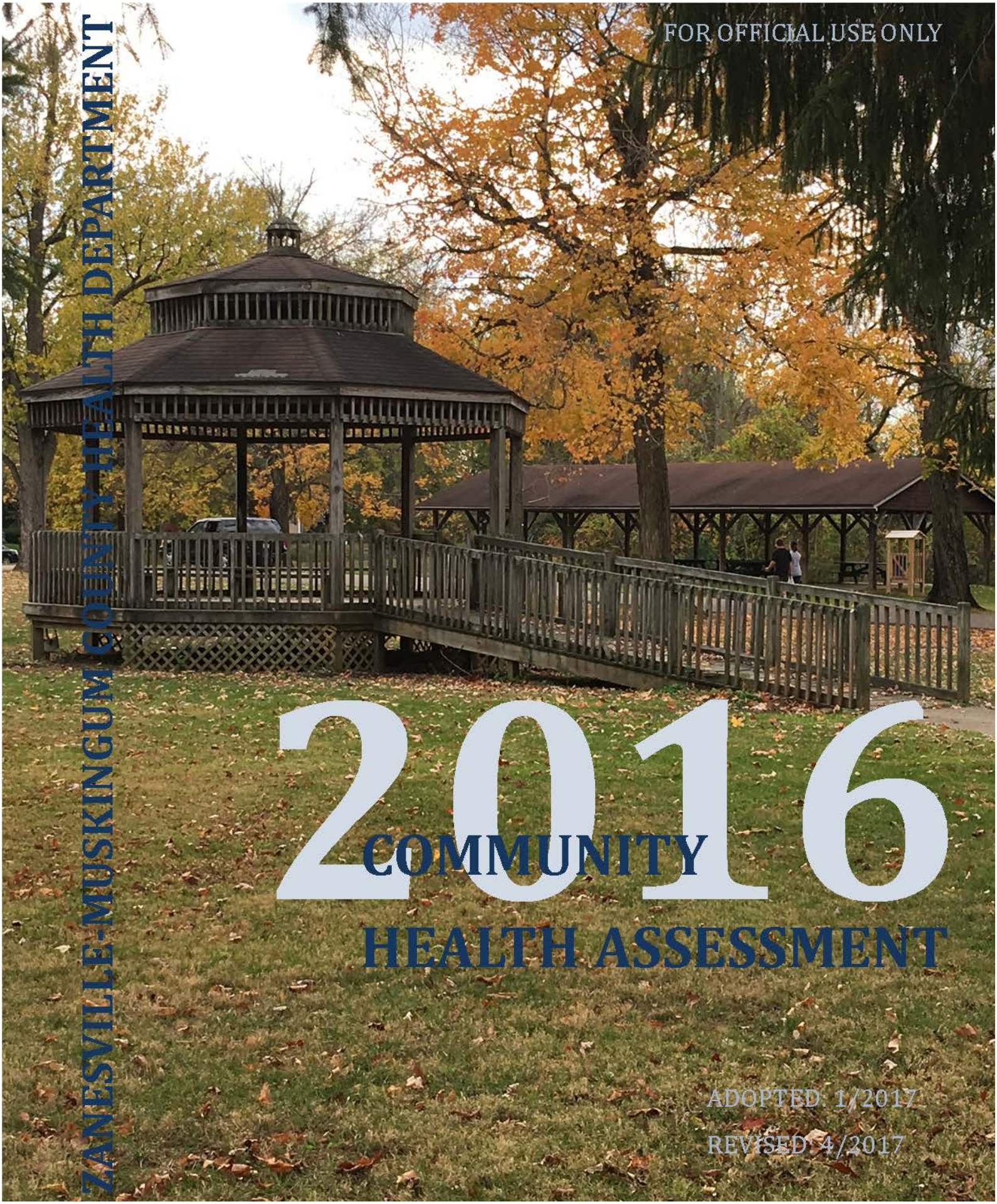

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ZANESVILLE-MUSKINGUM COUNTY HEALTH DEPARTMENT

2016 COMMUNITY HEALTH ASSESSMENT

ADOPTED: 1/2017

REVISED: 4/2017

Governance

The Board of Health is comprised of seven members representing the community. Three members are appointed by the mayor of the City of Zanesville, three members are appointed by the District Advisory Council, which covers all of the villages and townships within the county, and one member represents the District Licensing Council. As required by the State of Ohio, Board of Health members must obtain 2 hours of continuing education per year. As part of regular meetings of the Board of Health, opportunities for continuing education are provided to members.

Mission, Vision and Values

The mission of the Zanesville-Muskingum County Health Department is to promote, protect, and improve public health in Muskingum County.

The vision is:

- We continuously improve and use our knowledge, skills, and abilities to help our community grow to be a healthier place to live, learn, work, and play.
- We identify changing public health priorities; mobilize resources and partners to respond to our community's health challenges.
- Our services are driven by community need and fiscal responsibility.

The core values are:

- Continuous quality improvement-We continually look for ways to improve our work environment, processes, efficiency, and effectiveness.
- Integrity-We are fair, honest, ethical and accountable to our customers and co-worker
- Respect-We behave respectfully and accept the diversity of our customers and co-workers.
- Service-We are helpful, responsive, and take pride in providing excellent customer service to our community.
- Teamwork-We work together to establish common goals and achieve desired results.

This plan has been approved and adopted by the following individuals:

Signature	XX/XX/XXXX
Name and title	Date

Revisions:

Date	Description of Change	Pages Affected	Reviewed or Changed by

For questions about this plan, contact:

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(740) 454-9741 ext. 273

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EXECUTIVE SUMMARY

INTRODUCTION

A Community Health Assessment (CHA) is an integral part of improving and promoting the heath of a community. It involves the ongoing collection and analysis of data to inform on health status and priorities, making it a product as well as a process. This collaborative practice mobilizes community partners, agencies, organizations and businesses, socio-cultural institutions, stakeholders and residents to be a part of the process. The primary objectives of this assessment are three-fold, to:

- Describe the overall health of Muskingum County residents;
- Understand underlying factors that influence existing health outcomes;
- Identify opportunities for improvements.

The 2016 Muskingum County Community Health Assessment was conducted over a period of 18 months, from July 2015 to December 2016. The Zanesville-Muskingum County Health Department engaged community agencies, businesses and social groups, students and residents throughout the process. Encompassing primary and secondary data from local, state and federal sources, the completed community health assessment serves as a resource for community agencies and residents to understand and utilize findings for community. The process was guided by the Healthier Muskingum County Network (HMCN), which was originally convened to serve as a steering committee for the previous CHA in 2011.

Methods

The decision to use the Social Determinants of Health (SDH) as a framework for modeling the community health assessment came after an extensive review of the community health assessments from other cities, counties and states. To accomplish

this, several methods were selected. They comprised qualitative, quantitative, primary and secondary data. Data gathered came from a wide variety of resident characteristics and perspective. The methods employed include:

- A community health status assessment, which captured over 200 data points for Muskingum County as well as some comparison data for Ohio, USA and the Healthy People 2020 benchmarks;
- A 75 question Adult Opinion surveys which was administered to over 700 adult residents;
- Nine Focus Group Discussions and 5 Key Informant Interviews that engaged over 100 residents;
- A youth PhotoVoice project which offered six county youth the opportunity to photo journal impressions of Muskingum County;
- An Asset-mapping project and Local Public Health System Assessment (LPHSA), which identified capabilities, stakeholders, partners and resources that contribute to public health.

KEY FINDINGS

Demographics

Population, Age and Growth

As of July 1, 2015, Muskingum County had 86,290 residents, having grown overall by 2 % over the last fifteen years. Across gender, there have been no changes of significance; females making up 51.6% of the population, their male counterparts, 48.4%. Muskingum County portrays characteristics consistent with aging patterns; a steady increase in older population coupled with a negative growth in the young adult (-1.3%) and child populations (-0.7%). Since 2000, the median age has risen steadily from 37 to 40.6 years. This exceeds the state and national average of 37.8 and 37.7 years respectively.

Racial and Ethnic Diversity

Muskingum County is predominantly white or Caucasian, accounting for 93% of the population. Blacks or African Americans make up 4% of the county, with Hispanics/Latinos claiming another 1%. The remaining 2% is split among Asians, American Indians/Alaskan Natives and people of other races, representing 0.4%, 0.2% and 0.2% respectively. In comparison with 2010, there has been a significant increase in diversity, the multiracial population increasing by 25.5% over the course of 5 years. A

majority of multiracial residents describe themselves as Caucasian and African American (60%), or Caucasian and American Indian/Native Alaskan (16%).

Educational Attainment

Among Muskingum County residents over the age of 25, 88.2% have at least a High School diploma (or equivalent), 24.9% of which had an associates, bachelors or master's degree. Current education attainment rates indicate almost a 1% decrease in high school. About 10% of Muskingum County residents are classified as lacking Basic Prose Literacy Skills (BPLS), limiting the ability to perform simple and everyday tasks.

Income, Poverty and Employment

In Muskingum County, 18.6% of residents live below the Federal Poverty Level (FPL), however, children suffering disproportionately, with over 28% living in poverty. The median household income in Muskingum County for 2015 was $41,130, with a per capita income of $21,274. Ohio and the Unites States both have significantly higher rates, at $49,429 and $53,889 respectively. The county has an unemployment rate of 6.1%, which is slightly higher than that of the state (5.7%) and the national (5.2%). However, only 74% (at least 35hrs each week) of employed residents work full-time; 22% worked 15 to 34 hours.

Community Health Status

Overall Health Status

In 2016, Muskingum County was ranked an overall 71st out of 88 counties in Ohio, falling five spots from the previous year. An assessment of Quality of Life indicated that 36.3% of respondents felt their lives were not comfortable/happy or great. They also identified safety and security, employment and education as the three leading factors for a healthy community.

Leading Cause of Mortality

In 2015, Muskingum County's crude death rate was 1139.2 per 100,000 with the three leading causes of death being Cancer, Cardiovascular and Chronic Lower Respiratory Diseases. Kidney/renal disease rose to 6th place on the list and Parkinson's Disease was a new addition to the list. Premature deaths were highly attributed to Cancer, Cardiovascular and Chronic Lower Respiratory Diseases as well. Chronic liver disease/cirrhosis and intentional self-harm, which were on the premature list did not make the overall mortality list.

Chronic Disease

Chronic diseases like heart disease, cancer and diabetes were addressed as leading causes of overall and premature mortality. Healthy behaviors like engaging in physical activity, improving nutrition and seeking preventative care were discussed across focus group discussions, with safety, transportation and access to care coming up as challenges.

Infectious Disease

In Muskingum County, the three leading causes of (reportable) infectious diseases were Chlamydia, Hepatitis C and Gonorrhea. Sexually transmitted infections made up 58.4% of all reported infectious diseases.

Mental Health

As a mental health shortage area, Muskingum County has a mental healthcare provider to patient ratio of 1:1093. This has been compounded by the ongoing drug addiction epidemic. Delays in outreach to patients treated for medical complications and long wait time for referrals to initiate mental health services reduces the efficacy of people committing to rehabilitation. However, a major portion of interventions needed to support drug addiction rehabilitation was more social-cultural than medical.

Healthcare Access and Utilization

In 2015, 95.2% of all Muskingum County residents had health insurance, an increase from 79.3% in 2008. About 40% of all county residents depend on public health insurance. AOS results showed that despite having health insurance, residents were worried about insurance policies not covering enough care and being unable to afford deductibles and co-pays. In the event that they proceeded to seek care, they worried about getting convenience appointments times.

Community and Civicism

Beyond these close-knit groups, community residents participate in the more public community, 55.4% participating in some type of civic, religious or social group. Most of these groups have a component of giving back to the community; this occurs in various ways. In the adult opinion survey, 55.5% of all respondents said they had volunteered within the last month. Focus groups held among low income populations unanimously agreed that receiving felt better where they could give something back. It gave them a sense of belonging, purpose and responsibility.

Local Government

There is a community perception of limited local government presence and participation in community activities. Interestingly, this is a mutual feeling on the part of local government; both entities feel disconnected from the other. This gap is evident in low civic engagement at the community level. Residents report feeling unaware of information needed to make informed decisions about or participate in local government, or its activities and events.

Physical Environment

Safety

Residents who participated in FGD and the AOS overwhelmingly identified safe neighborhoods (78%) and good security/safety services (64%) as the two most important things that make a healthy community. Prostitution, drug and gang activity, and robberies and theft, were identified as the biggest safety issues, the latter of which most residents were worried about becoming victims of. These threats factored heavily in the decision for families and children to spend time outdoors, especially in public parks.

Housing and homelessness

In 2015, Muskingum County had 37,854 housing units, of which 90.5% were occupied. Of the occupied housing units, 68% were owner-occupied, with 32% rented. In a FGD on homelessness, residents discussed the challenges of living in and emerging out of poverty. They identified feeling stigmatized at healthcare facilities, when applying for jobs or seeking accommodation. The challenge of securing housing is not primarily a financial issue. While the criteria and or requirements have not changed much over time, the pool of applicant seeking accommodation has changed. Increasingly, alcohol, drug and criminal histories as well as recent evictions have become major disqualifiers for public and private housing alike.

Transportation

In Muskingum County, almost 88% of all county residents depend on private vehicles for transportation. However, Zanesville has pockets of high poverty populations who find getting around is a major challenge. About 10% of all respondents of the AOS admitted missing activities due to lack of transportation. Among residents who reported missing activities dues to lack of transportation, this occurred at least once on a weekly basis for 24%. Improving 'walkability' and 'bikeability' was a major

recommendation for many sections of the population including the youth who identified these modes of transport as most reliable when unaccompanied by an adult.

Nutrition

In Muskingum County, 22.3% of county residents received Supplemental Nutrition Assistance Program (SNAP) benefits in 2015. The 2016 AOS indicated that 25% respondents reporting having to cut back on food or their family has had to have smaller meals because there was not enough food. Reports from the local 2-1-1 Helpline call center received over 9000 calls with over 53% being requests for food/meals. For many families facing food insecurity, assistance for meals is primarily sought from family and friends (57%) and the 2-1-1 Helpline (25%). Proximity to healthy food is another access factor that influences food security. According to the 2016 County Health Rankings (CHR) Muskingum County's food environment index is 6.3. Ohio's food environment index is 6.9. In addition to accessibility issues, cost, time and food preparation knowledge are barriers to eating better.

Environmental Quality

Asthma, which is the leading chronic illness among children, is greatly impacted by air quality. In Muskingum County, 18.5% of children diagnosed with Asthma at some point of their life. This rate is higher than both Ohio's at 15.4% and the United States, at 17.8%. Lead another environmental exposure is a major concern in Muskingum County, which has 67% of its housing stock built before 1978, when lead paint was banned. Three high-risk zip codes have been identified that require blood-lead testing in children.

CONCLUSION

Based on secondary, social, economic, and environmental health data, discussions with residents and leaders, and a community survey, this assessment report provides an overview of the social and economic environment of Muskingum County's health status, opportunities for growth strengths. The 2016 Muskingum County Community Health Assessment (MCCHA) will be made available to the public, in draft version for comments. The final version will be presented to the Board of Health, Healthier Muskingum County Network and upon request. It will also be disseminated online, on the Zanesville-Muskingum County Health Department website, http://www.zmchd.org. It will also be available as a hard copy at the health department. Once completed, a process to identify 3-5 major priorities of the CHA will be conducted. This will be implemented over the next three years of the 2016 CHA-CHIP cycle.

GLOSSARY

KEY DEFINITIONS

Community Health Assessment

A systematic examination of the health status indicators for a given population that is used to identify key problems and assets in a community; the ultimate goal of a community health assessment is to develop strategies to address the community's health needs and identified issues (PHAB)

Community Health Improvement Plan

A long-term, systematic effort to address public health problems based on the results of community health assessment and the community health improvement process; the plan is used by health and other governmental education and human service agencies, in collaboration with community partners, to set priorities and coordinate and target resources (PHAB)

Health disparities

Differences in health status among distinct segments of the population including differences that occur by gender, race or ethnicity, education or income, disability, or living in various geographic localities

Social Determinants of Health

The conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. (WHO)

ACRONYMS

ACA	Affordable Care Act
AOS	Adult Opinion Survey
BPLS	Basic Prose Literacy Skills
BRFSS	Behavioral Risk Factor Surveillance Survey
CDC	The Centers for Disease Control and Prevention
CHA	Community Health Assessment
CHNA	Community Health Needs Assessment
CHR	County Health Rankings
CIW	Canadian Index of Wellness
CKD	Chronic Kidney Disease
CVD	Cardiovascular Disease
DD	Developmental Disabilities
EPHS	Essential Public Health Services
FEI	Food Environment Index
FGD	Focus Group Discussion
HMCN	Healthier Muskingum County Network
HUD	Housing and Urban Development
IHME	United States Institute for Health Metrics and Evaluation
KII	Key Informant Interview
KRA	Kindergarten Readiness Assessment
LBW	Low Birth Weight
LHDs	Local Health Departments
LPHS	Local Public Health System

LPHSA	Local Public Health System Assessment
MAPP	Mobilizing For Action through Planning and Partnerships
MCCHA	Muskingum County Community Health Assessment
MVA	Motor Vehicle Accident
MVESC	Muskingum Valley Educational Services Center
NCES	National Center for Education Statistics
ODE	Ohio Department of Education
ODH	Ohio Department of Health
OMAS	Ohio Medicaid Assessment Survey
PHAB	Public Health Accreditation Board
QoL	Quality Of Life
RWJF	Robert Wood Johnson Foundation
SDH	Social Determinants of Health
SNAP	Supplemental Nutrition Assistance Program
USDA	United States Department Of Agriculture
UWPHI	University of Wisconsin's Population Health Institute
ZMCHD	Zanesville-Muskingum County Health Department

INTRODUCTION

COMMUNITY HEALTH ASSESSMENTS

Purpose

A Community Health Assessment (CHA) is an integral part of improving and promoting the heath of a community. It involves the ongoing collection and analysis of data to inform on health status and priorities, making it a product as well as a process. This collaborative practice mobilizes community partners, agencies, organizations and businesses, socio-cultural institutions, stakeholders and residents to be a part of the process. The primary objectives of this assessment are three-fold, to:

1. Describe the overall health of Muskingum County residents;
2. Understand underlying factors that influence existing health outcomes;
3. Identify opportunities for improvements.

By accomplishing this assessment, the Zanesville-Muskingum County Health Department benefits in a number of ways. The agency is able to provide the highest quality of targeted public health services to the community. This is quintessential to acquiring future public health funding.

This assessment also puts the agency on track for accreditation through the Public Health Accreditation Board, a nationwide non-profit organization. The rigorous peer-reviewed process ensures that all accredited agencies meet a set of nationally agreed-upon standards, have a means to identify performance improvement opportunities, enhance management, develop leadership,

and strengthen relationships with members of the community. While not mandated nationally, Ohio requires each local health department be accredited by the summer of 2020. Being accredited would show evidence that the agency meets high standards in the provision of the 10 Essential Public Health Services.

Process

The 2016 Muskingum County Community Health Assessment was conducted over a period of 18 months, from July 2015 to December 2016. The Zanesville-Muskingum County Health Department engaged community agencies, businesses and social groups, students and residents throughout the process. Encompassing primary and secondary data from local, state and federal sources, the completed community health assessment serves as a resource for community agencies and residents to understand and utilize findings for community betterment.

The Zanesville-Muskingum County Health Department rolled out its 2016 Community Health Assessment in July of 2015. A core team was established to facilitate this process. Over the course of the first three months, the goal was to draw up a road map for completing the assessment process. This comprised of a review of the 2011 health assessment and its improvement plan and determining critical assessments necessary to capture a comprehensive view of the county's quality of life. During this planning phase, a budget and timeline were determined for completing six selected assessments.

Originally convened to serve as a steering committee for the 2011 community assessment, the Healthier Muskingum County Network (HMCN) was subsequently established as a networking group to address priority issues from the improvement plan. Member agencies of the network represent an array of social determinants of health, safety, education, employment, healthcare and housing among others. The network's goal is to increase awareness of community resources, identify networking opportunities and reduce duplication of available services. New and existing members were invited to be part of the 2016 assessment process. The network, which traditionally met six times a year, incorporated a voluntary workgroup made up of network members and community residents, meeting every 3 to 4 weeks to begin working on the assessment process.

The decision to use the Social Determinants of Health (SDH) as a framework for modeling the community health assessment came after an extensive review of the community health assessments from other cities, counties and states. A review of other existing models like Thriving Communities, Mobilizing for Action through Planning and Partnerships (MAPP) and the Canadian Index of Wellness (CIW) identified components that would be ideal for a rural/Appalachian county. Windshield assessments were

conducted across the townships to better understand the make-up of the county population. This helped determine how to collect primary data. Aligning the community health assessment with the Public Health Accreditation Board's (PHAB) standards was another key component of the planning process. The board delineates a set of standards to which each health department's performance is measured. This assessment fulfills a significant portion of Domain 1 of the PHAB standards, which focuses on surveillance, measuring health status and identifying health problems facing the community.

Data collected for this document was specifically selected to incorporate participation from a wide cross-section of community residents and stakeholders. There was also an interest in maintaining a good balance of qualitative and quantitative data. The order of implementation was strategically organized with the intention of investigating further, any new concepts/constructs that were derived from the data collected. The methodology, which discussed the different methods or strategies implemented for data collection is not followed in the organization of document; findings from each strategy are combined and reorganized into subject matter themes.

Content and Organization

The 2016 Muskingum County Community Health Assessment (MCCHA) comprises several smaller assessments that have been synthesized into one document. This assessment covers physical and socioeconomic status of the county, resident heath status, community resources and an assessment of the local public health system. The report has been broken down into several sections:

Image 1: Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education			
Support	Walkability				

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

Source: Henry J. Kaiser Family Foundation

Executive Summary - This section provides an abridged version of the entire CHA document, commenting on its purpose, process and findings.

Introduction - This section serves as a backdrop for the assessment, background information on the county and the community health assessments, as well as why they are done.

Methodology – This section discusses how the assessment was done; the theory, tools and strategies employed; how data was collected and analyzed, as well as limitations that were encountered through the process. It also discusses how the assessment is presented and disseminated.

Findings – This section is the heart of the document. It presents findings from all the assessments divided into demographics and health status. It delves into the cultural, environmental, political and social environment.

Vision – This section presents the perspectives on the county's future from residents and stakeholders. These views address the next three to five years. This is based on their understanding of the county's current health status and the socioeconomic environment.

Local Public Health System Assessment – This supplementary document focuses on the local health department and its supporting network of partners to assess how effectively it meets the needs of the county.

Community Resource Guide - This supplementary document lists existing community resources within the county. Serving as a directory, this guide will serve local agencies, organizations and businesses, the county 2-1-1 Helpline, an information referral system, as well as community residents.

MUSKINGUM COUNTY

History

In the 1790s, a settlement was established at the confluence of the Licking and Muskingum Rivers by Colonel Ebenezer Zane and his son-in-law John McIntire, who blazed Zane's Trace, the original pioneer trail into the Old Northwest Territory. Zane, a Revolutionary War veteran, was commissioned by the U.S. Congress to blaze a pathway into the rolling hills and the dense forests of the Ohio Valley, and to establish ferry crossings at three major rivers including the Muskingum. Muskingum County was authorized by the Ohio government on January 7, 1804.

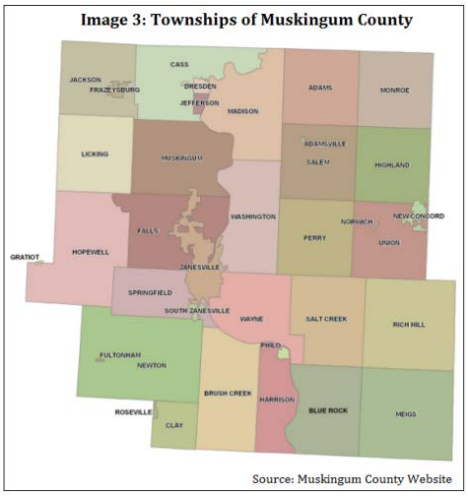
Muskingum County was a hub of river traffic and is famous for the "Y" bridge, built in confluence of the Muskingum and Licking Rivers. Transportation played a key role in the rich history and development of the community. Zane's Trace later became the

National Road, the major east-west artery for trade and travel and one of the pioneers' main routes to the west throughout the 1800s. The Muskingum River with a canal, lock and dam system transported steamboats and barges up from the Ohio River. Zanesville's pivotal position made the community a center for commerce, travel and trade throughout its history.

The county's name originated from a Native American word for "near the river", 'Moos-ki-gung.' The city of Zanesville was established on March 1, 1804, by Zane's son-in-law, John McIntire. In 1810, Zanesville became Ohio's capital until 1812.

Geography

Muskingum County is located in Southeastern Ohio, covering a land area of 673 square miles, eight of which is covered by the Muskingum River. It is surrounded clockwise by Coshocton, Guernsey, Noble, Morgan, Perry and Licking counties. The county makes up part of the Columbus Statistical Area.

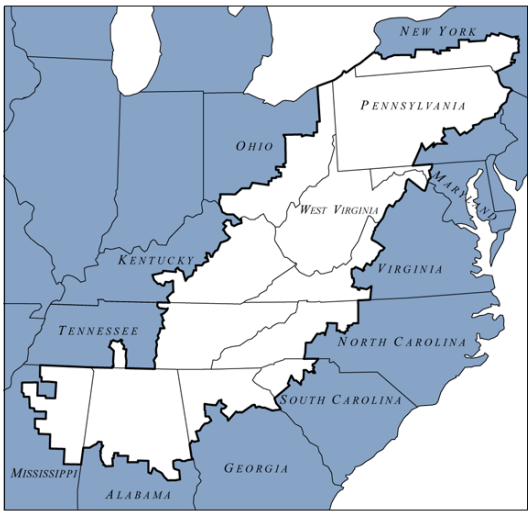


Within the borders of Muskingum County, there is one city, Zanesville, and 10 incorporated villages; Adamsville, Dresden, Frazeysburg, Fultonham, Gratiot, New Concord, Norwich, Philo, Roseville, and South Zanesville. This also includes 28 unincorporated communities. Muskingum County is made up of 25 townships, having the largest and smallest townships in the State of Ohio, Newton and Jefferson townships respectively.

Muskingum as an Appalachian County

Muskingum County is identified as an Appalachian county. Appalachia is a cultural region in the Eastern United States that stretches southwest from the southern tier of New York to northern Alabama, Georgia and Mississippi. As of the 2010 census, the region was home to approximately 25 million people. Since its recognition as a distinctive region in the late 19th century, Appalachia has been a source of enduring myths and distortions regarding the isolation, temperament, and behavior of its inhabitants as being uneducated and prone to impulsive acts of violence. This was coupled with aspects of the region's culture, such as moonshining and clan feuding.

Image 4: Map of Appalachian Region



Source: Appalachian Regional Commission

While endowed with abundant natural resources, Appalachia has long struggled and been associated with poverty. Adults in Appalachian counties are more likely to live in poverty, lack a high school diploma, be unemployed and uninsured, and have unmet health needs. Children in Appalachian counties face unique health disparities that include poverty, food insecurity, obesity and poor access to pediatric care.

Tourism and Attractions

Nature granted the area rich natural resources such as sand, clay and iron, making Zanesville and Muskingum County ideal for the manufacture of steel, glass and pottery. Ceramic tile and art pottery are an important part of the heritage of the community, Zanesville becoming known as the “Pottery Capital of the World” and the “Clay City.”

The production of pottery still makes Muskingum County a destination point for visitors from all over the world. Glass, steel and ceramics remain some of the community’s most important industries.

Many prominent Americans have called Zanesville and Muskingum County home. John Glenn, a native of New Concord was the first American astronaut to orbit the earth and was a U.S. Senator. William

Rainey Harper was the founder of the University of Chicago and Cass Gilbert was an architect for the U.S. Supreme Court building. Actors Richard Basehart and Agnes Morehead, and author Zane Grey, are all notable Muskingum County natives.

Muskingum County has many interesting places to see and a variety of exciting things to do. It is home to attractions such as the Y-Bridge, the Wilds, Dillon State Park, the Lorena Sternwheeler, many old churches and the John and Annie Glenn historic site.

Commerce and Industry

Muskingum County has a diverse workforce with over 36,000 people (41.7%). This is represented by several industries like healthcare/education, manufacturing and retail sales. This provides employment for 77.3% of the workforce, the remaining 22.2% and 0.5% working outside the county and state respectively. In the last 10 years, nearly 5,700 manufacturing jobs have been lost, a 56% decline. This has left a group of experienced, skilled and motivated workers, often underemployed or unemployed. In recent years, new industries like distribution and oil drilling have changed skill demands on the workforce. Muskingum County provides employment opportunities for many, with approximately 7,000 commuters traveling to Muskingum County to work.

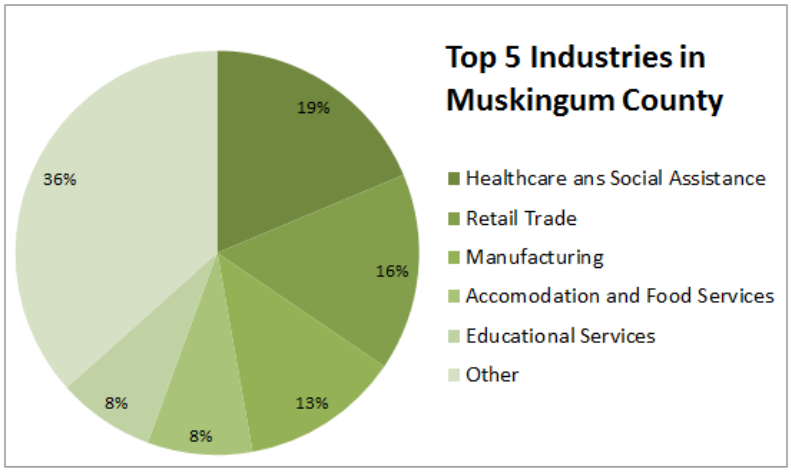


Image 5 Data Source: United States Census Bureau

The Zanesville-Muskingum County Chamber of Commerce, which currently has a membership of 663, dates back to 1905. Membership spans a wide array of organizations. These include local government agencies, small businesses and collaboratives among others. This organization has a long-standing tradition of service to the community.

Top 5 Employers in Muskingum County

Company	Employees
Genesis Healthcare System Hospitals, clinics, outpatient	2800
Zandex Nursing homes	1100
Dollar General Distribution center for retail stores	678
Shelly & Sands Road construction, aggregate, asphalt	500
Auto Zone Auto parts distribution center	470

Image 6 Data Source: Zanesville-Muskingum County Port Authority

METHODOLOGY

FRAMEWORKS AND THEORY

Understanding Health

Defined by the World Health Organization as "a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity," health is described as a state of being that enables a full life. In effect, the absence of disease or infirmity makes up only one of several components of health. The definition of health exists beyond individual physical abilities or dysfunction. Health encompasses a wide range of experiences and events and their interpretation may be relative to social norms and context. More broadly, health is 'not just the physical well-being of the individual but the social, emotional and cultural well-being of the whole community. It influences not just how we feel, but how we function and participate in the community. As such, individuals, groups and societies may have very different interpretations of what constitutes illness and what it means to be in good health.

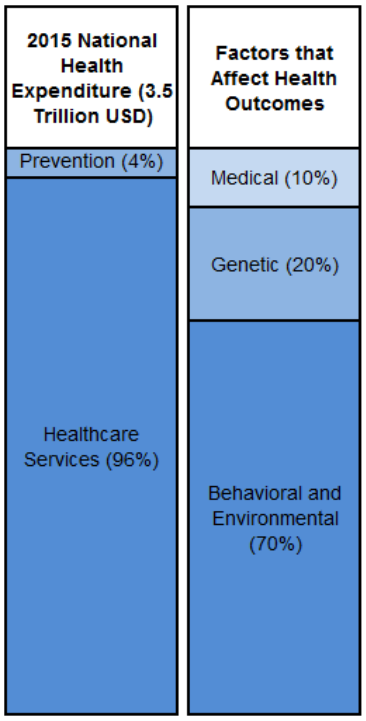


Image 7 Data Source: Centers for Medicare and Medicaid Services

In 2015, medical services and preventive services accounted for 96% and 4% respectively of the United States' estimated 3.5 trillion dollar healthcare expenditure. However, the factors that influence health status are 70% behavioral and environmental, 20% genetic and 10% medical (1). With almost 70% of healthcare dollars going to hospitals, healthcare providers and prescription medication, the greater remainder supports long-term and home health services, as well as durable medical equipment, all of which support secondary and tertiary healthcare.

Addressing the behavioral, socioeconomic and physical environments supports the need for a focus on social determinants of health as the leading approach to achieving success in health promotion. The challenge presented in this shift are seated in the reduction in the funding of a rapidly growing healthcare expenditure, and channeling funds to healthy promotion and preventative health programs, which are difficult to quantify.

Social Determinants of Health

The environment in which we live, from as early as in the womb to later in life; where we are born, grow up, live, work and age, is an intricate network. Within the community and built environments in which we live, factors like air quality, healthcare, industry, social capital and transportation infrastructure contribute to poor physical, mental or emotional health or illness. These factors are collectively termed Social Determinants of Health (SDH). Together, they create the context for which a community may thrive, and this system becomes a part of us and may predict our health outcomes. Studies show that however the social gradient is sliced; it has a strong direct relationship with health status.

While our genetic make-up provides each person with a unique set of codes, which give us the potential for particular health outcomes, the environment individuals find themselves in, and the resources available to them will either support or hinder this potential. While great height, cancer or diabetes may be a predisposition, proper nutrition and physical activity are a larger determining factor for each of these three outcomes. Proper nutrition and adequate exercise require easy access to healthy food,

Image 8: Social Determinants of Health as a Theory (Dahlgren and Whitehead, 1991)

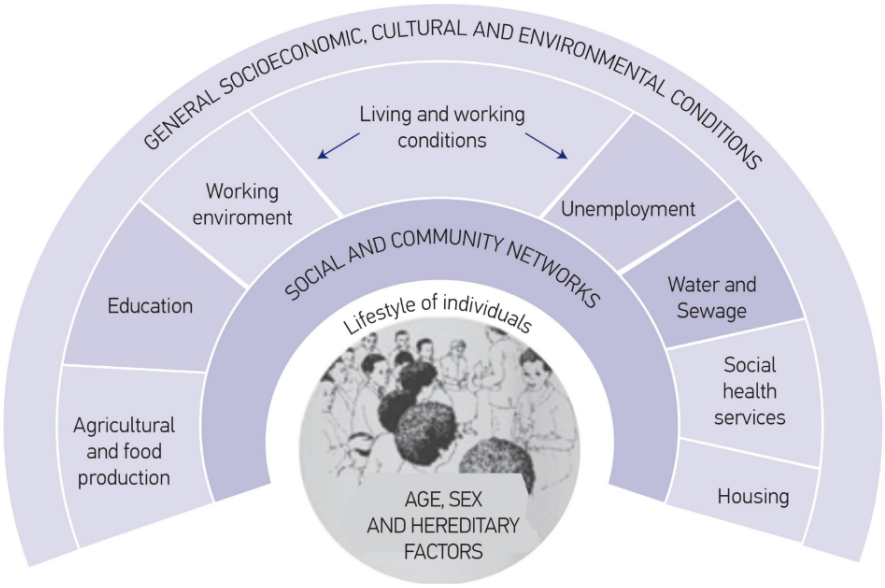


Image Source: Sucupira, Ana Cecília et al. (2014).

safe environments to play, as well as time to conduct both activities. In fact, recent studies, originating from the Delmar Divide in St. Louis, Missouri, support the new theory that one's zip code may be more important health indicator than his or her genetic code.

Health Equity

Regardless of how resources are distributed across a community, individual health outcomes vary. The health outcome differences seen between specific sub-populations are known as health disparities. These differences are evident across the social determinants of health like residential neighborhoods, levels of educational attainment or race/ethnicity. For a long time, the focus on health assessments was a focus on health disparities, identifying populations that suffer an uneven burden of health outcomes within communities. Some health disparities may stem from determinants like gender (breast cancer/prostate cancer rates), race/ethnicity (hypertension) and age (Coronary Heart Disease), which cannot be modified. However, socio-economic and physical environments as well as community infrastructure are factors that can be adjusted to better meet the needs of each individual. This realization creates an opportunity to address social determinants of health. Health equity serves to seek out the root causes of social determinants and to determine a fair/just way of allocating resources to ensure comparative health outcomes. Its primary goal is to create a fair and just inclusion so all can participate and prosper.

METHODOLOGY

Data Collection methods

The Zanesville-Muskingum County Health Department and the Healthier Muskingum County Network, taking a broad view of health and functioning, and incorporating social determinants of health, conducted the 2016 Muskingum County Community Health Assessment (MCCHA). The MCCHA seeks to help community members:

1. Better understand the context and influence of community, local economy, built environment and the social determinants of health that influence resident health;

2. Assess the breadth and strength of this network; focusing on gaps, duplication and opportunities for expansion; identifying and addressing the health inequities that exist across the county;
3. Engage partners and stakeholders to create a collective vision and plan for the community's 3-year future, and
4. Identify challenges and strategies to achieving success.

To accomplish this, several methods were selected. They comprised qualitative, quantitative, primary and secondary data. Data gathered came from a wide variety of resident characteristics and perspective. This combination provides a dense chunk of information that would create a clear identity for Muskingum County, and effectively inform the Community Health Improvement Plan (CHIP) priorities and interventions.

Table 1: Muskingum County Community Health Assessment Data Collection Methods

Data Collection Method	Type of Data				Data Level
	Quantitative	Qualitative	Primary	Secondary	
Adult Opinion Surveys	x		x		Individual
Youth PhotoVoice Project		x	x		Group
Community Health Status	x			x	System
Focus Group Discussions		x	x		Group
Key Informant Interviews		x	x		Individual
Community Asset Mapping	x		x		System
Local Public Health Assessment	x		x	x	System

Adult Opinion Survey

The Adult Opinion Survey captures perspectives and opinions of residents on life in Muskingum County and the communities in which they live. The survey, which contains over 65 questions, was built around results from the past CHA and emerging social concerns. Surveys were available on paper, over the internet and by telephone. The survey team set up stations at high-traffic locations across the county, went door to door in townships with Amish and small populations, and administered surveys, oversampling in the smallest five townships.

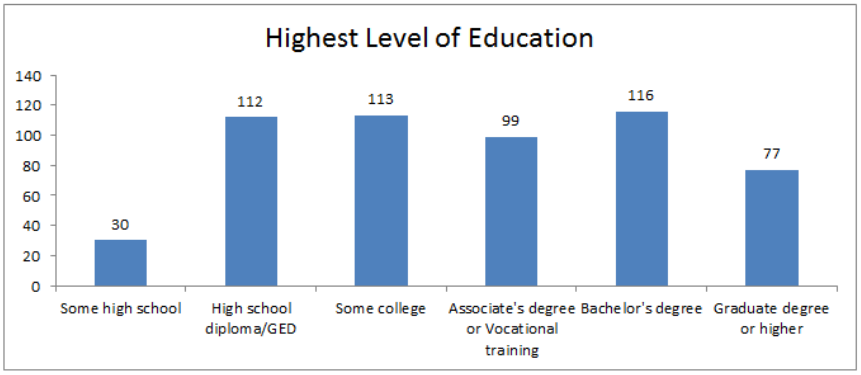


Table 2 Data Source: ZMCHD (AOS)

Online survey vouchers were provided to people who could not take the survey immediately. Paper surveys were distributed at public locations (grocery stores, churches, local agencies) and community events. The survey covers themes like access to health and nutrition, crime and safety,

as well as community cohesion and emergency preparedness. Over 700 surveys were completed between July and August 2016, with 420 over the internet, 280 on paper and 3 by telephone. A completed survey, in this context, was one that had at least 75% of all questions answered and provided demographic information on themselves. This exceeded the targeted sample size. All paper and telephone surveys were entered into the online survey tool to facilitate analysis. Results from the survey showed a good representation of both education and income status in the county.

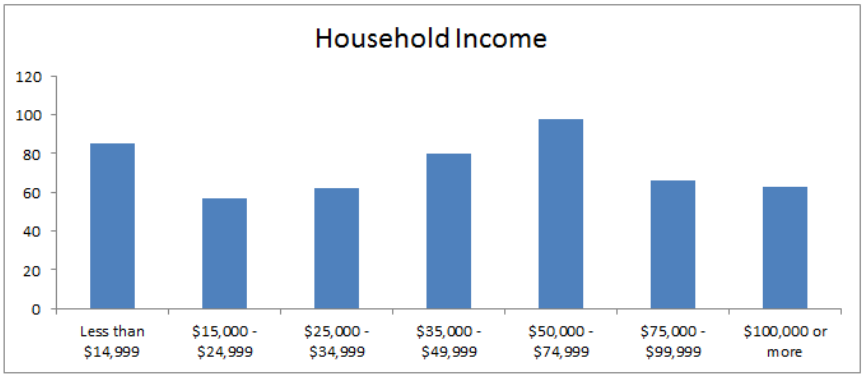


Table 3 Data Source: ZMCHD (AOS)

Community Health Status Assessment

The Community Health Status Assessment creates a profile for the county, describing its economic, health and socio-political make-up; the measures of several indicators collectively determining the quality of life or status of the community, thus creating a snapshot for a point in time. The data collected came from several levels of government, non-profit and the private sector entities. At the county level, sources of data include the Muskingum Valley Educational Services Center (MVESC), Genesis Healthcare System, law enforcement and the Zanesville-Muskingum County Health Department (ZMCHD). Data from the Ohio Department of Health (ODH), the Ohio Medicaid Assessment Survey (OMAS) and the Ohio Department of Education (ODE) are among several state level sources. The U.S. Census Bureau, the Robert Wood Johnson Foundation's County Health Rankings and the Network of Care not only counted as national sources for data, but they provided avenues for comparison across counties, states and national measures.

Focus Group Discussions (FGDs)

Nine Focus Group Discussions (FGDs) were held across the county, bringing together groups of 10-12 people with shared interests or common challenges. Marginalized or special populations were specifically targeted to help understand population concerns. Groups that came together for conversations include the local Chamber of Commerce, Rotary Club and social services organizations. Discussions focused on residents were conducted among parents of young children and the aging. The team also met with residents who experienced homelessness and families of residents with disabilities. Community gatekeepers were identified to help recruit participants for each FGD.

Key Informant Interviews (KIIs)

Key informant interviews were conducted at the latter end of the data collection period, once the assessment team has started analyzing preliminary data. Topics discussed with knowledgeable community residents and leaders were based on findings and results from the other data collection processes. The Board of Health, the Health Commissioner and industry leaders in mental health, transportation, and commerce were among a select few who were interviewed as key informants.

Local Public Health System Assessment (PLHSA)

The Local Public Health System (LPHS) is a network of direct health, supportive and complimentary services that enable a community achieve and sustain good health. The assessment focuses on public health and its support services across the community, and how well they work together to meet all 10 Essential Public Health Services (ESPHS). This assessment focuses on agencies and organizations, what they do and the populations they serve. ZMCHD staff members, organized by division, collectively completed a LPHSA survey, a tool created to capture function, strength/challenges and vision. This activity was offered to all partner agencies of each division. This information is presented in both narrative form and as a visual representation.

Youth PhotoVoice Project

The Youth PhotoVoice Project, the first of its kind in the county, brought together six individuals between the ages of 12 and 18, to shed light on the county from a youthful perspective. Organizations working with youth and schools were utilized in identifying participants for the project, which involved taking photographs of their community and documenting perceptions of life in the communities in which they lived, for a period of two months. The group met throughout this process to learn about photography, take photos, and as a group, discuss their productions. The products of this project were an exhibition displayed at the Zanesville Museum of Art in December 2016 and a photo documentary published on YouTube.

Asset Mapping and Windshield Assessment

Two components of the community health assessment were conducted with the assistance of local college students through internships and collaborations with ZMCHD. The asset-mapping project, which was done by students of Muskingum University through internships, identifies countywide resources that make up the local public health system. Contact information and services were documented for each entity. This document will serve as a resource guide for any organization. This resource will also provide updated information to the county's 2-1-1 directory. The windshield assessment, conducted by Ohio University, Zanesville nursing students, is a built-in part

of their curriculum. Findings from their reports are offered to ZMCHD/HMCN to supplement the asset-mapping piece.

Data Analysis

Data from the 2011 Community Health Assessment and the Genesis Healthcare System's 2015 Community Health Needs Assessment (CHNA) were reviewed to determine data collection tools and methods, indicators and priority areas. This process informed the design of data collection tools, the selection of indicators for trending and the identification of emerging issues worth exploring.

Qualitative data was collected from windshield assessments, PhotoVoice, FGDs and KIIs. Data collected from these sources were reviewed immediately after each session and summarized. Once each method was completed, the data was coded into themes. This was done to the point of saturation. Once all data collection was completed, it was organized into categories based on the social determinants of health. Findings were presented within the findings section, as part of narratives or illustrative quotations. Quantitative data collected from primary and secondary sources were analyzed with Microsoft Excel, SPSS and the Ohio Department of Health Data Warehouse, which is enabled to build custom reports. Findings were presented within the narrative as charts or tables. Both sets of data, qualitative and quantitative, were synthesized and integrated into the assessment.

Limitations

Through the process of designing a methodology for this assessment process, the team acknowledged several factors that would prove to be a challenge, including Muskingum County being a small rural county. Its homogenous make-up limits the ability to use racial/ethnicity as a measure of comparison. For comparison purposes, age, education and income were used. The team does, however, acknowledge the correlation between these three factors/measures and health status. Limitations acknowledged through this assessment process are reported by data level.

Secondary Data

Several of the secondary sources, which provided quantitative data for the CHA, did not go to county level; data was collected at a state or regional level. Data that was collected at the state or regional level may not be statistically representative of the county, limiting its power of inference and the possibility for stratification within the county.

Another limitation encountered was the age of the data collected; it was not always recent. Some data clearly dated a few years back, while other data values for the recent years were repeated, aggregated or estimated based on older data sets, indicating inaccurate change over time. This affected the ability to compare current data that was obtained from a dataset to previous data that accounted for multiple years.

A single but significant limitation was identified in the request for data from warehouses. The criteria for pulling data fell to the analyst (person pulling or requesting data), which is prone to bias. In recognizing these challenges, high-density data sources (like the US Census Bureau) were prioritized. Through the process, preference was also given to county level data.

Primary Data

Findings from the adult opinion surveys were not representative of the county, despite achieving a good sample size. Due to limited resources, the team used a convenient sampling method as opposed to a simple randomized sampling, the gold standard for statistical studies. With a third of the county's 86,290 population concentrated within 12 of 673 sq. miles, and a majority of the remaining residents living across several incorporated villages, the team focused convenience sampling around high-density locations. There were also challenges assigning each survey to a township for analyses, as many residents were unable to determine the townships in which they resided.

The selection of participants for focus group discussions also presented some challenge. The team recruited participants for the agency/business discussions and worked with community gatekeepers to determine participants for community-based discussions. Due to few entities within the sampling frame interested in participating in focus group discussions, the team extended invitations to entities that responded first, showed interest, or were willing to participate. This not only limited the possibility of a well-represented table, it may have brought together more opinionated and mission-focused voices. Other than directions based on demographics, all the gatekeepers' recruited participants at their discretion.

The data collected and analyzed for the community health assessment will primarily be used to inform the Community Health Improvement Plan. It serves the additional purpose of informing ZMCHD's strategic plan. The Community Health Assessment will be and disseminated publicly in print and online. It will serve as a resource for local agencies and organizations to address issues that impact population health.

FINDINGS

DEMOGRAPHY OF MUSKINGUM COUNTY

Population and Growth

According to US Census population estimates, as of July 1, 2015, Muskingum County had 86,290 residents, making it the 31st most populous of 88 Ohio counties and home to 0.74% of the state's population. Muskingum County is also the seventh largest of the 32 Appalachian counties in Ohio, which range from 235,463 to 13,251. Muskingum County residents live across 25 townships with varying population (range of 8140 to 180 residents), clustered into 10 villages and 28 unincorporated communities. The city, on the other hand, has 25372 residents, making up close to 30% of the county's population. Over half of Muskingum County residents live in urbanized areas or clusters (53%), 47% living in rural areas. The county is made up of US-born residents; only 1% having been foreign-born. Most of the foreign-born residents come from Europe (40%), Asia (37%) and South America (18%).

Muskingum County Population (2000 to 2015)					
Region	Annual Population			% Change in Population 2000-2015	% Change in Population 2010-2015
	2000	2010	2015		
MK	84,585	85,951	86,290	2.00%	0.39%
OH	11,353,140	11,512.43	11,575,977	1.96%	-1.40%
USA	281,421,906	303,965,272	316,515,021	12.46%	4.10%

Table 4 Data Source: United States Census Bureau

While the county has seen some fluctuation in its population over the last five years, there has been a small but steady increase in its population over the last 10 to 15 years, growing by 2%, from 84,585 in 2000. Muskingum County's population saw a growth of 0.3% over the last five years, factoring in a net migration rate of less than 1%.

Age and Gender Distribution

Having grown overall by 2 % over the last fifteen years, a closer look at the county population shows changes in its age distribution. Across gender, there have been no changes of significance; females making up 51.6% of the population, their male counterparts, 48.4%. This has remained consistent, fluctuating by less than 1% over the past 15-year period. In comparison with Ohio and the United States, Muskingum County has an older population; the median age of 40.6, older by 3 years. The largest population group of people, aged 40 to 59, is currently at the peak of their productive lives, is paving the way for the 20 to 39 age group, which is currently smaller than the state and national proportions. Muskingum County portrays characteristics consistent with aging patterns; a steady increase in older populations coupled with stunted to negative growth in the young adult (-1.3%) and child populations (-0.7%), consistent with aging patterns. Since 2000, the median age has risen steadily from 37 to 40.6 years.

Muskingum County Population - Age Group											
Region	9 years and under	10 to 19 years	20 to 29 years	30 to 39 years	40 to 49 years	50 to 59 years	60 to 69 years	70 to 79 years	80 years and older	Median age (years)	Age Dep. Ratio
MK	12.5%	13.4%	12.5%	11.10%	13.20%	14.30%	11.40%	6.80%	4.70%	**40.3**	**65.9**
OH	12.4%	13.3%	13.2%	12.10%	13.10%	14.60%	11.10%	6.10%	4.10%	**39.2**	**61.4**
USA	12.8%	13.2%	14.0%	13.00%	13.40%	13.70%	10.40%	5.70%	3.70%	**37.6**	**59.7**

Table 5 Data Source: United States Census Bureau

A significant proportion of growth within the county occurred among people aged 55 years and older. Of notable mention within this group, are age brackets 55 to 59 years and 60 to 65 years that increased by 36% and 50% respectively. The population of residents 85 years and above has also increased by almost 17% since 2000. This accounts for the increase in Muskingum's median age of 40.6 years, from 37 years in 2000. This exceeds the state and national average of 37.8 and 37.7 years respectively.

Muskingum County Age Distribution and Change (2000 to 2015)				
Age Group	Proportion of Population			Growth (2000 - 2015)
	2000	2010	2015	
Under 20 years	29.1%	26.8%	25.9%	-9.0%
20 to 54 years	47.3%	45.3%	44.0%	-5.2%
55 years and older	23.6%	27.9%	30.0%	29.6%

Table 6 Data Source: United States Census Bureau

The labor force, which has also seen a steady decline over the past decade, has seen its 35 to 44-age bracket shrink by 5.1%. This shrinking of Muskingum County's working population, coupled by an ever-increasing dependence of the aged and children, increases the burden on the county workforce. This proportion of working to non-working, measured by dependency ratio at 65.2, has increased over the last decade by two points over the last decade.

Race and Ethnicity

Muskingum County is predominantly white or Caucasian, accounting for 93% of the population. Blacks or African Americans make up 4% of the county, with Hispanics/Latinos claiming another 1%. The remaining 2% is split among Asians, American Indians/Alaskan Natives and people of other races, representing 0.4%, 0.2% and 0.2% respectively. In 2014, 96.7% of Muskingum's population claimed to be of one race; 3.3% describing themselves as multiracial.

In comparison with 2010, there has been a significant increase in diversity, the multiracial population increasing by 25.5% over the course of 5 years. A majority of multiracial residents describe themselves as Caucasian and African American (60%), or Caucasian and American Indian/Native Alaskan (16%). While Muskingum County may still be described as a minimally diverse county, the demographic landscape may be seeing growth spurts within smaller segments, minority and multiracial, to be specific.

The ethnic/racial diversity in Muskingum has changed slightly over the last decade, with minority populations increasing from 6% to 7% between 2000 and 2014 (and dropping from 7.4% in 2010). Most of Muskingum County ancestry is traced to Europe; the largest portion, 20% tracing their ancestry to Germany. Other larger groups trace back to Ireland (13.5%), and England (9.5%). Only 11.2% of local residents trace their ancestry from within the United States.

Language

English is the most widely spoken language throughout Muskingum County homes, with 98% of the population primarily speaking it. A minute portion of the population does not speak English. A tracing of a majority of Appalachian ancestry to Europe is evident in Indo-European languages being spoken by 1% of the population. Spanish/Creole is spoken in the homes of 0.7% of the population. A 72% majority of residents who do not speak English as their primary language at home have a good grasp of the English language. The remaining residents who do not speak English well tend to speak Asian, Pacific Island and other languages or fall into the 65 and above age category.

Religion

About 40% of Muskingum County residents are affiliated with a religion, most of which is Christian. Less than 2% of the population claim Jewish, Muslim or Buddhist faiths combined. Protestants make up the largest Christian denomination, at 71%, with 11.8% Roman Catholics coming in a far second. Latter-day Saints (Mormons) and Jehovah

Witnesses make up 1.7% and 1.6% of the county religious respectively. It is important to note that the above-mentioned 40% of county religious are residents with membership within a congregation and not necessarily all who attend religious services; the remainder does not indicate irreligion or atheism.

Disability

In Muskingum County, 15.9% of the population has at least one disability, in comparison with the state and national averages of 13.4% and 12.3% respectively; the leading disability being ambulatory difficulties. This affects 8.4% of the entire population; however, it is most common among residents 65 and above (24%). While a greater proportion of residents with disabilities are autonomous, 6.5% of them have difficulties living independently, and another 3% with self-care difficulties. People with disabilities make up 27% of the county's labor force and have a low unemployment rate of 1.5%.

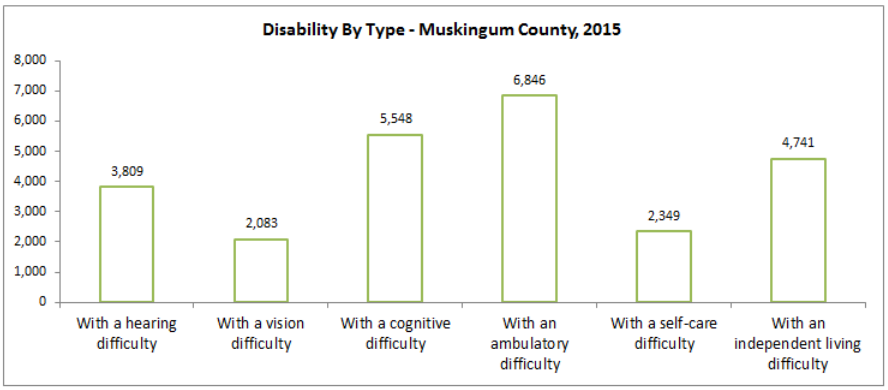


Table 7 Data Source: United States Census Bureau

Accessibility is a primary concern for people with mobility needs. Accessibility was extensively discussed in the focus group discussion with senior residents. The lack of mobility limits independence and makes life difficult, even when a person has help. Many day-to-day places that people access do not have automated doors. In these instances, maneuvering a wheelchair or assistive device makes using a mechanical door difficult. Residents agreed that some effort has been made to make downtown Zanesville more handicap-friendly, installing ramps and tactile paving. They also identified places like doctors' offices and larger department stores that have automated doors, however, these places are some of the least visited for them.

During a focus group with the senior residents, they also complained about difficulties with driving around town. Being more cautious and careful, they find it challenging driving with more aggressive drivers and on narrow streets. One intersection mentioned was the Senior High Rise exit onto Maple Avenue. 'Respect on the road,' extends from impatience towards senior drivers to the abuse of handicap parking, with younger and more able-bodies residents using these spots. Another issue that came up was night driving, which limits the mobility of most seniors. Lower lighting or absent

streetlights make it difficult for those who attempt to drive. There was general agreement that many activities they attend occur in the evenings, so without family or friends, they are confined to their homes after dark. For most seniors who depend on family and friends, they still have to prioritize their outing, settling on rides to medical appointments or grocery trips over any social activity. Several residents agreed that they stay home because they have no other choices.

Parent perspectives of children with developmental disabilities shed a different light on community life. They describe Muskingum County as a good place for their children and people with developmental disabilities. Not only is it a smaller community, life moves at a slower pace and the community is safer when compared with bigger cities. Having a tight-knit community also provides support and 'extra eyes'. They identified Starlight as a great resource and explained that some families moved into the county because of the available resources. Local schools are also better equipped to support students.

> The ignorance, whether color or disability. I can't believe the things that are said in classrooms, in the streets or in public... **My husband and I are both college grads and read well. You think two people will be able to google, search, find out, everything from social security disability before and after 18, to school IEPs, to where the support groups are. We beat our heads to the wall...** If you have a newborn and they have a disability, they are entitled to social security and a golden buckeye card, but some local businesses won't accept it...

Increased job opportunities for people with disabilities is another encouraging indicator. Traditionally, most people worked within Starlight Industries, however, over time, there are more opportunities with local businesses and organizations. Another great resource within the county are the informal parent and support groups; the groups report sharing 'insider information'. With limited accessibility to local disability resources, parents depend on each other (through support groups etc.) for guidance and resources, as well as sharing experiences.

Despite the availability of local resources, families felt the processes for finding and accessing support and opportunities were limited across Muskingum County. Channels for seeking information, direction and services were not centralized. They felt that the responsibility of searching for resources and determining eligibility fell to the family. Families had to actively pursue disability resources, worrying that between waiting on referrals and waitlists, many children may not get all the needed assistance.

Within the community, there is a need for people with disabilities to be properly recognized and provided with needed support and resources to enable them live normal lives. For many with developmental disabilities who show no physical disability, interactions out in the community may be viewed in a negative light or may not be

supported. This extends to the school environment. Families find themselves explaining and defending the actions of developmentally disabled individuals. Residents mentioned scenarios at stores, on flights and within the community when agencies, businesses and organizations are not only not accommodating to developmental disabilities, they may refuse to accept social service benefits like the golden buckeye card. This is also seen across the community when identifying activities for people with developmental disabilities. There are few options which cater to them, most events and activities geared at young children. Parents discussed the trend of public places like stores, movie theaters and events becoming sensory-friendly, suggesting this as something Muskingum County could benefit from.

Veterans

Almost a tenth (9.5%) of Muskingum County residents claim veteran status. Over half of this population is female (52.4% versus 47.6% males). Vietnam veterans are the largest portion of the group, with 38.7% of the veteran population having served between 1955 and 1975; this explains the 55 to 64 age group being the largest veteran segment. Veterans have a 57.9% participation rate in the labor force (74.4% for non-veterans). Almost twice as many veterans have a disability; this rate is 30.2%, in comparison with the average disability rate of 16% among non-veterans. Veterans, however, seem to have a lower poverty rate in comparison with their non-veteran counterparts.

Education and Literacy

According to the National Center for Education Statistics (NCES), 10% of Muskingum County residents are classified as lacking Basic Prose Literacy Skills (BPLS), in comparison with Ohio, with 9%. These residents are unable to read and understand any written information. This figure includes a small proportion of residents who could not complete the assessment due to language barriers.

Education Attainment Among Population 25 Years and Over		
Education Level	**2010**	**2015**
Less than 9th grade	1.1%	3.0%
9th to 12th grade, no diploma	9.9%	8.8%
High school graduate (and equivalency)	53.1%	40.4%
Some college, no degree	18.0%	22.9%
Associate's degree	4.4%	9.4%
Bachelor's degree	7.4%	10.6%
Graduate or professional degree	6.0%	4.9%
HS+	88.2%	88.2%

Table 8 Data Source: United States Census Bureau

Among Muskingum County residents over the age of 25, 88.2% have a High School diploma or its equivalent. This is slightly less than in Ohio (89.7%), but higher than the national of

87.2%. Current education attainment rates indicate almost a 1% decrease in high school (or equivalent) graduation among this population since 2010. While there has been a marked decrease (24.5%) in high school completion, attainment of some college, an associate's degree and bachelor's degrees are increasing.

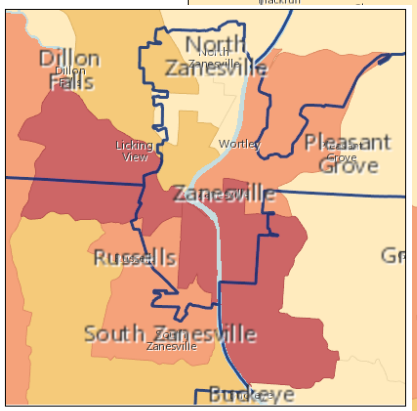


Image 9b : Source: Community Commons

Image 9a : Source: Community Commons

Across the county, there are pockets with low levels of education; adults without a high school diploma (or equivalent), some with levels over 20%. This stretches across four census tracts, mostly concentrated within the limits of Zanesville. Low education sections of the county tend to have less access to community resources and worse health outcomes.

Educational challenges are seen across the county as early as kindergarten, according to the 2014-2015 Ohio Kindergarten Readiness Assessment (KRA). In Muskingum County, only 48.4% of all students are described as 'Demonstrating Readiness.' This means they entered kindergarten with sufficient skills, knowledge and abilities to engage with kindergarten-level instruction. While 33.6% need some support (Approaching Readiness), 18% of them are classified as, 'Emerging in Readiness', requiring significant support to cope in school. In a focus group discussion with parents, there was a consensus about the need for early intervention

Ohio Kindergarten Readiness Assessent			
School District	**Demonstrating**	**Approaching**	**Emerging**
East Muskingum Local	80.1%	17.0%	2.8%
Franklin Local	50.4%	35.3%	14.4%
Maysville Local	47.8%	39.1%	13.0%
Tri-Valley Local	43.3%	36.3%	20.4%
West Muskingum Local	37.1%	35.3%	27.6%
Zanesville City	31.5%	38.5%	30.0%
Average	48.4%	33.6%	18.0%

Table 9 Source: Ohio Department of Education

when children need support. Some of the challenges with getting needed support include knowing what resources are available and making them accessible.

For many children, it will not be until they are failing academically that they may be identified and offered help or support. This leads to students struggling through school. During the 2015-2016 academic year, only 60.8% of 3rd Graders met the state reading

Muskingum County Education Report Card Highlights - 2015/16					
School District	Overall Performance Index (out of 100%)	Graduating Seniors Prepared for Success	3rd Graders Meeting the State Reading Proficiency Standard	Chronic Absenteeism	Spending Per Pupil
Maysville Local	69.2%	31.9%	70.3%	11.7%	$7,422.00
Tri-Valley Local	73.5%	37.5%	70.8%	8.2%	$7,533.00
West Muskingum Local	69.6%	38.9%	58.4%	11.4%	$7,774.00
East Muskingum Local	75.7%	38.9%	75.0%	9.3%	$7,943.00
Zanesville City	55.5%	20.9%	37.8%	18.6%	$8,218.00
Franklin Local	70.5%	37.9%	52.9%	12.2%	$8,844.00
Average	69.0%	34.3%	60.8%	11.9%	$7,956.00

Table 10 Source: Ohio Department of Education

proficiency standards and by graduation, only 34.3% of seniors were well prepared for the work world or for pursuing post-secondary education. Parents are aware of these challenges but struggle to support their wards. The challenges they face include conflicting work demands and a poor understanding of student assignments.

Educational resources and support for students with Developmental Disabilities (DD) has improved significantly in Muskingum County. However, support for DD students are primarily geared towards the classroom or academic work. Beyond the classroom, DD students may be alienated from participating extracurricular activities, if they do not have home or private support. Parents also acknowledged persistent difficulties with learning and accessing available resources.

> I'm a teacher. When I started college, we were using the old book of standards; they switched it twice before I graduated. The standards are vague; it is not specific enough... **They are trying to get these kids to catch up with other countries. Like you said, you've got elementary kids learning what I learnt in 7th grade...** When I walk into the classroom, I don't know what I'm teaching that day. It all comes from a packet. I have no idea how to work this problem out; they have these box things for multiplication. Can't we just do it the old school way (teacher)... **That (New Math) causes fights between kids and their parents because you do it how you were taught and they're like, " No, you're wrong."** A lot of parents write letters to the teachers because they don't get it; even I the teacher, I don't get it... **If teachers are handed what students need to learn just to pass a test, where do we have wiggle room to do fun things with our students?**

In recent years, the focus on Science, Technology, Engineering and Mathematics, also known as STEM subjects, has become a priority. This has had several consequences. The focus on STEM subjects has relegated the arts, physical education, life and vocational

skills to the background. All school districts in Muskingum County show little to moderate success in meeting Ohio's physical education standards. In 2015-2016 academic year, none of the school districts participated in the Physical Activity Pilot Program funded by the Ohio Department of Health.

In discussions with local businesses, education and job preparation was a major theme. They identified one a major challenge with new entrants into the workforce was a lack of preparedness; they found that students entering the workforce were not well equipped for the work environment. They required micromanagement, had poor work ethics and had unrealistic expectations of the work world.

> I think that vocational school is the best-kept secret of this community. Not all kids are going to be 4-year scholars but all kids are able to be taught, so to give them an avenue that they can take, that may not be a lifetime job, but they're going to have a skill that is going to employ them... **Back in the day, when I went to school, if you went to the vocational school, that was the 'vaca-tional' school. You didn't go there to learn...** "My younger brother who is 18, tried to mix bleach with the Comet powder. And the sad part is that, he gets an A+ in chemistry. I mean, how would you not know that?... **My son, he graduated high school with an associate's degree. Its not that hard. It just takes a little bit of effort. With what he's doing, there's not really anything for him to come back to...**

The focus on STEM led to a narrow focus on high-achieving students going on to 4-year colleges. Students who are not on this trajectory may not feel successful in their academic careers. While technical and vocational programs have been around, they have long been treated as second-rate; alternatives for students who are not good enough to pursue mainstream schooling. Over time, non-traditional schools have gained popularity. Programs offered now extend beyond skill-

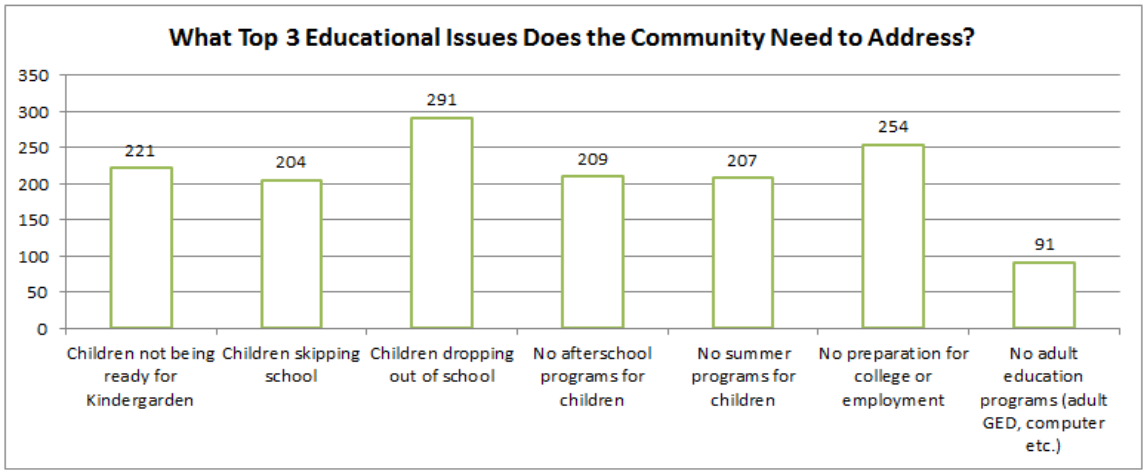


Table 11 Source: ZMCHD (AOS)

based learning for terminal employment like cosmetology and carpentry. Newer programs offer skills that may be built upon, like automation, digital media and robotics. Despite the emergence of these technical programs at the secondary level that

provide students with workforce skills and industry-specific credentials, most students encouraged to attend them, use these skills as a stepping stone into tertiary programs and not necessarily the workforce. Students in these programs are earning certificates and associate degrees to give them a leg up in college.

Overall, residents felt that while students may receive a good education, it might not prepare them for life. According to the opinion survey, the leading educational issues in Muskingum County were children dropping out of school, poor preparation for college or employment and children not being ready for kindergarten. The community identified the first two as priorities the community needed to tackle. Preparing the youth for life requires an education that equips them to be productive, socially and civically engaged, financially responsible as well as resilient. This resounded among businesses, key informants and focus group discussions.

Employment

Exactly 60% of Muskingum residents aged of 18 to 64 years participate in the labor force. Employed residents make up 94.1% of this population. The unemployment rate of 6.1% is slightly higher than that of the state (5.7%) and the national (5.2%) averages. Of the residents with gainful employment in 2015, the 74% worked fulltime, with at least 35 hours each week. Another 22% work 15 to 34 hours each week and the remaining 4% worked 1 to 14 hours each week. It is important to note that residents who met the full time status with at least 35 hours worked in a week did not necessarily have one job. People with at least one disability made up 32% of the workforce. A majority of Muskingum residents work within county limits (77.3%); 22.2% work outside the county, while a minute 0.5% work out of state.

> "I think that it's the employers responsibility. If you have an employee that is valuable, you take care of that employee." If you take care of them, they will stay."

Despite the low levels of unemployment, employment quality seems to be an issue across the county. For 18.6% of county residents, annual incomes fall below the federal poverty level. Another indicator of employment quality is participation in health insurance through an employer. Among the 95% of county residents with insurance, only 61.9% are covered by employers. Many

> I think that people don't understand that by supporting local businesses, it kind of stays in our communities... **If we need to hire three people, we bring in 10 to find 3. We will hire them eventually, but if they put the time in...** "My son, he graduated high school with an associate's degree. It's not that hard. It just takes a little bit of effort. With what he's doing, there's not really anything for him to come back to...

(40%) still depend on public coverage for funding healthcare.

Residents feel strongly about the condition of jobs in Muskingum County, describing it as a major priority. Opportunities for growth within jobs and position for college-educated residents are among other difficulties residents face. Interestingly, this is understood by local businesses. During focus group discussions, there was a consensus on the transformation of local industries over time. Many local jobs are not career jobs, ones people retire from. Most businesses expect people to work, gain experience and move on to other opportunities. Overtime however, this leaves few employment options for people who have been in the workforce for a while, or people pursuing further studies.

Local employers in Muskingum County express their contentment with doing business in Muskingum County, enjoying being part of the community and having the opportunity to give back in whatever ways possible. While there are businesses that may not be successful, Muskingum County has businesses that go back well over 175 years. Competition with 'big-box' stores pose a challenge for most local business, as their prices tend to be relatively higher. Another challenge local businesses face that has increased in recent years is the quality of employees. The effects of the ongoing drug epidemic have resulted in newly employed who are unable to pass drug screens immediately before or months after hiring. Having a history of drug or other charges may make candidates for employment unsuitable. Ill-equipped young adults entering the workforce is another challenge to hiring local residents. Embracing responsibility, good work ethics and high achievement are all desired characteristics that younger employees could improve upon.

Staff being under the influence of drugs or unprepared for the work environment increases the risk for accidents and misbehavior, something employers and proprietors are concerned about. Employment Focus Group participants described the community and the 'pool' of 'hirable' residents as small, with the same residents 'recycling' through the same jobs.

Income

The median household income in Muskingum County for 2015 was $41,130, with a per capita income of $21,274. Ohio and the Unites States both have significantly higher rates, at $49,429 and $53,889 respectively. Taking into consideration the average household income of $52, 388, a greater proportion, 59%, of county households make less than $50,000. This may also indicate income disparities. Wealth distribution, which is measured by the gini index, determines how proportionately income/wealth is shared across a population. Measured on a spectrum of 0 to 1, 0 indicates equal

distribution and 1, perfect inequality. Muskingum stands at 0.43, measuring slightly better than Ohio, at 0.46.

Results of the adult opinion survey indicated that only 55.2% of respondents had full-time employment. About 29.3% respondents were retired, disabled or unemployed, who may not depend on income from employment.

Poverty

As an Appalachian, rural county, poverty is pervasive, with 14% of county residents living below the federal poverty level. A closer look shows poverty unevenly distributed by age, children suffering disproportionately. Over 28% of Muskingum County children live in poverty (18.6 across Muskingum County). This compares unfavorably to adults (17.8%) and seniors 65 and older (8.3%). Results from the adult opinion survey showed that over 30% of respondents sought some type of assistance in the past year. Among all the people who sought some type of assistance, approximately 86% of them needed help with food/meals or electricity/heat, or other utilities.

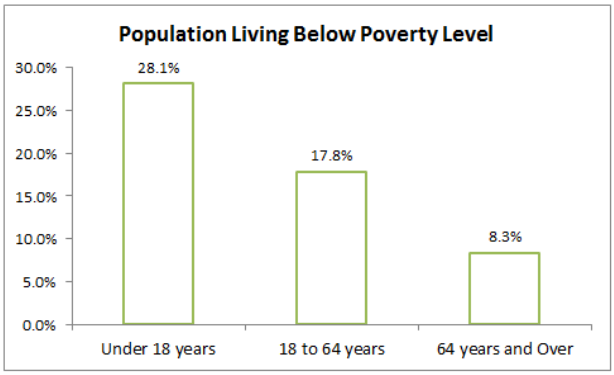


Table 12 Data Source: United States Census Bureau

Poverty, while quantifiable, is a relative concept in terms of an incomes ability to meet household needs. Estimates from the US census data shows 54% of Muskingum residents living below the poverty level received Supplemental Nutrition Assistance Program (SNAP) benefits, however, among households living above the poverty level, there was still a significant proportion receiving SNAP benefits (46%).

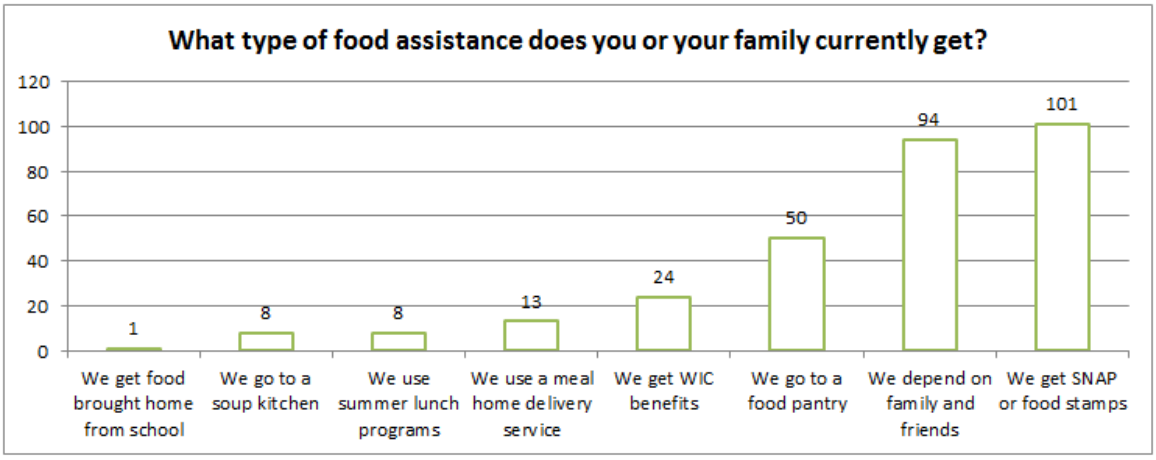
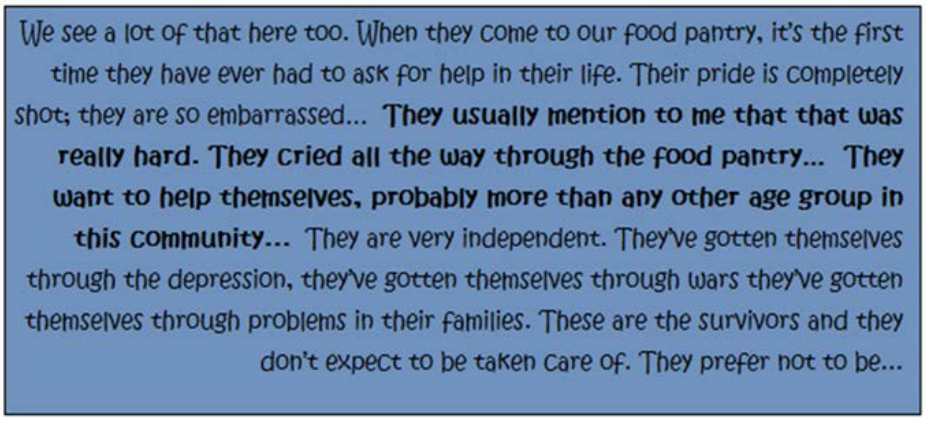


Table 13 Source: ZMCHD (AOS)

Poverty in aging populations may require special attention. While this population may indicate low levels of poverty (8.3%), conversations across several focus group discussions suggest otherwise. Fixed incomes, coupled with increasing healthcare costs and daily cost of living, hurt this population group. Giving up vehicles, pets, medication, food and entertainment happens increasingly. Participants in the senior focus group discussion agreed unanimously that for seniors, many of their lives now revolve around economics, making it through each day within their shrinking means. They mentioned places like the Senior Center, Christ Table, Eastside Community Ministries and some of the available and affordable places to go. They benefit from the connections made, learning how to making do. One resident mentioned discovering used clothing stores, locations and opportunities for free food and entertainment. However, many financial constraints for the elderly lie in transportation. For many, even getting to free activities or events is a challenge. This particular section of the population also has limited knowledge, and occasionally desire, to accessing public assistance. There is a special need to normalize (public) assistance among the senior population, a group that contributed a lifetime to these resources.



Households

The average household size in Muskingum County in 2014 was 2.46 people, with family households accounting for 67% of them, and 33% non-family households. Married-couple households are the majority, making up 48.1% of all household types. The proportion of married-couple households has declined significantly from

Muskingum County Households					
Type of Household (Hh)	Total	Married-couple Family	Male Householder, no wife present	Female Householder, no husband present	Nonfamily
Total Households	**34,261**	**16,446**	**1,886**	**4565**	**11,364**
Average household size	2.45	3.02	3.35	3.14	1.21
Families	22,897	16,446	1886	4,565	(x)
Average family size	2.94	2.98	2.8	2.9	(x)
Selected Types					
Hh with one or more under 18 years	31.40%	38.10%	68.6	68.70%	0.50%
Hh with one or more 60 years and over	39.50%	39.80%	22.90%	20.40%	49.40%
Householder living alone	27.60%	-	-	-	83.30%
65 years or older	11.50%	-	-	-	34.60%

Table 13 Data Source: United States Census Bureau

70.3% in 2000, although the current 48.1% is comparable to the state and national rates of 47.1% and 48.4% respectively.

Married-couple families account for 48.0% of all households. A closer look at family household structures shows that 18.8% of all family households are single-parent homes; 70.8% mothers and 29.2% fathers. Most non-family households are individuals who live alone (83%), 34.3% of which are 65 years or older. Unmarried partners make up 2.4% of county households, 5% of which are same-sex couples. Across the county, 39.1% of all households have at least one child (under 18), while 31.6% of them have at least one adult 60 years or older.

COMMUNITY HEALTH STATUS

MEASURING HEALTH IN OHIO

County Health Rankings

Attributing the overall health status of a county to a number value is as daunting a challenge as it seems. There are hundreds of health indicators, with varying degrees of importance, which together describe the health status of a population. This has become a mission of the Robert Wood Johnson Foundation (RWJF), in collaboration with the University of Wisconsin's Population Health Institute (UWPHI). The County Health Rankings (CHR) measures overall health by looking at a variety of indicators grouped into health factors and health outcomes. Health factors address health behaviors (smoking, excessive drinking etc.), clinical care (insurance coverage, preventable hospital stays etc.), socioeconomic factors (high school graduation, children in poverty etc.) and environmental factors (air pollution, long commutes etc.) that affect health. On the other hand, health outcomes look at the product of health factors, length and quality of life. These two are measured in premature death and poor health days. Health scores are weighted composites, calculated based on the importance of each measure. Ranking is done for all counties in each state, with the lowest score a 1, being the best-ranked county.

County Health Rankings (2015 - 2016)			
Ranking out of 88 Counties		Change	Indicators
2015	2016		
66	71	↓	Health Outcomes
64	56	↑	Length of Life
61	83	↓	Quality of Life
63	68	↓	Health Factors
55	83	↓	Health Behaviors
55	45	↑	Clinical Care
74	67	↑	Socioeconomic Factors
62	76	↓	Physical Environment

Table 15 Data Source: County Health Rankings

In 2016, Muskingum County was ranked an overall 71st out of 88 counties in Ohio, falling five spots from the previous year. This ranking is made up of scores for health

outcomes (71/88) and health factors (68/88). It is important to note that the change in scores may not necessarily indicate county conditions or outcomes getting better or worse since another county doing better or worse each year may upset a county's rankings. This ranking however, is a comparison across the state: a tool to determine how well a county stacks up against others of similar demographics. The rankings provide each county the opportunity to identify avenues for assistance, collaboration and improvement.

Quality of life

Ultimately, the goal of a community is to achieve a great Quality of Life (QOL). This is a broad concept that acknowledges negative and positive features of living. It aligns with the World Health Organization's definition of health: a state of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity. Over the last decade, QOL has also become a primary focus of Healthy People 2020, by identifying ways of creating social and physical environments that promote good health for all. Measuring quality of life is challenging due to its subjective nature.

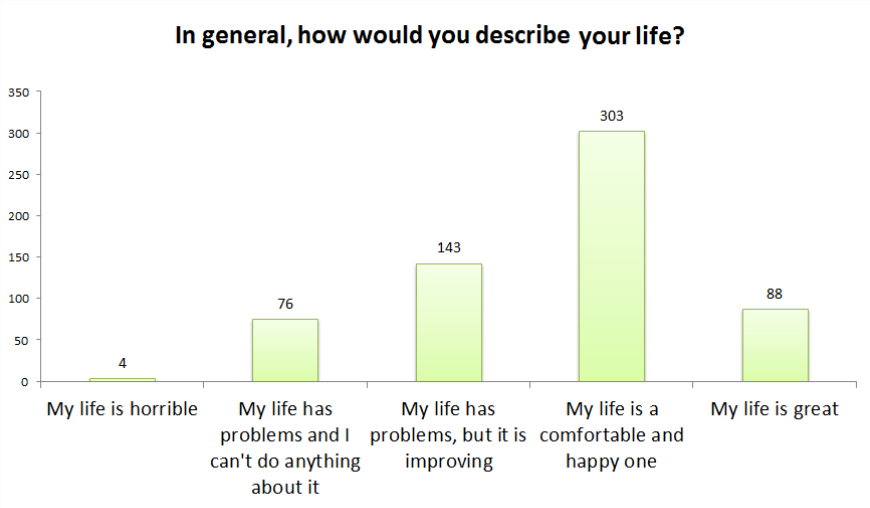


Table 16 Source: ZMCHD (AOS)

In the 2014 Ohio Behavioral Risk Factor Surveillance Survey (BRFSS), 20.6% of Muskingum County residents self-reported having fair to poor health. However, of the 616 residents who responded to a similar question in the 2016 Muskingum County Adult Opinion Survey (AOS), 36.3% indicated having a life that was not comfortable/happy or great. This supports the concept of health or wellness being constructed by more than normal/healthy biometric measures. A primary goal of the assessment is to understand the community's perception of health; this will inform the improvement plan, identifying priorities and strategies that garner community support.

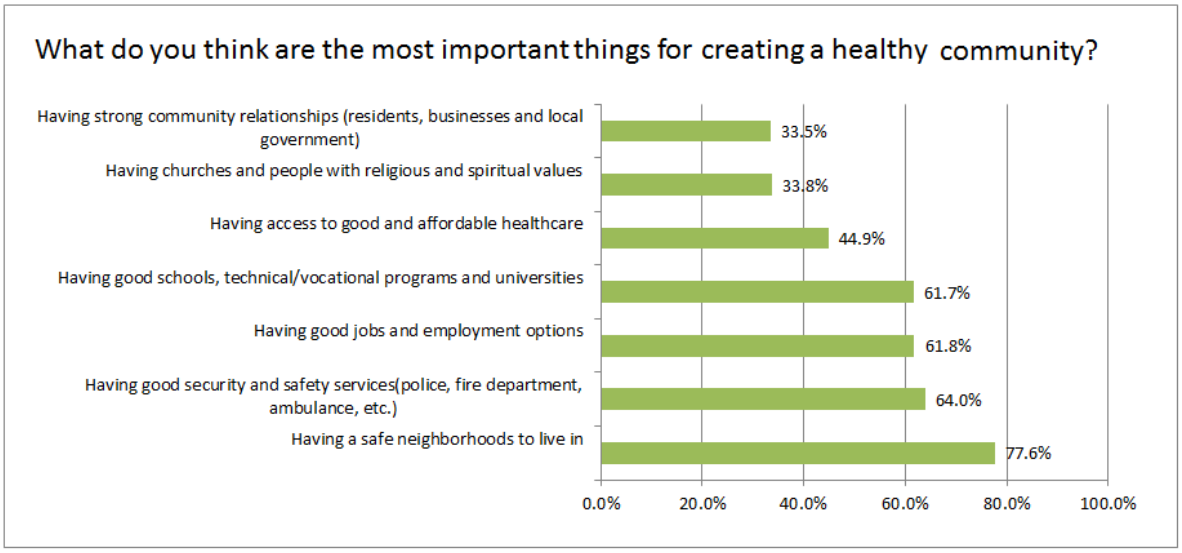


Table 17 Source: ZMCHD (AOS)

When asked to describe a healthy family or community during several focus group discussions, residents honed in on interpersonal relationships and the socio-economic environment. Gauging physical health, residents focused more on the availability or accessibility to healthy foods, safe spaces for play and exercise, as well as preventative care as a priority over the actual action or behavior of eating well, playing/exercising or getting regular check-ups. Overall, respondents felt that safety within neighborhoods and the community, access to affordable care and having people with religious, spiritual and moral values are what make for a healthy community.

"Clean... **Love each other...** Eat right... **Having stable family relationships...** Get along with each other and work together... **Financial stability...** Don't put the excess weight on... **Having support from family, church and moms groups...** No drama... **When all the basic needs are met...** You're getting sleep, fed, talked to and loved.... **Have safe places for children to play...** Look out for each other... **Have plenty to eat...** Get regular check-ups... **Exercise...** Not worrying about money..."

VITAL STATISTICS

Births

Births		
Year	Number of Births	Birth rate (per 1,000)
2012	1018	11.8
2013	1012	11.8
2014	1041	12.1
2015	**1026**	**11.9**

Table 18 Source: ODH Data Warehouse

In 2015, Muskingum County recorded 1,026 births, representing a birth rate of 11.9 per 1000 population. While this indicates a decrease from 2014 (12.1 per 1000), the county's birthrate shows the average maintained over the past 4 years. The health status of a child at birth may be a good predictor of the child's health over his or her lifetime. As such, several indicators are utilized to assess a community's health status.

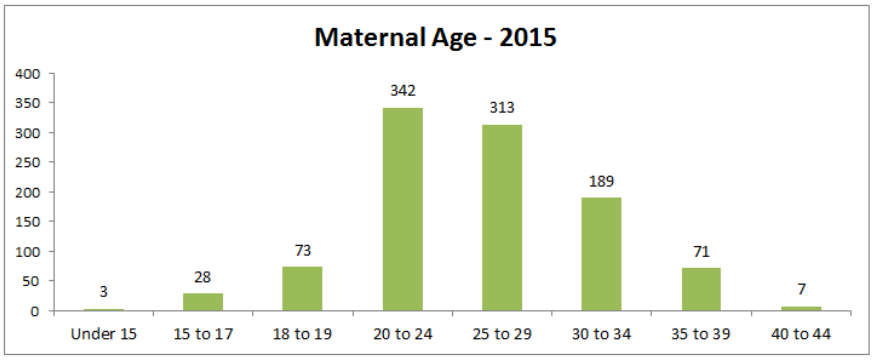


Table 19 Source: ODH Data Warehouse

Among the 2015 births, 9.8% of them were born to mothers under the age of 20 years, while another 8% of them were to mothers 35 years or older, both populations having higher perinatal risk factors due to age.

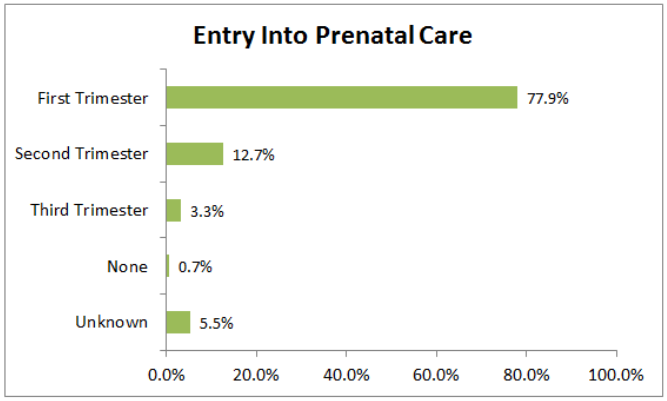


Table 20 Source: ODH Data Warehouse

Gestational age, which measures prematurity, birth before 37 weeks, shows a strong correlation to low birth weight (LBW). Term births (>37 weeks) made up 88% of all the babies born, 9.7% pre-term (32 to 36 weeks) and 2.3% being very pre-term (<32 weeks). Being born at a low birth weight indicates a higher risk for developing adverse health outcomes through childhood and beyond.

Behavioral factors that contribute to low birth weight include alcohol, tobacco and illicit drug use and inadequate prenatal care. In 2015, 93.9% of all pregnant women sought prenatal care, 77.9% in the first trimester.

A final, but strong indicator for child health outcomes is maternal education, the greatest benefit among mothers who have at least 12 years of education. Though challenged, maternal education attainment has been proven a better indicator than

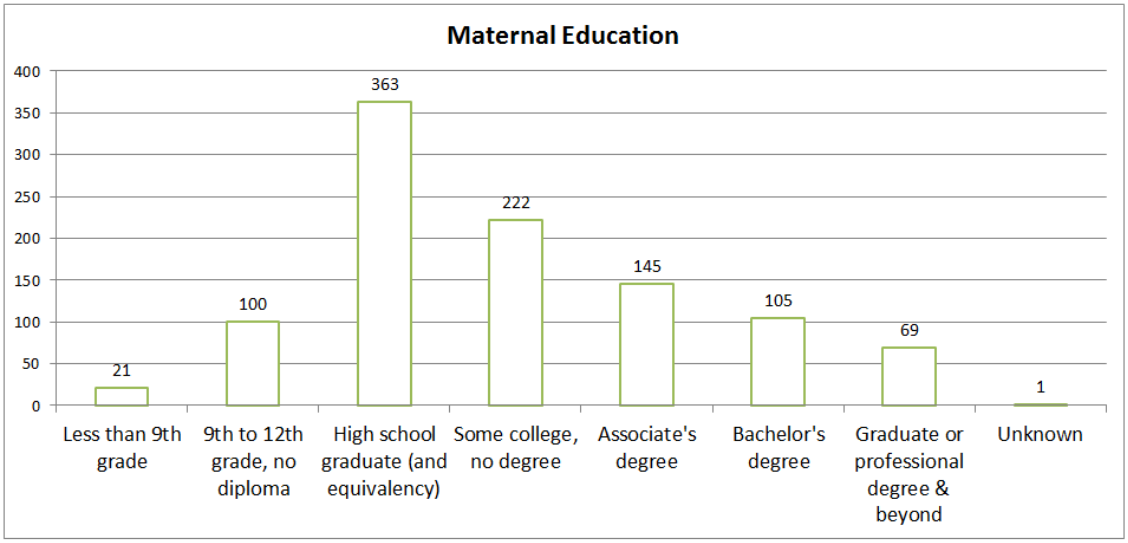


Table 21 Source: ODH Data Warehouse

class or income. Higher maternal education levels have a strong positive correlation with better birth outcomes. This is seen prenatally, with lower rates of risky behaviors like smoking or drinking alcohol, as well as a higher incidence of healthy behaviors like exercising and seeking early and routine prenatal care. After delivery, mothers with higher education levels are more likely to breastfeed and immunize their children. This goes on to positively influence school and health outcomes.

Life Expectancy

The life expectancy of women in Muskingum County is 78.4 years, with men expected to live to 75 years. Together, the average life expectancy for Muskingum residents is 0.7 and 1.86 years less than Ohio and the national life expectancy respectively. Premature deaths, which occur before the age of 75, accounted for 45.2% of all deaths. In 2015, a total of 8,000 years were lost prematurely in Muskingum County.

Life Expectancy			
Gender	MK	OH	USA
Men	75 yrs	80.07 yrs	75.96 yrs
Women	78.4 yrs	74.84 yrs	81.17 yrs

Table 22 Source: Network of Care

Years of Potential Life Lost	
2012	7953
2013	8761
2014	8761
2015	8000

Table 23 Source: Network of Care

MORTALITY

Leading Causes of Death

The crude mortality rate for Muskingum County was 1,139.2 deaths per 100,000 populations in 2015, representing 983 deaths. The three leading causes of death in Muskingum County continue to be cancer, cardiovascular and chronic lower respiratory disease, all three of which account for 53.4% of deaths in 2015. A few noteworthy changes to the list of leading causes of death include kidney/renal disease rising from ninth to sixth position, represents more than twice the state's rate. This displaced diabetes to the ninth position. New to the top 10 causes of death is Parkinson's Disease.

Overall Leading Cause of Mortality		MK	OH	HP2020
		(per 100,000 pop)		
1	Cardiovascular Disease	257.3	276.1	103.4
2	Cancer	253.8	207.6	161.4
3	Chronic Lower Respiratory Disease	97.4	97.4	***
4	Cerebrovascular Disease	78.2	49.9	34.8
5	Accidents (Unintentional Injuries)	41.8	53.3	53.7
6	Kidney Disease	39.4	17.3*	***
7	Alzheimer's Disease	37.1	35.2*	***
8	Influenza & Pneumonia	34.8	21.1*	***
9	Diabetes	29	31.4	66.6
9	Parkinson's Disease	22	9.8*	***

*Most recent Ohio Data was 2014
***No HP2020 Recommedations

Table 24 Source: ODH, Preliminary Mortality Dataset

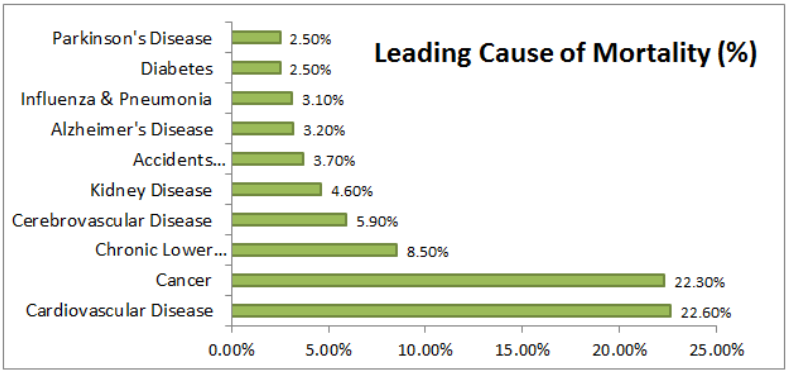


Table 25 Source: ODH, Preliminary Mortality Dataset

Defined as all deaths occurring before the age of 75, premature deaths are considered preventable. Cancer, cardiovascular and chronic lower respiratory diseases were the leading causes of premature death in Muskingum County. Unintentional injuries and diabetes rose to fourth and sixth positions respectively on the list of leading causes of premature death in Muskingum County.

Leading Cause of Premature Death	
1	Cancer
2	Cardiovascular Disease
3	Chronic Lower Respiratory Disease
4	Accidents/Unintentional Injuries
5	Cerebrobascular Disease
6	Diabetes
7	Chronic Liver Disease and Cirrhosis
8	Intentional Self-harm
9	Influenza and Pneumonia
10	Respiratory Disease

Table 26 Source: ODH, Preliminary Mortality Dataset

Absent from the overall leading cause of death, but on the premature death list

include chronic liver diseases/cirrhosis and intentional self-harm, in positions 7 and 8. Premature deaths account for 92.9% and 81.3% of all deaths attributed to chronic liver diseases/cirrhosis and intentional self-harm respectively.

Actual Cause of Death

Leading causes of death are generally manifestations of underlying actual causes of death; unhealthy behaviors and practices. Premature and preventable deaths in Muskingum County are heavily attributed to such behavioral and modifiable factors like tobacco use, physical inactivity, poor diet, alcohol, illicit drug use and suicide. The most effective preventive services are not screenings but counseling interventions to change unhealthy behaviors. Community-level initiatives like tobacco-free campuses, pedestrian-friendly cities and increasing access to nutritious food sources also play a critical role in changing health-related behaviors.

Leading Cause of Death	Underlying Risk Factors (or Actual Cause of Death	
Cardiovascular Disease	Tobacco use Elevated blood cholesterol High blood pressure	Obesity Diabetes Sedentary lifestyle
Cancer	Tobacco use Improper diet	Alcohol Environmental/Occupational exposure
Cerebrovascular Disease	High blood pressure Tobacco use	Elevated blood cholesterol Occupational hazzards
Accidents	Safety belt compliance Alcohol/Substance abuse Reckless driving	Fatigue/Stress
Chronic Lower Respiratory Disease	Tobacco use	Environmental/Occupational exposure

Table 27 Source: ODH, Preliminary Mortality Dataset

Infant and Child mortality

In 2015, 9 deaths occurred before the age of 1 year, four of which were older than 28 days. This brought the county's 2015 infant mortality rate to 3.9 per 1000 live births, higher than 3.3 per 1000 live births in 2012. This still compares favorably to the current state rate of 7.4 per 1000 live births, but it exceeds the national rate of 2.3 and stands at nearly double the HP2020 target (2.0). The neonatal mortality rate of 4.87 per 1000 live births, which accounts for deaths between birth and 28 days, mirrors that of Ohio at 4.95 per 1000 live births. Child mortality occurred at a rate of 1.0 per 1000 live births in Muskingum County, which reflects one death.

MORBIDITY – CHRONIC DISEASE

Cardiovascular Disease

Cardiovascular disease (CVD) is a broad term for a range of diseases affecting the heart and blood vessels. Known as the "silent killer" because many people do not realize they have it, hypertension increases the risk for heart disease and stroke. A heart attack or stroke may be the first warning of an underlying condition. CVD is the leading cause of death in Muskingum County, at a rate of 257.3 per 100,000 population in 2015. This is in comparison with Ohio's rate of 276.1 per 100,000. Heart disease is not only the most widespread but the most costly of healthcare expenditures. Co-morbidities like diabetes, hypertension, obesity and renal disease also pose a significant challenge with managing cardiovascular disease. Although heart disease is caused by genetic, environment and clinical risk factors or unhealthy behaviors, it is among the most preventable of the leading causes of death.

The Leading Modifiable (contollable) Risk Factors for Heart Disease
High blood pressure
High blood cholesterol
Tobacco use
Diabetes
Poor diet and physical inactivity
Overweight and obesity

Table 28 Source: Healthy People 2020

Cardiovascular Disease (CVD)

Cardiovascular or heart disease comprises several conditions that affect the heart. The 2014 BRFSS report indicated that 10.2% of Muskingum County's population report having had been told by a physician that they had suffered a heart attack or have heart disease. This figure was lower in Ohio (7.8%). In 2015, 37.8% of all CVD mortality was premature, affecting people under the age of 75 years.

Cerebrovascular Disease (Stroke) and Adult Hypertension

Cerebrovascular disease limits blood and oxygen supply to the body, resulting in stroke. The BRFSS report also shows that 3.4% of county residents have received a stroke diagnosis; this is in comparison with a proportion of 3.5% across the state. Data from the United States Institute for Health Metrics and Evaluation (IHME) indicates that about 40.25% of all Muskingum County residents over the age of 18 have hypertension, in comparison with the state rate of 34.3%. However self-reporting reveals lower rates in the county, 33.3% of residents admitting to a diagnosis of hypertension. Among the county population diagnosed with hypertension, only 75% receive treatment, with a smaller 58.6% having it well managed.

Diabetes

Diabetes occurs when the body cannot produce or respond appropriately to insulin, a hormone needed to absorb sugar into cells. It has a high direct and indirect cost. Diabetes reduces life expectancy by up to 15 years, increases the risk of heart disease by 2 to 4 times, and is the leading cause of kidney failure, lower limb amputation and adult-onset blindness. Diabetes has maintained its position as one of the top ten leading causes of death in Muskingum County. It ranks 9th (falling 2 spots), and had a mortality rate of 29 per 100,000 population. In 2014, at least 14.9% of county residents had been diagnosed as diabetic, with another 5.5% pre-diabetic. Ohio's diabetes rates are lower, at 11.7%, with a pre-diabetes rate of 7.6%. Evidence suggests that up to two-thirds of all people with diabetes are not aware of the condition. This may imply a higher burden of disease than the data shows. Traditionally, diabetes was considered as an adult onset disease, however, this is increasingly changing. In 1994, children made up 5% of all newly diagnosed cases of diabetes; today, this figure is at least 20%.

Obesity

Obesity is often due to poor diet and limited physical activity, which are influenced significantly by people's environment and social circumstances. Obesity increases the risk for coronary heart disease, hypertension, high cholesterol, diabetes, cancer, stroke, and other health conditions. According to the 2014 BRFSS, Muskingum County had an adult obesity rate of 35%, up from 29.1% in 2010. This was higher in comparison with Ohio (32.6%). Obesity rates are markedly high in all age groups and are seen as early as the pre-school years. In Ohio in 2014, 11% of all Head Start students were classified as obese. This figure increases to 17.4% in children aged 10 to 17. Adults 18 to 24 (14%) are least likely to be obese, with people age 35 to 44 (35.3%) most likely to be obese. Obesity prevention programs focused on 2-7 year olds have been shown to be most effective, resulting in lasting habit changes. Not only is it easier to impact the habits of 0 to 5 year olds, preferences for food and levels of activity are set by the time children are 2-3 years old. Delayed action regarding obesity prevention leads to steeply rising costs and morbidity, while early intervention can lead to decreased health risks later.

Cancer

Cancer, which is the second leading cause of disease and the leading cause of premature death in Muskingum County, occurred at a rate of 463.9 per 100,000 population in 2015. Males suffered a slightly higher burden of disease from cancer (53.4%) in comparison to their female counterparts (46.6%), despite making up the smaller proportion of overall deaths (49.5 versus females at 50.5%).

Leading 5 Cancers in Muskingum County - Mortality			
Cancer	MK	OH	US
	Rate per 100,000		
All types of Cancer	**228**	**463.9**	**454.8**
Lung and Bronchus	70.8	55.3	47.2
Breast	25.6	23.6	21.9
Prostate	19.1	22	21.4
Colon and Rectum	16.2	17	15.5
Uterus	4	4.9	4.4

*Ohio and US figures (2008-2012)

Table 29 Source: ODH, Preliminary Mortality Dataset & ODH Muskingum County Cancer Profile

Leading 5 Cancers in Muskingum County - Incidence			
Cancer	MK	OH	US
	Rate per 100,000		
All types of Cancer	**467.6**	**463.9**	**454.8**
Lung and Bronchus	80.2	71.7	58.7
Breast	103.5	120.9	124.8
Prostate	94.1	127.8	137.9
Colon and Rectum	43.2	43.1	42.4
Uterus	39.8	27.7	25.1

*Ohio and US figures (2008-2012)

Table 30 Source: ODH, Preliminary Mortality Dataset & ODH Muskingum County Cancer Profile

Based on the most recent data comparable to state and national rates, (2013), the three most common types of cancer that occur in the county are lung/bronchus, breast and prostate cancer. Of the five leading types of cancer, breast, colorectal and prostate cancers compared favorably to both Ohio and U.S rates, however the incidence of lung/bronchus and uterine cancers remain significantly higher.

The five most common types of cancer out of 24, in Muskingum County made up 51.9% of all cancers in 2015. The incidence of the five highest occurring types of cancer has increased by an average of 13.3% since 2011. The greatest increases by 82.2% and 42.5% were seen in breast and colorectal cancer respectively. The incidence of prostate cancer saw a 40% decline, as did lung/bronchus cancer by 7.1%. County cancer-related deaths occur at a higher rate in comparison to state and national figures. This is primarily due to lung/bronchus cancer.

Cancers are categorized into stages; in situ, local, regional and distant, describing the magnitude/severity of a particular cancer. A major factor of the high cancer-related mortality is stage of diagnosis; later stage diagnosis is associated with higher mortality. In Muskingum County, cancers most likely to be diagnosed at a later stage were pancreatic cancer and all lung/ bronchus cancers, 72.4% and 69.1% of the time,

Cancer Type/Site	MK		OH		USA	
	Early Stage	Late Stage	Early Stage	Late Stage	Early Stage	Late Stage
Lung and Bronchus	14.5	69.1	16.9	69.8	18.4	75.3
Breast (female)	63.8	32.9	67.4	29.3	70.5	27.9
Colon and Rectum	37.2	53.1	39.9	49.7	42.5	52.1
Prostate	74.2	16.3	79	13	78.8	16.3
Uterus/Cervix	63.3	36.7	41.4	52	45.2	49.7
Pancreas	3.9	72.4	7.5	69.4	10.5	78.4
Melanoma of the Skin	84.6	10.5	86.1	8.6	90.6	7.2

* Figures are from (2008 - 2012)

Table 31 Source: ODH Muskingum County Cancer Profile

respectively. The county rated slightly worse than the state but better than the nation in both types of cancer.

In the case of cancer, how early or late a diagnosis is made, greatly affects treatment options and prognosis. This makes screenings extremely critical for leading and screenable cancers. Regular screening for cancers of the breast, colon and rectum, cervix, prostate, testis, oral cavity and pharynx, melanoma of the skin and lung/ bronchus at earlier stages, result in better treatment options and outcomes. The five-year relative survival probability for all screenable cancers combined is about 86%. This is even higher for selected sites/types like female breast cancer, which is about 89%, and melanoma of the skin (91%) If all of these cancers were diagnosed at a localized stage through regular cancer screenings, the five-year survival probability increases to about 99% for female breast cancer and 98% for melanoma of the skin.

Screening rates still show significant room for improvement. According to the 2014 BRFSS report, 53.2% of adults 50 and older report having had a sigmoidoscopy or colonoscopy, which should be done every 5 to 10 years. Among women 18 and older, 77.5% report having had a Pap test in the last 3 years. This statistic may be underestimated due to a variation on recommendations by age; initiation by 21 years and pap tests every 3 to 5 years, and 5 to 10 years apart after 65. The report also indicated that about 83.7% of women 50 and older reported having had a mammogram in the last 2 years.

As controversial as this is for medical professionals, the breast cancer-screening rate is another statistic that may be unreliable. Recommendations from the American College of Obstetricians and Gynecologists (ACOG) and the U.S. Preventive Services Task Force Services (USPSTF) hold two different theories on mammogram initiation and spacing, one recommending them as early as 40 years (ACOG) and the other suggesting it can wait until 50 years. The lack of a converged directive may challenge adherence to recommendations.

Unintentional Injuries

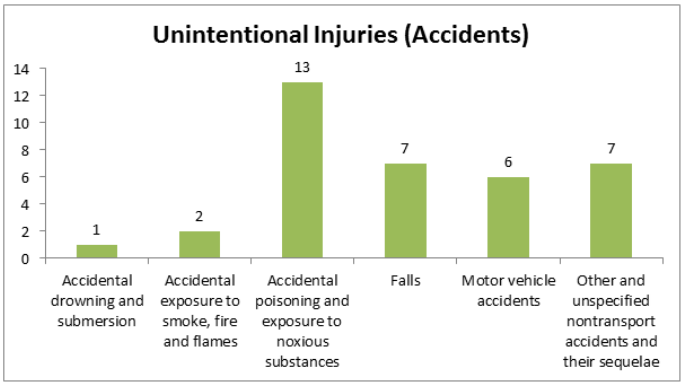


Table 32 Source: ODH, Preliminary Mortality Dataset

Unintentional injuries, or accidents, occurred at a rate of 41.8 per 100,000 population in Muskingum County in 2015, up from 38.4 between 2004 to 2010. This rate is comparable to the state's rate of 41.5 per 100,000, both lagging behind the 2020 target of 36.4 per 100,000. The three leading causes of unintentional injuries were accidental poisoning and exposure to noxious substances (36.1%), falls (19.4%) and motor vehicle accidents (MVAs) (16.7%). Accidental poisonings and noxious substance-related deaths have been on the increase since 2007, surpassing MVAs. This incline has been attributed to increases in drug abuse. Among the deaths attributed to falls, 85.7% occurred in residents over the age of 75.

Kidney Disease

The Centers for Disease Control and Prevention (CDC) estimates that more than 10 percent of adults in the United States may have Chronic Kidney Disease (CKD). Diabetes and high blood pressure increase the risk of developing kidney disease; approximately 1 in 3 adults with diabetes and 1 in 5 adults with high blood pressure has chronic kidney disease. In 2015, kidney disease was the 6th leading cause of death in Muskingum County, climbing from the 9th spot in 2012. A major factor for CKD is drug use, over-the-counter, prescription and illegal. Drug abuse results in acute kidney injury and drug nephropathy. Drugs cause approximately 20% of community-and hospital-acquired episodes of acute renal failure. Among older adults, the incidence of drug-induced nephrotoxicity may be as high as 66%.

MORBIDITY - INFECTIOUS DISEASE

Leading Cause of Infectious Disease

	Infectious Disease	Incidence Rate (per 100,000 pop)	
		MK	OH
1	Chlamydia infection	421.8	467.9
2	Hepatitis C	160.8	165.4
3	Gonococcal infection	74.6	135.7
4	Influenza (assoc. hosp.)	67.6	45.2
5	Salmonellosis	25.6	11.7
6	Campylobacteriosis	24.5	14.9

Table 33 Source: Ohio Disease Reporting System, ODH

The surveillance and reporting of infectious diseases by ZMCHD plays a significant role in detecting, controlling and preventing the spread of communicable diseases. This falls under two of the ten Essential Public Health Services (EPHS) that Local Health Departments (LHDs) provide. To accomplish this, the agency reports the incidence of a selection of communicable diseases to the Ohio Department of Health (ODH).

2015 Infectious Disease Historical Comparison						
Disease	Year					Average
	2011	2012	2013	2014	2015	
Chlamydia	265	215	247	365	362	290.8
Hepatitis C	71	96	77	122	138	100.8
Gonorrhea	77	35	55	57	64	57.6
Influenza-associated Hospitalizations	10	39	53	59	58	43.8
Salmonellosis	5	11	12	7	22	11.4
Campylobacteriosis	7	13	17	20	21	15.6

Table 34 Source: Ohio Disease Reporting System, ODH

In 2015, Muskingum County had 789 cases of reportable infectious diseases spanning 25 conditions. This represents a rate of 919.5 per 100,000 population. The leading causes of disease were Chlamydia, Hepatitis C and Gonorrhea, representing 45.9%, 17.5% and 8.1% of the county's disease burden. Collectively accounting for 71.5% of the infectious disease burden, these three conditions have maintained their positions over the past five years.

All three reportable diseases occurred at a rate lower than the state, however, there does continue to be a steady incline in rates across all three, when compared with their respective 5-year averages. Among all the diseases reported, Hepatitis C (38%) and Salmonella (92%) showed the greatest increase in incidence, in comparison to the 5-year average. Twelve different conditions showed rates lower than the 5-year average, with the largest decrease in Pertussis, or whooping cough.

Chlamydia and Gonorrhea are both categorized as sexually transmitted infections (STIs), while Hepatitis C, a contagious liver disease, is spread primarily by blood contamination. Intravenous drug use is the most significant risk factor, affecting 30% to 40% of all identified cases of Hepatitis C. There is a strong relationship among the three; drug abuse being a major risk factor for STIs. This combination results in higher needle sharing practices and irresponsible sexual behaviors. This is indicative of the current

drug epidemic. Chlamydia and Gonorrhea are also most likely to be co-infections or occur cyclically in Muskingum County.

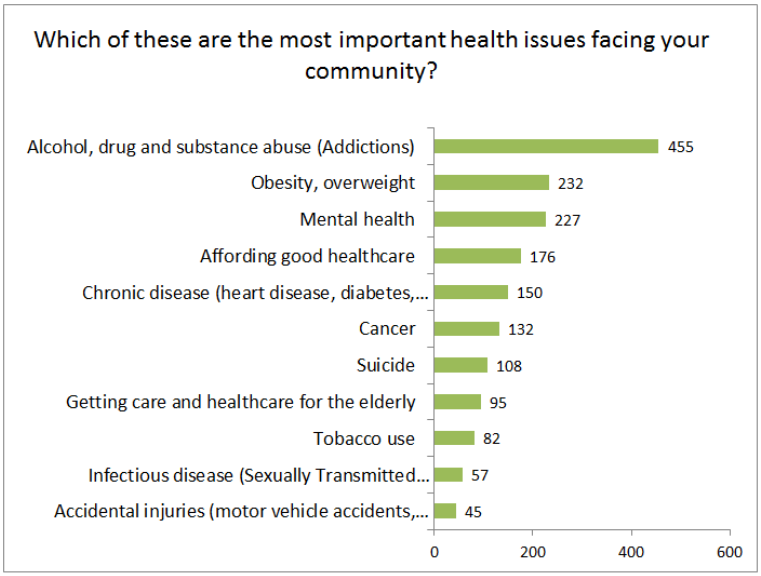


Table 35 Source: ZMCHD (AOS)

During focus group discussions, residents mentioned practicing safe sex as a part of being a healthy family or community. However, responses from the adult opinion survey indicate that infectious disease, which includes STIs, was not a major health concern. Selecting up to three health issues in the community, 607 residents ranked infectious diseases 10th out of 11; drug, alcohol and substance abuse ranking the highest health issue according to survey participants.

INFECTIOUS DISEASE DEMOGRAPHICS

Common Infection By Age Group			
Age Group	**Infection**	**Group Rate (%)**	**Cumulative**
Children Under 13 (N=49)	Pertussis	22%	52%
	Cryptosporidiosis	18%	
	Salmonella	12%	
Teenagers 13 to 19 (N=129)	Chlamydia	86%	94%
	Gonorrhea	5%	
	Hepatitis C	3%	
Young Adults 20 to 44 (N=430)	Chlamydia	50%	79%
	Hepatitis C	19%	
Adults 45 to 64 (N=117)	Hepatitis C	33%	59%
	Influenza	15%	
	Hepatitis B	11%	
Adults 65 and Older (N=63)	Influenza	46%	64%
	Legionellosis	10%	
	Strep Pneumoniae	8%	

Table 37 Source: Ohio Disease Reporting System, ODH

In 2015, 57% of all the infectious disease cases reported were females, males accounting for the smaller 43%. Across genders, disease rates were relatively even. The two conditions where significant disparities existed were in Chlamydia and Hepatitis C rates. In the former, females made up 72% of all Chlamydia cases, males only 28%. This flipped with Hepatitis C, males suffering

over twice as much (69%) the burden of disease when compared with females (31%).

Infectious Disease Gender Disparities		
Reportable Disease	**Female**	**Male**
Chlamydia	72%	28%
Hepatitis C	31%	69%

Table 36 Source: Ohio Disease Reporting System, ODH

The age range of reportable disease cases was 2 weeks to 98 years. Looking at the most common infectious disease by age group, several patterns are evident. The leading causes of infectious disease, Chlamydia, Hepatitis C and Gonorrhea are reflected within 2 age brackets; teenagers 13 to 19 and adults 20 to 44. Among children under the age of 13, foodborne illness is most common, while respiratory illness is more predominant in the 65 and older populations.

Reproductive and Sexual Health

While Ohio is one of 22 states that mandate sex and HIV education in schools, there is no requirement for medical accuracy or eliminating bias (ODH). Sex education curriculums are independently determined by the board of each school district, based on Ohio's abstinence-only law/policy. However, state data from the 2013 Youth Risk Behavior Survey (YRBS) shows 42.7% of responding 9th through 12th graders admitted ever having sexual intercourse. Among students who had sexual intercourse in the 3 months prior to completing the survey, 18.4% drank alcohol before sex, and 49% of them failed to use a condom.

During the focus group discussion with parents, this was a big concern. They mentioned a few sex games and activities students in as low as 5th grade participated in, most of which could expose them to sexually transmitted infections (STIs). This is reflected in STIs being most common in teens 13 to 19, making up 94% of all infectious diseases in this age group.

In Muskingum County, 33.2% of women aged 13 to 44 need publicly funded contraceptive services and supplies. The county has four sites that provide needed care, none of which provide IUDs or implants. For many young adults, public funded reproductive health services are not only affordable; they also provide much needed care and education. However, recently and possibly in the future, these services may be at risk of being defunded as collateral damage from Ohio's attempt to defund Planned Parenthood and abortion services, (despite only 3 out of 37 family planning clinics providing abortion services). This would effectively deprive a large proportion of low-income families from healthcare needs.

Maternal and child health

In Muskingum County, 77.9% of pregnant women seek care within the first trimester, and another 12.7% in second. Less than 1% received no prenatal care at all. Regular prenatal care identifies potential health problems to be able to improve birth outcomes. Among mothers who sought prenatal care, 65.7% received 12 or more prenatal visits before delivery. Existing recommendations suggest about 12 to 14 visits during the 9-month period (ACOG).

Maternal smoking has been found to be a major indicator for poor health outcomes. Babies born to mothers who smoke have elevated risk stillbirth, low birth weight, prematurity and childhood asthma (CDC). In Muskingum County, 25.9% of all women in childbearing years (between 18 to 44) smoke. This is higher than Ohio's rate of 20.8% (CFHS-ODH).

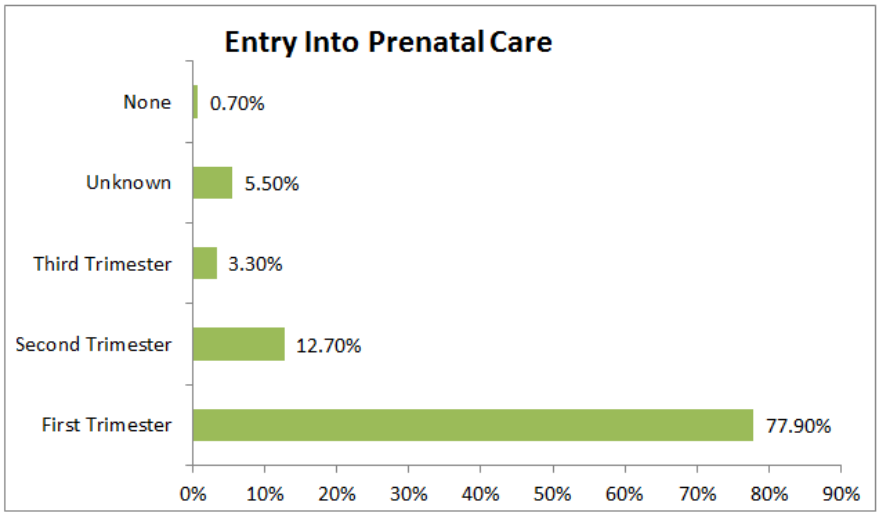


Table 38 Source: ODH Data Warehouse

Alcohol consumption within the 3 months before pregnancy is reported by close to 60% of all Ohio mothers. This figure declines to about 7% of all mothers reporting that they consumed alcohol in the last 3 months of their pregnancies. Alcohol consumption has not declined from 2006-2010. Effects of prenatal alcohol consumption range from low birth weight, growth retardation and Sudden Infant Death Syndrome to Fetal Alcohol Syndrome, a lifelong disability (Not a Single Drop-ODH).

The use of drugs while pregnant is another indicator of poor birth outcomes. This is an ever-increasing concern in Muskingum County. The March of Dimes (MoD) reports that in 2014, 1 in every 20 pregnant women used street drugs. This is visible in Ohio and Muskingum County. Between 2008 and 2013, the discharge rate for Neonatal Abstinence Syndrome (NAS) increased by 84%. NAS is a neonatal withdrawal resulting from a child being born addicted to whatever drug his/her mother used while pregnant. In Muskingum County, discharge rate increased from 0.4 in 2008 to 5.0 per 1000 live births in 2013. This is only expected to increase.

Mental Health

Mental health services were provided to Muskingum County residents at a rate of 32.1 per 1000 population, in comparison with Ohio's rate of 32.4 per 1000 pop (SAMHSA). A majority of services provided were for a younger demographic, 41% to people 17 and younger, and 29% to people 18 to 34 years. People aged 65 and older received only 1% of all mental healthcare services. It is important to note that the small proportion of care received by seniors may be understated. This demographic is primarily represented as a Medicare population. According to Medicare reports, 18.3% of all county beneficiaries had a depression diagnosis. This is comparable to Ohio's rate of 18.1% (SAMHSA).

Addiction services received by Muskingum County residents were at a rate of 5.5 per 1000, a rate significantly lower than Ohio at 8.6 per 1000. The majority of services catered to the 18 to 34 (54%) and 35 to 44 (23%) demographics. Hospital admissions for opiate abuse and dependence have increased between 2009 and 2013 from 7.7% to 18.4%. Drug overdose visits to the Emergency Departments (EDs) and Urgent Care facilities have increased as well. A comparison between Muskingum County residents treated at EDs and Urgent Cares for drug overdoses in the last quarters of 2015 and 2016 shows a 45% increase, going from an average of 28 cases to 41 cases per month in the fourth quarter of 2015 and 2016 respectively (SAMHSA).

Muskingum County is considered a Mental Health Shortage Area with a healthcare provider to patient ration of 1: 1093 (MHRSB). The county currently faces a scarcity of well-qualified mental healthcare providers and the aging out of the workforce among current providers. In an interview with a mental health key informant, delays in outreach to patients treated for medical complications and long wait time for referrals for initiating mental health services reduce the efficacy of people committing to rehabilitation. There was also the issue of availability of resources geared at rehabilitation. For many who begin treatment, returning to enabling activities and environments reduce the chance of success. He explained that many interventions needed to support drug addiction rehabilitation were more social-cultural than medical.

HEALTHCARE ACCESS AND UTILIZATION

Health Insurance

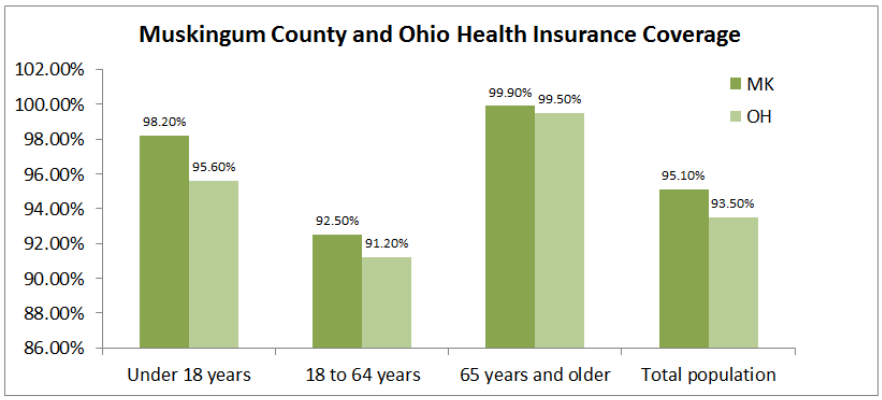


Table 39 Source: United States Census Bureau

In 2015, 95.2% of all Muskingum County residents had health insurance. Breaking down the coverage by age, the 65 and older population had the highest coverage (99.9%), followed by children (98.2%). Adults between the ages of 18 and 64 had a 92.5% coverage. All three age groups fared better than in Ohio with child, adult and senior rates at 95.6% (child), 79.3% (adult) and 99.5% (seniors) respectively.

Health insurance coverage has shown significant increase over the last decade. Health insurance coverage for adults rose from 79.3% in 2008 to 95.2% in 2015, with a smaller increase in children, from 89.2% to 98.2% over the last 8 years. A significant factor for the increase in health insurance coverage is the Affordable Care Act (ACA), also known as Obamacare. This resolution among others required Americans to obtain health insurance and provided subsidies to low and middle income Americans towards the purchase of health insurance.

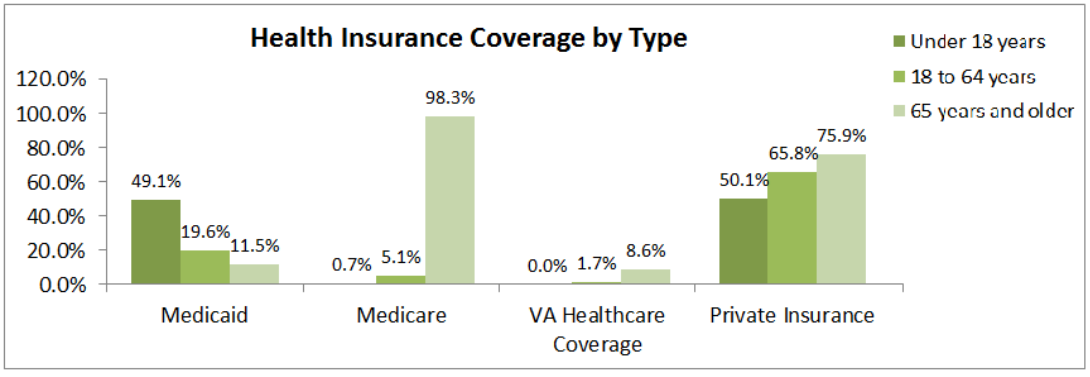


Table 40 Source: United States Census Bureau

About 40% of all /county residents of county residents depend on public health insurance, 60% with private insurance, and mostly through employers. The three major forms of public health insurance are Medicaid, Medicare and the Veterans Affairs (VA) benefits. Medicaid is mostly utilized by children, 49.1% of them receiving it. Private

insurance on the other hand, is most common amongst the 65 and older population, most of them seeking to supplement their Medicare benefits.

The availability of health insurance may not imply its utilization. Feedback from the adult opinion survey indicated this. Despite its availability, the co-pays and deductibles associated with most health insurance packages were prohibitive, according to 47.3% of respondents. Another 44.6% reported that their insurance did not cover their needed care or their doctor would not accept their insurance. When residents decided to use their insurance to seek care, a major challenge was getting in at a convenient time; 52% reporting this to be an issue. A 2015 survey conducted by Genesis Hospital reported that 15% of responders admitted delaying to seek healthcare due to cost.

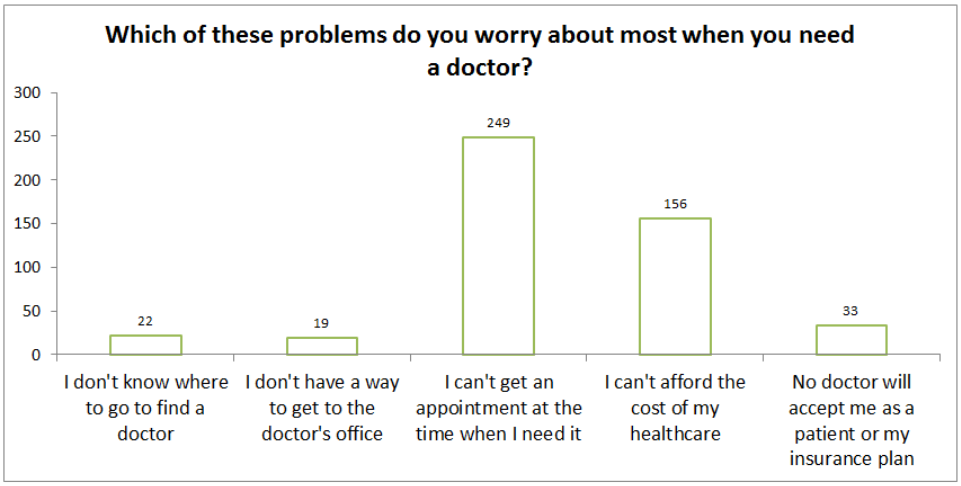


Table 41 Source: ZMCHD (AOS)

This is consistent with data from MVHC Health Center, a Federally Qualified Healthcare Center (FQHC) in Zanesville. Since its inception in 2008, it has grown from a patient base of 11,400 to over 37,000 in 2016. Despite increasing sites from 2 to 5, and expanding coverage from 2 to 4 counties, there is a high demand and utilization of service. For existing adult patients, wait times for appointments are 14 day. This is a lot lower for pediatric patients (3 days). For new adult patients, it may take up to 27 days to get in to see a physician; new pediatric patients get an appointment within 5 days.

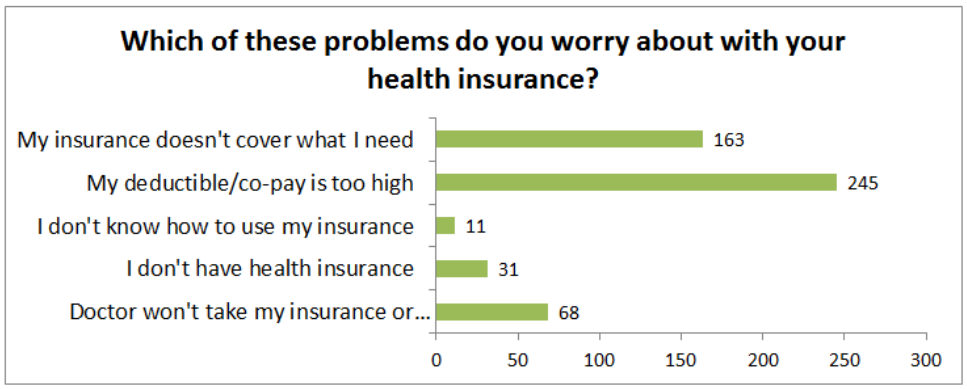


Table 42 Source: ZMCHD (AOS)

THE BUILT/PHYSICAL ENVIRONMENT

SAFETY AND CRIME

The built or physical environment within which we live comprise of our homes, neighborhoods and the places we go to for daily activities. It also includes factors like safety, transportation and access to basic needs. These factors contribute to enhancing a network that is conducive for a healthy community.

Residents who participated in FGD and the AOS overwhelmingly identified safe neighborhoods (78%) and good security/safety services (64%) as the two most important things that make a healthy community. According to survey respondents, behaviors associated with drug use pose the biggest safety concern in their neighborhoods. These included prostitution, drug and gang activity (51.4%), robberies and theft (43.8%), violence (32.0%), and people misbehaving under the influence of drugs and alcohol (36.6%). Respondents also expressed worry about their families or themselves, about becoming victims of robbery/theft (56.7%). This threat to their safety factored heavily in the decision to spend time outdoors, especially in public parks. They felt local parks did not feel like safe places (17.9%) and were worried about drug and criminal activity (12.7%).

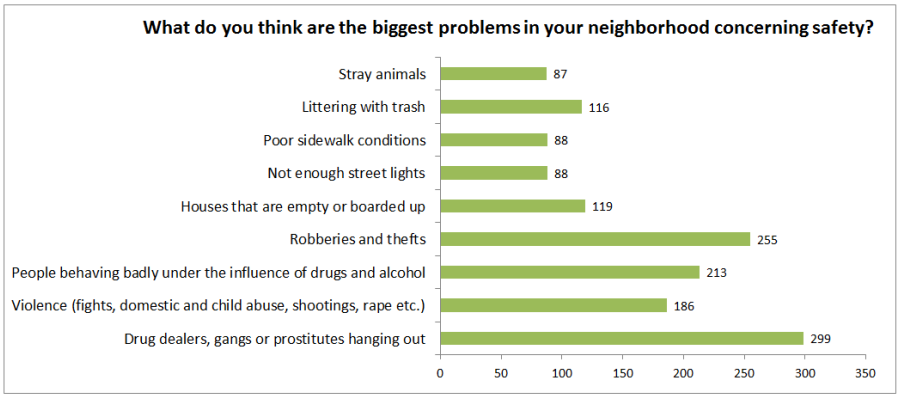


Table 43 Source: ZMCHD (AOS)

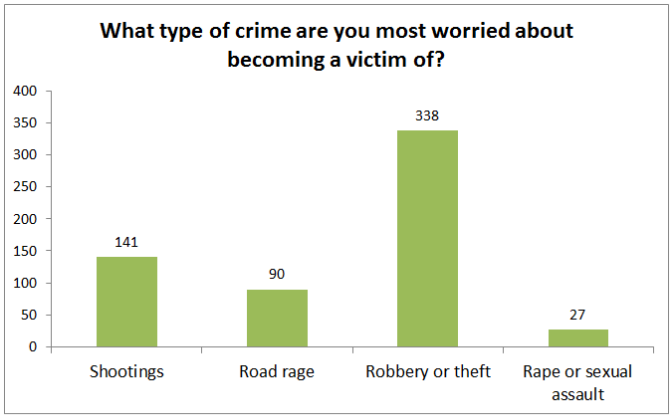


Table 44 Source: ZMCHD (AOS)

A safety concern for county youth was primarily about bullying. This was identified by 49% of AOS survey respondents. Other safety issues included alcohol, drug and tobacco addiction (41%) as well as child abuse/neglect (31%).

Existing data on crime support the concerns from residents. Property crimes occur at rate of 3143.6 per 100,000 population in Muskingum County. While this is significantly higher than that of Ohio, at 2683.1 per 100,000 population, it does reflect a significant decrease since 2010 (3519.1 per 100,000).

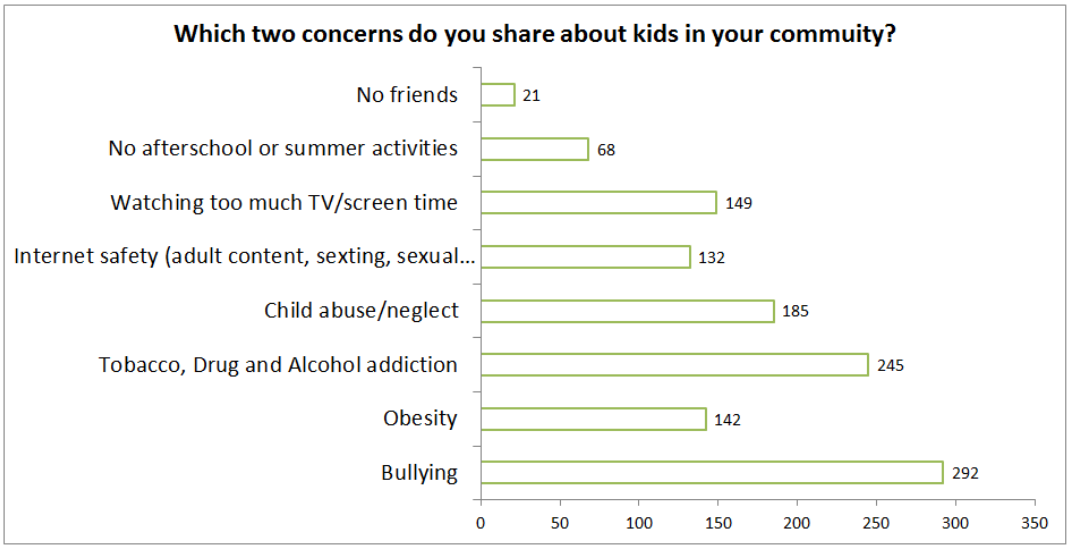


Table 45 Source: ZMCHD (AOS)

Violent crimes, on the other hand, have seen a significant increase since 2013, rising from 144.1 per 100,000 to 182.1 per 100,000 population. However, it does not compare with Ohio's violent crime rate of 315.4 per 100,000 population.

There was a concern about increases in risky behaviors seen on a daily basis, respondents identifying distracted driving (67.1%), drunk driving (28.9%) and violent behavior (28.2%) as the most common occurrences. This has shown a toll on motor vehicle accident (MVA) fatalities involving alcohol-impaired drivers. In 2015, 33.3% of all Muskingum County fatal MVAs were alcohol-related, in comparison with 20% in 2010. In Ohio, in 2015, this rate was 30.7%. These figures only account for cases where the perpetuator was tested for alcohol consumption. It is also important to note that this does not include any drug-related incidents.

HOUSING

Housing Demographics

In 2015, Muskingum County had 37,854 housing units, of which 90.5% were occupied. Of the occupied housing units, 68% were owner-occupied, with 32% rented. The remaining 9.5% of the housing units are 75% rental and 25% homeowner vacancies respectively.

Monthly Medican Housing Costs		
MK	$637	$1,050
OH	$729	$1,274

Table 46 Source: United States Census Bureau

In Muskingum County, the median gross rent as a percentage of household income is 30.6, with 49.9% of the renting population paying more than 30% of their gross household income on rent. This is significantly lower among homeowners. The median monthly homeowner cost (for residents who still pay a mortgage), as a percentage of household income, is 21.4%; only 25.8% paying more that 30% of their gross household incomes on housing.

Houses built in Muskingum County after the 1991 Americans Disability Act (ADA), make up 23% of all current homes. Renter-occupied units post ADA account for 3.4% of them. Housing may feel some pressure as the aging population increases and more people with disabilities become independent. This was a concern among both population groups during focus group discussions. They noted that most existing housing

units were not ADA friendly, making independent living a challenge and increasing the risk of accidents (especially falls).

Homelessness

Homelessness as a social determinant of health creates a completely new dimension of health disparities. The homeless population are systematically disconnected from the community and become more susceptible to worse health outcomes due to poor living conditions, food insecurity and limited resources for survival.

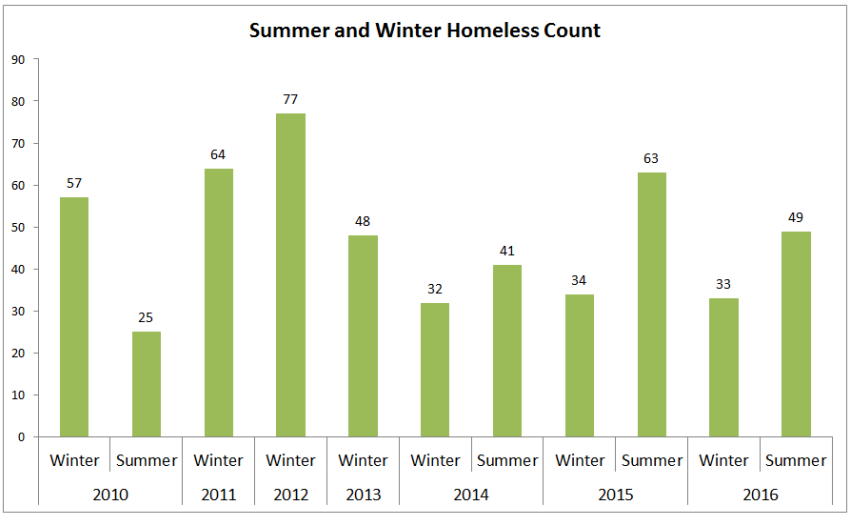


Table 47 Source Data Source: Muskingum County Continuum of Care

In 2016, the Point-in-time Counts, conducted every January in Muskingum County and reported to Housing and Urban Development (HUD), reported 33 and 49 homeless individuals living in Muskingum County over the summer and winter respectively. It is important to note that these figures may be a gross underestimation. According to a volunteer for the homeless count, most homeless individuals go to great lengths to make sure they are not located or counted. This is more common in the winter. Additionally, the HUD definition of homelessness excludes some categories of the population. Residents who 'couch surf 'or unofficially live with friends and family for extended periods (due to homelessness) cannot be tracked or counted.

"We should never have more homeless people than we have empty buildings"

- Social Services FGD Participant -

In a FGD on homelessness, residents discussed the challenges of living in and emerging out of poverty. They identified feeling stigmatized at healthcare facilities, when applying for jobs or seeking accommodation. The lack of an address hindered not only the above listed activities, but also applying for any welfare or disability benefits. This created a situation where overcoming homelessness seems like too difficult an undertaking.

They also identified public housing as the most realistic option for housing for themselves and their families, however, most public housing had long wait times. This was consistent with conversations with residents of public housing, who acknowledged attaining public housing as an ultimate goal. They found security in the permanence of public housing.

The challenge of securing housing is not primarily a financial issue. While the criteria and or requirements have not changed much over time, the pool of applicant seeking accommodation has changed. Increasingly, alcohol, drug and criminal histories as well as recent evictions have become major disqualifiers for public and private housing alike. Residents who are emerging from addiction, financial instability and homelessness find the housing system unforgiving, reporting that their only options may be to live with family/friends or remain homeless.

TRANSPORTATION

Access to transportation

Being a rural Appalachian county, Muskingum residents are widely dispersed beyond the city limits. In Zanesville, which has pockets of high poverty populations, getting around is a major challenge. In Muskingum County, almost 88% of all county residents depend on private vehicles for transportation. It is important to note that this may not indicate 88% having vehicles but access to people who can drive them. This implies that more than the remaining 12% of residents with no private transportation may need it.

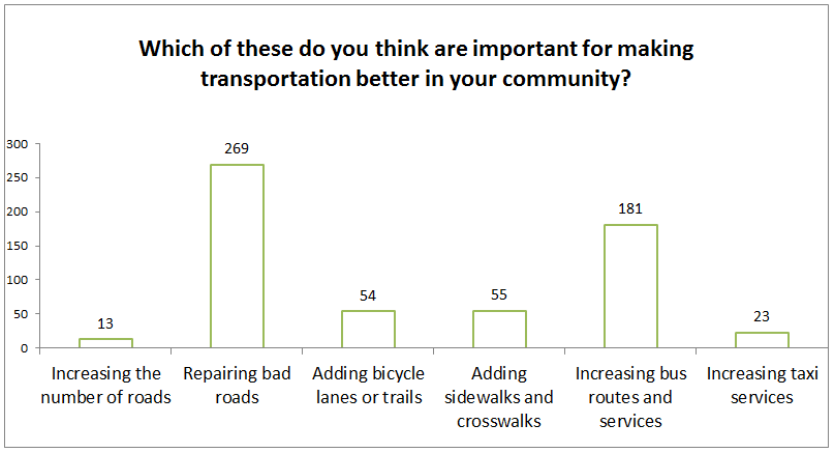


Table 48 Source: ZMCHD (AOS)

About 10% of all respondents of the AOS admitted missing activities due to lack of transportation. Among residents who reported missing activities dues to lack of transportation, this occurred at least once on a weekly basis for 24%. Residents who completed the AOS felt that making transportation better in Muskingum County could be accomplished by repairing bad roads (45.2%), increasing bus routes and services (30.4%) and adding bicycle lanes and trails (9%). When asked about transportation and employment, 93% of people responded that they rely on themselves for transportation to and from work and that transportation does not affect whether or not they have a job.

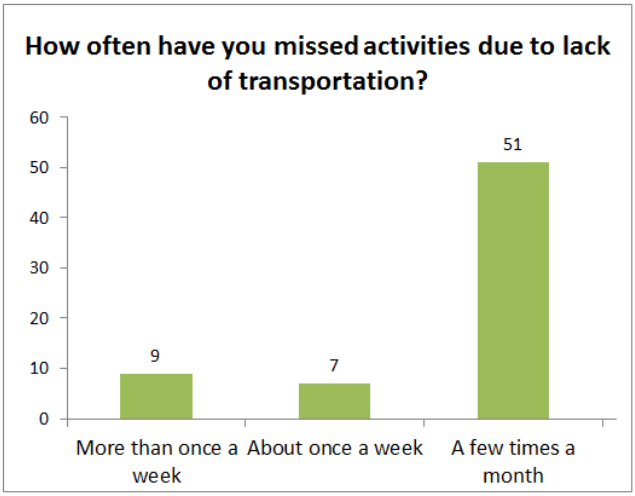


Table 49 Source: ZMCHD (AOS)

Walkability, Bikeability and Transit Scores

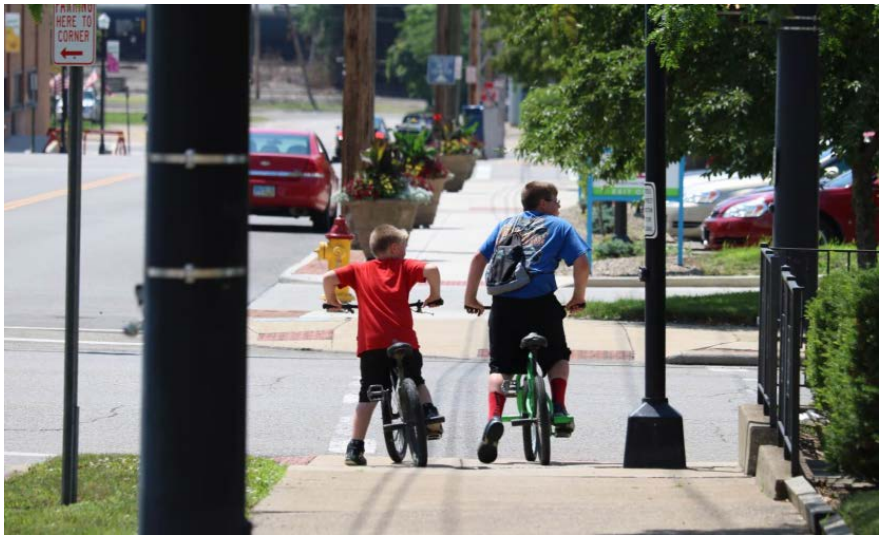
Walkability, bikeability and transit scores are relatively new concepts used to rate cities on how easy and friendly they are to each of these modes of transportation. Each composite score is derived from factors like number of commuters, bike lanes etc. The city of Zanesville has a walkability score of 41, indicating most errands require a car. Bike and transit scores, while not indicated, are most likely to fall within the 'Somewhat Bike able' and Some Transit levels. Initiatives to increase walkability downtown Zanesville has been supported by community resident for a few years, however it has been unsuccessful.

Score	Bikeability	Walkability	Transit
90 - 100	Biker's Paradise Daily errands can be accomplished on a bike	Walker's Paradise Daily errands do not require a car	Rider's Paradise World-class public transportation
70 - 89	Very Bikeable Biking is convenient for most trips.	Very Walkable Most errands can be accomplished on foot	Excellent Transit Transit is convenient for most trips
50 - 69	Bikeable Some bike infrastructure.	Somewhat Walkable Some errands can be accomplished on foot	Good Transit Many nearby public transportation options
25 - 49	Somewhat Bikeable Minimal bike infrastructure.	Car-Dependent Most errands require a car	Some Transit A few nearby public transportation options
0 - 24		Car-Dependent Almost all errands require a car	Minimal Transit It is possible to get on a bus

Table 50 Source: ZMCHD (AOS)

Muskingum County has 5 bike trails, 2 across parks and 3 recreational, almost all most of the county's biking trails outside city limits. Recent road construction downtown does not show any indication to adapt road to being biker-friendly. During focus group discussions, youth participants stressed the need for more bike and pedestrian friendly

streets; at least around the downtown area. A biker/pedestrian downtown would increase people coming around; more people would 'hang out', shop and attend events.



For many youth in the city, during summer, bicycles are the primary mode of getting themselves around; to places like the library, community activities as well as park locations for the Summer Lunch Program. For many of them who are still unable to drive, walking and biking are a mobility option for when not accompanied by adults. While they acknowledged that the downtown streets may not be 'bike-friendly,' they could be more 'friendly to bikes'. This would include creating designated locations and installing hardware for locking bicycles.

> Bike friendly, Yes, Friendly to bikes, No! There are no places to park bikes.
>
> - youth participant -

Public Transit

The South East Area Transit (SEAT) serves as the sole provides public transit provider for Muskingum County with an annually ridership of about 91,000 in Muskingum County. There is no taxi or alternative public transportation means. It provides four fixed route services within the city limits and additional on-demand services across the county. A key informant, interviewed on transportation indicated that SEAT's fixed routes provide access to within half a mile of all city limits. Fixed route ridership makes up 70% of its clientele. The elderly and people living with disabilities make up 15.4% of all ridership. As a rural transit organization, services provided are primarily dictated by ridership and funding. As a result, SEAT, also locally called the Z-Bus, runs 6am to 6pm, Monday to Friday. SEAT also does not operate on 11 federal holidays.

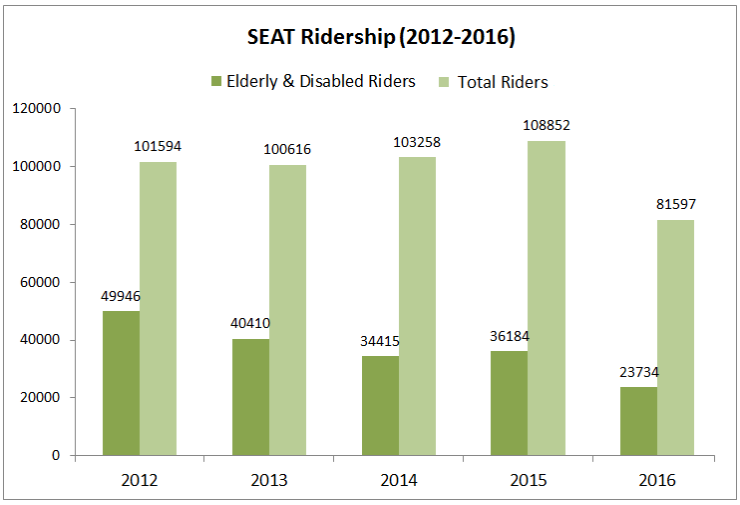


Table 51 Source: South East Area Transit (SEAT)

Residents who identified having issues with the local public transportation system, indicated their primary reason as not having bus routes close to where they lived (49.2%). Safety on public buses/routes (21.2%) and buses taking too long to get to their destinations (21.2%) were a second and third reason mentioned. Only 7.3% of respondents identified bus fares as too expensive.

From an objective perspective, the issue of transportation is a conundrum; residents demanding increased access, especially on the weekends and in the evenings. However, the demand is not consistent enough to make the expansion cost-effective. Across several focus group discussions, residents indicated possibilities for expansion, a Maple St. express bus being one mentioned several times. Residents complained about the time constraints with using the system. It may require planning 45 minutes to 1.5 hours into a schedule for a 30-minute trip that could have been completed in 15 minutes with a personal vehicle.

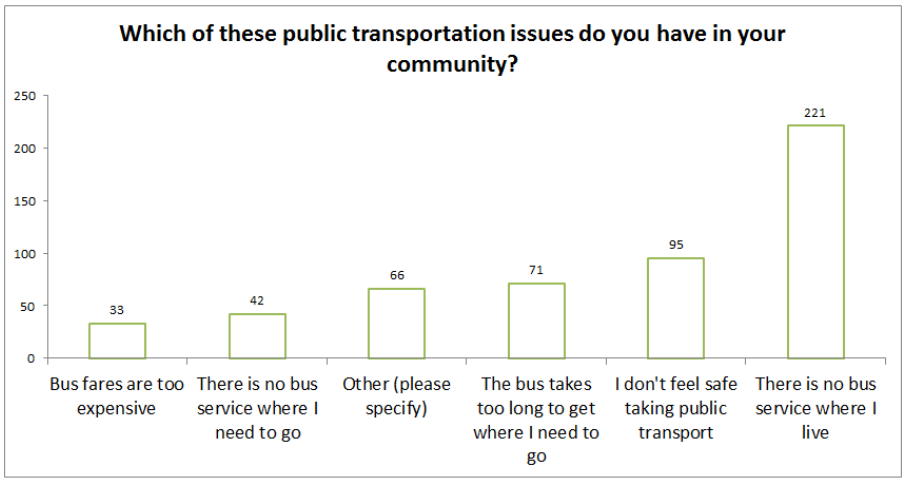


Table 51 Source: ZMCHD (AOS)

Another issue that was discussed was the need for rider education. Some residents who depend on the public transit system have different sense of time and may not be good at planning. For all non-fixed route services that SEAT provides, it may require a 24 to 48 hour window for service to be requested. Additionally, ride requests that are no longer needed, may not be cancelled; all inefficiencies that cost the organization.

NUTRITION

Nutrition is the process of obtaining the food necessary for health and growth. A healthy diet is a critical pathway in influencing chronic conditions like cancer, cerebrovascular and cardiovascular diseases. Poor dietary outcomes result in under-nutrition (micronutrient deficiency; anemia etc.) and over-nutrition (overconsumption of macronutrients; obesity etc.). While hunger may be a primary driver of nutrition, a multitude of factors, social and economic, play a major role on an individual's diet. The food environment is complex and difficult to navigate, however the goal is to achieve food security. Food security, as defined by the United Nations' Committee on World Food Security, is the condition in which all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

<u>Accessibility</u>

In Muskingum County, 22.3% of county residents received Supplemental Nutrition Assistance Program (SNAP) benefits in 2015. This was slightly higher in 2016, with 25% of AOS respondents reporting having to cut back on food or their family has had to have smaller meals because there was not enough food. Food insecurity is not suffered by just the poor, but across several income brackets in the community. Among families living below the Federal Poverty Line (FPL), 54% receive SNAP benefits, and the rate for families above the FPL is 46%. Reports from the local 2-1-1 Helpline call center received over 9000 calls with over 53% being requests for food/meals. For many families facing food insecurity, assistance for meals is primarily sought from family and friends (57%) and the 2-1-1 Helpline (25%).

Proximity to healthy food is another access factor that influences food security. According to the 2016 County Health Rankings (CHR) Muskingum County's food environment index is 6.3. Ohio's food environment index is 6.9. The Food Environment Index (FEI), which ranges from 0 (worst) to 10 (best) factors in two indicators of the food environment; low

income access to healthy food and reliable access to healthy food in the past year. For low income residents, a major factor for

In the AOS, 65% of respondents indicated living within a 5 to 10 minute drive of a grocery store. For 21% of the respondents, getting to a grocery store requires at least a 15-minute drive. Only 14% of respondents lived within walking distance. Access to farmers markets, another good alternative to grocery stores, is poor in Muskingum County with a rate of 0.03 farmers markets per 1000 county residents. Fast-food restaurants, on the other hand, are a very common (at a rate of 0.77 per 1000 county residents).

Cost

According to a Harvard University study, on average, a healthy diet costs $1.50 per person per day. This adds up to about $550 a year for the average household. The cost of healthy food is higher that of a 'normal' diet. Within this context, healthy food will be defined as a diet rich in fruits, vegetables, lean meats, fish and nuts and whole grains. A healthy diet is also characterized by a reduced consumption of processed food. There are several financial challenges with eating a healthy diet that affect low-income individuals disproportionately. Most produce and fresh meats have a short shelf life; they need to be bought more often. Eating a healthy diet requires more preparation and careful storage in comparison with traditionally bottled, boxed and canned foods. These processes require the right equipment and experience, which gets expensive. At the bottom line for many households looking to stretch a dollar, energy-rich foods go further than a nutrient rich option.

Residents in a few FGDs indicated that they also find that paying for food competes with other necessities like utilities and medicine/healthcare. Among food options, most households reported skipping purchasing snack foods and beverages for hot meal staples. They also prioritized foods their families preferred (32%) over what was cheapest (19%), healthiest (24%), had the longest shelf life (2%) or could be used for multiple meals (22%).

ENVIRONMENTAL HEALTH

ENVIRONMENTAL HEALTH AND AIR QUALITY

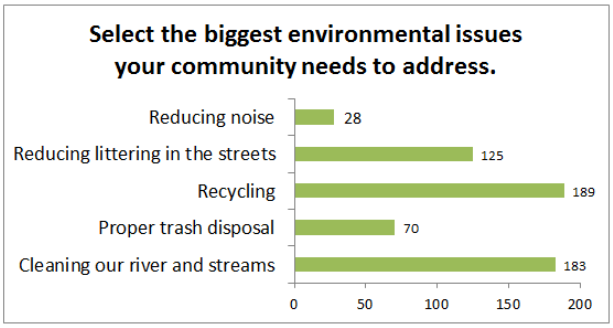


Table 53 Source: ZMCHD (AOS)

Residents interact with the environment constantly. These interactions affect the quality of life, years of healthy life lived and health disparities.

Participants were asked to identify the biggest environmental issue that the community needs to address. Participants reported, 32% that recycling was an issue, 31% reported that cleaning rivers and streams was an issue, and 21% reported that reducing liter in streets was an issue.

Air Quality Index

Air Pollution - Particulate Matter is defined as the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) in a county. Fine particulate matter is defined as particles of air pollutants with an aerodynamic diameter less than 2.5 micrometers. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air.

According to the 2016 County Health Rankings, Muskingum County's air pollution-particular matter is 13.6, comparative to Ohio's air pollution-particular matter of 13.5.

Air quality plays a significant role in respiratory diseases like Asthma, Chronic Obstructive Pulmonary Disease (COPD) and Emphysema. In Muskingum County, hospitalizations due to asthma occur at a rate of 14.9 per 10,000 population. This is lower than that of both Ohio (16.2 per 10,000 pop.) and the United States (16.6 per 10,000 pop.) Asthma, which is the leading chronic illness among children, is greatly impacted by air quality. In Muskingum County, 18.5% of children diagnosed with Asthma at some point of their life. This rate is higher than both Ohio's at 15.4% and the United States, at 17.8%.

Lead

Lead is a naturally occurring element found in small amounts in the earth. While it has many beneficial uses, it can be toxic to humans and animals. Exposure to lead, especially in children, can result in lifelong negative health impacts. It was commonly used in paint, gasoline, jewelry and cosmetics, toys and household goods. As a result of the Lead-Based Paint Poisoning Prevention Act of 1971 and an amendment to the Clean Air Act (in 1990), lead was removed from paint beginning in 1976 and gasoline in 1995.

There is no safe level of lead exposure for children, however, the level of 5 micrograms per deciliter has been established as 'blood lead level of concern'. Lead exposure, may be from objects, soil or air however for children, a primary source of lead poisoning is living in a home or frequently visiting a home that was built before 1978, due to the risk of the home possibly having lead based paint in or around the home. In Muskingum County, in 2016, approximately 67% were built before 1978.

Blood Lead Levels for Children Under 72 Months						
micrograms per deciliter						Total
0 - 4	5 - 9	10 - 14	15 - 29	20 - 24	25 +	
1505	31	8	3	1	1	1549

Table 54 Source: ODH Lead Program

In Muskingum County, three high-risk zip codes (43701, 43702, and 43777) have been identified for lead, requiring blood lead testing for children less than 6-year age.

HEALTH-RELATED ATTITUDES, BEHAVIORS AND PERCEPTIONS

COMMUNITY AND CIVICISM

Community Engagement

Muskingum County may be described as the epitome of a good community, despite its challenges. This is visible by residents taking care of and depending on their own, connecting and participating in community activities and volunteering. For many, this is just the way life is supposed to be. Residents selected family, friends and their church congregations as making up their social lives. Within these sociocultural communities, there is trust and they support each other. For many, these avenues are first sought in times of need.

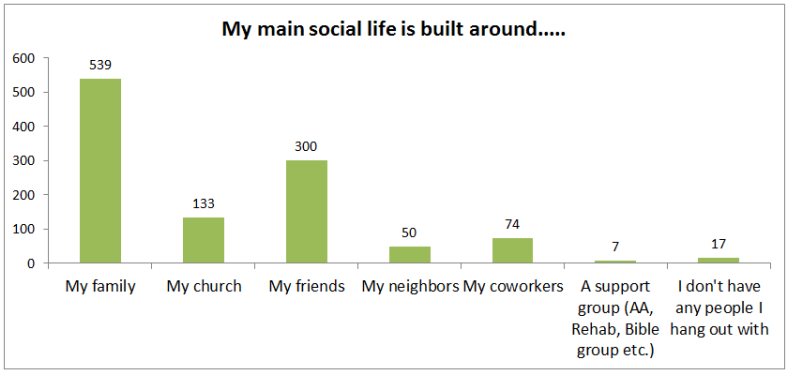


Table 55 Source: ZMCHD (AOS)

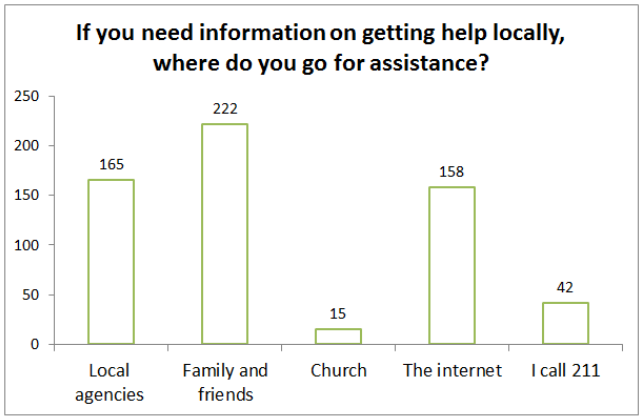


Table 56 Source: ZMCHD (AOS)

Beyond these close-knit groups, community residents participate in the more public community, 55.4% participating in some type of civic, religious or social group. Most of these groups have a component of giving back to the community;

this occurs in various ways. In the adult opinion survey, 55.5% of all respondents said they had volunteered within the last month. This was consistent across two focus group discussions where about half of the room mentioned that they volunteered. Focus groups held among low income populations unanimously agreed that receiving felt better where they could give something back. It gave them a sense of belonging, purpose and responsibility.

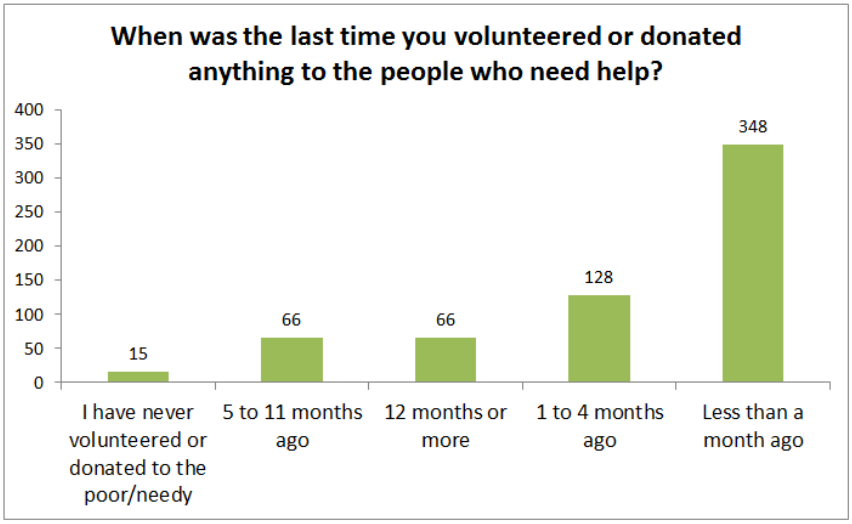


Table 57 Source: ZMCHD (AOS)

They mentioned places like Eastside Ministries and Christ Table providing opportunities for giving back to the community. Focus groups with the elderly echoed these sentiments. They identified volunteering as one of a few that engaged them. They identified volunteering with the youth as an opportunity that would have collateral benefits. They stressed that many community issues did not require money; solutions could be derived from pairing different community groups with complementary needs/goals.

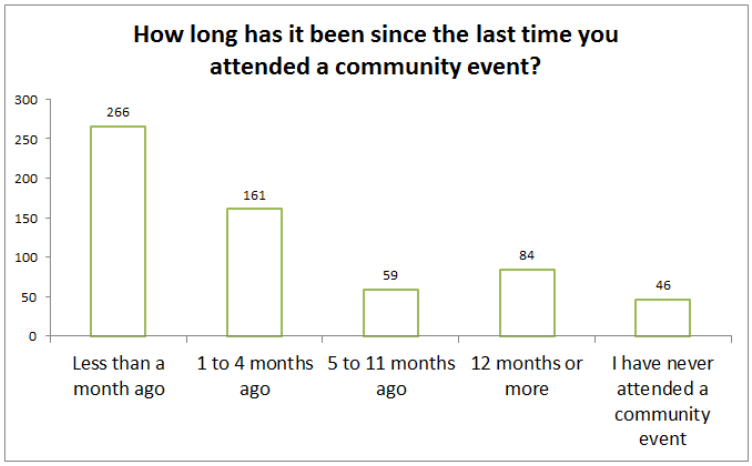


Table 58 Source: ZMCHD (AOS)

The opinion survey showed that 43.2% of responding residents had attended a community event in the last month. These events include educational, health or political events. However, arts and cultural events are by far the greatest desired. While they were greatly attended, residents reported that the county had few events and activities that the entire community to participate in. Many people went to Columbus to participate in arts and cultural events. They stressed that these types of events brought the community together and would serve as a great attraction for the county.

Residents take advantage of what the community has to offer by way of amenities and events. These are opportunities to get out, meet people and build relationships. By far, the library and parks/playgrounds are the most utilized across the county, 72.6% and 62.1% of residents reporting this. Among residents who do not use public parks, safety was the most predominant reason; this was reported by 58.6%. A youth participant recounted a past visit where on arrival, a drug deal was in progress. Another issue that several sources mentioned about local parks and playgrounds, was family-friendliness; the ability for the park or playground to cater to the entire family. Most playgrounds catered to children 10 and under, had nothing to entertain older children or activities for supervising parents. This resulted in older children encroaching on the available equipment and parents less likely to take their children to parks/playgrounds. Other amenities that the community felt would make the Muskingum a better place were a city pool, recreational spaces for teens and young adults.

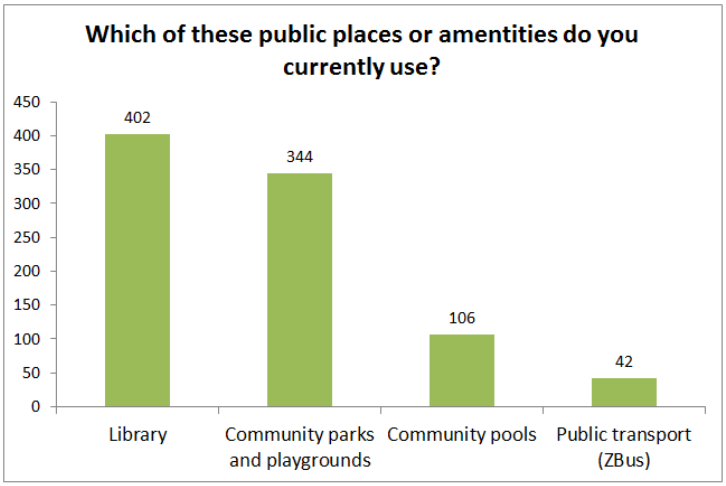


Table 59 Source: ZMCHD (AOS)

During discussions with parents, they indicated that, if brought together, parents would be interested in volunteering to supervise playgrounds and parks, making these spaces safer for their and unsupervised children who go to such places. They also identified the opportunity to utilize residents who need to complete community service, work-study or work release programs in a way that benefitted the entire community.

Seniors acknowledged the availability and contentment with social life in the county. They mentioned the senior center as one of the great things about being a senior in Muskingum County. They were excited about the new senior center and expressed a rich camaraderie they find there, engaging with participants and connecting with the community. The financial, social and health changes that come with age are among several issues they get to address by sharing information, resources and skills. One resident explained, "It's like a community over here; like a little town. You can dance here; you can play cards here. If you have a problem, you can talk it over

> Get the seniors together and make a noise; one voice. And it could be to better the children. That's where the future is. From what you heard here, it's pretty gloomy for their future, for the children, who have no conscience.
>
> - senior participant -

with someone here. If you're feeling crappy, you can just find a place in the corner and someone will find you."

A major concern for the senior community was youth apathy, the lack of parenting skills and the resulting grim futures. They were vehemently spoke against lack of funding being a 'easy out' for no entity taking on the youth. They stressed that it was the community, the people, the human resource, that was most critical to bringing about any change. By identifying and bringing together people who have the time, interest and ability, Muskingum County youth may have a fighting chance.

Local Government

There is a community perception of limited local government presence and participation in community activities. Interestingly, this is a mutual feeling on the part of local government; both entities feel disconnected from the other. This gap is evident in low civic engagement at the community level. A measure of civic engagement, voting rates, shows on 56% of enfranchised residents voted in the 2016 presidential elections.

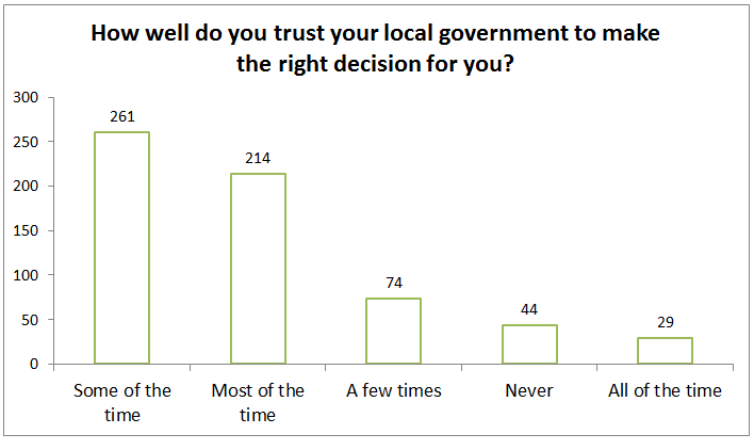


Table 60 Source: ZMCHD (AOS)

Residents report feeling unaware of information needed to make informed decisions about or participate in local government, or its activities and events. This disconnect suggests that the local government is unaware of their residents' perceptions and priorities, resulting in lower levels of confidence in local government working on behalf of residents. This is evident from the opinion survey, where 54% of respondents identified local government as the primary entity for leading community projects.

Table 61 Source: ZMCHD (AOS)

The lower level of trust in the local government factors into lower levels of

resident participation in community activities. Subsequently, local government initiatives and priorities may not align with community interests, thereby creating a self-fulfilling prophesy.

HEALTH-RELATED BEHAVIORS

Preventative Health and Health Seeking Behaviors

Preventative health is important for individuals to have optimal health and to remain to have a healthy lifestyle. According to the 2016 Adult Opinion Survey, most residents get their health-related information from their doctors or nurses. It is however unclear, the nature of this health-seeking approach, in that residents may receive information that was not actively sought after. The survey showed 37.5% of respondents getting information from internet websites.

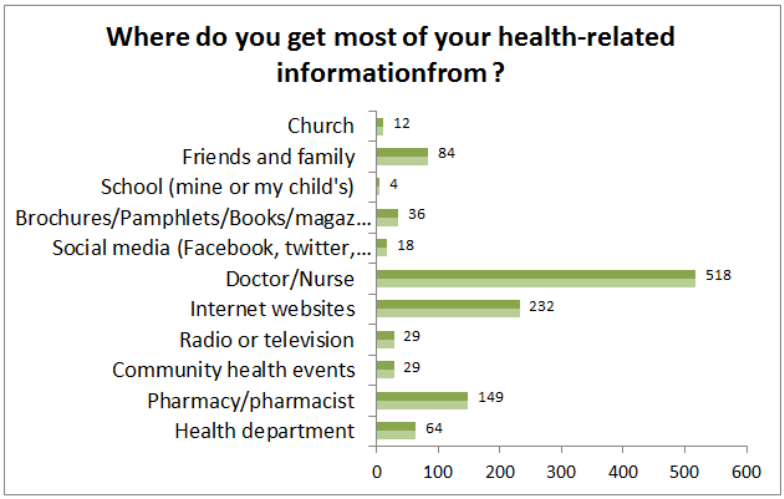


Table 62 Source: ZMCHD (AOS)

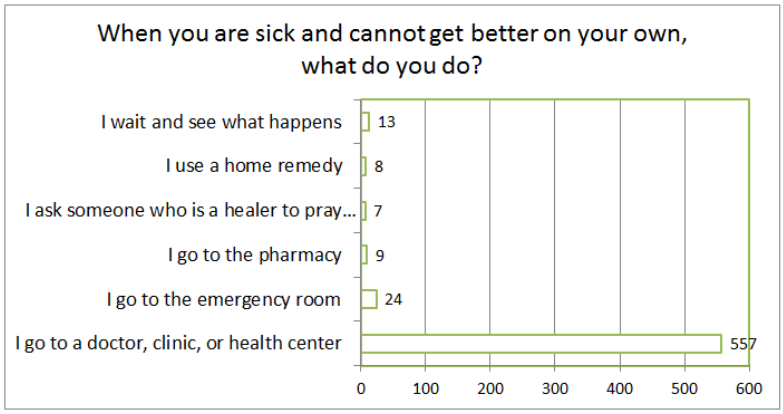


Table 63 Source: ZMCHD (AOS)

About 82% of the participants also reported that they receive regular check-ups to prevent health problems.

Stress and Coping Practices

As a key component of measuring Quality of Life (QoL), good physical and mental health is measured by the County Health Rankings (CHR) and the BRFSS. While this indicator is highly subjective, it does suggest that how people feel about themselves. The 2016 Adult Opinion Survey asked participants to identify major sources of stress in their household.

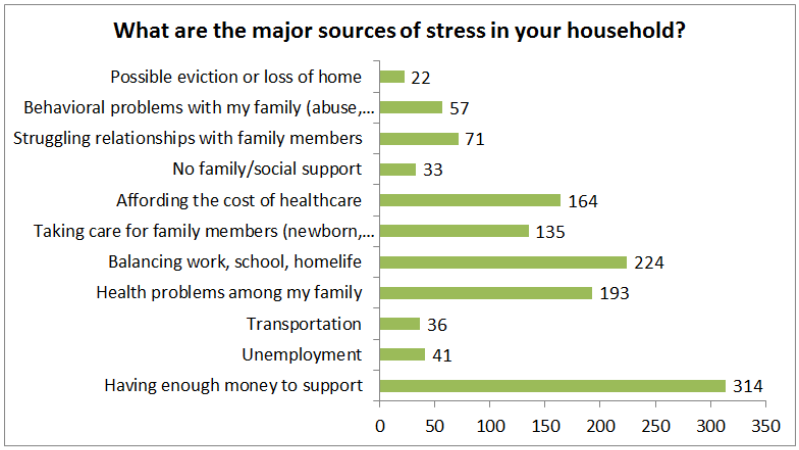


Table 64 Source: ZMCHD (AOS)

The top three answers were: having enough money to support, balancing work, school, and home life and health problems among family. According to the 2016 County Health Rankings, Muskingum County residents reported having 4.6 poor mental health days within the last 30 days. Ohio's overall average for poor mental health days is 4.3 days within the last 30 days.

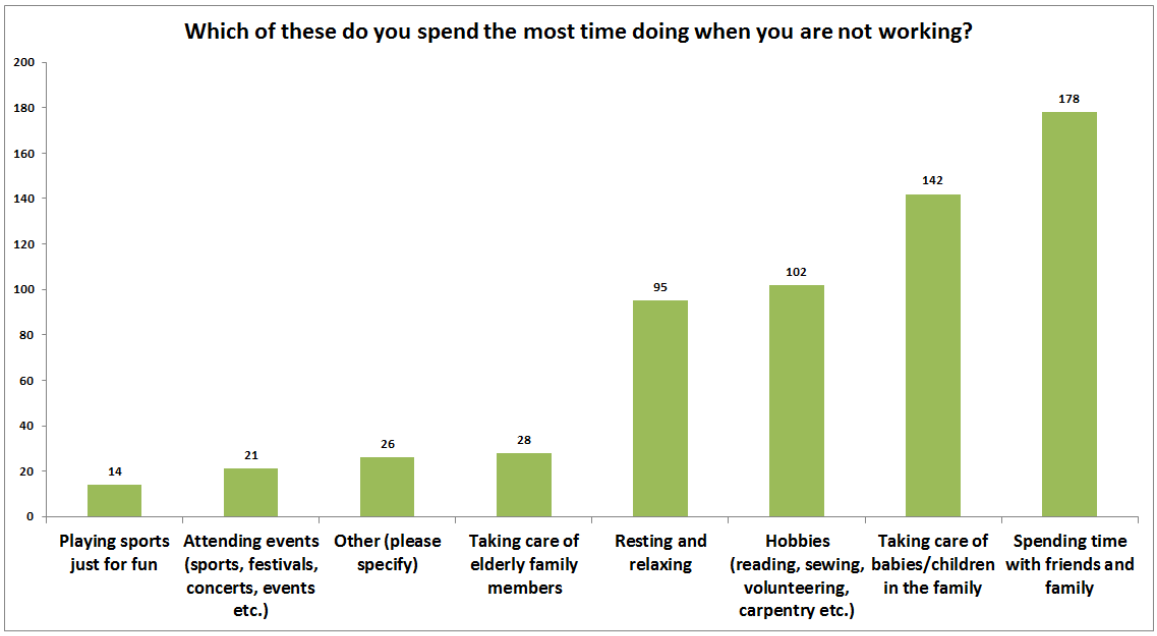


Table 65 Source: ZMCHD (AOS)

Exercise

According to the 2016 County Health Rankings, Muskingum County residents had 35% of physical inactivity. Physical inactivity within this context is defined as not getting the American Heart Association's (AHA) recommended 30 to 60 minutes of aerobic exercise, three to four days a week. Ohio overall had 26% physical inactivity. Access to exercise opportunity does not reflect physical activity. According to the 2016 County Health Rankings, 72% of Muskingum County residents had 72% access to exercise opportunities, compared with 83% in Ohio. Access to exercise opportunities was measured by the percentage of individuals in a county who resided within a half-mile (urban census blocks) or 3-mile (rural census block) radius of a recreational facility. This includes gyms, fitness centers, pools, community centers, playgrounds or parks.

"We need low-cost or free community exercise opportunities, not everyone can afford a gym membership"

- Focus group participant

"Community activities are not made known to the public until after the event has taken place. Then it is announced on local media"

- Survey respondent

Safety, which was not only identified as one of the most important things for a healthy community was a primary reason for not utilizing local parks and playgrounds. Residents who participated in FGD noted that most of the safer alternatives for physical activity were expensive or required transportation logistics. Residents also expressed interest in participating in free community activities as they provide an opportunity to get outdoors. A challenge to this

was information; the media has a tendency to report more on activities that had happened, rather than upcoming events.

Substance Abuse

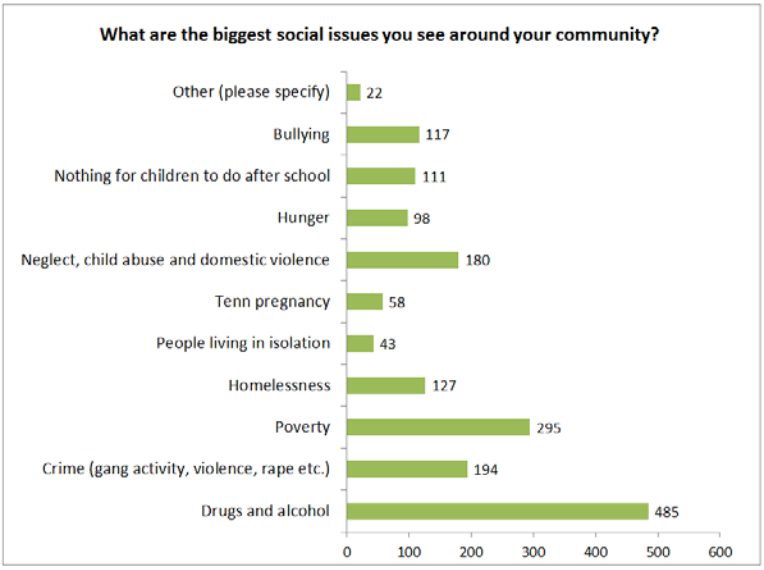


Table 66 Source: ZMCHD (AOS)

Substance abuse, be it alcohol, tobacco or illegal drugs, emerged as the largest health issue facing Muskingum County. A major factor of accidents, malfeasance, chronic disease and safety, the county facing the growing challenge of addressing substance abuse. According to the 2016 Adult Opinion Survey, in questions pertaining to social issues, health problems and safety, alcohol and drug addiction, or their direct consequences were that most frequently identified.

Alcohol

According to the 2014 BRFSS results, about 16.9% of Muskingum County adults admitted to engaging in binge drinking in the last 30 days. Binge drinking is defined as the consumption of four or five servings of alcohol in about 2 hours by women and men respectively. Results from the 2016 County Health Rankings shows that 18% of the adult population also reported excessive drinking, consuming at least 1 (women) or 2 (men) alcoholic beverages daily. Alcoholism has risen since 2010 when the rate of adult binge drinking was 14.5%.

Youth alcohol consumption data collected from the Ohio Youth Behavior Risk Survey provides statewide statistics. This shows 16.1% of teens binge drinking. Across the participants surveyed, 12.7% of them reported having their first drink (not sips) of alcohol before the age of thirteen. While overall student alcohol consumption had decreased from 42.2% in 2003 to 29.5% in 2013, the risks associated with drinking pose are great, to the individual and community. A gateway activity to tobacco and illegal drug use, alcohol experimentation and consumption lead to risky and irresponsible behaviors.

Tobacco (and Nicotine)

Approximately 440,000 premature deaths in the U.S. can be attributed to smoking each year. Cigarette smoking had been known to cause cancers, heart disease and respiratory condition, as well as low birth weight in infants. Ohio and Muskingum County's smoking rate is nearly double the Healthy People 2020 target of 12.0 percent. Appalachian adults smoke more than suburban, metropolitan, and non-Appalachian counties.

Muskingum Count Cigarette Consumption			
Region	**Adult Smoker**	**Youth Smokers**	**Smoking during Pregnancy**
Muskingum County	22.2%	12.1%	21.2%
Ohio	21%	9.3%	16.9%

Table 67 Source: 2015 ODH Muskingum County Cancer Profile

Drug Abuse

Drug abuse, addiction and overdose is a major problem plaguing many communities, Muskingum County included. It is currently considered a public health crisis. While several categories of drugs are commonly abused, opioids and opiates are most common. Generally used as pain relievers, these drugs, prescription and recreational are more available, cheaper and create a strong sense of euphoria.

In 2016, Muskingum County saw a 43% increase in drug-related hospital visits, occurring at a rate of 407.9 per 100,000. This figure does not reflect overdoses that law enforcement or emergency response services responded to but did not send to a medical facility. Deaths resulting from unintentional drug overdoses have increased as well. In 2015, they occurred at a rate of 16.0 per 100,000 population (Ohio, at 27.7 per 100,000), and increase from 2013 (12.4 per 100,000 population).

Recycling

According to the 2016 Adult Opinion Survey, 39% of the residents disposed of unused household chemicals and medication at community collection events, 30% use the trash or garbage, 14% save it and use it next time they need it and 12% use the sink or toilet.

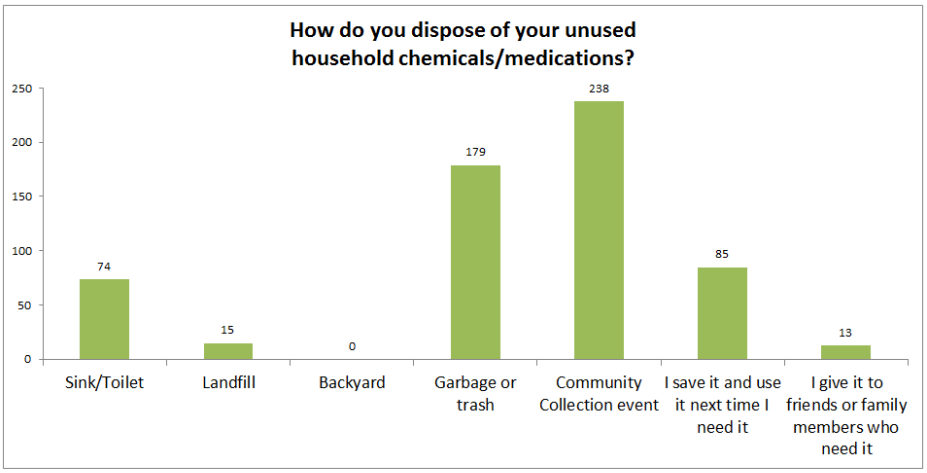


Table 68 Source: ZMCHD (AOS)

When residents were asked if they recycle old cardboard, glass and plastic containers, only 44% of the residents reported that they recycle.

Emergency Preparedness

In the event of an emergency; man-made or natural disaster, the ability for a community to weather the storm and resume a normal life depends greatly upon how well each member is prepared. Events like floods, tornadoes, bioterrorism and outbreaks are examples of events likely to occur without warning. During an emergency, the community still has basic needs, which include food, water and shelter. For other members in the community who have access and functional needs (depending on an interpreter, electrical wheelchair or requires dialysis), they

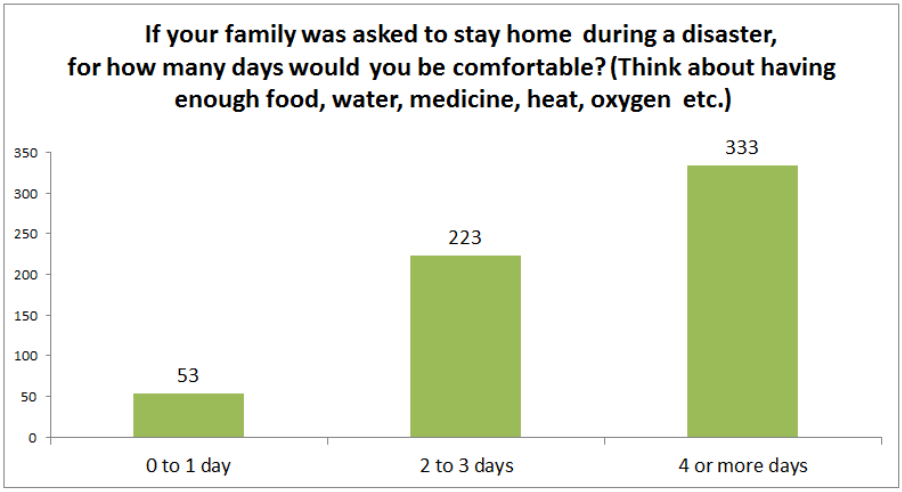


Table 69 Source: ZMCHD (AOS)

may suffer severe consequ

Recommendations from the Department of Homeland Security Emergency preparedness determine that an emergency supply sustain a household for three days. A key informant who spoke on the subject noted that many households might feel prepared for an emergency, however, few are. Citing water as an example, each household requires at least 1 gallon of water per person, per day; in that, a family of four would need at least 12 gallons of water. This increases when some members of the family require more. About 66% of AOS respondents determined that their households could be sustained for at least 3 days. Television (30.5%), radio (24.5%) and cell phone (24.8%) were reported as the primary modes through which they would receive information during an emergency event. Finally, in the event that they had to evacuate their homes, most worried about leaving pets at home alone (30.5%), leaving property behind (22.0%) and being less safe by leaving home.

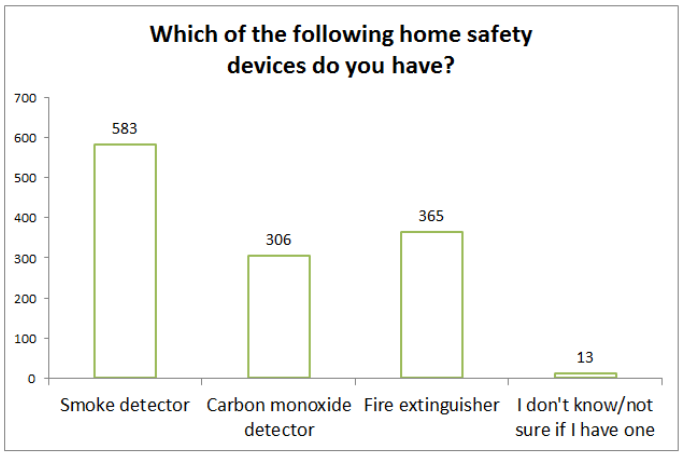


Table 70 Source: ZMCHD (AOS)

Smoke and carbon monoxide detectors, as well as fire extinguishers are a few safety devices recommended for homes. The AOS survey indicated that 96% of respondents had smoke detectors, 60% had fire extinguishers and 50% have a carbon monoxide detector.

CONCLUSION

Based on secondary, social, economic, and environmental health data, discussions with residents and leaders, and a community survey, this assessment report provides an overview of the social and economic environment of Muskingum County's health status, opportunities for growth strengths. The 2016 Muskingum County Community Health Assessment (MCCHA) will be made available to the public, in draft version for comments. The final version will be presented to the Board of Health, Healthier Muskingum County Network and upon request. It will also be disseminated online, on the Zanesville-Muskingum County Health Department website, http://www.zmchd.org. It will also be available as a hard copy at the health department. Once completed, a process to identify 3-5 major priorities of the CHA will be conducted. This will be implemented over the next three years of the 2016 CHA-CHIP cycle.

APPENDIX

DOCUMENT

Photographs

All photographs used in this document were products of the youth PhotoVoice Project, conducted as the youth component of the 2016 Community Health Assessment.

Quotation Boxes

All quotation boxes used in this document are direct quotes from individuals who live and work in Muskingum County. Quotes are from focus group discussions and key informant interviews.

Images

Image 1: Social Determinants of Health

Source: Henry J. Kaiser Family Foundation

http://kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/

Image 2: Muskingum and Appalachian Counties of Ohio

Source: Muskingum County Geographic Information System

http://www.muskingumcounty.org/images/rob_appalachia.jpg

Image 3: Townships of Muskingum County

Source: Muskingum County Website

http://www.muskingumcounty.org/mctownshipmap.html

Tables