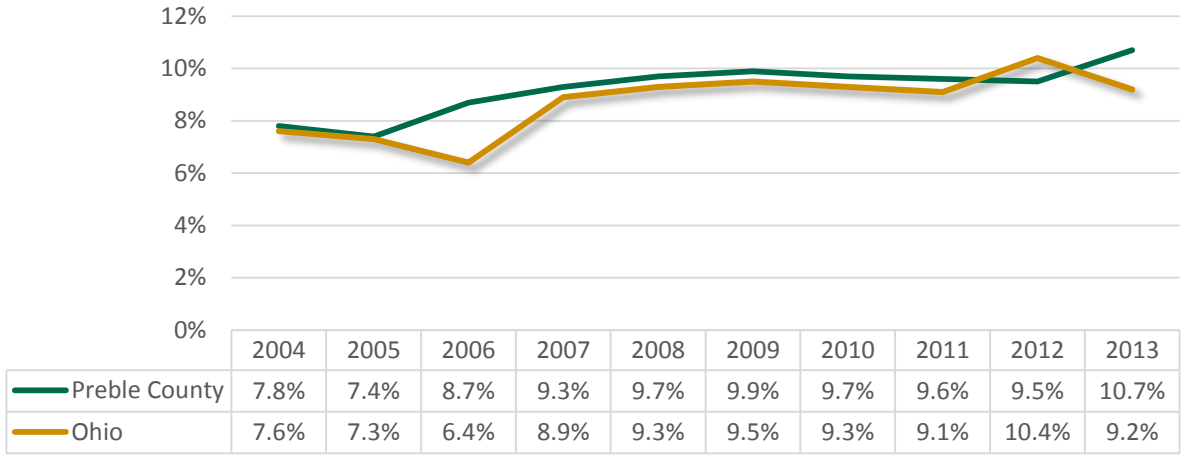
[66] (U.S. Centers for Disease Control and Prevention 2011)

percent of deaths in diabetes patients are attributed to heart and vascular diseases (American Diabetes Association).

Fifteen percent (14.9%) of Preble County respondents indicated that they have been told by a doctor that they have diabetes and this finding is higher than the percentages for state of Ohio (11.8%) and significantly higher than the nation (10.8%). Significant differences are witnessed by age. As age increases, so does the likelihood that respondents have been told they have diabetes.

The rate of adult diagnosed diabetes has increased since 2004, as witnessed in the following figure. In 2013, the CDC reports that the percentage of Preble County residents diagnosed with diabetes was 10.7% and this rate is higher than the rate for the State of Ohio. Refer to the following figure for a trend from 2004-2013.

Figure 43: Adult Diagnosed Diabetes Prevalence, 2004-2013



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Preble County	7.8%	7.4%	8.7%	9.3%	9.7%	9.9%	9.7%	9.6%	9.5%	10.7%
Ohio	7.6%	7.3%	6.4%	8.9%	9.3%	9.5%	9.3%	9.1%	10.4%	9.2%

Source: U.S. Centers for Disease Control and Prevention, Diabetes

Kidney Disease

According to the Kidney Foundation, as many as 26 million adults in the United States have kidney disease, most of whom are unaware, as kidney disease often goes undetected until it is in the late stages of the disease.[67] One in three American adults are at risk for developing kidney disease.[68] The three leading causes of kidney failure are diabetes, high blood pressure, and glomerulonephritis.[69] Some of the other diseases that may affect the kidneys include infections, kidney stones, and polycystic kidney disease. Over use of over-the-counter pain killers and illegal drugs also causes kidney disease.[70] Three percent (3.3%) of Preble County adults have been told that they have kidney disease, and this is higher than the percentage for Ohio (3.2%) and significantly higher than the U.S. median (2.7%).

[67] (National Kidney Foundation 2017)
[68] (National Kidney Foundation 2017)
[69] (National Kidney Foundation 2017)
[70] (National Kidney Foundation 2017)

Injury

In the 2017 Community Health Assessment survey, Preble County residents were asked to respond to injury related questions. Adults age 45 and older were asked how many times they had fallen in the past 12 months and if the fall had resulted in a visit to the doctor or an injury that limited their regular activities for at least one day. Seventy-three percent (73.3%) of the respondents had not fallen within the previous 12 months. Thirteen percent (12.8%) had fallen once or twice, and the remainder had fallen 3 or more times. When asked if the fall resulted in an injury that limited regular activities for at least a day or caused the respondent to go see a doctor, 37.1% of respondents indicated that it did.

The following table presents the fatal fall rates and fall-related hospitalization rates for senior adults in Preble County and Ohio. Preble County experienced 73.0 fatal falls per 100,000 in 2013, which is much higher than the rate for the State of Ohio overall. Fall-related Emergency Department visits for Preble County seniors occurs at a lower rate than for the State of Ohio. The rate of fall-related hospitalizations is twice as high in the State of Ohio as in Preble County.

Table 15: Fall Related Issues for the Population Ages 65 and Older, 2013

	Fatal Fall Rates per 100,000 in 2013	Fall-related Hospitalization Rates per 1,000 in 2013	Fall-related ED Visit Rates per 1,000 in 2012
Ohio	56.6	8.7	41.6
Preble	73.0	4.2	37.9

Source: Ohio Department of Health & Ohio Hospital Association

Chronic Disease and Injury Data Highlights

Ohio, U.S., and Healthy People 2020 Comparison

- Prevalence of high cholesterol and high blood pressure in Preble County is higher than the HP 2020 target
- Prevalence of diabetes is higher in Preble County than in Ohio or the U.S.
- The percentage of adults in Preble County reporting angina or coronary heart disease is higher than the percentage in Ohio or the U.S.
- The percentage of adults reporting that they have had a stroke is higher than the national percentage
- The prevalence of kidney disease is higher for Preble County than for Ohio or the U.S.

Disparities

- The prevalence of high blood pressure, high cholesterol, diabetes, COPD, kidney disease, and heart disease is higher for adults 55 years of age or older
- The prevalence of high blood pressure is higher for individuals in households with incomes below $15,000
- The prevalence of COPD is higher for respondents who do not have at least a high school degree or the equivalent

Table 16: State and National Comparison of Chronic Disease and Injury Prevalence

Key Variable	Preble County 2017 Survey Percent	Preble County 2017 Survey Sample Size	State of Ohio[71] 2015 Percent	Nationwide[72] *(States & DC)* 2015 Median	HP 2020 Target
Health Status					
General Health - Fair or Poor	17.8%	399	16.5%	16.4%^	20.2%
Chronic Health Conditions – Ever Told					
High Cholesterol	18.4%	401	36.7%^	36.3%^	**13.5%**
High Blood Pressure	28.4%	401	34.3%^	30.9%^	**26.9%**
Angina or Coronary Heart Disease	9.7%	401	4.2%*	3.9%^	N/A
Heart Attack (myocardial infarction)	3.8%	401	4.9%^	4.2%^	N/A
Stroke	3.5%	401	3.5%	3.0%^	N/A
Diabetes	14.9%	401	11.8%	10.8%^	N/A
Asthma	6.0%	401	14.1%^	14.3%^	N/A
COPD	6.1%	401	7.9%^	6.2%^	N/A
Kidney Disease	3.3%	401	3.2%	2.7%*	13.3%

* Significant at the .05 Level

^ Significant at the .01 Level

Table 17: Preble County Populations with a Significantly Higher Prevalence of Selected Chronic Diseases, 2017

Preble County Respondents - Key Variable	Age	Race, Ohio	Household Income	Education
Health Status				
General Health - Fair or Poor	55+			<HS
Chronic Health Conditions – Ever Told				
High Cholesterol	55+			
High Blood Pressure	55+		<$15k	
Angina or Coronary Heart Disease (CHD)	55+			
Heart Attack (myocardial infarction (MI))	55+			
CHD or MI	55+			
Diabetes	55+	Afr Am		
COPD	55+			<HS
Asthma		Afr Am		
Kidney Disease	55+			
Depression			<$15k	

[71] Center for Disease Control and Prevention, BRFSS Prevalence & Ohio Trends Data

[72] Center for Disease Control and Prevention, BRFSS Prevalence & All States & D.C. Trends Data

Cancer

Diseases can be prevented to a great extent through healthy lifestyle choices such as refraining from smoking, engaging in regular physical activity, making healthy food choices, and maintaining a healthy weight. However, not all diseases are preventable, making early detection through screenings and regular check-ups vital to health and longevity. The following section delves into cancer rates and the preventive actions Preble County residents have undertaken in order to remain healthy and cancer free.

The CDC reports that nationwide in 2013, the most common cancers (age adjusted rates expressed per 100,000) are:

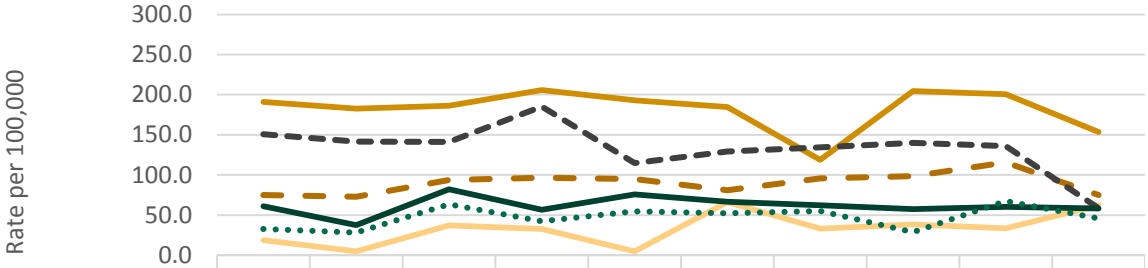
- Breast cancer (123.7 – 1st among women of all races and Hispanic origin populations)
- Prostate cancer (101.6 – 1st among men of all races and Hispanic origin populations)
- Lung cancer (67.4 – 2nd among white, black, American Indian/Alaska Native, and Asian/Pacific Islander men and women, but 3rd among Hispanic men and women)
- Colorectal Cancer (38.4 – 2nd among Hispanic men and 3rd among white, black, American Indian/Alaska Native, and Asian/Pacific Islander men)
- Uterine Cancer (25.9)
- Melanoma of the Skin (20.7)

Children

- Leukemias (8.3 – 1st among children 1-4 years of age)
- Brain and central nervous system cancer (4.5)

The most common form of cancer among the Preble County population is breast cancer (crude rate is calculated for the female population only) and the 2nd most common form of cancer is prostate cancer (crude rate calculated for males only). Of the six most prevalent cancers, all forms of cancer, based on rate, have remained consistent from 2006 to 2015 with the exception of the fluctuation of breast cancer and a decline of prostate cancer in 2015. Refer to the following figure for the top six crude rates in cancer incidence from 2006-2015.

Figure 44: Top Six Cancer Rates (crude rate per 100,000), 2006-2015



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Breast	191.2	182.6	186.4	206.0	193.0	184.5	118.8	204.8	200.8	153.5
Lung & Bronchus	75.0	72.8	93.7	96.6	94.9	80.9	95.6	98.3	115.6	75.0
Uterus	18.6	4.7	37.3	32.8	4.7	66.2	33.3	38.1	33.5	62.4
Prostate	150.9	141.5	141.3	185.2	114.7	129.4	134.5	140.1	135.9	58.6
Colon & Rectum	61.0	37.6	82.0	56.6	75.9	66.7	62.1	57.6	60.2	58.1
Melanoma of Skin	32.8	28.2	63.2	42.4	54.5	52.4	55.0	28.8	67.4	46.0

Source: Ohio Department of Health

Screenings are important in the detection and treatment of cancer. The stage of a cancer case refers to the degree to which the cancer has spread and the stage at diagnosis of cancer is an important determinant of survival, with the earliest stages often leading to better prognoses. Early detection through screening is useful in determining the most beneficial treatment and is a good predictor of long-term survival.[73]

The Ohio Department of Health defines the five stages at which cancer is diagnosed as:

Unstaged/Unknown: Insufficient information is available to determine the stage of cancer at the time of diagnosis, or the case was reported with missing stage data

Early Stage

- **in situ**: A tumor that has not invaded or penetrated surrounding tissue
- **Localized**: An invasive malignant tumor that is confined to the organ in which it originated

Late Stage

- **Regional**: An invasive malignant tumor that has spread by direct extension to adjacent organs or tissues and/or has spread to regional lymph nodes
- **Distant**: An invasive malignant tumor that has spread by direct extension beyond adjacent organs or tissues and/or metastasized to distant lymph nodes or tissues

Early Detection for Breast Cancer

The biggest risk for breast cancer is simply being a woman, and many women diagnosed with breast cancer do not have any of the identified risk factors. However, there are some risk factors that may increase a woman's risk for breast cancer, including a personal history of a prior breast cancer; evidence

[73] (Ohio Department of Health 2012)

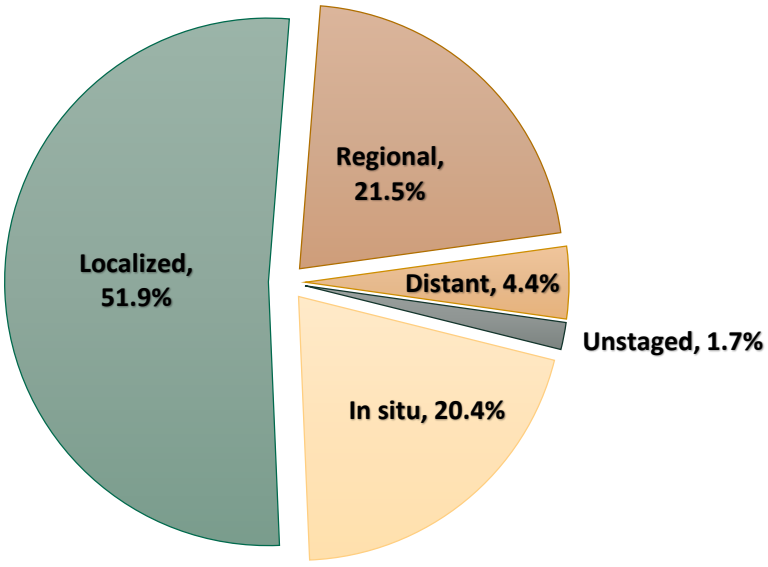
of a specific genetic change that increases susceptibility to breast cancer (BRCA1/BRCA2 mutations); a mother, sister, daughter, or two or more close relatives, such as cousins, with a history of breast cancer (especially if diagnosed at a young age); a diagnosis of a breast condition (i.e., atypical hyperplasia) that may predispose a woman to breast cancer; or a history of two or more breast biopsies for benign breast disease.

Two important screenings in the early detection of breast cancer are the clinical breast exam and the mammogram. The American Cancer Society (ACS) recommends that women 40 or older have a mammogram annually; however, women who have a family history of breast cancer should consult their doctor as to how often they should receive a mammogram.

Almost 4 out of 5 (78.2%) women in Preble County report that they have had a clinical breast exam and 46.9% have had one within the last year. Six out of ten (63.8%) Preble County women surveyed have had a mammogram and three out of five women (61.3%) who have had this procedure less than one year ago. At least eight out of ten (86.6%) women ages 40 and older have had a mammogram and 64.2% have had one performed within the past two years in Preble County. This finding is lower than the rates for the State of Ohio (72.2%) and the nation (73.0%).

However, the HP 2020 target is to increase the proportion of women, ages 50 to 74, who receive breast cancer screenings based on the most recent guidelines (currently biennially) to 81.1% and Preble County residents fall short of reaching this goal this goal – 75.9% of Preble County women ages 50-74 are getting a mammogram biennially. An additional HP 2020 objective is to reduce the rate of late-stage breast cancer diagnoses. As witnessed in the following figure, almost three-quarters (72.3%) of breast cancer diagnoses among Preble County women were diagnosed in the early stages.

Figure 45: Breast Cancer Detection by Stage, 2011-2015



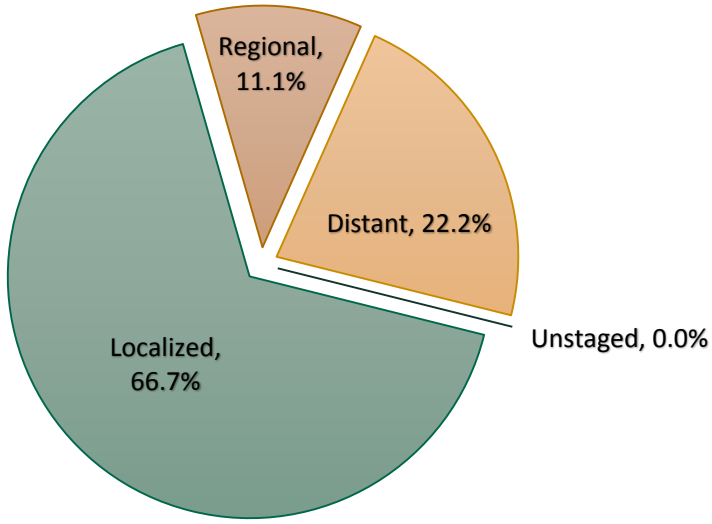
Source: Ohio Department of Health, Cancer Incidence Data

Early Detection for Cervical Cancer

Cervical cancer is often preventable and curable if it is detected early. More women aged 40 years and older are diagnosed with cervical cancer, but younger women are at risk for the precursor to cervical cancer. The most effective tool for early detection is the Papanicolaou test (Pap test), which can detect lesions before they become cancer. Most physicians recommend a Pap test every one to three years. Eighty percent of **all** female respondents (83.1%) have had a Pap test, and 57.1% respondents have had the exam within the past 3 years. This percentage is lower than the percentages for the State of Ohio (73.7%) and nation (75.2%).

The HP 2020 target is to increase the percentage of women who received a cervical cancer screening based on the most recent guidelines to 93.0% and to reduce the rate of new late-stage cervical cancer cases to 7.2 per 100,000. Between 2011 and 2015, 33.3% of the cervical cancer cases among women in Preble County were of late stage diagnoses – 11.1% regional and 22.2% Distant.

Figure 46: Cervical Cancer Detection by Stage, 2011-2015



Source: Ohio Department of Health, Cancer Incidence Data

Early Detection for Lung Cancer

Lung cancer is the leading cause of cancer death and the second most common cancer among both men and women in the United States.[74] According to the CDC, cigarette smoking is the number one risk factor for lung cancer and is linked to about 80% to 90% of lung cancers. The more years a person smokes and the more cigarettes smoked each day, the higher the risk. People who smoke cigarettes are 15 to 30 times more likely to get lung cancer or die from lung cancer than people who do not smoke.[75]

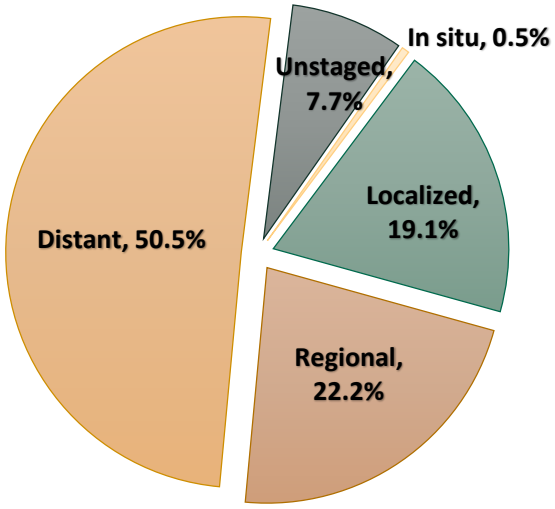
The only recommended screening test for lung cancer is low-dose computed tomography (also called a low-dose CT scan, or LDCT). In this test, an X-ray machine scans the body and uses low doses of radiation

[74] (U.S. Centers for Disease Control and Prevention 2017)
[75] (U.S. Centers for Disease Control and Prevention 2017, U.S. Centers for Disease Control and Prevention 2017)

to make detailed pictures of the lungs. The U.S. Preventive Services Task Force recommends yearly lung cancer screening with LDCT for people who have a history of heavy smoking, smoke now or have quit within the past 15 years, and are between 55 and 80 years old.

Between 2011 and 2015, nearly three-quarters (72.7%) of the lung cancer cases among adults in Preble County were of late stage diagnoses – 22.2% regional and 50.5% Distant.

Figure 47: Lung Cancer Detection by Stage, 2011-2015



Source: Ohio Department of Health, Cancer Incidence Data

Early Detection for Colorectal Cancer

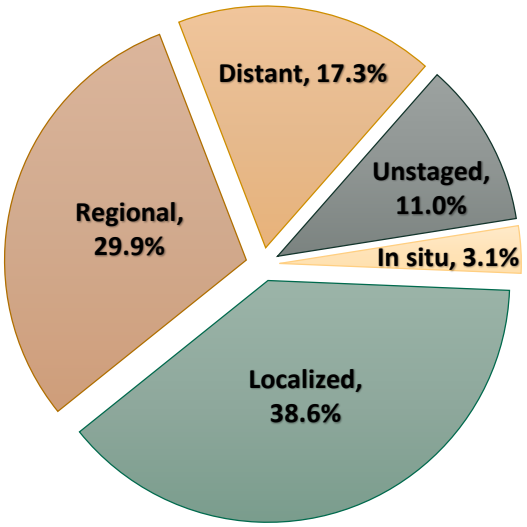
Colorectal cancer is the third most common cancer in both men and women in the United States, and is most common in people over age 50. More than 90 percent of people with this disease are diagnosed after age 50. Other risk factors include having colorectal polyps; having a family history of colorectal cancer or adenomatous polyps; having a personal history of colon cancer or inflammatory bowel disease; having colitis or Crohn's disease; having a diet high in fat and low in calcium, folate, and fiber; or being a cigarette smoker.

There are several methods used to screen for colon cancer, and early detection is the very best form of defense against the disease. One method of screening for colorectal cancer is the digital rectal exam. Other screenings include the fecal occult blood test (FOBT), a sigmoidoscopy, and a colonoscopy. Looking only at Preble County residents aged 50 and older, 37.2% of residents 50 and older have not had a sigmoidoscopy or colonoscopy, which is higher than the percentages for both the State of Ohio (32.4%) and the nation (30.7%). Of Preble County residents 50 years of age and older who indicated they have had a sigmoidoscopy or colonoscopy, 25.2% have done so in the last 2 years.

The HP 2020 target is to increase the percentage of adults, ages 50-75, who received a colorectal cancer screening based on the most recent guidelines to 70.5% and to reduce the rate of new late-stage

colorectal cancer cases to 39.9 per 100,000. Between 2011 and 2015, nearly half (47.2%) of the colorectal cancer cases among adults in Preble County were of late stage diagnoses – 29.9% regional and 17.3% Distant.

Figure 48: Colorectal Cancer Detection by Stage, 2011-2015



Source: Ohio Department of Health, Cancer Incidence Data

Early Detection for Prostate Cancer

Men over age 55 are most at risk for prostate cancer, and the risk for developing prostate cancer is higher if a father or brother has had the disease. Prostate cancer is also more common in African American men than in white men. Another risk factor may be a diet high in animal fat.

There are two detection tests for prostate cancer: the digital rectal exam and a blood test for prostate-specific antigen (PSA). In general, experts suggest men should have annual screenings for prostate cancer beginning at age 50. Fifty percent of men in Preble County (53.5%) have been advised by a doctor or other health care professional about the advantages of the prostate-specific antigen (PSA) test, which is a blood test to measure protein produced by both cancerous and noncancerous tissue in the prostate, and they are following this advice. Fifty percent of men (53.5%) ages 50 or older have had a PSA test, and 43.2% of men in Preble County have had a PSA test in the last two years.

Communicable Disease

The Centers for Disease Control and Prevention (CDC) estimates that there are approximately 20 million new sexually transmitted disease (STD) infections each year—almost half of them among young people ages 15 to 24. The cost of STDs to the U.S. health care system is estimated to be as much as $16 billion annually. [76] Because many cases of STDs go undiagnosed—and some common viral infections, such as

[76] (Owusu-Edusei and et al. 2008)

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 United States.

Untreated STDs can lead to serious long-term health consequences, especially for adolescent girls and young women. CDC estimates that undiagnosed and untreated STDs cause at least 24,000 women in the United States each year to become infertile.[77]

According to the CDC, many social, economic, and behavioral factors affect the spread of STDs.

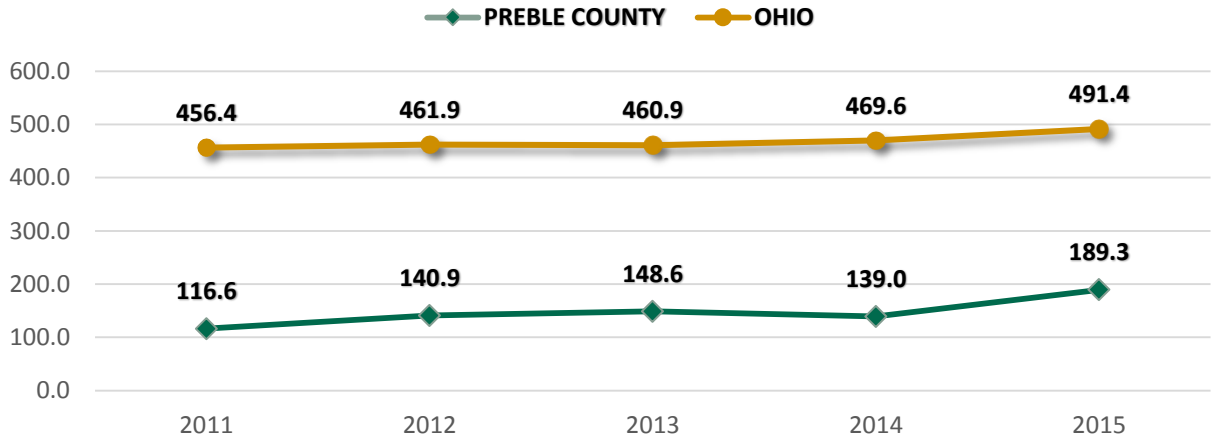
- Certain racial/ethnic groups
  - African Americans, Hispanics, and American Indian/Alaska Natives have higher rates of STDs
- Substance abuse
- Poverty
  - STDs are higher among the economically disadvantaged

Sexually Transmitted Infections

The rate per 100,000 in population of all sexually transmitted disease cases has increased since 2011 among Preble County residents. The rate per 100,000 is lower in Preble County than the rate for the State of Ohio. The rate of chlamydia cases in Ohio and in Preble County continues to increase.

Among Ohio residents, disparities by race and age are also apparent. STDs are of higher prevalence among African Americans when compared to the Caucasian population. STDs are also more prevalent among young adults between the ages of 20-24 than other age cohorts. Chlamydia cases are higher among women, while syphilis cases are higher among men.

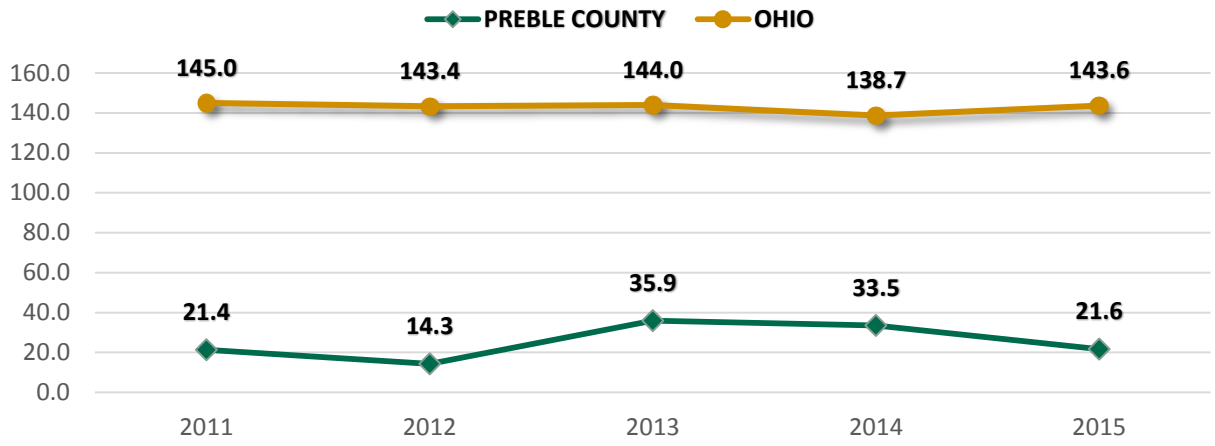
Figure 49: Chlamydia Cases, 2011-2015



Source: Ohio Department of Health, STD Surveillance Program.

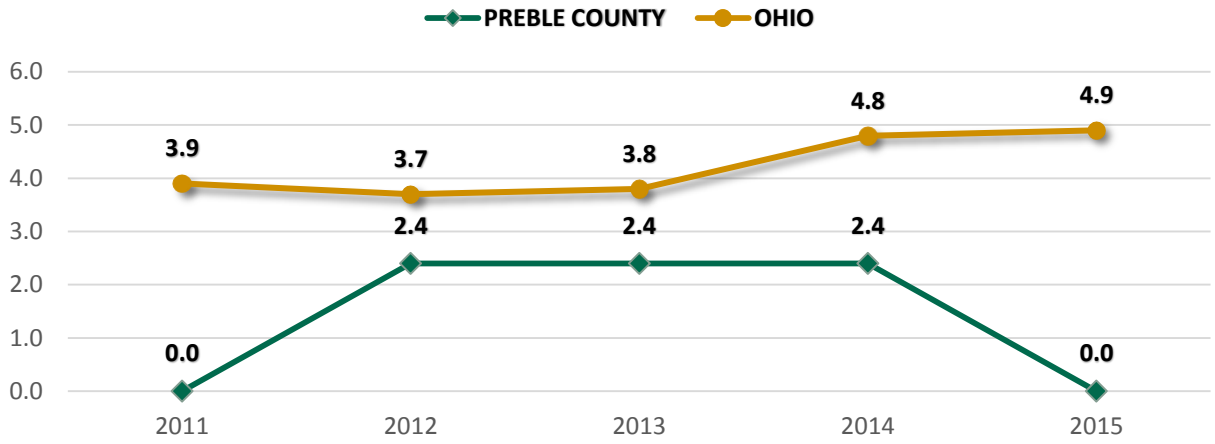
[77] (U.S. Department of Health and Human Services 2017)

Figure 50: Gonorrhea Cases, 2011-2015



Source: Ohio Department of Health, STD Surveillance Program.

Figure 51: Syphilis Cases, 2011-2015



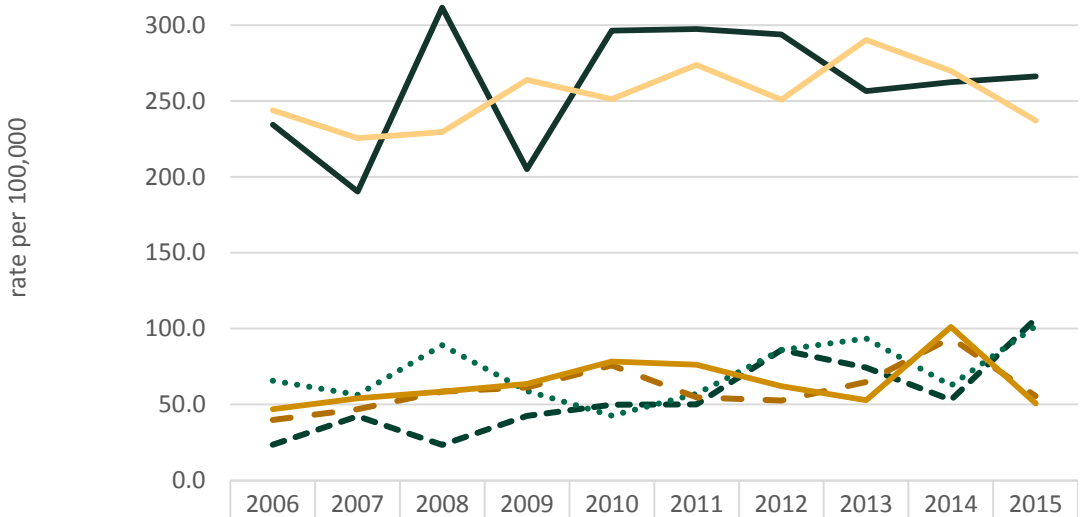
Source: Ohio Department of Health, STD Surveillance Program.

Adult Mortality

Leading Causes of Death

The top two leading causes of death – cancer and heart disease – have rates that are 2 to 4 times greater than the other specified leading causes of death presented in the chart below for all Preble County adult residents. Refer to the following figure for a complete breakdown by cause over time.

Figure 52: Top Six Leading Causes of Death for the Adult Population, 2006-2015
(crude rate per 100,000)



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Diseases of heart	234.5	190.3	311.6	205.1	296.4	297.6	293.9	256.6	262.5	266.2
Malignant neoplasms	243.8	225.6	229.6	264.0	251.4	273.8	250.9	290.2	269.7	237.1
Atherosclerosis	23.4	42.3	23.4	42.4	49.8	50.0	86.0	74.3	53.0	106.5
Accidents (unintentional injuries)	65.6	56.4	89.0	58.9	42.7	57.1	86.0	93.5	62.6	101.6
Cerebrovascular diseases	39.9	47.0	58.6	61.3	75.9	54.8	52.6	64.8	93.9	55.7
Chronic lower respiratory diseases	46.9	54.0	58.6	63.6	78.3	76.2	62.1	52.8	101.2	50.8

Source: Ohio Department of Health, Vital Statistics

Mental Health & Substance Abuse

Respondents to the 2017 survey were asked about their mental health status over the past 30 days and how many days stress, depression, and problems with their emotions negatively affected their mental health. When asked how many days in the past 30 days they had poor mental health, 28.6% of respondents indicated they had at least one day in the past 30 where their mental health was not good. Forty-four percent (44.2%) indicated that poor physical or mental health had kept them from performing their usual activities like self-care, work, or recreation at least one day in the past 30. When asked if their mental/emotional health limited their activities, 2.2% indicated that mental health problems and 2.2% indicated emotional health problems did.

Respondents were also asked if mental health issues were a problem for their household. Nine percent of households (8.9%) report they have a problem with adult mental illness, 4.2% report alcohol abuse as a problem for their household, and 2.3% report their household faces problems with prescription or illegal drug use.

Respondents were asked if they had ever been told by a doctor that they had a depressive disorder or mental or emotional problems or conditions. Six percent (6.3%) of respondents indicated that they have a depressive disorder and 4.5% have been diagnosed with mental or emotional problems. Three percent of respondents (3.3%) also indicated that they could not get mental health care services when they needed them.

Significant differences are witnessed between the sexes in Preble County – female respondents are significantly more likely to report that they have been diagnosed with a mental or emotional problems (6.8%) than are male respondents (2.1%).

Significant differences are also witnessed by household income. Individuals living in households earning under $15,000 per year are significantly more likely to report that they have been diagnosed with a depressive disorder or mental/emotional problems.

Table 18: FY 2016 Individuals Served in Public Behavioral Health System, by Diagnoses

Board Area	Mental Health Diagnosis	Alcohol and Other Drugs	Dual Diagnosis	No Assessment	Total	Rate per 1,000
Preble	791	213	197	148	1,349	42.3

Source: Ohio Department of Mental Health and Addiction Services

Alcohol Consumption and Substance Abuse

According to the CDC, we know that addiction is a disease that affects both the brain and behavior. Science has identified many of the biological and environmental factors that affect drug use and dependence and are beginning to search for the genetic variations that contribute to the development and progression of the disease. Despite these advances, it is still unknown why people become addicted to drugs or how drugs change the brain to foster compulsive drug use. The National Institute on Drug Abuse (NIDA) also reports that “most drugs of abuse can alter a person’s thinking and judgment, leading

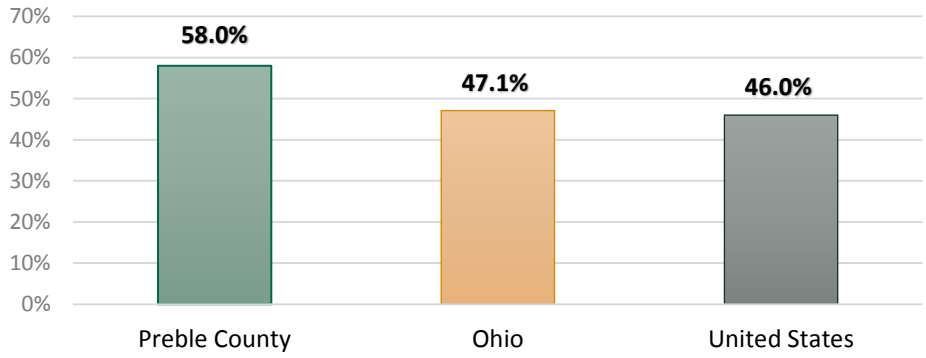
to health risks, including addiction, drugged driving, pregnancy risks, and infectious disease."[78] Commonly abused drugs include alcohol, cocaine, heroin, marijuana, opioids, steroids, and nicotine.

According to NIDA, fentanyl-laced heroin has been linked to a surge of overdoses in Ohio. Fentanyl and related compounds are also being found in counterfeit pills made to look like prescription pain relievers and sedatives and those who use heroin or prescription drugs laced with fentanyl are at much higher risk of overdose and death. Emerging drug use trends in Ohio also include the use of the potent animal opioid sedative carfentanil, which has been linked to a significant number of overdose deaths.[79] The next section of this report addresses alcohol consumption and substance abuse.

Alcohol Consumption

In the 2017 health status survey, the Applied Policy Research Institute asked Preble County residents about their alcohol use. First, respondents were informed that a drink of alcohol includes one can or bottle of beer, one glass of wine, one can or bottle of wine cooler, one cocktail, or one shot of liquor. With this in mind, respondents were asked to indicate how many times they have had at least one drink of alcohol in the past month. Three out of five (58.0%) respondents indicated that they had not consumed alcohol in the past 30 days. The percentage of Preble County adults who did not drink alcohol in the past month (58.0%) is higher than the percentages for the State of Ohio (47.1%) and the nation (46.0%).

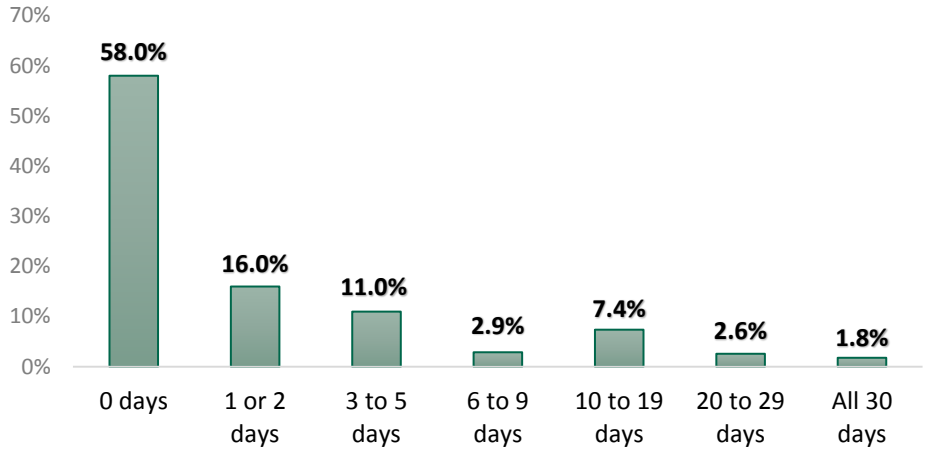
Figure 53: No Alcohol in Past Month County, State, and Nation Comparison



One-fourth (27.0%) of Preble County adults report they consumed alcohol between 1 and 5 days in the last month. Conversely, 1.8% of Preble County adults reported daily alcohol consumption.

[78] (U.S. Department of Health and Human Services, National Institute on Drug Abuse 2017)
[79] (U.S. Department of Health and Human Services, National Institute on Drug Abuse 2017)

Figure 54: Alcohol Consumption, Number of Days in the Last 30



When Preble County adults who did report that they drank alcohol in the past month were asked on the days that they did drink, how many drinks they had on average, the average was 2.73 drinks.

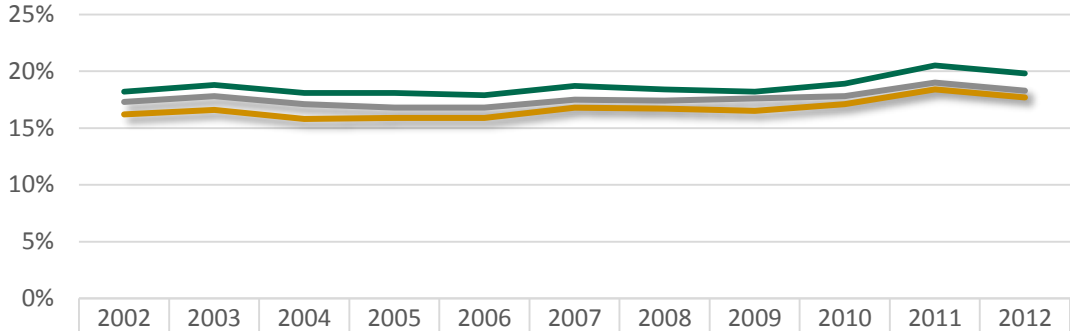
Sixteen percent (15.6%) of Preble County adults are considered binge drinkers, having consumed five or more drinks on any one occasion within the past month (4 or more drinks if a female). The percentage of Preble County adults, responding to the survey, who binge drink is lower than the percentage for the State of Ohio (18.2%) and the same as the national percentage (16.3%).

Finally, the survey also asked if alcohol abuse is a problem for the respondent's household and 95.8% of respondents indicated that it was not.

"Binge drinking" is defined as the consumption of 5 or more alcoholic beverages on any one occasion for men and 4 or more for women. "Heavy" drinking is defined as the consumption, on average, of more than one drink per day for women or two drinks per day for men in the past 30 days. The Institute for Health Metrics provides trend data in regards to binge and heavy drinking prevalence among adults. Data is available and provided in the following figures for a several year span through 2012.

In Preble County, the prevalence for binge drinking has increased between 2002-2012 by 1.6% - from 18.2% to 19.8%, which is similar to both the State of Ohio and the nation. Differences can be seen between the sexes. Twice as many men reported binge drinking over the study period. The percentage of heavy drinkers among Preble County adults (8.2%) is similar to both the State of Ohio (8.2%) and the national (8.8%) percentages in 2012, and this rate has modestly increased over the study period. Similar to binge drinking, men are also more likely to be heavy drinkers.

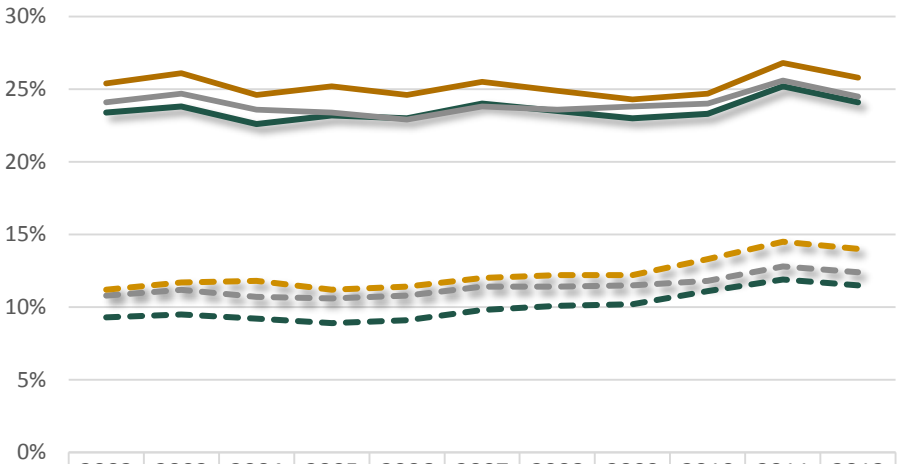
Figure 55: Prevalence of Binge Drinking, Adults, 2002-2012



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Preble County	18.2%	18.8%	18.1%	18.1%	17.9%	18.7%	18.4%	18.2%	18.9%	20.5%	19.8%
United States	17.3%	17.8%	17.1%	16.8%	16.8%	17.5%	17.4%	17.6%	17.8%	19.0%	18.3%
Ohio	16.2%	16.6%	15.8%	15.9%	15.9%	16.8%	16.7%	16.5%	17.1%	18.4%	17.7%

Source: Institute for Health Metrics and Evaluation

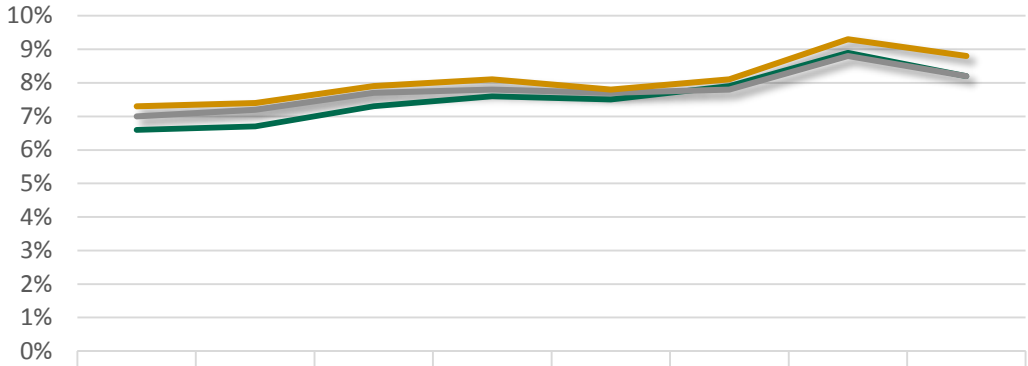
Figure 56: Prevalence of Binge Drinking, Adults by Sex, 2002-2012



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Female (Preble County)	9.3%	9.5%	9.2%	8.9%	9.1%	9.8%	10.1%	10.2%	11.1%	11.9%	11.5%
Female (U.S.)	10.8%	11.2%	10.7%	10.6%	10.8%	11.4%	11.4%	11.5%	11.8%	12.8%	12.4%
Female (Ohio)	11.2%	11.7%	11.8%	11.2%	11.4%	12.0%	12.2%	12.2%	13.3%	14.5%	14.0%
Male (Preble County)	23.4%	23.8%	22.6%	23.2%	23.0%	24.0%	23.5%	23.0%	23.3%	25.2%	24.1%
Male (U.S.)	24.1%	24.7%	23.6%	23.4%	22.9%	23.8%	23.6%	23.8%	24.0%	25.6%	24.5%
Male (Ohio)	25.4%	26.1%	24.6%	25.2%	24.6%	25.5%	24.9%	24.3%	24.7%	26.8%	25.8%

Source: Institute for Health Metrics and Evaluation

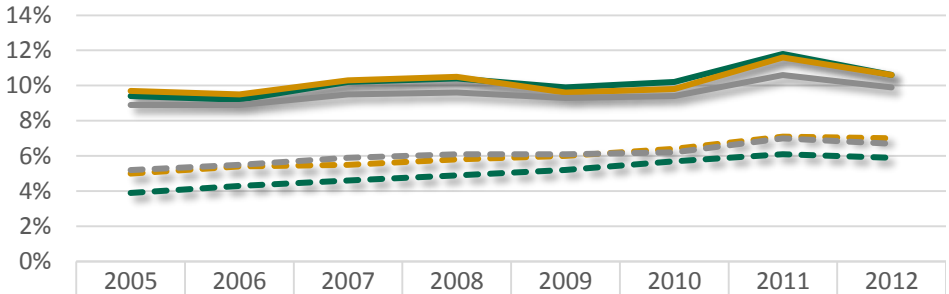
Figure 57: Prevalence of Heavy Drinking, Adults, 2005-2012



	2005	2006	2007	2008	2009	2010	2011	2012
Preble County	6.6%	6.7%	7.3%	7.6%	7.5%	7.9%	8.9%	8.2%
United States	7.0%	7.2%	7.7%	7.8%	7.7%	7.8%	8.8%	8.2%
Ohio	7.3%	7.4%	7.9%	8.1%	7.8%	8.1%	9.3%	8.8%

Source: Institute for Health Metrics and Evaluation

Figure 58: Prevalence of Heavy Drinking, Adults by Sex, 2005-2012



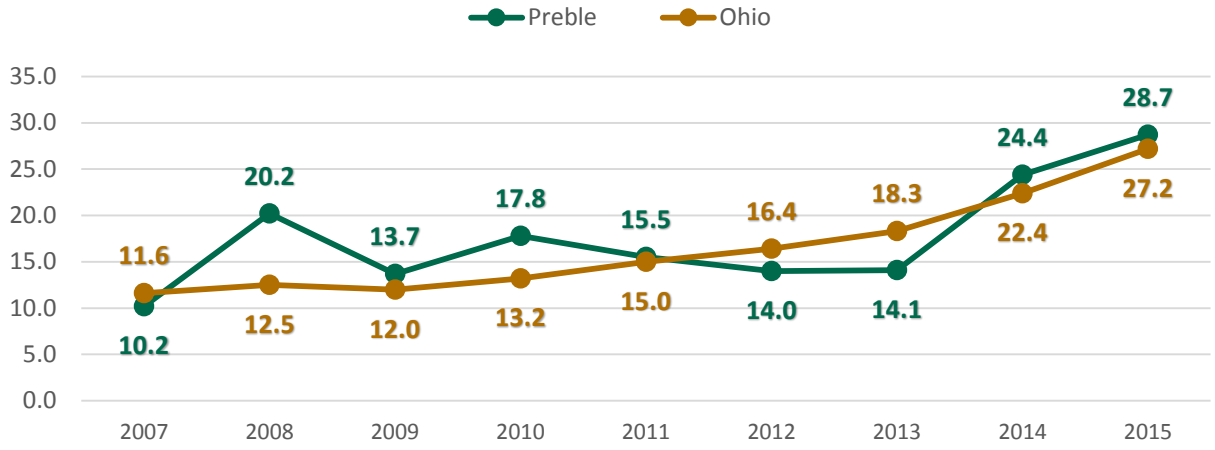
	2005	2006	2007	2008	2009	2010	2011	2012
Female (Preble County)	3.9%	4.3%	4.6%	4.9%	5.2%	5.7%	6.1%	5.9%
Female (Ohio)	5.0%	5.4%	5.5%	5.8%	6.0%	6.4%	7.1%	7.0%
Female (U.S.)	5.2%	5.5%	5.9%	6.1%	6.1%	6.2%	7.0%	6.7%
Male (Preble County)	9.4%	9.2%	10.2%	10.4%	9.9%	10.2%	11.8%	10.6%
Male (Ohio)	9.7%	9.5%	10.3%	10.5%	9.6%	9.8%	11.6%	10.6%
Male (U.S.)	8.9%	8.9%	9.5%	9.6%	9.3%	9.4%	10.6%	9.9%

Source: Institute for Health Metrics and Evaluation

Substance Abuse

According to the CDC, drug overdose deaths and opioid-involved deaths continue to increase in the United States. Prescription or illegal opioids are the main driver of drug overdose deaths. Opioids were involved in 33,091 deaths in 2015, and opioid overdoses have quadrupled since 1999. In 2015, Ohio was one of the top five states with the highest rates (29.9 per 100,000) of death due to drug overdose.[80] Studying unintentional drug overdose trends for Preble County and Ohio indicates that Preble County's rate outpaced the State of Ohio's rate in five years out of a nine year trend (Refer to the following figure).

Figure 59: Unintentional Drug Overdose, Age-adjusted Death Rates per 100,000 Population



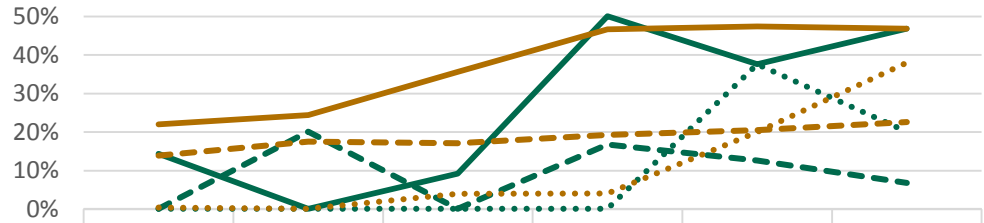
Source: Ohio Department of Health, Mortality

Respondents to the Preble County Community Health Assessment Survey were asked if they have ever taken prescription pain medication (Codeine, Vicodin, OxyContin, Hydrocodone, Percocet, etc.) that was not prescribed to them or differently than instructed by the doctor. One in seven (13.6%) of respondents indicated that they have at one time or another. Respondents were also asked if they or anyone in their family have been affected by street drug use like heroin, methadone, cocaine, etc. and 14.6% indicated that illegal drug use has.

While the percentage of unintentional drug overdose deaths involving heroin is generally lower in Preble County than for Ohio, it matched the rate for the state of Ohio (46.7%) in 2015. The percentage of unintentional drug overdose deaths involving fentanyl is lower in Preble County than for Ohio.

[80] (U.S. Centers for Disease Control & Prevention 2016)

Figure 60: Unintentional Drug Overdose Deaths by Drug, 2010-2015



	2010	2011	2012	2013	2014	2015
Preble - Heroin	14.3%	0.0%	9.1%	50.0%	37.5%	46.7%
Preble - Fentanyl	0.0%	0.0%	0.0%	0.0%	37.5%	20.0%
Preble - Cocaine	0.0%	20.0%	0.0%	16.7%	12.5%	6.7%
Ohio - Heroin	21.9%	24.3%	35.5%	46.6%	47.3%	46.7%
Ohio - Fentanyl	0.3%	0.0%	3.9%	4.0%	19.9%	37.9%
Ohio - Cocaine	13.8%	17.4%	17.0%	19.2%	20.4%	22.5%

Source: Ohio Department of Health, Mortality

Mental Health and Substance Abuse Data Highlights

- Unintentional drug overdose deaths have nearly tripled from 2007-2015
- Fentanyl-laced heroin has been linked to a surge of overdoses in Ohio
- Drug overdose deaths involving fentanyl accounted for 1 out of 3 drug overdose deaths in 2014 and 1 out of every 5 in 2015 in Preble County

Disparities

- Female respondents are significantly more likely to report that they have been diagnosed with a mental or emotional problems (6.8%) than are male respondents (2.1%)
- Individuals living in households earning under $15,000 per year are significantly more likely to report that they have been diagnosed with a depressive disorder or mental/emotional problems
- Adults under the age of 55 are significantly more likely to indicate binge drinking in the past 30 days

Table 19: State and National Comparison of Mental Health and Substance Use Indicators

Key Variable	Preble County 2017 Survey Percent	Preble County 2017 Survey Sample Size	State of Ohio[81] 2015 Percent	Nationwide[82] *(States & DC)* 2015 Median	HP 2020 Target
Chronic Health Conditions – Ever Told					
Depression	6.3%	401	18.9%^	19.0%^	N/A
Health Behaviors					
Has not drank alcohol within the past 30 days	58.0%	399	52.9%	54.0%	N/A
Binge Drinking (5 or more drinks on one occasion)	15.6%	396	18.2%^	16.3%	24.4%

* Significant at the .05 Level

^ Significant at the .01 Level

Table 20: Miami County Populations with a Significantly Higher Prevalence of Selected Substance Use Behaviors, 2017

Preble County Respondents - Key Variable	Sex	Age	House-hold Income	Educa-tion
Chronic Health Conditions – Ever Told				
Depression	Female		<$15	
Health Behaviors				
Drank alcohol within the past 30 days	Male	<55		<HS
Binge Drinking (5 or more drinks on one occasion)		<55		

[81] Center for Disease Control and Prevention, BRFSS Prevalence & Ohio Trends Data

[82] Center for Disease Control and Prevention, BRFSS Prevalence & All States & D.C. Trends Data

Dental Health

Respondents to the 2017 survey were asked how long it had been since they last visited a dentist or dental clinic for any reason. Seven out of ten (70.3%) respondents report that they last visited a dentist or dental clinic within the past year, which is significantly higher than both the State of Ohio (65.3%) and the nation (65.3%). Female respondents are significantly more likely to indicate that they have visited a dentist in the past year than are male respondents in Preble County. Significant differences can also be witnessed by household income and educational attainment. Respondents whose highest level of educational attainment in a high school diploma/GED or higher and respondents from households earning $15,000 or more per year are significantly more likely to have visited a dentist in the past year. Fifty percent (51.5%) of respondents report that none of their permanent teeth have been removed because of tooth decay or gum disease, while 48.5% have – 28.5% have lost 1-5 teeth, 12.4% have lost at least 6 teeth, but not all of their teeth, and 7.6% have lost all of their teeth due to tooth decay or gum disease. As previously mentioned, 48.5% of Preble County residents report that permanent teeth have been removed because of tooth decay or gum disease, which is significantly lower than both the State of Ohio (46.5%) and the nation (56.6%).

When asked if the respondent or anyone else in their household needed but could not get dental care in the past 12 months, 10.6% of respondents indicated that someone in their household could not get these services. Eight out of ten (78.5%) of respondents indicated that the reason someone in their household could not get dental services was because of cost. One respondent indicated that they could not necessary dental care because their insurance denied the claim.

Dental Health Data Highlights

Disparities

- Male respondents in Preble County are less likely to have visited the dentist in the previous 12 months
- Low income respondents are significantly less likely to have visited a dentist within the past 12 months than residents from higher income households
- Adults with less than a high school degree are significantly less likely to have visited the dentist in the previous year than respondents with a high school diploma/GED or higher
- Adults 55 years of age or older are significantly more likely to indicate they have had teeth removed than younger adults
- Adults who do not have at least a high school diploma or GED are significantly more likely to have had teeth removed than adults with a high school diploma/GED or higher

Table 21: State and National Comparison of Adult Dental Health Indicators

Key Variable	Preble County 2017 Percent	Preble County 2017 Sample Size	State of Ohio 2015 Percent	Nationwide *(States & DC)* 2015 Median	HP 2020 Target
Visited the dentist or dental clinic within the past year for any reason (2014)	70.3%	391	65.3%^	65.3%^	49.0%
Adults that have had any permanent teeth removed (2014)	48.5%	393	46.5%^	43.4%^	N/A

Table 22: Preble County Populations with a Significantly Higher Prevalence of Selected Dental Health Characteristics, 2017

Preble County Respondents - Key Variable	Sex	Age	House-hold Income	Educa-tion
Visited the dentist or dental clinic within the past year for any reason (2014)	Female		$15k+	HS+
Adults that have had any permanent teeth removed (2014)		55+		<HS

Health Challenges

While heart disease and cancer make up the two leading causes of death in the United States, lifestyle choices and behaviors contribute to these diseases. Modifiable behaviors like tobacco use, poor diet, physical inactivity, and excessive alcohol consumption cause much of the illness and early death related to chronic diseases and conditions.[83] This chapter profiles the lifestyle choices of Preble County residents.

Vaccinations

According to the CDC, influenza is a serious disease that can lead to hospitalization and sometimes even death. Millions of people get the flu every year, hundreds of thousands of people are hospitalized and thousands or tens of thousands of people die from flu-related causes every year and annual seasonal flu vaccine is the best way to reduce your risk of getting sick with seasonal flu and spreading it to others.

The CDC also reports that the pneumococcal disease is common in young children, but older adults are at greatest risk of serious pneumococcal infections and even death. CDC recommends vaccination with the pneumococcal conjugate vaccine for all babies and children younger than 2 years old, all adults 65 years or older.

According to the CDC, shingles is a painful rash that usually develops on one side of the body, which forms blisters that typically scab over in 7 to 10 days and clears up within 2 to 4 weeks. Your risk of shingles increases as you get older and the shingles vaccine reduces the risk of developing shingles by 51%.

Preble County residents were asked if they had received one of three common vaccines for adults within the past year. More than four out of ten (46.8%) respondents indicated that they had received a flu shot in the past year and two-thirds of these respondents got their last flu shot at a doctor's office (48.1%) or a store pharmacy (22.7%). As age increases, so does the likelihood that the respondent has received the flu shot in the past twelve months and this finding is significant. Less than one-third of adults (29.7%) have ever had the pneumonia vaccine. Significant differences can also be seen by age. As age increases, so does the likelihood that that the respondent has received the pneumonia vaccine. Finally, two out of ten (19.7%) respondents indicated they that had received the shingle or zoster vaccine.

According to the CDC, deaths due to influenza are generally most common among senior adults or those 65 years old and over. In addition, the pneumococcal polysaccharide vaccine is recommended for all adults 65 years or older. Three-fourths (74.4%) of Preble County senior adults have had the flu vaccine within the last year, which is higher than the percentages for the State of Ohio (57.7%) and nation (61.3%). A higher percentage of Preble County senior adults have ever had a pneumonia or pneumococcal vaccine (75.2%), which is higher than the percentages for the State of Ohio (72.2%) and nation (72.7%).

[83] (National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. September 16, 2016. 2016)

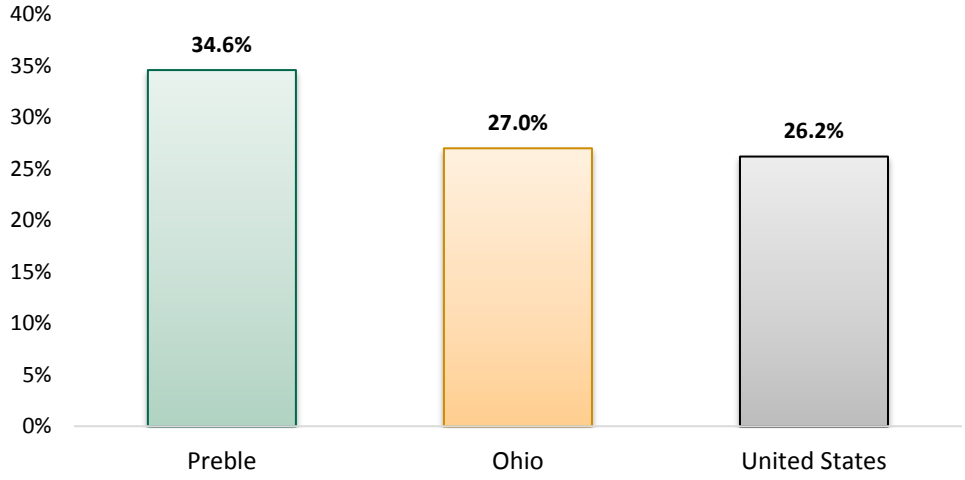
Physical Activity

Exercise is an essential part of a well-balanced lifestyle and increasing attention has been placed on the link between exercise and disease prevention. "Regular physical activity using large muscle groups, such as walking, running, or swimming, produces cardiovascular adaptations that increase exercise capacity, endurance, and skeletal muscle strength. Habitual physical activity also prevents the development of coronary artery disease and reduces symptoms in patients with established cardiovascular disease. There is also evidence that exercise reduces the risk of other chronic diseases, including type 2 diabetes, osteoporosis, obesity, depression, and cancer of the breast and colon."[84] The Centers for Disease Control and Prevention (CDC) recommends two types of physical activity to improve adult health – moderate-intensity aerobic activity for at least 150 minutes per week and muscle-strengthening activities at least 2 days per week.

Moderate-intensity aerobic activities involve increasing your heart rate and possibly breaking a sweat for at least 10 minutes at a time to get health benefits from the activity. Another way to gauge moderate aerobic activity is the talk test. While engaging in an activity if you can talk but not sing, then it can be considered moderate aerobic activity. One-third of Preble County adults (34.6%) have not participated in some sort of moderate aerobic activity in the past month, such as running, calisthenics, golf, gardening, or walking for exercise, according to the 2017 survey. Adults living in households earning less than $15,000 per year are more likely to indicate that they do not participate in regular exercise. As educational attainment increases, so does the likelihood that the respondent participates in any physical activity.

The percentage of Preble County adults not participating in physical activity (34.6%) is higher than the percentage reporting no regular physical activity for Ohio (27.0%) or at the national level (26.2%).

Figure 61: No Physical Activity

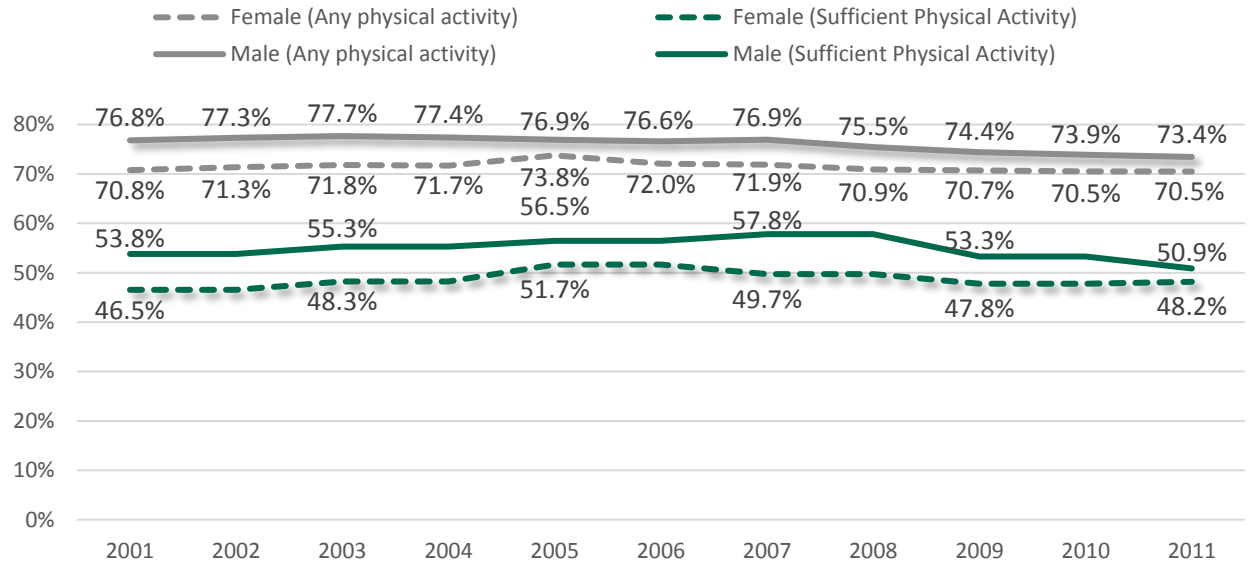


Source: 2017 Preble County Health Assessment Household Survey
Source: Centers for Disease Control and Prevention, BRFSS Prevalence & Trends Data

[84] (American Heart Association 2003)Treatment of Atherosclerotic Cardiovascular Disease. Accessed January 2016.

In a trend analysis provided by the Institute for Health Metrics and Evaluation for Preble County, the rate at which individual adults report participating any leisure time physical activity has remained relatively constant from 2001-2011 for both males and females. Meeting the recommended levels of physical activity has decreased for males in Preble County since 2005, but increased for females overall.

Figure 62: Physical Activity, 2001-2011



Source: Institute for Health Metrics and Evaluation

The walkability index score measures walkability in communities on a scale from 0 - 100 based on walking routes to destinations such as grocery stores, schools, parks, restaurants, and retail.[85] In Preble County, the walkability score is 0, which means almost all errands require a car or are car-dependent. Walkability index scores by Preble County jurisdictions include:

- Eaton – average walk score of 65 from Main Street (some errands can be accomplished on foot) The closest park is Fort Saint Clair Ohio Historical Site and Park.
- West Alexandria – average walk score of 37 from center of village (most errands require a car)
- New Paris – average walk score of 36 from center of village (most errands require a car) The closest park is France Park.
- Lewisburg – average walk score of 36 from a village location (most errands require a car)
- Verona – average walk score of 9 from a village location (almost all errands require a car)
- Eldorado – average walk score of 14 from a village location (almost all errands require a car). The closest park is Village Park.
- Camden – average walk score of 47 from a village location (most errands require a car)

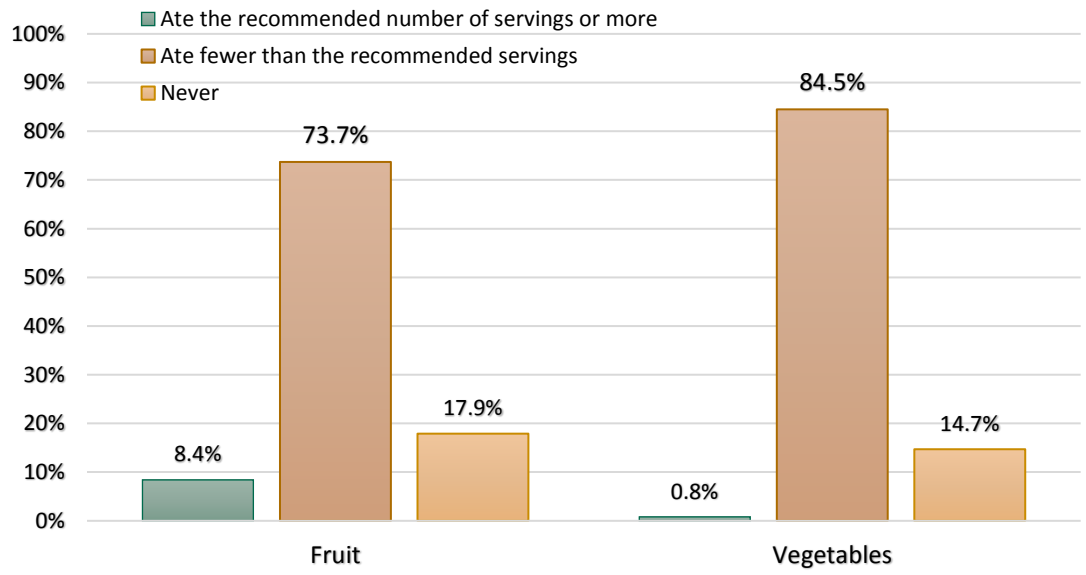
[85] (Walk Score Professional 2017)

Daily Fruit and Vegetable Intake

"Eating a diet high in fruits and vegetables is associated with a decreased risk of many chronic diseases, including heart disease, stroke, high blood pressure, diabetes, and some cancers."[86] According to the U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion (ODPHP), adults should consume at minimum 2 servings of fruit or 100% fruit juice and 3 servings of vegetables per day. The CDC reports that American adults fall short of these recommendations – consuming 1 serving of fruit and 1.7 servings of vegetables per day.[87]

When queried about the number of servings of fruit and/or vegetables respondents consume in a day, Preble County residents also fall short of these recommendations. Only 5.3% of respondents indicated that they consume the recommended 2 servings of fruit and 3 servings of vegetables per day. However, most respondents reported that they do consume fruits and vegetables daily, just not the daily recommended intake of each. For a detailed look at daily intake of fruit juice, fruit, and vegetables refer to the following figures.

Figure 63: Percent of Preble County Adults Getting Enough Fruit and Vegetables



Source: 2017 Preble County Health Assessment Household Survey

Approximately fifty percent (49.5%) of Preble County residents consume at least one serving of fruit per day, which is a significantly lower percentage than the rate for Ohio residents (57.1%) or the national median (60.3%). Three out of four Preble County residents (78.2%) also eat at least a single serving of vegetables per day and this finding is higher than the finding for the State of Ohio (75.3%) and significantly higher than the nation (77.9%). Significant differences are witnessed between the sexes. Female respondents are more likely to report that they gets at least a single serving of fruit daily than

[86] (U.S. Centers for Disease Control and Prevention 2011)
[87] (Moore, PhD and Thompson, PhD 2015)

are male respondents. Adults 55 years of age or older and individuals who do not have at least a high school degree or equivalency are significantly more likely to report that they do not consume at least a single serving of vegetables per day.

Respondents were also asked if they had problems securing enough food for their household or food for a special diet prescribed by any household members' doctor. Twenty-nine individuals responding to the survey indicated that, in general, hunger or a need for food was a problem for their household and 16 respondents indicated that a member of their household had problems getting the food required for a special diet.

According to the USDA data provided by Feeding America, 5,320 people, including 2,110 children, in Preble County were food insecure in 2015. That means 1 in 8 individuals (12.8%), and more than 1 in 5 children (21.5%), lived in households without consistent access to adequate food. One out of every four (24.0%) food insecure people in Preble County have incomes that do not qualify for nutrition assistance programs (income is at or above 185% poverty threshold) and another 19% are over the Supplemental Nutrition Assistance Program (SNAP) threshold limit--130% of poverty.[88] Feeding America also estimated that 25% of the children experiencing food insecurity in Preble County are also likely ineligible for federal nutrition programs based on household income. Refer to the following table for the food insecurity rates from 2013 to 2015 for Preble County, the State of Ohio, and the nation.

Table 23: Food Insecurity Rate, Estimates 2013-2015

	Preble County		Ohio		U.S.	
	Adult	Child	Adult	Child	Adult	Child
Food Insecurity Rate 2013	14.1%	24.6%	16.8%	24.2%	15.8%	21.4%
Food Insecurity Rate 2014	13.1%	23.3%	16.8%	23.8%	15.4%	20.9%
Food Insecurity Rate 2015	12.8%	21.5%	16.0%	21.9%	13.4%	17.9%

Source: Feeding America

Weight

In the 2017 survey, Preble County respondents were also asked to indicate their height and weight so that researchers could calculate the BMI. Three out of ten respondents (29.8%) twenty years or older are of "normal or healthy weight." Seven out of ten (69.5%) Preble County adults, 20 years of age or older, are classified as overweight (35.4%) or obese (34.1%) based upon their body mass index. This finding is important because being overweight and obese could increase the chances of developing health problems, including type 2 diabetes, heart disease and strokes, and certain cancers.[89] Male respondents are significantly more likely to report being overweight or obese than are female respondents. Adults under the age of 55 also significantly more likely to report that they are overweight or obese than older adults in Preble County. Respondents with at least a high school diploma or GED are also more likely to report being overweight or obese, and this finding is significant.

[88] (Feeding America 2017)
[89] (National Institute of Diabetes and Digestive and Kidney Diseases 2012)

As previously mentioned, 69.5% Preble County adults, 20 years of age or older, are classified as overweight or obese based upon their body mass index. This finding is higher than findings for the State of Ohio (66.5%) and the nation (65.3%).

Figure 64: Weight Status

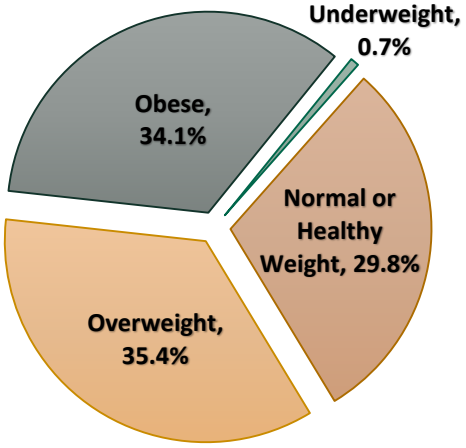
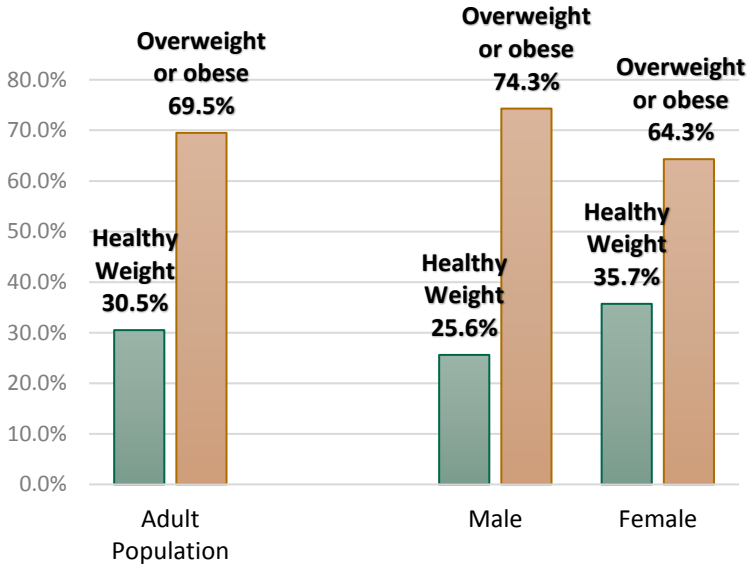


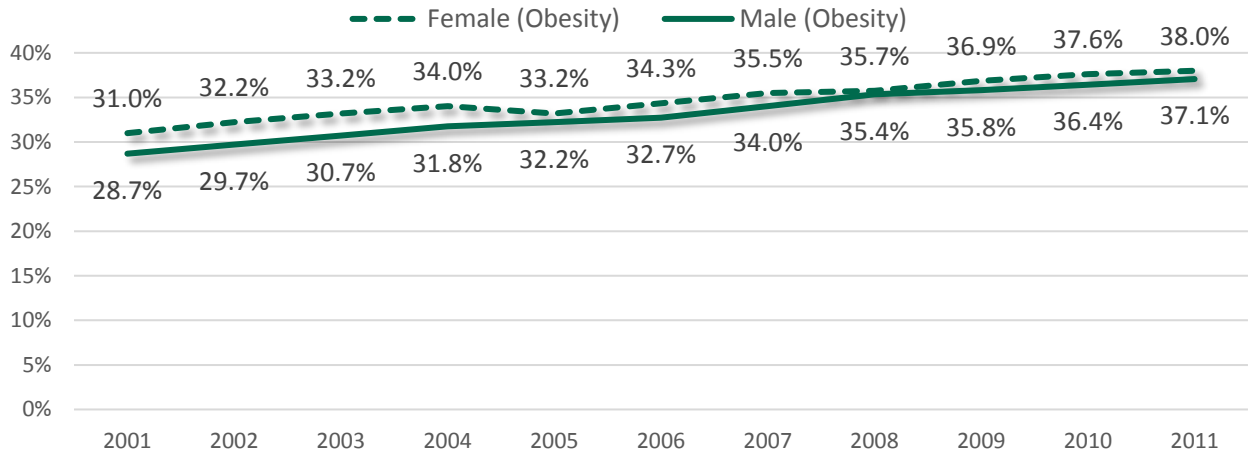
Figure 65: Weight Status by Gender



Source: 2017 Preble County Health Assessment Household Survey

The following graph presents the trends in obesity in Preble County over an eleven year span. As shown in the following figure, more Preble County adults are reporting personal obesity every year.

Figure 66: Prevalence of Adult Obesity in Preble County, 2001-2011



Source: Institute for Health Metrics and Evaluation

HIV Prevention

According to the CDC, an estimated 1.1 million individuals in the U.S. are living with the human immunodeficiency virus (HIV – the virus that causes acquired immunodeficiency syndrome (AIDS)). Approximately 40,000 new HIV infections occur each year in the U.S. with 39,513 people being diagnosed in 2015. The annual number of new diagnoses declined by 9% from 2010 to 2014 (CDC).[90] HIV transmission can be prevented by eliminating risky behaviors, like having unprotected sex with a partner whose HIV status is unknown or who is infected, or having contact with infected blood and sharing drug needles with someone who may be infected with the virus. HIV transmission cannot be eliminated if individuals do not know their HIV status.

Respondents were asked if they ever knowingly had their blood tested for HIV, not including blood donations. Three-fourths (72.8%) of respondents said they have never knowingly been tested for HIV, which is significantly higher than percentages for the State of Ohio (69.3%) and the nation (63.7%). Approximately one-fourth of respondents (27.2%) indicated they knowingly had their blood tested for HIV. Of these respondents who have been tested, 47.8% of them reported having their last test at a private doctor's office, 14.2% in a hospital inpatient setting, and 4.8% report being tested at the local health department. Significant differences are also seen by sex, household income, and educational attainment. Female respondents are more likely to be tested for HIV than are male respondents. Respondents with household income below $15,000 and respondents who have a high school diploma/GED or higher are also more likely to have ever been tested for HIV.

Tobacco Use

According to the Journal of the American Medical Association, tobacco use is the leading cause of preventable death in the United States. Six out of ten adults in the 2017 Preble County study (60.4%) have smoked cigarettes or an electronic vapor product at some point in their life, and 20.0% of those residents still currently smoke cigarettes and 6.0% smoke a vapor product.

Male respondents are significantly more likely to indicate that they have ever smoked cigarettes or used a vapor product than are female respondents. This finding is significant by household income and educational attainment – as lower income households (household income below $15,000) and individuals with a lower educational attainment (high school degree/GED or lower educational attainment) are significantly more likely to have ever smoked. As age increases, it is significantly less likely an individual has ever used a vapor product.

Four out of five Preble County adults (80.0%) report that they do not currently smoke cigarettes, which is higher than the percentage for the State of Ohio (78.2%) but lower than the national percentage (82.5%). Male respondents are significantly more likely to indicate that they currently smoke cigarettes or a vapor product than are female respondents. This finding is also significant by educational attainment. Individuals who have pursued education beyond a high school diploma or GED are

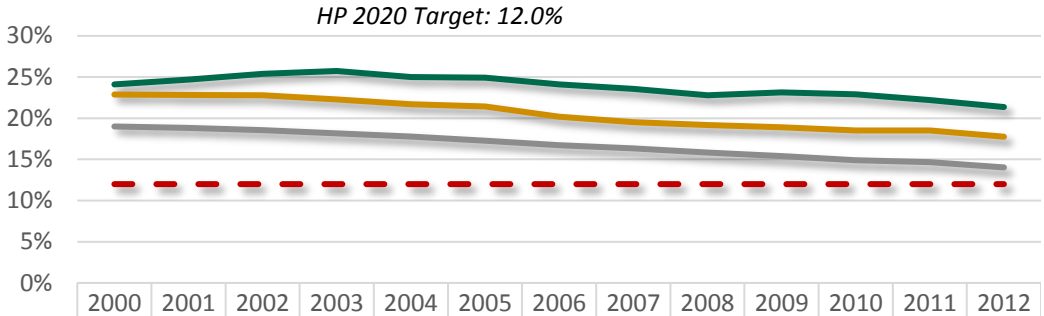
[90] (U.S. Centers for Disease Control and Prevention 2017)

significantly less likely to be current cigarette smokers. As age increases, the likelihood that the respondent is currently using a vapor product decreases and this findings is also significant.

Respondents who indicated having smoked a cigarette in their life, but currently do not smoke were asked how long it has been since they last smoked on a regular basis. Nearly half (44.7%) of respondents indicated they have not smoked for over five years.

The following figures present daily cigarette smoking trends for Preble County adults from 2000-2012 as reported by the Institute for Health Metrics and Evaluation. Daily cigarette smoking has declined in Preble County, the State of Ohio, and the nation, but still falls short of the HP 2020 goal of 12.0%.

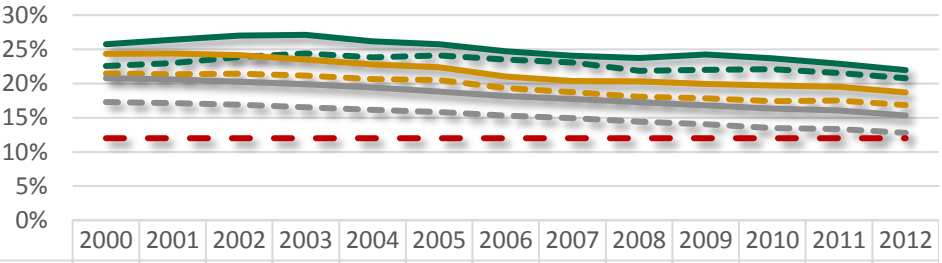
Figure 67: Prevalence of Daily Cigarette Smoking, Adults (age standardized), 2000-2012



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Preble County	24.1%	24.7%	25.4%	25.7%	25.0%	24.9%	24.1%	23.6%	22.8%	23.1%	22.9%	22.2%	21.4%
U.S.	19.0%	18.8%	18.6%	18.2%	17.8%	17.3%	16.7%	16.3%	15.8%	15.4%	14.9%	14.7%	14.0%
Ohio	22.9%	22.8%	22.8%	22.3%	21.7%	21.4%	20.2%	19.5%	19.2%	18.9%	18.5%	18.5%	17.8%
HP2020 Target	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%

Source: Institute for Health Metrics and Evaluation

Figure 68: Prevalence of Daily Cigarette Smoking, Adults by Sex, 2000-2012



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Female (Preble County)	22.6%	23.0%	23.9%	24.4%	23.8%	24.1%	23.5%	23.1%	21.9%	22.0%	22.1%	21.5%	20.8%
Female (Ohio)	21.5%	21.4%	21.4%	21.1%	20.6%	20.5%	19.4%	18.7%	18.1%	17.9%	17.4%	17.5%	16.9%
Female (U.S.)	17.3%	17.1%	16.9%	16.5%	16.1%	15.8%	15.3%	14.9%	14.4%	14.0%	13.5%	13.3%	12.8%
Male (Preble County)	25.7%	26.4%	27.0%	27.1%	26.2%	25.7%	24.7%	24.1%	23.7%	24.3%	23.7%	22.9%	22.0%
Male (Ohio)	24.4%	24.4%	24.2%	23.5%	22.8%	22.4%	21.0%	20.4%	20.3%	20.0%	19.7%	19.5%	18.7%
Male (U.S.)	20.8%	20.6%	20.3%	19.9%	19.4%	18.8%	18.2%	17.8%	17.3%	16.8%	16.3%	16.1%	15.3%
HP2020 Target	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%

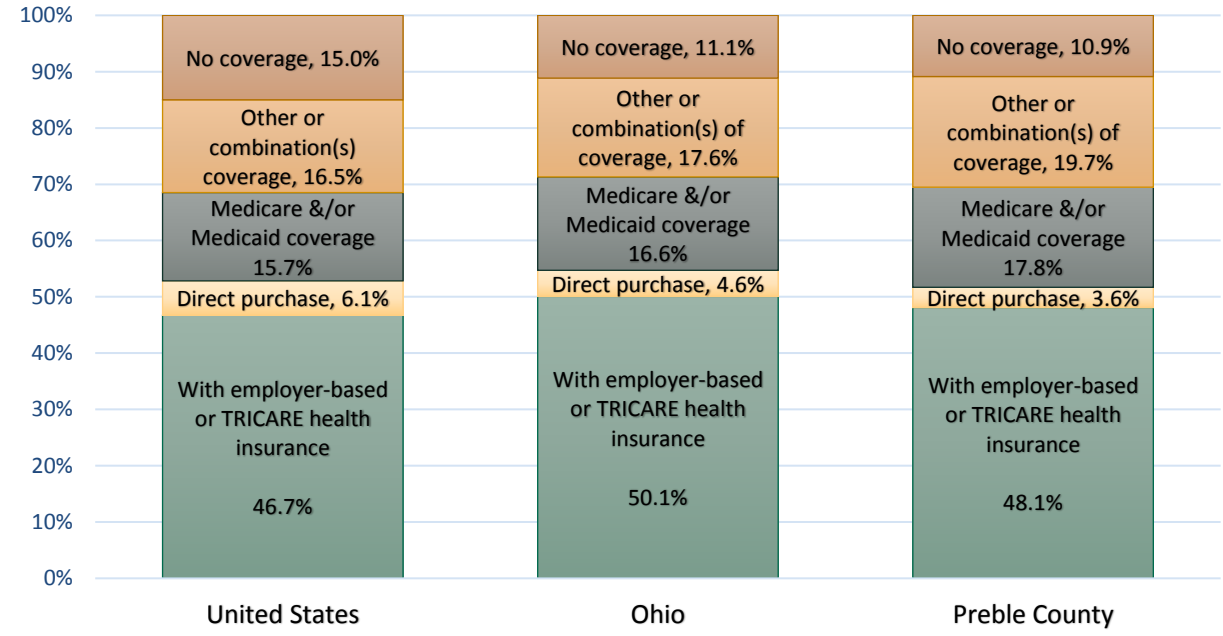
Source: Institute for Health Metrics and Evaluation

Preble County residents were also asked how many days out of the previous 7 days had someone (other than the respondent) smoked tobacco inside their home. Approximately nine out of ten respondents (87.8%) indicated that no one smoked tobacco inside their home while they were home. Similarly, 85.9% also said that they did not ride in car when someone else was smoking tobacco in the previous 7 days.

Access to Health Care

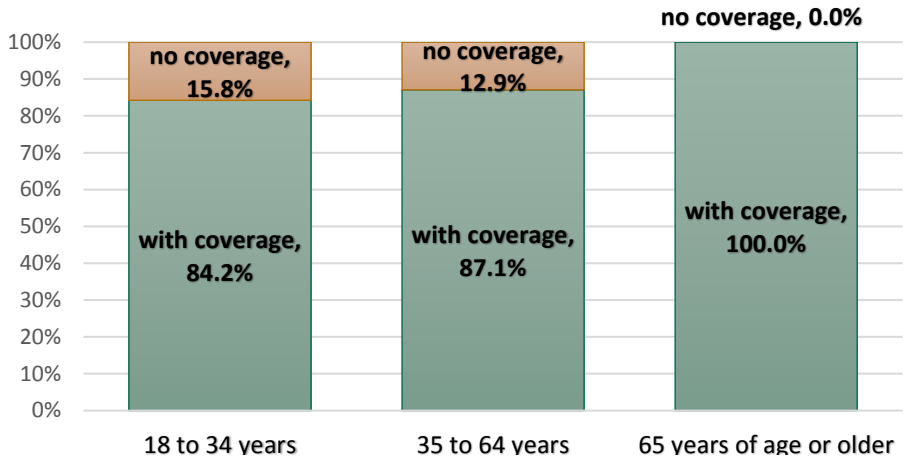
The US Census Bureau's Small Area Health Insurance Estimates (SAHIE) program produces estimates of health insurance coverage for all states and counties. The percent of Preble County residents over the age of 18 that do not have health insurance coverage is 10.9% versus 11.1% for the State of Ohio and 15.0% as the national benchmark. The percent of Preble County residents over the age of 18 without medical insurance coverage is presented below along with State and national comparisons, followed by more detail by age in the following figure.

Figure 69: Medical Insurance Coverage for the Population over the Age of 18, 2011-2015



Source: Bureau of the Census American Community Survey, 2011-2015

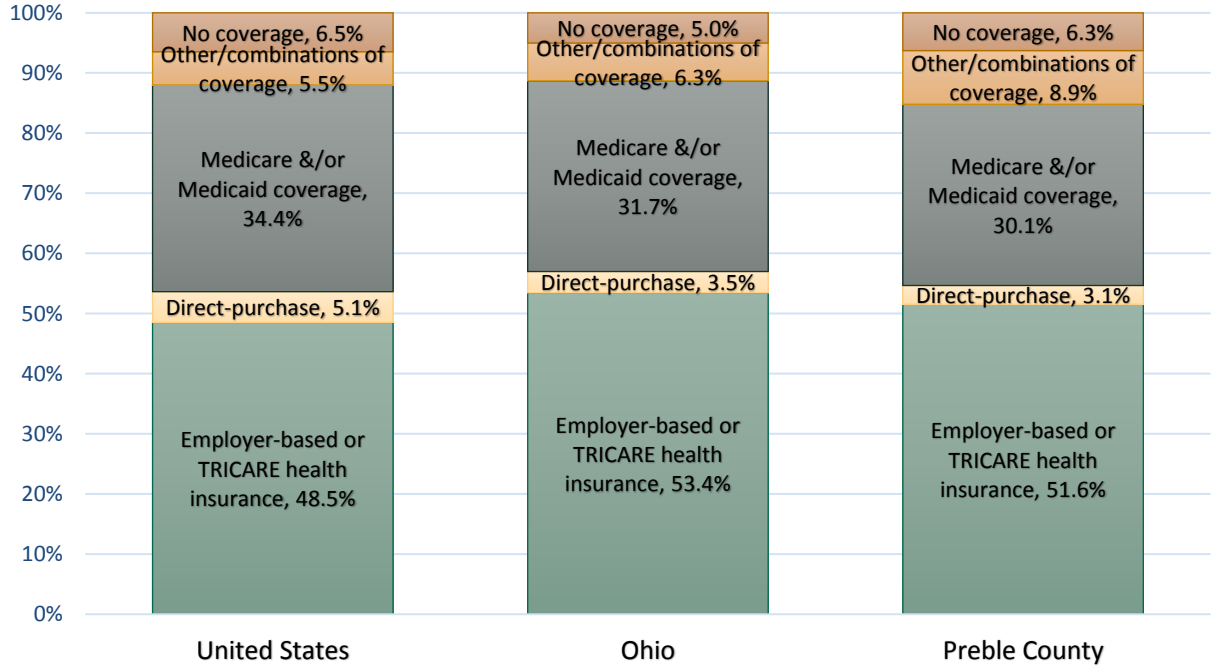
Figure 70: Insurance Coverage by Age for Preble County Adults, 2011-15



Source: Bureau of the Census American Community Survey, 2011-2015

Six percent of Preble County's children have no insurance coverage according to the 2011-2015 American Community Survey, which is higher than the State of Ohio's rate and similar to the nation's rate. Refer to the following figure for more detail about insurance coverage for children.

Figure 71: Health Insurance Coverage for Children, 2015



Source: Bureau of the Census American Community Survey, 2011-2015

Health Care Coverage

In the 2017 community health assessment survey, Preble County residents were asked if they had health care coverage. Nine out of ten respondents (92.7%) indicated they have some kind of health care coverage, including health insurance, prepaid plans such as HMO's, or government plans such as Medicare or Indian Health Services.

Seven percent (7.3%) of participants indicated that they did not have health care coverage. This percentage is significantly lower than percentages for the State of Ohio (8.4%) and the nation (10.8 %). Despite these findings, 6.6% of Preble County respondents indicated that they could not see a doctor at some point in the past 12 months because of the cost. The percentage of Preble County residents who could not see a doctor in the past year because of the cost is lower than both the State of Ohio (10.7%) and national (12.1%) percentages.

Health Care Utilization

"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, and an increased likelihood that patients will receive appropriate care."[91] In the 2017 community survey, respondents were also asked questions pertaining to access to health care providers. Questions were designed to assess whether respondents have a regular health care provider, the frequency of regular check-ups, as well as whether respondents without a health care provider are impacted by lack of health care coverage.

Four out of five respondents (79.9%) say they have one person who they think of as their personal doctor or health care provider, while 9.1% of respondents say they have more than one person they think of as their doctor or health care provider, and the remaining 11.0% of respondents say they do not have a regular person or persons they think of as their doctor or health care provider.

When participants were asked about how long it had been since they had last visited a doctor for a routine checkup, three-quarters of respondents (73.1%) indicated they visited the doctor for a routine check-up in the past year. Significant differences are also witnessed by age — adults ages 55 or older are significantly more likely to have visited a doctor for a routine checkup in the last year than adults under the age of 55.

[91] (U.S. Department of Health and Human Services 2017)

Figure 72: Length of Time since Last Routine Doctor's Visit

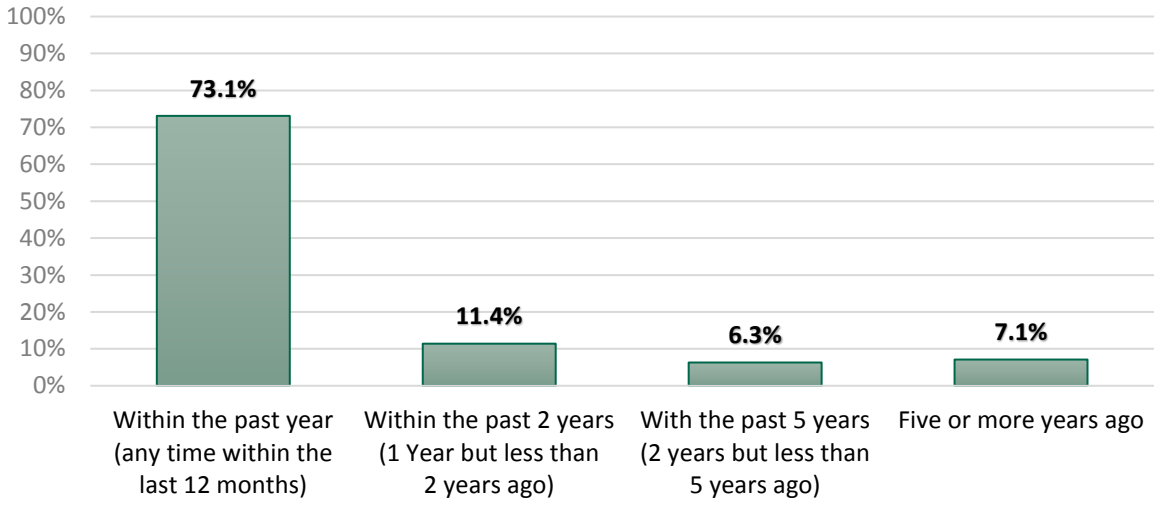
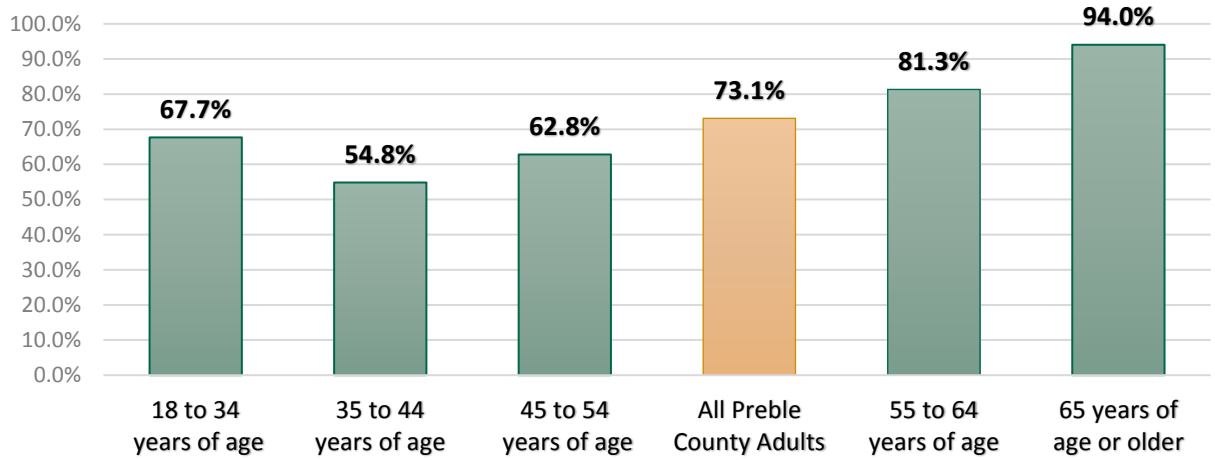


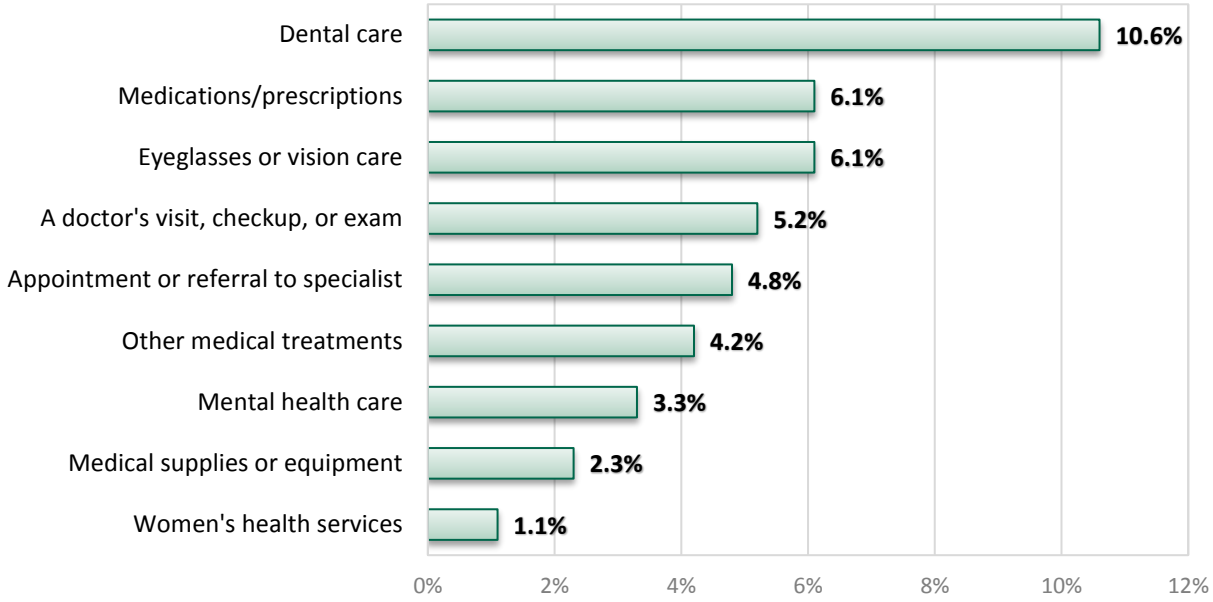
Figure 73: Adult Routine Exam within the Past 12 Months by Age Cohort



Respondents were asked if there was a time in the past 12 months they could not see a doctor because of the cost, and 93.4% of respondents indicated that cost was not an issue.

Respondents were also asked what types of medical care they could not get in the past 12 months. The three most frequently cited needed services were dental care (10.6%), medications or prescriptions, and eyeglasses or vision care. Refer to the following figure.

Figure 74: Types of Medical Care Needed in the Past 12 Months



Resources to Address Health Issues

Health Care Facilities and Resources within the Community

Preble County's health care infrastructure is comprised of one urgent care facility, two dialysis centers, and four residential nursing care facilities.

Physicians and other Health Providers

The County Health Rankings indicate that Preble County has a less favorable ratio of population to primary care physicians, dentists, and mental health providers than for Ohio overall.

Table 24: Health Care Provider - Populations Ratios

County Health Rankings Data	Preble County	Ohio
Primary care physicians (Primary care physicians include practicing physicians (M.D.'s and D.O.'s) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics. (Population per physician)	4,640:1	1,300:1
Dentists (Population per dentist)	5,940:1	1,710:1
Mental health providers (Population per mental health providers (including child psychiatrists, psychiatrists, and psychologists active in patient care))	1,980:1	640:1

Source: County Health Rankings and Roadmaps

According to HRSA, the following physicians and other health providers provide services in Preble County.

Table 25: Physicians and other Health Providers

Primary Care Physicians	**8**	**Obstetricians/Gynecologists**	**0**
PCP Physician/100K Pop	19.2	OB/GYN /100K Pop	0.0
General/Family Practice	8		
Gen/Family/100K Pop	19.2	**General Surgeons**	0
Internal Medicine	0	General Surgeons/100K Pop	0.0
Internal Medicine/100K Pop	0		
Pediatricians	0	**Psychiatrists**	**0**
Pediatricians/100K Pop	0.0	Psychiatrists/100K Pop	0.0
Health Centers		**Dentists**	**5**
Community Health Centers (FQHC)	0	Dentist/100K Pop	12.0

Source: Health Resources and Services Administration, Health Resources Comparison Tool, http://arf.hrsa.gov/arfdashboard/HRCT.aspx, last accessed 12/09/2016 (except where noted)

Urgent Care

- Reid Health Urgent Care
  109B E. Washington-Jackson Rd.
  Eaton, OH 45320
  Source: Reid Health Physician Associates
- Preble County Medical Center
  24/7 Emergency Care
  450-B Washington Jackson Rd. (Kettering Health Network 2017)
  Eaton, OH 45320
  Source: Kettering Health Network

Dialysis

- Davita – Eaton Dialysis Center
  Licensed capacity: 13
  105 E. Washington-Jackson Rd.
  Eaton, OH 45320
- Fresenius Medical Care - Preble County Regional Dialysis, Inc.
  Licensed capacity: 15
  450-D Washington Jackson Rd.
  Eaton, OH 45320

Source: Ohio Department of Health http://publicapps.odh.ohio.gov/EID
U.S. Centers for Medicare & Medicaid Services

Nursing Homes

According to the Ohio Department of Health, there are 4 licensed nursing home and residential or assisted living care facilities in Preble County.

1. Eaton Grand Manor, Eaton, Ohio, 45320
   (Licensed capacity: 21 residential/assisted living beds)
2. Greenbriar Nursing Center, Eaton, Ohio, 45320
   (Licensed capacity: 74 (nursing beds)/36 (residential/assisted living beds)
3. Heartland (Maple Gardens Rehabilitation and Nursing Center), Eaton, Ohio, 45320
   (Licensed capacity: 100 (nursing beds))
4. Vancrest Health Care Center of Eaton, Eaton, Ohio 45320
   (Licensed capacity: 82 (nursing beds)/66 (residential/assisted living beds))

Source: Ohio Department of Health http://publicapps.odh.ohio.gov/EID. Accessed 06/09/2017

Mental Health Care Capacity

In 1988 Ohio passed the “Mental Health Act” which stressed the importance of community treatment rather than institutionalization. Community Mental Health Boards received even more authority to plan and develop local systems of care.

In 1989, Ohio recognized that a cabinet level department and local community control could best serve the recovery needs of Ohioans with alcohol and/or other drug addictions. Counties throughout Ohio

reengineered their existing Community Mental Health Boards to also plan and oversee alcohol and other drug services.

The Preble County Mental Health & Recovery Board (PCMHRB) provides mental health, substance abuse and recovery services to Preble County residents by contracting with local agencies to provide mental health services. PCMHRB partners with four agencies and three independent licensed local clinical counselor firms.

The table below presents information about the mental health and addiction services provided in Preble County. More residents receive mental health services than addiction services, which is a common occurrence across mental health and recovery boards.

Table 26: FY 2016 Individuals Served in Public Behavioral Health System, by Diagnoses

Service Type	Mental Health Diagnosis	Alcohol and Other Drugs	Dual Diagnosis	No Assessment	Total	Rate per 1,000
Preble	791	213	197	148	1,349	42.3

Source: Ohio Department of Mental Health and Addiction Services

Community Participation and Input

The Applied Policy Research Institute facilitated a series of steering committee meetings. Through these meetings, stakeholders provided information on their county's top health issues, strengths, challenges and trends. Stakeholders provided feedback on their county's themes and strengths and forces of change through participation in one of steering committee meetings or an online survey. The feedback gathered from community leaders and residents is used to inform the selection of county-level priorities in the county health improvement plan. The findings from the Community Themes and Strengths Assessment and the Forces of Change Assessment are discussed in more detail in the sections below.

Community Themes and Strengths Assessment

Q1: What do you think are the most important traits in a healthy community?

The top three responses from community members when asked, "What are the most important traits of a healthy community?" are access to adequate and affordable health care, nutrition / physical activity, and social environment. Together these three responses made up about half of the total responses submitted. Two other categories of responses that are worth noting are educating the community and mental health and substance abuse. Finally, other concerns for a healthy community that were mentioned by a handful individuals include a clean and safe environment, preventative care, and economic environment. Each category of responses is described in further detail below, and the full list of results on this survey question can be found in the addendum.

The top-ranking response for traits that define a healthy community is summarized in a category that emphasizes the importance of having access to adequate and affordable health care. Accessibility to health care is the number one response in this category, and it includes the need for access to medical

professionals, emergency care, and health care facilities. Some responses emphasize a need not only for access, but also the need for care and resources to be high quality. Affordability is the other half of this category, and community members stressed the importance of being able to afford insurance payments.

The second ranking category, nutrition / physical activity, provides a variety of explanations for what defines a healthy and active lifestyle. The most frequent response for this category is having access to exercise opportunities, such as walk parks, gyms, indoor and outdoor fitness facilities, and wellness activities. Community members also emphasize a need for proper dieting and eating more nutritious foods. The need for easily accessible and affordable healthy foods and focusing more on local farmers markets are other important traits for a healthy community noted by the respondents.

The next response that appeared most frequently in the survey question about the most significant traits in a healthy community is the importance of the community's social environment. One method suggested by multiple individuals is active involvement in the community through volunteering. Another option proposed is going to church, and having active churches with community outreach. Other social environment related responses in the survey include having strong family values and good role modeling, offering social support systems, informed and involved citizens, and community organizations that promote individual well-being.

The final five response categories did not produce as many responses as those previously discussed, but they are still important for the existence of a health community: educating the community, a need for mental health and substance abuse services, a safe and clean physical environment, preventative care, and a good economic environment. According to participants, good schools and libraries, places for children and senior citizens to spend time in enriching activities, and communication on available resources are all important aspects of educating the community. A sign of a healthy community is being drug-free and having adequate mental health facilities. Respondents explained that a safe and clean environment has clean drinking water, low crime, and feeling safe when playing at parks. Regular checkups and yearly exams along with education of the importance of preventative care are traits of a healthy community. Lastly, a good economic environment includes a low poverty rate, high employment rate and a higher average income as described by the community.

Q2: Name one thing in Preble County that stops people from being healthy.

Similar to the first question of this survey, respondents' top two answers for the question that asks them to name one thing in Preble County that prevents people from remaining healthy is affordable nutrition /physical activity and affordable and accessible health care. The highest response regarding nutrition/ physical activity is an improper diet, bad eating habits, and lack of exercise. According to respondents, distance to doctors, the continuing rising cost of health care, insurance premiums, and availability of doctors all stop people from being healthy.

The third most frequent response category for what stops people from being healthy in Preble County is mental health and substance abuse. Respondents cite the heroin epidemic as a contributing factor that stops people from being healthy and emphasize the need to eradicate the problem. Lack of access to mental health services is also mentioned as a barrier that stops people from being healthy.

The final four response categories include motivation and accountability, education, economics, and a clean and safe environment. Some respondents acknowledge that poor choice and inappropriate lifestyles contribute to them not being healthy. Lack of education about health practices, living in a very poor county, and poor air quality are also indicated by respondents as being barriers that prevent people from being healthy.

Q3: Name one way we can improve people's health in Preble County.

The top ranking response categories for naming one way we can improve people's health in Preble County are affordable and accessible health care and nutrition / physical activity. Many responded that making health care and health insurance more affordable would improve the health of people in the county. Other suggestions include more choices for healthcare providers, a free clinic, and more doctor availability. In regards to nutrition / physical activity most responses focused on eating healthy and exercising more. Some respondents went further to explain that availability of places that support a healthy lifestyle and resources to provide it are also needed to improve people's health in Preble County.

Educating the community and mental health and substance abuse are the final two categories. Respondents suggest that communication on available resources, effective education and activity programs, educating on preventable illnesses and providing information about the health department can help improve people's health. In regards to mental health and substance abuse respondents emphasize providing rehabilitation and counseling facilities, having drug and alcohol abuse prevention programs accessible in schools and to families within the community, and getting rid of the heroine epidemic.

Community Assets and Resources

The MAPP assessments captured information about the local public health system and the community themes and strengths. Information from those assessments is used to summarize the assets available to improve health in Preble County.

- Assets
    - Kettering Medical Center's ER provides in-County emergency medical care.
    - Head Start helps families acquire insurance, home doctors and dentists; provides a mobile children's dentist.
    - School districts
    - Preble County Department of Job and Family Services/Ohio Means Jobs
    - Preble County Public Health has a clinic that provides preventive care, reproductive health and immunizations.
    - Preble County Development Partnership is working to attract jobs.
    - YMCA/YWCA
    - Preble County Park District
    - Many organizations provide transportation to clients in need.

Groups Working to Improve the Health and Quality of Life in Preble County

- Chronic Disease
  - YMCA – Programs for health needs, diabetes prevention, live strong (cancer program)
  - Preble County Public Health provides preventative care
  - Essence of Wellness (EOW) – Educate patients individually and in groups on various topics, workshops (e.g. natural ways to reduce pain/inflammations/balance/falls). They are working with individuals as well as families to promote a healthy lifestyle.
- Mental Health and Addiction
  - Mental Health and Recovery Board conducts regular assessments of community need for mental health and addiction services. They also provide education and trainings, refer people to services and offer services.
  - Preble County Substance Abuse Prevention Partnership (SAPP) uses prevention activities to reduce the use and abuse of alcohol and other drugs.
- Maternal and Family Health
  - YMCA/YWCA
  - Preble County Jobs and Family Services
  - School nurses – report communicable diseases
  - Preble County Council on Aging
  - Head Start – nutrition assessment on each child. Health results and education are sent home with family.
  - Success program – Refer families to agencies that can help with health issues
  - Women, Infants and Children (WIC) – Participate in Miami Valley Breastfeeding Coalition.
  - Health Department – Prenatal and reproductive health clinic and programs.

Forces of Change Assessment

The national model we are using for the strategic planning process, called MAPP,[92] recommends four different health assessments to provide a comprehensive picture of health in the community. The Forces of Change Assessment is one of the four assessments, and its purpose is to identify the trends, factors, or events that are likely to influence community health and quality of life, or to impact the work of the local public health system. As respondents answered the questions below, they were asked to be sure to consider all types of forces, including:

- Social
- Economic
- Political
- Technological
- Environmental
- Scientific
- Legal
- Ethical

Example: A major technological change in recent years is the use of social media to communicate. (This statement responds to question "a" below.) The opportunity created by this is that new technologies can connect to populations in many ways to convey important health information. (This statement responds to question "d" below.) The threat posed by that is that misinformation is readily available and not everyone has equal use of technology to obtain information. (This statement responds to question "e" below.)

What has occurred recently that may affect our local public health system or health issues in our community?

- Zika Virus (2)
  - Zika scares, with disease moving inland
- Heroin/opiate epidemic (3)
  - The heroin epidemic has been affecting the health and lives of many in the Preble County community in huge ways recently. Not only does it threaten the physical health of users and their families, but it is connected to mental health issues and affects the social well-being of our communities. Additionally, drug abuse of any kind can threaten families' economic well-being, as well as the economy of the community.
  - We continue to see a rise in the opiate epidemic and a recurrence of methamphetamines in our community. Our community has limited resources for treatment of addiction and a huge stigma surrounding this issue and many other related health issues.
- Bed bug issues
- Changes in healthcare

What may occur in the next 3 to 5 years that could impact health issues in the community?

- Enemy attacks
- Change in healthcare (2)

[92] Mobilizing for Action through Planning and Partnerships

  - Loss of affordable care act, increase in insurance costs, lack of adequate medical care and transportation, continued dependence on pain medication, drugs to assist addicts such as Suboxone and methadone, birth of babies born with drugs in their system - what will be the long term effect on those children?
  - Further changes in healthcare rates, changing roles of healthcare providers
- Heroin epidemic (3)
  - Depending on how the heroin epidemic is handled on a state and local level within the next few years, the health issues in the community could either improve or deteriorate. The epidemic could become worse and continue to negatively impact Preble County. Children within our communities are already being affected by this epidemic by experiencing trauma from parents, guardians, or other family members or friends overdosing and being exposed to drug use. Our young people in high schools could start trying the drug at increased rates. This long term trauma that children are experiencing could have extremely negative outcomes on their futures.
  - Heroin/drug control
- The work that is happening around reducing stigmas, mandates from the State around treatment and supports of various health issues, and increased education should help to reduce negative impacts and promote positive impacts.

What forces are occurring locally, regionally, nationally, or globally that may affect health issues in our community?

- County Government
- Zika scares with this disease moving inland. Bed bug issues.
- Heroin epidemic
- Low wages - people relying on food banks and SNAP; income guidelines for SNAP assistance remain the same for the last 10 years. Availability of healthy food choices in our county - it is often hard to find fresh produce at the local groceries and even more difficult for those with lack of transportation and living in outlying areas. No regulation on GMO's and high fructose corn syrup, additives and chemicals used in our food and dairy products, overwhelming obesity in our nation with no end in sight.
- Poverty is a huge factor in health issues within our community. The global, national, state, and local economies all have an influence on unemployment rates and household income, which are factors related to poverty. Right now, Preble County communities are faced with high rates of poverty, especially among families with school-aged children, affecting their health and well-being.
- Safe, reliable, and affordable housing is a force locally and regionally that affects health issues, especially the health of low-income individuals and families. Preble County lacks safe, reliable, affordable housing, although with the opening of Eagle's Point, this may change and be a positive force within the county.
- Transportation (or lack of) is a force locally and regionally that affects health issues in our community. Often, families are unable to attend appointments, community events, or school meetings because of lack of transportation. The county is currently working on providing transportation to mental health agencies within the county, so this may improve health issues if this transportation service is used by the people who need it the most and is reliable.
- Education is a driving force across all levels that affects health issues within every community. Lack of education in Preble County on issues such as reproductive health and sex education and mental health could have negative effects, while strong education on suicide prevention and drug prevention in younger generations could have positive effects.
- Politics (2)
    - The political atmosphere and policies from a federal, state, or local level can affect health issues as well.
    - As the Republicans take control of the national government, there will be impacts locally to health issues. I am not sure what that impact will be. There is a possible impact to the legalization of abortion and the positive/negative health impacts of that.
- Stock market, interest rates, cultural change

Consider the opportunities and threats related to each of the forces you identified above. What characteristics of Preble County and/or the State may create new opportunities?

Figure 75: Preble County Public HEalth Prevent Zika Virus

- More information to residents regarding Zika and bed bugs.
- Transportation
- More local farmer's markets in the outlying areas; classes on canning and gardening.
- Review of the federal SNAP program and adjustment for the economy.
- Increased parks and recreation areas to encourage healthy lifestyle, addition of a bike trail in the county to add to our healthy lifestyle.
- Increased funding from the county and/or state could create new opportunities for affordable housing, transportation, and education, which in turn could reduce the poverty rate within Preble County.
- More opportunities for people to detox from drug addiction and programs to maintain sobriety.
- Different politicians at the state level could influence the increased funding into our communities and could create new opportunities, such as new programs for transportation and education for example.
- Focus on health outcomes in the community, create public knowledge source
- There are County and State initiatives that will create new opportunities for education, treatment and a reduction of deaths related to overdoses due to Narcan. As a County, we need to continue to push for an increase in education and prevention in various health related areas.

What characteristics of Preble County or the State may pose threats?

- Too conservative, lack of regard for people who live differently than those who can provide for themselves, too much inactivity, cost of the YMCA membership is too high for low income families, no transportation to outside sources for fresh produce
- Lack of funding (3)
    - Decreased funding from the county or state into the Health Department or other social service or health organizations would pose a threat to the well-being of individuals and

families within Preble County. This decreased funding could potentially diminish programs' services or even cause programs to be shut down.
    - The State is pushing for a complete continuum of care around the opiate epidemic without adding dollars to that mandate. This could cause disruption in other mental health and addiction treatment services which pose a threat to continued health in many areas.
- Lower income community, jobs leaving

What may occur or has occurred that may pose a barrier?

- Lack of support for bringing in new ideas to the county, new opportunities for recreational sites, apathy to the fact that the local grocery stores do not provide adequate fresh food causing those who can to shop outside the county.
- Budget cuts
- Barriers to solutions for the heroin epidemic could be lack of local funding for prevention, education, and mental health and recovery services. Additionally, the lack of community awareness and acceptance of the epidemic could be a barrier.
- Inability to replace current health department levy, economy
- Possible barriers might be political changes, barriers to obtaining services due to stigmas and cultural beliefs and lack of transportation to keep appointments

Where might the County tap into new resources to address health issues and overcome barriers?

- Washington DC
- New resources could be found in adjacent counties, such as Montgomery or Butler, who have programs to address health issues that could expand to Preble County.
- Grants, local volunteers, general fund
- The Health Department or other community organizations could apply for federal or state grants that would help fund new programs for Preble County to overcome health issues, such as the heroin epidemic.
- More funding from the state or local government

Key Informant Survey and Focus Group Findings

Once Around Shop (Food Pantry and Thrift Store)

The Wright State University (WSU) researchers visited Once Around Shop to obtain feedback and insight from locals on healthy living in Preble County. A total of 9 participants shared their thoughts. A survey sheet with 7 questions was used where participants could fill out answers themselves as well as discuss them with the WSU researchers.

The first question asks, "What does 'Healthy Lifestyle' mean to you?" The majority of the participants (8) answered, "Eating right," is a way to stay healthy. They expanded on this with comments that healthy food includes fruits, vegetables, and protein, and that portion control is key to any healthy eating regimen. Other responses that about half of the group agreed on were exercise, getting sleep, and low stress. Some participants further clarified what they meant by "exercise," which includes maintaining a physically active lifestyle and working out regularly. One individual stated that exercise should occur every day for at least a half hour, even though she does not do this; and walking is a good option. Other answers that participants shared were "getting regular checkups" and "being able to do things you want to and have having time to do them."

The second question asks, "What do you do to stay healthy?" Four individuals said getting enough sleep was key, while three stated eating right was also important. The most common response to this question was that people stay healthy through exercise and physical activities. Responses vary on how each person stays active in their own lives. One person stays "very active by working on an abandoned house recently purchased," while another is "on my feet all day cleaning the school, which is a physical job." The local YMCA is a popular destination for exercise, and two participants explained that their free membership and going to "the Y" is how they stay healthy.

The next three questions are a sequence. First, Question 3 asks, "What are the top health issues you are seeing facing your community (among the people you know or people in your neighborhood)?" Three responded that drugs and slum lords are a big issue. Others also included accessing healthy food, finding a doctor who will take your insurance, having insurance for a dentist, and adequate transportation as important problems that require attention. One person answered that mental health is a top health concern facing this community, but "going to church helps."

Question 4 asks if the participants themselves have experienced any of the issues they mentioned in the previous question. Five responded "Yes" while four responded "No." Finally, the fifth question asks where participants turn to for help if they experience any of the issues they listed. Some responded that they have nowhere to turn because "the City doesn't want to be involved in taking care of the dilapidated house next door [to respondent's home]," and because they "can't afford going to the dentist." Two respondents turn to their family doctor, while one listed Lutheran Services, and another said the Emergency Room.

The sixth question asks, "What health services do people need that they cannot get?" Three respondents said, "Dentist is a service people cannot get." Two others mentioned drug addiction services. "We have drug rehab, but I have not heard good things about the rehab services being effective. We do have a drug problem here." One participant's son attended drug addiction services in

this community and did not have a positive experience. One other participant responded a service she needs is insurance that will take her husband's pre-existing condition. Other respondents are on Medicaid, and they indicated that Medicaid covers all their needs.

Lastly, the seventh question asks, "What can the community do to help improve your health?" There were a range of responses to this question. "A health issue is the dilapidated house next door [to mine]. The City doesn't want to be involved…There is no property maintenance ordinance and it's full of water so mosquitoes are prevalent…It is even affecting the health of my dog due to mold, fleas, and asbestos. This is a public health issue." Another respondent finds that "lower income people have more problems." This same respondent thought that senior citizens [have access to services] with Meals On Wheels, the Senior Center, and others amenities. Senior help is available if you know about it." Someone else made a similar point about making people aware of services, "People don't know there is help, like transportation, and some can't afford it." Another participant brought up another viewpoint, "I'm self-sufficient, but I see others use their SNAP card to buy chips and other unhealthy food, then we have more fat, unhealthy people to provide health care to. Health care doesn't mean going to the doctor for a cough. People overuse the system and we have enabled this through too many programs. People have found they can make more money collecting public assistance than in a minimum wage job." One other participant said, "The #1 issue is drugs, so counseling people to help them get off drugs would help, as well as help for mental health issues."

Substance Abuse Prevention Committee Focus Group Session

The goal of the Substance Abuse Prevention Partnership is to provide education and prevention. They come together as a community to determine what they can do to help address the heroin epidemic. It focuses on any and all substances, including alcohol and other drugs.

1. **What are the top concerns that you see this committee or the population struggling with in the coming years?**

Lack of Inpatient Residential Treatment

"I think one of the main issues that we face is lack of residential treatment. We have made some steps in the county, but it is lacking with the magnitude of the problem. "

"We just opened a 16 bed residential treatment facility for women, and a fiscal year 18 goal is to provide a certain number of beds, not sure how many yet, for men. Otherwise, the people in this room work with others to find placements out of county that don't have any cost to the family. They work really hard to do so. Our outpatient professionals work really hard to support people that would benefit more from being in residential treatment, but with no placement, they work really hard to do outpatient treatment."

"I have a question/clarification. A mother of a son that had a heroin addiction explained to me that because they lived in Preble County, and because there isn't a residential treatment facility in Preble County, that funds like Medicaid were not available, so it would be out of pocket to go out of county. Is that true?"

"Every person that is covered by Medicaid in Ohio can access any facilities that accept Medicaid and have openings. Those facilities will accept residents from any county."

"There are some facilities that only accept Medicaid insurance."

"Medicaid does not cover room and board, which is expensive. Room and board is between $135 and $210 a day. But there are placements that will take Preble County residents without charging them room and board and/or find scholarships for them."

"Medicaid does not cover room and board, but I think when Medicaid changes I think there will be some change to that."

Transitioning back into Society

"As a recovering addict myself, the biggest stumbling block we have is rehabilitation and moving people back into the community. My experience was every time I had been locked up went to a halfway house and treatment center I always came back to the same environment, doing the same thing, and got caught up in the same situations. This last time when I came out here, I was involved with the circle of reentry program. I was involved with people I normally would not have communicated with or built relationships. The professional part, the employment part, the counseling part and living in recovery. I am doing outreach with the jails, and the first question these guys are asking me is, 'Where do I go from here?' And the thing is we don't have the resources or the means to fully engulf them into reentry and take them out of their typical environment to change the way they think and the things they do."

Jail/Court System

"I got to attend a Mike DeWine session on fighting the drug epidemic and he said that is one of the most vital parts of this is we can't arrest our way out of it. People are getting arrested, they go into jail to basically detox. The average hold is 3 to 15 days. They get out and they do the same thing. That's when they say 70% of the deaths are happening from people coming out of jail, because they haven't been sentenced to a recovery center or a detox area."

"Originally the court had asked people to come together to identify some short falls in the system. One of the biggest things we came up with was if someone gets arrested and then its 6, 7 or 8 months until their case gets disposed of through court, in that 6 or 7 months you have people reoffending. The prosecutor's office did step up. They are now doing a lot better job at identifying people that qualify for treatment with a conviction and they are fast tracking those people instead of leaving them in the system for 6 or 7 months, which has been a positive thing I think."

Outreach and Education

"Our best bet right now is getting into the faith based communities because within our churches they reach 80% of the community."

"The prevention part is the most vital piece, but everyone wants to start at junior high or high school, but you really need to start in kindergarten. Because if you're talking to these kids about drugs in 7th and 8th grade they've already seen it in 5th and 6th grade. That's from my experience, I completely believe that because I was one of them."

"Getting more into the jail system to talk to those folks."

"Last year, the town hall meetings allow us to go to the community to talk about the problem. There are quite a few people who see ten seconds on the news at night and that's all they know about the drug problem. Something we all learned from the town hall meetings is there are a lot of people who have dealt with this, have a family member who is or has been addicted, and they have no idea where to go with it. At the town hall meetings, we've been providing information to them and people to talk to afterwards if they have questions and right now we are doing some student outreach, too. We are going to do more focus groups, stop in at a sports practices and talk to the basketball team for 5 minute. I agree that we need to start earlier, but hopefully we are getting the message across to people."

2. What progress has been made in the last couple of years?

Collaboration and Cooperation

"I think that we've bonded as a community. Children's Services, the Mental Health and Recovery Board, other partners, probation and the courts. We've all come together and a lot of times people don't realize what we're doing behind the scenes to try to help make a difference."

Miscommunication/Misperceptions

"There are a lot of accusations flying around that nobody's doing anything. That's not at all accurate. I guess they don't have any knowledge about it or don't ask."

"I think one of the problems is the heroin problem is getting worse. So, they see it on the rise and they think nobody is doing anything to stop it. We can't stop it. If we could stop it we would."

"We do a lot and we need to do more, but what do we do? I get calls daily and I'm a nobody. I lost a nephew in 2014. I get calls daily and I feel like I don't know what to tell them."

"Do you really think that holding up a poster outside of a court house is really going to make an addict stop?"

"There was a little group standing at the courthouse one day with signs that said, 'Stop heroin' and 'Get heroin out of our community.' And I got fed up with it. I was not kidding when I said half the county has no idea how bad this is. I get a phone call every single day of somebody that has overdosed. Even as a recovering addict I don't know what to say to you because everyone is different. No, I don't think people holding up signs is going to get people to stop doing heroin, but it will get the community's attention. The problem has been around for a long time. If you put my using time with heroin together with my clean time with heroin, it's been over ten years. But now [with the additives in it] it's killing people faster and more. So everybody wants to blame law enforcement and this that and the other. No, they're doing all they can do. Now the community needs to get up and become more proactive."

Resource Kits to Hand Out

"If we got a resource kit to all the doctors, because one of the things that we talked about was that if there were more points of contact, even if all the doctors had this little kit and said here's what you can do, here's where you can go, including a list of all the churches, with a point of contact. There needs to be more places that can direct people where to go for help."

"We have detox kits. It's just a matter of getting people connected and educated on how to use the kit. A guy had his kit, but was afraid to use his kit, so he kept using heroin."

"Some of what I hear in our church alone is that there are some people that don't have any clue about the opioid epidemic. When people are affected by it personally, it does motivate us, but then it looks so huge. It is helping people find small, but tangible ways that they can be a part of the solution. Like the resource kits that may seem like such a small thing in the eyes of somebody, but it is one piece of the puzzle. As a church, we're trying to get a sense of what piece we can we lay into the puzzle. We are trying to find ways that people can help, even in the smallest of ways. A lot of people doing that is going to make a difference."

"This is a small area, like Camden. I get a phone call from a mother and she says, 'You've got to do something, my son just got out of jail. I don't know what to do. He needs residential treatment and he needs this and this.' I have a hand written paper that I send to them, two pages of treatment places that I know of, places we've sent people. Then you find out that one died, so I go to that funeral. And then a few days later another one died and this is Camden. Three died in eight days. And I went to all of their funerals. And I felt guilty because it wasn't that we weren't doing enough, but I don't know what to do anymore. I send out the papers, but we need residential treatment. We need a program so that when they come out of jail, they don't go home. Instead, a bus picks them up and takes them to a treatment facility. And sometimes I think they should treat this as a war, get the National Guard involved. When 91 people are dying every day in the United States, I don't know why this isn't being shouted from the mountain tops."

Self-Motivation/Resilience to Quit

"If they don't want help, then they aren't going to get it. Their family is not going to make them get it. They have to hit their bottom before they are going to get recovery. And if they don't hit their bottom and they are doing it for someone or because somebody made them they're not going to get it."

"I think we are doing a lot of good things, but the responsibility is on them. We can only do so much."

"The group has to realize we can only do so much. The biggest thing we can do is educate people and hand them information. But other than someone ending up in jail or a court, it comes down to the families' decision and the addict's personal decision to get treatment. I don't know what else we can do besides constant outreach and these resources are out there. I don't know where to go from there."

"Because it has to be something on their part. We can't chase them down."

"I think that's the public misperception. The gentlemen that was in here last time and the group was really disappointed because the overdose rate went up. Well you're doing something, but it falls back on people and their decisions and their families' decisions sometimes get involved."

"We've had people come together to get people down to Tennessee and Kentucky to a homeless shelter that has a residential treatment facility. If you can get them there, drop them off at the door, because they won't be turned away. To keep them there, since it is a homeless shelter is their choice after the initial detox. They have to be willing to stay in the program and that's the hardest part."

"Residential is like putting a Band-Aid on a gaping hole. It is a lifelong process. They are going to have to work on it and change their whole life."

Families Enabling

"We deal with families that enable them and give them money. I realize it's their kids, it's their family, so I don't want to sound cruel and kick them out on the street. That's not what we're saying, but sometimes it's that realization that you're not helping the problem with what you do. We need to stay focused on what we can do, but after that, it's going to fall on that person using drugs and their family. We can provide them resources and point them in the right direction to try to help, but if they don't want the help we don't have a hand to force them, unless they get into trouble."

"That's one of the things we do when we get the phone calls. It is usually a family member and I try to explain that the family member is a problem as much as the addict is. And if they can't understand that and don't start doing something to cut the addict off, then they are just cosigning the death warrant."

Small Window of Opportunity to get Addicts into Treatment

"What I have experienced, we would have people come in and ask to see somebody in our office that they knew would be compassionate and at that moment they were ready to go to treatment. I've been on the phone with everybody trying to find some place open to take them. That's where we hit the road block because there wouldn't be any place at that moment and they wouldn't come back the next day."

"There is a very small window."

"A lot of treatment centers want them detoxed before they will take them."

"I am grateful for Sojourners. They can detox there. I know the women in the jail I see they don't know how to get clean and sober. If you have any chance at all that is where your chance is."

Accountability

"The question I get is, if there is an addict who overdoses what is the consequence?"

"What is the consequence of someone who has a heart attack because they eat poorly? But we save their life at the hospital. That's what I always try to tell people. I don't care what's wrong with us physically, usually it is due to our choices and it is the same with an overdose."

"Are you asking if they should be prosecuted?"

"Some cities are doing that."

"We have to keep educating the community on this. You're not going to reason with someone who's in active addiction. They can't reason because their brain is full of drugs, so they can't think through what you and I think through."

"I just talked to the chief of the fire department and I ask how much Narcan have you given somebody? And he said a whole bag and there is a lot in a bag."

"No one wakes up and says 'I want to be an addict.' They can't stop. They want to stop and there is a part of them that wants to stop, but they just can't. It's like telling you to stop breathing."

"So how do you hold them accountable? This is one of those things that is my passion, being here. I work full time, I raise my children, but every opportunity I have I to give back to my community. I am

here and I'm involved. The story of my life is an open book. I got sober in this community, even though I wasn't getting arrested and doing all my crimes, but I came back to this community to raise my children and I met my wife. It is because I have a passion and I have a responsibility to be a productive member of society. I can take an hour vacation to get off work and come to this meeting and speak, and if I save one life then I've done my job. The thing is we can hold them accountable and continue to build up a wall against them or as a community they've been convicted, they've overdosed, they've done all these things and once they have the opportunity to recover and if they do recover they will become productive members of society and want to give back."

"We just try to love them until they learn to love themselves."

Keeping Addicts Accountable through Mentors

"Isn't the best accountability each other though? That's what I've been hearing your best accountability is one drug addict to another going hey we're in this together and you're not screwing this up. I'm not going to let you."

"That's what I had. I had five men showed me how to live life the first year. I was able to get my daughter out of Children's Services, I was able to get a tax paying job, and I was able to go back to the jails to share with people that we don't have to continue to do this. There is another way to life. The thing was is I had all those people involved for that first year. And that's what I try to do is surround them. If I see somebody that's tasted recovery and they haven't shown up for a few days, then I'm calling them saying, 'Where are you? Are you okay?' And I can tell by their text if they are high or not. It is staying active in people's lives and going out. It is my responsibility. As a result of what I've done to cost the community tax dollars for investigations, arrests, and putting me in prison is I have to give back. I have to be out there on the firing lines, because I know how to help them when nobody else can. Whether they're overdosing or they are at that breaking point, that's my responsibility."

Opening Residential Treatment Centers

"100 people showed up to a zoning meeting to get approval for a residential treatment building, and that is huge to have the community coming together and rallying around."

"We are trying to open a sober living house in July for women that has three rooms that can be turned over yearly. Again, we need a men's house, too. Zoning is always an issue. No one wants this in their community, but they know we need it."

Pregnant Women Using

"We are working on a grant for pregnant women specifically where we would send them down to Sojourner in Butler County because our facility will only take them up to three months or so. We're trying to identify funding opportunities. We feel as a board we care about people who are struggling with addiction, but we really care about their children, too. And we want to make sure to help them have the healthiest babies possible. We really need to put more of a focus as a community on women who are pregnant and using drugs. And they can't stop and we need to give them all the support they can have."

Children with Parents that are Addicts

"What I'm seeing in the Junior High and High School is we got 15 revolving kids in our majority group and about 10 of the kids have parents who are in an addictive situation. So who is caring for those kids? How are we going to break the cycle? A little boy in our group last night talked about how his dad is an addict and he doesn't know what to do about it and he's tired of trying."

"I went to the jail recently and there were 11 women and 33 kids attached to those 11 women. As a community we need mentors, we need counseling for these families, we need somebody to be looking after the kids and making sure they're okay."

"Children's Services cannot do it all."

"What we do is fabulous, but there is this whole other spectrum of our society that needs support and I feel like we are really failing. We are spending a lot of energy and time on addiction, which is great. But what are we doing for those families? What are we doing for those kids? What are we doing for the grandparents who are supporting?"

"Especially, because they [children] are so close to it and they are right on the edge of that cycle and they are going to fall right into it, because that's all they know. That's all they've learned. So especially if we can intervene to break that before it happens."

When I spoke at these Junior High schools, I spoke to 7th grade classes and I had a bunch of the young men and women sharing with me 'This is what is actually going on.' One young man said that his mom and dad are both in prison, he came from a foster home in Dayton and here in Preble County he is living with his grandma. And he says, 'I just can't get away from it.' I said, 'Stop hanging around them kids.' He said, 'It's not the kids, it's my grandma.'"

"40% of these kids are being raised by the streets. So how do we get them plugged into the programs in school? And be able to get them funded to stay in sports and stuff like that to have the mentors. This is where the faith based communities come in."

"When I speak to kids I tell them you have the opportunity to raise the bar. You don't have to go to the depths. You have a choice and that's the thing. Society is giving younger and younger people too many choices and rights and not enough discipline. That's what I tell those kids' family members you need to know what your children are doing. It is not the police department's job. They are doing everything they can. They can't discipline your children the way you can or get involved the way you can. It's knowing. It's our responsibility as parents to know who their friends are and where they are."

"The grant was due on Friday for Ohio Children's Trust Fund's money and we're putting it in for parenting groups. We are going to start up in Darke, Miami and Preble Counties. We're excited. We hope that we get the money for it, but it's parenting for preschool and young school aged children and that's where you can start breaking some of that violence and abuse. Often the violence and abuse are linked to these other issues as well. It gives us a place to teach parents how to be a parent, what is appropriate discipline for the age level of the children. So fingers crossed that we do get that grant. And we can start the programs and then expand it to other areas. We are trying to get the funding that we can."

Business Community Involvement

"Once we do get parents into recovery, how do they take care of their kids? Because they are unemployable. That's where we need the business community to step up. This problem is affecting your business, your insurance, everything. Your costs are going up because of the epidemic, so how do you start getting informed and knowledgeable. The only wrong thing they can do is nothing. You have to get plugged in and involved."

Marijuana: good idea, bad idea?

"I think it is a big deal and I think it is part of the problem. If you want to compare it to alcohol fine, I don't care. I am really conflicted on how we've gotten to this place. Is it part of the problem or not part of the problem?"

"A drug is a drug."

"Whether we legalize it or not it is still a prescription drug. We have a problem with Vicodin, everything. A drug is a drug. It doesn't matter whether it's legal or illegal: we have a drug problem."

Strength of Drugs

"I think part of the problem of why we are seeing so many overdoses and deaths is because the drug, the heroin, the fentanyl is so bad that users aren't able to hit rock bottom. They are dying before they get there."

"They are coming back. It's a game to them. So what's it matter?"

Shock Factor to Gain Awareness

"I think we need a shock factor, like they do with prom and the car. The movie, Chasing the Dragon, if you have not seen that that might be something to be shown. I went by a Catholic Church one time and there were all these crosses and it was for kids that had been aborted. I have often thought what would it look like if it was just Preble County and we had a cross sitting out for all the lives lost to drug overdoses since a certain time. We can have the whole community see this is overwhelming. People would drive by that and it would be a shock factor for the community to see."

Using Small Groups to Gain Awareness

"I think attacking it from all small groups, not just the kids' small groups, but also like PTOs or other small groups speaking to parents and letting them know those types of things."

"I was one of those [parents] and I did not want to know anything about any of this. I liked my little bubble. Unless you hear about it or you have people speak to you in a small group you can ignore it all you want. It's not touching you."

3. How is this community measuring the drug epidemic? What data points are you using to track this?

"I just sent overdose statistics out to this committee. I don't know if the data go back to 2008, but I can get them. The 2016 number was 16. We lost 16 people in 2016."

"Ohio is the 7th largest state by population, but in 2014 Ohio had the 2nd highest number of overdose deaths. In 2015 3,050 Ohioans died from unintentional drug overdoses, which is a 20.5% increase from 2014. It continues to increase at that rate every year. They said 2017 would be the worst we've ever seen. And the worst is yet to come. This is what the federal government information is saying."

Who pays the Narcan bill? Is that the tax payer money? Can we track how much Narcan we are using?
"Well every bill is paid by tax payers."

"We don't pay any local money."

"It is state money."

4. Any other ideas or topics of either problems or resources you think we forgot to mention?

Strong Recovery Community
"We have a strong NA and AA community."

"We have a life recovery outreach. We do a few meetings with Sojourners and the jails, we do NA and AA groups that we run to make sure to keep every avenue open. So we have the biblical, the spiritual, everything. I use all the tools, so I'm at war with this."

"And part of outpatient is that they are required to do so many NA/AA meetings per week."

"We've tried to implement the mentor part, but when they call and see what I tell them they have to do their phone breaks."

"Heroin kits are going to the ER here. They want them because of how many people survive an overdose who come to our ERs."

A part of the heroin kits tells them what to do next.

"We need somebody who is a former addict to help lead the classes, so they are right there when they ask questions. Because I don't know what that is like. I care about them, but I just don't know."

Church Involvement
"A church could be a Hope Spot."

"A lot of churches are reluctant to have addicts in their church."

"In Camden, we had a whole prayer service and everybody in the community said a prayer for the addicts; they had a lot of people show up."

"It is very important for the churches to help, but if the churches are not together we are not going to come do that very well. We can come as individual churches but that is not going to accomplish much. We had a meeting and had representation from 13 churches in the county; we had churches from Camden, Eaton, West Alexandria, etc. We talked about what do we need to be doing? I believe that is the biggest question for churches. I know it may sound really silly and why don't you guys know what to do? It is such a big complicated issue, and I am not a professional, I don't know how to counsel people, I've never been an addict, but I want to help. There are people that come up to me weekly that say, 'please tell me what I can do.' That's why we need to find out, what are some tangibles? One of the things we talked about was having an overall training and having churches from all over the county send representatives to this training. Trainings for people to lead an AA program or Celebrating Recovery program, and have those touch points at every church in the county. We are trying to figure this out."

Preble County Service Provider Survey Summary Report

Respondent Background

Twenty-two service providers responded to an online survey to identify the resources and challenges impacting the County as it seeks to improve the physical, mental, spiritual, and social well-being of communities and individuals. These service providers represent schools, health providers, churches, fire departments, legal services, agencies (health department, mental health, job and family services), and senior services providers.

Of the 22 respondents, more service providers serve individuals between the ages of 18 and 59 than any other age group (36.4%), followed by adults aged 60+ (22.7%), youth ages 4-17 (18.2%), and children between the ages of 0-3 (4.5%).

Forty percent of respondents (42.1%) think that compared to five years ago, the way systems that support physical, mental, spiritual, and social well-being for individuals work together has improved. Another quarter (26.3%) believe they remain unchanged, while thirty percent (31.6%) think that the collaboration among systems and agencies has worsened.

Compared to 5 years ago, service providers were asked, "What is the impact of poverty on the people you serve?" A majority of respondents state that the impact of poverty has either remained unchanged (36.8%) or worsened (42.1%).

Challenges and Waiting Lists

The survey also asked respondents how much of a problem it is to access a variety of services in Preble County. The list below is sorted from most serious problems to least. The waiting list presented in the right-hand column indicates the services with the longest waiting lists, according to the service providers.

Table 27: Challenges

Challenges	Moderate to Serious Problem (%)	Waiting List Rank (1 is longest)
Access to public transportation	88.2	4
Mental health care for children age 17 and under	78.6	1
After school programs for children	70.6	5
Affordable housing	66.7	3
Substance abuse treatment for youth	64.3	9
Substance abuse treatment for adults	58.8	9
Mental health care for adults	52.9	1
Certified and licensed child care options	52.9	5
Access to affordable fitness or recreation options	52.9	5
Homeless shelter	47.1	5
Preschool programs	41.2	9
Access to healthy foods	38.9	9
Senior adult services	25.0	15

In addition to the surveyed responses, service providers listed other services that are difficult to access:

- Chiropractic care
- Government sponsored care
- Qualified doctors

Most Important Challenges that the Community Must Rally Around

The service providers were asked what they saw as the two most important challenges to the physical, mental, spiritual, and social well-being that the community must rally behind. This resulted in three categories being mentioned the most: drugs, transportation, and mental health and health care.

Drugs (7 comments):

- Addiction
- Drug Abuse
- Drug addiction
- Heroin/drug addiction and dependence
- Drug abuse, especially heroin

- Drug and Alcohol treatment facilities that are located in Preble County and that are user friendly so that when a person needs these services they can receive them immediately with a streamlined approach.
- Serious drug problems

Transportation (6 comments):

- Access to … transportation
- Transportation (3)
- Lack of transportation
- No county transportation

Health Care and Mental Health (6 comments):

- 1. Poor personal responsibility for health care 2. Community groups (e.g., Senior Center, Rotary, YMCA) need to reinforce healthy lifestyle choices. Example: YMCA Healthy Kids Day supplies junk foods as opposed to reinforcing healthy food choices.
- Mental Health issues
- Mental Health treatment facilities that are located in Preble County and that are user friendly so that when a person needs these services they can receive them immediately with a streamlined approach
- Mental Health services for families

Culture, Community, and Family (2 comments):

- The culture of the community is stubborn and refuses to change
- Family Values

Employment (2 comments):

- Job Retention
- Re-careering individuals that have had challenges in life so that they are employable and self-sufficient to become productive citizens in our community. One of the biggest challenges is getting employers on board to take a chance on these individuals that have had struggles.

Awareness of Resources (1 comment):

- Awareness of available programs and money to fund the programs.

Housing (1 comment):

- Lack of affordable housing

Education (1 comment):

- Early childhood education options

Poverty (1 comment):

- Feeding the needy

Jail (1 comment):

- Jail conditions

Respondents were asked to provide additional comments that will help inform this assessment:

- Cultural and generational issues are largely to blame for many of the issues that plague this community. The inability to take an honest look at the problems and the solutions needed to address them is another.
- Preble County needs to partner with the health professionals to offer services locally, this also comes with the challenge of funding for these services.
- Some services previously listed do not have waiting lists because we do not have access to those services (i.e., public transportation). That is, for example, public transportation is not ranked as number 1 on the waiting list, because public transportation is not available in the County.
- This online survey is not very thorough and 2 of the questions are exactly the same.
- This community has low expectations of itself and very ineffective political leadership...both hold it back.

Best Resources in Preble County for Improving Community Health

Service providers were asked to describe the best resources for improving the community's health, with "health" defined broadly as the state of physical, mental, spiritual, and social well-being for individuals and communities. Service providers were asked to consider a strategic planning framework when answering this question addressing: information delivery/marketing, staff training, programming, agency collaboration, enhancing access to services, physical design, and/or policy change.

Sometimes the comments pertained to the best resources but also acknowledged needed improvements. Sometimes the comments pointed to the best resources in the County. The responses were in the following categories: Agencies/Organizations/Institutions, Collaboration, and Programming.

Agencies, Organization, Institutions (4 comments)

- County health department, mental health board, the YMCA, Schools and Parks, local doctors
- Mental Health Services, Doctors offices, Churches.
- Physical health related - YMCA, grocery stores, health professionals (e.g. chiropractors, medical doctors), sports teams, swim pool (aquatic center), built environment (e.g. sidewalks, parks, bike racks) Mental health related - Psychologists, social workers, counselors Spiritual - Churches Social - Service clubs (e.g. Rotary), senior center, YMCA, library, two art centers, and schools (e.g., athletics, PTO, plays, theater - performing arts)
- Public Health, YMCA, HIT Foundation, Mental Health and Recovery Board, Job and Family Services including the Ohio Means Jobs Center (Job Center), Kettering Emergency Center (ER), Sojourner Recovery Center, YWCA, Council on Aging

Collaboration (2 comments)

- Agency collaboration and avoiding duplication of services. Staff Training about other agencies (if the staff working with the public doesn't know what services are available people can get shuffled around).
- Agency collaboration with emphasis on bringing services to the people of the community.

Programming (1 comment)

- Better programming and services need expansion in mental health. More funding is needed in most all aspects of healthcare and better doctors

Other (2 comments)

- Political leadership evidencing an interest in health as defined
- Traditional Family Structure

Discussion and Conclusion

Purpose of a Community Health Assessment

A Community Health Assessment (CHA) produces comprehensive information about the county's current health status and needs. In this case, the CHA describes the health of Preble County residents by presenting a broad analysis of factors which impact health status. The CHA also addresses health disparities (that may be found by age, sex, race/ethnicity, etc.) as well as the social determinants of health that contribute to health status. Social determinants include socioeconomic status, social support, safety and violence, and the physical environment. Community members and partners are engaged to collect and analyze health-related data and information from a variety of sources. The goal is to inform community decision-making and the prioritization of health problems, improve collaborative efforts, and assist in the preparation of planning, policy, and actions to improve the health status of all Preble County residents.

Vision and Values

Vision of a Healthy Preble County: An independent community working collaboratively to form a healthy environment with safe housing, affordable health care, financial security, and access to resources and opportunities.

We value: An environment that promotes preparedness, health and wellness, and guides people to resources to assist them in meeting their basic needs to sustain mental and physical health.

Process/Method

The method used to conduct the Community Health Assessment is the Mobilizing for Action through Planning and Partnership (MAPP) process. Through participation in the MAPP process, community organizations and residents gain a better awareness of their health status and challenges. There are six phases in the MAPP process, four of which are addressed in a Community Health Assessment (see table below). The last two phases are addressed in a Community Health Improvement Plan. The first four phases of the MAPP process were carried out from September 2016 through August 2017.

MAPP Phase	Methods
Community Health Assessment	
Phase 1 – Organizing for Success and Partnership Development	Local stakeholders are brought together to engage in the development of partnerships and the planning of a strategic process.
Phase 2 – Visioning Process To establish a focus, purpose, and direction for the MAPP process.	Stakeholders and community members collaborate to develop a vision statement. Community input was gained via an online survey.
Phase 3 – Four MAPP Assessments: • The **Forces of Change Assessment** identifies trends, factors, or events that generate opportunities or threats	Community leaders conduct this assessment in an online tool.

towards the health of the community and local public health system.	
• The **Community Themes and Strengths Assessment (CTSA)** provides a deep understanding of the issues and community resources that residents of the county deem to be important.	Community members provided input via an online survey, while community leaders were engaged during an in-person meeting.
• The **Community Health Status Assessment (CHSA)** provides an understanding of the community's health status and ensures that the community's priorities are aligned with the strengths, resources, and the needs of the community.	Information regarding demographics, vital statistics, health behaviors, morbidity, and other data were collected, analyzed, and compared to state and national data. Information was also collected in three focus groups, and via a county-level household survey (BRFSS). A youth status assessment was done through an online survey of community experts youth-serving agencies.
• The Local Public Health System Assessment (LPHSA) focuses on all the organizations and entities that contribute to the local public health system as they deliver essential public health services to the community.	Conducted with community agencies in a community mind-mapping exercise. Furthermore, a service provider survey was conducted to identify services in high need and with high waiting lists.
Phase Four – Identify Strategic Issues	The Committee reviewed all data results that were summarized in two detailed matrices, developed a set of criteria, and identified strategic issues to help the community reach the shared vision.
Community Health Improvement Plan	
Phase Five – Formulate Goals and Strategies	Establish goals and strategies in response to strategic issues
Phase Six – The Action Cycle	Planning, implementation, and evaluation

Themes and Emerging Trends

The following table integrates the Forces of Change Assessment, the Community Themes and Strengths Assessment, and the Local Public Health System Assessment into one table. Key findings include concerns about healthcare reform and mental health and substance abuse. Taking those findings into account along with key informant and focus group results uncovers themes, too. The broad community underscores access to: nutritional food and physical activity amenities, adequate and affordable health care, and a good social environment. Service providers point to the need for mental health services and substance abuse treatment for youths and adults. Focus group participants pointed to health care access (including mental health care) and insurance options, as well as chronic diseases like obesity and diabetes. Other concerns discussed by focus group participants are poor nutrition, lack of dental care, stress, and the high cost of prescriptions, hearing aids, and long-term care.

Table 28: Miami County Trends Matrix

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
Political			
Healthcare/ Healthcare Reform	▪ Kettering Medical Center's ER provides in-County emergency medical care. ▪ Head Start – helps families acquire insurance, home doctors and dentists; provides a mobile children's dentist. ▪ PCPH – has a clinic that provides preventive care, reproductive health and immunizations.	▪ Loss of affordable care act, increase in insurance costs, lack of adequate medical care. ▪ The continuing rising costs of health care and insurance premiums are straining on the middle class. ▪ Insurance problems - wording must be right for insurance to pay for it. Then people do not know what is covered. Further, insurance coverage for wellness checks is very confusing. ▪ The County does not have a pediatrician. ▪ There is a lack of dental care and there is no pediatric dentist that accepts Medicaid. ▪ The County is a Health Professionals Shortage Area (HPSA).	▪ The health district is committed to serving at-risk individuals even if the ACA is repealed. ▪ In the coming years, explore the viability of an FQHC satellite in Preble County, which would provide affordable health care, mental health care, and dental services.
Funding Issues	▪ The Department of Job and Family Services oversees – local eligibility for SNAP, Medicaid (for about 11,000 people), child care, etc. for eligible citizens who apply for assistance. ▪ The health department depends on local levy dollars as well as state and	▪ Decreased funding from the county or state into the Health Department or other social service or health organizations would pose a threat to the well-being of individuals and families within Preble County. This decreased funding could potentially diminish programs' services or even cause	▪ Different politicians at the state level could influence the increased funding into our communities and could create new opportunities, such as new programs for transportation and education, for example. ▪ Increased funding from the county and/or state could definitely

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
	federal flow through funding to provide services.	programs to be shut down. ▪ An inability to replace the current health department levy would have negative effects. ▪ The expectation to take on unforeseen public health issues that historically had not been in the public health purview such as a public health emergency issue.	create new opportunities for affordable housing, transportation, and education, which in turn could reduce the poverty rate within Preble County. ▪ Collaboration with local and regional partners to address the opioid and heroin epidemic or other health-related issues. ▪ Preble County could take a regional approach to problems and collaborate with other counties to work for funding for health issues.
Economic			
Employment/ Joblessness	▪ Preble County Department of Job and Family Services/Ohio Means Jobs ▪ Preble County Development Partnership – working to attract jobs.	▪ Low wages - people relying on food banks and SNAP; income guidelines for SNAP assistance have remained the same for the last 10 years. ▪ Well-paying jobs go unfilled because applicants cannot pass a drug test.	▪ Review of the federal SNAP program and adjustment for the economy. ▪ CAP financial literacy courses. ▪ Care Source provides life coaching. ▪ *On My Way* program for at risk youth.

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
Transporta-tion	▪ JFS provides non-emergency Medicaid transportation. ▪ Council on Aging (COA) has about 20 vehicles and contracts with JFS and MHA to provide transit services. ▪ COA receives funding to coordinate transit in the County. ▪ YWCA offers transportation for its clients. ▪ CAP has transportation for Veterans	▪ Often times, families are unable to attend appointments, community events, or school meetings because of lack of transportation. ▪ There is no public transportation to outside sources for fresh produce, work, & grocery shopping. ▪ Many Head Start parents need to get their kids to daycare but don't have transit to do so. ▪ There is an issue with transportation for anything outside of medical issues. ▪ Even then, there is difficulty transporting patients to kidney dialysis centers.	▪ There is a new mobility manager at the Council on Aging who is pursuing grants and other funding. ▪ Two Head Start facilities will be providing transportation (but the other facilities do not)
Sociocultural			
Mental Health and Substance Abuse	▪ MHRB (Mental Health and Recovery Board) – Conducts regular assessments of community need for mental health and addiction services of stakeholders and consumers. ▪ MHRB – education and trainings, refers people to services/offer services.	▪ Not only does the heroin epidemic threaten the physical health of users and their families, but it is connected to mental health issues and affects the social well-being of our communities. ▪ Drug abuse of any kind can threaten families' economic well-being, as well as the economy of the community. ▪ There is a recurrence of Methamphetamines in	▪ The work that is happening around reducing stigmas, mandates from the State around treatment and supports of various health issues, and increased education should help to reduce negative impacts and promote positive impacts. ▪ More opportunities for people to detox from

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
	▪ MHRB – Monitors mental health and addiction agencies to make sure they are following laws and regulations mandated by the state. ▪ MHRB – use of strategic plan to improve success and opportunities for mental health and addiction services. ▪ MHRB – encourage and fund professional development trainings for mental health and substance abuse professionals. ▪ Preble County SAPP (Substance Abuse Prevention Partnership)	our community. Our community has limited resources for treatment of addiction and a huge stigma surrounding this issue and many other related health issues. ▪ Children within our communities are already being affected by this epidemic by experiencing trauma from parents, guardians, or other family members or friends overdosing, as well as the effects of being exposed to drug usage. Our young people in high schools could start trying the drug at increased rates. This long term trauma that children are experiencing could have extremely negative outcomes on their futures. ▪ The State is pushing for a complete continuum of care around the opiate epidemic without adding dollars to that mandate. This could cause disruption in other mental health and addiction treatment services which pose a threat to continued health in many areas. ▪ Lack of local funding for prevention, education, and mental health and recovery services.	drug addiction and programs to maintain sobriety. ▪ There are County and State initiatives that will create new opportunities for education, treatment and a reduction of deaths related to overdoses (due to Narcan). As a County, we need to continue to push for an increase in education and prevention in various health related areas.

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
		▪ The lack of community awareness and acceptance of the epidemic. ▪ Lack of access to mental health services.	
Community Culture, Size and Reach	▪ PCHD – ongoing assessment of service providers. ▪ HIT – refer clients to appropriate agencies. ▪ Success program – refer families to agencies that can help with health issues. ▪ JFS – provide brochures and referrals to agency customers, provide processing of eligibility for Medicaid, food assistance, OWF and other services. ▪ YWCA – speak at community churches, agencies, businesses and organizations.	▪ There is a cultural and economic divide in Preble County. ▪ Too much physical inactivity.	▪ The human service agencies in this county work extremely well together. They know each other, they know each other's capabilities, they share information and resources to best help their clients. ▪ Working with other entities to share resources is vital in addressing health issues similar to our drug coalition (SAPP) we have enacted to handle the drug overdose issue in the county. ▪ Lean Program— Greene, Miami, and Preble are partners in this program to make clinical work more efficient.
Education			
Health Communica-tion and Wellness Promotion	▪ YWCA ▪ YMCA ▪ HD ▪ Essence of Wellness (EOW) ▪ Head Start ▪ Miami University	▪ There are communication errors, like not communicating to the right population. ▪ Lack of education in Preble County on issues such as reproductive health	▪ Strong education on suicide prevention and drug prevention in younger generations could have positive effects. ▪ Focus on health outcomes in the community, create

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
		and sex education and mental health which could have negative effects. ▪ People ignore the message and preventative care until there is a problem and it affects them. ▪ It is difficult to get the message out in Preble County with no daily local paper and not many avenues other than social media. ▪ Many agencies are local and do not have websites and no staff to keep the website updated and no marketing department.	public knowledge source (Pocket guide creation). ▪ There is good communication among agencies in the area. ▪ The library is a good source to use for communication. ▪ YWCA – outreach, prevention and education on domestic violence. They have programs for health needs, diabetes prevention, live strong (cancer program). ▪ PCHD - social media on health topics, outreach with information, prevention education in clinics. ▪ EOW – educate patients individually and in groups on various topics, workshops (e.g. natural ways to reduce pain/inflammations/balance/falls). They are working with individuals as well as families to promote a healthy lifestyle as well as social media Facebook posts highlighting recent research to live better. ▪ Head Start – health fairs, wellness escape, weekly physical and mental health emails/articles.

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
			▪ Miami University professors are working with parents on health literacy and health information distribution, and are willing to engage additional partners.
Demographic			
Aging Population	▪ Job and Family Services (JFS) – collect data on abuse/neglect of elderly and children. Attempt prevention activities. ▪ PCCOA (Preble County Council on Aging)	▪ Growth of the older population, especially those 75 and older who tend to have more chronic health conditions. The growth is faster than what Preble County can accommodate. ▪ Groups that are aging have less money/seniors living in poverty. ▪ Age discrimination and community awareness. ▪ There is no method to identify senior needs. ▪ There needs to be broader collaboration with community partners ▪ Lack of advocacy and funding. ▪ No voice outside of the county.	▪ There is a senior service levy. ▪ Medicare supplemental insurance offers. ▪ PCCOA is a multi-focal senior center. It offers transportation services, home delivered meals, congregate meals, and many activities and trips. It also makes referrals out of the agency as needed. ▪ PCCOA can utilize the 18 acres on its property for housing for seniors, adult day care and investing in the PCCOA workforce.
Environmental			
Pollution	▪ HD - water/well/sewer inspections ▪ HD – food, water, waste enforcement	▪ The air and chemicals we take in may cause health problems. ▪ Change in state laws and regulations impact	▪ Collect data to identify causes of increased chronic health issues. ▪ Improve aging infrastructure.

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
	of local, state and federal policy	what the health department investigates and enforces. ▪ Asthma and immune systems inflamed. ▪ Failing septic system – EPA involved.	▪ Increased awareness of pollutants like lead paint, etc.
Food Deserts and Food Insecurity	▪ HD – food service inspections. ▪ Head Start – nutrition assessment on each child. Health results and education sent home with family ▪ WIC – nutrition and breastfeeding support/education ▪ PCPH – nutrition education	▪ Availability of healthy food choices in our county - it is often hard to find fresh produce at the local groceries and even more difficult for those with lack of transportation and living in outlying areas. ▪ No regulation on GMO's and high fructose corn syrup, additives and chemicals used in our food and dairy products, overwhelming obesity in our nation with no end in sight. ▪ Apathy to the fact that the local grocery stores do not provide adequate fresh food causing those who can to shop outside the county.	▪ More local farmer's markets in the outlying areas; classes on canning and gardening. ▪ There needs to be more health outreach for healthy eating practices. ▪ Promote the availability to use EBT SNAP card at stores and some farmers markets. ▪ Pursue the next Healthy Communities grant from the state – can apply again in 2019
Built Environment	▪ Preble County park district ▪ Local government is in charge of maintaining the sidewalks.	▪ Preble County lacks safe, reliable, affordable housing. ▪ Need more investment in infrastructure. ▪ Safety of parks is a concern. ▪ People are not aware of the opportunities	▪ The opening of Eagle's Point may be a positive force within the county to combat the lack of safe, affordable housing. ▪ Increased parks and recreation areas to

Trends, Factors, and Events	Local Public Health System Competencies and Capacities	Threats	Opportunities
		for exercise (gyms, YMCAs).	encourage healthy lifestyle; addition of a bike trail in the county to add to our healthy lifestyle. ▪ Availability of places that support a healthy lifestyle and the resources to provide it (gyms, YMCAs, health and wellness organizations, etc.). Also the promotion of these places to bring awareness of them to the community. ▪ More local farmer's markets in small villages (not just Eaton) and all year long.
Spread of Infectious Diseases	▪ HD - common disease inventory, disease assessment ▪ School nurses – report communicable diseases ▪ Head Start – require physical and immunizations	▪ Zika scares with disease moving inland ▪ Bed bugs ▪ Increase of Hep C and B from heroin epidemic	▪ More information to residents regarding Zika and bed bugs ▪ Promote harm reduction education for infectious disease control. ▪ HD – fill gaps in services, plan and practice for bio-emergency (Ebola, Zika, etc.). ▪ School nurses – immunization compliance, medication laws.

Highlights of Priority Community Concerns

The data collection and analysis efforts for this Community Health Assessment have exposed priority health needs. The process used to select priorities from this needs assessment depends upon shared decision criteria, and relied upon a modified version of the Hanlon Method and PEARL test which has been promoted by NACCHO. [93] The first set of criteria used to uncover Preble County priority health concerns pertain to prevalence, seriousness (e.g., hospitalization and death), trends, comparison to state and/or national averages, and impacts on other health issues.

The next set of criteria were applied as practical criteria.

- Urgency – what are the consequences of not addressing this issue?
- Economics –does it make economic sense to address this issue?
- Acceptability – are stakeholders and the community ready to address this priority?
- Alignment – can this effort align with a group already working on this issue? Does this issue align with the State Health Improvement Plan?
- Resources – is funding likely to be available to apply strategies? Are organizations able to offer personnel time and expertise or space needed to address this issue?

The three selected priority needs for Preble County are:

- Maternal and Family Health
- Chronic Disease
- Mental Health and Addiction

Maternal and Family Health

The goal for maternal and child health is to improve the health and well-being of women, infants, children, and families. In addition to an improvement in overall well-being, this focus helps improve the health of the next generation and can help predict future public health challenges for families, communities, and the health care system.

The **social determinants** that influence maternal health also affect pregnancy outcomes and infant health. Racial and ethnic disparities in infant mortality exist, particularly for African American infants and a child's health status varies by both race and ethnicity. Family income and related factors, including educational attainment among household members and health insurance coverage also affect prenatal

[93] Specified Criteria –: size of health problem, magnitude of health problem, and effectiveness of potential interventions; PEARL: • Propriety – Is a program for the health problem suitable? • Economics – Does it make economic sense to address the problem? Are there economic consequences if a problem is not carried out? • Acceptability – Will a community accept the program? Is it wanted? • Resources – Is funding available or potentially available for a program? • Legality – Do current laws allow program activities to be implemented?

and infant health outcomes.[94] Environmental factors like neighborhood can have an effect too if the neighborhood lacks access to exercise opportunities and nutritious food.

Key Research Findings

- The percentage of pregnant mothers in Preble County receiving first trimester prenatal care is steadily increasing since a low point in 2012; however the current percentage of women receiving first trimester care is 74.2%, which is lower than the Healthy People 2020 target of 77.9%.
- The percentage of Preble County mothers who smoke while pregnant, 18.1%, is higher than the state and national rates of 13.0% and 10.9%, respectively. The Healthy People 2020 target is 1.4%, meaning that Preble County's rate is 13 times higher than the Healthy People 2020 target.
- The percentage of preterm births in Preble County was decreasing from 2010 to 2013, but in 2014 the rate exceeded the state and Healthy People 2020 rates. In 2015, the most recent year for which data are available, Preble County's rate of 11.8% was lower than the state rate of 12.2%, but was higher than the Healthy People 2020 target of 11.4%.
- The low birth weight rate in Preble County exceeds the state rate, the national rate, and the Healthy People 2020 target. In 2015, Preble County's rate was 9.0% versus 8.5% for the state and 8.2% for the U.S. rate, while the Healthy People 2020 target is 7.8%.
- The birth rate to Preble County teenage mothers, 10.6 per 1,000 mothers who are 15-17 years of age, is consistently lower than the HP 2020 target of 36.2 per 1,000, but is higher than the State of Ohio's rate in three out five years – 2011, 2013, 2015. Ohio's rate was 10.0 in 2015.

Health Disparities

Preterm Births: The percentage of U.S. births delivered prematurely rose more than 20 percent between 1990 and 2006. This rise has been tied to several interrelated trends one of which is an increase in births to older mothers.[95] Other maternal factors are also associated including behavioral and socioeconomic characteristics such as smoking, teenage pregnancy, obesity, poverty, and inadequate prenatal care.[96]

Low Birth Weight: Being an older mother (aged 35 years or older) is associated with LBW in the United States.[97] Furthermore, a clear graded association between education and LBW is apparent, with a significant difference between mothers who have not completed high school and those with a high school education. There is also a clear and significant income gradient in LBW. According to researcher Deborah Bach, "If you are a low-income woman and you grew up low-income and had

[94] (U.S. Department of Health and Human Services 2017)
[95] Kent, M. "Premature Births Help Explain Higher U.S. Infant Mortality Rate," Population Reference Bureau, 2009
[96] Heron, M., et al. "Preterm Labor and Birth"; "Deaths: Final Data for 2006," National Vital Statistics Reports 57, no. 14 (2009): table D. (cited in Kent, M.)
[97] Martinson, M. "Socioeconomic Inequalities in Low Birth Weight in the United States, the United Kingdom, Canada, and Australia," American Journal of Public Health, 2016

poor nutrition and more stress, all these factors have accumulated throughout the life course to culminate in low birth weights."[98]

Chronic Disease

According to the CDC, about half of all adults had one or more chronic health conditions and one of four adults had two or more chronic health conditions.[99] Two of the ten leading causes of death account for almost half (48 percent) of the deaths in the United States – heart disease and cancer. The CDC also reports that diabetes is the leading cause of limb amputations (not caused by accidental causes), and new cases of blindness among adults.

Social determinants of health research from the American Heart Association notes clear associations between societal factors and cardiovascular health. For example, research indicates that people with lower educational levels die younger, largely due to cardiovascular disease.[100] The lower the income, the higher the risk for cardiovascular disease.—"There also is evidence that people who experience the chronic stressors, such as racism, might have higher blood pressure as a result."[101]

Studies support that the neighborhoods in which people live likely affect their heart disease risk. "We need to learn more about why that is, but contributing factors could include less access to healthy food, less opportunity for physical activity, higher stress levels with higher crime, noise, traffic, etc."[102]

"Emerging evidence suggests that one's tendency to develop high blood pressure and perhaps diabetes as adults is in some way determined by things that happen before birth and through early life. There's evidence that children with low birth weight tend to have structural changes to the heart and kidneys that may predispose them high blood pressure and diabetes, when they're adults."[103]

Key Research Findings

- The three most frequently cited chronic conditions for Preble County adults are high blood pressure (28.4%), high blood cholesterol (18.4%), and diabetes (14.9%). In addition, the prevalence of obesity in Preble County is 34.1%. Obesity, while not a chronic disease, is a health factor identified by the steering committee as a priority concern.
- The prevalence of high blood pressure in Preble County is significantly lower than the rate for Ohio and the nation based on survey results (28.4% versus 34.3% and 30.9%).

[98] Bach, D. "Study shows U.S. has greater link between Low Birth Weight and Inequality," University of Washington News, January 2016.
[99] Ward BW, Schiller JS, Goodman RA. "Multiple chronic conditions among US adults: a 2012 update." Preventing Chronic Disease, 2014; 11:130389. DOI: http://dx.doi.org/10.5888/pcd11.130389
[100] "Addressing social factors critical for continued fight against heart disease and stroke in America," American Heart Association Scientific Statement, August 2015
[101] Edward P. Havranek, M.D., chair of the American Heart Association writing group and a cardiologist at Denver Health Medical Center and professor of cardiology at the University of Colorado School of Medicine, Denver, Colorado.
[102] "Addressing social factors critical for continued fight against heart disease and stroke in America," American Heart Association Scientific Statement, August 2015
[103] Ibid

- The rate of high cholesterol conditions, based on the household survey, is significantly lower for Preble County adults (18.4%) versus the rate for Ohio and the nation (36.7% and 36.3%, respectively).
- The rate of coronary heart disease is significantly higher in Preble County than the state and national rates (9.7% in Preble County versus 4.2% for Ohio and 3.9% for the U.S.).
- The diabetes rate for adults in Preble County is 14.9% based on survey results versus 11.8% and 10.8% for the state and nation, respectively. The Preble County percentage is significantly higher than the U.S. percentage.
- The prevalence of obesity among Preble County adults is 34.1% versus 31% for Ohio, according to County Health Rankings data provided by the Robert Wood Johnson Foundation. According to survey results, the rate of overweight and obese for Preble County adults is 69.5% versus 66.5% and 65.3% for Ohio and the nation, respectively. The County rate is statistically significantly higher than the rate for the state and the U.S.

Health Disparities

***High Blood Pressure**:* High blood pressure is associated with age and income; Preble County adults over 55 years of age are significantly more likely to have this condition, as are those whose household income is less than $15,000 annually.

High Cholesterol: High cholesterol is associated with age (those over age 55). Older adults are statistically significantly more likely to have high cholesterol.

Coronary Heart Disease (CHD): CHD is associated with age. Adults over the age of 55 are significantly more likely to report that they have CHD than other adults.

***Diabetes**:* Diabetes is significantly more likely among adults over age 55.

***Obesity**:* Tests for significance indicate that overweight and obesity are significantly more likely to occur among males, among younger adults (under age 55), and those with a high school diploma or even higher educational attainment.

Mental Health and Addiction

According to the CDC, addiction is a disease that affects both the brain and behavior. Science has identified many of the biological and environmental factors that affect drug use and dependence and are beginning to search for the genetic variations that contribute to the development and progression of the disease. Despite these advances, it is still unknown why people become addicted to drugs or how drugs change the brain to foster compulsive drug use.

The **social determinants** associated with substance abuse include several biological, social, environmental, psychological, and genetic factors. These factors can include gender, race and ethnicity, age, income level, educational attainment, and sexual orientation.[104] Substance abuse is also strongly influenced by interpersonal, household, and community dynamics. Family, social networks, and peer

[104] Centers for Disease Control and Prevention. CDC health disparities and inequalities report: United States, 2011. Morbidity Mortal Weekly Report. 2011; 60 (supplement).

pressure are key influencers of substance abuse among adolescents. For example, research suggests that marijuana exposure through friends and siblings was a primary determinant of adolescents' current marijuana use.[105]

The National Institute on Drug Abuse (NIDA) also reports that most drugs of abuse can alter a person's thinking and judgment, leading to health risks, including addiction, drugged driving, pregnancy risks, and infectious disease. Commonly abused drugs include alcohol, cocaine, heroin, marijuana, opioids, steroids, and nicotine.

According to NIDA, fentanyl-laced heroin has been linked to a surge of overdoses in Ohio. Fentanyl and related compounds are also being found in counterfeit pills made to look like prescription pain relievers and sedatives, and those who use heroin or prescription drugs laced with fentanyl are at much higher risk of overdose and death.

Key Research Findings

- Sixteen percent (15.6%) of Preble County adults are considered binge drinkers, having consumed five or more drinks on at least one occasion within the past month (4 or more drinks if a female). The percentage of Preble County adults who binge drink is significantly lower than the state of Ohio percentage (18.2%) and is lower than the national percentage (16.3%).
- Adult tobacco use in Preble County is less prevalent than use in Ohio but more prevalent than the national usage rate (20% versus 21.6% and 17.5%, respectively). The County rate is significantly higher than the U.S. rate and is higher than the national Healthy People 2020 target rate of 12%.
- According to the CDC, "Drug overdose deaths and opioid-involved deaths continue to increase in the United States." The majority of drug overdose deaths (more than six out of ten) involve an opioid.[106] Studying unintentional drug overdose trends for Preble County and Ohio indicates that Preble County's rate outpaced the state of Ohio's rate in five years out of a nine year trend, and Preble County's rate is currently higher than Ohio's rate (28.7 drug overdose deaths in Preble County per 100,000 in population versus 27.2 for Ohio).
- The percentage of unintentional drug overdose deaths involving heroin was generally lower in Preble County than for Ohio; however, it matched the rate for the state of Ohio (46.7%) in 2015.
- The percentage of unintentional drug overdose deaths involving fentanyl was lower in Preble County than in Ohio in all but one year of a six-year trend (2010-2015). In 2014, Preble County's percentage of deaths due to fentanyl was 37.5% versus 19.9% for Ohio.

[105] Galea S, Nandi A, Vlahov D. The social epidemiology of substance use. Epidemiologic Reviews 2004; 26(1):36–52.
[106] Rudd RA, Seth P, David F, Scholl L. Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. Morbidity Mortal Weekly Report ePublication: 16 December 2016.

Health Disparities

Binge Drinking: Binge drinking is significantly more likely among adults under the age of 55.

Current Tobacco Smokers: Smoking is significantly more likely among males, among those with a household income of less than $15,000 annually, and among those with less than a high school education.

Works Cited

American Diabetes Association. "Overall Numbers, Diabetes and Prediabetes." 2017.

Applied Policy Research Institute. *Western Ohio Household Survey.* Dayton, OH: Wright State University, 2016.

Blackwell, D. L. "Family structure and children's health in the United States: Findings from the National Health Interview Survey, 2001–2007." *Vital Health Stat* (National Center for Health Statistics) 10, no. 246 (2010).

Board of Preble County Commissioners. "Public Assistance." *Preble County Job and Family Services.* 2017. http://www.prebco.org/Preble_County_Commissioners_Job_and_Family_Services.htm (accessed 2017).

Boehmer, T, and et. al. "Residential proximity to major highways - United States, 2010." *MMWR* Surveillance summaries 62 , no. Suppl 3 (2013): 46-50.

Center for the Study of Social Policy. ""Protective Factors Literature Review: Early Care and Education Programs and the Prevention of Child abuse and Neglect," Strengthening Families through Early Care and Education." 2003.

Centers for Disease Control and Prevention. "Unemployment — United States, 2006 and 2010." *MMWR* 62, no. Suppl 3 (2013): 27-31.

Centers for Disease Control and Prevention, Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion. *Teen Pregnancy: The Importance of Prevention.* May 9, 2017. http://www.cdc.gov/teenpregnancy/aboutteenpreg.htm#The Importance of Prevention (accessed 2017).

Child Welfare Information Gateway. *"What is Child Abuse and Neglect?" Factsheets.* Administration for Children and Families, Children's Bureau, U.S. Department of Health and Human Services, 2008.

Community Action Partnership of the Greater Dayton Area. *Transportation / Elderly Services for Darke and Preble County.* 2017. https://capdayton.org/transportation-services/ (accessed Jun 05, 2017).

Department of Preventive Medicine, Southern California Permanente Medical Group (Kaiser Permanente). ""Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study"." *American Journal of Preventative Medicine* (American Journal of Preventative Medicine), May 1998: 245-58.

Feeding America. *Food Insecurity.* 2017.

Freeman, L. "America's affordable housing crisis: a contract unfulfilled." *Am J Public Healt* 92 (2002): 709-712.

Hawkley, L., and J. Cacioppo. "Loneliness and pathways to disease." *Brain, behavior, and immunity*, 2003: 98-105.

Institute for Health Metrics and Evaluation. *United States Alcohol Use Prevalence by County 2002-2012.* Seattle, WA, 2017.

Institute for Health Metrics and Evaluation. *United States Life Expectancy and Age-specific Mortality Risk by County 1980-2014.* Seattle, WA, 2017.

Institute for Health Metrics and Evaluation. *United States Physical Activity and Obesity Prevalence by County 2001-2011.* Seattle, WA, 2017.

Institute for Health Metrics and Evaluation. *United States Smoking Prevalence by County 1996-2012.* Seattle, WA, 2017.

Institute on Disability. *Annual Disability Statistics Compendium.* Durham, NH: University of New Hampshire, 2013.

Kettering Health Network. *Preble County Medical Center.* 2017. https://www.ketteringhealth.org/preble/ (accessed Jun 2017).

Massachusetts Institute of Technology. *Living Wage Calculator.* Electronic Model, Cambridge: Massachusetts Institute of Technology, Department of Urban Studies and Planning, 2016.

Miami Valley Regional Planning Commission. *Regional Bikeways.* Dayton, OH, n.d.

National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. September 16, 2016. *COPD.* Sep 16, 2016. https://www.cdc.gov/copd/index.html (accessed Jun 2017).

National Prevention Council. *National Prevention Strategy.* Washington, D.C., n.d.

National Prevention Council. *National Prevention Strategy.* Washington, D.C.: U.S. Department of Health and Human Services, Office of the Surgeon General, 2011.

Office of Disease Prevention and Promotion. "Social Determinants of Health." Electronic, Healthy People 2020, U.S. Department of Health and Human Services, Washington, DC, 2017.

Ohio Colleges of Medicine Government Resource Center. *Ohio Medicaid Assessment Survey.* n.d. http://grc.osu.edu/OMAS (accessed Jan 2017).

Ohio Colleges of Medicine Government Resource Center. *The Scope of Family Violence in Ohio: Ohio Family Violence Prevention Project.* 2014.

Ohio Department of Aging. "Senior Farmers Market Nutrition Program." n.d.

Ohio Department of Education. *Graduation Rate, 4-Year Longitudinal Graduation Rates.* School Year 2009-2014.

Ohio Department of Education. *Ohio's Kindergarten Readiness Assessment.* Columbus, n.d.

—. *Ohio's Kindergarten Readiness Assessment.* n.d. http://education.ohio.gov/Topics/Early-Learning/Kindergarten/Ohios-Kindergarten-Readiness-Assessment (accessed 2016).

Ohio Department of Health. *2015 Ohio Infant Mortality Data: General Findings.* Columbus, Nov 16, 2016.

Ohio Department of Health. *Data Warehouse, Mortality.* Columbus, 2007-2015.

Ohio Department of Health. *Health Care Provider Report & Information Extract.* Columbus, OH, 2016.

—. *Neonatal Abstinence Syndrome (NAS) Hospital Reporting in Ohio.* Mar 9, 2017. https://www.odh.ohio.gov/en/health/vipp/drug/Ohio-NAS-Reporting (accessed June 2017).

Ohio Department of Health. "Neonatal Abstinence Syndrome (NAS) in Ohio, 2006-2015." 2016.

Ohio Department of Health. *Ohio Cancer Incidence Surveillance System.* Columbus, 2006-2015.

Ohio Department of Health. "Ohio Kindergarten Immunization Rates 2012-13." n.d.

Ohio Department of Health. *Ohio Resident Live Births.* Columbus, 2006-2015.

Ohio Department of Health. *Special Emphasis Report: Fall Injuries among Older Adults, 2005-2014.* Columbus, OH, Dec 2016.

Ohio Department of Health. "Stage at Diagnosis for Selected Cancer Sites." 2012.

Ohio Department of Health. *STD Surveillance Program.* Columbus, 2015.

Ohio Department of Health. "The Impact of Chronic Disease in Ohio." 2015.

Ohio Department of Health. *Third Grade Oral Health Screening Survey, 2013-15: Findings for Ohio Counties.* Columbus, 2016.

Ohio Department of Health, Bureau of Vital Statistics. *Ohio Resident Mortality Data.* Columbus, OH, 2006-2015.

Ohio Department of Job and Family Services. *Family Assistance Letter #114.* Columbus, Apr 17, 2012.

Ohio Department of Job and Family Services. *Family Assistance Letter #147.* Columbus, Sep 22, 2015.

Ohio Department of Job and Family Services. "Ohio Labor Market Information, Current Civilian Labor Force Estimates." 2016.

Ohio Department of Mental Health and Addiction Services. *Unduplicated Clients by Mental Health Board.* Columbus, 2016.

Ohio Department of Public Safety. "Observational Survey of Seat Belt Use in Ohio." 2013, 2014, 2015, 2016.

Ohio Department of Public Safety Office of Criminal Justice Services. *Crime Statistics and Crime reports from the FBI's Ohio Master File for the Uniform Crime Reporting Program.* Columbus, OH, 2010-2014.

Ohio Department of Public Safety, Office of Criminal Justice Services. *Crime Statistics and Crime Reports.* Columbus, OH, 2017.

Ohio Department of Transportation. *County Boundaries, City Boundaries, Township Boundaries, Highway Systems.* Columbus, OH, 2016.

Ohio Development Services Agency. "2010 to 2040 Projected Population for Ohio." 2013.

Ohio Development Services Agency. "Ohio County Profiles." 2016.

Ohio Mental Health & Addiction Services. "Hospital Discharges for Neonatal Abstinence Syndrome." 2017.

Penman-Aguilar, A, M Carter, MC Snead, and AP Kourtis. "Socioeconomic disadvantage as a social determinant of teen childbearing in the U.S." *Public Health Report* 128, no. suppl 1 (2013): 5-22.

Pickrell, T. M., & Li, R. "Occupant protection in passenger vehicles: 2014 data." *Traffic Safety Facts. Report No. DOT HS 812 262* (National Highway Traffic Safety Administration.), November 2016.

Preble County Council on Aging. *Transportation.* 2017. http://www.prebleseniorcenter.org/transportation.

Preble County, Ohio Auditor. *Land Use.* Eaton, OH, 2017.

Prevention, Centers for Disease Control and. *CDC.* 06 06, 2017. https://www.cdc.gov/hiv/basics/statistics.html (accessed 06 06, 2017).

Queensland Council of Social Service Inc. *Investing in Prevention and Early Intervention: A Ten Year Plan.* Kelvin Grove, Queensland, 2006.

Reid Health Physician Associates. 2017. https://reidphysicianassociates.org/locations/reid-urgent-care-of-eaton/ (accessed Jun 2017).

Substance Abuse and Mental Health Services Administration. "Community Conversations about Mental Health: Information Brief." *HHS Publication No. SMA-13-4763* (Substance Abuse and Mental Health Services Administration), 2013.

U.S. Census Bureau. *2011-2015 5-Year American Community Survey.* 2015.

U.S. Centers for Disease Control & Prevention. *Drug Overdose Death Data.* Dec 16, 2016. https://www.cdc.gov/drugoverdose/data/statedeaths.html (accessed Jun 2017).

U.S. Centers for Disease Control and Prevention. "2014 National Diabetes Statistics Report." 2015.

U.S. Centers for Disease Control and Prevention. *About Teen Pregnancy.* Atlanta: U.S. Department of Health and Human Services, 2017.

U.S. Centers for Disease Control and Prevention. *Community Health Assessment for Population Health Improvement: Resource of Most Frequently Recommended Health Outcomes and Determinants.* Atlanta, GA: Office of Surveillance, Epidemiology, and Laboratory, 2013.

U.S. Centers for Disease Control and Prevention. *Diabetes: County Data.* Atlanta, 2017.

U.S. Centers for Disease Control and Prevention. "Infant Mortality." 2016.

U.S. Centers for Disease Control and Prevention. *Lung Cancer.* 2017.

U.S. Centers for Disease Control and Prevention. "Most Recent Asthma Data." 2017.

U.S. Centers for Disease Control and Prevention. *Sudden Unexpected Infant Death and Sudden Infant Death Syndrome.* Atlanta, GA, Jun 2017.

U.S. Centers for Disease Control and Prevention. "Vital Signs: Asthma Prevalence, Disease Characteristics, and Self-Management Education, United States, 2001- 2009." *Morbidity and Mortality Weekly Report (MMWR).* Atlanta, GA, May 2011.

U.S. Centers for Disease Control and Prevention. *What Are the Risk Factors for Lung Cancer?* May 2017.

U.S. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention. *Child Passenger Safety.* Atlanta, GA, Aug 2016.

U.S. Centers for Medicare & Medicaid Services. *Dialysis Facility Compare.* n.d. https://www.medicare.gov/dialysisfacilitycompare/ (accessed Jun 2017).

U.S. Department of Agriculture, Economic Research Service. *Food Security in the United States: Key Statistics.* Oct 11, 2016.

U.S. Department of Health & Human Services. *Health Resources Comparison Tool, Area Health Resources Files.* Rockville, MD, 2015.

U.S. Department of Health and Human Services. *HealthyPeople.gov (Healthy People 2020).* 04 19, 2017. https://www.healthypeople.gov (accessed 2017).

U.S. Department of Health and Human Services. *Social Determinants of Health, Healthy People 2020.* n.d.

U.S. Department of Health and Human Services, Administration for Children and Families. *"Child Abuse," Federal child Abuse Prevention and Treatment Act of 2010.* N.P., 2010.

U.S. Department of Health and Human Services, National Institute on Drug Abuse. *Commonly Abused Drugs.* May 2017. https://www.drugabuse.gov/drugs-abuse/commonly-abused-drugs-charts (accessed May 2017).

—. *Emerging Trends and Alerts.* Jun 2017. https://www.drugabuse.gov/drugs-abuse/emerging-trends-alerts (accessed Jun 2017).

U.S. Department of Labor, Bureau of Labor Statistics. "Education still pays." *Career Outlook.* 2014. https://www.bls.gov/careeroutlook/2014/data-on-display/education-still-pays.htm (accessed 2017).

U.S. Environmental Protection Agency. *Air Quality Index: Ozone.* January 2016.

U.S. Environmental Protection Agency. *Ozone Pollution.* Jun 08, 2017.

Uebel, H., et al. "Reasons for Re-hospitalization in Children Who Had Neonatal Abstinence Syndrome." *Pediatrics* 136, no. 4 (Oct 2015).

University of Wisconsin Population Health Institute. *County Health Rankings and Roadmaps.* 2011-2015. http://www.countyhealthrankings.org/app/ohio/2015/rankings/<county name>/county/outcomes/overall/snapshot (accessed Jan 2017).

Walk Score Professional . *Walk Score Professional .* 2017. https://www.walkscore.com/professional/research.php (accessed 06 01, 2017).

World Health Organization (WHO). *International classification of functioning, disability and health (ICF).* Geneva, Switzerland: WHO, 2001.

Appendix A: Community Health Assessment Telephone Survey

Demographics

County of Residence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Preble County	401	100.0	100.0	100.0

Age Cohort

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-34 years of age	98	24.4	24.4	24.4
	35-44 years of age	63	15.8	15.8	40.2
	45-54 years of age	77	19.2	19.2	59.4
	55-64 years of age	75	18.8	18.8	78.2
	65-74 years of age or older	87	21.8	21.8	100.0
	Total	401	100.0	100.0	

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	195	48.6	48.6	48.6
	Female	206	51.4	51.4	100.0
	Total	401	100.0	100.0	

Do you speak a language other than English at home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	13	3.3	3.3	3.3
	No	388	96.7	96.7	100.0
	Total	401	100.0	100.0	

Are you of Hispanic, Latino/a, or Spanish origin?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	1.8	1.8	1.8
	No	394	98.2	98.2	100.0
	Total	401	100.0	100.0	

Which one or more of the following would you say is your race? Recode

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White or Caucasian	384	95.6	95.6	95.6
	All other races	9	2.2	2.2	97.9
	Don't know	3	.7	.7	98.6
	Refused	6	1.4	1.4	100.0
	Total	401	100.0	100.0	

Which one or more of the following would you say is your race? Recode

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White or Caucasian	384	95.6	95.6	95.6
	All Other Races or Combinations of Races	9	2.2	2.2	97.9
	Don't know	3	.7	.7	98.6
	Refused	6	1.4	1.4	100.0
	Total	401	100.0	100.0	

Have you ever served on active duty in the United States Armed Forces, either in the regular military or in a National Guard or military reserve unit?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	42	10.5	10.5	10.5
	No	359	89.5	89.5	100.0
	Total	401	100.0	100.0	

Marital Status (recode)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	250	62.4	62.4	62.4
	Divorced, widowed, separated	85	21.3	21.3	83.7
	Single or never married	65	16.3	16.3	100.0
	Total	401	100.0	100.0	

How many children less than 18 years of age live in your household?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	242	60.4	60.7	60.7
	1	65	16.2	16.3	77.0
	2	51	12.8	12.9	89.9
	3	18	4.4	4.4	94.3
	4	12	3.0	3.0	97.3
	5	3	.8	.8	98.1
	6	3	.7	.7	98.8
	7	2	.4	.4	99.2
	8	2	.4	.4	99.6
	9	2	.4	.4	100.0
	Total	399	99.4	100.0	
Missing	Refused	2	.6		
Total		401	100.0		

Educational Attainment (recode)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than high school	20	5.0	5.0	5.0
	GED or high graduate	155	38.6	38.7	43.7
	Some college or 2 year degree	134	33.4	33.6	77.3
	Bachelor degree or higher	91	22.6	22.7	100.0
	Total	399	99.6	100.0	
Missing	System	2	.4		
Total		401	100.0		

Are you currently employed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed for wages	205	51.0	51.4	51.4
	Self-employed	34	8.5	8.6	60.0
	Out of work for more than 1 year	4	1.0	1.0	61.0
	Out of work for less than one year	4	.9	.9	61.9
	A homemaker	21	5.2	5.2	67.1
	A student	9	2.3	2.3	69.4
	Retired	93	23.3	23.5	92.9
	Unable to work	28	7.1	7.1	100.0
	Total	398	99.3	100.0	
Missing	Don't know	3	.7		
Total		401	100.0		

Annual Household Income from All Sources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<$10,000	14	3.6	4.9	4.9
	Between $10,000 and $14,999	10	2.4	3.3	8.2
	Between $15,000 and $19,999	17	4.1	5.6	13.8
	Between $20,000 and $24,999	18	4.5	6.2	19.9
	Between $25,000 and $34,999	30	7.6	10.2	30.2
	Between $35,000 and $49,999	54	13.6	18.4	48.6
	Between $50,000 and $74,999	61	15.3	20.7	69.3
	$75,000 or more	91	22.6	30.7	100.0
	Total	296	73.7	100.0	
Missing	Don't know	20	5.0		
	Refused	85	21.3		
	Total	105	26.3		
Total		401	100.0		

Household Income recoded to State Cohorts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under $15,000	24	6.0	10.3	10.3
	$15,000 and over	210	52.4	89.7	100.0
	Total	234	58.4	100.0	
Missing	System	167	41.6		
Total		401	100.0		

Do you own or rent your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Own	305	76.0	76.3	76.3
	Rent	70	17.4	17.5	93.8
	Other arrangement (Group home, staying with friends or family without paying rent)	25	6.2	6.2	100.0
	Total	400	99.7	100.0	
Missing	Refused	1	.3		
Total		401	100.0		

Population Health Issues

Health Status

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

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	54	13.4	13.5	13.5
	Very good	144	36.0	36.2	49.6
	Good	130	32.4	32.6	82.2
	Fair	55	13.6	13.7	95.9
	Poor	16	4.1	4.1	100.0
	Total	399	99.6	100.0	
Missing	Don't know	1	.2		
	Refused	1	.3		
	Total	2	.4		
Total		401	100.0		

Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	219	54.6	55.4	55.4
	1	21	5.2	5.3	60.7
	2	35	8.7	8.9	69.5
	3	14	3.6	3.7	73.2
	4	6	1.5	1.5	74.7
	5	11	2.8	2.8	77.6
	6	4	.9	1.0	78.5
	7	9	2.3	2.4	80.9
	8	1	.2	.2	81.1
	10	8	1.9	2.0	83.0
	14	8	1.9	2.0	85.0
	15	9	2.2	2.2	87.2
	20	9	2.3	2.3	89.5
	21	2	.6	.6	90.1
	25	1	.1	.2	90.3
	27	1	.3	.3	90.6
	28	2	.5	.5	91.1
	29	2	.4	.4	91.6
	30	33	8.3	8.4	100.0
	Total	395	98.5	100.0	
Missing	Don't know	5	1.2		
	Refused	1	.3		
	Total	6	1.5		
Total		401	100.0		

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

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	282	70.3	71.4	71.4
	1	9	2.2	2.3	73.7
	2	20	5.0	5.1	78.8
	3	5	1.2	1.2	80.0
	4	6	1.6	1.6	81.6
	5	14	3.5	3.5	85.1
	6	1	.3	.3	85.4
	7	7	1.8	1.9	87.2
	10	9	2.3	2.3	89.6
	14	3	.6	.7	90.2
	15	12	3.0	3.0	93.3
	20	4	1.0	1.0	94.3
	21	2	.4	.4	94.7
	25	4	.9	.9	95.6
	28	1	.3	.3	96.0
	30	16	4.0	4.0	100.0
	Total	395	98.4	100.0	
Missing	Don't know	5	1.3		
	Refused	1	.3		
	Total	6	1.6		
Total		401	100.0		

During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	125	31.1	55.8	55.8
	1	16	3.9	6.9	62.8
	2	17	4.4	7.8	70.6
	3	4	1.0	1.8	72.4
	4	3	.7	1.2	73.6
	5	13	3.3	5.8	79.4
	6	2	.6	1.0	80.5
	7	4	.9	1.6	82.1
	10	8	2.1	3.8	85.8
	12	1	.2	.3	86.1
	14	2	.6	1.0	87.1
	15	5	1.3	2.3	89.4
	20	2	.4	.7	90.1
	21	2	.4	.8	90.9
	22	1	.2	.3	91.2
	25	2	.5	.9	92.1
	30	18	4.4	7.9	100.0
	Total	224	55.8	100.0	
Missing	Don't know	2	.4		
	Refused	1	.3		
	System	175	43.6		
	Total	177	44.2		
Total		401	100.0		

Health Care Coverage

Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare or Indian Health Services? *All Adults*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	368	91.7	92.7	92.7
	No	29	7.3	7.3	100.0
	Total	397	99.0	100.0	
Missing	Don't know	2	.6		
	Refused	2	.4		
	Total	4	1.0		
Total		401	100.0		

Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare or Indian Health Services? *Adults 18-64*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	281	89.4	90.6	90.6
	No	29	9.3	9.4	100.0
	Total	310	98.7	100.0	
Missing	Don't know	2	.7		
	Refused	2	.5		
	Total	4	1.3		
Total		314	100.0		

In your opinion, do you feel that your health care coverage is affordable?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	287	71.5	80.4	80.4
	No	70	17.5	19.6	100.0
	Total	357	89.0	100.0	
Missing	Don't know	11	2.7		
	System	33	8.3		
	Total	44	11.0		
Total		401	100.0		

Health Care Access

Do you have one person you think of as your personal doctor or health care provider?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, only one	313	78.1	79.9	79.9
	Yes, more than one	36	8.9	9.1	89.0
	No	43	10.8	11.0	100.0
	Total	392	97.9	100.0	
Missing	Don't know	6	1.6		
	Refused	2	.6		
	Total	9	2.1		
Total		401	100.0		

Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	27	6.6	6.6	6.6
	No	374	93.2	93.4	100.0
	Total	400	99.8	100.0	
Missing	Don't know	1	.2		
Total		401	100.0		

About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	289	72.1	73.1	73.1
	Within the past 2 years (1 year but less than 2 years ago)	45	11.2	11.4	84.5
	Within the past 5 years (2 years but less than 5 years ago)	25	6.2	6.3	90.8
	5 or more years ago	28	7.0	7.1	97.9
	Never	8	2.0	2.1	100.0
	Total	395	98.6	100.0	
Missing	Don't know	5	1.2		
	Refused	1	.2		
	Total	6	1.4		
Total		401	100.0		

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. A doctor's visit, checkup, or exam

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	380	94.8	94.8	94.8
	Selected	21	5.2	5.2	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Mental Health Care

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	388	96.7	96.7	96.7
	Selected	13	3.3	3.3	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Eyeglasses or vision care

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	376	93.9	93.9	93.9
	Selected	25	6.1	6.1	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Medical supplies or equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	392	97.7	97.7	97.7
	Selected	9	2.3	2.3	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Appointment or referral to specialist

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	382	95.2	95.2	95.2
	Selected	19	4.8	4.8	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Dental Care

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	358	89.4	89.4	89.4
	Selected	43	10.6	10.6	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Other medical treatments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	384	95.8	95.8	95.8
	Selected	17	4.2	4.2	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Medications/prescriptions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	377	93.9	93.9	93.9
	Selected	24	6.1	6.1	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Women's health services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	397	98.9	98.9	98.9
	Selected	4	1.1	1.1	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Able to obtain all healthcare needed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	87	21.7	21.7	21.7
	Selected	314	78.3	78.3	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Don't know

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	388	96.7	96.7	96.7
	Selected	13	3.3	3.3	100.0
	Total	401	100.0	100.0	

Please indicate whether you or anyone in your household have needed but could not get any of the following types of medical care in the past 12 months. Refused

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	395	98.5	98.5	98.5
	Selected	6	1.5	1.5	100.0
	Total	401	100.0	100.0	

If you said yes to any of the above, what is the main reason you could not get the service?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cost	49	12.2	73.2	73.2
	Lack of transportation	2	.5	2.7	75.9
	Doctor not accepting new patients	1	.1	.9	76.8
	Needed afterhours/weekend care	1	.3	1.8	78.5
	Other	14	3.6	21.5	100.0
	Total	67	16.7	100.0	
Missing	Don't know	1	.2		
	System	333	83.1		
	Total	334	83.3		
Total		401	100.0		

Chronic Disease

Have you ever been told by a doctor you have any of these diseases? High Blood Pressure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	287	71.6	71.6	71.6
	Selected	114	28.4	28.4	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Diabetes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	341	85.1	85.1	85.1
	Selected	60	14.9	14.9	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? High Cholesterol

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	327	81.6	81.6	81.6
	Selected	74	18.4	18.4	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Heart Disease

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	362	90.3	90.3	90.3
	Selected	39	9.7	9.7	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Heart Attack

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	386	96.2	96.2	96.2
	Selected	15	3.8	3.8	100.0
	Total	401	100.0	100.0	

Has coronary heart disease or myocardial infarction – recode (calculated from multiple variables)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	359	89.6	89.6	89.6
	Selected	42	10.4	10.4	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? COPD, Emphysema, Chronic Bronchitis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	377	93.9	93.9	93.9
	Selected	24	6.1	6.1	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? A Depressive Disorder

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	376	93.7	93.7	93.7
	Selected	25	6.3	6.3	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Stroke

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	387	96.5	96.5	96.5
	Selected	14	3.5	3.5	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Asthma

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	377	94.0	94.0	94.0
	Selected	24	6.0	6.0	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Kidney Disease

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	388	96.7	96.7	96.7
	Selected	13	3.3	3.3	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Substance Abuse Issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	395	98.5	98.5	98.5
	Selected	6	1.5	1.5	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Overweight/Obese

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	325	80.9	80.9	80.9
	Selected	76	19.1	19.1	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Mental Emotional Problems or Conditions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	383	95.5	95.5	95.5
	Selected	18	4.5	4.5	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Alzheimer's

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	399	99.6	99.6	99.6
	Selected	2	.4	.4	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? None

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	221	55.2	55.2	55.2
	Selected	180	44.8	44.8	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Don't Know

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	400	99.9	99.9	99.9
	Selected	1	.1	.1	100.0
	Total	401	100.0	100.0	

Have you ever been told by a doctor you have any of these diseases? Refused

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	397	99.1	99.1	99.1
	Selected	4	.9	.9	100.0
	Total	401	100.0	100.0	

How old were you when you were told you have diabetes?

N	Valid	58
	Missing	343
Mean		46.75
Median		50.00

Are you currently taking medicine for your high blood pressure?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	100	25.0	88.7	88.7
	No	13	3.2	11.3	100.0
	Total	113	28.1	100.0	
Missing	Don't know	1	.3		
	System	287	71.6		
	Total	288	71.9		
Total		401	100.0		

Dental Health

How long has it been since you last visited a dentist or a dental clinic for any reason?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	275	68.5	70.3	70.3
	Within the past 2 years (1 year but less than 2 years ago)	44	11.0	11.3	81.6
	Within the past 5 years (2 years but less than 5 years ago)	22	5.6	5.7	87.3
	5 or more years ago	45	11.3	11.6	98.9
	Never	4	1.1	1.1	100.0
	Total	391	97.5	100.0	
Missing	Don't know	9	2.1		
	Refused	2	.4		
	Total	10	2.5		
Total		401	100.0		

How many of your permanent teeth have been removed because of tooth decay or gum disease? Include teeth lost to infection, but do not include teeth lost for other reasons, such as injury or orthodontics.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 5	112	28.0	28.5	28.5
	6 or more, but not all	49	12.1	12.4	40.9
	All	30	7.4	7.6	48.5
	None	203	50.5	51.5	100.0
	Total	393	98.0	100.0	
Missing	Don't know	5	1.2		
	Refused	3	.7		
	Total	8	2.0		
Total		401	100.0		

Health Problems or Impairments

Are you limited in any way in any activities because of the following? Physical problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	306	76.3	76.3	76.3
	Selected	95	23.7	23.7	100.0
	Total	401	100.0	100.0	

Are you limited in any way in any activities because of the following? Mental problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	392	97.8	97.8	97.8
	Selected	9	2.2	2.2	100.0
	Total	401	100.0	100.0	

Are you limited in any way in any activities because of the following? Emotional problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	392	97.8	97.8	97.8
	Selected	9	2.2	2.2	100.0
	Total	401	100.0	100.0	

Are you limited in any way in any activities because of the following? None

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	100	25.0	25.0	25.0
	Selected	301	75.0	75.0	100.0
	Total	401	100.0	100.0	

Are you limited in any way in any activities because of the following? Don't know

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	399	99.6	99.6	99.6
	Selected	2	.4	.4	100.0
	Total	401	100.0	100.0	

Are you limited in any way in any activities because of the following? Refused

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not selected	400	99.7	99.7	99.7
	Selected	1	.3	.3	100.0
	Total	401	100.0	100.0	

Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	38	9.5	9.5	9.5
	No	362	90.2	90.5	100.0
	Total	400	99.7	100.0	
Missing	Refused	1	.3		
Total		401	100.0		

Are you blind or do you have serious difficulty seeing, even when wearing glasses?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	23	5.7	5.7	5.7
	No	375	93.5	94.3	100.0
	Total	398	99.2	100.0	
Missing	Don't know	2	.6		
	Refused	1	.3		
	Total	3	.8		
Total		401	100.0		

Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	43	10.8	10.8	10.8
	No	356	88.7	89.2	100.0
	Total	399	99.4	100.0	
Missing	Don't know	1	.3		
	Refused	1	.3		
	Total	2	.6		
Total		401	100.0		

Do you have serious difficulty walking or climbing stairs?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	71	17.8	17.8	17.8
	No	328	81.8	82.2	100.0
	Total	399	99.6	100.0	
Missing	Refused	2	.4		
Total		401	100.0		

Do you have difficulty dressing or bathing?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	17	4.4	4.4	4.4
	No	382	95.4	95.6	100.0
	Total	400	99.7	100.0	
Missing	Refused	1	.3		
Total		401	100.0		

Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	38	9.5	9.5	9.5
	No	362	90.3	90.5	100.0
	Total	400	99.7	100.0	
Missing	Refused	1	.3		
Total		401	100.0		

Falls

In the past 12 months, how many times have you fallen?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	175	43.6	73.3	73.3
	1	30	7.6	12.8	86.1
	2	14	3.6	6.0	92.1
	3	5	1.3	2.2	94.3
	4	6	1.4	2.4	96.7
	5	4	.9	1.6	98.2
	8	1	.1	.2	98.5
	10	1	.2	.3	98.8
	15	1	.1	.2	99.1
	40	1	.1	.2	99.3
	50	1	.3	.4	99.7
	52	1	.2	.3	100.0
	Total	239	59.5	100.0	
Missing	Don't know	1	.3		
	System	161	40.2		
	Total	162	40.5		
Total		401	100.0		

How many of these falls caused an injury? By an injury, we mean the fall caused you to limit your regular activities for at least a day or to go see a doctor.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	40	10.0	62.9	62.9
	1	16	3.9	24.8	87.7
	2	1	.3	1.9	89.5
	3	2	.5	2.9	92.5
	4	1	.2	1.0	93.5
	5	2	.6	3.7	97.2
	7	1	.2	1.2	98.4
	10	1	.3	1.6	100.0
	Total	64	15.9	100.0	
Missing	System	337	84.1		
Total		401	100.0		

Health Challenges

Tobacco Use

Have you ever smoked a cigarette or used an electronic vapor product in your life?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, smoked cigarette or cigar	182	45.4	45.7	45.7
	Yes, smoked electronic vapor product	11	2.8	2.8	48.5
	Yes, both	48	11.9	11.9	60.4
	No - never smoked	158	39.3	39.6	100.0
	Total	398	99.3	100.0	
Missing	Don't know	2	.4		
	Refused	1	.3		
	Total	3	.7		
Total		401	100.0		

Ever Cigarette Smokers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	229	57.2	57.6	57.6
	No	169	42.1	42.4	100.0
	Total	398	99.3	100.0	
Missing	Refused	3	.7		
Total		401	100.0		

Ever Vapor Product Users

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	59	14.7	14.8	14.8
	No	339	84.6	85.2	100.0
	Total	398	99.3	100.0	
Missing	Refused	3	.7		
Total		401	100.0		

Currently Cigarette Smoker

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	80	19.9	20.0	20.0
	No	319	79.4	80.0	100.0
	Total	398	99.3	100.0	
Missing	Refused	3	.7		
Total		401	100.0		

Current Vapor Product User

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	24	6.0	6.0	6.0
	No	374	93.4	94.0	100.0
	Total	398	99.3	100.0	
Missing	Refused	3	.7		
Total		401	100.0		

During the past 30 days, on how many days did you smoke cigarettes?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 days	150	37.3	63.7	63.7
	1 or 2 days	3	.9	1.5	65.1
	3 to 5 days	1	.1	.2	65.4
	6 to 9 days	3	.7	1.3	66.6
	20 to 29 days	4	.9	1.6	68.2
	All 30 days	64	16.0	27.3	95.5
	Never smoked a cigarette	10	2.6	4.5	100.0
	Total	235	58.6	100.0	
Missing	Don't know	3	.8		
	Refused	2	.4		
	System	161	40.2		
	Total	166	41.4		
Total		401	100.0		

During the past 30 days, on how many days did you use an electronic vapor product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 days	161	40.1	63.9	63.9
	1 or 2 days	4	1.0	1.6	65.5
	3 to 5 days	3	.8	1.2	66.8
	6 to 9 days	2	.4	.6	67.4
	10 to 19 days	2	.4	.7	68.1
	20 to 29 days	2	.4	.6	68.7
	All 30 days	12	3.0	4.8	73.5
	Never smoked a vapor product	67	16.6	26.5	100.0
	Total	251	62.6	100.0	
Missing	System	150	37.4		
Total		401	100.0		

During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	97	24.1	40.8	40.8
	No	140	35.0	59.2	100.0
	Total	237	59.2	100.0	
Missing	Don't know	1	.3		
	Refused	2	.5		
	System	160	40.0		
	Total	164	40.8		
Total		401	100.0		

How long has it been since you last smoked a cigarette, even one or two puffs?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past month (less than 1 month ago)	75	18.6	32.3	32.3
	Within the past 3 months (1 month but less than 3 months ago)	9	2.3	4.0	36.3
	Within the past 6 months (3 months but less than 6 months ago)	6	1.4	2.4	38.7
	Within the past year (6 months but less than 1 year ago)	5	1.3	2.3	41.0
	Within the past 5 years (1 year but less than 5 years ago)	33	8.2	14.3	55.2
	Within the past 10 years (5 years but less than 10 years ago)	19	4.8	8.2	63.5
	10 years or more	85	21.1	36.5	100.0
	Total	231	57.7	100.0	
Missing	Don't know	8	1.9		
	Refused	2	.4		
	System	160	40.0		
	Total	170	42.3		
Total		401	100.0		

Not counting decks, porches, or garages, during the past 7 days, on how many days did someone other than you smoke tobacco inside your home while you were at home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	350	87.3	87.8	87.8
	1	6	1.5	1.5	89.3
	2	4	1.1	1.1	90.4
	3	3	.7	.8	91.1
	4	2	.5	.5	91.6
	5	1	.3	.3	91.9
	6	1	.1	.1	92.1
	7	32	7.9	7.9	100.0
	Total	399	99.4	100.0	
Missing	Don't know	1	.3		
	Refused	1	.3		
	Total	2	.6		
Total		401	100.0		

During the past 7 days on how many days did you ride in a vehicle where someone other than you was smoking tobacco?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	341	84.9	85.9	85.9
	1	14	3.5	3.5	89.4
	2	9	2.2	2.2	91.7
	3	6	1.5	1.5	93.2
	4	1	.3	.3	93.5
	5	10	2.5	2.5	96.0
	6	2	.6	.6	96.6
	7	13	3.4	3.4	100.0
	Total	396	98.8	100.0	
Missing	Don't know	2	.5		
	Refused	3	.7		
	Total	5	1.2		
Total		401	100.0		

Alcohol Use

During the past 30 days, on how many days did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 days	232	57.8	58.0	58.0
	1 or 2 days	64	15.9	16.0	74.0
	3 to 5 days	44	11.0	11.0	85.0
	6 to 9 days	11	2.8	2.9	87.9
	10 to 19 days	30	7.4	7.4	95.3
	20 to 29 days	10	2.6	2.6	97.9
	All 30 days	7	1.8	1.8	99.7
	Never drank an alcoholic beverage	1	.3	.3	100.0
	Total	399	99.6	100.0	
Missing	Don't know	2	.4		
Total		401	100.0		

One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?

N	Valid	164
	Missing	236
Mean		2.73

One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	.6	1.5	1.5
	1	69	17.2	42.2	43.7
	2	36	8.9	21.8	65.5
	3	25	6.1	15.0	80.5
	4	14	3.5	8.6	89.1
	5	4	1.0	2.5	91.7
	6	3	.8	2.0	93.7
	8	4	1.0	2.4	96.1
	10	4	1.1	2.7	98.8
	30	2	.5	1.2	100.0
	Total	164	40.8	100.0	
Missing	Don't know	2	.6		
	Refused	1	.2		
	System	234	58.5		
	Total	237	59.2		
Total		401	100.0		

Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks (if male) (4 or more drinks if female) on an occasion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	107	26.8	65.1	65.1
	1	21	5.2	12.6	77.7
	2	10	2.5	6.2	83.9
	3	6	1.4	3.4	87.3
	4	4	1.1	2.6	89.9
	5	4	1.0	2.4	92.3
	6	5	1.1	2.8	95.0
	8	2	.4	1.0	96.0
	14	2	.4	1.0	97.0
	15	2	.4	1.0	98.0
	25	1	.1	.4	98.3
	30	3	.7	1.7	100.0
	Total	165	41.2	100.0	
Missing	Don't know	2	.4		
	System	234	58.5		
	Total	236	58.8		
Total		401	100.0		

During the past 30 days, what is the largest number of drinks you had on any occasion?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	49	12.2	30.5	30.5
	2	39	9.6	24.0	54.5
	3	20	5.1	12.6	67.1
	4	14	3.4	8.5	75.6
	5	13	3.2	7.9	83.5
	6	2	.6	1.4	84.9
	7	2	.4	1.0	85.9
	8	6	1.4	3.5	89.4
	9	1	.3	.6	90.0
	10	13	3.2	8.0	98.0
	12	2	.4	1.0	99.0
	14	2	.4	1.0	100.0
	Total	161	40.1	100.0	
Missing	Don't know	6	1.4		
	System	234	58.5		
	Total	240	59.9		
Total		401	100.0		

Binge drinking (recode - calculated variable)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never in the past month	333	83.0	84.4	84.4
	Binged one or more times in the past month	62	15.4	15.6	100.0
	Total	395	98.4	100.0	
Missing	Don't know	4	1.0		
	Refused	2	.6		
	Total	6	1.6		
Total		401	100.0		

Vaccinations

During the past twelve months, have you had a flu shot?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	187	46.7	46.8	46.8
	No	213	53.1	53.2	100.0
	Total	400	99.9	100.0	
Missing	Don't know	1	.1		
Total		401	100.0		

What kind of place did you last get your flu shot?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A doctor's office or health maintenance organization-HMO	90	22.4	48.1	48.1
	A health department	1	.3	.7	48.7
	Another type of clinic or health center	7	1.8	3.9	52.6
	A store/pharmacy (Examples: supermarket, drug store)	42	10.6	22.7	75.4
	A hospital	11	2.6	5.6	81.0
	Workplace	29	7.3	15.7	96.8
	Some other kind of place	5	1.3	2.7	99.4
	A school	1	.3	.6	100.0
	Total	187	46.6	100.0	
Missing	Don't know	1	.2		
	System	214	53.3		
	Total	214	53.4		
Total		401	100.0		

A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot. Have you ever had a pneumonia shot?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	116	29.0	29.7	29.7
	No	275	68.7	70.3	100.0
	Total	392	97.7	100.0	
Missing	Don't know	8	2.1		
	Refused	1	.3		
	Total	9	2.3		
Total		401	100.0		

Have you ever had the shingles or zoster vaccine?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	76	18.9	19.7	19.7
	No	310	77.3	80.3	100.0
	Total	386	96.3	100.0	
Missing	Don't know	14	3.5		
	Refused	1	.3		
	Total	15	3.7		
Total		401	100.0		

During the past twelve months, have you had a flu shot? *Adults 65 years of age or older*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	74.0	74.4	74.4
	No	22	25.4	25.6	100.0
	Total	87	99.3	100.0	
Missing	Don't know	1	.7		
Total		87	100.0		

What kind of place did you last get your flu shot? *Adults 65 years of age or older*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A doctor's office or health maintenance organization-HMO	38	43.4	58.7	58.7
	Another type of clinic or health center	3	3.9	5.3	64.1
	A store/pharmacy (Examples: supermarket, drug store)	15	17.2	23.3	87.4
	A hospital	3	3.4	4.6	91.9
	Workplace	3	3.6	4.8	96.8
	Some other kind of place	2	2.4	3.2	100.0
	Total	65	74.0	100.0	
Missing	System	23	26.0		
Total		87	100.0		

A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot. Have you ever had a pneumonia shot? *Adults 65 years of age or older*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	65	74.3	75.2	75.2
	No	21	24.5	24.8	100.0
	Total	86	98.8	100.0	
Missing	Refused	1	1.2		
Total		87	100.0		

Have you ever had the shingles or zoster vaccine? *Adults 65 years of age or older*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	40	45.7	46.7	46.7
	No	46	52.2	53.3	100.0
	Total	86	97.9	100.0	
Missing	Don't know	1	.9		
	Refused	1	1.2		
	Total	2	2.1		
Total		87	100.0		

Cancer Screenings

A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram? *All women*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	131	32.7	63.8	63.8
	No	74	18.5	36.2	100.0
	Total	205	51.2	100.0	
Missing	Refused	1	.1		
	System	195	48.6		
	Total	196	48.8		
Total		401	100.0		

How long has it been since you had your last mammogram? (recode - 2 variables combined) – *All women*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	78	19.4	38.7	38.7
	Within the past 2 years (1 year but less than 2 years ago)	19	4.6	9.2	47.9
	Within the past 3 years (2 years but less than 3 years ago)	8	2.0	3.9	51.8
	Within the past 5 years (3 years but less than 5 years ago)	3	.9	1.7	53.5
	5 or more years ago	19	4.9	9.7	63.1
	Never	74	18.5	36.9	100.0
	Total	202	50.3	100.0	
Missing	Don't know/Not sure	3	.8		
	Refused	1	.2		
	System	196	48.8		
	Total	199	49.7		
Total		401	100.0		

A clinical breast exam is when a doctor, nurse, or other health professional feels the breast for lumps. Have you ever had a clinical breast exam? *All women*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	159	39.7	78.2	78.2
	No	44	11.1	21.8	100.0
	Total	203	50.7	100.0	
Missing	Don't know/Not sure	2	.5		
	Refused	1	.1		
	System	195	48.6		
	Total	198	49.3		
Total		401	100.0		

How long has it been since your last breast exam? (recode - 2 variables combined)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	94	23.3	46.9	46.9
	Within the past 2 years (1 year but less than 2 years ago)	19	4.6	9.3	56.2
	Within the past 3 years (2 years but less than 3 years ago)	12	2.9	5.9	62.1
	Within the past 5 years (3 years but less than 5 years ago)	10	2.5	5.0	67.1
	5 or more years ago	21	5.3	10.7	77.8
	Never	44	11.1	22.2	100.0
	Total	200	49.8	100.0	
Missing	Don't know/Not sure	5	1.3		
	Refused	1	.3		
	System	195	48.6		
	Total	201	50.2		
Total		401	100.0		

A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram? ***Women 40+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	119	86.2	86.6	86.6
	No	18	13.3	13.4	100.0
	Total	137	99.6	100.0	
Missing	Refused	1	.4		
Total		138	100.0		

How long has it been since you had your last mammogram? (recode - 2 variables combined) – ***Women 40+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	68	49.2	50.4	50.4
	Within the past 2 years (1 year but less than 2 years ago)	19	13.5	13.8	64.2
	Within the past 3 years (2 years but less than 3 years ago)	8	5.7	5.8	70.1
	Within the past 5 years (3 years but less than 5 years ago)	2	1.8	1.8	71.9
	5 or more years ago	19	14.1	14.5	86.3
	Never	18	13.3	13.7	100.0
	Total	134	97.5	100.0	
Missing	Don't know/Not sure	2	1.5		
	Refused	1	.5		
	System	1	.4		
	Total	3	2.5		
Total		138	100.0		

A clinical breast exam is when a doctor, nurse, or other health professional feels the breast for lumps. Have you ever had a clinical breast exam? ***Women 40+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	112	81.4	81.7	81.7
	No	25	18.2	18.3	100.0
	Total	137	99.6	100.0	
Missing	Refused	1	.4		
Total		138	100.0		

How long has it been since your last breast exam? (recode - 2 variables combined) - ***Women 40+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	59	42.8	43.9	43.9
	Within the past 2 years (1 year but less than 2 years ago)	12	9.0	9.2	53.1
	Within the past 3 years (2 years but less than 3 years ago)	10	7.1	7.3	60.4
	Within the past 5 years (3 years but less than 5 years ago)	9	6.4	6.6	67.0
	5 or more years ago	19	14.0	14.4	81.4
	Never	25	18.2	18.6	100.0
	Total	134	97.5	100.0	
Missing	Don't know/Not sure	2	1.6		
	Refused	1	1.0		
	Total	3	2.5		
Total		138	100.0		

How long has it been since you had your last mammogram? (recode - 2 variables combined) – *Ages 50-74*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	48	54.0	54.4	54.4
	Within the past 2 years (1 year but less than 2 years ago)	13	14.6	14.7	69.1
	Within the past 3 years (2 years but less than 3 years ago)	7	8.0	8.1	77.2
	Within the past 5 years (3 years but less than 5 years ago)	2	2.7	2.8	79.9
	5 or more years ago	10	11.1	11.2	91.1
	Never	8	8.8	8.9	100.0
	Total	88	99.3	100.0	
Missing	System	1	.7		
Total		88	100.0		

A pap test is a test for cancer of the cervix. Have you ever had a pap test? All women

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	170	42.4	83.1	83.1
	No	35	8.6	16.9	100.0
	Total	205	51.1	100.0	
Missing	Don't know/Not sure	1	.1		
	Refused	1	.1		
	System	195	48.6		
	Total	196	48.9		
Total		401	100.0		

How long has it been since you had your last pap test? (recode - 2 variables combined) – All women

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	73	35.3	36.6	36.6
	Within the past 2 years (1 year but less than 2 years ago)	26	12.6	13.1	49.7
	Within the past 3 years (2 years but less than 3 years ago)	15	7.1	7.4	57.1
	Within the past 5 years (3 years but less than 5 years ago)	11	5.2	5.4	62.5
	5 or more years ago	40	19.3	20.1	82.5
	Never	35	16.8	17.5	100.0
	Total	199	96.3	100.0	
Missing	Don't know/Not sure	7	3.4		
	Refused	1	.3		
	Total	8	3.7		
Total		206	100.0		

How long has it been since you had your last pap test? (recode - 2 variables combined) *Women 21-65 years of age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	63	42.2	43.5	43.5
	Within the past 2 years (1 year but less than 2 years ago)	23	15.4	15.9	59.4
	Within the past 3 years (2 years but less than 3 years ago)	11	7.3	7.6	66.9
	Within the past 5 years (3 years but less than 5 years ago)	8	5.6	5.8	72.7
	5 or more years ago	24	15.8	16.3	89.0
	Never	16	10.7	11.0	100.0
	Total	145	97.0	100.0	
Missing	Don't know/Not sure	4	2.6		
	Refused	1	.4		
	Total	4	3.0		
Total		150	100.0		

Has a doctor, nurse, or other health professional ever talked with you about the advantages of the PSA test? *Men 50+ years of age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	48	51.9	53.5	53.5
	No	42	45.1	46.5	100.0
	Total	90	97.0	100.0	
Missing	Don't know	2	2.4		
	Refused	1	.6		
	Total	3	3.0		
Total		93	100.0		

Have you ever had a PSA test? *Men 50+ years of age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	48	51.9	53.5	53.5
	No	42	45.1	46.5	100.0
	Total	90	97.0	100.0	
Missing	Don't know	2	2.4		
	Refused	1	.6		
	Total	3	3.0		
Total		93	100.0		

How long has it been since your last PSA test? (recode - 2 variables combined) ***Men 50+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	34	36.7	37.8	37.8
	Within the past 2 years (1 year but less than 2 years ago)	5	5.3	5.4	43.3
	Within the past 3 years (2 years but less than 3 years ago)	2	2.4	2.4	45.7
	Within the past 5 years (3 years but less than 5 years ago)	1	1.2	1.3	47.0
	5 or more years ago	6	6.3	6.5	53.5
	Never	42	45.1	46.5	100.0
	Total	90	97.0	100.0	
Missing	Don't know/Not sure	2	2.4		
	Refused	1	.6		
	Total	3	3.0		
Total		93	100.0		

How long has it been since your last PSA test? (recode - 2 variables combined) ***Men 40+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	36	27.8	28.5	28.5
	Within the past 2 years (1 year but less than 2 years ago)	5	3.8	3.9	32.4
	Within the past 3 years (2 years but less than 3 years ago)	4	3.0	3.1	35.4
	Within the past 5 years (3 years but less than 5 years ago)	1	.9	.9	36.3
	5 or more years ago	6	4.6	4.7	41.0
	Never	74	57.7	59.0	100.0
	Total	126	97.8	100.0	
Missing	Don't know/Not sure	2	1.7		
	Refused	1	.5		
	Total	3	2.2		
Total		128	100.0		

A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit? ***Adults 50+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	67	32.9	33.1	33.1
	No	135	66.5	66.9	100.0
	Total	202	99.4	100.0	
Missing	Don't know	1	.3		
	Refused	1	.3		
	Total	1	.6		
Total		203	100.0		

How long has it been since you had your last blood stool test using a home kit? ***Adults 50+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	27	13.4	14.0	14.0
	Within the past 2 years (1 year but less than 2 years ago)	11	5.5	5.7	19.6
	Within the past 3 years (2 years but less than 3 years ago)	6	2.9	3.0	22.7
	Within the past 5 years (3 years but less than 5 years ago)	2	1.1	1.1	23.8
	5 or more years ago	14	6.8	7.1	30.9
	Never	135	66.5	69.1	100.0
	Total	195	96.3	100.0	
Missing	Don't know/Not sure	6	2.9		
	Refused	2	.9		
	Total	8	3.7		
Total		203	100.0		

Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the bowel for signs of cancer and other health problems. Have you ever had either of these exams? ***Adults 50+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	127	62.6	62.8	62.8
	No	75	37.1	37.2	100.0
	Total	202	99.7	100.0	
Missing	Refused	1	.3		
Total		203	100.0		

Was your most recent exam a sigmoidoscopy or a colonoscopy? ***Adults 50+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sigmoidoscopy	2	1.1	1.7	1.7
	Colonoscopy	123	60.4	98.3	100.0
	Total	125	61.5	100.0	
Missing	Don't know	2	1.1		
	System	76	37.4		
	Total	78	38.5		
Total		203	100.0		

How long has it been since your last sigmoidoscopy or colonoscopy? (recode - 2 variables combined) ***Adults 50+ years of age***

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within the past year (anytime less than 12 months ago)	31	15.4	15.6	15.6
	Within the past 2 years (1 year but less than 2 years ago)	19	9.5	9.6	25.2
	Within the past 3 years (2 years but less than 3 years ago)	22	10.8	10.9	36.1
	Within the past 5 years (3 years but less than 5 years ago)	25	12.4	12.6	48.7
	Within the past 10 years (5 years but less than 10 years ago)	22	10.8	10.9	59.6
	10 or more years ago	6	2.8	2.8	62.4
	Never	75	37.1	37.6	100.0
	Total	200	98.8	100.0	
Missing	Don't know	2	.9		
	Refused	1	.3		
	Total	2	1.2		
Total		203	100.0		

Respondents aged 50-75 who have fully met the U.S. Preventive Services Task Force (USPSTF) recommendation for colorectal cancer screening (variable calculated from one or more BRFSS questions)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Has had a blood stool test in the past year	9	5.1	5.1	5.1
	Has had sigmoidoscopy in the past 5 years and blood stool test in the past 3 years	1	.8	.8	5.9
	Has had a colonoscopy in the past 10 years	98	57.0	57.0	62.9
	Did not meet the USPSTF recommendation	64	37.1	37.1	100.0
	Total	172	100.0	100.0	

HIV Testing

Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation. Include testing fluid from your mouth.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	104	26.0	27.2	27.2
	No	278	69.4	72.8	100.0
	Total	382	95.4	100.0	
Missing	Don't know/Not sure	17	4.4		
	Refused	1	.3		
	Total	19	4.6		
Total		401	100.0		

Where did you have your last HIV test - at a private doctor or HMO office, at a counseling and testing site, at an emergency room, as an inpatient in a hospital, at a clinic, in a jail or prison, at a drug treatment facility, at home, or somewhere else?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private doctor or HMO office	50	12.4	47.8	47.8
	Health department	5	1.3	4.8	52.6
	Emergency room	1	.3	1.1	53.7
	Hospital inpatient	15	3.7	14.2	67.9
	Clinic	10	2.5	9.6	77.5
	At home	2	.6	2.2	79.7
	Somewhere else	6	1.4	5.4	85.1
	Work	11	2.8	11.0	96.1
	Don't know	3	.8	2.9	99.0
	Refused	1	.3	1.0	100.0
	Total	104	26.0	100.0	
Missing	System	297	74.0		
Total		401	100.0		

Maternal Health

Have you ever been pregnant? *Women under 45*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	53	65.9	65.9	65.9
	No	27	34.1	34.1	100.0
	Total	80	100.0	100.0	

To your knowledge, are you now pregnant? *Women under 45*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	12.6	12.6	12.6
	No	70	87.4	87.4	100.0
	Total	80	100.0	100.0	

Has a doctor, nurse, or other health care worker ever talked to you about ways to prepare for a healthy pregnancy and baby? *Women who have ever been pregnant only*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	53	65.8	65.8	65.8
	No	27	34.2	34.2	100.0
	Total	80	100.0	100.0	

How many times a week do you currently take a multivitamin, a prenatal vitamin, or a folic acid vitamin? *Women under 45*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 times per week	36	44.3	46.0	46.0
	1-3 times per week	11	13.9	14.5	60.5
	4-6 times per week	2	2.5	2.6	63.1
	Every day of the week	28	35.5	36.9	100.0
	Total	77	96.2	100.0	
Missing	Don't know	3	3.8		
Total		80	100.0		

Infant and Child Safety

How often do you transport your children (birth to 4'9") in a car or booster seat? *Adults with children only*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	78	49.5	77.4	77.4
	Nearly always	6	4.0	6.2	83.6
	Sometimes	1	.8	1.2	84.8
	Seldom	1	.7	1.0	85.8
	Never	8	5.2	8.2	94.0
	Never drive or ride in a car	4	2.8	4.4	98.4
	Don't know/Not sure	2	1.0	1.6	100.0
	Total	100	64.0	100.0	
Missing	Don't have an infant or child shorter than 4'9"	56	35.6		
	Refused	1	.4		
	Total	56	36.0		
Total		157	100.0		

Does your infant sleep in bed with you? *Adults with children only*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	5	3.2	7.7	7.7
	Sometimes	6	3.7	9.0	16.7
	Seldom	5	3.5	8.5	25.1
	Never	47	30.3	73.2	98.4
	Don't know/Not sure	1	.7	1.6	100.0
	Total	65	41.4	100.0	
Missing	Not applicable	35	22.6		
	Don't have an infant or child shorter than 4'9"	56	36.0		
	Total	92	58.6		
Total		157	100.0		

Do you put your infant to sleep on their back? *Adults with children only*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	26	16.4	42.3	42.3
	Nearly always	4	2.8	7.2	49.4
	Sometimes	10	6.3	16.2	65.6
	Seldom	3	1.9	5.0	70.6
	Never	15	9.4	24.3	94.9
	Don't know/Not sure	3	2.0	5.1	100.0
	Total	61	38.8	100.0	
Missing	Not applicable	39	25.2		
	Don't have an infant or child shorter than 4'9"	56	36.0		
	Total	96	61.2		
Total		157	100.0		

Fruit and Vegetable Intake

During the past month, not counting juice, how many times per day, week, or month did you eat fruit? Count fresh, frozen, or canned fruit.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Answer given in times per day	169	42.2	43.3	43.3
	Answer given in times per week	129	32.2	33.0	76.3
	Answer given in times per month	77	19.2	19.6	95.9
	Never	16	4.0	4.1	100.0
	Total	392	97.6	100.0	
Missing	Don't know	8	2.1		
	Refused	1	.3		
	Total	9	2.4		
Total		401	100.0		

During the past month, how many times per day, week, or month did you eat cooked or canned beans, such as refried, baked, black, garbanzo beans, beans in soup, soybeans, edamame, tofu or lentils. Do not include long green beans.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Answer given in times per day	32	7.9	8.3	8.3
	Answer given in times per week	153	38.2	39.6	47.9
	Answer given in times per month	162	40.4	42.0	89.9
	Never	39	9.7	10.1	100.0
	Total	386	96.3	100.0	
Missing	Don't know	12	3.1		
	Refused	3	.7		
	Total	15	3.7		
Total		401	100.0		

During the past month, how many times per day, week, or month did you eat dark green vegetables for example broccoli or dark leafy greens including romaine, chard, collard greens, or spinach.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Answer given in times per day	86	21.4	21.9	21.9
	Answer given in times per week	150	37.5	38.4	60.4
	Answer given in times per month	126	31.5	32.3	92.7
	Never	29	7.2	7.3	100.0
	Total	392	97.6	100.0	
Missing	Don't know	8	2.1		
	Refused	1	.3		
	Total	9	2.4		
Total		401	100.0		

During the past month, how many times per day, week, or month did you eat orange-colored vegetables such as sweet potatoes, pumpkin, winter squash, or carrots?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Answer given in times per day	36	9.0	9.1	9.1
	Answer given in times per week	158	39.4	40.1	49.3
	Answer given in times per month	154	38.3	39.1	88.4
	Never	46	11.4	11.6	100.0
	Total	393	98.0	100.0	
Missing	Don't know	7	1.7		
	Refused	1	.3		
	Total	8	2.0		
Total		401	100.0		

Not counting what you just told me about, during the past month, about how many times per day, week, or month did you eat other vegetables? Examples include tomatoes, tomato or v8 juice, corn, eggplant, peas, lettuce, cabbage, and white potatoes that are not fried such as baked or mashed potatoes?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Answer given in times per day	117	29.3	30.0	30.0
	Answer given in times per week	146	36.5	37.4	67.3
	Answer given in times per month	119	29.6	30.3	97.6
	Never	9	2.3	2.4	100.0
	Total	392	97.6	100.0	
Missing	Don't know	8	2.1		
	Refused	1	.3		
	Total	9	2.4		
Total		401	100.0		

Daily recommended servings of 2 fruit & 3 vegetable servings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero or no servings	252	62.8	72.4	72.4
	Less than the recommended	78	19.4	22.4	94.7
	At least the recommended	18	4.6	5.3	100.0
	Total	348	86.8	100.0	
Missing	Don't know	27	6.6		
	Refused	26	6.6		
	Total	53	13.2		
Total		401	100.0		

Daily fruit and vegetable consumption, 5 in any combination

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero or no servings	2	.4	.5	.5
	Less than the 5 recommended servings (any combination) per day	309	77.0	88.7	89.2
	At least the recommended 5 servings (any combination) per day	38	9.4	10.8	100.0
	Total	348	86.8	100.0	
Missing	Don't know	27	6.6		
	Refused	26	6.6		
	Total	53	13.2		
Total		401	100.0		

Daily fruit consumption

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero or no servings	32	7.9	8.4	8.4
	Less than the 2 recommended servings per day	279	69.6	73.7	82.1
	At least the recommended 2 servings per day	68	16.9	17.9	100.0
	Total	378	94.4	100.0	
Missing	Don't know	8	2.1		
	Refused	14	3.5		
	Total	23	5.6		
Total		401	100.0		

Daily Vegetable Consumption (any combination of vegetables)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero or no servings	3	.7	.8	.8
	Less than the 3 recommended servings per day	300	74.7	84.5	85.3
	At least the recommended 3 servings per day	52	13.0	14.7	100.0
	Total	354	88.4	100.0	
Missing	Don't know	23	5.7		
	Refused	24	5.9		
	Total	47	11.6		
Total		401	100.0		

At least one serving of fruit daily

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero or no servings	32	7.9	8.4	8.4
	Less than a single serving of fruit per day	160	39.8	42.2	50.5
	At least the 1 serving of fruit per day	187	46.7	49.5	100.0
	Total	378	94.4	100.0	
Missing	Don't know	8	2.1		
	Refused	14	3.5		
	Total	23	5.6		
Total		401	100.0		

At least one serving of vegetables daily

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Zero or no servings	3	.7	.7	.7
	Less than a single serving of vegetables per day	82	20.4	21.2	21.8
	At least the 1 serving of vegetables per day	303	75.5	78.2	100.0
	Total	387	96.5	100.0	
Missing	Don't know	3	.8		
	Refused	11	2.7		
	Total	14	3.5		
Total		401	100.0		

Drug Use

During your life, how many times have you taken prescription pain medicine without a doctor's prescription or differently than how a doctor told you to use it (count drugs such as Codeine, Vicodin, OxyContin, Hydrocodone, and Percocet)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	326	81.2	86.4	86.4
	1	10	2.6	2.7	89.2
	2	11	2.7	2.9	92.1
	3	4	1.0	1.1	93.2
	4	6	1.4	1.5	94.7
	5	9	2.1	2.3	97.0
	10	4	1.0	1.1	98.1
	12	2	.5	.5	98.6
	15	2	.6	.6	99.2
	25	1	.2	.2	99.4
	50	2	.4	.4	99.8
	76	1	.1	.2	100.0
	Total	377	93.9	100.0	
Missing	Don't know	23	5.7		
	Refused	2	.4		
	Total	24	6.1		
Total		401	100.0		

Have you or your immediate family been affected by street drug use like heroin, methadone, cocaine, etc.?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	58	14.4	14.6	14.6
	No	339	84.5	85.4	100.0
	Total	397	98.9	100.0	
Missing	Don't know	2	.5		
	Refused	2	.6		
	Total	4	1.1		
Total		401	100.0		

Household Problems

Please indicate if the following are a major problem, moderate problem, minor problem, or no problem at all for your household: Hunger or a need for food in your household

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Major problem	1	.3	.3	.3
	Moderate problem	8	1.9	1.9	2.3
	Minor problem	20	5.0	5.0	7.3
	Not a problem at all or N/A	372	92.7	92.7	100.0
	Total	401	100.0	100.0	

Please indicate if the following are a major problem, moderate problem, minor problem, or no problem at all for your household: A need for food that is required for a special diet (prescribed by your/another household member's doctor)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderate problem	9	2.2	2.2	2.2
	Minor problem	17	4.2	4.2	6.4
	Not a problem at all or N/A	375	93.6	93.6	100.0
	Total	401	100.0	100.0	

Please indicate if the following are a major problem, moderate problem, minor problem, or no problem at all for your household: Alcohol abuse

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Major problem	1	.3	.3	.3
	Moderate problem	7	1.8	1.8	2.1
	Minor problem	8	2.1	2.1	4.2
	Not a problem at all or N/A	383	95.6	95.8	100.0
	Total	400	99.8	100.0	
Missing	Don't know	1	.2		
Total		401	100.0		

Please indicate if the following are a major problem, moderate problem, minor problem, or no problem at all for your household: Drug abuse (prescription or illegal)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Major problem	3	.8	.8	.8
	Moderate problem	2	.6	.6	1.3
	Minor problem	3	.9	.9	2.2
	Not a problem at all or N/A	391	97.5	97.8	100.0
	Total	400	99.7	100.0	
Missing	Don't know	1	.2		
	Refused	1	.2		
	Total	1	.3		
Total		401	100.0		

Please indicate if the following are a major problem, moderate problem, minor problem, or no problem at all for your household: Adult mental illness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Major problem	8	1.9	1.9	1.9
	Moderate problem	10	2.4	2.5	4.3
	Minor problem	18	4.5	4.5	8.9
	Not a problem at all or N/A	364	90.9	91.1	100.0
	Total	400	99.7	100.0	
Missing	Don't know	1	.1		
	Refused	1	.2		
	Total	1	.3		
Total		401	100.0		

Exercise

During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	262	65.4	65.4	65.4
	No	139	34.6	34.6	100.0
	Total	401	100.0	100.0	

Weight Status

Weight Status (calculated variable)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Underweight	2	.6	.7	.7
	Normal or Healthy Weight	109	27.3	29.8	30.5
	Overweight	130	32.4	35.4	65.9
	Obese	125	31.2	34.1	100.0
	Total	367	91.5	100.0	
Missing	Respondent is under 20 years of age	8	2.1		
	Refused	26	6.4		
	Total	34	8.5		
Total		401	100.0		

Appendix B: State and Nation Comparison

Key Variable	Preble County 2017		State of Ohio 2015				Nationwide *(States & DC)* 2015		HP 2020
	Percent	Sample Size	Percent	Sample Size	N	Sample-N	Median	Balance	Target
Health Status									
General Health - Fair or Poor	17.8%	399	16.5%	11,900	2,507	9,393	16.4%^	83.6%	20.2%
No Health Care Coverage	7.3%	397	8.4%^	11,878	605	11,273	10.8%^	89.2%	**0%**
No Health Care Coverage for Adults 18-64	9.3%	310	10.2%^	6,936	519	6,417	13.0%^	87.0%	**0%**
Could not see a doctor because of cost in past 12 months	6.6%	400	10.7%	11,893	995	10,898	12.1%^	87.9%	**4.2%**
Had last checkup within past 12 months	73.1%	395	72.0%^	11,750	9,306	2,444	70.2%^	30.9%	N/A
Have at least one (or more than one) health care provider	89.0%	392	82.0%^	11,882	10,601	1,281	78.8%^	21.0%	**83.9%**
Dental Health									
Visited the dentist or dental clinic within the past year for any reason (2014)	70.3%	391	65.3%^	10,8012	7,214	3,598	65.3%^	34.7%	49.0%
Adults that have had any permanent teeth removed (2014)	48.5%	393	46.5%^	10,602	5,959	4,643	43.4%^	56.6%	N/A
Chronic Health Conditions – Ever Told									
High Cholesterol	18.4%	401	36.7%^	10,463	4,571	5,892	36.3%^	63.7%	**13.5%**
High Blood Pressure	28.4%	401	34.3%^	11,886	5,420	6,466	30.9%^	69.1%	**26.9%**
Angina or Coronary Heart Disease (CHD)	9.7%	401	4.2%*	11,818	823	10,995	3.9%^	96.1%	N/A
Heart Attack (myocardial infarction (MI))	3.8%	401	4.9%^	11,861	889	10,972	4.2%^	95.8%	N/A
Stroke	3.5%	401	3.5%	11,886	624	11,262	3.0%^	97.0%	N/A
CHD or MI	10.4%	401	7.0%	11,819	1,299	10,520	6.1%^	93.9%	N/A
Diabetes	14.9%	401	11.8%	11,905	1,955	9,950	10.8%^	89.1%	N/A
Asthma	6.0%	401	14.1%^	11,873	1,533	10,340	14.3%^	85.8%	N/A

Key Variable	Preble County 2017		State of Ohio 2015				Nationwide *(States & DC)* 2015		HP 2020
	Percent	Sample Size	Percent	Sample Size	N	Sample-N	Median	Balance	Target
COPD	6.1%	401	7.9%^	11,865	1,324	10,541	6.2%^	93.8%	N/A
Kidney Disease	3.3%	401	3.2%	11,884	547	11,337	2.7%*	97.3%	13.3%
Depression	6.3%	401	18.9%^	12,987	2,587	10,400	19.0%^	81.0%	N/A
Health Behaviors									
Consumed fruit less than once per day	50.5%	378	42.9%^	10,734	4,257	6,477	39.7%^	60.3%	N/A
Consumed vegetables less than once per day	21.8%	387	24.8%	10,509	2,259	7,980	22.1%^	77.9%	N/A
No Physical Activity	34.6%	401	27.0%^	10,963	3,281	7,682	26.2%^	73.8%	**32.6%**
Weight-Overweight/Obese	69.5%	367	66.5%^	10,924	7,490	3,434	65.3%^	34.7%	**66.1%**
Not Currently Smoker	80.0%	398	78.4%	11,522	9,593	1,929	82.5%^	17.5%	**88.0%**
Has not drank alcohol within the past 30 days	58.0%	399	52.9%	11,450	5,221	6,229	54.0%	46.0%	N/A
Binge Drinking (5 or more drinks on one occasion)	15.6%	396	18.2%^	11,342	1,284	10,058	16.3%	83.7%	24.4%
Adult Immunizations									
Adults Who Have Had Flu Shot Past 12 Months (65+) (2014)	74.4%	87	57.7%^	4,381	2,505	1,876	61.3%^	38.7%	**90.0%**
Adults Who Have Had Pneumonia Shot (65+) (2014)	75.2%	86	72.2%^	4,267	3,086	1,181	70.3%^	27.3%	**90.0%**
Have you ever had the shingles or zoster vaccine? All respondents (2014)	19.7%	386	20.8%	7,406	1,744	5,662	22.2%^	77.8%	**30.0%**
Cancer Screenings									
Mammogram (Ages 40+) – within last 2 Years (2014)	64.2%	134	72.2%^	5,361	3,885	1,476	73.0%^	27.0%	N/A
Mammogram (Ages 50-74) – within last 2 Years (2014)	69.1%	88	75.8%^	3,422	2,604	818	78.1%^	21.9%	**81.1%**

	Preble County 2017		State of Ohio 2015				Nationwide *(States & DC)* 2015		HP 2020
Key Variable	**Percent**	**Sample Size**	**Percent**	**Sample Size**	**N**	**Sample-N**	**Median**	**Balance**	**Target**
Pap test (women 18+) - within last 3 years (2014)	57.1%	199	73.7%^	4,237	3,029	1,208	75.2%^	24.8%	N/A
Pap test (women 21-65) - within last 3 years (2014)	66.9%	145	81.5%^	2,943	2,348	595	82.6%^	17.4%	**93.0%**
PSA Test (40+) – within last 2 Years	32.4%	126	56.7%^	3,149	1,606	1,543	57.2%^	42.8%	N/A
Never had a Sigmoidoscopy or Colonoscopy (50+) (2014)	37.2%	202	32.4%^	7,349	2,267	5,082	30.7%^	69.3%	N/A
Adults 50-75 who met the USPSTF recommendation for colorectal cancer screening (2014)	62.9%	172	65.1%^	5,853	3,812	1,841	66.6%^	33.4%	**70.5%**
Communicable Disease									
HIV Test	27.2%	382	30.7%*	10,400	2,292	8,108	36.3%^	63.7%	**73.6%**

* Significant at the .05 Level
^ Significant at the .01 Level

Note - the N and Sample N (as reported by the CDC) for Ohio data represent unweighted counts, while the percentage represents the weighted State estimate.

Appendix C: Disparities

Preble County Respondents - Key Variable	Sex	Age	House-hold Income	Educa-tion
Health Status				
General Health - Fair or Poor		55+		<HS
No Health Care Coverage		<55	$15k+	
Could not see a doctor because of cost in past 12 months	Female			
Had last checkup within past 12 months	Female	55+		
Have at least one (or more than one) health care provider		<55		
Dental Health				
Visited the dentist or dental clinic within the past year for any reason (2014)	Female		$15k+	HS+
Adults that have had any permanent teeth removed (2014)		55+		<HS
Chronic Health Conditions – Ever Told				
High Cholesterol		55+		
High Blood Pressure		55+	<$15k	
Angina or Coronary Heart Disease (CHD)		55+		
Heart Attack (myocardial infarction (MI))		55+		
CHD or MI		55+		
Diabetes		55+		
COPD		55+		<HS
Kidney Disease		55+		
Depression	Female		<$15	
Health Behaviors				
Consumed fruit less than once per day	Male			
Consumed vegetables less than once per day		55+		<HS
No Physical Activity		55+	<$15	
Weight - Overweight/Obese	Male	<55		HS+
Currently Smoker	Male		<$15	<HS
Drank alcohol within the past 30 days	Male	<55		<HS
Binge Drinking (5 or more drinks on one occasion)		<55		
Adult Immunizations				
Adults Who Have Had Flu Shot Past 12 Months (2014)		55+		
Adults Who Have Had Pneumonia Shot (2014)		55+		
Have you ever had the shingles or zoster vaccine? All respondents (2014)		55+		
Cancer Screenings				
Mammogram (Ages 40+) – within last 2 Years (2014)	N/A			
Pap test (women 18+) – within last 3 years (2014)	N/A	<55		HS+
PSA Test (40+) – within last 2 Years	N/A	55+		
Never had a Sigmoidoscopy or Colonoscopy (50+) (2014)		<55		
Adults 50-75 who met the USPSTF recommendation for colorectal cancer screening (2014)		55+		
Communicable Disease				
Ever tested for HIV	Female		<$15k	HS+