



**Partners for a Healthier
Ross County**

Community Health Needs Assessment

November 2019



TABLE OF CONTENTS

Acknowledgements	04
Executive Summary	05
Purpose and Overview	08
Introduction	08
Partners for a Healthier Ross County	10
Process	11
 2016 CHIP Progress Report	 13
2016 CHA Priorities	14
Progress on 2016 CHIP	14
 Community Profile – Ross County	 17
Ross County, Ohio	17
Community Assets	17
 2019 Data Review	 20
 County Health Rankings	 20
Demographic Characteristics	22
Population Size and Growth	22
Age, Sex, Ethnicity, Immigration,	
Veterans Disability Status	22
Household and Location	23
 Vital Statistics	 24
Premature Death	24
Leading Causes of Death	25
 Population Health	 25
Obesity and Related Issues	25
Respiratory Issues	26
Cancer	26
Sexually Transmitted Diseases	27
Maternal Health	27
Birth	27
Child Health	28
Oral Health –Children	28
Health Behaviors	28
Injury – Drug Overdoses and Traffic Fatality	29
 Healthcare System	 29
Hospital Utilization	30
Preventive Services	30

Access to Healthcare	30
Healthcare Service Access	30
Healthcare Provider Access: Primary, Oral and Mental Health Care	30
Insurance Coverage	31
Public Health and Prevention	32
Communicable Disease Control	32
Public Health Funding	34
Public Health Workforce and Accreditation	35
Social and Economic Environment	36
Education	36
Employment	36
Crime	36
Industry and Occupations	37
Income and Poverty	37
Physical Environment	38
Air Quality	38
Water Quality	39
Food Access and Insecurity	39
Housing	39
Built Environment and Community Resources	40
Community Input	41
Public Survey Summary	42
Stakeholder Interview Summary	51
Focus Group Summary	51
Evaluation of 2016 Assessment	51
Forces of Change	51
Assessment of the Local Public Health System	53
Summary of Key Findings	53
Conclusions and Next Steps	54
Appendices	



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Partners for a Healthier Ross County also contracted with the Hospital Council of Northwest Ohio for reviewing and validating all of the secondary data for this assessment.

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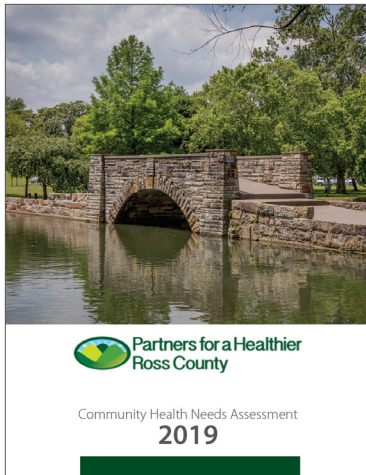
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How has the 2019 CHA been improved since the last assessment?

The 2019 CHA improves upon the 2016 CHA with the following additions:

- More in-depth assessment of the public health system including GIS mapping
- Additional survey questions and data on social factors like interpersonal violence, housing, transportation, income and education that impact health
- Increased engagement of the community via survey, public commenting periods and stakeholder interviews
- Health equity analysis on poverty/low income
- Air

EXECUTIVE SUMMARY

What is the Ross County Community Health Needs Assessment?

A community health assessment (CHA), also known as community health needs assessment (CHNA) is a comprehensive and systematic data collection and analysis process designed to inform communities on top health needs and priorities to drive effective planning that results in positive change. Evidence based practice indicates multisector collaborations should support shared ownership of all phases of community health improvement, including assessment, planning, investment, implementation, and evaluation to realize healthy communities. Partners for a Healthier Ross County completed its last assessment in 2016. The previous assessment was reviewed and updated in 2019 with additional data sets added to improve community knowledge and capacity to improve health.

How was the CHA developed?

As it did in 2016, the Partners for a Healthier Ross County utilized the CDC and NACCHO's Mobilizing Action through Planning and Partnership (M.A.P.P) for the 2019 assessment. M.A.P.P. is a six-phase process that guides the assessment of the community's health needs and development of a community health improvement plan (CHIP). The assessment portion of this process includes a four part strategy focused on collecting qualitative and quantitative data from both primary and secondary sources to identify community themes and strengths, community health status and forces of change in the community, as well as assess the local public health system. More than 1,100 public surveys were completed, five local stakeholder interviews were conducted and demographic, socio-economic, health outcomes and factors data were also obtained to create the assessment.

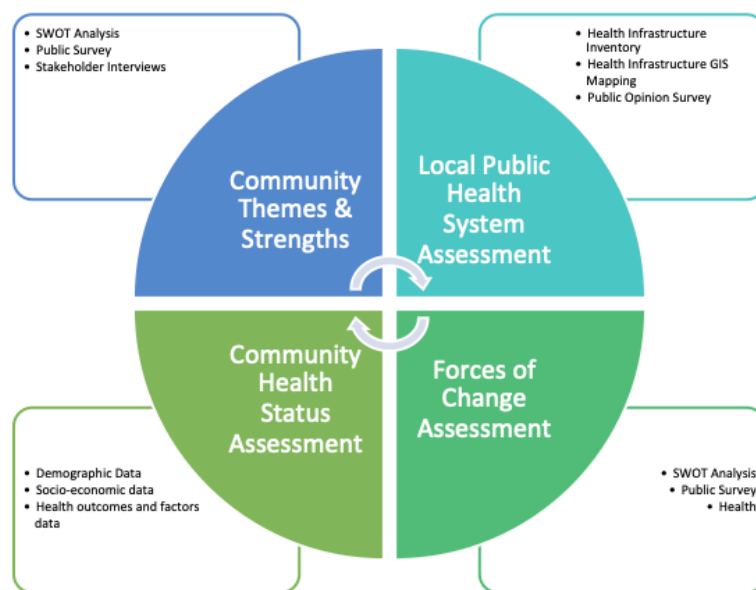


Figure 1: MAPP Four-Part Comprehensive Assessment Process

Key Findings

The 2019 CHA process included review of the assessment completed in 2016, as well as current County Health Rankings to outline any trends impacting public health. Although health outcomes for Ross County declined in 2019, health factors continued to improve signaling that some movement, particularly around clinical services and community resources, was starting to have some impact. Top causes of death remained the same, as did public perception of quality of life issues, health behaviors and top environmental factors.

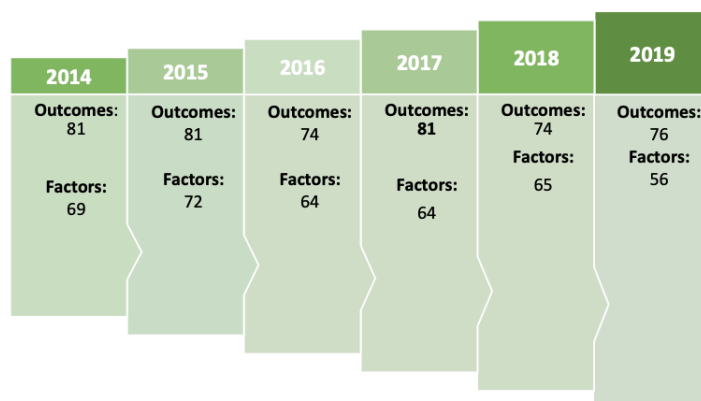


Figure 2: Ross County, Ohio 2014-2019 County Health Rankings

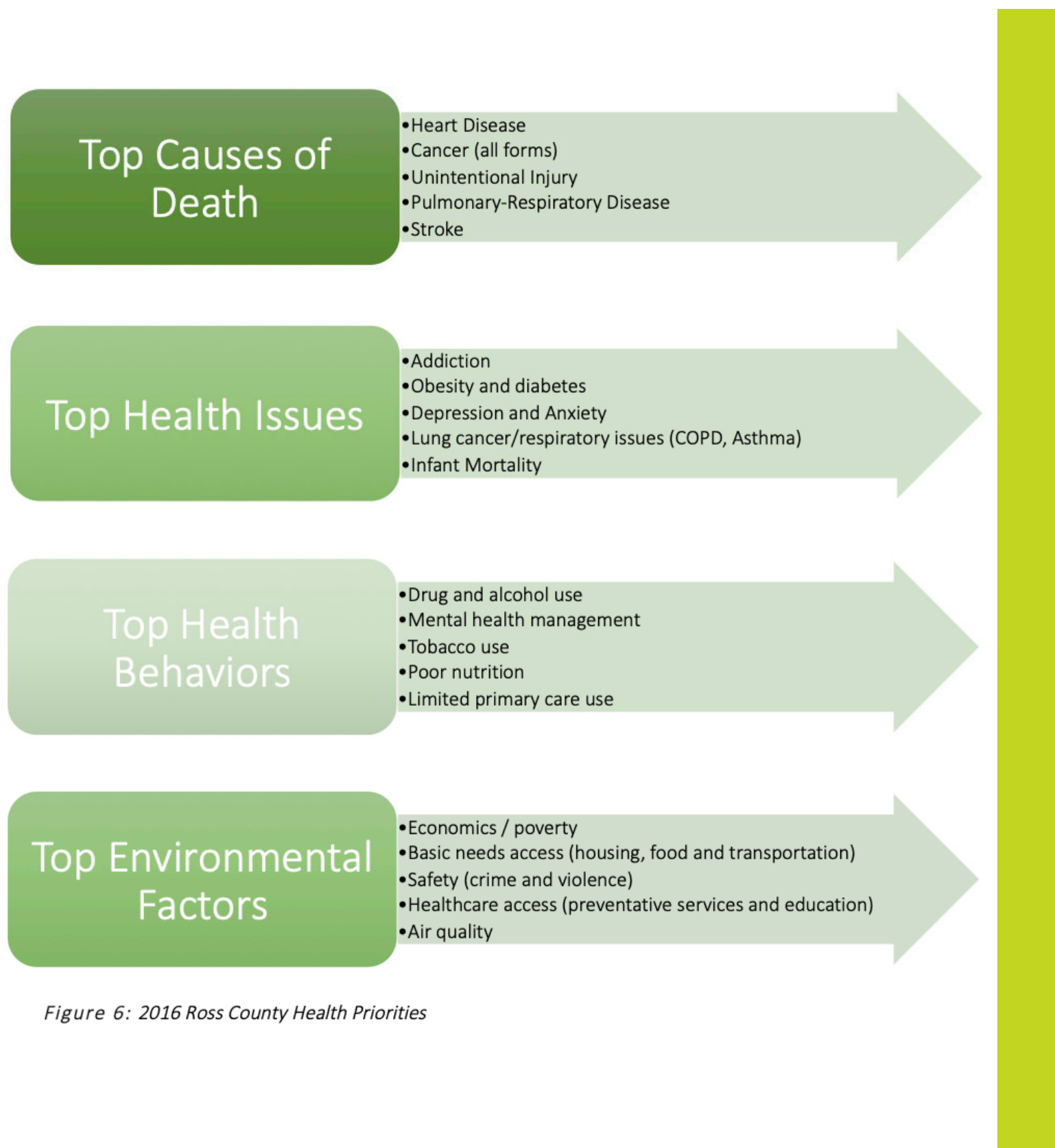
Trends:

- Years of life lost are continuing to increase, continued increase between 2010-2017.
- Adult obesity continued to increase between 2010-2015 at 36% as compared to Ohio at 32%.
- Improved access to insurance, but continued report of cost burden

Top Accomplishments Since the 2016 CHA

As part of the 2016 CHA, Partners for a Healthier Ross County identified great need to build infrastructure around top health issues. This included improving systems, creating collaborations and seeking funding to increase community capacity to improve health.

- 2-1-1 information and referral system migrated to new, updated management system, with re-launch scheduled for January 2020
- Development and continued expansion of the Partners for a Healthier Ross County social media network, currently reaching over 1,000 per week in 2019
- Establishment of LiveWell Ross, a committee dedicated to preventing obesity and diabetes in youth
- Establishment of BreatheWell Ross, a committee focused on tobacco and vaping prevention and cessation
- Increased smoke free public space policy adoption with Chillicothe and Ross County parks
- Developed and disseminated smoke free workplace tool kits for local businesses
- Establishment of the Ross County Air Quality Committee and monitoring program coordinated in partnership with Ohio EPA
- Realized three years of consistent reduction in overdose deaths through efforts of Partners affiliated Hope Partnership Project
- Completion of a critical intercept mapping by the Ross Mental Health Forum to identify opportunities for improvement in the local mental health system
- Establishment of a community Access to Care cooperative and community clinic located in identified critical need community neighborhood
- Establishment of a community mobility and transportation planning cooperative to improve rural transportation to health resources
- Over \$1.5mil in grant and community funding to support sub-committee initiatives of Partners for a Healthier Ross County





PURPOSE AND OVERVIEW

Introduction

The term “health” embodies a multi-faceted concept, particularly from a community perspective. An individual’s health is measured by the presence and/or severity of illness; whether or not they engage in behaviors that are a risk to their health, and if so, the length of time the behavior has occurred. It can also be measured by asking individuals to report their personal perception of their overall health. The health of an entire community is measured by collecting and compiling individual data. Commonly used measurements of population health status are morbidity (incidence and prevalence of disease) and mortality (death rates). Socioeconomic data is usually included as it relates to the environment in which individuals live. A particular population’s level of health is usually determined by comparing it to other populations, or by looking at health related trends over time.

Everyone in a community has a stake in health. Poor health is costly to people trying to maintain employment, and employers pay for it via high rates of absenteeism and higher health insurance costs. Whole communities can suffer economic loss when groups of citizens are ill. As a result, everyone benefits from addressing social, environmental, economic, and behavioral determinants of health.

Health status is closely related to a number of socioeconomic characteristics. Individuals of various socioeconomic status show different levels of health and incidence of disease, while race and culture matter in complex ways. Zip codes, social and economic variables have been shown to impact health including life expectancy, income, education, and employment, as well as literacy, language, and culture.

Health literacy is a concept that links a person's level of literacy with their ability to understand and act upon health information and, ultimately, to take control of their health. Individuals with poor health literacy are at risk for poor health outcomes when important health care information is communicated using medical jargon and unclear language that exceed their literacy skills. These individuals can have issues reading and comprehending materials such as prescription bottles, educational brochures, and nutrition labels, thus they are more likely to have higher rates of complications than people who are more literate.

A comprehensive community health needs assessment can provide a better understanding of a population's health needs. Provisions of the Patient Protection and Affordable Care Act (ACA) requires all 501(c) (3) health systems operating one or more hospitals, as well as federally qualified health centers (FQHC's) to complete one every three years. All public health districts are required to complete health needs assessments every five years. The purpose is to provide the health continuum in a community with a foundation for their community health planning and to provide information to policymakers, provider groups, and community advocates for improvement efforts, including the best ways to direct health-related grants and appropriations.



Obtaining information and views from community members is one of the most important aspects of the community health needs assessment. This involves surveying a percentage of the community to determine which health problems are most prevalent and to solicit their ideas concerning strategies to address these problems. It also explores the factors that impact the design of programs and services to effectively address the identified health problems on a broader scope.

The U.S. Department of Health and Human Services established four overarching health goals for the year 2020:

1. *Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.*
2. *Achieve health equity, eliminate disparities, and improve the health of all groups.*
3. *Create social and physical environments that promote good health for all.*
4. *Promote quality of life, healthy development, and healthy behaviors across all life stages.*

To achieve these goals a comprehensive set of objectives were established (Healthy People 2020), with 26 leading health indicators arranged into 12 topics used to set priorities and measure health over a 10-year period. These indicators, selected on the basis of their ability to motivate action, the availability of data to measure progress, and their importance as health issues for the public, influenced the development of Partners for a Healthier Ross County's 2016 and 2019 Community Health Needs Assessments.

PARTNERS FOR A HEALTHIER ROSS COUNTY

Established in 1996, the Partners for a Healthier Ross County is a collaborative, community-based group whose efforts are aimed at improving the quality of life for residents of Ross County. After almost 20 years of each participating agency conducting their own community health assessment and subsequent plans, the group collaborated in 2016 to complete Ross County's first collaborative assessment and strategic plan. The coalition, organized with a memorandum of understanding (MOU), is structured with a steering committee and senior advisory council. Both have representation from the following agencies:

Adena Health System; Chillicothe City Schools; Chillicothe Gazette; Chillicothe & Ross Public Library, City of Chillicothe Parks and Recreation, Hope Clinic of Ross County; Hope Partnership Project, Hopewell Health Center; Ohio State University Extension; Ohio Department of Job and Family Services, Paint Valley ADAMH Board; Friel and Associates; Ross County Board of Developmental Disabilities/Pioneer Center, Ross County Child Protection Center; Ross County Health District; Ross County YMCA; Ross County Parks District, Scioto Paint Valley Mental Health Center; United Way of Ross County; Veterans Administration Hospital.

U. S. Department of Health and Human Services Health People 2010

Leading Health Indicator Topics

Access to Health Services

Clinical Preventative Services

Environmental Quality

Injury and Violence

Maternal, Infant and Child Health

Mental Health

Nutrition, Physical Activity, and Obesity

Oral Health

Reproductive and Sexual Health

Social Determinants

Substance Abuse

Tobacco

For the 2016 and 2019 assessments and strategic plans, Partners utilized the data-driven Mobilizing Action for Planning and Partnership (M.A.P.P.) process developed by the National Association of City and County Health Officials (NACCHO) and the Centers for Disease Control (CDC). This six-phase process includes a four-part community health needs assessment, as well as an in-depth analysis of current community trends, gaps, and resources with which to comprehensively evaluate the current state of health in Ross County and to prioritize key public health issues. This data was then used to develop the community health strategic plan.

Utilizing the values of commitment, engagement, communication, and respect, it is the vision of Partners for a Healthier Ross County that *all people within the region are empowered and inspired to reach their fullest physical and mental potential in a clean and safe environment through positive community collaborations.* By working through strategic initiatives that improve the physical, mental, emotional, and socioeconomic well-being of Ross County residents, this will be achieved.

Process

This 2019 Community Health Needs Assessment was completed through a comprehensive process of data collection and evaluation utilizing the M.A.P.P. process. The data for this report reflects only Ross County. Both qualitative and quantitative data were collected from primary and secondary sources. Data was collected in a total of four categories (Figure 5): Community Themes and Strengths; Local Public Health System; Community Health Status; and Forces of Community Change. This information was compiled and evaluated by the Partners Steering Committee and hospital and public health work teams in order to finalize specific health-related priorities. The published assessment completed as part of these efforts is intended to inform decision makers and funders about the challenges Ross County faces in improving community health, and the priority areas where support is most needed. The information is also intended to be useful as a planning tool for community organizations.

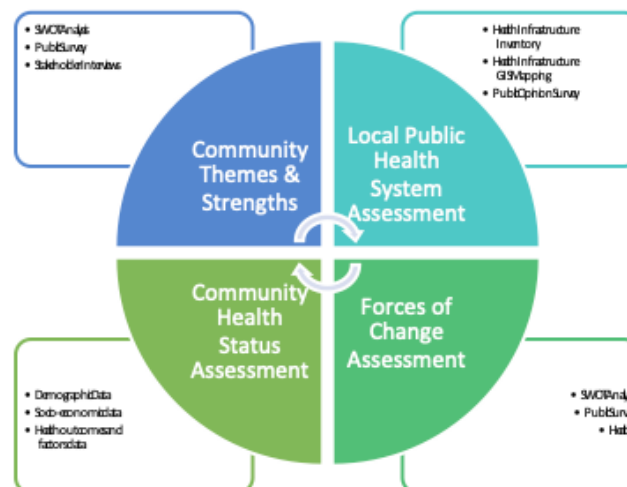


Figure 5: MAPP Four-Part Comprehensive Assessment Process



Methods

Quantitative and qualitative methods were used to collect information for this assessment. Quantitative data collected includes demographic data for the county's population, vital statistics such as birth and death rates, and disease prevalence for the county as a whole. In addition, an inventory of all the community's health related infrastructure was taken and mapped utilizing GIS technology. Qualitative data for this report was collected to provide greater insight into the issues experienced by the population. Data includes opinions expressed from a widely distributed community health survey - which received more than 1,100 responses - as well as community stakeholder interviews.

Source

Primary and secondary data sources were used as part of the needs assessment and came from both internal and external sources. Internal data came from within the health system/hospital (patient population data) and external from outside the health system/hospital (county and state). The primary data gathered includes new information that may be used to investigate and help solve a problem. An example of this would be the percentage of survey participants who ranked obesity as a top-10 health problem. Secondary data are the statistics and other data already published or reported to government agencies. An example of this would be rates of childhood obesity.

Secondary Data: Publicly-Available Statistics

Existing data were collected from all applicable local, state, and federal agency sources, including public health agencies (e.g., Ohio Department of Health, Ohio Department of Job and Family Services, U.S. Department of Labor, U.S. Census Bureau). These data included demographics, economic and health status indicators, and service capacity/availability. Local data on health infrastructure including an inventory of all healthcare providers, nutrition, fitness and social

support was also taken as part of the public health system review and then mapped utilizing GIS technology to create a visual on health resource gaps in the community. This was also compared with local health system population health data to identify disparities in resource availability.

While data at the national and state level are generally available for community health-related indicators, local data - from counties and cities - are less accessible and sometimes less reliable. Some data from publicly-available sources also typically lags by at least two years because it takes time for reported data to be received, reviewed, approved, analyzed, and prepared for presentation.

Primary Data: Community Input

Primary methods used in the assessment process for collecting input from the community were a community survey and key stakeholder interviews.

Community Questionnaire

A questionnaire was developed for the general public, which queried respondents about the most important health needs, common barriers, and habits they used to maintain their own personal health (See Appendix). The survey was distributed in hard copy by member agencies and community partners to a variety of locations in Ross County where the groups of interest would best be reached. These included local food banks, social service providers, community health clinics, the public health department, Adena Health System, and physician offices. In addition, the survey was made available broadly through an electronic Survey Monkey. Notices about the online version with its link were posted on member agency's websites, social media pages, and emailed to members of local business, government, civic groups, schools, and universities. All of the hard-copy survey data was entered into the electronic Survey Monkey by Adena Health System volunteers and Ross County Health District interns.

Stakeholder Interviews

An interview script was developed for the community leaders in the public-private sector, which asked participants their opinions about the community's strengths, major challenges and what is needed to improve the health of the community (See Appendix). A total of three stakeholders were interviewed by two to three representatives from the Partners Steering Committee. Responses were then reviewed for themes and consensus results.



2017 CHIP PROGRESS REPORT

The Partners for a Healthier Ross County completed its first collaborative community health needs assessment (CHNA) in 2016. As part of the 2016 CHA, Partners for a Healthier Ross County identified great need to build infrastructure around top health issues. This included improving systems, creating collaborations and seeking funding to increase community capacity to improve health. Beginning with identification of top causes of death, health issues, health behaviors and environmental factors, Partners for a Healthier Ross County, then outlined two strategic questions with aligned goals to build a work plan for *(See Appendix)* 2016-2019.

After reviewing the data, the Partners for a Healthier Ross County Advisory and Steering teams then met for a day-long workshop to identify and agree upon top health priorities and key strategic questions, as well as outline goals to address them. Developing community infrastructure was prioritized at the workshop, as well as improving awareness of and access to community resources to improve health. The following outlines the strategic questions goals and what the Steering Committee has been able to address since the last assessment.

2016 COMMUNITY HEALTH NEEDS ASSESSMENT

Strategic question 1: How do we as a public health community ensure access and improve navigation to all points of the public health continuum?

- GOAL 1: Establish a baseline and yearly goals to measure the cross-system collaboration and engagement within the community health continuum in Ross County.
- GOAL 2: Establish a baseline and yearly goals to measure the visibility of the community health continuum in Ross County.

Strategic question 2: How do we as a public health community impact the culture of acceptance around unhealthy choices and environments?

- GOAL 1: Establish a baseline and improvement plan for community health literacy using the five primary health issues.
- GOAL 2: Develop improvement strategies and metrics for collaborative and agency alignment around each of the five health priority issues.

PROGRESS ON 2016 COMMUNITY HEALTH NEEDS ASSESSMENT PRIORITIES

For Strategic Question 1, improving access and navigation to community resources, the Partners for a Healthier Ross County Steering team, outlined goals focused on establishing measurement of the cross-system collaboration and engagement, as well as visibility of community resources. The Steering Committee identified the community's 2-1-1 Resource and Referral line as a key project to assist in developing this infrastructure. The project team worked through 2017-2018 with the help of outside consultants to evaluate the current system's capacity and effectiveness, as well as outline opportunities for improvement. Through this process, it was determined the current line should be transferred to a new line designee with more capacity to maintain the database, reporting structures and call quality. In October of 2019, the line designation was transferred to United Way of Ross County and outsourced to the United Way of Greater Cleveland's 2-1-1 call center. The database build, maintenance and communication plan will be completed by December 31, 2019 and go live in January of 2020. Data reporting on community need and engagement will begin in the first quarter of 2020.

In addition, the Partners Steering team, with the support of agency partner the Ross County Health District, launched a social media page on Facebook in 2018. The number of people following the page continued to grow into 2019 and has an average weekly reach of over 1,000 people.

For Strategic Question 2, involving changing health culture of the community, the Steering team outlined a goal focused on establishing a community baseline and improvement plan for health literacy. In addition, the team also outlined a goal to develop and/or align infrastructure including work teams around the priority areas of substance use disorder, mental health, obesity and diabetes, lung and respiratory and child safety and infant mortality.

For the health priority of substance use disorder, the Partners for a Healthier Ross County Steering team worked to create alignment with the already existing Hope Partnership Project, led by Dr. John Gabis, Ross County Coroner and Primary Care Physician of Adena Medical Group. This well-integrated community collaboration between court systems, law enforcement, healthcare, treatment and community resource agencies has been able to realize reductions in overdose deaths in 2017, 2018 and 2019 with projects held at various partner agencies that focus on harm reduction, intercept and on-demand navigation to treatment services. See work plan in the Appendix for more detail.

For the health priority of mental health, the Partners Steering team worked to re-establish the Ross Mental Health Forum, a collaboration among various mental health service providers. Dr. Jim Hagen agreed to lead the forum and re-establish collaboration among agencies focused on all populations. Through data evaluation and community and agency feedback, the forum identified in 2017 the judicial system as a critical intercept of those with chronic mental health issues and prioritized this as a focus area. In October of 2018, the forum conducted an intercept mapping to identify gaps in care and community resources for the mental health population. This team is currently working with the county jail to improve medication and support services to reduce recidivism and improve case plan compliance. See work plan in the Appendix for more detail.

For the health priority of obesity and diabetes, Partners Senior Advisory Council Member and CEO of the Ross County YMCA, Steve Clever, convened the LiveWell Ross work team, focused on reducing obesity and diabetes. Through root-cause analysis and local health system data review, this team is focused on prevention through improving activity and nutritional habits of children in Ross County. The team is working to partner with all seven school districts to educate on nutritional guidelines and

increase opportunities for children to be active in Ross County. In 2018 the team completed a nutritional survey of Ross County schools utilized that information in 2019 to create a Healthy Celebrations Guide and introduce concepts to school nutrition coordinators to improve school food options and standards. See work plan in the Appendix for more detail. Partner for a Healthier Ross County Partner, the Ross County Health District, also received a Creating Healthy Communities grant in October of 2019 to support expanding these efforts.

For the health priority of lung and respiratory, the Partners for a Healthier Ross County Steering team coordinated a team to outline strategies around these issues. The work team quickly decided to break out into two groups. One group would focus on tobacco prevention and cessation (a top health behavior) and the other would focus on air quality. The Ross County Air Quality Committee convened in late 2017 and has worked with outside consultants and Ohio EPA to identify opportunities and strategies to develop an Ohio EPA backed air quality improvement plan. In 2018 the team utilized data to assess inventory emissions and census tracts in the county that could benefit from monitoring. An outside consultant assisted the team in identifying a low-cost smaller monitor to begin data collection on PM2 and PM10. Three monitors went live in early 2019 and the Ohio EPA will begin assisting with evaluation of the data in last quarter of 2019. See work plan in the Appendix for more detail.

The BreatheWell Ross work team, led by Kim Hardesty, Community Health Specialist at the Ross County Health District convened in early 2017 to focus on tobacco prevention and cessation. This team reviewed best practice recommendations set by the CDC within communities. Utilizing their top five recommendations, the team in 2018 partnered with the City of Chillicothe to expand smoke free public spaces policy in all Chillicothe City Parks. The same was achieved in 2019 with the Ross County

Parks. In addition, the team has coordinated and disseminated smoke free policy workplace tool kits for local businesses through a partnership with the Chillicothe-Ross Chamber of Commerce, coordinated a butt-pickup event with Chillicothe City Schools in Yoctangee Park and received a grant to hire a full time tobacco prevention specialist for Ross County through the Ross County Health District. The grant is also supporting prevention and cessation opportunities awareness across the county through multiple venues including schools working to reduce vaping among tweens and teens. See work plan in the Appendix for more detail.

For the health priority of child safety and infant mortality, the Partners Steering team started by reviewing local infant mortality data, including a deeper dive with the child fatality review committee aligned with the Ross County Coroner's office. This information seeking yielded that most of the infant deaths that have occurred in Ross County in the last several years were mostly due to child safety issues – unsafe sleeping conditions, child abuse and/or neglect.

After further review and input from Ohio Department of Job and Family Services, the Steering committee determined that creating a new work team may be counter-productive to the work already being done by the Ross County Family and Children First Council, so an alignment with the committee and its work that state mandated collaborative already did around child safety. However, over the course of 2018 and 2019, the group struggled to identify specific areas where the Partners for a Healthier Ross County could work to support the efforts of this group. At a 2019 planning meeting of Partners for a Healthier Ross County, it was determined that a new group must be started in order to focus on child safety awareness issues such as safe sleep and community culture change around parenting.

Through the process and collaboration in all of the Partners for a Healthier Ross County's Steering Committee and work teams, two other community issues - access to care and transportation - also became identified as environmental issues that must be prioritized to impact health improvement. In 2018, the Ross County Health District coordinated the Ross County Mobility Planning team, focused on completing a mobility plan for the county to improve transportation issues for those seeking health services. The team received a grant in 2019 to fully fund these efforts and bring in a mobility coordinator for the community in January of 2020.

In 2018, member agencies of the Partners for a Healthier Ross County – Adena Health System, Hopewell Health Center, the Ross County Health District and outside partner CliniSync, convened a Medicaid Collaborative focused on improving

access to care in the community and reducing non-emergent use of the local emergency room. By utilizing GIS mapping of population health data and comparing it to a GIS mapping of local health infrastructure, an east side quadrant of Chillicothe, OH was identified as a high need area. Through the partnership with Chillicothe City Schools and a financial investment of over \$300,000 by Adena Health System and Hopewell Health Center, a portion of the former Mt. Logan Elementary School was renovated with a primary care clinic that provides on-demand access and later hours to meet the primary care needs of patients in those areas.



COMMUNITY PROFILE

Ross County, Ohio

Ross County is located in rural, south central Ohio (Figure 2) and is one of Ohio's 32 Appalachian counties. The county covers 688.5 square miles and is Ohio's second largest county in terms of geographic area. Only about three percent is used for residential, commercial or industrial purposes (Ohio Development Services Agency 2014). Over 44% of the land is forested and more than 38% is farmland. The remaining 14% is pasture.

The population of Ross County is 76,981 (U.S. Census Bureau 2018). Approximately 21,738 live in the county seat, Chillicothe. It is divided into two Congressional Districts (2nd and the 15th) and contains the population patterns and distinct economic conditions inherent of the Appalachian region of the U.S. These include challenges such as low educational attainment, limited economic diversification and growth.

Community Assets

Seven total community capitals were assessed in a separate study conducted in the fall of 2015 as part of a Ross County Chamber of Commerce planning exercise and are provided for this report (Jones 2015). These include natural, cultural, human, social, political, financial and built capital. In addition, governance of the region was also researched. The following provides a summary of each of these assessments.

Natural Capital

The Chillicothe and Ross County region is rich in natural capital, including farmland, two local aquifers that supply the county and surrounding region with water, large tracts of forested land, and wildlife. In addition, natural resources were also inventoried and assessed. Almost half of Ross County (400,000 acres) is covered in trees, with 10 total acres inside the city of Chillicothe alone. This makes the forested areas of the region one of the most important natural capital



Figure 7: 2016 Ross County Health Priorities

Community Snapshot

Population: 76,981
(population declining)

Percent with four year college degree or higher: 16%

Median household income: \$45,792

Families living below 200% of poverty level: 39%

Median gross rent: \$721

2018 Unemployment Rate: 4.6%

Largest industrial sector: Service, 16,719 jobs (*top three sectors health, hospitality, trade*)

resources. The county also has an ample supply of high-quality water, has rich soil that provides infrastructure to support more than 1,000 farms, and a temperate climate that allows a 140-170 day growing season.

The diversity of the landscape of Chillicothe and Ross County supports a very diverse wildlife population. The numerous bodies of water and acres of forestry provide the habitat for many species of birds, mammals, fish, reptiles, amphibians, butterflies, and insects. In addition, numerous plant species are also abundant. These numerous resources make natural capital one of Chillicothe and Ross County's greatest assets.

Cultural Capital

The Chillicothe and Ross County region has a rich history that dates to pre-historic times. The area has mounds, created by the ancient Hopewell culture, scattered across the county. These mounds were later used by the Native American tribes, who also inhabited the area, in sacred rituals. The Shawnee Tribe was very welcoming to European settlers, including Thomas Worthington, who built an estate here. Worthington was Ohio's sixth governor and helped to make Chillicothe Ohio's first capital city. This history draws many tourists each year who can still tour the mounds and the Adena Mansion, the home of Worthington's family. These tourist attractions are some of the most important cultural capital for the region.

Chillicothe and Ross County are situated in the Appalachian region. The community culture is indicative of this part of the United States. More than a quarter of the population is affiliated with one of the 119 churches in the area, but still resonates the independent nature and clan culture that developed in the first settlers in the area. This often times limits the willingness of individuals and small groups to integrate and collaborate with others. There is also limited diversity among the population.

What is most notable in the 2019 public survey are the significant additions to the survey.

Questions about housing, gender identification, discrimination, personal and childhood trauma were added to the survey. As were Adverse Childhood Experiences (ACE) questions about discrimination, interpersonal violence, and substance abuse. These questions provided a significant indicator to inform a future community mental health assessment, including where people turn first when they feel help is needed.

Human Capital

Chillicothe and Ross County have access to higher education and numerous civic and philanthropic groups that work to increase the capacity of the residents. This includes a branch of Ohio University, the oldest college in the mid-west. The rates of educational attainment are slowly increasing in the region, partially due to the career-ladder opportunities the college makes available to older students. There are also many civic and philanthropic groups that support education with scholarships and volunteer support. These resources are some of the most important human capital for the region.

Social Capital

The numerous groups, including churches in the community, engage much of the population which encourages interaction and collaboration. Currently there are 11.8 associations per 10,000 people, which has continued to increase over the years. There is also a developing community council which is looking at ways to increase this engagement. These are some of the most important social capital for Chillicothe and Ross County.

Local media also helps to engage the public. The Chillicothe Gazette, the only newspaper for the area, has a wide circulation, as does the local radio station WBEX. In addition, there is a community based magazine that is published, Great Seal, as well as a local media outlet Litter Media that reports mostly through internet based venues. Social media utilization has been on the rise over the last 10 years. More than a quarter of the population is now using it and many organizations, including local government agencies, rely on it to inform the public on important issues and events. These resources contribute to the social capital in Chillicothe and Ross County.

Political Capital

Chillicothe and Ross County have a number of organizations and agencies that advocate on the behalf of the population. These include political groups, socio-economic support agencies, disability support services, cancer and crime victim support. In addition, there are a number of civic groups that provide volunteer support for many local causes. These are some of the most important political capital for the area.

There are also a growing number of individuals with economic and outside political capacity also work to influence the community. Most are local business owners interested in developing the region, particularly if it serves to develop their own resources. This is seen predominantly in the downtown Chillicothe area that is experiencing a rebirth since 2015. This, along with their political and economic connections outside the community, also increases their capacity to influence. All of these resources contribute to the political capital of Chillicothe and Ross County.

Built Capital

Chillicothe and Ross County has a tremendous amount of built capital. This includes a state supported road, bridge, water, and communication infrastructure, as well as many historic buildings and sites such as the Hopewell Mounds. There is also a strong civic infrastructure. The local healthcare system provides 261 beds for care. There are also seven local school districts with almost 700 staff members. These are some of the most important built capital for the area.

Housing stock is also ample and newer than in other parts of the state. The median housing value is about \$150,000, making it affordable for a large segment of the population. There is also a limited amount of low-income housing within the City of Chillicothe and across the county. The City of Chillicothe has a growing land bank that is in development to improve access to housing. All of these resources contribute to the built capital of the area.

Governance

Chillicothe and Ross County has a government structure that is supported by a number of committees and commissions. These include seven different city commissions dedicated to planning, development, and community improvement. The county is also supported by a three member board of commissioners that oversees ten different county offices supporting infrastructure, planning, development, and budget management.



2019 Data Review

The Partners for a Healthier Ross County collected a variety of data during 2019 to complete the Community Health Assessment (CHA). This data included both qualitative and quantitative data from both primary and secondary sources.

Qualitative data included survey, key stakeholder interviews and public comment. More than 1,100 surveys were collected from the general public. Response to both primary and secondary data was offered via the Ross County Health District and Partners for a Healthier Ross County social media sites to provide access to the survey and offer public comment opportunity. Both electronic and paper copies of the surveys were collected at local healthcare and social service delivery sites, as well as via social media sharing from Partners agencies. All paper copies of the survey were input into the electronic system by interns of the Ross County Health District. In-person interviews were completed for the stakeholder interviews. The interviewees were determined by the Steering Committee considering their involvement and association with Partners for a Healthier Ross County and their related perspective.

Quantitative data included demographic, socio-economic, health status, health behavior, health outcomes and factors data from multiples sources. These sources included the Ohio Department of Health, the U.S. Census Bureau, and the Ohio Development Services Agency, as well as the local Ross County Health District, local law enforcement, the Adena Health System, and the Ohio Department of Job and Family Services, among others. In addition, new data, including a health inventory and GIS mappings were included in this assessment. Life expectancy data by census was also collected and mapped as part of this portion of the data collection.

COUNTY HEALTH RANKINGS

The economic and educational challenges experienced in Ross County and the surrounding region have been correlated to declining health. Many southern Ohio

counties, including Ross County, are considered some of Ohio's unhealthiest. A 2019 report published by the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, County Health Rankings: Mobilizing Action Toward Community Health outlines the health outcomes and factors impacting health of Ross County residents.

In overall positive health outcomes, the State of Ohio ranked low nationally. All 88 counties in Ohio were then ranked both related to health outcomes and health factors. Rates of death from heart disease, lung cancer, and pulmonary-respiratory disease are all above state and national averages. Ross County is currently ranks 76th out of 88 counties for health outcomes and 57th for health factors, which is an improvement over recent years.

While Ross County has stayed relatively the same over the last couple of years in terms of health outcomes, health factors have shown significant improvement. Access to healthcare has improved. Socio-economic conditions such as employment and educational attainment have also improved. Clinical care is now performing at a level higher than top national performers. All of which have improved overall ranking for health factors and would indicate eventual improvements in health outcomes. Opportunities exist to improve early death related to accidents, social support, mental health and health behaviors like drinking and smoking.

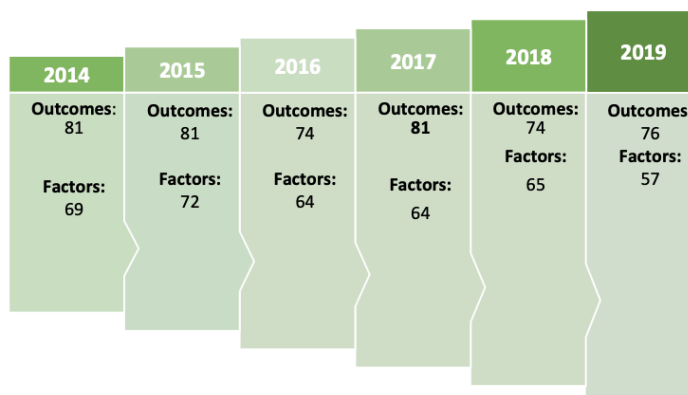


Figure 7: Ross County, Ohio Health Rankings 2014-2019

**Ross (RO)
2019 Rankings**

County Demographics					
	County		State		
Population	77,313		11,658,609		
% below 18 years of age	21.2%		22.3%		
% 65 and older	16.2%		16.7%		
% Non-Hispanic African American	6.0%		12.5%		
% American Indian and Alaskan Native	0.3%		0.3%		
% Asian	0.6%		2.3%		
% Native Hawaiian/Other Pacific Islander	0.0%		0.1%		
% Hispanic	1.2%		3.8%		
% Non-Hispanic white	89.5%		79.1%		
% not proficient in English	0%		1%		
% Females	47.3%		51.0%		
% Rural	58.7%		22.1%		

	Ross County	Error Margin	Top U.S. Performers ^	Ohio	Rank (of 88)
Health Outcomes					77
Length of Life					68
Premature death	9,700	9,000-10,500	5,400	8,500	
Quality of Life					83
Poor or fair health **	19%	18-20%	12%	17%	
Poor physical health days **	4.3	4.1-4.5	3.0	4.0	
Poor mental health days **	4.3	4.1-4.5	3.1	4.3	
Low birthweight	10%	9-10%	6%	9%	
Additional Health Outcomes (not included in overall ranking)					
Life expectancy	75.1	74.5-75.7	81.0	77.0	
Premature age-adjusted mortality	480	460-510	280	400	
Child mortality	40	30-60	40	60	
Infant mortality	7	5-9	4	7	
Frequent physical distress	13%	12-13%	9%	13%	
Frequent mental distress	13%	13-14%	10%	14%	
Diabetes prevalence	13%	10-15%	9%	12%	
HIV prevalence	122		49	213	
Health Factors					57
Health Behaviors					77
Adult smoking **		22-24%	14%	23%	
Adult obesity		32-40%	26%	32%	
Food environment index	7.4		8.7	6.7	
Physical inactivity		26-34%	19%	25%	
Access to exercise opportunities	71%		91%	84%	
Excessive drinking **		16-17%	13%	19%	
Alcohol-impaired driving deaths	28%	21-36%	13%	33%	
Sexually transmitted infections	209.9		152.8	520.9	
Teen births		36-42	14	26	
Additional Health Behaviors (not included in overall ranking)					
Food insecurity	15%		9%	15%	
Limited access to healthy foods	6%		2%	7%	
Drug overdose deaths	48	39-56	10	37	
Motor vehicle crash deaths	17	13-20	9	10	
Insufficient sleep	41%	40-42%	27%	38%	
Clinical Care					8
Uninsured		6-8%	6%	7%	
Primary care physicians	1,640:1		1,050:1	1,300:1	
Dentists	1,840:1		1,260:1	1,620:1	
Mental health providers			310:1	470:1	
Preventable hospital stays			2,765	5,135	
Mammography screening	41%		49%	41%	
Flu vaccinations	43%		52%	47%	
Additional Clinical Care (not included in overall ranking)					
Uninsured adults	8%	6-9%	6%	8%	
Uninsured children	4%	3-5%	3%	4%	
Other primary care providers	781:1		726:1	1,161:1	
Social & Economic Factors					65
High school graduation	90%		96%	85%	
Some college		48-55%	73%	65%	
Unemployment	5.1%		2.9%	5.0%	
Children in poverty	23%	18-29%	11%	20%	
Income inequality	4.5	4.1-4.9	3.7	4.8	
Children in single-parent households	37%	32-43%	20%	36%	
Social associations	11.2		21.9	11.2	
Violent crime	247		63	293	

Demographic Characteristics

A profile of Ross County and its residents was formulated by collecting publicly available data such as vital statistics, economic, and education data. Research shows that sociological and economic factors affect health in complicated ways, so it is understood that this information must be reviewed with public opinion data (provided in the next section) to develop a clear understanding of the state of health of a particular community. The following tables describe the population in relation to diversity.

Population Data

The current total population of Ross County is estimated at 76,931. This is a more than 5% growth since 2010, even though current estimates indicate a population decrease since 2010. This is significantly less growth than what is currently seen in Ohio as a whole and across the U.S.

Age, Sex, Ethnicity, Immigration, Veterans Disability Status

Approximately 62% of the population is between the ages of 18 and 64. About 15% of the population is over the age of 65. The majority of the population is white, with African Americans making up the majority of the region's minority population. Table 2 provides demographic information reported by the U.S. Census Bureau's American Community Survey from 2013-2017 for Ross County.



Table 1: Ross County Ohio Population Patterns

Year	Ross County	Ohio	U.S.
2010	78,064	11,536,504	308,745,538
2015	77,050	11,617,850	320,742,673
2018 (est.)	76,931	11,689,442	327,167,434
Percent Change	-1.45%	1.33%	5.97%

Source: U.S. Census Bureau, 2018

Information was found from Table PEPANNRES: Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2018

Table 2: Ross County, Ohio Population, Age, Race and Gender

Population Demographics		Ross	Ohio	U.S.
Age	Total Population	Percent	Percent	Percent
(Table S0101)	0-17 Years	21.7%	22.6%	22.9%
	18-24 Years	8.0%	9.4%	9.7%
	25-44 Years	25.9%	24.9%	26.4%
	45-64 Years	28.9%	27.3%	26.1%
	65 years or more	15.4%	15.9%	14.9%
Race & Ethnicity	Total Population	Percent	Percent	Percent
(Table CP05)	African American	5.2%	12.3%	12.7%
	Asian	0.6%	2.0%	5.4%
	Hispanic	1.2%	3.6%	17.6%
	American Indian/ Alaska Native	0.02%	0.2%	0.8%
	Native Hawaiian/ Pacific Islander	0.02%	0.03%	0.2%
	White	90.3%	81.9%	73.0%
	Other	0.6%	0.9%	4.8%
	Two or more races	3.4%	2.7%	3.1%
Gender	Total Population	Percent	Percent	Percent
(Table CP05)	Male	52.7%	49.0%	49.2%
	Female	47.3%	51.0%	50.8%
Foreign Born	Total Population	1.0%	4.3%	13.4%
(Table CP02)				
Veterans	Total Population	9.9%	8.4%	7.7%
(Table CP02)				
Disabilities	Total Population	Percent	Percent	Percent
(Table CP02)	Any age	20.0%	13.8%	12.6%
	Under the age of 18	7.9%	5.0%	4.2%
	Ages 18-64	19.0%	11.9%	10.3%
	65 years and over	41.8%	34.8%	35.5%

Source: U.S. Census Bureau; 2013-2017 American Community Survey

Household and Location

The average household size in Ross County is slightly larger in comparison to households across Ohio but smaller than the U.S. average. This is also true for the percentage of households with children under the age of 18 years. More than half of the population (58.7%) of Ross County lives outside its one urban designated area, Chillicothe. This is a significantly larger portion of the population than in other parts of Ohio or the U.S., which is around 20%. Nearly half (47.2%) of children under the age of 18 are being raised by grandparents or other family members.

Table 3: Ross County, Ohio Households

Families and Living Arrangements	Size and Status	Ross County	Ohio	U.S.
Households ¹	Total Households	28,526	4,633,145	118,825,921
(Table CP02)	Average Household Size	2.49	2.44	2.63
	Family Households With Children (under 18 years of age)	28.3%	26.7%	28.2%
	Children Raised by Grandparents/Other Family (under 18 years of age)	47.2%	44.0%	35.5%
	Female Led Households With Children (under 18 years of age)	8.9%	7.2%	6.8%
Marital Status ²	Never Married Males	33.4%	35.0%	36.3%
(Table CP02)	Never Married Females	23.3%	29.0%	30.1%
	Now Married Males	48.3%	49.7%	49.9%
	Now Married Females	50.9%	46.5%	46.6%
	Divorced Males	12.6%	10.9%	9.5%
	Divorced Females	15.2%	13.0%	12.1%
Location ³	Urban	41.3%	77.9%	80.7%
	Rural	58.7%	22.1%	19.3%

Source: U.S. Census Bureau, 2013-2017 ¹

Source: 2013-2017 American Community Survey (US Census Bureau) ²

Source 3: U.S. Census Bureau, 2010 Decennial Census.

Vital Statistics Data

The leading causes of death, particularly premature death, as well as illness, and injury are indicators to the primary health challenges facing a population in a particular region. They can also indicate what health risk factors are most prevalent among a population. The life expectancy of a Ross County resident is 75.1 years of age which is lower than the average age of an Ohioan (77 years of age) or those that live in some of the U.S.'s healthiest communities (81 years of age).

Premature Death

The premature death rate in Ross County is higher (9,700) than Ohio (8,500) as well as the U.S. (5,400). Some related factors, like suicide, infant and child mortality contribute. Rates for these factors are much higher than state and national statistics.

Table 4: Premature Death in Ross County, Ohio

	Ross County	Ohio	U.S.
Premature death rate	9,700	8,500	5,400
Suicide rate	15.4	13.5	13.1
Infant Mortality rate	6.6	7.4	5.8
Child Mortality rate	42.2	57.8	50.6

Source: County Health Rankings, 2019

Leading Causes of Death

The three leading causes of death in Ross County are heart disease, cancer and unintentional injuries. Deaths related to chronic lower respiratory diseases are a very close fourth cause. The rate of death for each of these conditions is significantly higher than state and national averages. More than 55% of unintentional deaths in 2014 and 2015 were due to a drug overdose. However, this statistic has seen steady reduction since 2017 with the broad deployment of Naloxone the community and additional resources to mitigate substance abuse disorder. Traffic accidents with drivers/passengers who are unbelted are the other leading cause of accidental deaths.

While lung cancer deaths are much higher than state and national averages, deaths from prostate and breast cancer are lower.

Table 5: Leading Causes of Death in Ross County

Age-Adjusted Cause of Death (rate per 100,000)	Ross County ¹	Ohio ¹	U.S. ¹	2016-2017 Ross County ² (crude rate per 100,000)
Heart Disease	206.3	187.5	167.7	218.4
Cancer	196.2	176.2	159.4	237.8
<i>Trachea, Bronchus and Lung Cancer</i>	61.2	49.3	40.9	77.8
<i>Prostate Cancer</i>	7.3	7.7	7.8	Unreliable
<i>Colorectal Cancer</i>	17.4	15.8	14.3	25.3
<i>Breast Cancer</i>	11.3	12.5	11.4	13.0
Unintentional Injury	75.6	56.3	43.2	88.8
Chronic Lower Respiratory Diseases	73.9	48.9	41.2	107.6
Stroke	42.8	40.9	37.0	54.4
Diabetes	34.1	25.4	24.4	48.6
Total Death Rate	946.7	824.9	730.4	1,115.9

Source: Centers for Disease Control and Prevention, 2012-2017, CDC Wonder, 2012-2017, obtained from:
<https://wonder.cdc.gov/>

Population Health

The prevalence of certain health conditions as well as disease can provide insight to leading causes of death in a population in a particular region. They can also indicate what health behaviors are most prevalent among a population.

Obesity and Related Issues

More than 29% of Ross County's residents are considered overweight, with almost 36% being obese. Obesity rates are considerably higher than state (30.1%) and national averages (27.1%). The percentage of the population with other health conditions – diabetes, high cholesterol, high blood pressure and heart disease – is also higher than state and national averages.

Table 6: Obesity, Diabetes, Blood Pressure and Heart Disease in Ross County

Illness and Disease	Ross County	Ohio	U.S.
Obese ²	35.9%	32%	31%
Diabetes ³	13%	9.5%	8.7%
High Cholesterol	35%	37%	22%
High Blood Pressure	33%	28%	23%
Heart Disease	50%	48%	47%

Source: Centers for Disease Control and Prevention, 2016

Source 2: 2015 BRFSS Data, as compiled by County Health Rankings, 2019

Source 3: CDC, Diabetes Atlas, 2015

Respiratory Issues

Pulmonary and respiratory issues are also prevalent in Ross County. More than 22% of the population experiences asthma, which is considerably higher than state (13.8%) and national (13.4%) averages.

Table 7: Asthma and COPD in Ross County

Illness and Disease	Ross County	Ohio	U.S.
Asthma	23.3%	14.2%	8.3%
Ever been told they have asthma ²	25%	13.7%	14.2%
COPD	6.9%	7.6%	6.4%
Ever told they had COPD ²	7.2%	8.3%	6.5%

Source: Center for Disease Control and Prevention, 2016

Source: Ohio Department of Health Vital Statistics 2016

Source 2: CDC, BRFSS, 2017

Cancer

Of all cases of cancer experienced in Ross County, breast cancer, lung and prostate cancer are most often experienced. The rate of breast cancer occurrence in Ross County (117.6) is less than state (126.2) and national (126) averages. The same is true of prostate cancer occurrence. The occurrence of lung, cervical and colorectal cancer however is higher, with lung cancer occurrence being considerably higher (94.7) than state (69.3) and national (54.6) averages.

Table 8: Ross County Cancer Incidence Rates per 100,000 (2011-2015)

Forms of Cancer	Ross County	Ohio	U.S.
Breast Cancer	117.6	126.2	126.0
Cervical	11.4	7.6	7.4
Lung Cancer	94.7	69.3	54.6
Colon and Rectum	42.6	41.7	39.4
Prostate	66.0	108.0	112.6
Ovarian	15.2	11.4	11.6
Testicular	3.8	5.6	5.7
Oral Cavity & Pharynx	13.3	11.7	11.3
Larynx	5.7	4.1	3.0
Esophagus	5.4	5.1	4.2
Brain	7.3	6.9	6.4

Source: Ohio Department of Health County Cancer Profile 2017

Source: Ohio Department of Health, Ohio Cancer Atlas 2019, obtained from:

https://odh.ohio.gov/wps/wcm/connect/gov/9047e9b6-2e98-4f9a-b7fa-d3ffd6397b20/Ohio+Cancer+Atlas+2019.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18M1HGGIK0N0JO00QO9DDDDM3000-9047e9b6-2e98-4f9a-b7fa-d3ffd6397b20-mEhAtCQ

Sexually Transmitted Disease Data

The overall rate of occurrence for sexually transmitted disease is considerably lower than state and national averages.

Table 9: Ross County Sexually Transmitted Diseases

	Ross County	Ohio	U.S.
Sexually Transmitted Diseases			
Chlamydia (rate per 100,000)	209.9	619.8	497.3
Gonorrhea (rate per 100,000)	106.3	209.9	174.0
HIV (rate per 100,000)	N/A	217.6	365.5
Hepatitis C (rate per 100,000)	N/A	1.6	1.0
Hepatitis A (rate per 100,000)	N/A	0.3	0.6

Source: Centers for Disease Control and Prevention, National Centers for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2016, obtained from: <https://www.cdc.gov/nchstp/atlas/index.htm>

Maternal Health

The rate of low birth weights in Ross County is higher than the state average. The rate of maternal smoking is significantly higher (27.3%) than the rest of Ohio (14.4%). The number of women receiving prenatal care within their first trimester of pregnancy is considerably lower (68%) than the rest of Ohio (83%).

Table 10: Maternal Health in Ross County

	Ross County	Ohio
Maternal Health		
Low Birth Weight	9.7%	7.1%
Very Low Birth Weight	1.3%	1.5%
Pre-term Birth	11.4%	6.5%
Maternal Smoking	23%	19.4%
First Trimester Prenatal	68%	83%
Breastfeeding	N/A	87.1%
Unmarried	51.5%	43%
Unintended Pregnancy	N/A	34.2%
Smoking During Pregnancy ²	27.9%	14.4%

Source: Ohio Department of Health, Data Warehouse 2017

Source 2: Ohio Department of Health, Ohio State Health Assessment: obtained from:

https://analytics.das.ohio.gov/t/ODHPI/PUB/views/SHA_DRAFT_Domain_PopHealth/10_PopHealth?&linktarget=_self&isGuestRedirectFromVizportal=y&embed=y

Birth Rate

The crude rate of birth in Ross County is similar to the state average and slightly below national average. The rate of teen births per 100,000 is significantly higher than the state and national rates.

Table 11: Birth Rates in Ross County

	Ross County	Ohio	U.S.
Birth Rates			
Total Births	862	136,890	3,855,500
Teen Birth Rates (Ages 15-19)	39	26	18.8
Crude Birth Rate	11.1	11.8	12.0

Source 2: CDC Wonder, 2017 Natality

Source Ohio Department of Health, Vital Statistics 2016

Child Health

More than 600 children were screened for lead exposure in 2018 with 2% testing with elevated blood levels.

Table 12: Birth Rates in Ross County

	Ross County	Ohio	U.S.
Birth Rates			
Total Births	862	136,890	3,855,500
Teen Birth Rates (Ages 15-19)	39	26	18.8
Crude Birth Rate	11.1	11.8	12.0

Source 2: CDC Wonder, 2017 Natality

Source Ohio Department of Health, Vital Statistics 2016

Oral Health

Oral health problems for children in Ross County are higher than the rest of state. More than 20% of children have untreated cavities.

Table 13: Oral Health in Ross County

	Ross County	Ohio	U.S.
Oral Health			
Percentage of children with untreated cavities	20.8%	17%	N/A
Percentage of children with one or more dental sealants	57.9%	49%	N/A
Percent of children with a history of tooth decay	54.5%	51%	N/A

Source: Ohio Department of Health, 2015-2016

Source: Centers for Disease Control and Prevention, National Centers for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2016, obtained from: <https://www.cdc.gov/nchhstp/atlas/index.htm>

Health Behaviors

The prevalence of certain health behaviors can serve as early indicators for a number of health conditions and diseases, as well some causes of death. Nutrition, fitness, and other behaviors for Ross County were researched from public health information, as well as surveyed within the population. According to data from the Centers for Disease Control, more than 29% of Ross County residents are not engaging in enough physical activity or getting enough fruits and vegetables in their diet. Alcohol consumption is not as high as other parts of Ohio and the U.S. but smoking prevalence continues to be much higher.

Table 14: Health Behaviors in Ross County

	Ross County	Ohio	U.S.
Health Behaviors			
Physical Inactivity	30%	25%	19%
Not Consuming Fruit Daily	N/A	37.7%	36.6%
Excessive Drinking	16%	19%	18%
Current Smokers	23.4%	22.5%	16.3%

Source: CDC BRFSS Data, as compiled by County Health Rankings, 2019

Source: Source: Ohio Department of Health, Data Warehouse 2017

Accidental Death

Accidental death is a leading cause of death in Ross County. Closer review reveals drug overdoses and traffic fatalities being the majority of those deaths. Local data is collected through the Ross County Coroner's Office, Ross County Health District and the local State Highway Patrol Outpost.

Drug Overdose Deaths Drug overdose deaths continue to be the leading accidental death cause in Ross County Ohio, although community-wide deployment of Narcan has decreased deaths over the last few years. The following table shows the number of deaths since 2016.

Table 15: Drug Overdose Fatalities, Ross County, Ohio

Overdose Fatalities	2015	2016	2017	2018
Drug related	11	6	12	14
Heroin	20	19	11	16
Fentanyl	11	N/A	14	26
Other Opiates	16	N/A	15	4
Carfentanil and other Fentanyl	N/A	1	9	2
Meth	N/A	4	6	12
Total	40	44	34	32

Traffic Safety

Traffic safety In 2016 through 2019 traffic more than half of traffic related fatalities were due to drivers not wearing seat belts. This trend appears to be increasing with 66% of traffic fatalities involving unbelted drivers in 2018. Preliminary data from the Ohio State Highway Patrol indicates that as of 2019 the trend is continuing to worsen.

Table 16: Unrestrained Traffic Fatalities, Ross County, Ohio

Fatalities	2016	2017	2018
Restrained	6	3	6
Unrestrained	11 (65%)	3 (50%)	10 (66%)
Total	17	6	16

Healthcare System

The Ross County community has a regional medical center/hospital (Adena Regional Medical Center) serving the broader community as well as a regional medical center dedicated to serving veterans (Chillicothe VA Medical Center). Both of these facilities have emergency departments, as well as inpatient psychiatric units. The community also has three community health clinics, one federally qualified health center (FQHC) and a free clinic, providing a wide range of options to access medical care.

Healthcare System Utilization

There is one hospital in Ross County, the Adena Regional Medical Center. The 261 bed hospital provides emergency services, cancer care, orthopedics, cardiology, women's and children's healthcare, in addition to other specialty services. The following provides information utilization of services by the population.

Table 17: Local Hospital Utilization

Services	2018 Utilization
Inpatient Hospital Utilization	132
Emergency Department Utilization	418

Source:

IP/ED Discharges - OHA Insight, CY 2018

Population - 2010 US Census Data

US Utilization - Analysis of American Hospital Association Annual Survey data, 2016, for community hospitals.

US Census Bureau: National and State Population Estimates, July 1, 2016.

Healthcare Service Access

Ross County has a partial medically underserved area (MUA) designation, as well as a partial medically underserved population (MUP). This is due to the limited number of providers who access Medicaid and the geographic isolation experienced in the more rural areas of the county. The area is considered a healthcare provider shortage area (HPSA) due to limited access for some specialty services.

Table 18: Healthcare Availability in Ross County

Service Access	MUA/MUP	HPSA Primary Care	HPSA Oral Health	HPSA Mental Health
Ross County	Partial	Facilities Only	Whole Low Income Population	Whole county

Source: U.S Department of Health of Health and Human Services, 2017

Healthcare Provider Access: Primary Care, Oral Health and Mental Health

Ross County has some limited capacity to provide healthcare services. There are currently 1,640 patients for every primary care provider. There are 1,840 patients for every dentist in Ross County. The number of mental health providers has increased to improve access to mental and behavioral health services. There is now a provider for every 340 patients in Ross County. This ratio is better than Ohio (470:1) and nearing some of the top U.S. performers. Ross County's clinical care is rated 8th out of 88 counties in Ohio, helping to improve its health factors.

Table 19: Healthcare Provider Access in Ross County

Provider Access	Ross County	Ohio	U.S.
Patient to Provider Ratio			Top U.S. Performers
Primary Care ₁	1,640:1	1,300:1	1,050:1
Oral Health Care ₂	1,840:1	1,620:1	1,260:1
Mental Health Care ₃	340:1	470:1	310:1

Source 1: Area Health Resource File, 2016, as compiled by County Health Rankings and Roadmaps, 2019

Source 2: Area Health Resource File, 2017, as compiled by County Health Rankings and Roadmaps, 2019

Source 3: CMS, National Provider Identification, 2018, as compiled by County Health Rankings and Roadmaps, 2019

Insurance Coverage

Similar to Ohio and the rest of the U.S., less than 6% of Ross County children under the age of eighteen lack health insurance. Nearly half of children in Ross County access healthcare services with Medicaid, which is more than 10% higher than state and national rates.

Table 20: Health Care Services in Ross County

Healthcare Access	Ross County	Ohio	U.S.
Insurance			
Total population without health insurance (under age 65) ₁	7.9%	7.4%	10.5%
Children without health insurance (under the age of 19) ₁	5.4%	4.6%	5.7%
Medicaid			
Insured population using Medicaid ₁	25.2%	21%	20.6%
Children under 18 using Medicaid ₁	48.7%	36.8%	38.6%
Medicaid Births ₂	61.7%	51.8%	47.8%

Source: U.S. Census Bureau, 2013-2017 ₁, (Table S2701)

Source: Child and Family Health Services, Ohio Department of Health 2017 ₂



PUBLIC HEALTH AND PREVENTION

Communicable Disease Control

A Communicable Disease is an illness caused by microorganisms, such as bacteria, viruses, parasites, and fungi. The route of transmission varies by disease and may include direct contact with contaminated body fluids or excretions, contact with contaminated objects, inhalation of contaminated airborne particles, ingestion of contaminated food or water, or transmission from an animal or vector (re: arthropod) carrying the microorganism (CDC, 2019).

Communicable diseases that are of high public health concern are reportable to the Ross County Health District (RCHD) for investigation. The majority of reportable diseases can spread rapidly and cause outbreaks resulting in widespread and potentially severe illness in the community. In Ohio, these diseases are reported to local health district according to the Ohio Administrative Code (OAC) Chapter 3701-3 (OAC, 2019).

The RCHD is responsible for the surveillance and investigation of over 100 different communicable diseases that are reported through a variety of reporting sources including laboratories, physicians, hospitals, infection preventionists, school nurses, or any individual having knowledge of a person suffering from a disease expected to be communicable. Diseases are entered in the Ohio Disease Reporting System (ODRS) by the RCHD Infectious Disease Case Manager. This provides immediate access for ODH to document the distribution of disease in Ohio and to assist in identifying disease outbreaks occurring across the state (ODH, 2015). In 2018, 983 cases of Communicable Diseases were reported among Ross County residents, compared to 755 cases in 2017.

When communicable diseases are investigated and are determined to be a threat to people and communities in Ross County, the Ross County Health District implements control measures, through health education / awareness, enforcement actions, and interventions to help reduce the spread of communicable diseases. This can be done through a variety of measures and in many times is done with cooperation from our local healthcare network and community stakeholders.

Table 21: 2016-2018 Ross County Reported Communicable Diseases

Hepatitis C	699
Chlamydia trachomatis infections	621
Gonorrhea (Neisseria gonorrhoeae)	261
Influenza-Hospitalized	209
Hepatitis B	205
Hepatitis A	94
Campylobacteriosis	41
Salmonellosis	30
Varicella	30
Streptococcus pneumoniae, invasive	29
Syphilis	24
Pertussis	21
Strep Group A, Invasive	21
Legionellosis	17
Cryptosporidiosis	16
Spotted Fever Rickettsiosis	15
Lyme Disease	14
Meningitis, Aseptic	13
Giardiasis	8
Haemophilus influenza, Invasive	8
Shigellosis	8
E.coli Other Shiga Toxin-Producing	6
Mycobacterial, other than TB	6
Ehrlichiosis/Anaplasmosis	5
E. coli O157:H7	4
LaCrosse Virus Disease (LAC)	3
West Nile Virus Infection (WNV)	3
Coccidioidomycosis	2
Hepatitis B (Perinatal)	2
Influenza A Novel Virus	2
Mumps	2
Listeriosis	1
Strep Group B, Newborn	1
Yersiniosis	1
Zika Virus	1

Source: Ross County Health District's Communicable Disease Program and RCHD Annual Reports (2016, 2017, 2018)

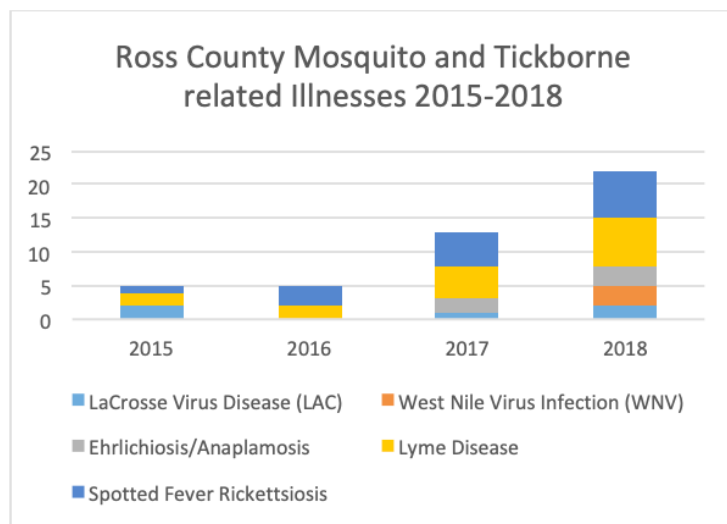


Figure 8: Mosquito and Tickborne related illnesses 2015-2018
Source: Ross County Health District's Communicable Disease Program and RCHD Annual Reports (2016, 2017, 2018)

Over the past several years, RCHD has seen an increase in reported mosquito borne and tickborne related illnesses. These illness are spread to humans through the bite of a tick or mosquito. Ross County Health District's Mosquito Control Program, which was re-established in 2015 through funding made available by the Ohio Environmental Protection Agency help implement control mosquito populations by implementing control measures including source reduction (solid waste, standing water, tire removal), health promotion activities, and insect control to help minimize health related issues related to mosquito borne illnesses in Ross County.

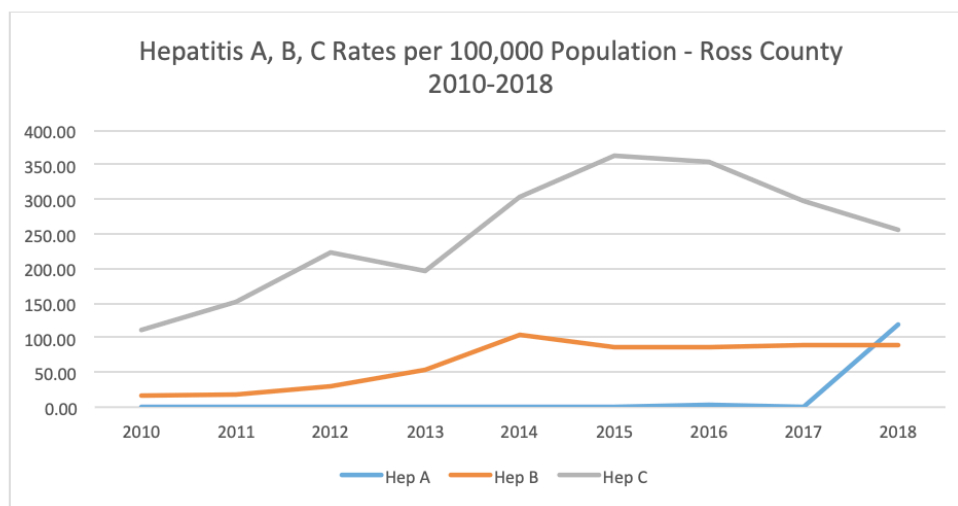


Figure 9: Hepatitis A, B, C Rates for Ross County, Ohio 2010-2018
Source: Ross County Health District Annual Reports 2010 through 2018

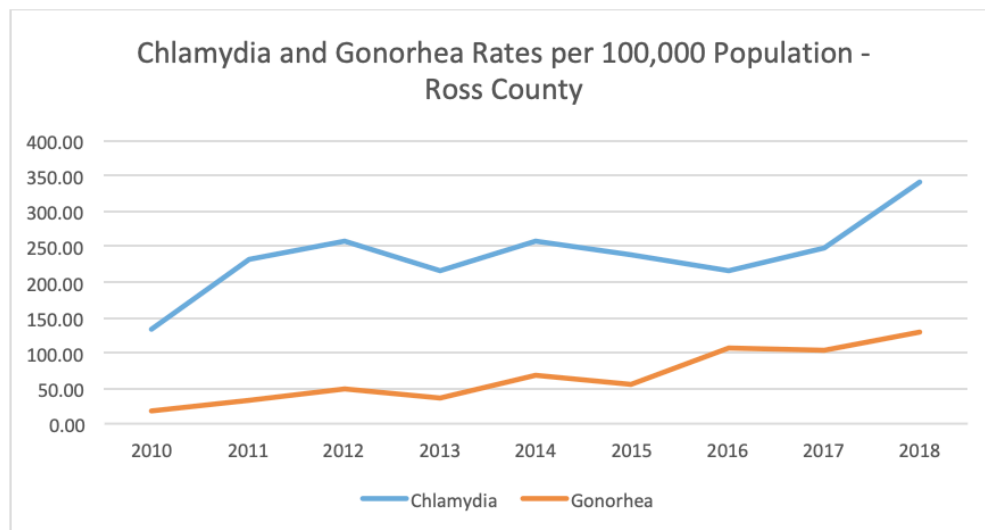


Figure 10: Chlamydia and Gonorrhea Rates Ross County, Ohio 2010-2018
Source: Ross County Health District Annual Reports 2010 through 2018

Public Health Funding

Public health funding for Ross County comes from a variety of funders, including a local 1.0 mil tax levy for Ross County, which brings approximately \$1.3 to \$1.4 in revenue to the Ross County Health District to support foundational public health services and to support essential public health programs, services, and strategies. Additional funding is needed in Ross County outside of the 1.0 mil tax levy. In some cases, program specific services such as food service inspections, water and sewage system permitting and inspections, clinical health services for immunizations, public health nursing, birth and death certificates, and several other services are supported by local fees and revenues. For some public health services, RCHD relies on state and federal funding.

In 2018, RCHD received funding for Injury Prevention, Public Health Emergency Preparedness, Maternal and Child health services from both Federal and State Public Health grants. In 2019, with help from strong community partnerships and community collaborations, RCHD was able to secure additional state and federal grants / funding for multiple public health initiatives including Tobacco Use Prevention and Cessation, Chronic Disease Prevention, Mobility and Transportation advocacy to improve access to healthcare, Opioid Data Sharing and Naloxone Distribution which all correlate with strategies and public health initiatives influenced Partners for a Healthier Ross County's 2016 Community Health Improvement Plan.

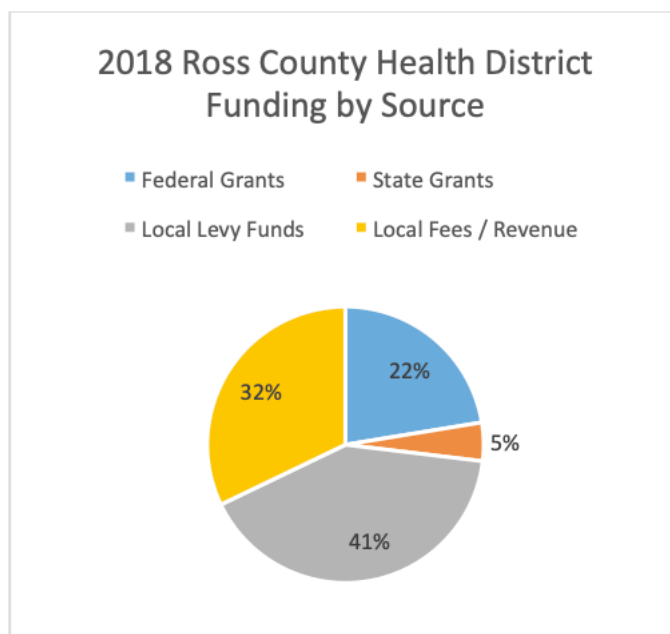


Figure 11: Public Health Funding in Ross County, Ohio 2018
Source: Ross County Health District

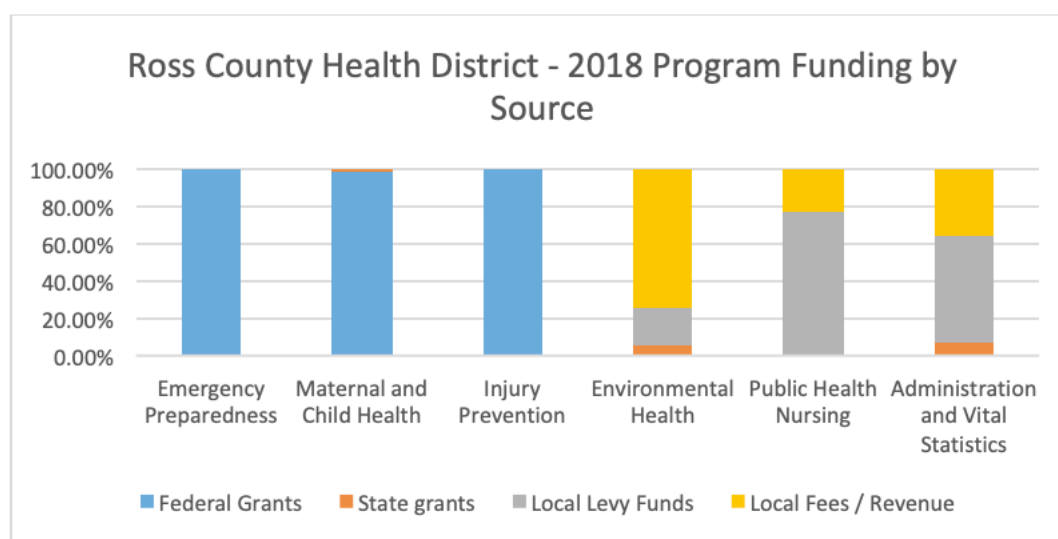


Figure 12: Public Health Funding by Source in Ross County, Ohio 2018
Source: Ross County Health District

Public Health Services and Accreditation

There are many foundational public health services, which in Ross County are supported by a combination of local tax levy dollars, local fees and revenue, and state and federal grants. Figure 13 provides a summary of what is provided in Ross County, Ohio as well as how it is supported by the local government and community.

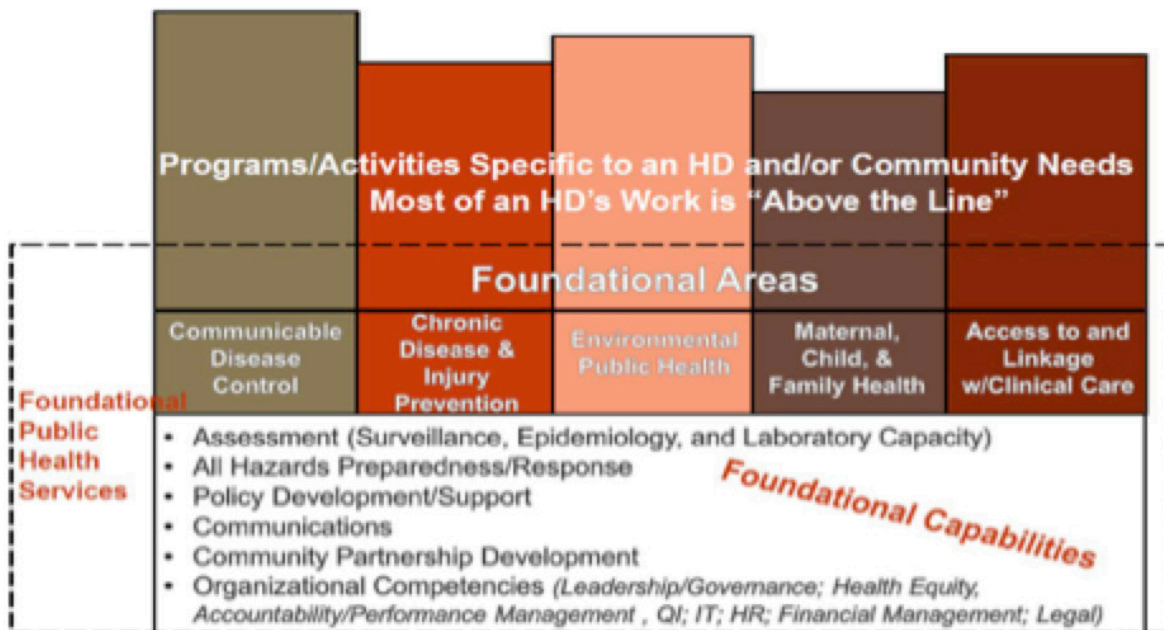


Figure 13: Foundational Public Health Services in Ross County, Ohio

Source: Ross County Health District

Figure 14 outlines the Essential Public Health Services of the public health system. Ross County Health District focuses on providing the 10 essential public health services in many of our programs, services, and interventions to improve health outcomes in Ross County. Implementing methods from 10 Essential Public Health Services is the foundation of RCHD efforts in becoming a nationally accredited health district.



Figure 14: Essential Public Health Services

Source: Ross County Health District

SOCIAL AND ECONOMIC ENVIRONMENT

The Ross County region has many of the same socio-economic conditions prevalent in other part of the Appalachian region. Educational attainment is considerably lower than in other parts of Ohio and U.S., particularly for advanced education. Median individual and family income is also lower. The following provides a breakdown of education, employment, industry, occupations, income and poverty for Ross County and how it compares with the rest of Ohio and the U.S.

Education

Approximately 13% of the adults in Ross County have not graduated from high school. This percentage is higher than both Ohio (10.2%) and national (12.6%) averages. Fifteen percent of the population holds a Bachelor's degree or higher, which is significantly lower than state and national averages.

Table 22: Ross County, Ohio Educational Attainment

Education Level (persons 25 years of age or older)	Ross County	Ohio	U.S.
No High School Diploma	13.3%	10.2%	12.6%
High School Graduate	43.4%	33.6%	27.3%
Some college, no degree	18.2%	20.5%	20.8%
Associate Degree	9.1%	8.5%	8.3%
Bachelor's Degree or Higher	16%	27.2%	30.9%

Source: U.S. Census Bureau, 2013-2017, (Table CP02)

Employment Status

The unemployment rate in Ross County (4.1%) is currently comparable to the Ohio and U.S. average. However, nearly 47% of the population is not in the workforce. This is higher than the state and national averages (36%).

Table 23: Ross County Employment Data

Employment Status	Ross County	Ohio	U.S.
Civilian Labor Force (16 years of age or older)	53.3%	63.1%	63.0%
Employed _a	49.2%	59.1%	58.9%
Unemployed _a	4.1%	4.1%	4.1%
Not in the workforce _a	46.7%	36.8%	36.6%

Source: U.S. Census Bureau, 2013-2017, (Table DP03)

Crime

The rate of both property crime and violent crime in Ross County is significantly less than the rest of Ohio and the U.S.

Table 26: Crime in Ross County

Violent Crime	Ross County	Ohio	U.S.
Property Crime (rate per 100,000 population)	1,672.6	2419.1	2362.2
Violent Crimes (rates per 100,000 population)	120.6	297.5	382.9

Source: Federal Bureau of Investigation 2017

Industry and Occupations

The private sector provides more than 65% of the employment opportunities in Ross County with service providing organizations providing more than 45% of those opportunities. More than 20% of the population is employed by a local, state, or federal agency. Ross County has more than 45% of its workforce employed in trade, transportation, and utilities occupations (16.6%), education and health services (15.4%), and manufacturing occupations (13.3%).

Industrial Sector	Occupations	Average Employment
Private Sector		21,688
<i>Goods Producing</i>	Natural Resources and Mining	135
	Construction	711
	Manufacturing	4,123
<i>Service Providing</i>	Trade, Transportation and Utilities	5,462
	Information	280
	Financial Services	619
	Professional and Business Services	1,487
	Education and Health Services	5,192
	Leisure and Hospitality	3,185
	Other Services	495
Public Sector		
	Federal Government	1,635
	State Government	1,658
	Local Government	3,169

Table 24: Ross County Economics, 2016

Source: Ohio Development Services Agency, 2018 Ross County Profile, as obtained from: <https://development.ohio.gov/files/research/C1072.pdf>

Income & Poverty

The per capita, median, and mean household incomes in Ross County are lower than the state and U.S. averages. Poverty rates are also higher than state and national averages but lower than the rest of the region. More than 25% of children are living at or below 100% of the Federal Poverty Level (FPL). More than 75% of African American children are living in poverty as compared with 20% of white children.

Table 25: Ross County Income and Poverty Data

Income & Poverty	Ross County	Ohio	U.S.
Income			
Per Capita Income ₁	\$22,714.00	\$29,011.00	\$31,177.00
Median Household Income ₁	\$45,792.00	\$52,407.00	\$57,652.00
Poverty			
Individuals Below Poverty Status (FPL 100%) ₁	18.2%	14.9%	14.6%
Children (under 18 years) Below Poverty Status (FPL 100%) ₁	25.3%	21.3%	20.3%
Children Eligible for Free/Reduced Lunch	49.0% ₂	44.9% ₂	52.1% ₃

Source 1 - U.S. Census Bureau, 2013-2017, (Table DP03)

Source 2 - National Center for Educational Statistics 2015-2016, as compiled by 2018 County Health Rankings

Source 3 - National Center for Education Statistics, 2015-2016, obtained from: https://nces.ed.gov/programs/digest/d17/tables/dt17_204.10.asp?current=yes

PHYSICAL ENVIRONMENT

Information on environmental and community factors health - food, air, water, housing and crime - can provide insight into many of the underlying issues that impact the health of a community. Data on food and housing access and security, air and water quality, and safety was collected to inform on how residents of Ross County access basic needs.

Air Quality

Ambient air quality monitoring was not started until early 2019 by the Ross County Health District. While data is not yet available for review yet for the 2019 community health needs assessment, toxics release inventory emissions inventory (TRI) is available from the EPA to provide some insight into what pollutants are emitted in the community by local industry, as well car emissions etc. This data was also available by census tract so geographical information system mapping tool was utilized to understand health risk by area of the community (below). Methanol and hydrogen sulfide, emitted by local paper mill, continue to be the largest pollutants emitted in the community.

Table 27: Toxics Release Inventory, Ross County, OH, 2017

Chemical	Emissions	Air Emissions	Surface Water	Disposal
ACETALDEHYDE	60	25,000.00	230	0
AMMONIA	500	77,000.00	3,000.00	0
BARIUM COMPOUNDS	0	150	0	0
CATECHOL	0	0	80	0
CHLORINE	10	250	0	0
CHLORINE DIOXIDE	0	53,000.00	0	0
CHROMIUM	0	31	0	0
DIISOCYANATES	0	0	0	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS	0	0.0019494	0	0
ETHYLENE GLYCOL	972	0	0	0
FORMALDEHYDE	1	7,300.00	0	0
FORMIC ACID	0	0	710	0
HYDROCHLORIC ACID (1995 AND AFTER ACID AEROSOLS ONLY)	0	160,000.00	0	0
HYDROGEN SULFIDE	1,900.00	14,000.00	0	0
LEAD	0	0	0	996.1
LEAD COMPOUNDS	0	161.3	433.8	0
MANGANESE	0	31	0	0
MANGANESE COMPOUNDS	0	270	48,000.00	0
MERCURY COMPOUNDS	0	36.7	0.1	0
METHANOL	324,447.00	80,000.00	0	0
PHENOL	0	14,000.00	0	0
SULFURIC ACID (1994 AND AFTER ACID AEROSOLS ONLY)	0	170,000.00	0	0
TOLUENE	1,455.00	0	0	0
VANADIUM COMPOUNDS	0	160	240	0
ZINC COMPOUNDS	0	1,190.00	15,000.00	0
Total	329,345.00	602,580.00	67,693.90	996.1

Source: Environmental Protection Agency, 2017

Water Quality

The City of Chillicothe and the Ross County Water Company completed EPA sampling for the aquifers that provide drinking water to the residents of Ross County during 2018. Sampling tests for bacteriological (coliform), radioactive contaminants (pCi/L), inorganic contaminants (lead, fluoride, copper, nitrate, barium), synthetic organic contaminants including pesticides and herbicides, volatile organic contaminants (trihalomethanes and haloacetic acids), and residual disinfectants (chlorine). Neither the City of Chillicothe (City of Chillicothe 2018) nor the Ross County Water Company (Ross County Water Company 2018) received violations as a result of the samplings.

Table 28: Ross County Water Quality Report, 2018

CONTAMINANTS/UNITS	MCLG	MCL	LEVEL FOUND	RANGE OF DETECTION	VIOLATIONS	SAMPLE DATE	TYPICAL SOURCE OF CONTAMINANTS
BACTERIOLOGICAL							
Total Coliform	0	5%>	<5%	N/A	NO	2018	Naturally Present in Environment
Radioactive Contaminants							
Alpha Total pCi/L	0	15	<3	N/A	NO	2016	Erosion of Natural Deposits
Inorganic Contaminants							
Lead - ppb	0	AL=15	<5.0	N/A	NO	2018	Corrosion of Household Plumbing Systems
30 SAMPLES - ZERO OUT OF 30 SAMPLES EXCEEDED 15PPB							
*Copper - ppm	1.3	AL=1.3	.833	.062-.910	NO	2018	Corrosion of Household Plumbing Systems
30 SAMPLES - ZERO OUT OF 30 SAMPLES EXCEEDED 1.30 PPM							
Fluoride - ppm	4	4	0.96	0.81-1.14	NO	2018	Water Additive which Promotes Strong Teeth
Nitrate - ppm	10	10	0.95	<0.5-0.95	NO	2018	Runoff from Fertilizer
Barium - ppm	2	2	0.05	.039-.048	NO	2016	Erosion of Natural Deposits
Synthetic Organic Contaminants Including Pesticides and Herbicides							
NONE DETECTED						2018	(Most Recent Year)
Volatile Organic Contaminants							
THM5 - ppb (total trihalomethanes)	0	80	21.8	20.6-21.8	NO	2018	By-Product of Drinking Water Chlorination
HAA5 - ppb (total haloacetic acids)	0	60	6.6	<6-6.6	NO	2018	By-Product of Drinking Water Chlorination
Residual Disinfectants							
TOTAL CHLORINE - ppm	MRDLG = 4	MRDL = 4	1.6	1.2-1.7	NO	2018	Water Additive Used to Control Microbes

Source: Ross County Water Company, Retrieved from <http://www.rosscowater.org/docs/2018-Water-Quality-Report.pdf>

Public Drinking Water Systems permitted in Ross County Ohio serve an estimated 70,039 people in Ross County. Each water system is permitted by the Ohio Environmental Protection Agency and required to meet water quality parameters as determined by their permit to operate. The locations of the 11 public water systems in Ross County are listed below (from US EPA website <https://ofmpub.epa.gov/apex/safewater/f?p=136:103::NO::>)

Water System Name	Estimated Population Served
BAINBRIDGE VILLAGE PWS	900
CHILLICOTHE CITY PWS	21,725
CHILLICOTHE CORRECTIONAL INSTITUTION	9,000
CLARKSBURG VILLAGE PWS	455
FRANKFORT VILLAGE PWS	1,100
GREENFIELD CHURCH OF JESUS CHRIST PWS	70
HIRNS CORNER PWS	50
KINGSTON VILLAGE PWS	1,219
QUEEN CITY COURT MHP	150
ROSS COUNTY WATER CO INC PWS	35,345
THE OLD HOME PLACE PWS	25

Results of water samples and Drinking Water Advisories for the above Public Water Systems can be obtained from the Ohio Environmental Protection Agency's website at <https://oepa.maps.arcgis.com/apps/webappviewer/index.html?id=5b1c1a32a7954cedb094c11dc7fd87b7>

Food

The food insecurity experienced by Ross County residents is slightly higher (15%) than Ohio and the U.S. as a whole. More than one-fifth of Ross County households (21%) receive SNAP benefits, which is considerably higher than the rest of Ohio (14.2%) and the U.S. (12.6%). There is also less access to grocery stores for Ross County residents.

Table 29: Food Access in Ross County

Food Access	Ross County	Ohio	U.S.
Food Security			
Food Insecure Population ₁	15.0% ¹	14.5% ¹	12.9% ¹
Households receiving SNAP ₂	21.1%	14.2%	12.6%
Number of Food Pantries	36		
Grocery Store Access (establishment rate per 100,000 population) ₂	23.34	29.01	29.72
Fast Food Access (establishment rate per 100,000) ₂	140.03	163.91	172.30

Source 2: U.S. Census Bureau, 2013-2017 American Community Survey (Table S2201)

Source 1: Map the Meal Gap, 2019, Food Insecurity Rate, 2017, as obtained from:

https://public.tableau.com/profile/feeding.america.research#!/vizhome/2017StateWorkbook-Public_15568266651950/CountyDetailDataPublic



Health Infrastructure Inventory

Ross County has many resources that impact the health of the community. In 2018 an inventory of these resources was conducted. The results from the inventory were then also mapped utilizing a geographic information system (GIS) provided by the Ross County Soil and Water Department. The mapping (below) provides a visual to demonstrate the limited resources available to 72% of the county's residents living outside of the City of Chillicothe.

Access to grocery stores that sell fresh fruits and vegetables, fitness facilities other than parks and social support services are very limited to rural residents. Access to convenience marts, including those selling alcohol and tobacco products, is much more prevalent making healthier choices more challenging.

Table 30: Health Infrastructure Inventory for Ross County

Health Element	Resource	Total Inventoried
Fitness	Parks	85
	Fitness Facilities	19
	Athletic Complexes	19
Nutrition	Food Banks	36
	Fresh Produce Drops	7
	Fast Food Restaurants	70
	Grocery (fresh food)	17
	Grocery (frozen, canned only)	31
	Convenience Stores	56
Social Support	Licensed Childcare Facilities	23
	Churches	104
	Clubs	25
	Community Centers	13
	Shelters	3
	Schools	29
Healthcare	Emergency Management Services	23
	Emergency and Urgent Care Services	7
	Dental Services	40
	Primary and Specialty Care Services	39
	Mental Health Services	24
	Hearing Services	7
	Optometric Services	17
	Skilled Nursing Facilities	28
	Pharmacies	14

Community Input

Multiple methods of community input were sought for this community health assessment to inform the process. It is important to note that not all rural communities, particularly those that are Appalachian, have the understanding of the relevance or importance of providing input to the community health assessment process, so it can be difficult to obtain via some routes such as public comment. Therefore, other methods are implored to obtain input into the process.

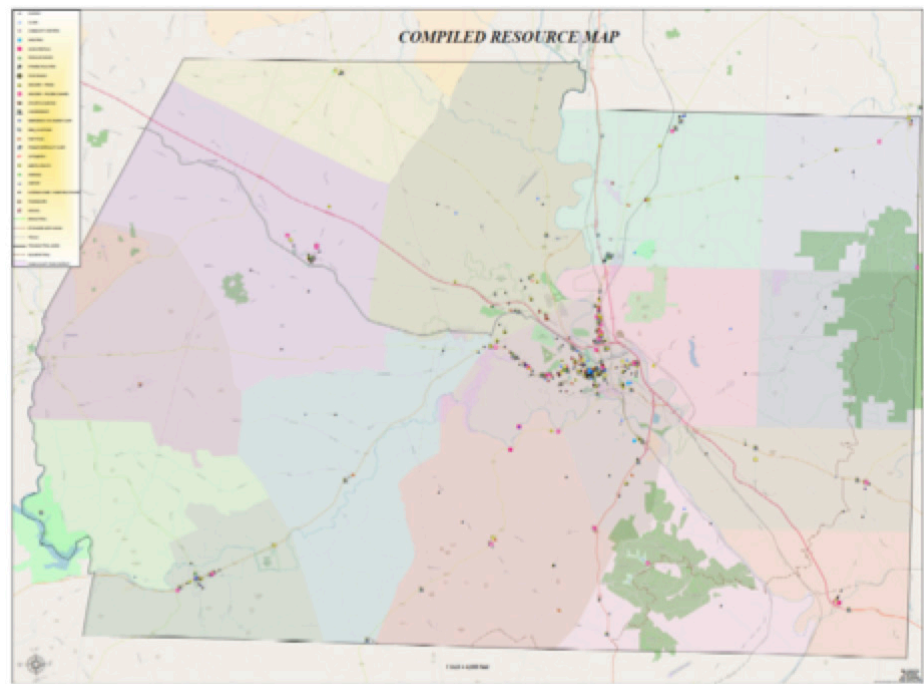


Figure 15: Ross County, OH Health Infrastructure Mapping - Compiled

Over 1250 surveys were taken by residents of Ross County between June 1, 2019 and July 31, 2019. Surveys were distributed throughout the community using various means, including electronic surveys via social media and agency websites, in local medical offices and community agency offices, at the local libraries, Job and Family Services, at local food drops and community events, and with the help of community partners who work with various populations. Analysis of survey results were conducted between August through October of 2019 by the Partners for a Healthier Ross County and the Hospital Council of Northwest Ohio (contracted services).



Introduction: 2019 Community Health Assessment Adult Public Survey:

The Partners for a Healthier Ross County began preparation for the public survey (primary data collection) portion of the Community Health Assessment in April and May of 2019. As part of the survey preparation, a survey instrument was designed using the 2016 Public Survey as a template and additional questions were added to the survey to better understand social determinants that lead to poorer health outcomes when analysis of the survey results. A total of 67 survey questions were included in the survey.

Public surveys were conducted beginning in May of 2019 and continued until late July of 2019. A variety of methods were used in collecting survey responses. Surveys were collected online through use of Survey Monkey and paper copy of surveys were collected in a variety of settings throughout the community and Ross County. Over 1250 surveys were attempted and collected by residents of Ross County. All survey respondents were anonymous. Only surveys from respondents who reside in Ross County were accepted. Respondents less than 18 years of age were excluded.

Analysis of Public Survey results began in August and September of 2019. Cleaning, preparation, and analysis of survey results were completed by the Partners for a Healthier Ross County along with the Hospital Council of Northwest Ohio. After data was prepared and cleaned, a total of 1058 surveys The Hospital Council of Northwest Ohio weighted survey data when analyzed.

During October and November of 2019, final analysis of data was conducted to identify key findings and populations that may be a higher risk for specific health outcomes, unhealthy behaviors, and to identify social determinants that lead to poorer health.

Public Survey Data Findings:

Adult Public Survey Data was cross analyzed to identify subgroups that may have a higher risk for health issues. Data analysis include graphs displaying Total percentage of survey respondents who answered yes to a specific question. Additional cross analysis of the results was then subdivided by Gender (Male / Female), Age (ages Less than 30, 30-64, and 64+), and Income (less than \$25,000 annual income, more than \$25,000 annual income). All findings of survey data were from Adults 18 years or older.

As with many health assessments, it is important to consider the findings of this public survey with limitations and caution. Surveys were collected from a variety of populations in Ross County to get a desired amount of responses (age, race, gender, income, education, etc.) to aid in better understanding of health issues within our community. In all instances, the public surveys were voluntary and anonymous.

Please note: Caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

See Appendix A for the Survey Weighting Table for interpretation of survey results and weightings.

See Appendix B for the Health Outcomes and Behaviors Cross Analysis Tables

Overall Top Health Issues Self-Reported by Survey Respondents (Outcome results include both those who reported currently have the health issue or have had the health issues in the past).

Key Findings for Health Outcomes from Adult Public Survey:

- Mental Health and Overweight / Obesity continue to be health issues experienced by Ross County residents.
- Chronic disease such as diabetes, cancer and heart disease continue be top health issues.
- Asthma and respiratory health continue to be health issues experience by Ross County residents.

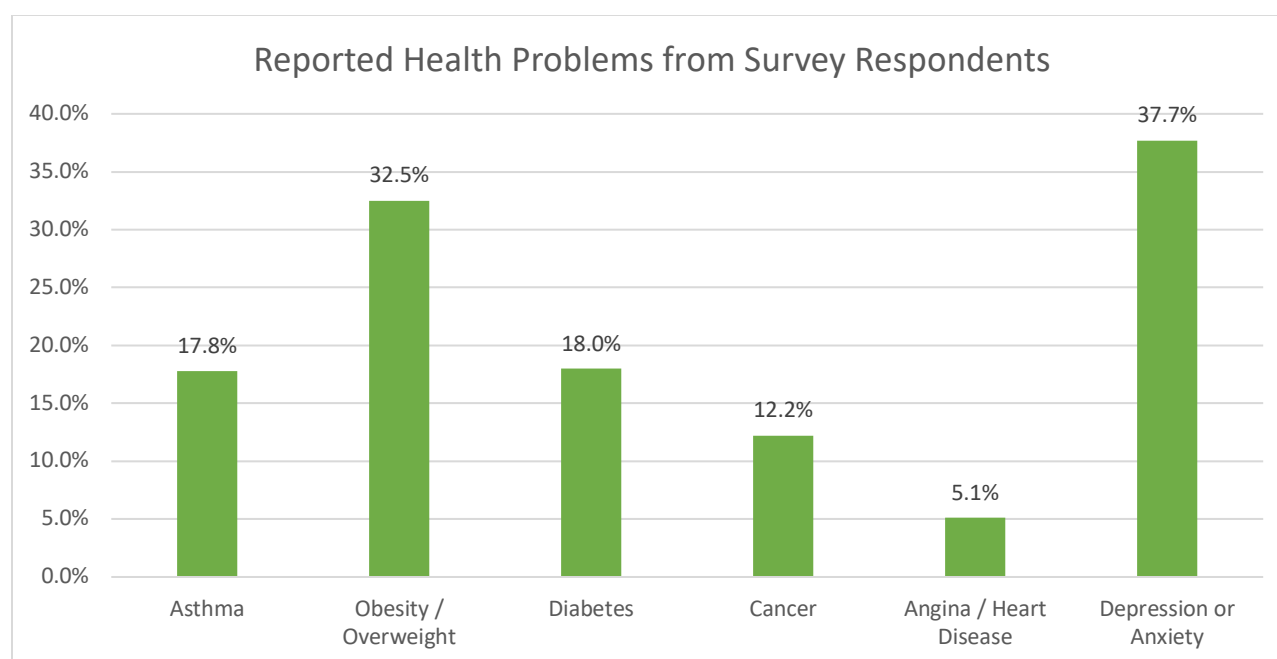


Figure 30: Top Issues Reported by Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

Health Perceptions:

Key Findings:

- Low income and poverty continue to be a leading issue in Ross County.
- Drug abuse continues to be a leading issue in our communities.
- Children need to continue to learn about drug abuse prevention, suicide prevention, and mental health management.
- Adults want to learn more about Drug abuse, Suicide prevention, mental health, nutrition, and tobacco prevention and cessation.
- 46.1% of adults feel they have “Very Good Health” whereas 41.4% of adults feel they have “Fair Health”

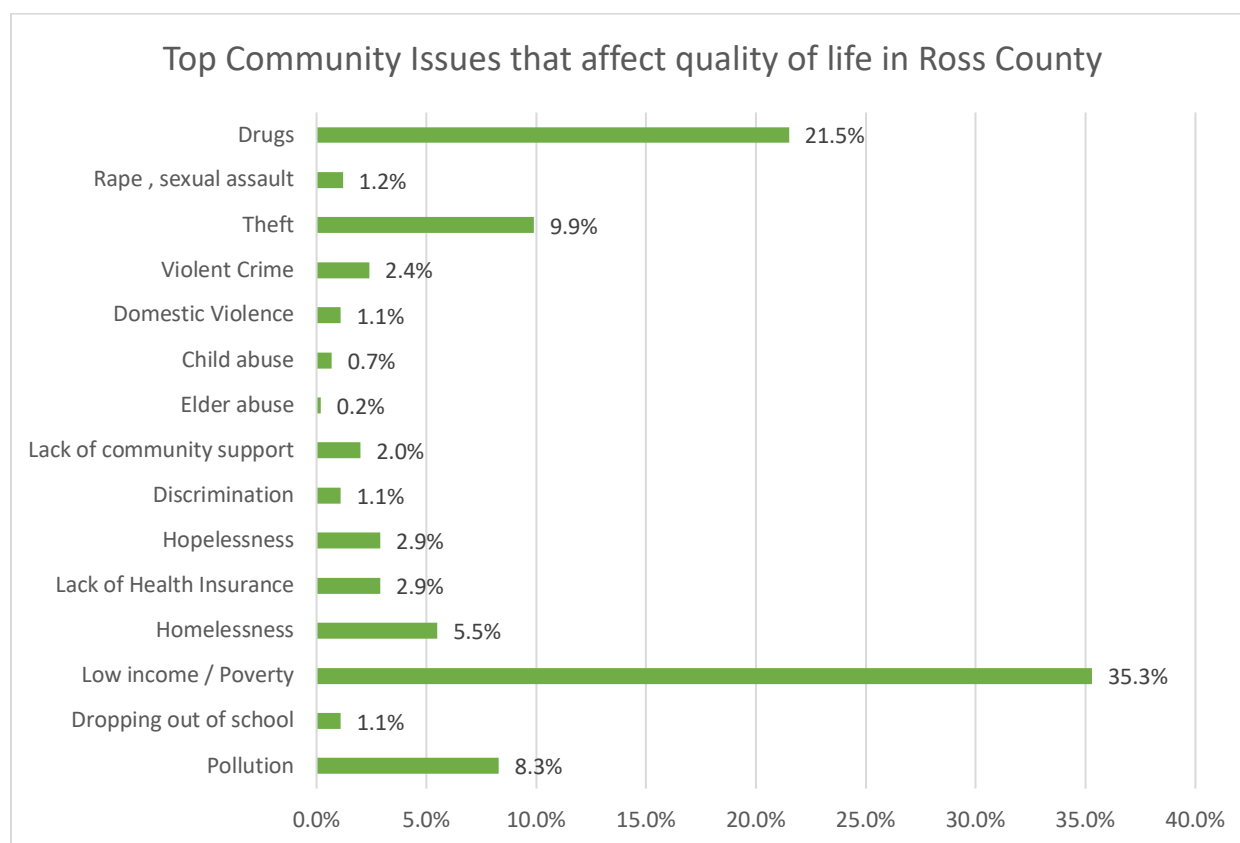


Figure 31: Top Community Issues Affecting Quality of Life in Ross County

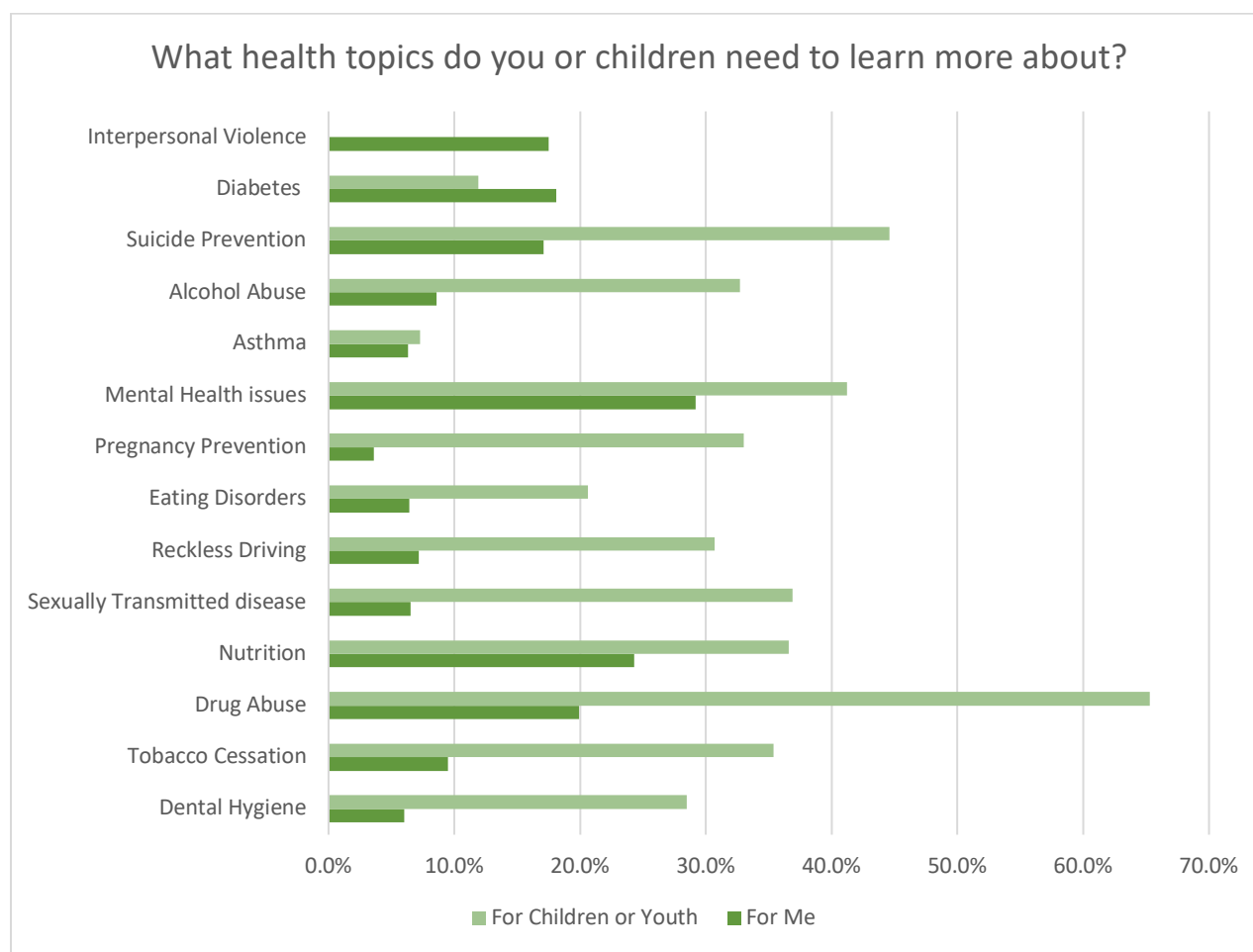


Figure 32: Top Health Topics Ross County Children Need to Know More About

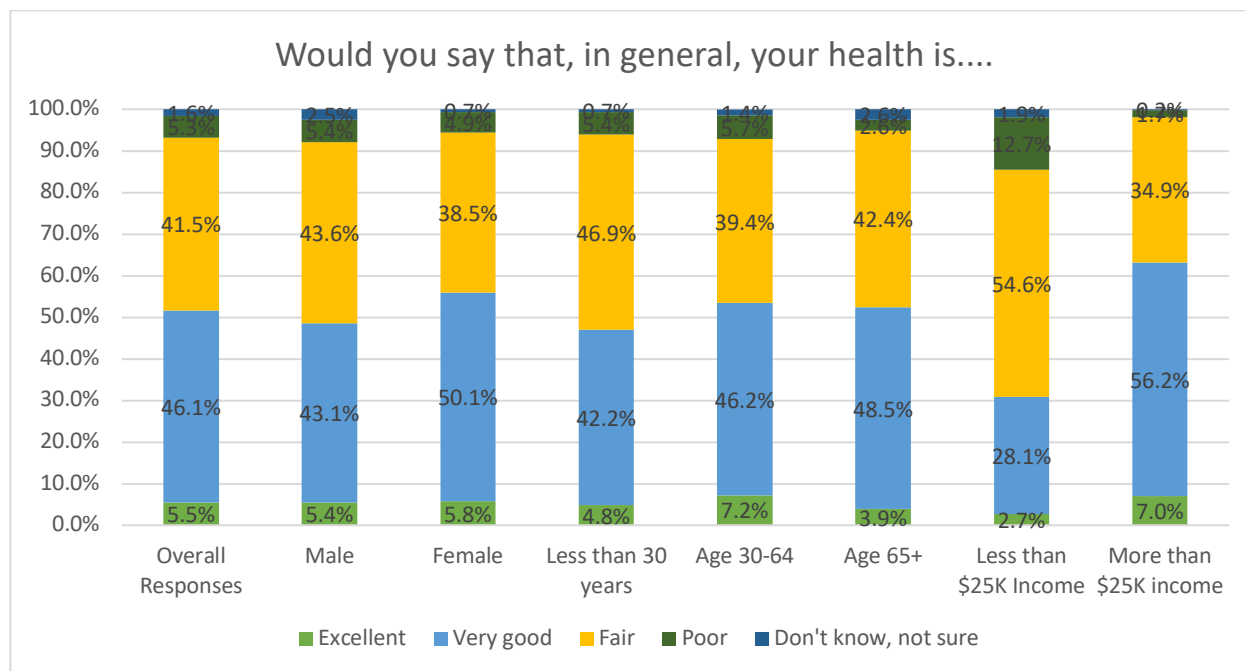


Figure 33: Self-Reported Health Status of Ross County Survey Respondents

Housing:

Key Findings:

- 25% of survey respondents struggle to pay for housing. Of those who have children in their household under the age of 18, 36% say they struggle to pay for housing. 44% of those who made less than \$25,000 annual income struggle to pay for housing.
- 22% of survey respondents said they have experienced unstable housing or homelessness in the past.
- 4.7% of survey respondents said they don't have a permanent home or are homeless.
- 27.6% say they have children 18 years or younger in their home.
- 26.5% say they care for an extended member of their family (grandchild, niece, nephew, sibling, or parent)

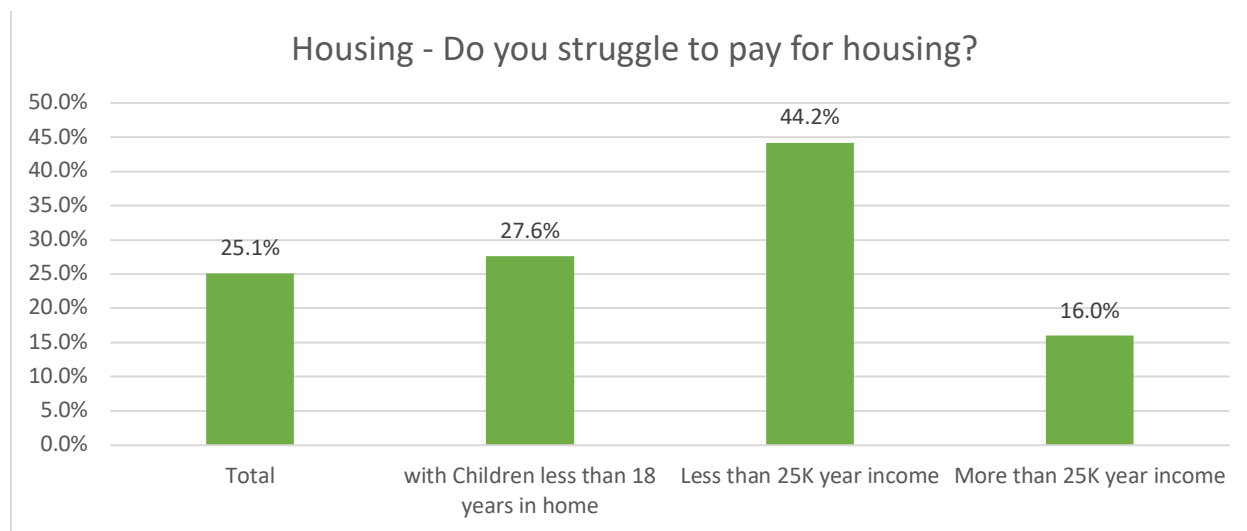


Figure 34: Ross County Survey Respondents Reporting Cost of Housing Burden

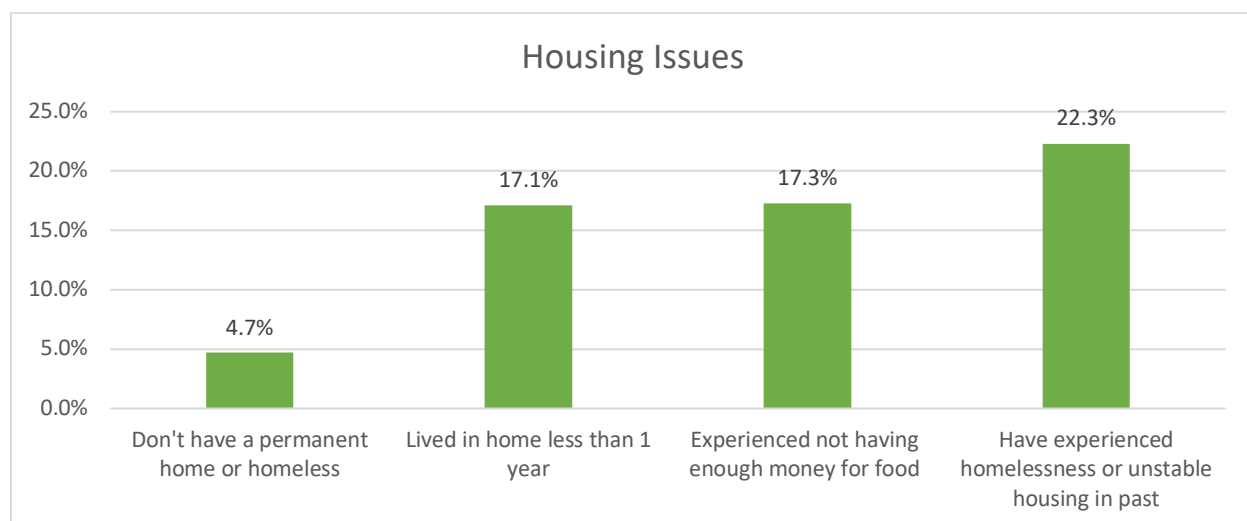


Figure 35: Ross County Survey Respondents Reporting Housing Issues

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

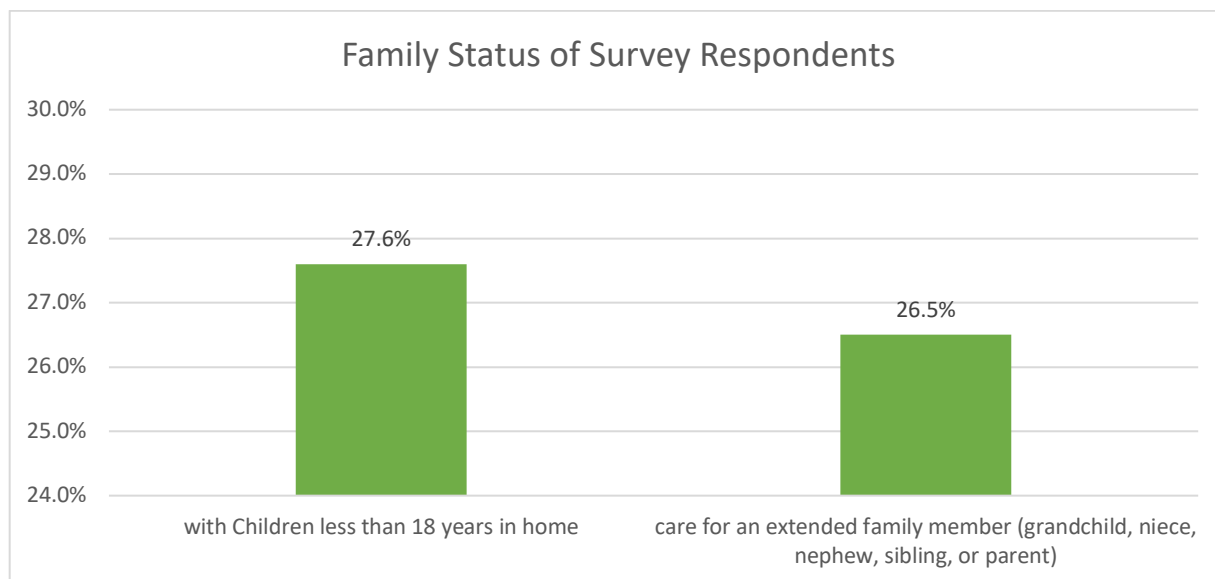


Figure 36: Family Status of Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

Health Behaviors: Substance Use

Key Findings:

- 25% of survey respondents use tobacco.
- 50% of survey respondents use alcohol.
- 14% of survey respondents use marijuana.
- 14% of survey respondents said they have received treatment for substance use.

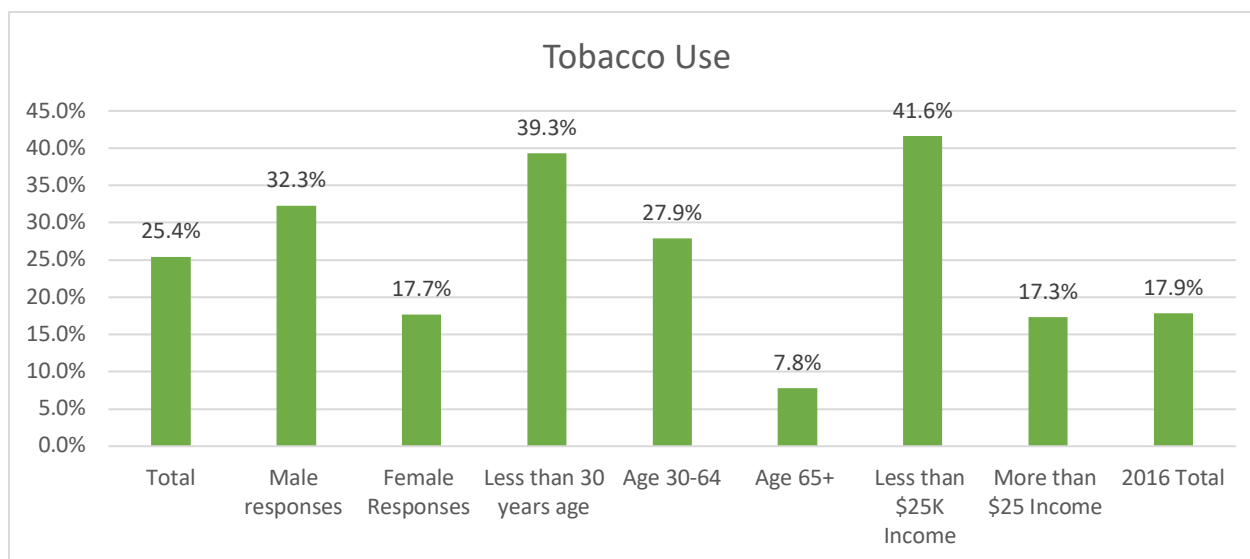


Figure 37: Tobacco Use Among Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey

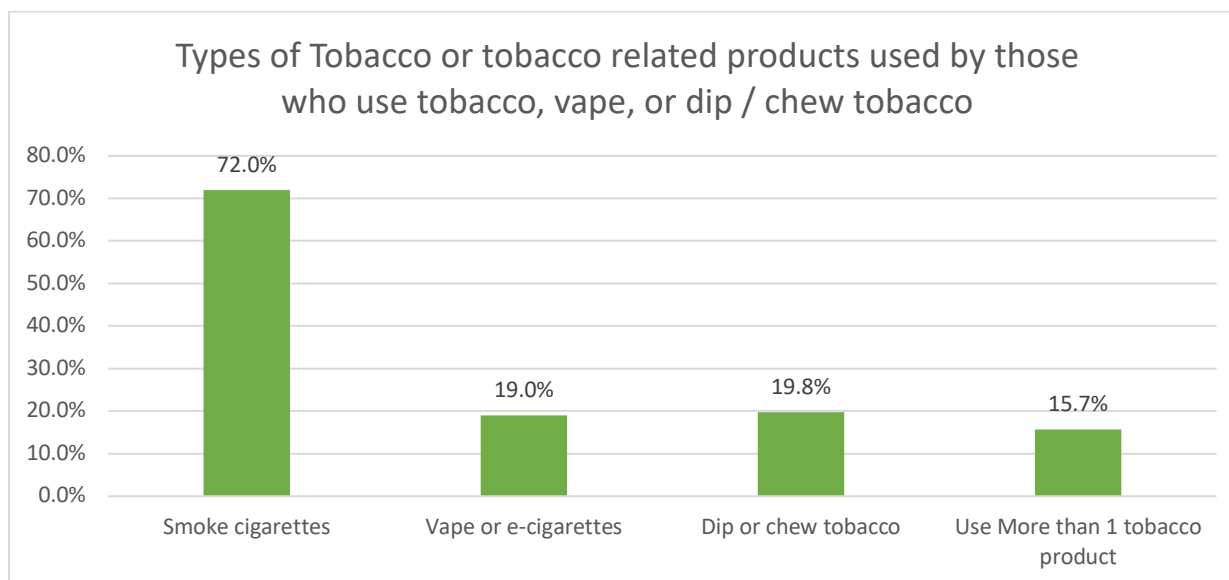


Figure 38: Types of Tobacco and Vaping Use Among Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey

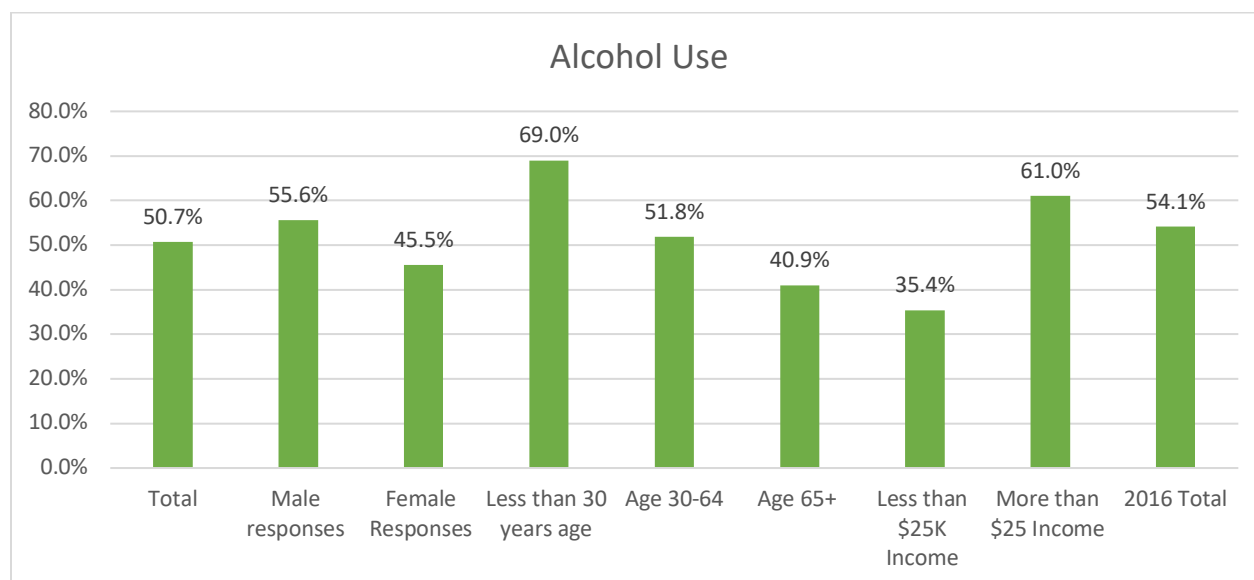


Figure 39: Alcohol Use Among Ross County Survey Respondents

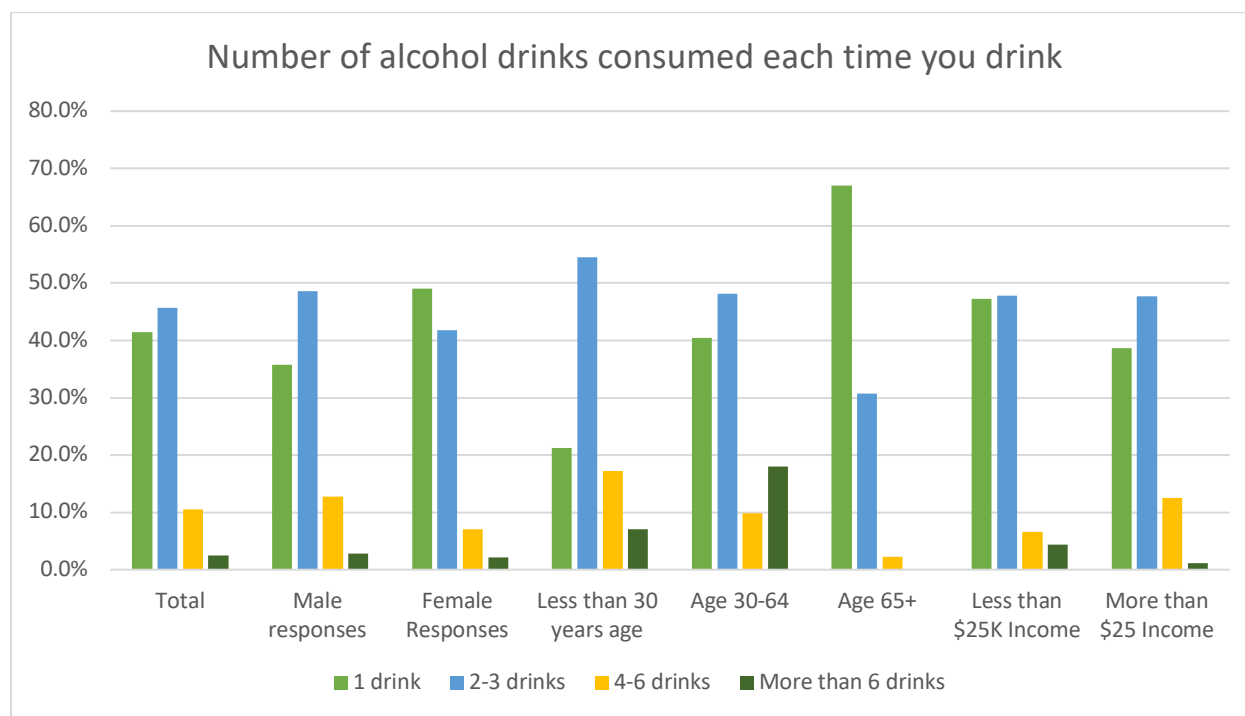


Figure 40: Alcohol Consumption Among Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey

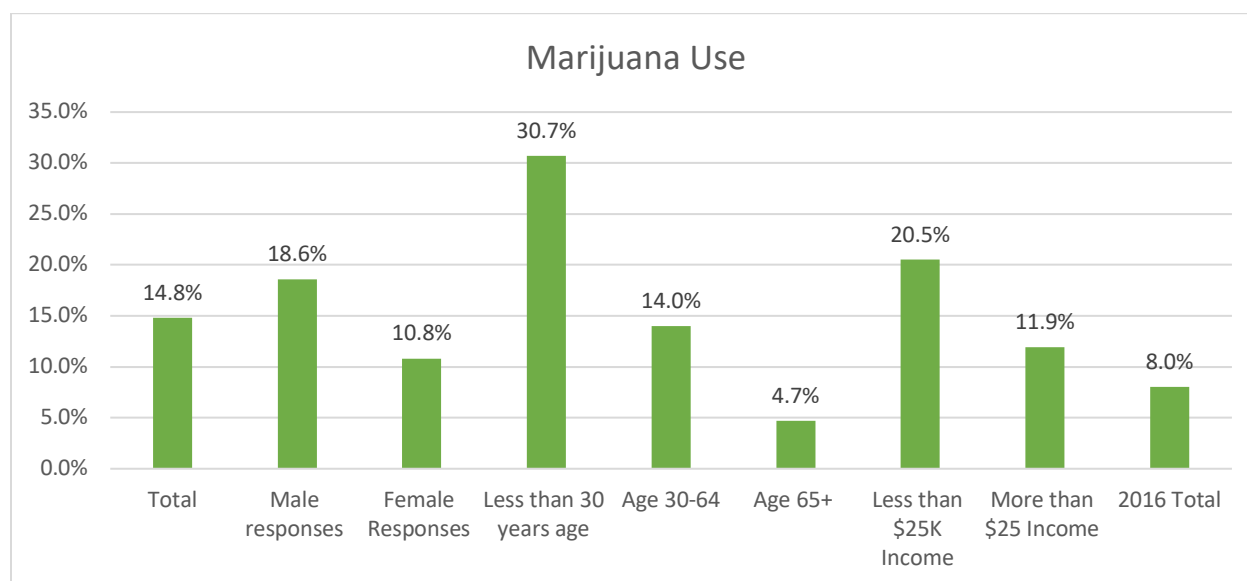


Figure 41: Marijuana Use Among Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey

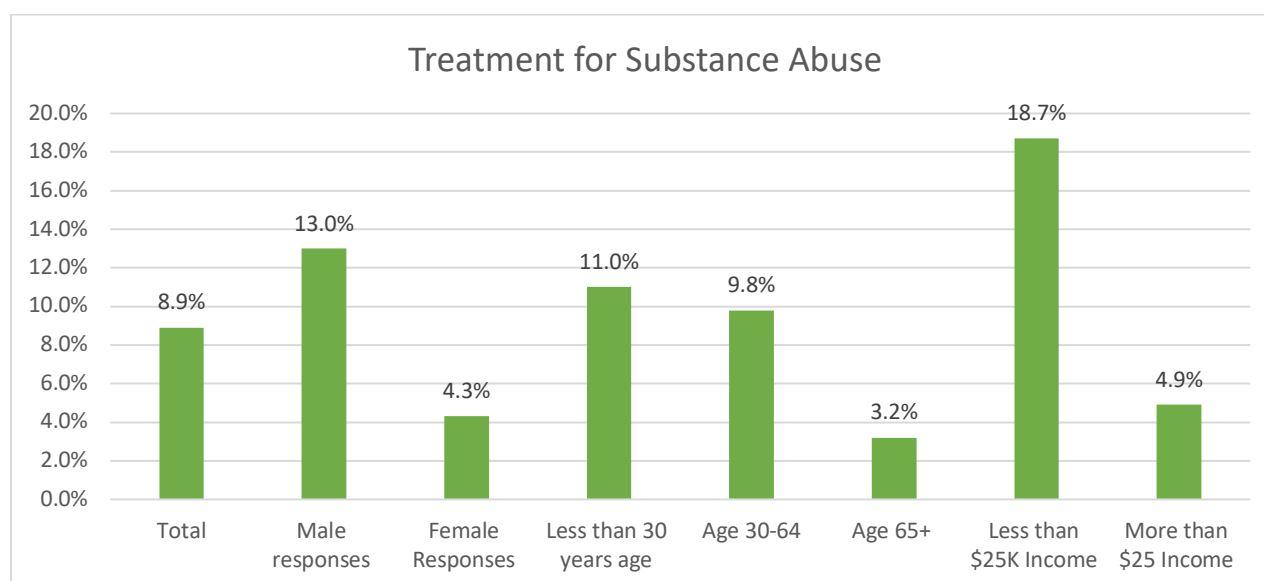


Figure 42: Substance Use Disorder Treatment For Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey

Health Outcomes

Mental Health:

Key Findings:

- Mental health continues to be a top health issue in our community, as 37% of survey respondents in 2016 noted they experience depression or anxiety but only 10% of respondents noted they visit a Mental Health Specialist.

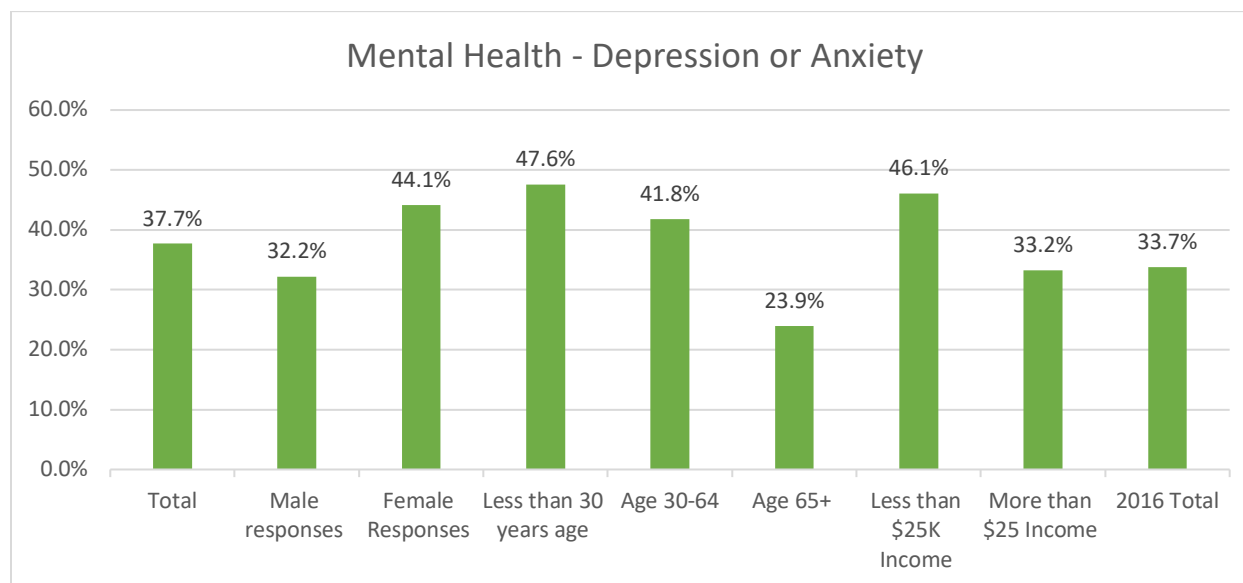


Figure 43: Mental Health Status of Ross County Survey Respondents

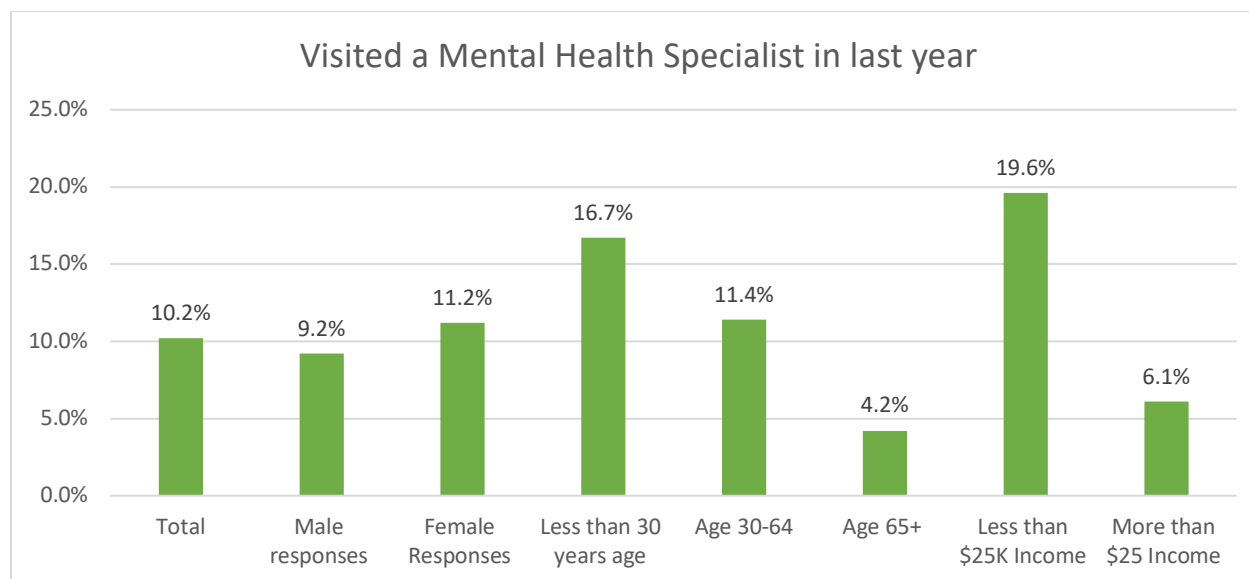


Figure 44: Mental Health Treatment Among Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey

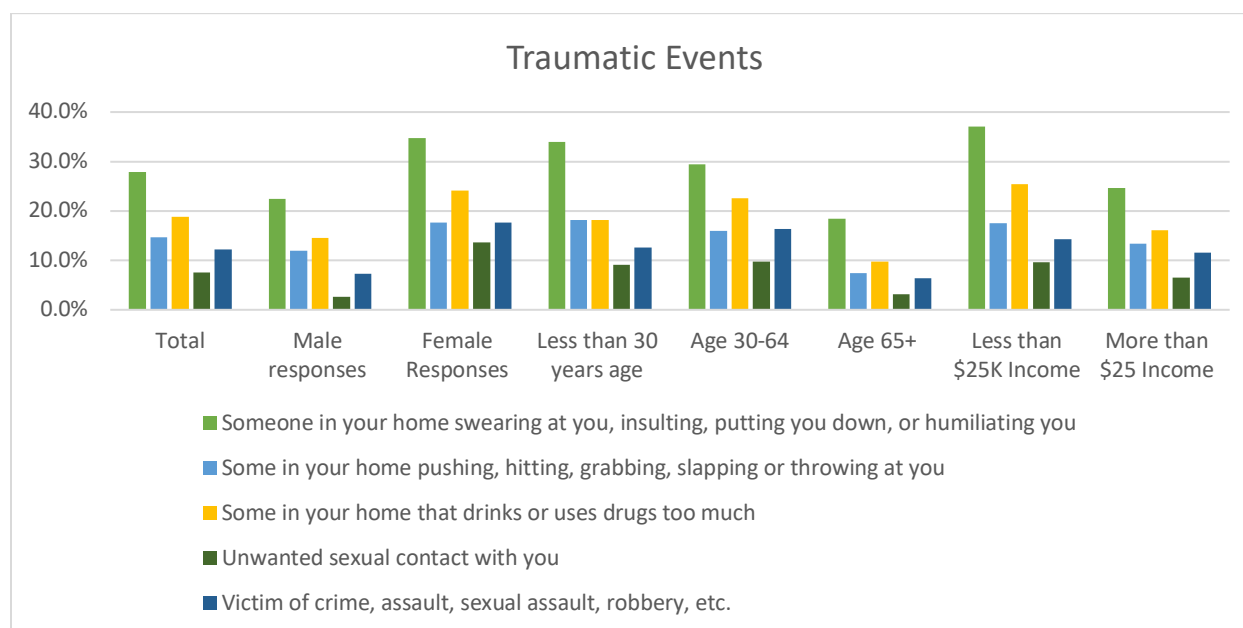


Figure 45: Traumatic Events Among Ross County Survey Respondents

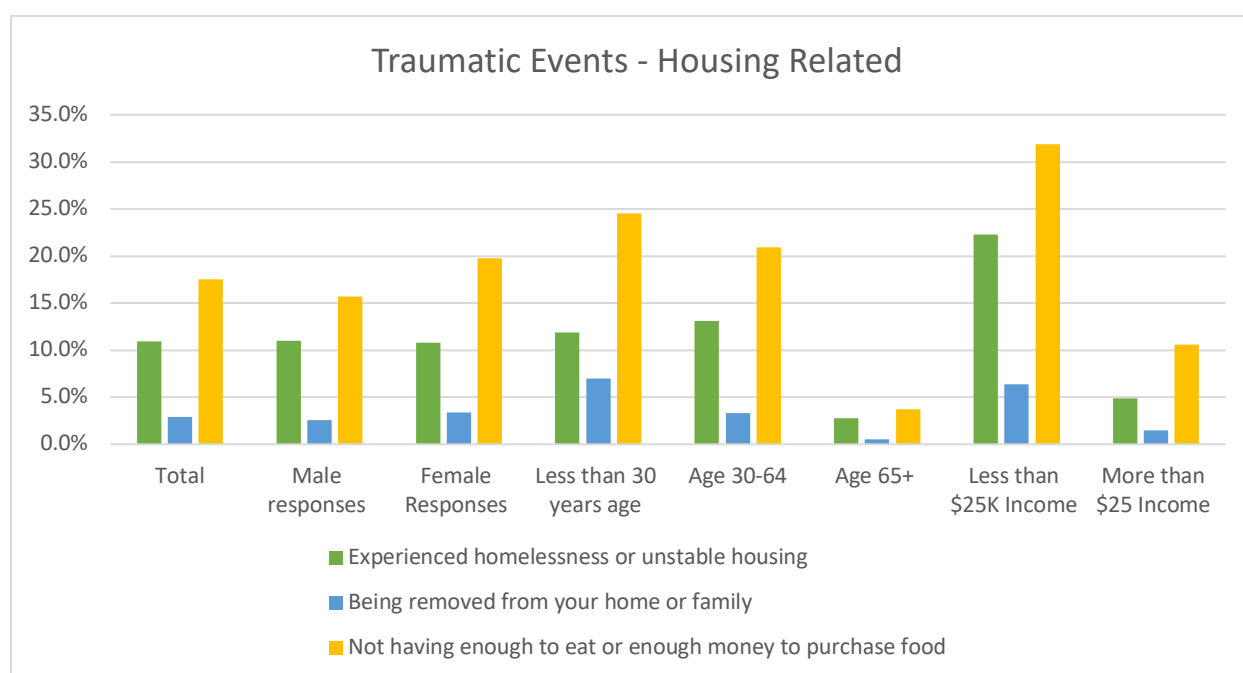


Figure 46: Housing Related Traumatic Events Among Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

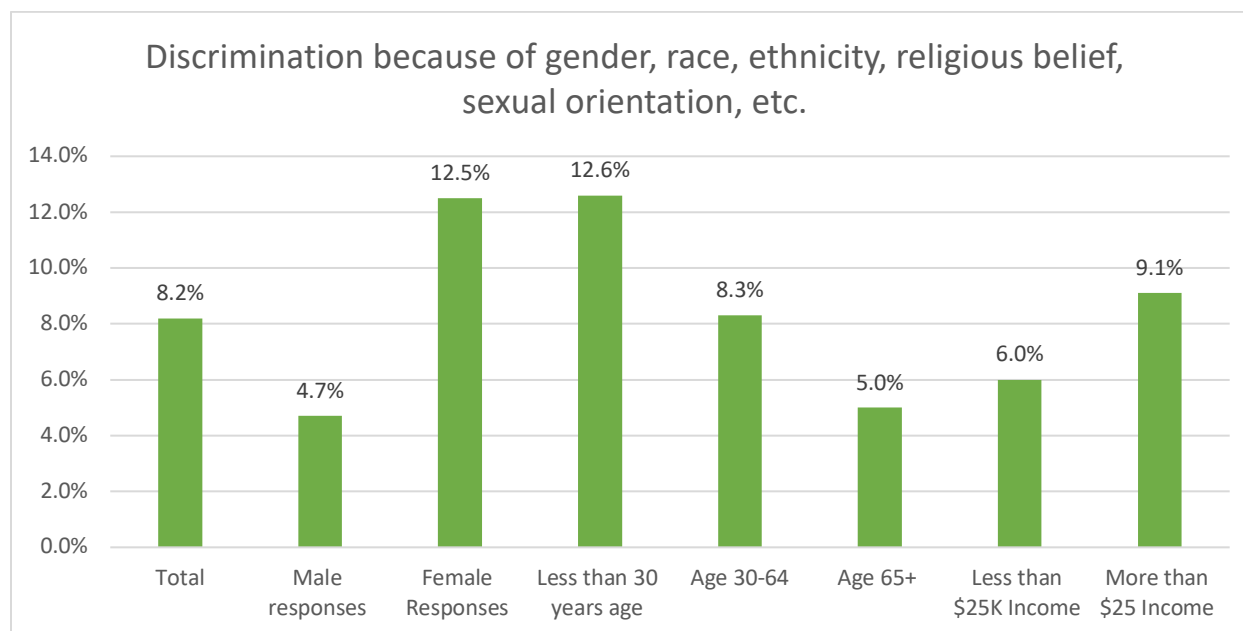


Figure 47: Discrimination Experienced By Ross County Survey Respondents

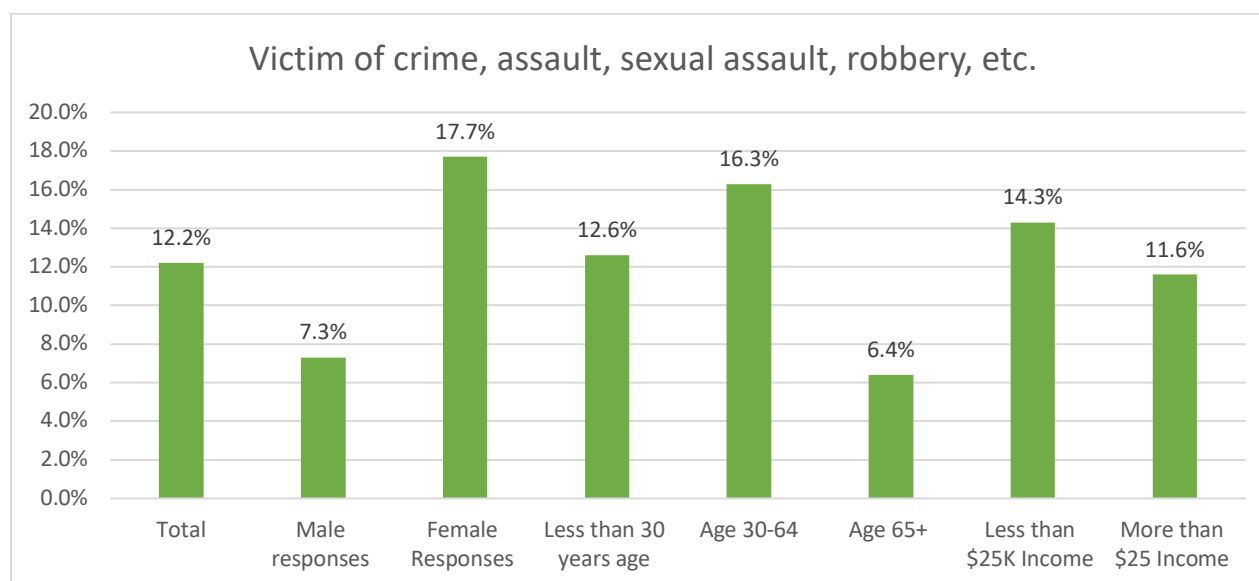


Figure 48: Victimization Experienced By Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

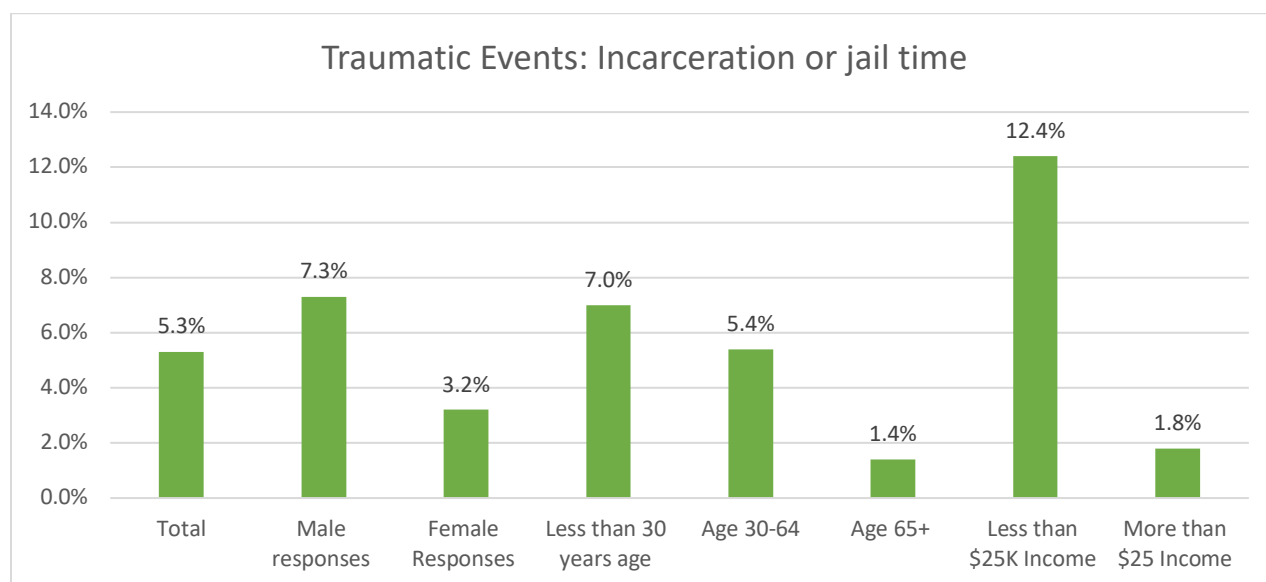


Figure 49: Incarceration Experienced By Ross County Survey Respondents

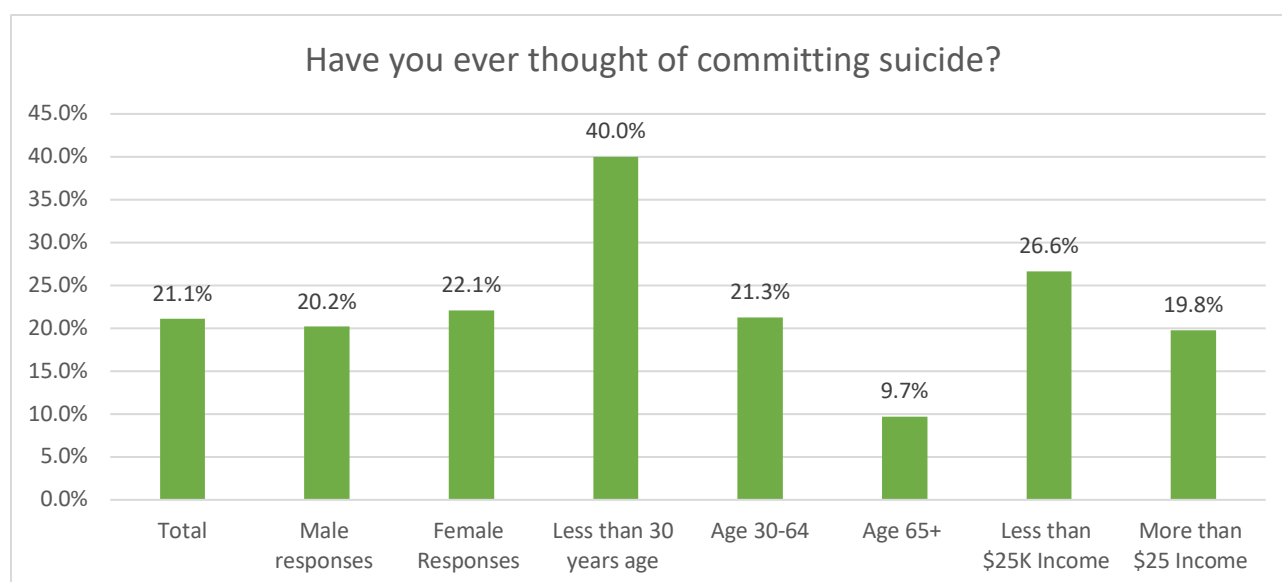


Figure 50: Suicidal Thoughts Reported By Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

Health Outcomes Asthma:

Key Findings:

- 17% of survey respondents noted they experience asthma.
- Very little variation was observed among subgroups.

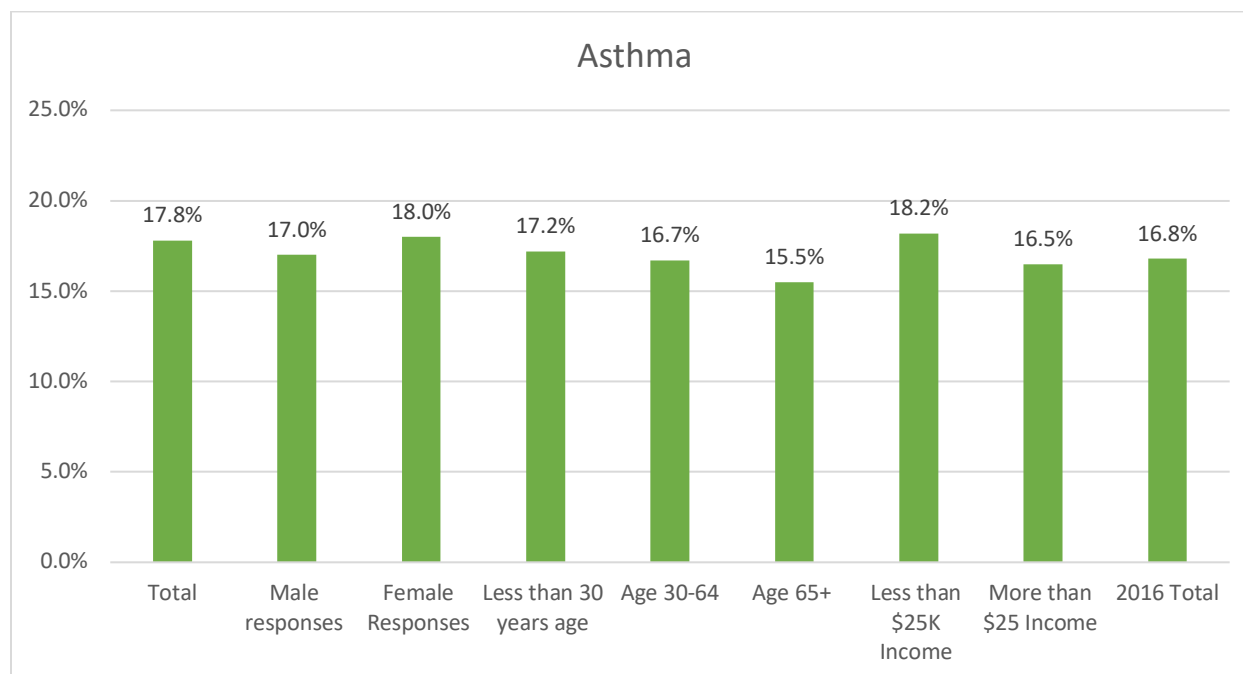


Figure 51: Reported Health Outcomes Among Ross County Survey Respondents

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

Health Outcomes Cancer:

Key Findings:

- 12% of survey respondents answered yes to having cancer or may have had cancer in the past.
- 2016 CHA Public Survey revealed the same rate of 12% of survey respondents answering yes to having cancer or have had cancer in the past.

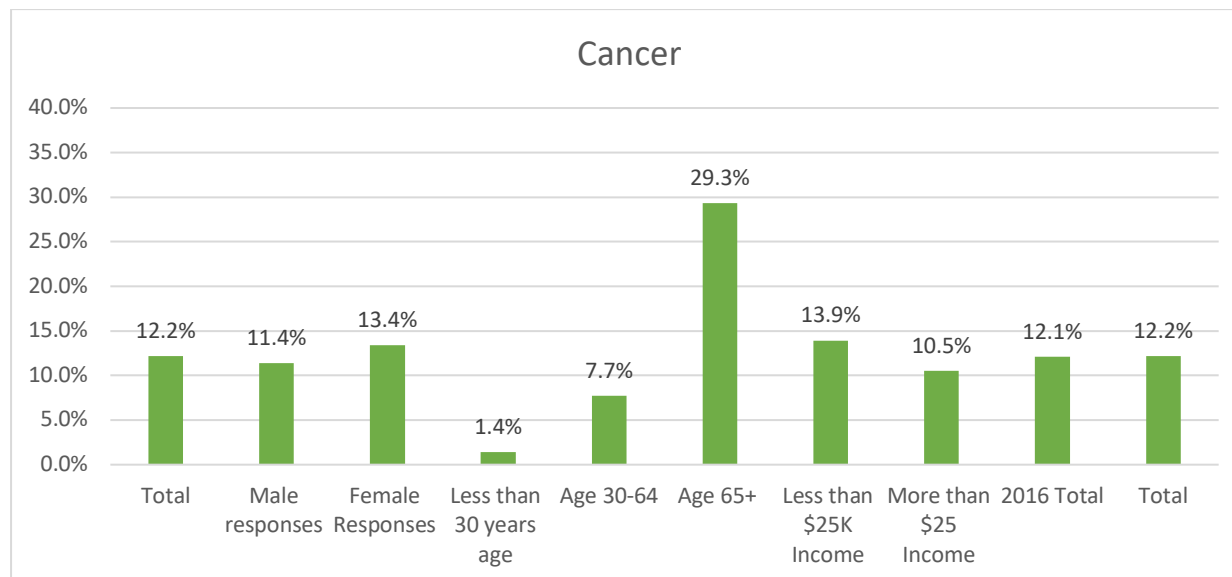


Figure 52: Reported Health Outcomes of Ross County Survey Respondents - Cancer

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey

Health Outcomes Obesity and Diabetes:

Key Findings:

- 18% of public survey respondents reported having Diabetes.
- 32.5% of survey respondents reported being overweight or obese. Some variation among subgroups exist.

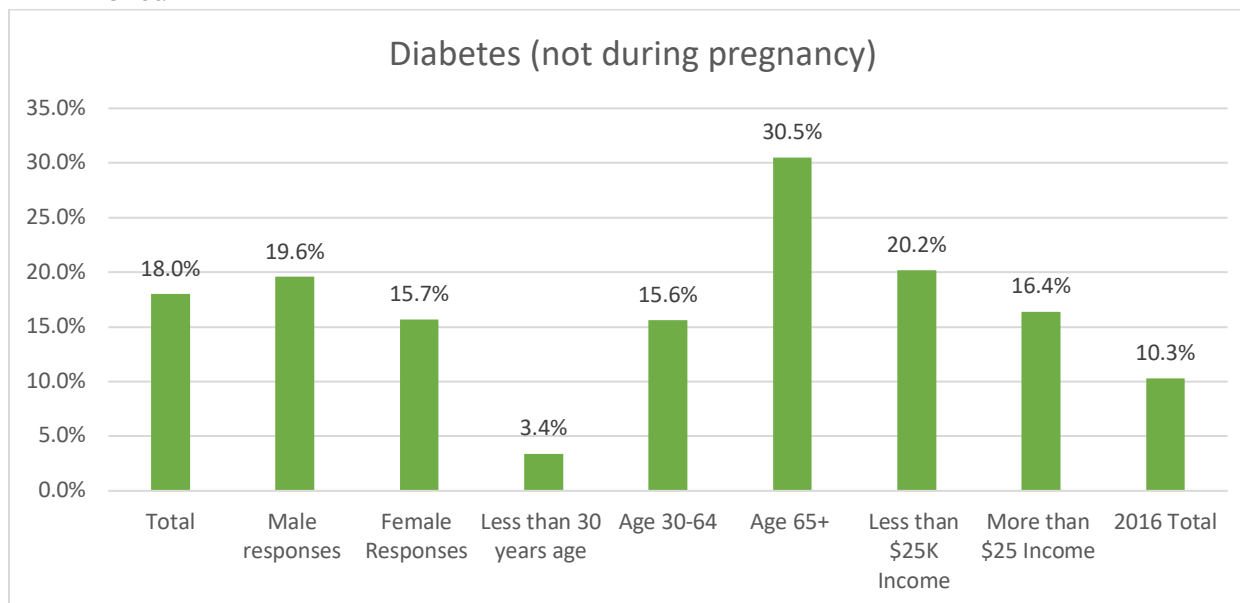


Figure 53: Reported Health Outcomes of Ross County Survey Respondents - Diabetes

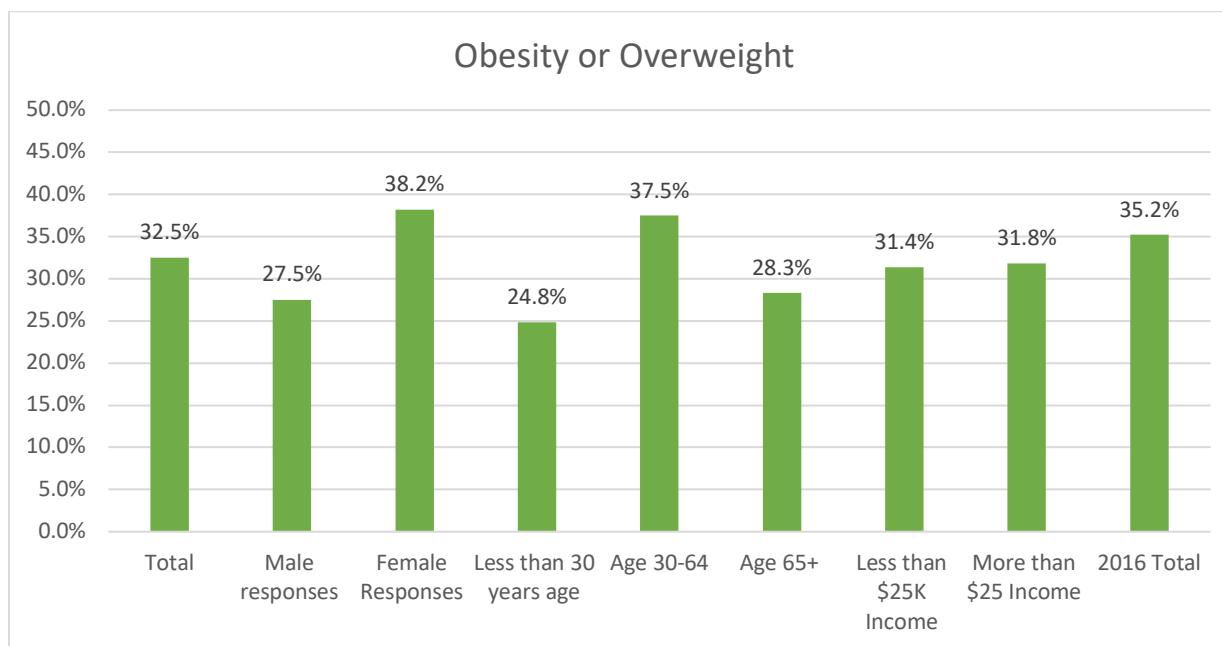


Figure 54: Reported Health Outcomes of Ross County Survey Respondents - Obesity

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

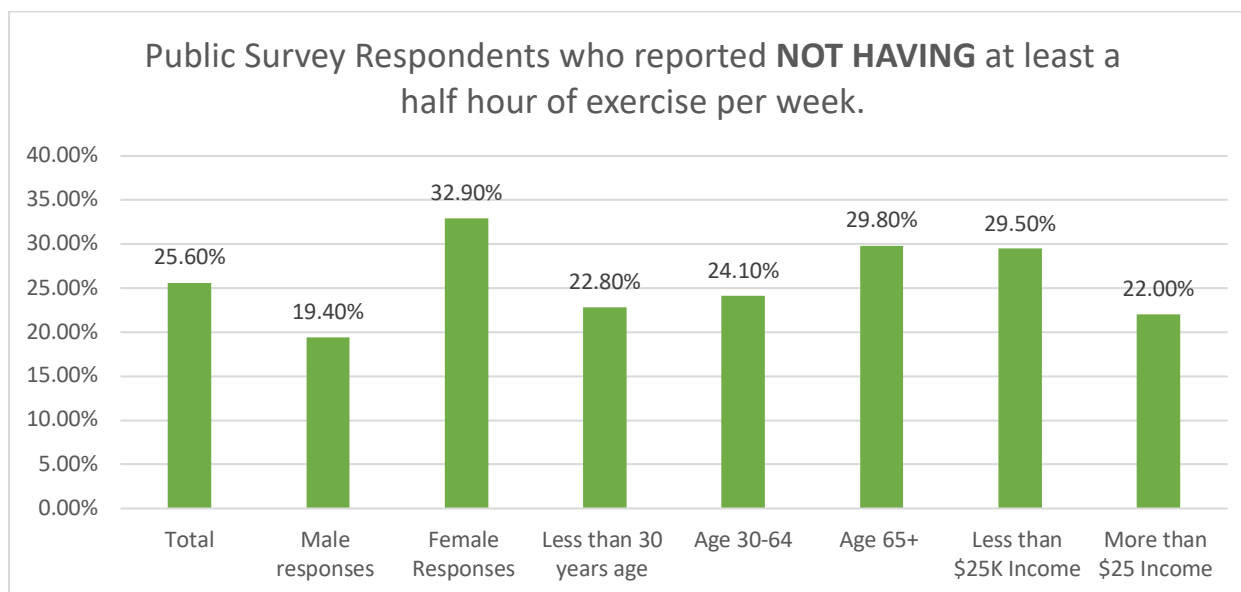


Figure 55: Reported Health Behaviors of Ross County Survey Respondents - Exercise

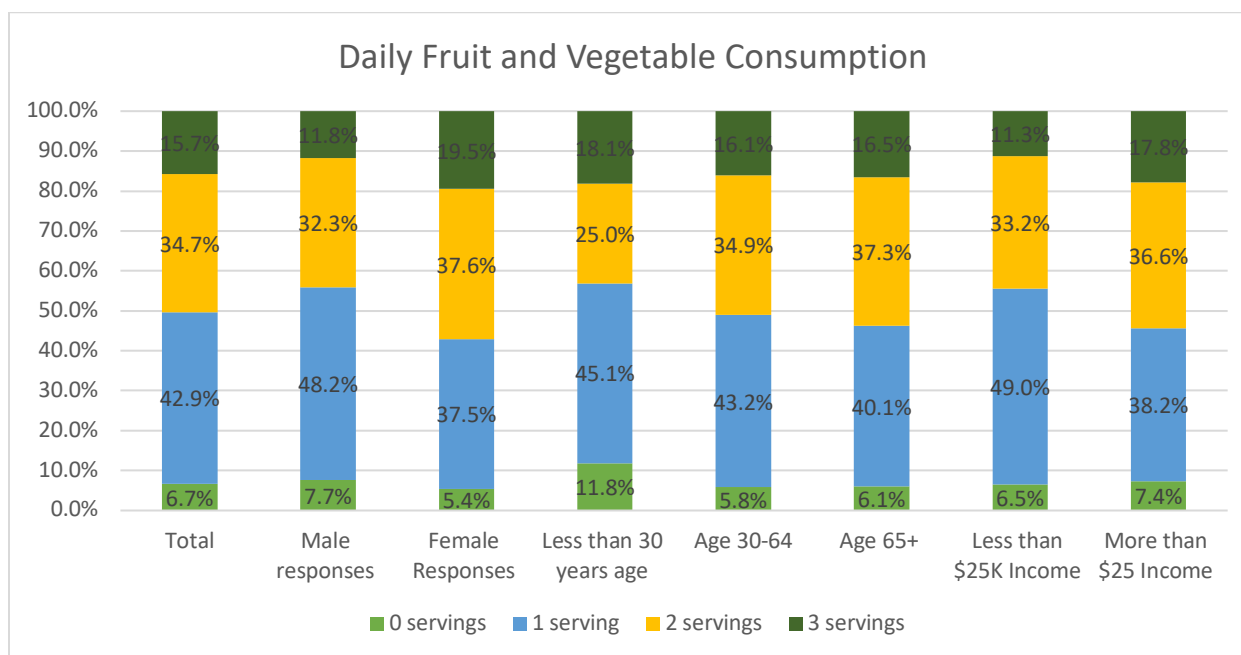


Figure 56: Reported Health Behaviors of Ross County Survey Respondents - Nutrition

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

Health Outcomes Heart Health:

Key Findings:

- Age is a factor on heart health, as high cholesterol and high blood pressure in those 65 years or older as higher percent of respondents reported having high cholesterol or high blood pressure vs. those aged 30-64 and those less than 30 years of age.
- Angina and heart disease carry the same trends. 8.8% of those aged 65 years or older reported having angina or heart disease vs. 4.4% of those aged 30-64 years of age and 0% of those less than 30 years of age.

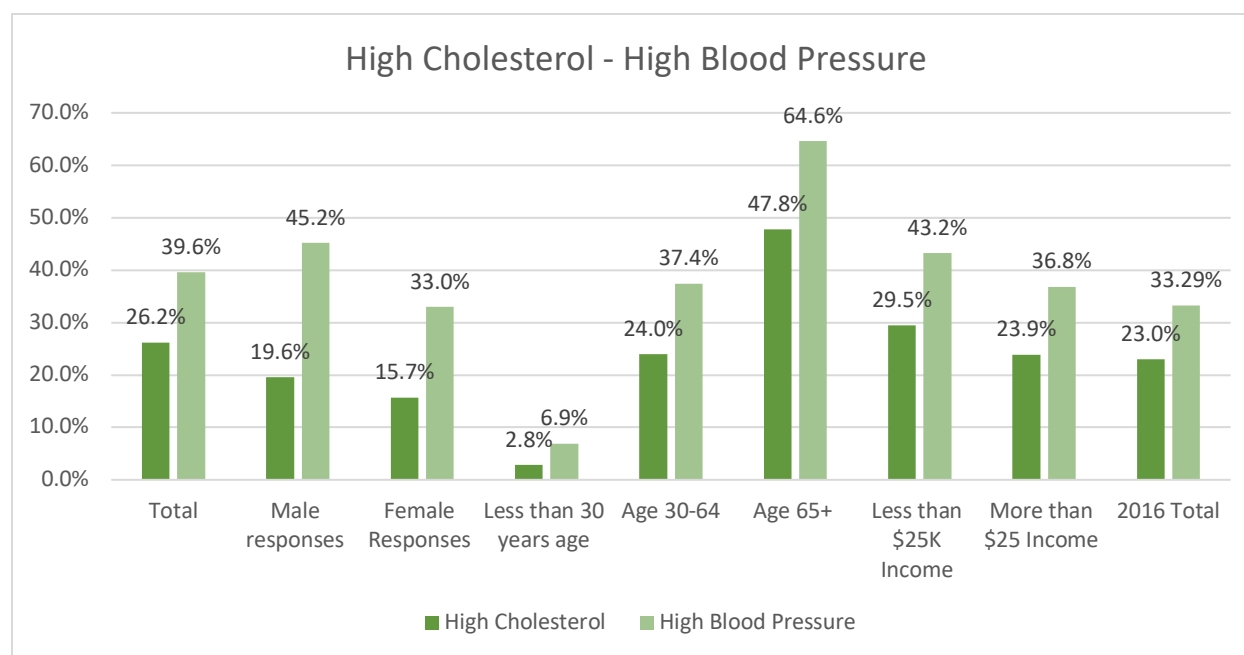


Figure 57: Reported Health Outcomes of Ross County Survey Respondents – Cholesterol and Blood Pressure

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

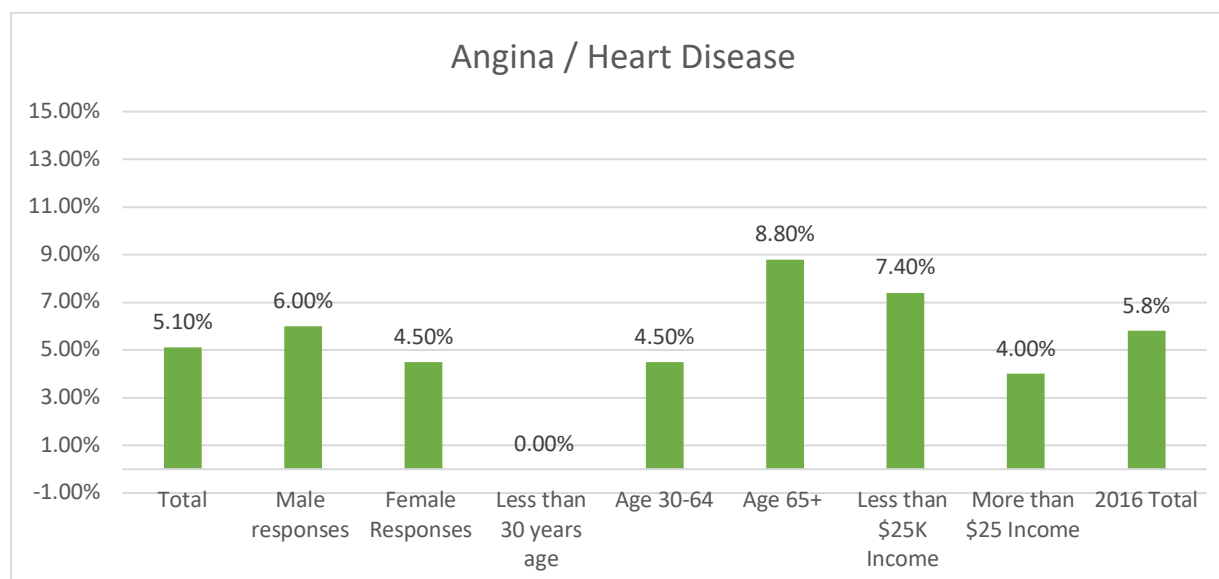


Figure 58: Reported Health Outcomes of Ross County Survey Respondents – Heart Disease

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

Access to Health Care:

Key Findings: Many survey respondents feel that Access to Health Care is a concern in our community as 22% of open comments regarding improvements in our community for better health were related to health care access.

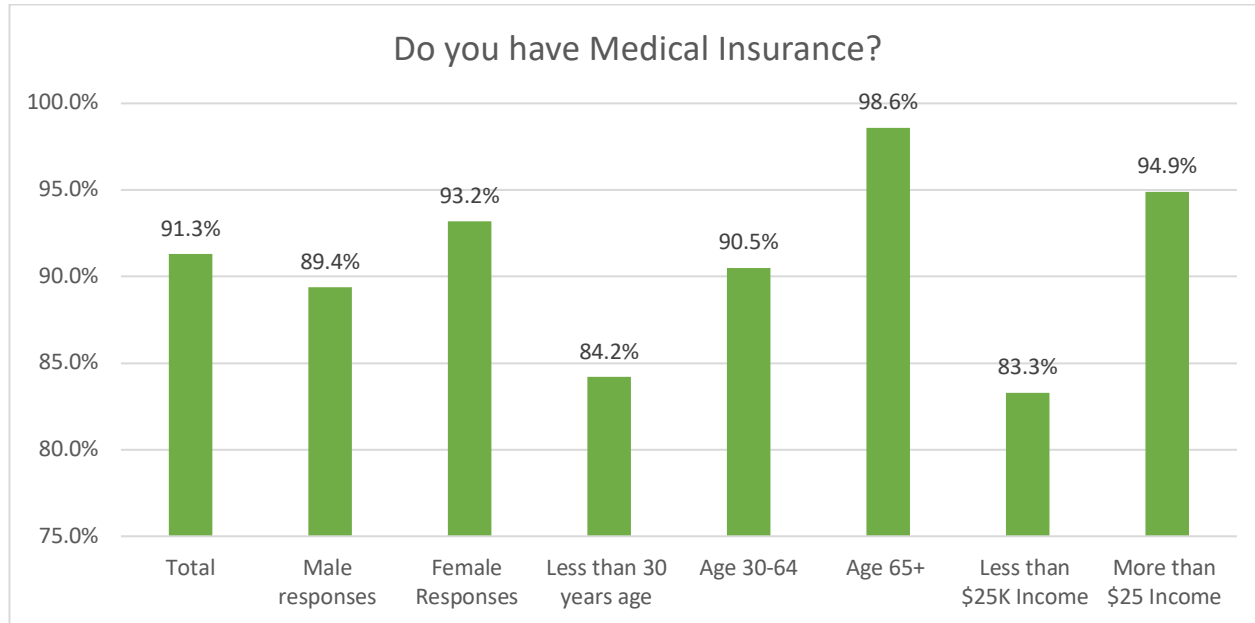


Figure 59: Ross County Survey Respondent Insurance Coverage

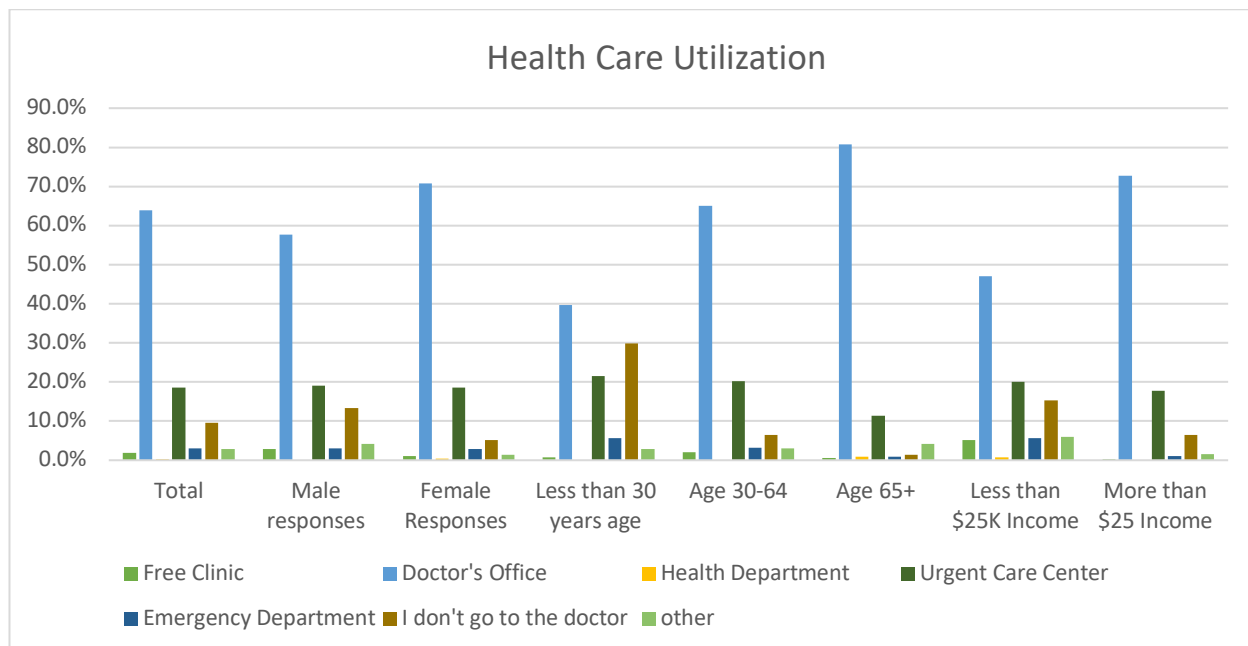


Figure 60: Ross County Survey Respondent Healthcare Utilization

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

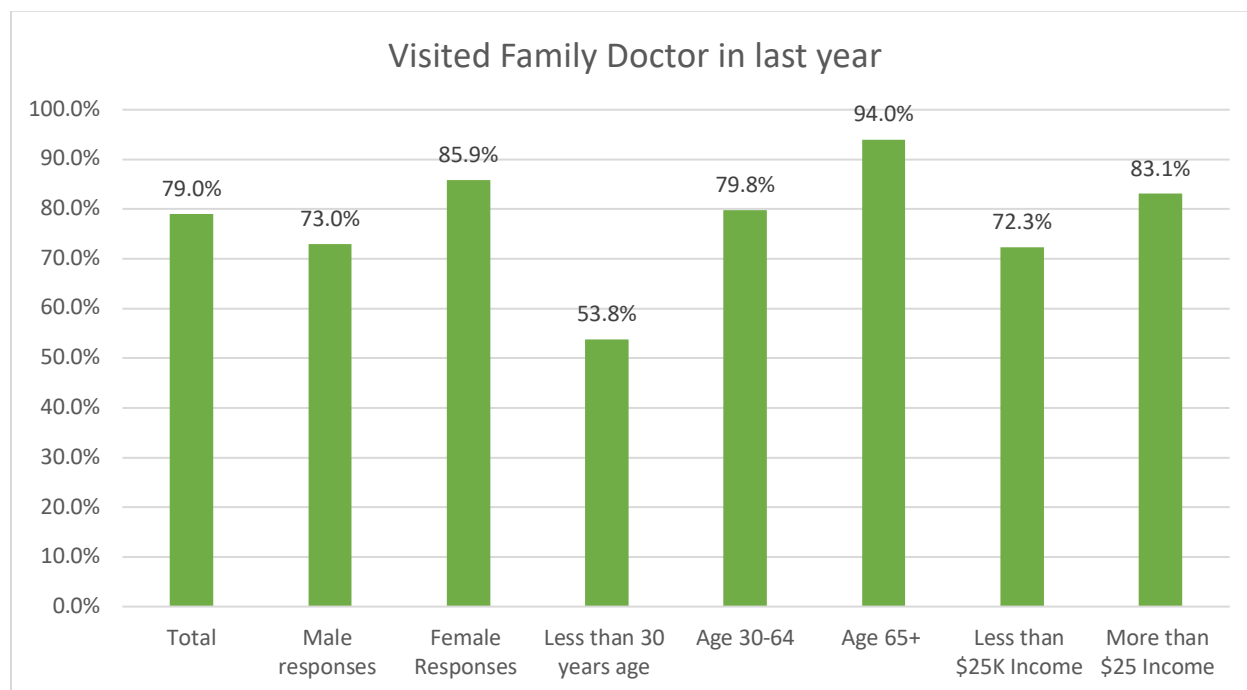


Figure 61: Ross County Survey Respondent Primary Care Utilization

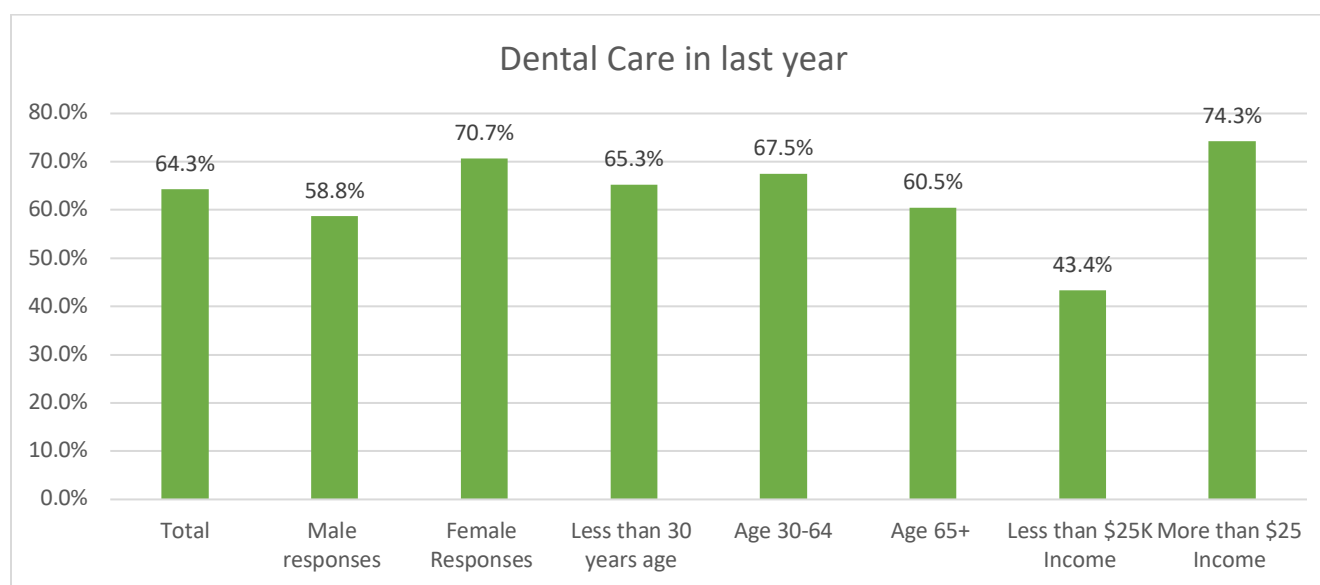


Figure 62: Ross County Survey Respondent Dental Care Utilization

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

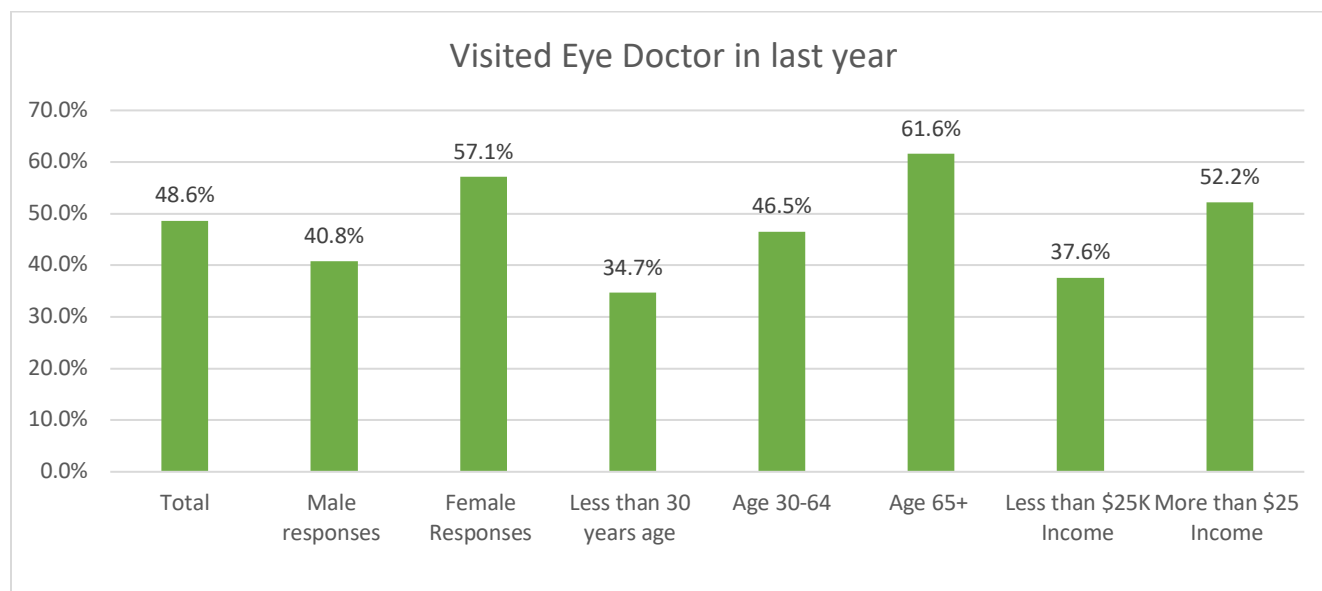


Figure 63: Ross County Survey Respondent Optometry Care



Figure 64: Ross County Survey Respondent Mental Healthcare Utilization

Please note: caution should be used when interpreting subgroup results, as the margin of error for any subgroup is higher than that of the overall survey.

Public Survey Question # 67 – What would you like to see in Ross County to help the community with health?

Background: Data collected from public surveys during the Partners for a Healthier Ross County's 2019 Community Health Assessment were used for this study. Analysis of qualitative responses from survey participants for question # 67 were used. A total of 541 survey respondents answered question # 67. Of the 541 responses, topics were organized into the following categories to further analyze the community health needs identified by survey respondents for question # 67. A total of 621 different health related topics or needs were identified by the 541 responses and were categorized by the following general subjects.

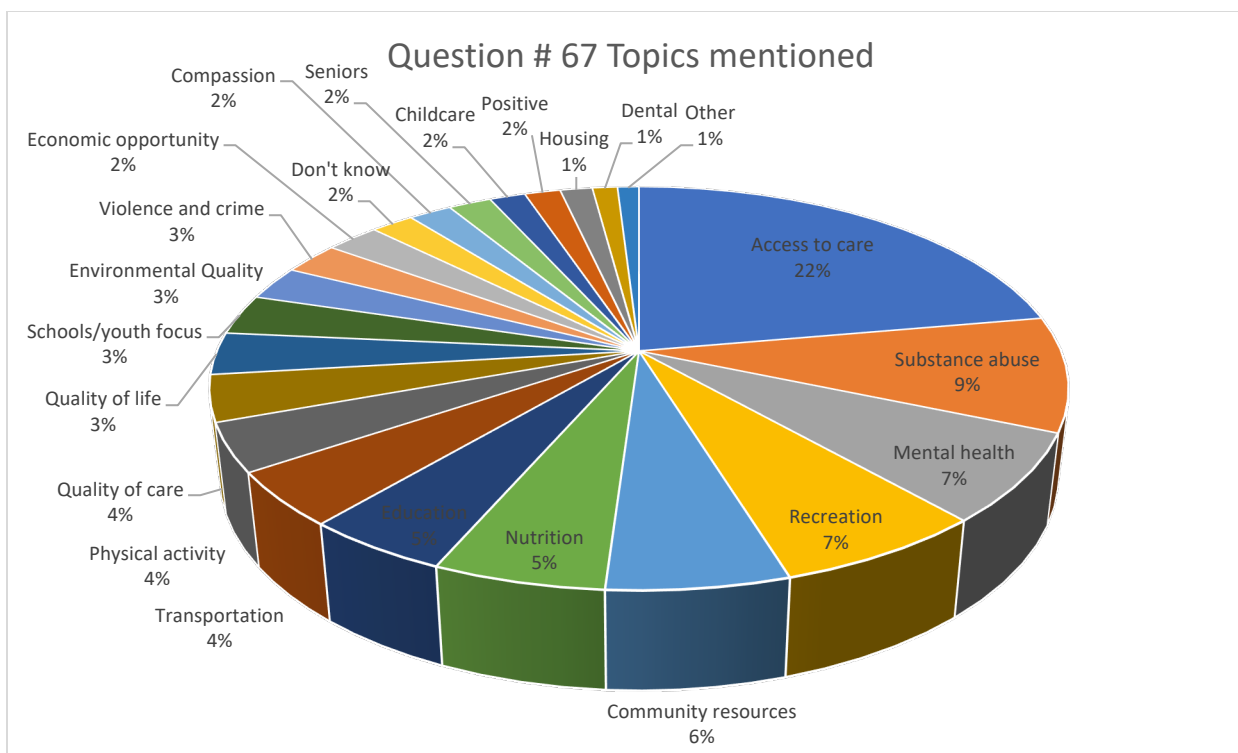


Figure 59: Ross County Survey Respondent Opinion on Community Health Needs

Focusing on Access to Care: Responses related to Access to Care were further subdivided on the following topics to better understand access to health care related health needs identified by survey respondents.

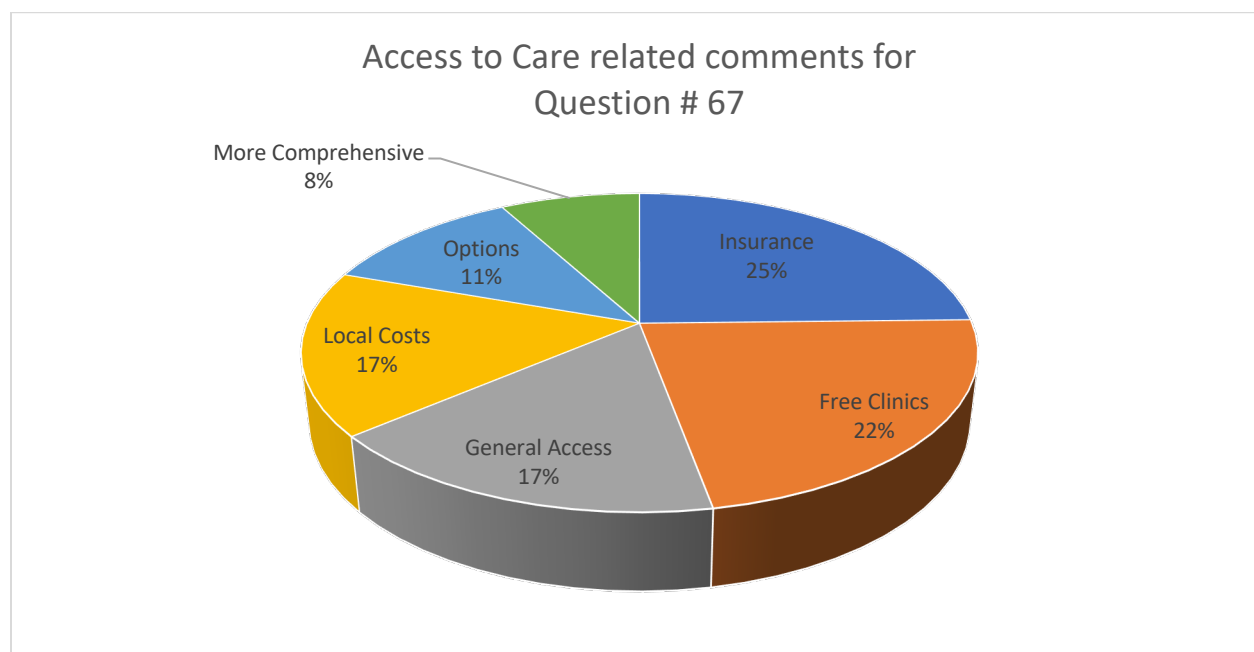


Figure 66: Ross County Survey Respondent Opinion on Access To Care

See Appendix C for the full survey questionnaire and responses.

Stakeholder Interview Summary

A total of three community stakeholders were interviewed for the 2019 Community Health Assessment (roster available in the Appendix). These included individuals from government agencies, education, healthcare and social services. Each were asked a series of question (see Appendix) regarding the current state of community health, and what they believed was necessary to improve health. Several themes emerged from these conversations, including an improved effort at reaching children with health messages, as well as addressing mental health among both adults and children.

The education sector reported a great deal of poverty related issues, as well as mental health for many students that are victims of the region's substance use disorder epidemic. The education system continues to be challenged with mitigating the many behavioral issues of students from families in distress. The issues noted were poor school performance and attendance, disciplinary issues, chronic hunger and lack of parental engagement. Working with non-immediate family members who have custody of the children were also mentioned as challenging issues. Additional resources and education for school staff was mentioned as help that was needed.

In speaking with leadership from the local mental health system, collaboration was identified as a key issue among agencies that was continuing to improve but also still an area of opportunity. Data sharing to understand need for staffing and community concerns was also noted as a key area of opportunity. Crisis services were also discussed as part of improving the health continuum, including a crisis summit that was scheduled to gain more insight to mental health continuum gaps and needed resources.

Other community and civic leaders also indicated the need for more health and mental health services, as well as prevention efforts to change the health habits of future generations. Most would like to see increased engagement with youth such as before and after school programming to reduce screen time.

Most all agreed that more economic opportunities to increase personal capacity of the population would be of most help. They also indicated transportation, health literacy and culture changed were needed in the community to improve health in RossCounty.

EVALUATION OF 2016 ASSESSMENT

In early October of 2019, the Partners for a Healthier Ross County convened a workshop to review the 2016 assessment and work accomplished from the community health improvement plan (CHIP) that was developed from that assessment. The workshop focused on reviewing new data sets to identify any changes since the last assessment in 2016, as well as determine if any of the previous strategies, goals and objectives needed to be revised or adjusted.

Forces of Change

Also as part of the workshop, the Partners for a Healthier Ross County reviewed and revised the SWOT analysis that was completed as part of the Forces of Change exercise conducted during the MAPP process in 2016. This exercise relates to what is currently occurring or emerging in the Ross County community that may impact the health of the community or the local public health system. This information was categorized and summarized by strengths, weaknesses, opportunities, and threats (SWOT) in Table 31.

While two areas focused on in the last assessment such as smoking prevention and cessation and substance use disorder have continued to make advancements with funding and projects, other areas including obesity and diabetes prevention and mental health efforts – complex and non-emergent issues- continue to struggle to get engagement and support. After consideration of what has been accomplished, as well as what opportunities are emerging, the group updated the previous SWOT analysis.

Table 31: Community Health SWOT Analysis 2019

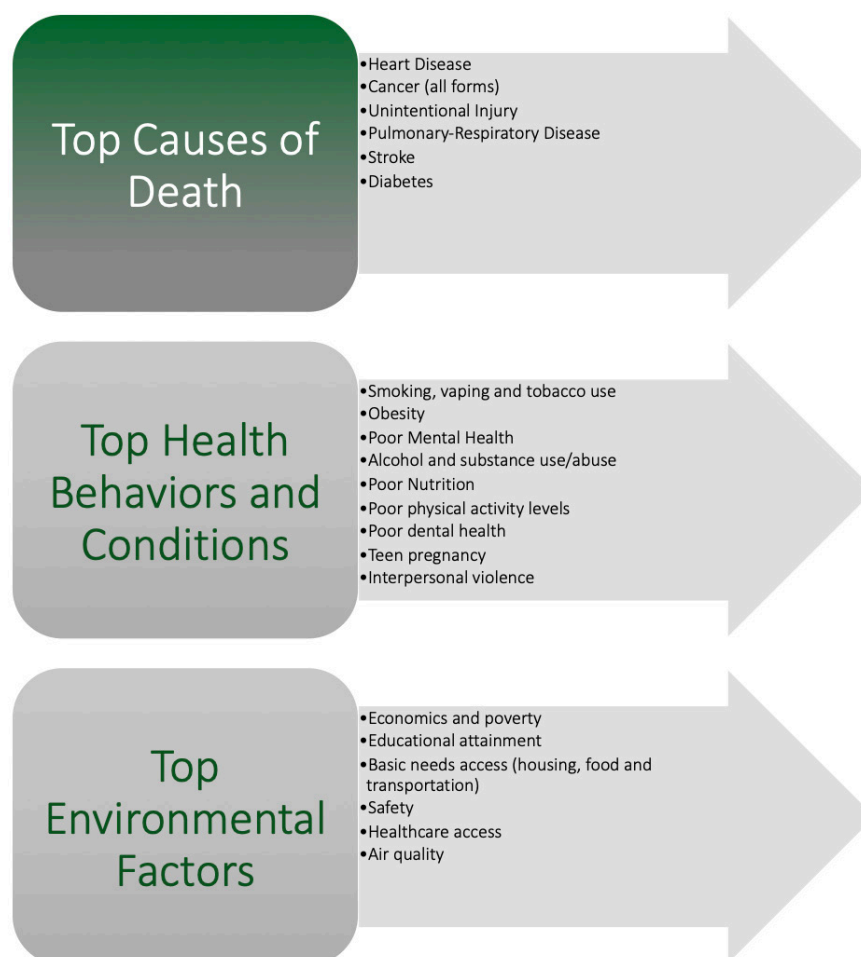
<p>Strengths</p> <ul style="list-style-type: none"> • Strong presence and network of healthcare providers including public health, hospitals, FQHCs, oral, mental and behavioral health providers for Partners for a Healthier Ross County • Agencies have dedicated human resources to working to complete health needs assessment and participating on Partners for a Healthier Ross County • Established Community Health Improvement Plan (CHIP) to build from • Strong material assistance and food security network • Strong network of social service agencies • Continued desire to work together • Hope Partnership Project • Developing awareness of mental health issues • More than \$2 mil in grant funding realized for three of the affiliated sub committees • Expanded capacity for the 2-1-1 information and resource referral line 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Absence of data and data reporting systems • Limited economic capacity of the community • Limited educational attainment of the community • Limited engagement of school systems in health related efforts • Poor health factors and outcomes are prevalent and aligned with current culture of health • Limited or no prevention programs in the public school system • High rate of use of local emergency room for care • Cost reported as a barrier to care by public • Mental health issues problematic and stigma very strong • Leadership capacity of many local agencies • Limited understanding of the relationship of community development and health among community and community leaders
<p>Opportunities</p> <ul style="list-style-type: none"> • Establish child safety and child health initiatives that increase awareness and connection to resources • Establish and implement broader youth prevention and intervention efforts in partnership with the schools and other partners • Additional grant funding for community wellness and health infrastructure development • Development of more robust community health data collection • Expand efforts in nutrition and fitness education and resource awareness • Create the model community health platform which demonstrates improved health outcomes and cost savings • Develop comprehensive health data collection and sharing network • Elevate visibility and increase utilization of the 2-1-1 resource and referral system to increase community utilization of health resources 	<p>Threats</p> <ul style="list-style-type: none"> • Reluctance of some agency representatives to work together • Changes in political leadership (election year) • Making coalition work teams too large or broad to function efficiently or effectively • Failure to broadly impact health will not help the goal of improved health outcomes • Unable to increase capacity to address the mental and behavioral health needs • Escalating drug problem • Escalating crime problem related to drugs • Unable to overcome an established culture of poor health • Unable to impact economic disparities • Increasing number of population who are “un-houseable and unemployable” due to criminal records

2016 Community Health Assessment Metric Review

Also as part of the workshop, the Partner for a Healthier Ross County reviewed completion of key goals and objectives aligned with the two strategic questions developed for the 2016 CHIP. While much of the infrastructure building had been completed during the last three years, other areas had not been addressed.

The following outlines areas the workshop participants identified as areas that still needed to be developed and should be continued as part of the 2019 Community Health. The following identifies new areas to be added for the 2019 assessment and improvement plan, as well as those that will be continued. Areas to be continued for 2020-2022 are in black while new areas that have been added are in red.

In early October of 2019, the Partners for a Healthier Ross County convened a workshop to review the 2016 assessment and work accomplished from the community health improvement plan (CHIP) that was developed from that assessment. The workshop focused on reviewing new data sets to identify any changes since the last assessment in 2016, as well as determine if any of the previous strategies, goals and objectives needed to be revised or adjusted.



SUMMARY OF KEY FINDINGS

While most of the data continues to be consistent with the 2016 assessment, several changes can be noted. First, the population of Ross County continues to decline. In migration continues to increase but it isn't yet offsetting the decrease in the older population as of 2019. The rates of poverty and unemployment have continued to improve. However, more than 50% of families in Ross County still earn less than \$50,000 per year. This can be correlated to the more than half families below the poverty level (53%) being run by of single female households. Teen pregnancies also continue to rise. As does those reporting experiencing some mental health or substance use/abuse issue.

After three years of various projects for data collection, there are still gaps across the Ross County rural continuum. A need for real-time and forecasting health data continues to be a need for rural communities, particularly those in the rural communities of Ohio.

Figure 67: Health and Social Factor Priorities for Partners for a Healthier Ross County 2020-2022

Top Health Priorities

- Mental Health
- Substance Use Disorder
- Prevention (lifestyle, fitness and nutrition)
- Tobacco and vaping prevention
- Social factors of health (transportation, housing interpersonal violence prevention and access to care)
- Child safety and wellness/prevention

Figure 68: Top Health Priorities for Partners for a Healthier Ross County 2020-2022

Conclusions and Next Steps

As health outcomes and factors in Ross County, Ohio have not changed much since the last assessment, collaboration will be necessary around top health issues to have impact in the community. Data from this assessment will be useful for the community as they develop and plan community infrastructure that drives positive health outcomes.

Next steps for the Partners for a Healthier Ross County will be to utilize this assessment to update, expand and improve upon its 2016 community health improvement plan. Following the M.A.P.P process, data will be further analyzed and prioritized, as well compared to what was accomplished in the last plan. Metric driven goals can then be developed to further the efforts around improving priority health issues.



Figure 69: Mobilizing Action through Planning Partnership (MAPP)

