CHRONIC DISEASE REPORT

FEBRUARY, 2018

Defiance County General Health District

CONTENTS

Defiance County

Public Health

DEFIANCE COUNTY GENERAL HEALTH DISTRICT

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Chronic diseases such as heart diseases, strokes, diabetes, and cancers are among the most common health conditions in the United States and Ohio[1]. As of 2012, about half of all adults (117 million people) had one or more chronic health conditions[2]. In Ohio, chronic diseases account for 62% of all deaths, with heart disease and cancers together accounting for nearly 46% of all deaths[3]. Within Defiance County, chronic diseases account for 46% of all deaths in 2016[3].

The majority of healthcare cost in Ohio are associated with chronic diseases[1]. In 2010, the direct medical cost associated with chronic diseases were $25 million in the U.S.[1]. The medical cost associated with chronic disease are expected to rise in the future[1]. However, if individuals continue to improve chronic disease prevention and utilize early detection services, the cost of healthcare will decrease. Some modifiable health behaviors that can influence one's health include: smoking and other tobacco use, poor diet, insufficient physical activity and heavy alcohol consumption[1]. Improving in these risk factors will have a significant impact on the chronic disease burden.

This report was developed to give a snapshot of the chronic disease conditions within Defiance County.   The data focuses on hospitalizations, emergency department visits and deaths caused from chronic diseases affecting Defiance County residents. This report summarizes demographic statistics such as sex, age groups and geographical disparities. The data gathered for this report was collected from multiple sources including the Ohio Department of Health, Center for Disease Control and Prevention and the Center for Medicare and Medicaid Services. The findings from this report can be used to support the need for a coordinated approach to chronic disease prevention and health promotions within Defiance County.

HEART DISEASE

Cardiovascular diseases (CVD), or heart diseases are a group of diseases of the heart and blood vessels[4]. Some of these diseases include: coronary heart disease, peripheral arterial disease, and myocardial infarction (MI or heart attack) [4]. Heart attacks are mainly caused by a blockage that prevents blood from flowing to the heart. The most common reason for a blockage is due to a buildup of fatty deposit on the inner wall of the blood vessel that supply the heart[4].

Heart disease is the leading cause of deaths in Ohio[1]. In 2016, within Ohio, heart disease killed more than 27,000 Ohioans[3]. Within the same year in Defiance County, 85 residents died from a disease of the heart[3]. Defiance County heart disease hospitalization rate is 51.7 vs. Ohio 55.1 per 1,000 residents[6]. In Defiance County, 54% of residents who were inpatients in an Ohio hospital had high blood pressure[5]. The majority of CVD cases are caused by high blood pressure, high cholesterol, tobacco use, excess weight and lack of physical activity[1]. Other factors that may contribute to heart disease include: genetics, the environment, and behaviors[1]. The figure to the right displays the heart disease standardized mortality ratio from 2012-2015. The darker the shade of orange the higher heart disease deaths occurred in that area.
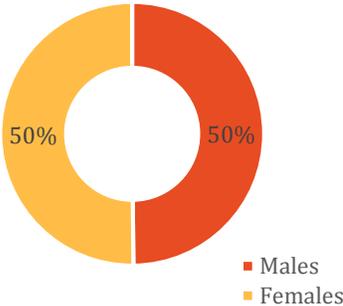
Heart Disease SMR, 2012-2015
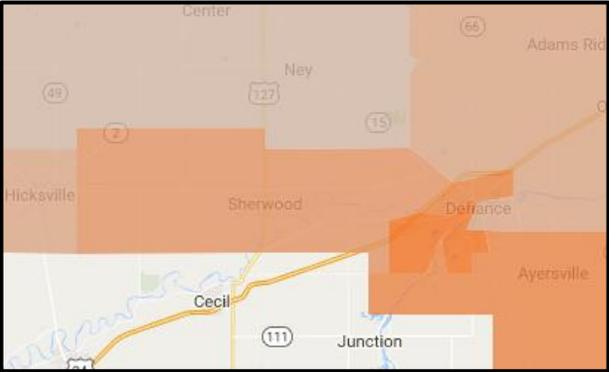
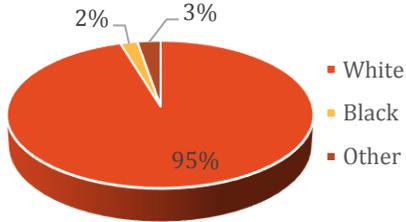**Summary of Cardiovascular Disease Deaths
in Defiance County, 2012-2016[3]**

Heart Disease Deaths by Age

0%
16%
84%
- <1-24
- 25-64
- 65+
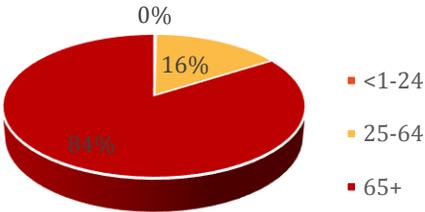
Heart Disease Deaths by Gender

50% 50%
- Males
- Females

Heart Disease Deaths by Race

2% 3%
95%
- White
- Black
- Other

A stroke is a "brain attack", which occurs when blood flow to part of the brain is reduce or blocked[7]. When this happens the brain cells are deprived of oxygen and nutrients, causing damage to the brain tissue[7]. The most important parts of stroke care are early recognition of signs and symptoms and immediate access to appropriate emergency medical services. Some of the symptoms of a stroke include: confusion, headaches, sudden numbness or weakness on one side of the body, dizziness and trouble talking, walking or seeing[7].

**Stroke Hospitalization in individuals 65+, rate per 1,000[6]**

Within the United States, every 40 seconds an individual has a stroke[7]. African-American are more impacted by stroke than any other racial group within the American population[7]. The likelihood of having a stroke more than doubles for each decade of age after age 55[7]. The prevalence of stroke among Ohio adults with high blood pressure was nearly four times higher than those without high blood pressure[1]. The stroke death rate has decreased from 2012-2016 in Ohio and Defiance County[3]. Within Defiance County, the age-adjusted stroke death rate was 28.1 vs. Ohio rate of 40.6 in 2016[3]. The figures to the right displays the stroke hospitalization rate for Medicare beneficiaries from 2012-2014. The darker the shade of orange the higher the hospitalization rate. Within Northwest Ohio the stroke hospitalization rates ranges from 6.7 to 11. Ohio's stroke hospitalization rate is 11.9[6].

Summary of Stroke Deaths in Defiance County, 2012-2016[3]

Stroke Deaths by Age

0% 8% 92%
- <1-24
- 25-64
- 65+
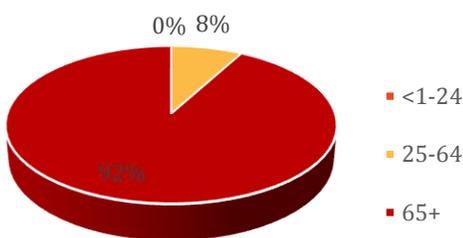
Stroke Deaths by Gender

49% 51%
- Males
- Females
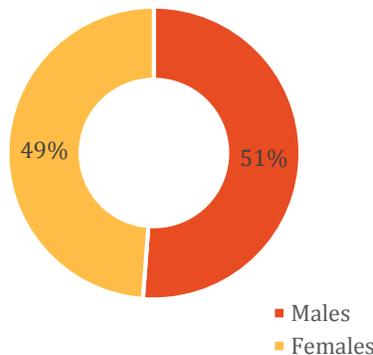
Stroke Deaths by Race

1% 2% 97%
- White
- Black
- Other
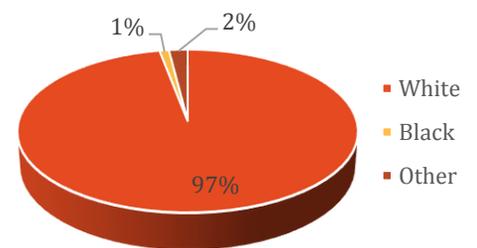
Diabetes mellitus occurs when the pancreas can no longer make enough insulin to control blood sugar[8]. There are two different types of diabetes type 1 and type 2[8]. Type 1 is when the cells have the inability to respond to insulin correctly[8]. Type 2 diabetes account for 90-95% of the diabetes cases in the Unites States[8]. The risk of type 2 diabetes is associated with genetics and lifestyle factors including: obesity, poor diet, lack of physical activity, and tobacco use[1]. In 2012, Ohio adults with lower household income and lower education had a higher prevalence of diabetes[1].

In 2015, the prevalence of diabetes among adults in Ohio was 9%[9]. The diabetes prevalence among Medicare beneficiaries was higher, 26.8% the same year[10]. The prevalence of diabetes in Defiance County was 12%[11]. In 2015, 47% of Defiance County adults who were hospitalized had a discharge with diabetes[5]. The prevalence of diabetes is similar between males and females (12.5 vs. 10.9)[1]. Diabetes prevalence increases with age. Individuals 65 years of age and older have a higher prevalence of diabetes than any other age group in Ohio[1].

**Prevalence of Diabetes in
Medicare Beneficiaries, 2014[10]**

|	
■	Over 30.0%
■	27.1 - 30.0%
■	24.1 - 27.0%
□	Under 24.1%
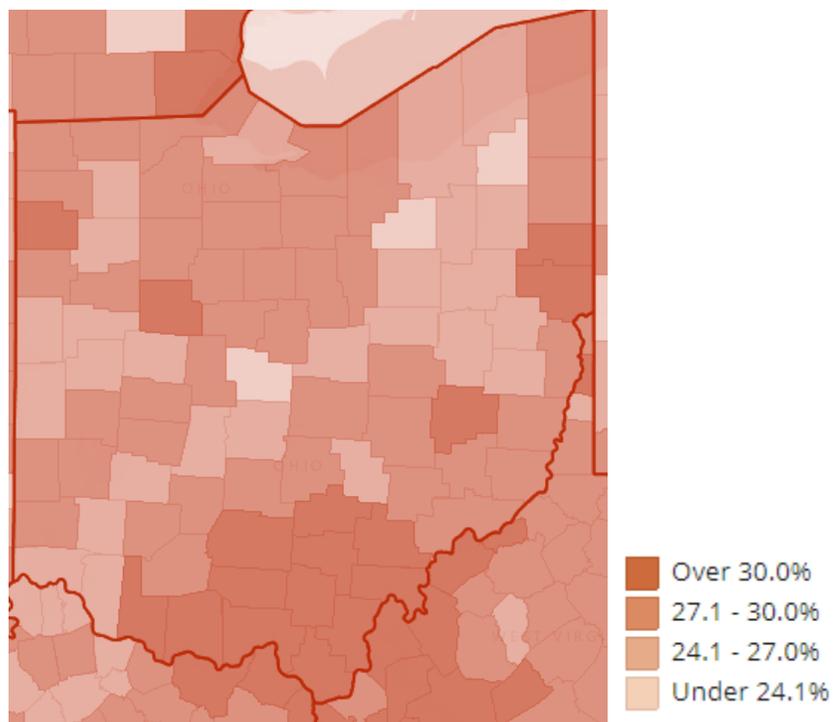
This figure is displaying the prevalence diabetes in Medicare beneficiaries. The darker the shade of red the higher the prevalence of diabetes.

CANCER

Cancer is the second leading cause of death in Ohio[1].   Cancer is causes by uncontrolled growth and spread of abnormal cells within the body[1]. In Defiance County, there is an average of 200 new invasive cancers cases and 86 cancer deaths occurred each year between 2012-2016[3]. The cancer incident rate for all sites and types in Defiance County was 459.5 per 100,000, which is the same as Ohio's rate. The leading types of cancers in Defiance County include: lung and bronchus, prostate, breast (Females), colon and rectum, and bladder, representing 58% of all invasive cancer cases[3]. The leading types of cancers that causes mortality are lung and bronchus, colon and rectum, pancreas, breast cancer and prostate[3].

**Age-adjusted cancer death rate per 100,000, 2012[1]**

The lifetime risk of developing cancer is 40% for men and 33% for women[1]. Risk factors for cancer are a person's age, sex, and genetics[1]. Other risk factors include: tobacco use, drinking excess alcohol, eating poor diet, and not getting enough physical activity[1]. However, the causes of many cancer types have not been found. The figure is of age-adjusted cancer death rate per 100,000 population. The darker the color of orange the higher the cancer death rate.
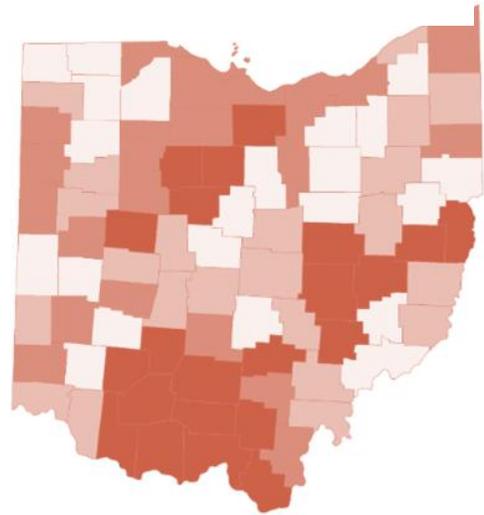
Summary of Cancer Incidence in Defiance County, 2012-2016[3]

Cancer Cases by Age Groups

- 1-15
- 16-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

1% 1% 1% 4% 13% 24% 56%
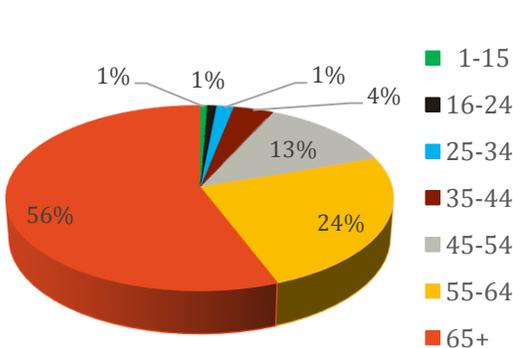
Cancer Cases by Gender

47% 53%

- Males
- Females

Cancer Cases by Race

1% 2% 97%

- White
- Black
- Other
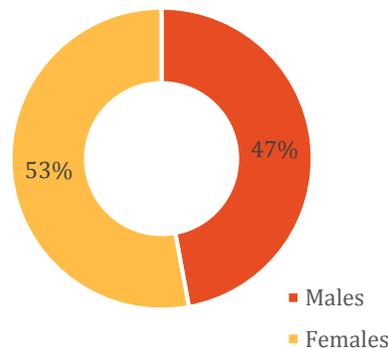
CHRONIC RESPIRATORY DISEASE
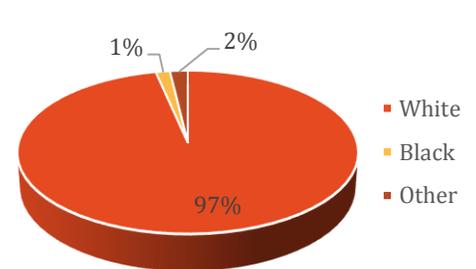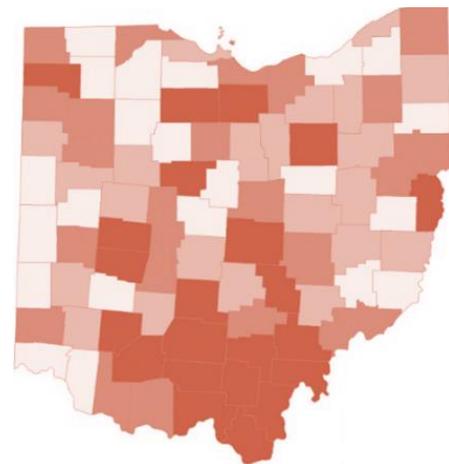
Chronic respiratory diseases are chronic diseases of the airway and other structures of the lung[12]. Examples of chronic respiratory diseases include: chronic obstructive pulmonary disease (COPD), asthma, and pulmonary hypertension[12]. In 2016, chronic lower respiratory disease (CLRD) was the third leading cause of death in the state of Ohio and in Defiance County[1,3].
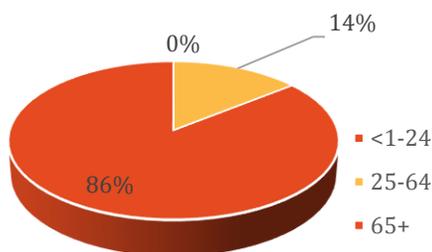
In 2016, 7,017 Ohioan's died from CLRD, which is equate to an age-adjusted death rate of 47.5 per 100,000[3]. Within the same year, Defiance County lost 31 residents from CLRD, which equates to 61.6, age-adjusted death rate[3]. Defiance County has a higher death rate of CLRD than the State of Ohio. Tobacco smoke is a large factor in the development and progression chronic respiratory diseases. In 2015, 15% of Defiance County adults were current smokers[14]. Other factors that contribute to chronic respiratory disease include: air pollutants, genetic factors, and respiratory infections.

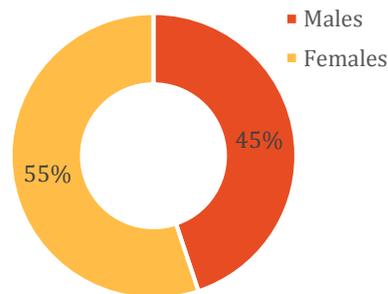**Age adjusted CLRD death rate per 100,000 in 2012[1]**

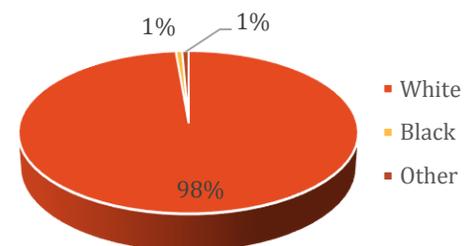**Summary of Chronic Lower Respiratory Disease Deaths in Defiance County, 2012-2016[3]**

CLRD Cases by Age

0%
14%
86%

- <1-24
- 25-64
- 65+

CLRD Cases by Gender

- Males
- Females

45%
55%

CLRD Cases by Race

1%   1%
98%

- White
- Black
- Other

Asthma is a chronic inflammatory disease of the airway[13]. Asthma is repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing[13]. There is no cure for asthma, but it can be prevented and controlled with medication and avoiding triggers that can cause an asthma attack[13]. Common types of triggers include allergens, exercise, air pollution, and tobacco smoke[13].

In Ohio, asthma is more common among children, adult women, and low income residents[1]. In Ohio, one in nine adults have asthma and one in seven children have asthma[1]. In 2015, 9% of Defiance County adults had been diagnosed with asthma and 10.5% of Ohioans[14, 15]. In Defiance County there is an estimated 5,659 residents living with asthma[15]. In 2017, eighty-seven emergency department (ED) visits were due to asthma (rate of 23.6 per 10,000 residents)[16]. Of the ED visits, 39% were between the ages 15-34 in 2017[16].

Summary of Asthma Emergency Department Visits in Defiance County, 2014-2016[16]

Asthma ED Visits by Age
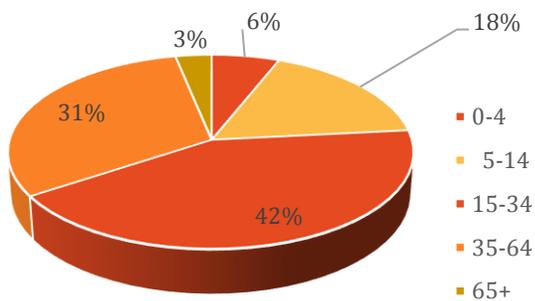

Asthma ED Visits by Gender
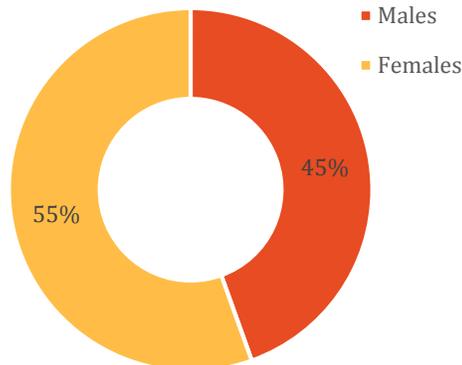
Lifestyle choices are important factors that can influences one's risk for chronic diseases. The majority of chronic diseases results from unhealthy behaviors such as tobacco use, poor diet, insufficient physical activity and excessive alcohol use[1]. Within the Defiance County Community Health Status Assessment (CHA), 2015, only 5% of adults consumed the recommended guidelines for fruits and vegetables per day[14]. Within the same assessment, 50% of adults were engaging in some type of physical activity for at least 30 minutes or more 3 days per week[14]. Making modifications to one's behaviors can lower their risk of certain diseases. The chronic diseases and associated risk factors table below is displaying the different risk factors associated with different chronic diseases.
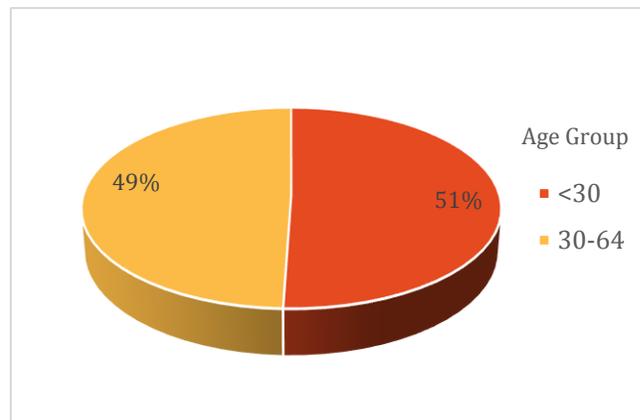
Chronic Diseases and Associated Risk Factors[1]

	Tobacco Use	Insufficient Physical Activity	Poor Nutrition	Heavy Alcohol Use
Heart Disease	X	X	X	X
Stroke	X	X	X	X
Diabetes	X	X	X	
Cancer	X	X	X	X
CLRD	X			
Asthma	X			

**Percent of residents who reported smoking cigarettes[14]**
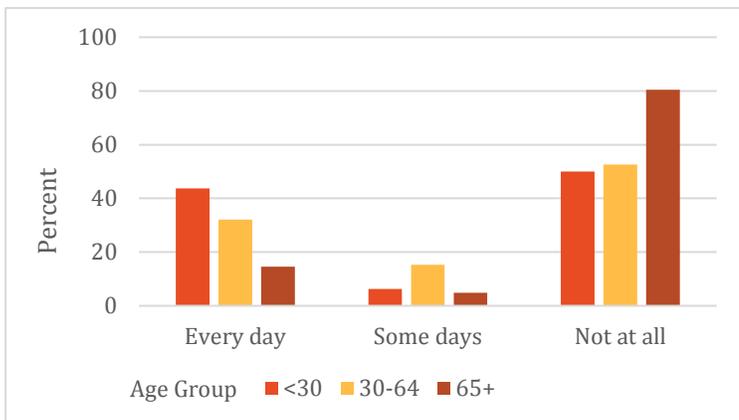
Percent of residents who reported binge drinking by age group[14]

In the 2015 CHA, 15% of Defiance County adults were current smokers[14]. Defiance County smokers were more likely to have been separated or divorced and rate their overall health as fair or poor. The percent of male and female residents who reported they are current smokers were similar (53% vs. 49%)[14]. The pie graph to the right is displaying the percent of Defiance County residents by age group who binge drink (had more than 5 drinks (males) or 4 drinks (females) on an occasion). Residents over the age of 65-year-old did not report binge drinking[14]. Males reported having more alcohol drinks than females[14]. Almost one-quarter (23%) of Defiance County adults were considered binge drinkers[14]. The alcohol expenditures map included any beer, wine, and liquor purchased for consumption at home. Alcohol purchased at restaurants and bars is not included.

Alcohol Expenditure, Percent of Food-at-home Expenditure, National Rank by Tract, Neilson, 2014[17]
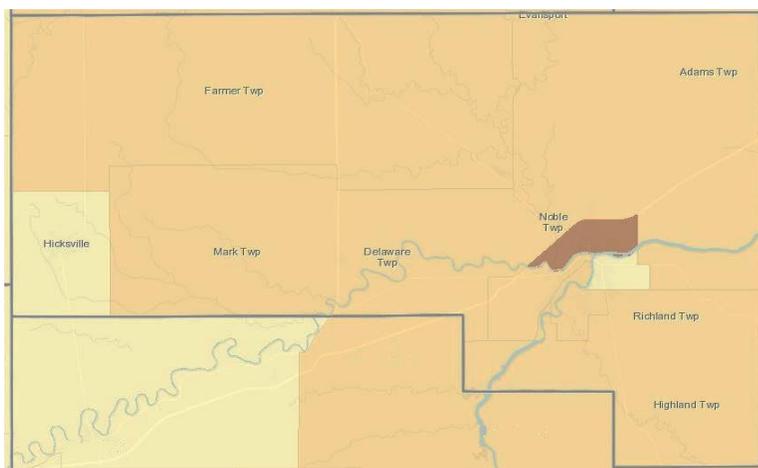
Alcoholic Beverage Expenditures, Percent of Food-At-Home Expenditures,
- 1st Quintile (Highest Expenditures)
- 2nd Quintile
- 3rd Quintile
- 4th Quintile
- 5th Quintile (Lowest Expenditures)
- No Data or Data Suppressed

Cigarette Expenditure, Percent of Total Expenditures, National Rank by Tract, Nielsen, 2014[17]
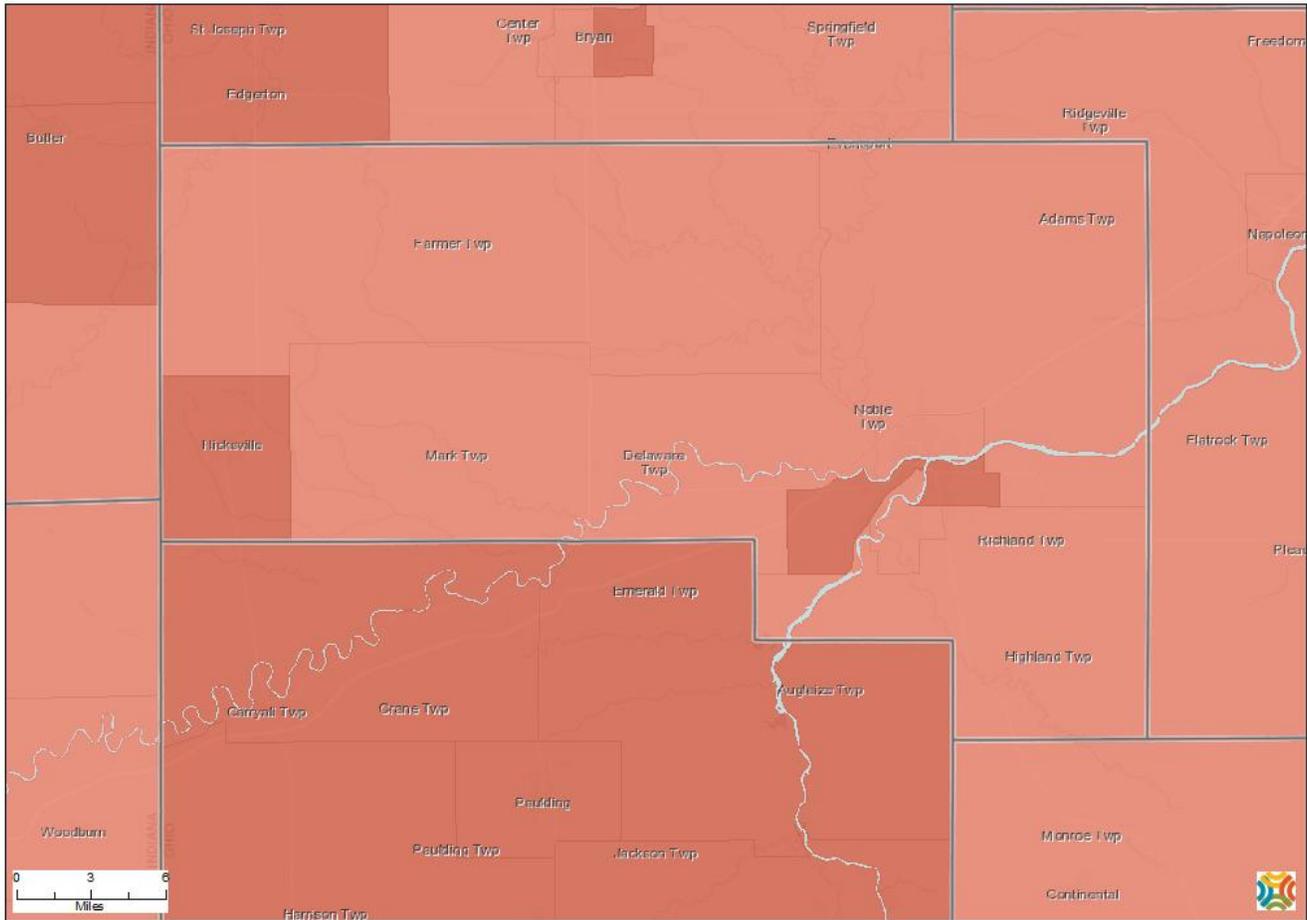

Map Legend

Cigarette Expenditures, Percent of Total Expenditures, National Rank by Tract, Nielsen 2014

- 1st Quintile (Highest Expenditures)
- 2nd Quintile
- 3rd Quintile
- 4th Quintile
- 5th Quintile (Lowest Expenditures)
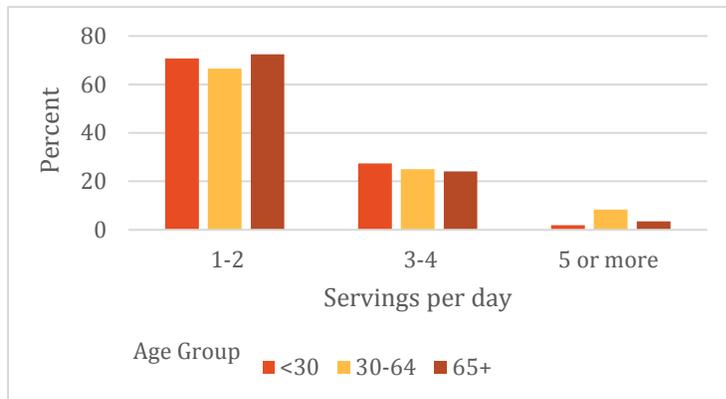- No Data or Data Suppressed

Community Commons, 2/13/2018

BEHAVIOR RISK FACTORS

Percent of residents who reported engaging in physical activity more than 3x a week by age group[14]
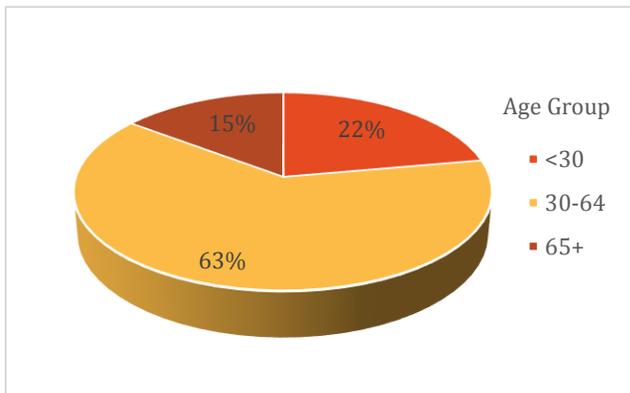
Percent of residents who reported consuming servings of fruits and vegetables[14]

The pie graph to the left is displaying the percent of Defiance County residents by age group, who engaged in physical activity more than three times a week for 30 minutes. Adult residents between the ages of 30-64 years old were the most active age group[14]. Ninety percent of adults reported eating 1 and 4 servings of fruit and vegetables per day[14]. Females reported consuming more servings of fruits and vegetables per day than males (41.38% vs. 21.71%)[14].

Not only do health behaviors affect one's health but also health disparities. Health disparities are preventable differences in the burden of diseases, injury, violence, or opportunities to achieve optimal health that are experiences by socially disadvantaged populations[1]. Some health disparities include race, gender, income, geographic location, or sexual orientation[1]. Health disparities result from multiple factors including: poverty, environmental threats, inadequate access to health care, education inequalities. Defiance County General Health District will continue to investigate the impact of health disparities within Defiance County. The table below is displaying health disparities by chronic disease.

Populations with a significantly higher prevalence of selected chronic diseases in Ohio[1]

	Sex	Older Age	Household Income <$15,000	<High School Education
Heart Disease	X (male)	X	X	X
Stroke	-	X	X	X
Diabetes	-	X	X	X
Cancer	X (male)	X	X	X
COPD	-	X	X	X
Asthma	X (female)		X	X

1. Disease Epidemiology and Evaluation Section, Bureau of Health Promotion, Ohio Department of Health (2015). The Impact of Chronic Disease in Ohio: 2015.

2. Center for Disease Control and Prevention (2017). Chronic Disease Prevention and Health Promotion. Retrieved from https://www.cdc.gov/chronicdisease/overview/index.htm

3. Ohio Department of Health. (2017). Ohio Public Health Data Warehouse. This data was provided by the Ohio Department of Health. The Department specifically disclaims responsibility for any analyses, interpretations or conclusions.

4. Center for Disease Control and Prevention (2015). Heart Disease. Retrieved from https://www.cdc.gov/heartdisease/coronary_ad.htm

5. Ohio Hospital Association. (2016) OHA 2014-2016 Hospital Data County Level.

6. Center for Disease Control and Prevention (2015). Interactive Atlas of Heart Disease and Stroke. Retrieved from https://nccd.cdc.gov/DHDSPAtlas/

7. Center for Disease Control and Prevention (2017). Stroke. Retrieved from https://www.cdc.gov/stroke/facts.htm

8. Center for Disease Control and Prevention (2017). Diabetes Home. Retrieved from https://www.cdc.gov/diabetes/basics/diabetes.html

9. Center for Disease Control and Prevention (2017). Diagnosed Diabetes. Retrieved from https://gis.cdc.gov/grasp/diabetes/diabetesatlas.html#

10. Center of Medicare Services (2017). Medicare Chronic Conditions Dashboard: Country Level. Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Dashboard/chronic-conditions-county/cc_county_dashboard.html

11. Center for Disease Control and Prevention (2017). Diabetes Data and Statistics. Retrieved from https://www.cdc.gov/diabetes/atlas/countydata/atlas.html

12. Center for Disease Control and Prevention (2017). Chronic Respiratory Disease. Retrieved from https://www.cdc.gov/healthcommunication/toolstemplates/entertainmented/tips/ChronicRespiratoryDisease.html

13. Center for Disease Control and Prevention (2017). Asthma. Retrieved from https://www.cdc.gov/asthma/default.htm

14. Defiance County General Health District (2015). Defiance County Community Health Status Assessment Data.

15. Ohio Department of Health, Asthma Program. (2015) Asthma in Defiance County and Ohio.

16. Defiance County General Health District (2017). Epicenter-Asthma Data.

17. Community Commons (2018). Maps and Data. Retrieved from https://maps.communitycommons.org/