University Hospitals

2018 Community Health Needs Assessment

UH Geauga Medical Center
Geauga County

Forward

University Hospitals' (UH) long-standing commitment to the community spans more than 150 years. This commitment has grown and evolved through significant thought and care in considering our community's most pressing health needs. One way we do this is by conducting a periodic, comprehensive Community Health Needs Assessment (CHNA). The most current assessment was completed by an external health care consulting service working with UH and includes quantitative and qualitative data that serve to guide both our community benefit and strategic planning. Through our CHNA, UH has identified the greatest health needs among each of the counties were our medical centers reside, enabling UH to ensure our resources are appropriately directed toward outreach, prevention, education and wellness opportunities where the greatest impact can be realized. The following document is a detailed CHNA for University Hospitals Geauga Medical Center (UH Geauga Medical Center).

UH Geauga Medical Center is a 226-bed, acute care facility providing a full range of services including the Orthopaedic Center, Spine & Pain Management Center, UH Harrington Heart & Vascular Institute, UH Seidman Cancer Center and the Center for Women's Health. UH Geauga Medical Center offers myriad programs and activities to address the surrounding community health needs. These range from an Alzheimer's education series and to a diabetes support group and free health screenings.

University Hospitals strives to meet the health needs of its community.

Acknowledgements

The 2018 University Hospitals Community Health Needs Assessment was commissioned by:

University Hospitals Geauga Medical Center

The 2016 Geauga County primary data collection was commissioned by:

Arthritis Foundation of NE Ohio
Berkshire Local School District
Big Brothers Big Sisters
Cardinal Local School District
Carmella Rose
CASA for KIDS of Geauga County
Catholic Charities Community Services
Chagrin Falls Park Community Center
Chardon Community Action Team
Chardon Local School District
DDC Clinic
Family and Community Services
Family Planning Association of NE Ohio, Inc.
Geauga Community Action Inc.
Geauga County Board of Developmental Disabilities
Geauga County Board of Health
Geauga County Board of Mental Health & Recovery Services
Geauga County Clerk of Courts
Geauga County Commissioners
Geauga County Department on Aging
Geauga County Educational Service Center
Geauga County Health District
Geauga County Health District Advisory Council
Geauga County Job and Family Services
Geauga County Public Library System
Geauga County Residents
Geauga County Sheriff
Geauga County Township Association
Geauga Family First Council
Geauga Park District
Kenston Local School District
Kent State University College of Public Health
Kent State University Geauga
Lake-Geauga Head Start
Ledgemont Local School District
Life Act
Mental Health Association, Geauga
Middlefield Care Center
NAMI Geauga
Ohio Department of Health
Ravenwood Mental Health Center
Starting Point
United Way Services of Geauga County
University Hospitals – Geauga Medical Center
WomenSafe, Inc.

Project Management, Secondary Data, Data Collection, and Report Development

The Hospital Council of Northwest Ohio (HCNO) is a 501(c)3 non-profit regional hospital association located in Toledo, Ohio. They facilitate community health needs assessments and planning processes in 40+ counties in Ohio, Michigan, and Oregon. Since 2004, they have used a process that can be replicated in any county that allows for comparisons from county to county, within the region, the state, and the nation. HCNO works with coalitions in each county to ensure a collaborative approach to community health improvement that includes multiple key stakeholders, such as those listed above. All HCNO project staff have their master's degree in public health, with emphasis on epidemiology and health education.

Hospital Council of Northwest Ohio:

Britney L. Ward, MPH
Director of Community Health Improvement

Selena Coley, MPH
Community Health Improvement Coordinator

Emily A. Golias, MPH, CHES
Community Health Improvement Coordinator

Emily Soles, BS
Graduate Assistant

Margaret Wielinski, MPH
Assistant Director of Community Health Improvement

Tessa Elliott, MPH
Community Health Improvement Coordinator

Emily Stearns, MPH, CHES
Community Health Improvement Coordinator

Data Collection & Analysis

Joseph A. Dake, Ph.D., MPH
Professor and Chair
School of Population Health
University of Toledo

Aaron J. Diehr, PhD, CHES
Consultant

Samantha Schroeder, MPA
Consultant

Hospital Utilization and Discharge Data Compilation and Analysis

Cypress Research Group

To see the Geauga County data compared to other counties, please visit the Hospital Council of Northwest Ohio's Data Link website at:

http://www.hcno.org/community-services/data-link/

The 2018 University Hospitals Geauga County Health Needs Assessment is available on the following websites:

University Hospitals
https://www.uhhospitals.org/about-uh/community-benefit/community-health-needs-assessment

Hospital Council of Northwest Ohio
http://www.hcno.org/community-services/community-health-assessments/

Contact Information

Danielle Price
Director, Community Health Engagement
Government & Community Relations
University Hospitals
11100 Euclid Avenue
MPV 6003
Cleveland, Ohio 44106-5000
Danielle.Price3@UHhospitals.org
Phone: 216-844-2391

Written Comments

University Hospitals solicited feedback on its 2015 Community Health Needs Assessments (CHNAs), which are posted on its website, but did not receive any comments. Individuals are encouraged to submit written comments on the current joint Community Health Needs Assessment (CHNA) to CommunityBenefit@UHhospitals.org. These comments provide additional information to hospital facilities regarding the broad interests of the community and help to inform future CHNAs and implementation strategies.

Table of Contents

Executive Summary

In 2018, University Hospitals Geauga Medical Center worked to align their community health needs assessment (CHNA) process both at the local and state levels. The state of Ohio mandated by law (ORC 3701.981) that all hospitals must collaborate with their local health departments on community health assessments (CHA) and community health improvement plans (CHIP). In order to meet this requirement, University Hospitals Geauga Medical Center shifted their definition of community to encompass the entire county. This will result in less duplication. In addition, local hospitals have to align with the Ohio State Health Assessment (SHA). This requires alignment of the CHA process timeline and indicators. This local alignment must take place by October 2020. This report serves as the initial CHA to move University Hospitals Geauga Medical Center into a more collaborative approach. University Hospitals Geauga Medical Center will be actively participating in the 2019 Geauga County CHA and CHIP, which will align partners to be in compliance by 2020.

University Hospitals hired the Hospital Council of Northwest Ohio (HCNO) to align the 2018 University Hospitals Geauga Medical Center report with the existing 2016 Geauga County Community Health Needs Assessment. HCNO collected the data, guided the health assessment process and integrated sources of primary data from the 2016 Geauga County Health Assessment, secondary data from 2008-2018, and hospital utilization and discharge data from 2016 into the final 2018 University Hospitals Geauga Community Health Needs Assessment report.

Internal Revenue Services (IRS) Requirements

The Affordable Care Act (ACA), enacted in March 2010, added new Section 501 (r) requirements in Part V, Section B, on 501 (c)(3) organizations that operate one or more hospital facilities. Each 501 (c)(3) hospital organization must conduct a community health needs assessment and adopt an implementation strategy at least once every three years. This report meets these IRS requirements.

DEFINITION OF COMMUNITY & SERVICE AREA DETERMINATION

The community has been defined as Geauga County. About two-fifths (41%) of University Hospitals Geauga Medical Center's discharges were Geauga County residents. In addition, University Hospitals is positioning itself to conduct joint or aligned CHNAs in each of the counties where its medical centers are located by October 1, 2020, per state of Ohio regulation (House Bill 390, effective September 28, 2016). Per the Patient Protection and Affordable Care Act, section 501(r) of the Internal Revenue Code, in order for CHNAs to be conducted jointly, all collaborating organizations must define their community to be the same. For these two reasons, the county was defined as the community.

INCLUSION OF VULNERABLE POPULATIONS

Demographically, Geauga County is not very diverse regarding race and ethnicity. Approximately 7% of Geauga County residents were below the poverty line, according to the 2012-2016 American Community Survey 5 year estimates. For this reason, data is broken down by income (less than $25,000 and greater than $25,000) throughout the report to show disparities.

Approximately 15% of Geauga County is Amish. Although the local health department and hospitals have a great working relationship with this population, and provide services regularly, the Amish leadership has been unwilling to allow participation in the community health needs assessment process. However, patient encounters with local healthcare have provided the community with various qualitative supplemental information to better understand their needs. Additional programs and outreach have been implemented.

PROCESS & METHODS FOR ENGAGING COMMUNITY

This community health needs assessment process was commissioned by the Partnership for a Healthy Geauga (PHG). This coalition has been in existence since 2011 and has approximately 21 member organizations. Multiple sectors, including the general public, were asked through email list servs, social media, and public notices to participate in the process which included defining the scope of the project, choosing questions for the surveys, reviewing initial data, planning a community release, and identifying and prioritizing needs. Forty-four key community agencies worked together to create one comprehensive assessment and plan, with more than 10 community stakeholders attending the release and providing qualitative feedback.

QUANTITATIVE & QUALITATIVE DATA ANALYSIS

The Hospital Council of Northwest Ohio was contracted to collect and analyze the data, as well as overall project management. Detailed data collection methods are described later in this section.

IDENTIFYING & PRIORITIZING NEEDS

The Partnership for a Healthy Geauga met six times to complete the 2018-2019 Geauga County Community Health Improvement Plan. PHG used the Mobilizing for Action through Planning and Partnerships (MAPP) process, which is a community-driven strategic planning process for improving community health. This framework helps communities apply strategic thinking to prioritize health issues and identify resources to address them. There were twenty-one coordinating agencies that comprised the CHIP steering committee and oversee the three priority area teams. The priority areas and coordinating agencies can be found in Appendix VII.

The Partnership for a Healthy Geauga sub-contracted with the Lake County General Health District to facilitate the community health improvement planning process. A prioritization grid activity was used pertaining to the three priority topics and 10 priority outcomes identified in the State Health Improvement Plan. An electronic polling system was them used to determine priority outcomes they felt should be addressed in the CHIP.

Additional details of this process and its results can be found on the Partnership for a Healthy Geauga's website. Geauga County is focused on the following three priority areas: mental health and addiction; chronic disease; and maternal and infant health.

RESOURCES TO ADDRESS NEED

Needs and priorities identified through the MAPP planning process, resulted in a comprehensive 2018-2019 Geauga County Community Health Improvement Plan (CHIP). Numerous resources were identified to address the needs found in Appendix VII. The entire 2018-2019 Geauga County CHIP can be found on the Partnership for a Healthy Geauga's website.

EVALUATION OF IMPACT

The evaluation of impact takes into consideration the feedback from the last community health needs assessment. University Hospitals Geauga Medical Center has a quarterly score card that tracks impact of priority action steps.

CHNA AVAILABILITY

The 2018 University Hospitals Geauga Medical Center's Community Health Needs Assessment, as well as the various other assessments used in creating this report can be found at the following websites:

University Hospitals: http://www.uhhospitals.org/about/community-benefit/community-health-needs-assessment

ADOPTION BY BOARD

University Hospitals adopted the 2018 University Hospitals Geauga Medical Center Community Health Needs Assessment on September 27, 2018.

Primary Data Collection Methods

DESIGN

This assessment was cross-sectional in nature and included a written survey of adults and parents within Geauga County, Ohio in 2016. From the beginning, community leaders were actively engaged in the planning process and helped define the content, scope, and sequence of the study. Active engagement of community members throughout the planning process is regarded as a key factor in completing a valid health needs assessment.

INSTRUMENT DEVELOPMENT

Two survey instruments were designed and pilot tested for this study: one for adults and one for parents of children ages 0-11. As a first step in the design process, health education researchers from the University of Toledo and staff members from HCNO met to discuss potential sources of valid and reliable survey items that would be appropriate for assessing the health status and health needs of adults and children. The investigators decided to derive most of the adult survey items from the Centers for Disease Control and Prevention for their national and state Behavioral Risk Factor Surveillance System (BRFSS). The majority of the survey items for the parents of children ages 0-11 were derived from the National Survey of Children's Health (NSCH). This decision was based on being able to compare local data with state and national data.

The project coordinator from HCNO conducted a series of meetings with the planning committee from Geauga County. During these meetings, banks of potential survey questions from the BRFSS and NSCH surveys were reviewed and discussed. Based on input from the Geauga County planning committee, the project coordinator composed drafts of surveys containing 115 items for the adult survey and 70 items for the child survey. The drafts were reviewed and approved by health education researchers at the University of Toledo, as well as the Geauga County planning committee.

SAMPLING | Adult Survey

The sampling frame for the adult survey consisted of adults ages 19 and older living in Geauga County. According to the 2010 Census, there were 67,862 persons ages 19 and older living in Geauga County. The investigators conducted a power analysis to determine what sample size was needed to ensure a 95% confidence level with a corresponding margin of error of 5% (i.e., we can be 95% sure that the "true" population responses are within a 5% margin of error of the survey findings.) A sample size of at least 382 adults was needed to ensure this level of confidence. The random sample of mailing addresses of adults from Geauga County was obtained from Allegra Marketing Services in Louisville, KY.

SAMPLING | 0-11 Survey

Children ages 0-11 residing in Geauga County were used as the sampling frame for the child surveys. Using 2010 U.S. Census Bureau data, it was determined that 14,854 children ages 0-11 reside in Geauga County. The investigators conducted a power analysis based on a post-hoc distribution of variation in responses (70/30 split) to determine what sample size was needed to ensure a 95% confidence level with corresponding confidence interval of 5% (i.e., we can be 95% sure that the "true" population responses are within a 5% margin of error). The sample size required to generalize to children ages 0-11 was 374. The random sample of mailing addresses of parents of children 0-11 from Geauga County was obtained from Allegra Marketing Services in Louisville, KY.

PROCEDURE | Adult Survey

Prior to mailing the survey, an advance letter was mailed to 1,200 adults in Geauga County. This advance letter was personalized, printed on Partnership for a Healthy Geauga stationery, and signed by Robert K. Weisdack, Health Commissioner of Geauga County Health District. The letter introduced the assessment project and informed the readers that they may be randomly selected to receive the survey. The letter also explained that the respondents' confidentiality would be protected and encouraged the readers to complete and return the survey promptly if they were selected.

Three weeks following the advance letter, a three-wave mailing procedure was implemented to maximize the survey return rate. The initial mailing included a personalized hand signed cover letter (on Partnership for a Healthy Geauga stationery) describing the purpose of the study, a questionnaire, a self-addressed stamped return envelope, and a $2 incentive. Approximately three weeks after the first mailing, a second wave mailing included another personalized cover letter encouraging them to reply, another copy of the questionnaire, and another reply envelope. A third wave postcard was sent three weeks after the second wave mailing. Surveys returned as undeliverable were not replaced with another potential respondent. The mailing process took place from September to November 2016.

The response rate for the mailing was 40% (n=456: CI=± 4.57). This return rate and sample size means that the responses in the assessment should be representative of the entire county.

PROCEDURE | Children 0-5 and 6-11

Prior to mailing the survey to parents of 0-11 year olds, an advance letter was mailed to 2,400 parents in Geauga County. This advance letter was personalized, printed on Partnership for a Healthy Geauga stationery, and signed by Robert K. Weisdack, Health Commissioner of Geauga County Health District. The letter introduced the assessment project and informed the readers that they may be randomly selected to receive the survey. The letter also explained that the respondents' confidentiality would be protected and encouraged the readers to complete and return the survey promptly if they were selected.

Three weeks following the advance letter, a three-wave mailing procedure was implemented to maximize the survey return rate. The initial mailing included a personalized hand signed cover letter (on Partnership for a Healthy Geauga stationery) describing the purpose of the study, a questionnaire, a self-addressed stamped return envelope, and a $2 incentive. Approximately three weeks after the first mailing, a second wave mailing included another personalized cover letter encouraging parents to reply, another copy of the questionnaire, and another reply envelope. A third wave postcard was sent three weeks after the second wave mailing. Surveys returned as undeliverable were not replaced with another potential respondent. The mailing process took place from September to November 2016. The response rate was 23% (n=430: CI=± 4.66).

DATA ANALYSIS

Individual responses were anonymous and only group data was available. All data was analyzed by health education researchers at the University of Toledo using SPSS 23.0. Crosstabs were used to calculate descriptive statistics for the data presented in this report. To be representative of Geauga County, the adult data collected was weighted by age, gender, race, and income using 2010 Census data. Multiple weightings were created based on this information to account for different types of analyses. For more information on how the weightings were created and applied, see Appendix III.

LIMITATIONS

As with all community health needs assessments, it is important to consider the findings in light of all possible limitations. First, the Geauga County adult assessment had a high response rate. However, if any major differences existed between the respondents and the non-respondents regarding the questions asked, this would represent a threat to the external validity of the results (the generalizability of the results to the population of Geauga County). If there were little to no differences between respondents and non-respondents, then this would not be a limitation.

It is also important to note that, although several questions were asked using the same wording as the CDC questionnaires and the NSCH questionnaire, the adult and parent data collection method differed. CDC adult data and NSCH child data were collected using a set of questions from the total question bank, and adults were asked the questions over the telephone rather than through a mailed survey. Additionally, the Amish community is considered a difficult-to-reach population and certain data points may not appropriately reflect specific health indicators within that demographic.

Finally, this survey asked parents questions regarding their young children. Should enough parents had felt compelled to respond in a socially desirable manner inconsistent with reality, this would represent a threat to the internal validity of the results.

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

Secondary Data Collection Methods

HCNO collected secondary data from over 50 websites, including county-level data, wherever possible. HCNO utilized sites, such as the Ohio Department of Health database, Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Surveillance System (YRBSS), numerous CDC sites, Census, American Community Survey, American Cancer Society, American Diabetes Association, Healthy People 2020, County Health Rankings, Job & Family Services (Individual & Family Services), etc. Most secondary data is from 2014-2016. However, trend data has been included starting from 2008 for some indicators. All of the data is included in the section of the report it corresponds with.

Hospital Utilization Data Collection Methods

HCNO worked with staff from University Hospitals, the Center for Health Affairs and Cypress Research Group to incorporate hospital discharge and utilization data within the community health assessment. The hospital utilization data included within the community health assessment is from January 2016 through December 2016. Data is broken down into gender and age, where applicable.

Each hospital provides data to the Ohio Hospitalization Association ("OHA") for state-wide consolidated reporting. Those data are at the patient level, where patients are de-identified. Each data record represents a single hospital admission; hence, individuals who are hospitalized multiple times are included in the database for each time they are admitted/discharged from the hospital.

The hospital utilization data allows us to track number of discharges for any Ohio-based acute care hospital over time. The database includes key demographic information (age, gender, race, county of residence) as well as information related to the hospitalization (primary diagnosis, and all secondary diagnoses). The data allowed us to isolate inpatients both in terms of where they were hospitalized (regardless of where they live) and where they live (regardless of where they were hospitalized).

For more information regarding hospital utilization data, see Health Care Access and Utilization.

2016 Ohio State Health Assessment (SHA)

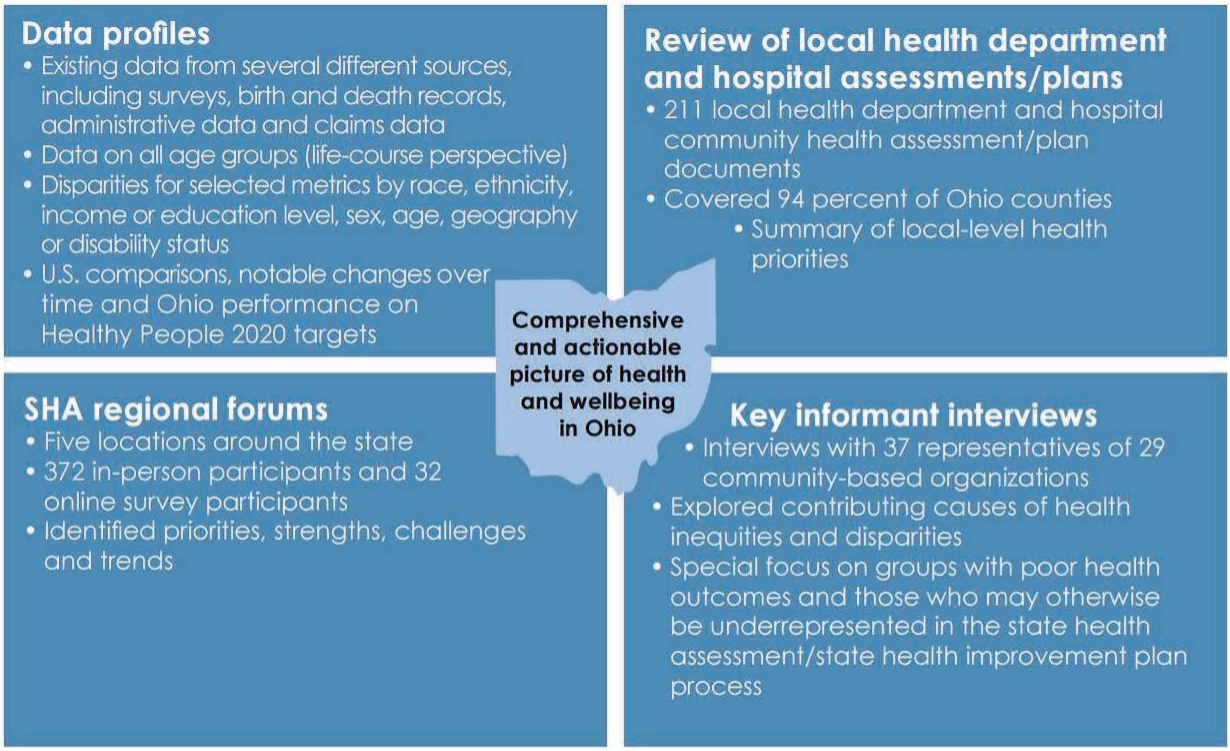
The 2016 Ohio State Health Assessment (SHA) provides data needed to inform health improvement priorities and strategies in the state. This assessment includes over 140 metrics, organized into data profiles, as well as information gathered through five regional forums, a review of local health department and hospital assessments, and plans and key informant interviews.

Similar to the 2016 Ohio SHA, the 2018 Geauga County Community Health Needs Assessment (CHNA) examined a variety of metrics from various areas of health including, but not limited to, health behaviors, chronic disease, access to health care, and social determinants of health. Additionally, the CHNA studied themes and perceptions from local public health stakeholders from a wide variety of sectors. **Note: This symbol will be displayed in the comparison summary when an indicator directly aligns with the 2016 Ohio SHA.**

The interconnectedness of Ohio's greatest health challenges, along with the overall consistency of health priorities identified in this assessment, indicates many opportunities for collaboration between a wide variety of partners at and between the state and local level, including physical and behavioral health organizations and sectors beyond health. It is our hope that this CHA will serve as a foundation for such collaboration.

To view the full 2016 Ohio State Health Assessment, please visit: http://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/chss/ship/SHA_FullReport_08042016.pdf?la=en

FIGURE 1.1 | State Health Assessment (SHA) Sources of Information

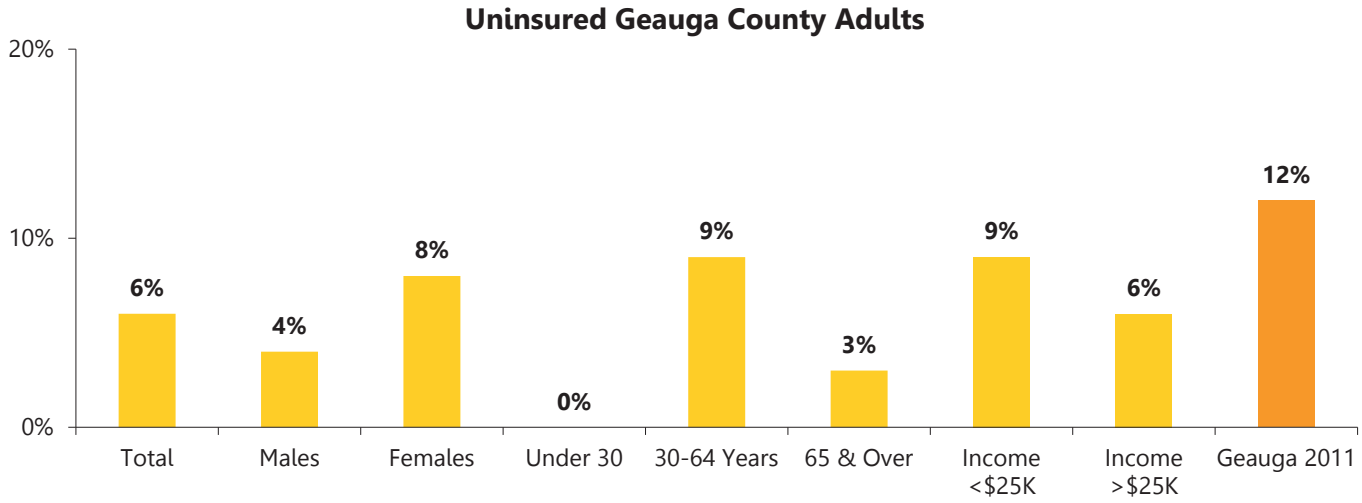


The following section is a high level view of key findings from the HCNO adult and child surveys in Geauga County. Comparison data is provided in the following Trend Summary section.

Data Summary | Healthcare Access

HEALTHCARE COVERAGE

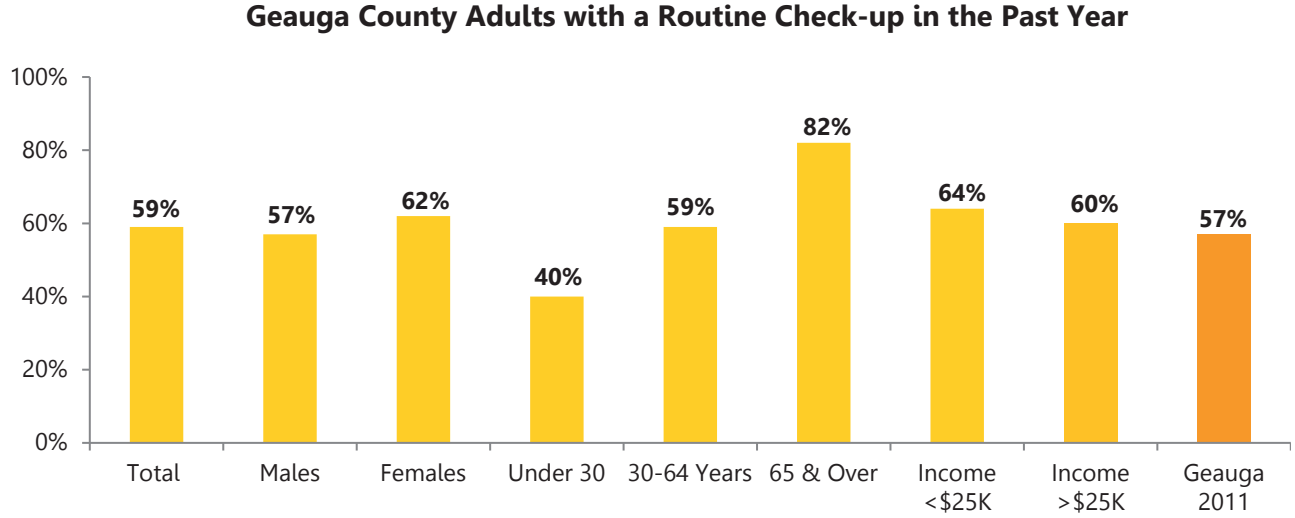
In 2016, 6% of Geauga County adults were without health care coverage. Those most likely to be uninsured were adults ages 30-64 and those with an income level under $25,000. In Geauga County, 7% of residents live below the poverty level *(Source: U.S. Census, American Community Survey 5 Year Estimate, 2012-2016).*



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 AND UTILIZATION

In 2016, 59% of Geauga County adults had visited a doctor for a routine checkup in the past year. Seventy-four percent (74%) of adults went outside of Geauga County for health care services in the past year.



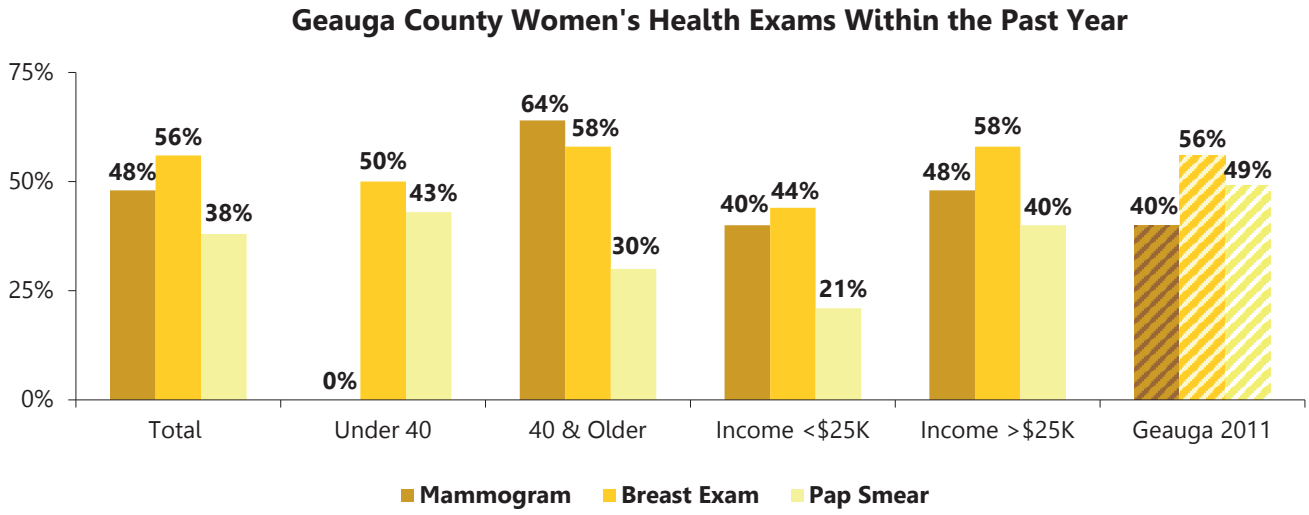
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

PREVENTIVE MEDICINE

In 2016, more than four-fifths (83%) of adults ages 65 and over reported having a flu vaccine in the past year. More than half (54%) of adults ages 50 and over had a colonoscopy or sigmoidoscopy in the past 5 years.

WOMEN'S HEALTH

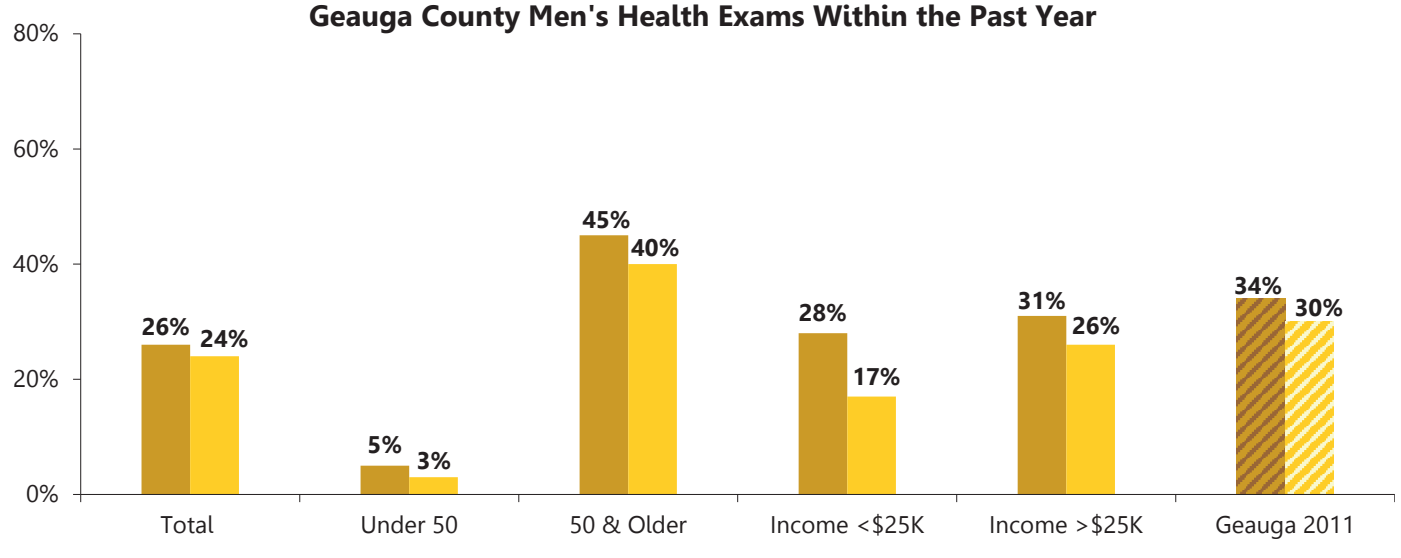
In 2016, nearly two-thirds (64%) of Geauga County women over the age of 40 reported having a mammogram in the past year. Fifty-six percent (56%) of Geauga County women ages 19 and over had a clinical breast exam and 38% had a Pap smear to detect cancer of the cervix in the past year. Four percent (4%) of women survived a heart attack and 2% survived a stroke at some time in their life. Nearly one-third (32%) were obese, 35% had high blood cholesterol, 25% had high blood pressure, and 10% were identified as smokers, all known risk factors for cardiovascular diseases.



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

MEN'S HEALTH

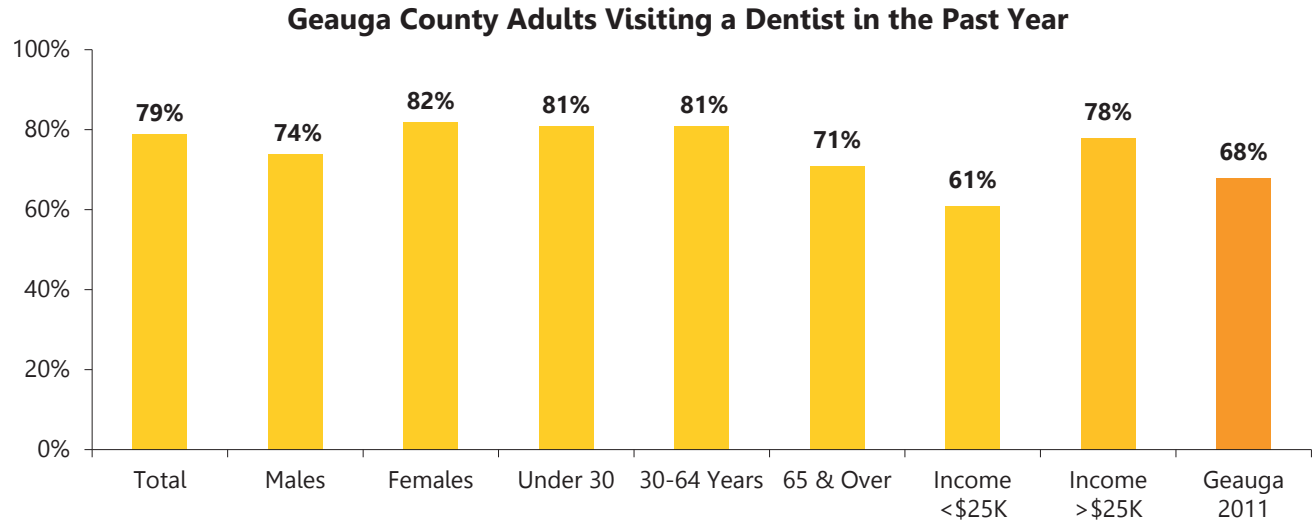
In 2016, 45% of Geauga County males over the age of 50 had a Prostate-Specific Antigen (PSA) test. The needs assessment determined that 6% of men survived a heart attack and 2% survived a stroke at some time in their life. More than one-fourth (28%) of men had been diagnosed with high blood pressure, 35% had high blood cholesterol, and 10% were identified as smokers, which, along with obesity (23%), are known risk factors for cardiovascular diseases.



Caution should be used when int *er than that of the overall survey.*

ORAL HEALTH

Nearly four-fifths (79%) of Geauga County adults had visited a dentist or dental clinic in the past year. The 2016 BRFSS reported that 68% of Ohio adults and 66% of U.S. adults had visited a dentist or dental clinic in the previous twelve months.

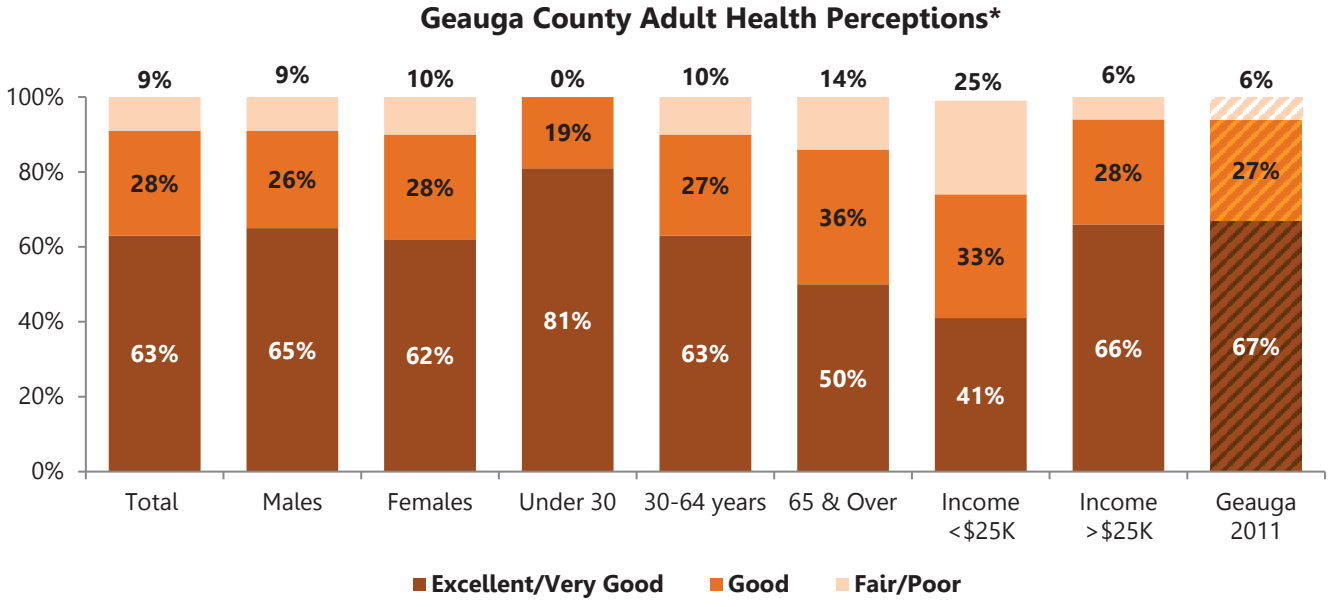


Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

Data Summary | Health Behaviors

HEALTH STATUS PERCEPTIONS

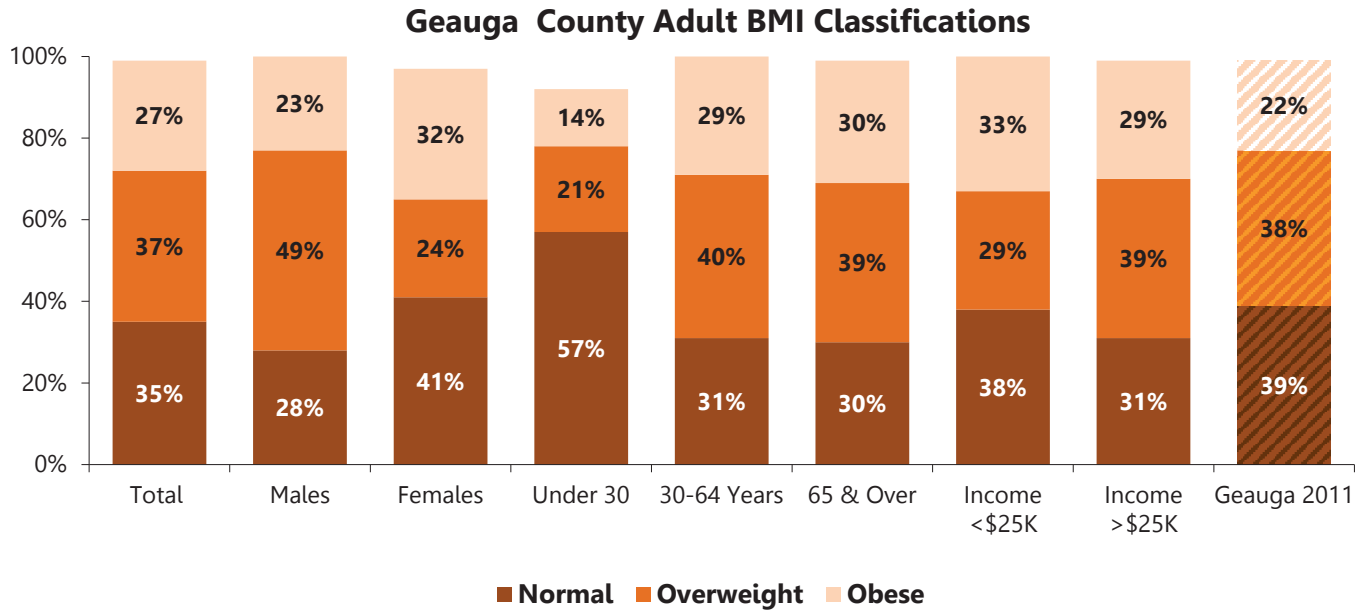
In 2016, almost two-thirds (63%) of Geauga County adults rated their health status as excellent or very good. Conversely, 9% of adults described their health as fair or poor. That percentage increased to 25% of those with incomes less than $25,000.



**Respondents were asked: "Would you say that in general your health is excellent, very good, good, fair or poor?"*
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

ADULT WEIGHT STATUS

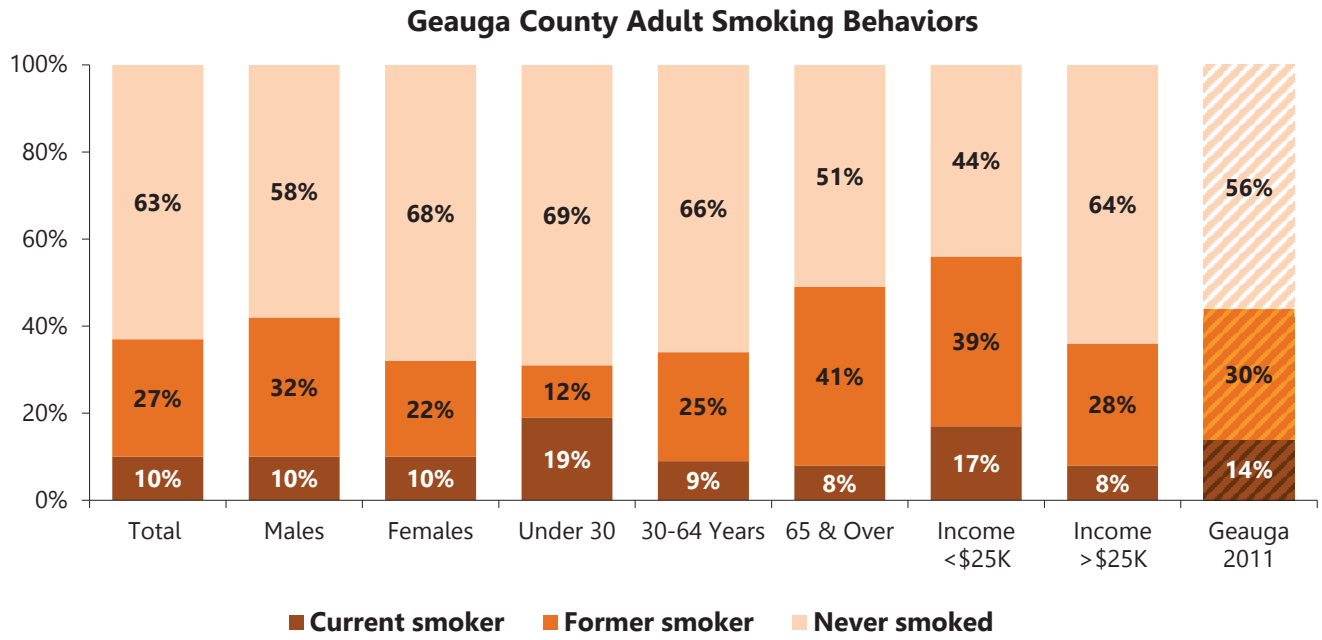
In 2016, 64% of Geauga County adults were overweight (37%) or obese (27%) based on Body Mass Index (BMI). The 2016 BRFSS indicates that 32% of Ohio and 30% of U.S. adults were obese as measured by BMI. Nine percent (9%) of adults ate 5 or more servings of fruits and vegetables per day.



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

ADULT TOBACCO USE

In 2016, 10% of Geauga County adults were current smokers, and 27% were considered former smokers. In 2017, the American Cancer Society (ACS) stated that tobacco use was the most preventable cause of death worldwide and is responsible for the deaths of approximately half of long-term users.

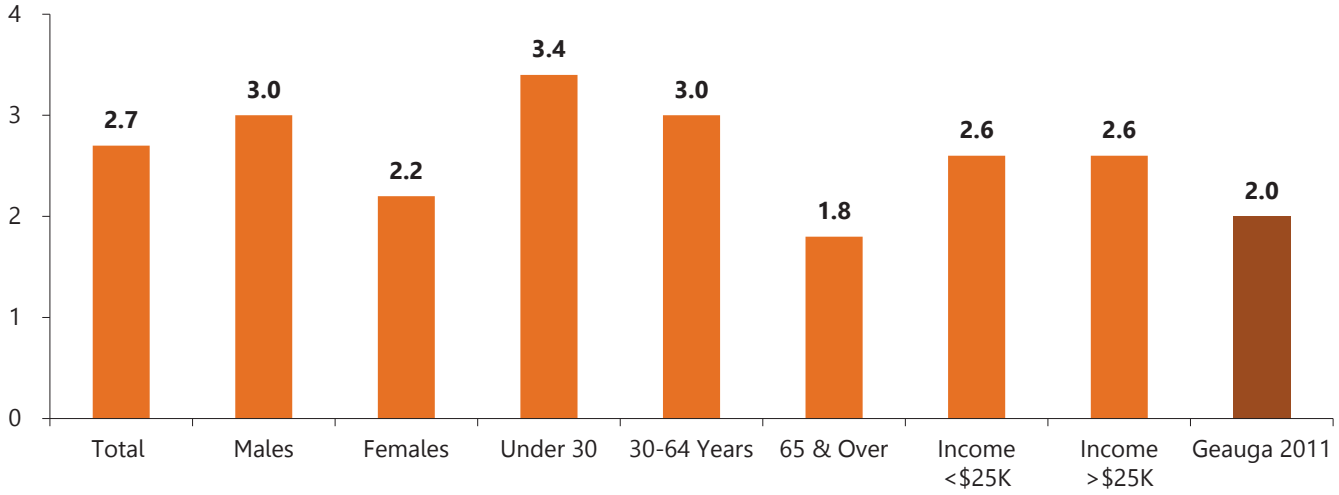


Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

ADULT ALCOHOL CONSUMPTION

In 2016, 38% of current drinkers engaged in binge drinking (defined as five or more drinks for males or four or more drinks for females) on at least one occasion in the past month. Five percent (5%) of adults drove after having perhaps too much to drink.

Adults Average Number of Drinks Consumed Per Drinking Occasion

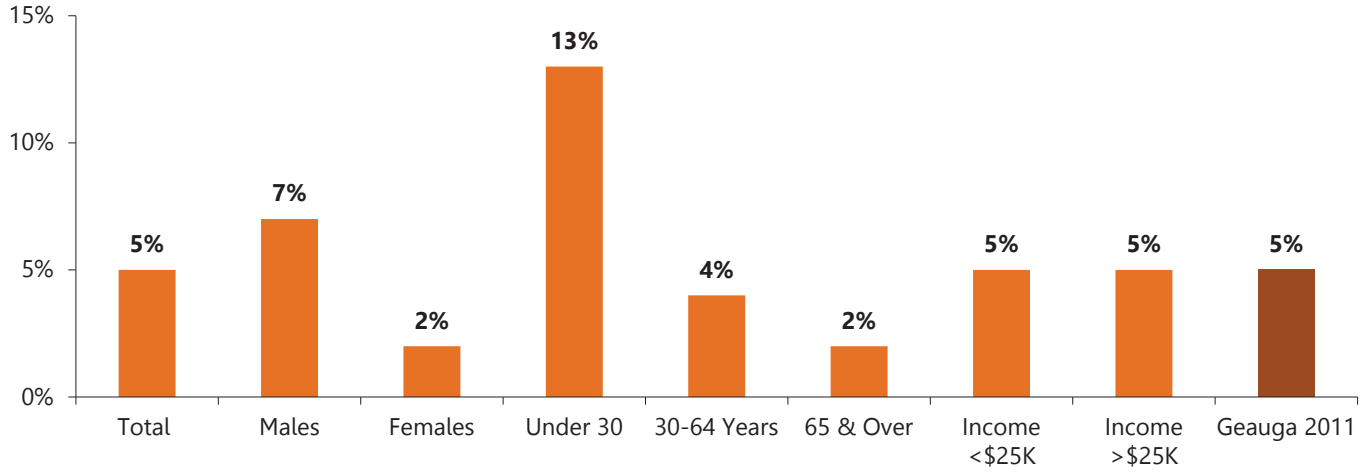


Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

ADULT DRUG USE

In 2016, 5% of Geauga County adults had used marijuana during the past 6 months. Five percent (5%) of adults had used medication not prescribed for them or took more than prescribed to feel good or high and/or more active or alert during the past 6 months.

Geauga County Adult Marijuana Use in Past 6 Months



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

ADULT SEXUAL BEHAVIOR

In 2016, more than two-thirds (68%) of Geauga County adults had sexual intercourse. Two percent (2%) of adults had more than one partner. CDC estimates that youth ages 15-24 make up just over one quarter of the sexually active population but account for half of the 20 million new sexually transmitted infections that occur in the United States each year *(Source: CDC, STDs in Adolescents and Young Adults, 2016 STD Surveillance).*

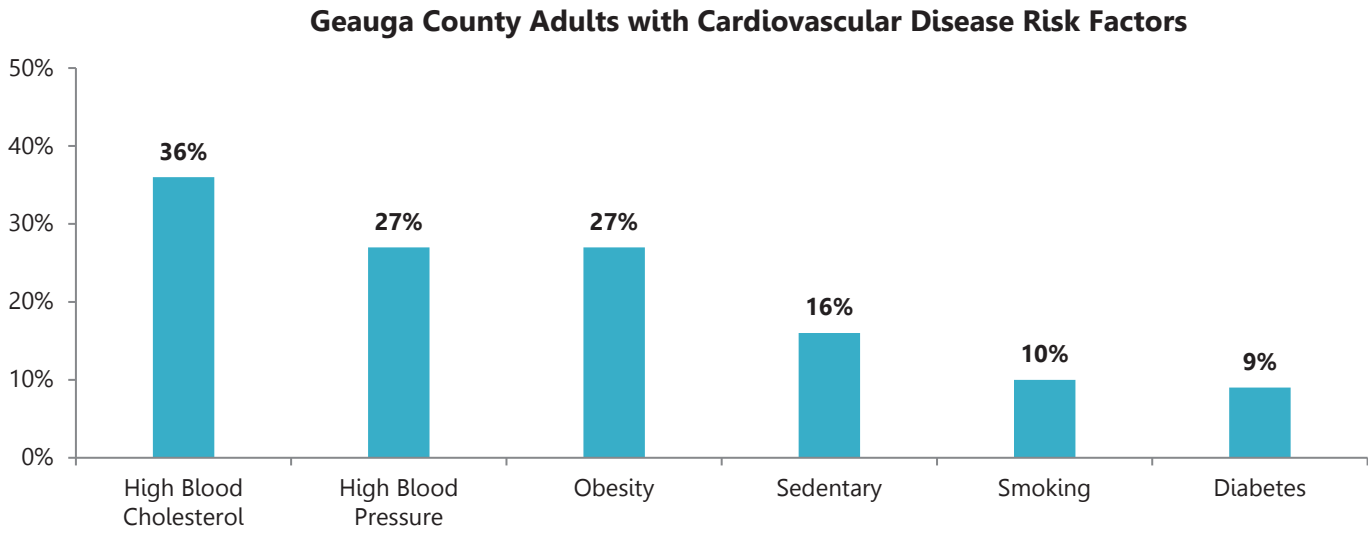
ADULT MENTAL HEALTH

In 2016, 3% of Geauga County adults considered attempting suicide. Eleven percent (11%) of adults rated their daily stress level as high or very high.

Data Summary | Chronic Disease

CARDIOVASCULAR HEALTH

Four percent (4%) of adults had survived a heart attack and 2% had survived a stroke at some time in their life. More than one-third (36%) of Geauga County adults had high blood cholesterol, 27% were obese, 27% had high blood pressure, and 10% were smokers, four known risk factors for heart disease and stroke. Heart disease (25%) and stroke (4%) accounted for 29% of all Geauga County adult deaths from 2013-2015 *(Source: CDC Wonder, 2013-2015).*



CANCER

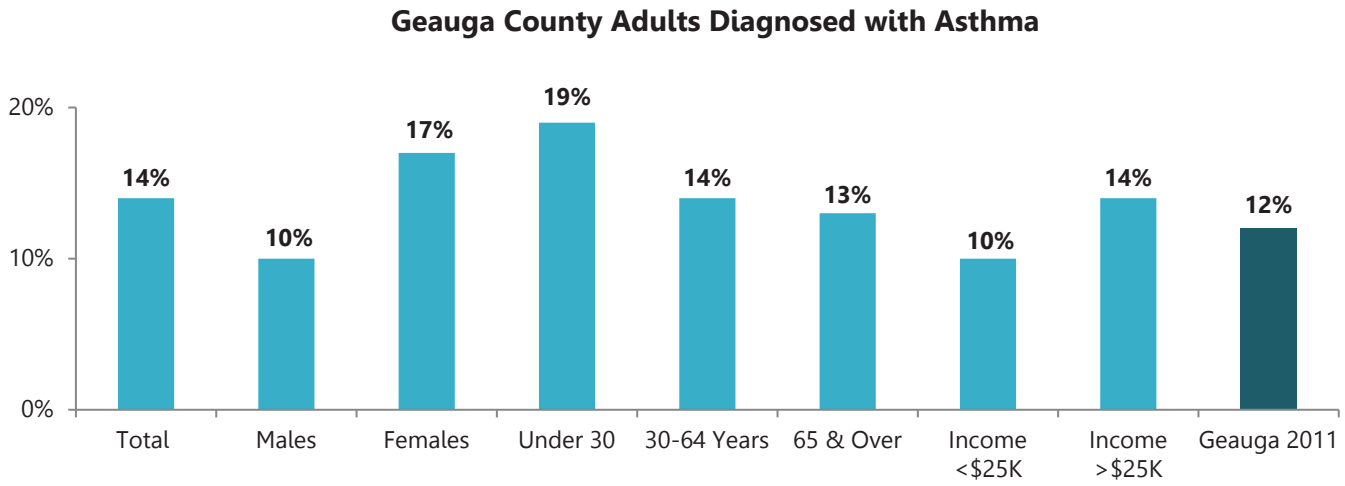
In 2016, 13% of Geauga County adults had been diagnosed with cancer at some time in their life. The Centers for Disease Control and Prevention (CDC) indicates that from 2013-2015, cancers caused 22% of all Geauga County resident deaths. The American Cancer Society advises that avoiding tobacco products, maintaining a healthy weight, adopting a physically active lifestyle, eating more fruits and vegetables, limiting alcoholic beverages, and early detection may reduce overall cancer deaths.

ARTHRITIS

In 2016, 31% of adults were diagnosed with arthritis. The 2016 BRFSS indicated that 31% of Ohio adults and 26% of U.S. adults were told they have arthritis.

ASTHMA

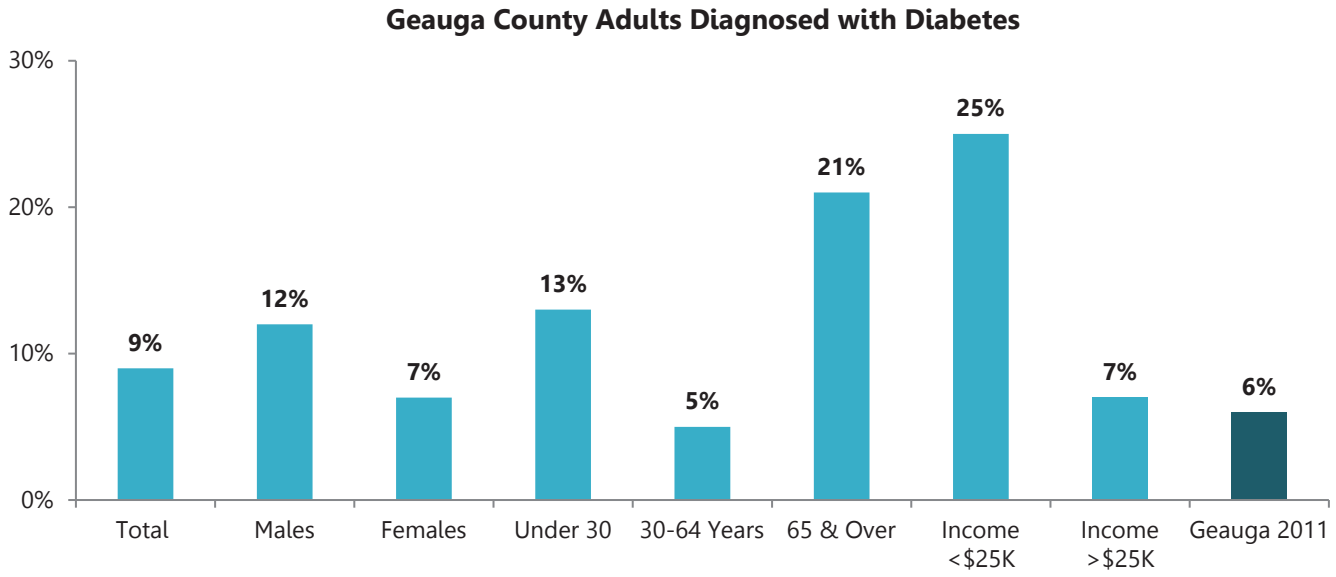
In 2016, 14% of adults had been diagnosed with asthma.



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

DIABETES

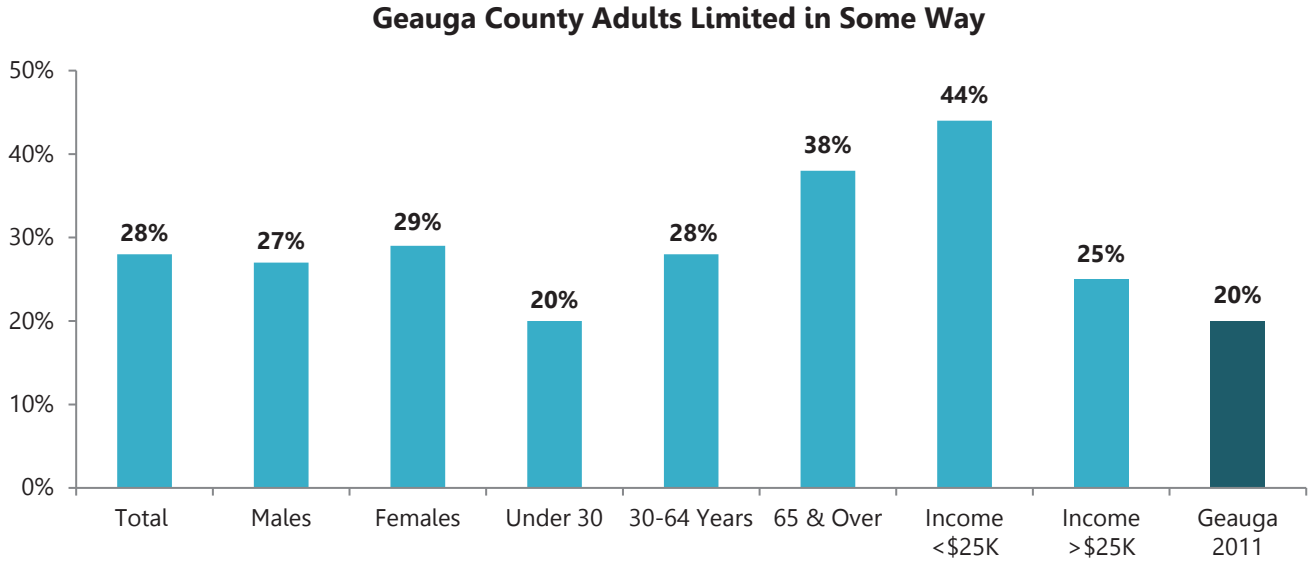
In 2016, 9% of Geauga County adults had been diagnosed with diabetes, and 5% were diagnosed with pre-diabetes.



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

QUALITY OF LIFE

In 2016, 28% of Geauga County adults were limited in some way because of a physical, mental or emotional problem.

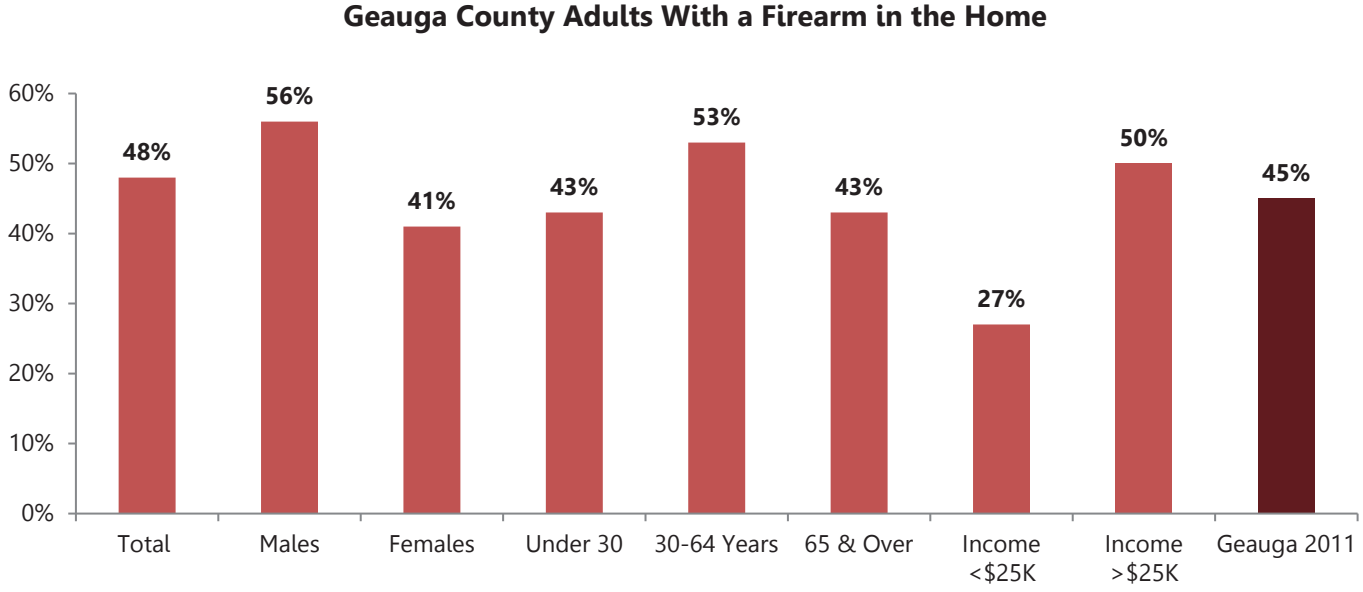


Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

Data Summary | Social Conditions

SOCIAL DETERMINANTS OF HEALTH

In 2016, 7% of Geauga County adults were abused in the past year (including physical, sexual, emotional, financial, and verbal abuse). Fifteen percent (15%) of Geauga County adults had 3 or more adverse childhood experiences (ACEs) in their lifetime. Nearly half (48%) of adults reported having firearms in or around their homes.



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

Data Summary | Child Health

CHILD HEALTH AND FUNCTIONAL STATUS

In 2016, 96% of Geauga County parents of 0-11 year olds rated their child's health as excellent or very good. Thirty-three percent (33%) of children were classified as obese by Body Mass Index (BMI) calculations. Eighty-three percent (83%) of parents had taken their child ages 2-11 to the dentist in the past year. Twelve percent (12%) of parents reported their child had been diagnosed with asthma.

CHILD HEALTH INSURANCE, ACCESS & UTILIZATION

In 2016, 1% of Geauga County parents reported their 0-11 year old did not have health insurance. Eighty-seven (87%) of parents reported they had one or more person they think of as their child's personal doctor or nurse. Twenty-nine percent (29%) of parents reported at least one emergency room visit due to accidents, injury or poisonings.

EARLY CHILDHOOD (0-5 YEARS OLD)

The following information was reported by parents of 0-5 year olds. Seventy-seven percent (77%) of mothers received prenatal care within the first three months during their last pregnancy. Sixty-one percent (61%) of parents put their child to sleep on his or her back. Seventeen percent (17%) of mothers never breastfed their child.

MIDDLE CHILDHOOD (6-11 YEARS OLD)

The following information was reported by Geauga County parents of 6-11 year olds. In 2016, 77% of Geauga County parents reported their child always felt safe at school. Nine percent (9%) of parents reported their child was bullied at some time in the past year. Twenty-one percent (21%) of parents reported their child had an email or a social network account.

FAMILY FUNCTIONING AND COMMUNITY CHARACTERISTICS

In 2016, 35% of parents reported that every family member who lived in their household ate a meal together every day of the week. Nineteen percent (19%) of parents reported they or someone in the family reads to their child every day.

PARENT HEALTH

In 2016, 91% of parents rated their health as excellent or very good. Parents missed work an average of 0.7 days per year due to their child being ill or injured.

Adult Trend Summary

Geauga County adult primary data was collected through local surveys. The comparative Ohio and U.S. data was compiled through the CDC's Behavioral Risk Factor Surveillance System data, unless reported otherwise.

Adult Variables	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Health Status and Coverage				
Rated health as excellent or very good	67%	63%	51%	52%
Rated general health as fair or poor	6%	9%	18%	17%
Rated their mental health as not good on four or more days in the previous month	18%	28%	N/A	N/A
Average number of days that physical health was not good in the past month	N/A	3.8	3.7*	3.8*
Average number of days that mental health was not good in the past month	N/A	4.8	4.0*	3.8*
Uninsured	12%	6%	7%	10%
Had at least one person they thought of as their personal doctor or healthcare provider	51%	54%	83%	77%
Visited a doctor for a routine checkup in the past year	57%	59%	75%	71%
Unable to see doctor due to cost	12%	7%	11%	11%
Diabetes				
Has been diagnosed with diabetes	6%	9%	11%	11%
Asthma				
Has been diagnosed with asthma	12%	14%	14%	14%
Arthritis				
Has been diagnosed with arthritis	34%	31%	31%	26%
Cardiovascular Health				
Had angina or coronary heart disease	N/A	3%	5%	4%
Had a heart attack	2%	4%	5%	4%
Had a stroke	2%	2%	4%	3%
Has been diagnosed with high blood pressure	30%	27%	34%***	31%***
Has been diagnosed with high blood cholesterol	36%	36%	37%***	36%***
Had blood cholesterol checked within the past five years	N/A	86%	78%***	78%***
Weight Status				
Overweight	38%	37%	35%	35%
Obese	22%	27%	32%	30%
Alcohol Consumption				
Current drinker (drank alcohol at least once in the past month)	65%	69%	53%	54%
Binge drinker (defined as consuming more than four [women] or five [men] alcoholic beverages on a single occasion in the past 30 days)	18%	26%	18%	17%
Tobacco Use				
Current smoker (currently smokes some or all days)	14%	10%	23%	17%
Former smoker (smoked 100 cigarettes in lifetime and now do not smoker)	30%	27%	24%	25%
Drug Use				
Adults who used marijuana in the past six months	5%	5%	N/A	N/A
Adults who misused prescription drugs in the past six months	4%	5%	N/A	N/A
Preventive Medicine				
Had a pneumonia vaccine in lifetime (age 65 and older)	N/A	81%	75%	73%
Had a flu vaccine in the past year (ages 65 and over)	41%	83%	57%	58%
Had a mammogram in the past two years (age 40 and older)	77%	78%	74%	72%
Had a pap smear in the past three years	N/A	69%	82%**	80%**
Had a PSA test in within the past two years (age 40 and over)	N/A	56%	39%	40%
Had a digital rectal exam within the past year	30%	24%	N/A	N/A
Quality of Life				
Limited in some way because of physical, mental or emotional problem	N/A	28%	21%***	21%***
Mental Health				
Considered attempting suicide in the past year	2%	3%	N/A	N/A
Sexual Behavior				
Had more than one sexual partner in past year	5%	2%	N/A	N/A
Oral Health				
Adults who have visited the dentist in the past year	68%	79%	68%	66%

N/A – Not Available, Indicates alignment with the Ohio State Health Assessment
** 2015 BRFSS as compiled by 2017 Community Health Rankings, **Ohio and U.S. BRFSS reports women ages 21-65, ***2015 Ohio and U.S. BRFSS*

Child Trend Summary

Geauga County child primary data was collected through local surveys. The comparative Ohio and U.S. data was compiled through the National Survey of Children's Health data, unless reported otherwise.

Child Comparisons	Geauga County 2011 Ages 0-5	Geauga County 2016 Ages 0-5	Ohio 2016 Ages 0-5	U.S. 2016 Ages 0-5	Geauga County 2011 Ages 6-11	Geauga County 2016 Ages 6-11	Ohio 2016 Ages 6-11	U.S. 2016 Ages 6-11
Health and Functional Status								
Rated health as excellent or very good	96%	96%	94%	93%	96%	96%	91%	89%
Rated health as fair or poor	4%	4%	N/A	N/A	4%	4%	N/A	N/A
Dental care visit in past year	45%	63%	54%*	59%*	77%	85%	95%	91%
Diagnosed with asthma	6%	10%	9%	6%	11%	12%	16%	15%
Diagnosed with ADHD/ADD	1%	0%	2%**	3%**	10%	7%	13%	9%
Diagnosed with behavioral or conduct problems	4%	1%	3%**	5%**	4%	2%	13%	11%
Diagnosed with vision problems that cannot be corrected	3%	1%	N/A	1%	2%	3%	N/A	2%
Diagnosed with bone, joint, or muscle problems	2%	3%	N/A	N/A	2%	5%	N/A	N/A
Diagnosed with epilepsy	2%	3%	N/A	1%	1%	2%	N/A	1%
Diagnosed with a head injury	2%	1%	N/A	1%	3%	4%	N/A	2%
Diagnosed with diabetes	1%	1%	N/A	N/A	<1%	1%	N/A	<1%
Diagnosed with depression	1%	1%	N/A	N/A	2%	3%	N/A	2%
Experienced two or more adverse childhood experiences	N/A	6%	18%	12%	N/A	4%	29%	23%
Health Care Coverage, Access and Utilization								
Had public insurance	8%	17%	28%	37%	8%	5%	33%	38%
Have a personal doctor or nurse	79%	88%	75%	74%	81%	87%	77%	72%
Received all the medical care they needed	88%	95%	N/A	N/A	87%	94%	N/A	N/A
Family Functioning, Neighborhood and Community Characteristics								
Parent reads to child everyday	35%	44%	39%	38%	13%	12%	N/A	N/A
Family eats a meal together every day of the week	38%	43%	51%	53%	15%	33%	43%	45%
Child never attends religious services	27%	28%	N/A	N/A	18%	29%	N/A	N/A
Early Childhood (0-5 Years Old)								
Never breastfed their child	N/A	17%	30%	21%	N/A	N/A	N/A	N/A
Middle Childhood (6-11 Years Old)								
Parent felt child was usually/always safe at school	N/A	N/A	N/A	N/A	98%	99%	N/A	N/A
Child participated in 1 or more activities	N/A	N/A	N/A	N/A	N/A	51%	82%	76%
Parent Health								
Mother's mental or emotional health is fair/poor	2%	20%***	5%	5%	5%	12%***	9%	6%
Father's mental or emotional health is fair/poor	13%	24%***	5%	3%	2%	14%***	6%	3%

N/A – Not Available, Indicates alignment with the Ohio State Health Assessment

**Ages 1-5 years old, **Ages 3-5*

**** The response rate for this question was significantly lower compared to 2011 Assessment. Please use numbers with caution.*

Evaluation of Impact

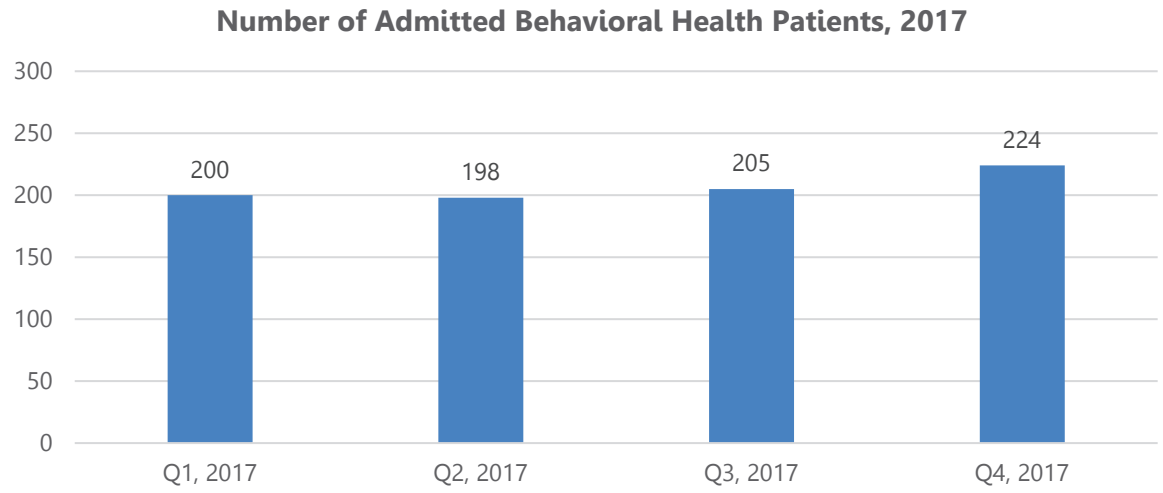
University Hospitals Geauga Medical Center

In its 2015 Community Health Needs Assessment, three community health areas were targeted for the UH Geauga Medical Center's implementation plans. These were chosen as the areas of greatest need where the Medical Center's leadership felt could benefit from the hospitals' resources and expertise.
The three areas were:

- Lack of access of hospital-based services for substance abuse and mental health issues;
- Lack of access to regular outpatient primary and specialty care for the chronically ill; and,
- Insufficient early detection and patient education for chronic diseases (to improve sub-optimal patient self-management).

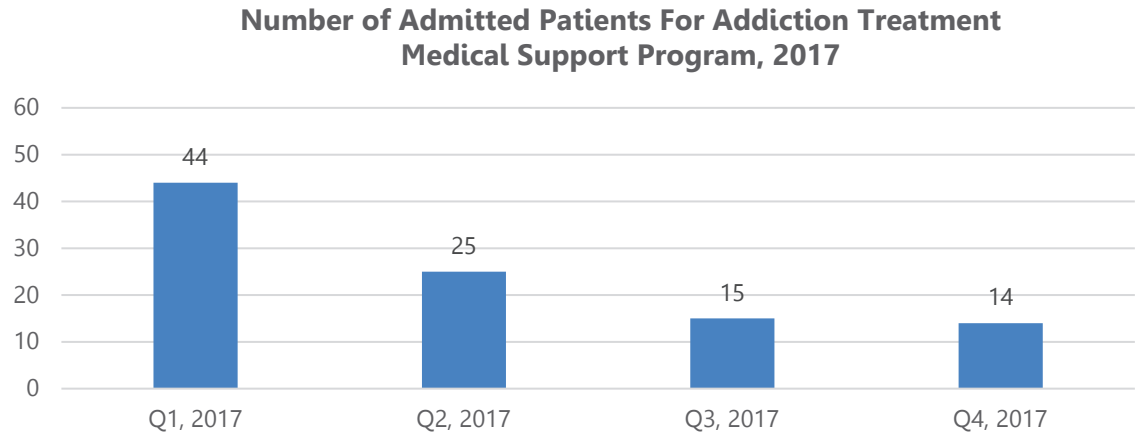
Here we describe the specific interventions initiated by UH Geauga Medical Center in response to each.

1. Access to Hospital-Based Mental Health & Substance Abuse Services
UH Geauga Medical Center realized that although it managed the only inpatient behavioral health unit in the county, its 18-bed inpatient was underutilized by the community. To bring its vital services to more community members who needed it, UH Geauga Medical Center focused primarily on increasing the awareness of its available services in the community. To do this, it expanded its communications outreach to expand its awareness geographically and among more sub-acute care, ambulatory care, and social services personnel. Additionally, UH Geauga made changes to its Behavioral Health Unit so that it better met the needs of the community such as developing criteria to maximize its capacity, hired a psychiatrist with additional training and expanded outreach to nursing homes. This effort was extremely successful. The initial goal was to more than double the number of patients in 2017 who receive inpatient mental health services to 750. That goal was exceeded (827 patients), and the per-quarter trend was up throughout 2017.



As previously mentioned, the hospital also added a psychiatrist to its physician network. The original goal for 2017 was to provide access to psychiatric care for 200 additional patients in the county. That goal also was far exceeded, as more than 300 new patients were evaluated for treatment in each quarter of 2017.

One gap in services was identified, and that was the need for medically supported entry into substance use disorder recovery. This specific approach addresses the needs of those who need medical care in order to safely and sustainably physically adjust to the early stages of recovery. In 2017, a total of 98 patients received treatment through this service.



The UH Addiction Medically Assisted Treatment ("UH MAT") of UH Portage and UH Geauga Medical Centers offers non-psychiatric, inpatient medically managed withdrawal services for patients experiencing opiate and alcohol withdrawal symptoms. Patients experiencing withdrawal or needing to go through withdrawal can call a clinical coordinator for a screening. Appropriate patients can be admitted to the hospital within 24 hours of calling (during weekdays). Inpatient stays are typically 3-5 days. Patients continuing with medication-assisted treatment (MAT) are discharged on medications such as Suboxone or Naltrexone when appropriate. Scheduled outpatient appointments are on day of discharge or within 72 hours. Licensed professional clinical coordinators schedule discharge appointments and provide ongoing patient navigation and follow-up. Appointments include medical addiction specialists and/or fully accredited and licensed behavioral health providers who are conveniently located in the patient's hometown community.

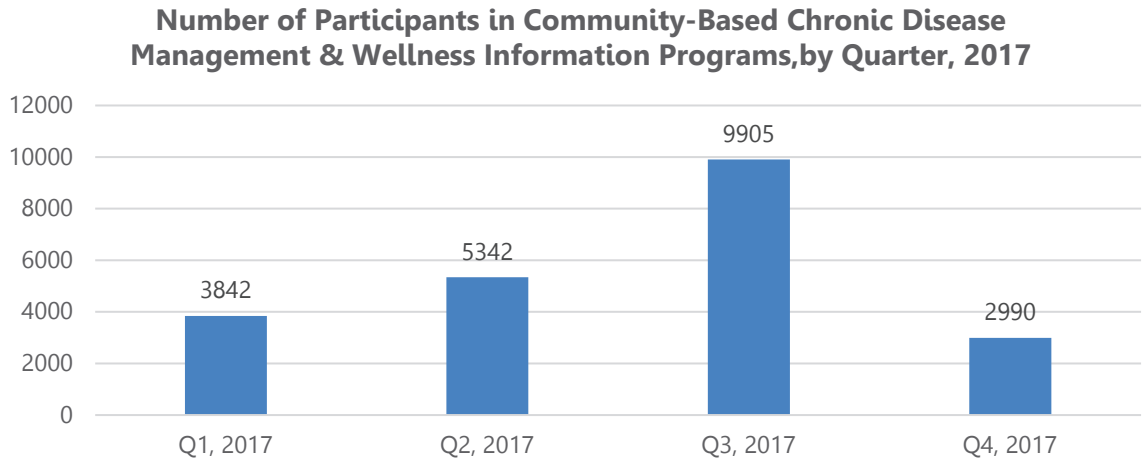
The "pent-up demand" for this new service was very high in early 2017, when the highest number of quarterly patients were admitted. By the second-half of 2017, that number had settled to about 15 patients per quarter. To help ensure all of those who need this care receive it, in 2018 a Masters Level Licensed Professional Clinical Counselor trained in dual diagnosis began working with the Emergency Department in order to capture those patients trying to utilize the acute setting of the Emergency Department to get their chronic disease of addiction needs met and offer them the appropriate medical support to enter recovery.

Hospital leadership also addressed the need to offer pain management in a way which minimizes dependence on addictive narcotics. The hospital's Pain Management Task Force created a multi-disciplinary team focused on reducing the number of patients whose use of prescribed narcotics leads to addiction. For example, the hospital added music therapy as a tool in combating chronic pain. In addition, beginning in Q2, 2017, they improved access to care for high-risk pain management patients by using the Ohio Automated Rx Reporting System ("*OARRS*"), which is an integrated tool to track the dispensing and personal furnishing of controlled prescription drugs to patients. This program was used to identify, educate and connect patients to the proper avenue to minimize their risk of addiction. In the last three quarters of 2017, 54 individuals who presented to the Emergency Department were redirected to lower-risk avenues for pain management.

UH Geauga Medical Center leadership also recognized the need for increased awareness and understanding of behavioral health issues within the general community. They therefore set a goal to reach 1,000 community members through various outreach programs targeted at vulnerable populations: 1) DARE classes (Drug Abuse Resistance Education, for school age children and teens); 2) Quit It Program; 3) Stress Management classes, and 4) Senior Center presentations. In total in 2017, 5,605 Geauga County residents were reached. Participation in programs grew from 607 in Q1, 2017 to 1,205 in Q4, 2014. Geauga County has a total population of about 95,000 people. Therefore, in 2017, these programs reached more than five percent of the total population in the County.

2. Access to outpatient primary and specialty care for the chronically ill

The hospital began its community outreach programs to improve disease management by the chronically ill by frequently engaging with community groups within various settings: health fairs, presentations to employees within businesses, senior centers, schools, libraries and general wellness events. These events were most aggressively scheduled in the parts of Geauga County which are most heavily populated by members of the Amish Community. In total, there were 22,079 participants for the multiple programs in 2017; participation levels by quarter in 2017 are shown below. While some individuals likely attended more than one program in 2017, given that Geauga County's population is less than 100,000 people, this participation level is *very* high and testimony to both how receptive the community was to receiving this information, and how dedicated to the community's well-being UH Geauga Medical Center is.



As a more direct route to regular care for chronic diseases, in 2017 an Amish Nurse navigator was included in many events in order to bring specific information about UH Geauga's call center or instruct on how to access the primary care or specialty care network in the County for those with chronic disease issues. A total of 9,408 community members received this information and counsel throughout 2017. The highest number of community members were served in this way was 3,269 in Q3, 2017.

For seniors who need time to recover after a surgery, accident or illness or injury, UH Center for Lifelong Health concierge services works with patients and their families to connect them to appropriate follow-up services, like rehabilitation centers, which are close to home. UH Geauga set a goal to increase the number of these follow-up appointments for seniors by 15% in 2017. A total of 4,033 appointments were scheduled for seniors in 2017, and the number scheduled in Q4, 2017 was more than double that scheduled in Q1, 2017 – far exceeding the original goal.

3. Increase early detection and provide ongoing education to improve self-management of chronic disease

Through all of the efforts described above, UH Geauga Medical Center hopes to see a decrease of hospitalizations for those with chronic diseases by 5% between 2015 and 2018. This is best assessed through direct measurement of the number of inpatients with the most common chronic conditions in the county (congestive heart failure, chronic obstructive pulmonary disease, diabetes and hypertension) between 2015 and 2018. At the time of this report, only 2016 hospitalization data were available, which was prior to the hospitals' intervention efforts. This will be revisited in the 2019 Community Health Needs Assessment, when data will be available to assess the hospitalization data coincident with the interventions.

HEALTH CARE ACCESS: HEALTH CARE COVERAGE

Key Findings

In 2016, 6% of Geauga County adults were without health care coverage. Those most likely to be uninsured were adults ages 30-64 and those with an income level under $25,000. In Geauga County, 7% of residents live below the poverty level *(Source: U.S. Census, American Community Survey 5 Year Estimate, 2012-2016).*

General Health Coverage

- In 2016, 94% of Geauga County adults had health care coverage, leaving 6% who were uninsured. The 2016 BRFSS reported uninsured prevalence rates as 7% for Ohio and 10% for the U.S.
- Six percent (6%) of adults reported being uninsured in the past year, increasing to 9% of those with incomes less than $25,000 and those ages 30-64.
- Six percent (6%) of adults with children did not have healthcare coverage, compared to 4% of those who did not have children living in their household.
- The following types of health care coverage were used: employer (39%), someone else's employer (20%), Medicare (18%), self-paid plan (9%), Medicaid or medical assistance (7%), multiple-including private sources (4%), Health Insurance Marketplace (1%), military or VA (1%), and multiple-including government sources (1%).

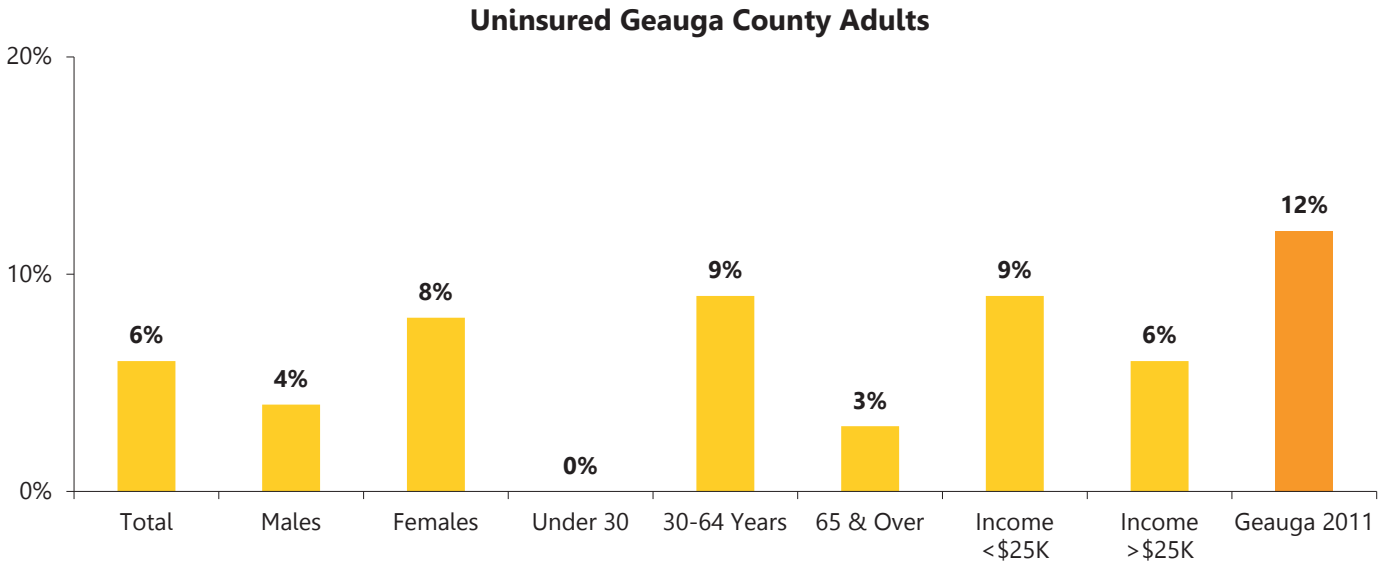
Six percent (6%) of Geauga County adults were uninsured.

- Adult health care coverage included the following: medical (97%), prescription coverage (92%), immunizations (84%), preventive health (81%), outpatient therapy (75%), dental (69%), mental health (66%), vision (59%), alcohol and drug treatment (45%), durable medical equipment (45%), skilled nursing (30%), home care (27%), hospice (24%), and transportation (14%).
- The top reasons uninsured adults gave for being without health care coverage were:
  1. They lost their job or changed employers (58%)
  2. They could not afford to pay the premiums (19%)
  3. They became a part-time or temporary employee (16%)

  (Percentages do not equal 100% because respondents could select more than one reason)

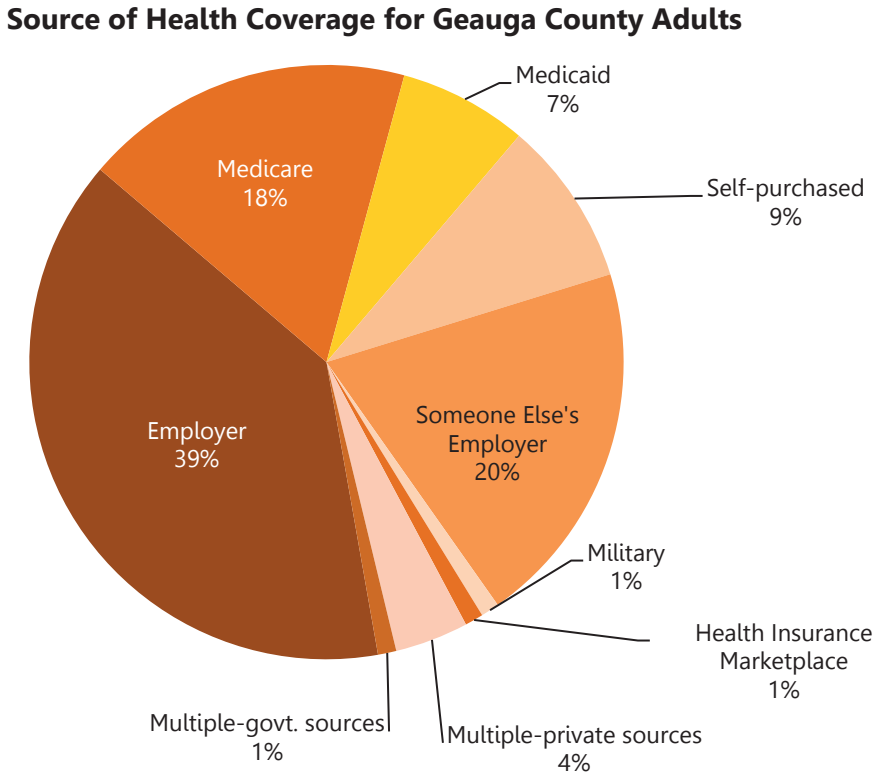
Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Uninsured	12%	6%	7%	10%

The following graph shows the percentages of Geauga County adults who were uninsured by demographic characteristics. Examples of how to interpret the information in the graph include: 6% of all Geauga County adults were uninsured: 9% of adults with an income less than $25,000 and 9% of those ages 30-64. The pie chart shows sources of Geauga County adults' health care coverage.



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

Nine percent (9%) of Geauga County adults with incomes less than $25,000 were uninsured.



The following chart shows what is included in Geauga County adults' insurance coverage.

Health Coverage Includes:	Yes	No	Don't Know
Medical	97%	1%	2%
Prescription Coverage	92%	6%	2%
Immunizations	84%	3%	12%
Preventive Health	81%	3%	16%
Outpatient Therapy	75%	2%	23%
Dental	69%	29%	2%
Mental Health	66%	2%	32%
Vision	59%	34%	7%
Alcohol and Drug Treatment	45%	4%	51%
Durable Medical Equipment	45%	3%	52%
Skilled Nursing	30%	5%	65%
Home Care	27%	7%	65%
Hospice	24%	5%	71%
Transportation	14%	23%	63%

Healthy People 2020
Access to Health Services (AHS)

Objective	Geauga County 2016	Ohio 2016	U.S. 2016	Healthy People 2020 Target
AHS-1.1: Persons under age of 65 years with health care insurance	100% age 20-24 100% age 25-34 94% age 35-44 90% age 45-54 89% age 55-64	90% age 18-24 89% age 25-34 91% age 35-44 94% age 45-54 94% age 55-64	85% age 18-24 84% age 25-34 87% age 35-44 90% age 45-54 93% age 55-64	100%

Note: U.S. baseline is age-adjusted to the 2000 population standard
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
(Sources: Healthy People 2020 Objectives, 2016 BRFSS, 2016 Geauga County Health Assessment)

University Hospital Discharges for Patients without Medical Insurance, 2016*

- Of the inpatients for UH hospitals in UH Geauga Medical Center in 2016, 9.3% of those under 18 were "self-pay," as were 4.9% of those aged 18-64. Very few (0.3%) of seniors did not utilize health insurance to cover their hospital stay. Note that none of the inpatients were classified as 'charity care' in 2016.

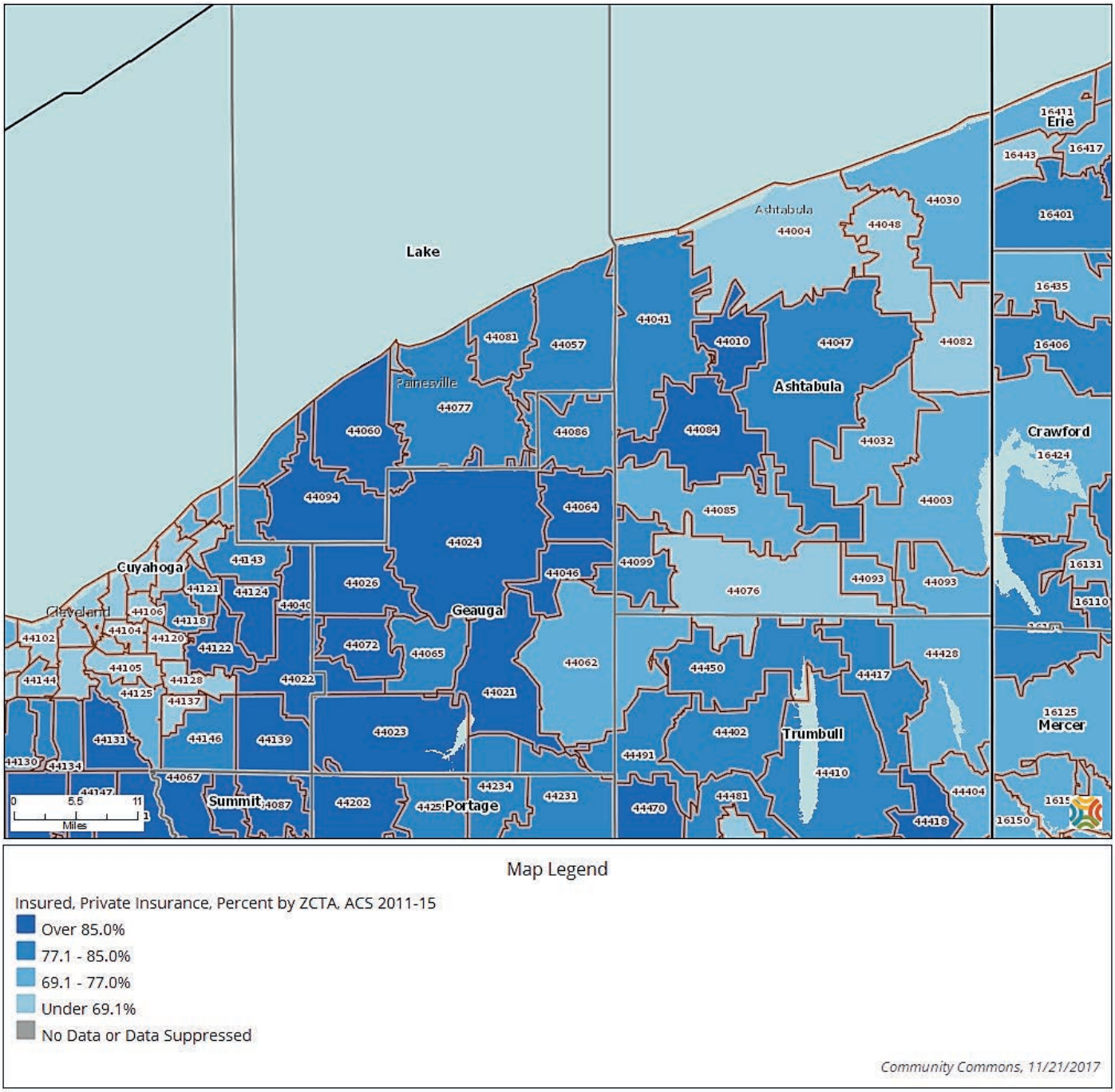
	Patients Age 0-17 Years	Patients Age 18-64 Years	Patients Age 65 Years and Older
Patients without Medical Insurance at Discharge	115 of 1,231 (9.3%)	187 of 3,784 (4.9%)	12 of 4,042 (0.3%)

**Patients who were categorized as either 'self-pay' or 'charity care.'*

(Source: University Hospital Discharge Data, 2016, as analyzed and reported by Cypress Research)

Insurance Type by Zip Code Tract Area, American Community Survey, 2011-2015

Private Insurance



Map Legend

Insured, Private Insurance, Percent by ZCTA, ACS 2011-15

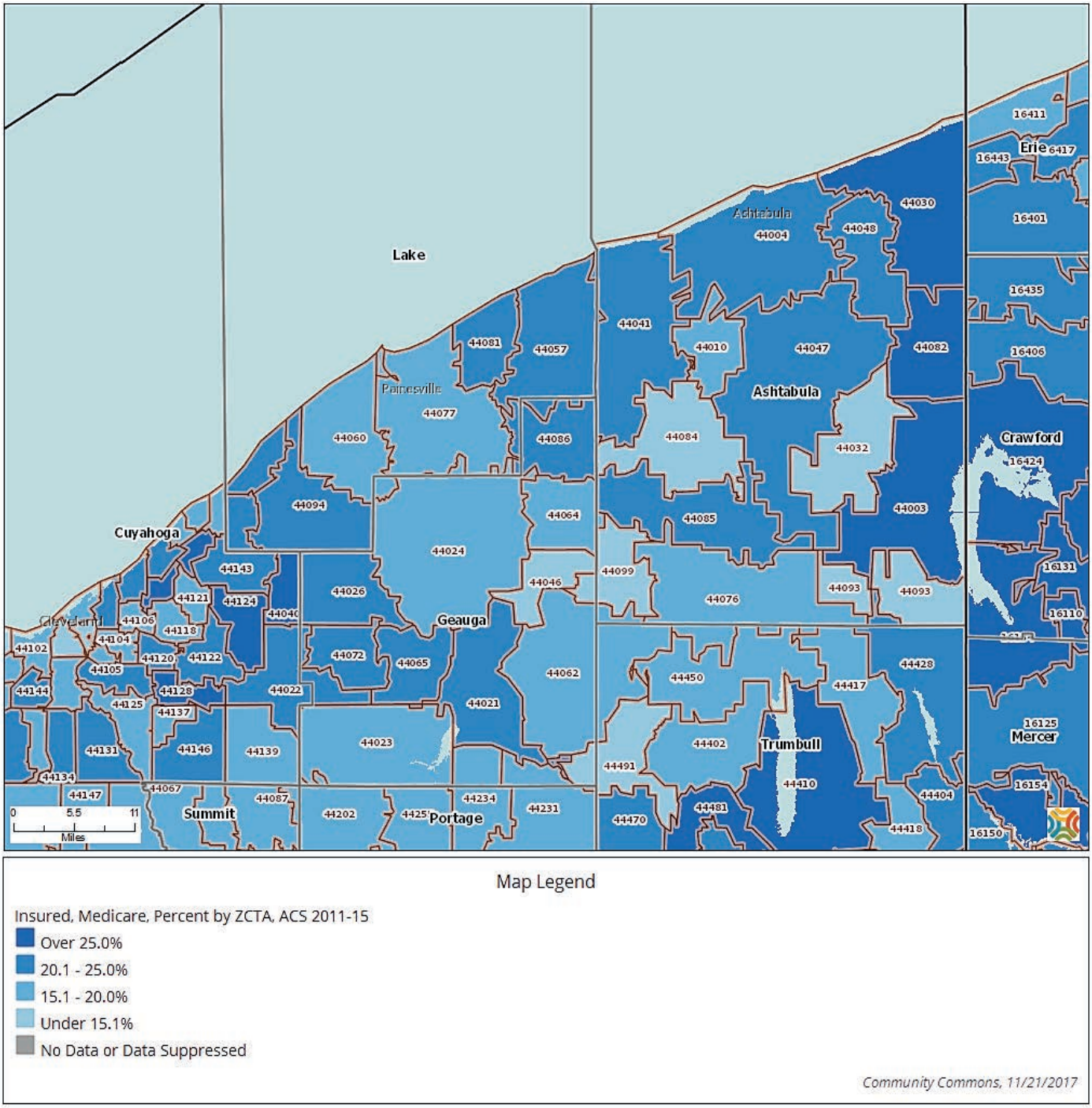
- Over 85.0%
- 77.1 - 85.0%
- 69.1 - 77.0%
- Under 69.1%
- No Data or Data Suppressed

Community Commons, 11/21/2017

(Source: U.S. Census Bureau, American Community Survey: 2011-2015, as compiled by Community Commons)

Insurance Type by Zip Code Tract Area, American Community Survey, 2011-2015

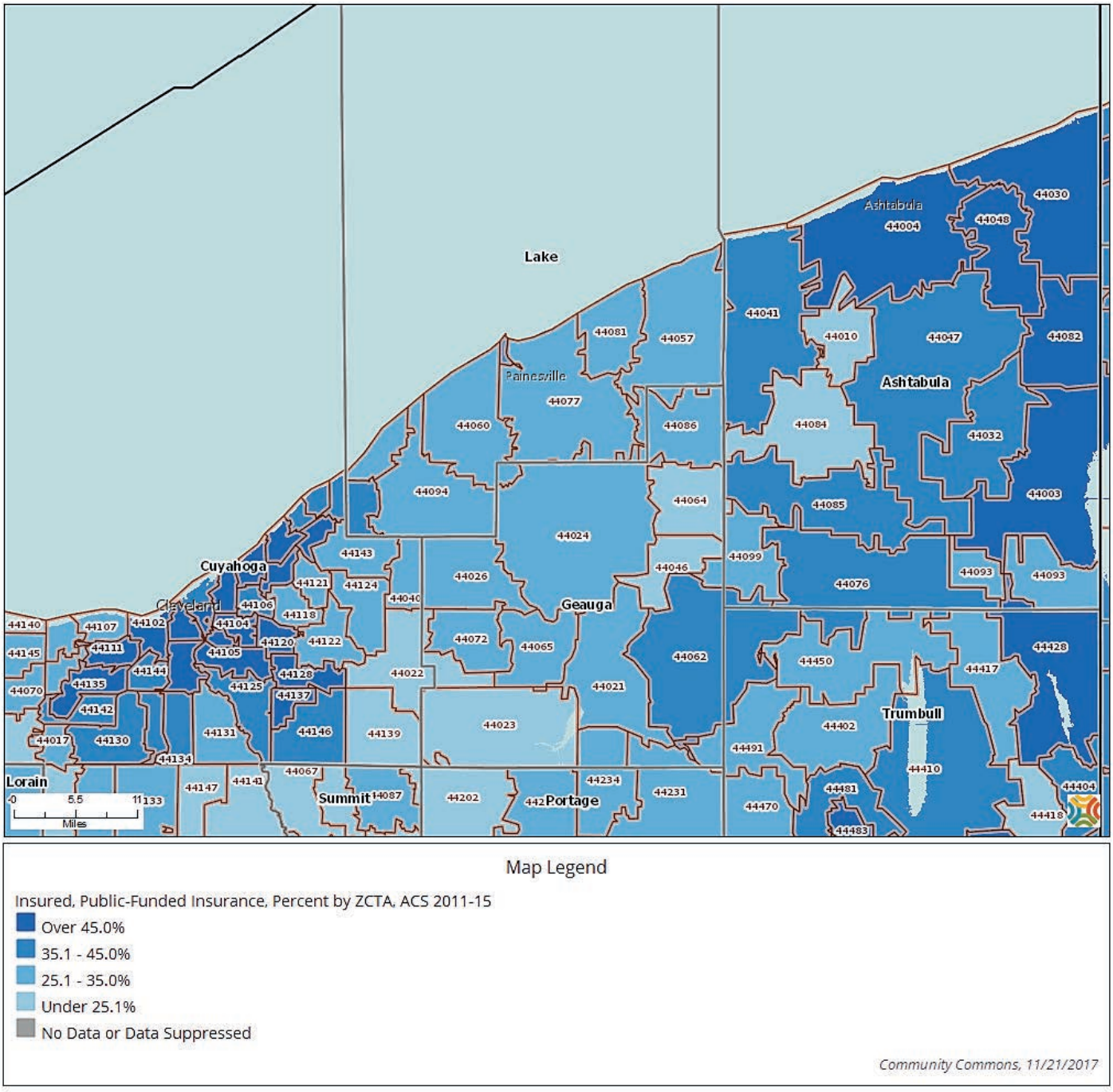
Medicare



(Source: U.S. Census Bureau, American Community Survey: 2011-2015, as compiled by Community Commons)

Insurance Type by Zip Code Tract Area, American Community Survey, 2011-2015

Public-Funded Insurance



Map Legend

Insured, Public-Funded Insurance, Percent by ZCTA, ACS 2011-15

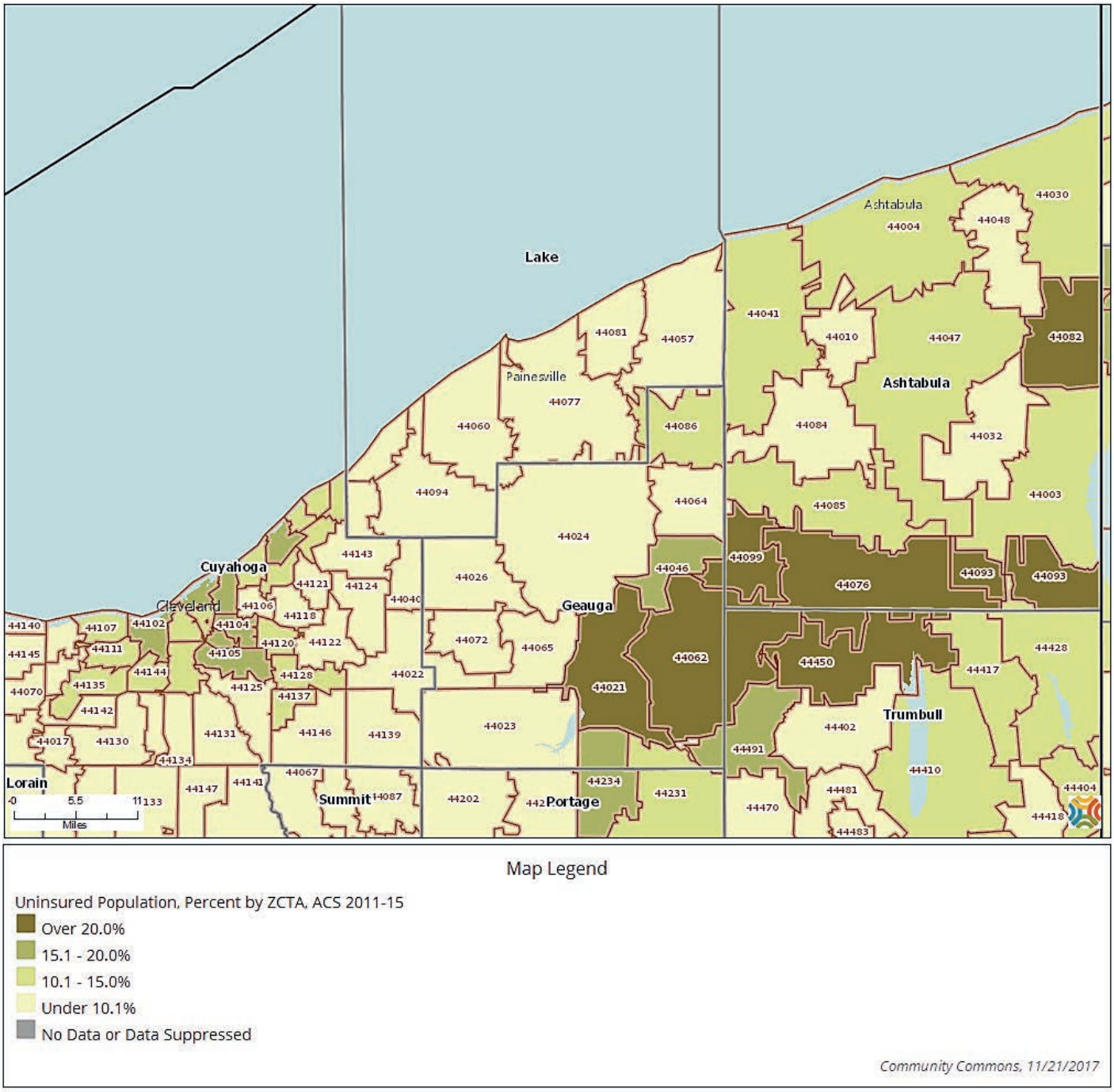
- Over 45.0%
- 35.1 - 45.0%
- 25.1 - 35.0%
- Under 25.1%
- No Data or Data Suppressed

Community Commons, 11/21/2017

(Source: U.S. Census Bureau, American Community Survey: 2011-2015, as compiled by Community Commons)

Insurance Type by Zip Code Tract Area, American Community Survey, 2011-2015

Uninsured



(Source: U.S. Census Bureau, American Community Survey: 2011-2015, as compiled by Community Commons)

HEALTH CARE ACCESS: ACCESS AND UTILIZATION

Key Findings

In 2016, 59% of Geauga County adults had visited a doctor for a routine checkup in the past year. Seventy-four percent (74%) of adults went outside of Geauga County for health care services in the past year.

Health Care Access

- Nearly three-fifths (59%) of Geauga County adults visited a doctor for a routine checkup in the past year, increasing to 82% of those over the age of 65. The 2016 BRFSS reported that 75% of Ohio and 71% of U.S. adults visited a doctor for a routine checkup in the past year.

- More than half (54%) of adults reported they had one person they thought of as their personal doctor or healthcare provider. Thirty-four percent (34%) of adults had more than one person they thought of as their personal healthcare provider, and 9% did not have one at all.

- Adults visited the following places for health care services or advice: doctor's office (61%), multiple places including a doctor's office (12%), family and friends (5%), Internet (5%), urgent care center (3%), chiropractor (2%), hospital emergency room (1%), in-store health clinic (1%), public health clinic or community health center (1%), Department of Veteran's Affairs (VA) (<1%), and some other place (1%). Nine percent (9%) of adults indicated they had no usual place for health care services.

- Seven percent (7%) of adults indicated there was a time in the past year they needed to see a doctor but could not do so because of cost, increasing to 18% of those with incomes less than $25,000.

- The following might prevent adults from seeing a doctor if they were sick, injured, or needed some kind of health care: cost (24%); difficult to get an appointment (15%); high deductible (13%); inconvenient hours (10%); could not get time off work (9%); doctor would not take their insurance (5%); worried they might find something wrong (4%); difficult to find/no transportation (3%); frightened of the procedure or doctor (2%); do not trust or believe doctors (2%); could not find childcare (1%); and some other reason (3%).

- Adults did not get the following major or preventive care because of cost: colonoscopy (5%), mammogram (5%), medication (4%), pap smear (4%), surgery (4%), lab testing (3%), weight loss program (3%), immunizations/vaccinations (2%), mental health services (2%), family planning services (1%), PSA test (1%), alcohol/drug treatment (<1%), and smoking cessation (<1%).

- Almost three-quarters (74%) of adults went outside of Geauga County for the following health care services in the past year: dental services (43%), specialty care (36%), primary care (34%), obstetrics/gynecology/NICU (10%), cardiac care (8%), orthopedic care (7%), pediatric care (6%), mental health care/counseling services (5%), cancer care (2%), addiction services (1%), pediatric care/therapies (1%), hospice/palliative care (<1%), and other services (6%).

Key Facts about the Uninsured Population

- Studies repeatedly demonstrate that the uninsured are less likely than those with insurance to receive preventive care and services for major health conditions and chronic diseases.
- Part of the reason for poor access among uninsured is that 50% do not have a regular place to go when they are sick or need medical advice.
- One in five (20%) nonelderly adults without coverage say that they went without care in the past year because of cost compared to 3% of adults with private coverage and 8% of adults with public coverage.
- In 2016, uninsured nonelderly adults were three times as likely as adults with private coverage to say that they postponed or did not get a needed prescription drug due to cost.
- Because people without health coverage are less likely than those with insurance to have regular outpatient care, they are more likely to be hospitalized for avoidable health problems and to experience declines in their overall health.

(Source: The Henry Kaiser Family Foundation, Key Facts about the Uninsured Population, 2017)

- More than one-fourth (26%) of adults did not get their prescriptions from their doctor filled in the past year, increasing to 50% of those without prescription coverage.

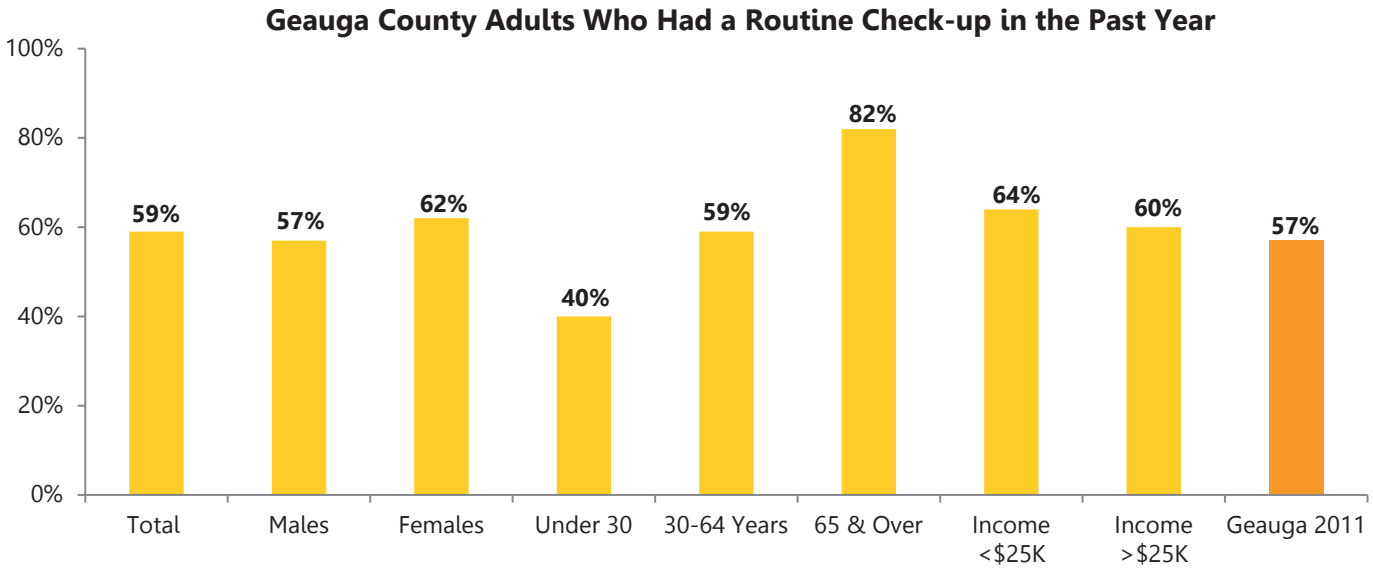
- Those who did not get their prescriptions filled gave the following reasons: no prescriptions to be filled (56%), too expensive/out-of-pocket costs too high (27%), they did not think they needed it (17%), side effects (10%), they stretched their current prescription by taking less than prescribed (10%), there was no generic equivalent (8%), transportation (5%), they were taking too many medications (4%), they did not have insurance (3%), and fear of addiction (1%).

- Adults over the age of 65 understood the following Medicare options available to them: Medicare (33%), Medicare Advantage plan (9%), Medicare Part D drug program (3%), and My Care/Care Source (2%). Nearly one-third (32%) understood multiple options available to them, and 21% understood none of the Medicare options available to them.

Availability of Services

- Fourteen percent (14%) of Geauga County adults used a program or service for themselves or a loved one to help with depression, anxiety, or emotional problems. Reasons for not using such a program included the following: could not afford to go (5%), co-pay/deductible too high (3%), had not thought of it (3%), other priorities (3%), stigma of seeking mental health services (3%), transportation (2%), could not get to the office or clinic (1%), did not know how to find a program (1%), fear (1%), and other reasons (6%). Sixty-eight percent (68%) of adults indicated they did not need such a program.

The following graph shows the percentage of Geauga County adults who had a routine check-up in the past year. An example of how to interpret the information includes: 59% of all Geauga County adults have had a routine check-up in the past year, including 57% of males and 62% of females.



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

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Had at least one person they thought of as their personal doctor or healthcare provider	51%	54%	83%	77%
Visited a doctor for a routine checkup in the past year	57%	59%	75%	71%
Unable to see doctor due to cost	12%	7%	11%	11%

University Hospital Discharge Data for Youth 0-17 Years of Age, 2016

- The data have been compiled into three age groups (0-17 years; 18-64 years; and 65 or more years) and by gender. This is how the federal government typically reports discharge data.
- There were 1,231 Geauga County residents, from 0-17 years of age, including newborns, as inpatients in an acute care hospital in 2016.
- The table for youth 0-17 years of age indicates that the three most frequent discharge conditions were: diseases of the respiratory system (4.7%), conditions originating in the perinatal period (4.6%), and mental and behavioral disorders (4.0%).

Disease Grouping	ICD-10 Codes	Total n (%)	Males n (%)	Females n (%)
Total		1,231 (100%)	605 (100.0%)	626 (100.0%)
Diseases of the respiratory system	J00-J98	58 (4.7%)	31 (5.1%)	27 (4.3%)
Certain conditions originating in the perinatal period	P00-P96	57 (4.6%)	37 (6.1%)	20 (3.2%)
Mental and behavioral disorders	F01-F99	49 (4.0%)	22 (3.6%)	27 (4.3%)
Diseases of the digestive system	K00-K92	33 (2.7%)	16 (2.6%)	17 (2.7%)
Endocrine, nutritional and metabolic diseases	E00-E88	31 (2.5%)	9 (1.5%)	22 (3.5%)
Diseases of the nervous system and sense organs	G00-G98	24 (1.9%)	5 (0.8%)	19 (3.0%)
Symptoms, signs, and ill-defined conditions	R00-R99	20 (1.6%)	11 (1.8%)	9 (1.4%)
Infectious and parasitic diseases	A00-B99	17 (1.4%)	4 (0.7%)	13 (2.1%)
Diseases of the genitourinary system	N00-N98	14 (1.1%)	8 (1.3%)	6 (1.0%)
Diseases of the skin and subcutaneous tissue	L00-L98	11 (0.9%)	5 (0.8%)	6 (1.0%)
Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99	11 (0.9%)	5 (0.8%)	6 (1.0%)
Complications of pregnancy, childbirth, and the puerperium	O00-O99	10 (0.8%)	0 (0.0%)	10 (1.6%)
Diseases of the musculoskeletal system and connective tissue	M00-M99	9 (0.7%)	3 (0.5%)	6 (1.0%)
Diseases of the circulatory system	I00-I99	9 (0.7%)	4 (0.7%)	5 (0.8%)
Other (not classified elsewhere)		865 (69.9%)	438 (72.4%)	427 (68.2%)

** Fewer than 5 cases were not reported to protect privacy.*

(Source: University Hospital Discharge Data, 2016, as analyzed and reported by Cypress Research)

University Hospital Discharge Data for Adults 18-64 Years of Age, 2016

- There were 3,784 Geauga County residents 18-64 years old who were discharged from an acute care facility in 2016.

- The table for adults 18-64 years of age indicates that the three most frequent discharge conditions were: complications related to pregnancy, childbirth, and the puerperium (females only, 37.6%); diseases of the digestive system (11%); and diseases of the circulatory system (9.9%).

Disease Grouping	ICD-10 Codes	Total n (%)	Males n (%)	Females n (%)
Total		3,784 (100.0%)	1,619 (100.0%)	2,165 (100.0%)
Complications of pregnancy, childbirth, and the puerperium	O00-O99	813 (37.6% of females)	0 (0.0%)	813 (37.6%)
Diseases of the digestive system	K00-K92	415 (11.0%)	221 (13.7%)	194 (9.0%)
Diseases of the circulatory system	I00-I99	376 (9.9%)	241 (14.9%)	135 (6.2%)
Mental and behavioral disorders	R00-R99	373 (9.9%)	187 (11.6%)	186 (8.6%)
Diseases of the musculoskeletal system and connective tissue	M00-M99	368 (9.7%)	184 (11.4%)	184 (8.5%)
Diseases of the respiratory system	J00-J98	225 (5.9%)	117 (7.2%)	108 (5.0%)
Cancers (neoplasms)	C00-D48	188 (5.0%	95 (5.9%	93 (4.3%
Infectious and parasitic diseases	A00-B99	154 (4.1%)	86 (5.3%)	68 (3.1%)
Injury	S00-T34	151 (4.0%)	109 (6.7%)	42 (1.9%)
Diseases of the nervous system and sense organs	T36-T50	110 (2.9%)	65 (4.0%)	45 (2.1%)
Endocrine, nutritional and metabolic diseases	E00-E88	104 (2.7%	54 (3.3%	50 (2.3%
Symptoms, signs, and ill-defined conditions	G00-G98	90 (2.4%)	34 (2.1%)	56 (2.6%)
Diseases of the genitourinary system	N00-N98	89 (2.4%)	43 (2.7%)	46 (2.1%)
Diseases of the skin and subcutaneous tissue	L00-L98	79 (2.1%)	45 (2.8%)	34 (1.6%)
Poisoning	T36-T50	49 1.3%)	31 (1.9%)	18 (0.8%)
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	D50-D89	34 (0.9%	16 (1.0%	18 (0.8%
Other (not classified elsewhere)		156 (4.1%)	85 (5.3%)	71 (3.3%)

** Fewer than 5 cases were not reported to protect privacy.*

(Source: University Hospital Discharge Data, 2016, as analyzed and reported by Cypress Research)

University Hospital Discharge Data for Adults 65 Years of Age and Older, 2016

- There were 4,042 Geauga County residents 65 years of age and older who were discharged from an acute care facility in 2016.

- The table for adults 65 years of age and older indicates the three most frequent discharge conditions were: diseases of circulatory system (23.9%), diseases of the respiratory system (11.2%), and diseases of the musculoskeletal system and connective tissue (10.8%).

Disease Grouping	ICD-10 Codes	Total n (%)	Males n (%)	Females n (%)
Total		4,042 (100.0%)	1,901 (100.0%)	2,141 (100.0%)
Diseases of the circulatory system	I00-I99	968 (23.9%)	497 (26.1%)	471 (22.0%)
Diseases of the respiratory system	J00-J98	453 (11.2%)	219 (11.5%)	234 (10.9%)
Diseases of the musculoskeletal system and connective tissue	M00-M99	438 (10.8%)	216 (11.4%)	222 (10.4%)
Diseases of the digestive system	K00-K92	394 (9.7%)	173 (9.1%)	221 (10.3%)
Injury	S00-T34	287 (7.1%)	101 (5.3%)	186 (8.7%)
Infectious and parasitic diseases	A00-B99	285 (7.1%)	141 (7.4%)	144 (6.7%)
Diseases of the genitourinary system	N00-N98	245 (6.1%)	107 (5.6%)	138 (6.4%)
Cancers (neoplasms)	C00-D48	203 (5.0%)	102 (5.4%)	101 (4.7%)
Diseases of the nervous system and sense organs	G00-G98	127 (3.1%)	62 (3.3%)	65 (3.0%)
Symptoms, signs, and ill-defined conditions	R00-R99	124 (3.1%)	61 (3.2%)	63 (2.9%)
Endocrine, nutritional and metabolic diseases	E00-E88	95 (2.4%)	29 (1.5%)	66 (3.1%)
Diseases of the skin and subcutaneous tissue	L00-L98	85 (2.1%)	40 (2.1%)	45 (2.1%)
Mental and behavioral disorders	F01-F99	78 (1.9%)	41 (2.2%)	37 (1.7%)
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	D50-D89	54 (1.3%)	19 (1.0%)	35 (1.6%)
Poisoning	T36-T50	11 (0.3%)	4 (0.2%)	7 (0.3%)
Diseases of the ear and mastoid process	H60-H93	6 (0.1%)	1 (0.1%)	5 (0.2%)
Other (not classified elsewhere)		184 (4.6%)	85 (4.5%)	99 (4.6%)

** Fewer than 5 cases were not reported to protect privacy.*

(Source: University Hospital Discharge Data, 2016, as analyzed and reported by Cypress Research)

Ambulatory Care Sensitive (ACS) Discharges (Primary Diagnosis), Geauga County Residents (Hospitalized Anywhere), vs. UH Geauga Medical Center Inpatients, 2016

- **A**mbulatory **C**are **S**ensitive (ACS) conditions or discharges are conditions for which hospital admission could be prevented by interventions in primary care.

- In 2016, there were 9,057 Geauga County residents who were discharged, as inpatients, from an acute care hospital. Of those, 3,623 (40%) were hospitalized in UH Geauga Medical Center.

- Also during 2016, UH Geauga Medical Center cared for 8,960 inpatients. Many of those, however, (5,332 or 59.4%%) were non-Geauga County residents. Below we show the Ambulatory Care Sensitive cases ("ACS" cases) for 2016 for both groups of patients.

- Overall, 11.9% of the hospitalizations of Geauga County residents were due to an ACS condition. If we look at those hospitalized in UH Geauga Medical Center, we see almost the same proportion of ACS cases (11.7%).

- The most common ACS condition among those hospitalized was Congestive Heart Failure, which comprised 2.6% of all Geauga County residents hospitalized, and 3.0% of UH Geauga Medical Center inpatients. Almost as many, as a percentage of total, inpatients were hospitalized due to Chronic Obstructive Pulmonary Disease. The third most common ACS condition was a hip/femur fracture among those age 45 and older; this is considered less an issue with the lack of primary care as structural deficiencies in the community (where older residents are more susceptible to falls).

	Inpatient in Any Hospital: Geauga County Resident		Inpatient in UH Geauga Medical Center	
	Number	Percent	Number	Percent
Total	9,057	100.0%	8,960	100.0%
Total ACS Cases	1,080	11.9%	1,045	11.7%
Specific Ambulatory Care Sensitive Conditions:				
Congestive Heart Failure	240	2.6%	267	3.0%
Chronic Obstructive Pulmonary Disease	185	2.0%	224	2.5%
Hip/Femur Fracture (age 45 and older)	111	1.2%	91	1.0%
Cellulitis	104	1.1%	111	1.2%
Gastrointestinal Obstruction	72	0.8%	87	1.0%
Diabetes	65	0.7%	77	0.9%
Grand Mal Seizure and Other Convulsions	65	0.7%	24	0.3%
Dehydration	44	0.5%	42	0.5%
Appendicitis	35	0.4%	26	0.3%
Asthma	34	0.4%	14	0.2%
Hypertension	29	0.3%	34	0.4%
Gastroenteritis	28	0.3%	25	0.3%
Kidney/Urinary Tract Infection	26	0.3%	22	0.2%
Bacterial Pneumonia	16	0.2%	5	0.1%
Convulsions/Epilepsy (age 6 and older)	15	0.2%	9	0.1%
Angina	7	0.1%	6	0.1%
Myocardial Infarction	7	0.1%	2	<0.1%

Fewer than 5 cases were omitted to ensure confidentiality.

(Source: University Hospital Ambulatory Care Sensitive Data, 2016, as analyzed and reported by Cypress Research)

Most Common* Ambulatory Care Sensitive (ACS) Discharges (Primary Diagnosis), 2016
All Geauga County Residents (Hospitalized Anywhere),
By Major Age Group (Adults Only, Age 18+)

- **A**mbulatory **C**are **S**ensitive (ACS) conditions or discharges are conditions for which hospital admission could be prevented by interventions in primary care.

- The incidence of ACS cases among Geauga County residents in 2016 increased with age. Only 5.3% of those hospitalized adults under age 40 had an ACS condition; twice as many (11.8%) of those aged 40-64. About one in six seniors (16.1%) were hospitalized due to an ACS condition in 2016.

- The most common ACS condition (primary diagnosis) associated with hospitalization for younger adult (under 40 years) Geauga County residents in 2016 were grand mal seizures/convulsions (1.2%) and cellulitis (0.8%). Note that adults under age 40 comprised only 19% of the hospitalized patients in 2016.

- Middle-aged adults (age 40-64) showed a somewhat different pattern of ACS conditions. The most common conditions were Chronic Obstructive Pulmonary Disease (COPD) (2.6%) and cellulitis (1.6%).

- For the oldest hospitalized group (age 65+), the most common ACS conditions were congestive heart failure (5.0%), COPD (3.1%) and hip/femur fracture (2.4%).

	Adult Under 40	Adults Ages 40-64	Adults Age 65+
Total:	1,529 (100.0%)	2,138 (100.0%)	4,192 (100.0%)
Any ACS Condition:	81 (5.3%)	253 (11.8%)	674 (16.1%)
Specific Ambulatory Care Sensitive Conditions:			
Cellulitis	12 (0.8%)	35 (1.6%)	54 (1.3%)
Chronic Obstructive Pulmonary Disease	1 (0.1%)	56 (2.6%)	128 (3.1%)
Congestive Heart Failure	5 (0.3%)	25 (1.2%)	210 (5.0%)
Diabetes	6 (0.4%)	28 (1.3%)	19 (0.5%)
Gastrointestinal Obstruction	5 (0.3%)	26 (1.2%)	39 (0.9%)
Grand Mal Seizure and Other Convulsions	19 (1.2%)	16 (0.7%)	20 (0.5%)
Hip/Femur Fracture (age 45 and older)	0 (0.0%)	9 (0.4%)	102 (2.4%)

**Only those ACS conditions associated with at least 1% of the group are shown.*

(Source: University Hospital Ambulatory Care Sensitive Data, 2016, as analyzed and reported by Cypress Research)

Geauga County Residents, Primary & Secondary Diagnoses, 2016 Hospitalizations

Below are the diagnosis specifics for all 9,057 of the Geauga County residents hospitalized in 2016, regardless of where they were hospitalized (in or out of the county). Both the diagnostic category, and the most common specific diagnoses are shown. Information for both primary diagnosis and for secondary diagnoses is shown; while the primary diagnosis is related to the primary reason for hospitalizations, understanding the incidence of various diagnoses which are secondary is often more telling of the chronic health conditions facing the community in general. Some noteworthy findings for Geauga County:

- The most common diagnostic categories for the primary diagnoses were **diseases of the circulatory system** (12.9% of all hospitalizations), **complications of childbirth** (11.8%) and **diseases of the digestive system** (8.1%). These three general categories comprise about one-third of all primary diagnoses for inpatients in 2016.

- While very few residents were hospitalized due to essential hypertension, 15.9% had a secondary diagnosis of hypertension.

- One in ten (10.1%) of Geauga County resident inpatients had a secondary diagnosis of gastro-esophageal reflux disease (without esophagitis).

- Pneumonia was a common primary (2.9%) and secondary (2.8%) diagnosis.

- While mental/behavior related issues were only a primary diagnosis in one in twenty admissions, they were very commonly a secondary diagnosis: nicotine dependence (9.1%), anxiety disorder (8.1%), major depressive order episode (7.5%) were the most common secondary diagnoses. These total to over one-fourth of inpatients in acute care settings.

- While cancer is a leading cause of death in Geauga County, it is not a common reason for hospitalization (1.7% primary diagnosis for 2016 inpatients). Cancer is generally treated primary on an out-patient basis.

- Diseases of the nervous system were rarely a primary cause for hospitalization, however 4.7% had a secondary diagnosis of sleep apnea and 7.1% had encephalopathy.

- While few primary diagnoses were related to the endocrine, nutritional or metabolic diseases (3.3%), hyperlipidemia was very common as a secondary diagnosis (18.9%), as was type II diabetes (15.2%; not all shown in figure).

- Endocrine, nutritional and metabolic secondary diagnoses were very common: 21.7% had hyperlipidemia, and 7.4% hypokalemia. Type II diabetes was very common also (8.4%).

Geauga County Residents, Primary & Secondary Diagnoses, 2016 Hospitalizations

	Primary Diagnosis (Reason for Hospitalization)		Secondary Diagnosis (Patients can have multiple secondary diagnoses)	
Total Geauga County Inpatients	**9,057**			
Subtotal: Diseases of the circulatory system	**1,152**	**12.9%**	N/A	N/A
Non-ST elevation (NSTEMI) myocardial infarction	147	1.6%	32	0.4%
Acute on chronic diastolic (congestive) heart failure	123	1.4%	69	0.8%
Cerebral infarction, unspecified	100	1.1%	7	0.1%
Unspecified atrial fibrillation	67	0.7%	227	2.5%
Paroxysmal atrial fibrillation	60	0.7%	122	1.4%
ST elevation (STEMI) myocardial infarction of unspecified site	27	0.3%	122	1.4%
Hypertensive heart disease with heart failure	26	0.3%	85	0.9%
Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or	24	0.3%	83	0.9%
Peripheral vascular disease, unspecified	11	0.1%	264	2.9%
Chronic atrial fibrillation	11	0.1%	94	1.0%
Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	9	0.1%	88	1.0%
Essential (primary) hypertension	7	0.1%	1,402	15.6%
Atherosclerotic heart disease of native coronary artery without angina pectoris	5	0.1%	637	7.1%
Hypotension, unspecified	5	0.1%	421	4.7%
Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	3	<0.1%	364	4.1%
Heart failure, unspecified	3	<0.1%	151	1.7%
Chronic diastolic (congestive) heart failure	1	<0.1%	111	1.2%
Chronic obstructive pulmonary disease, unspecified	0	0.0%	402	4.5%
Old myocardial infarction	0	0.0%	231	2.6%
Complications of pregnancy, childbirth, and the puerperium	**1,055**	**11.8%**	N/A	N/A
Post-term pregnancy	117	1.3%	39	0.4%
Second degree perineal laceration during delivery	112	1.3%	72	0.8%
Encounter for full-term uncomplicated delivery	77	0.9%	2	<0.1%
First degree perineal laceration during delivery	69	0.8%	46	0.5%
Streptococcus B carrier state complicating childbirth	64	0.7%	96	1.1%
Labor and delivery complicated by cord around neck, without compression, not applicable or unspecified	28	0.3%	120	1.3%
Abnormality in fetal heart rate and rhythm complicating labor and delivery	27	0.3%	74	0.8%
Supervision of elderly multigravida, third trimester	21	0.2%	71	0.8%
Smoking (tobacco) complicating childbirth	17	0.2%	84	0.9%
Diseases of the digestive system	**769**	**8.6%**	N/A	N/A
Gastrointestinal hemorrhage, unspecified	83	0.9%	64	0.7%
Unspecified intestinal obstruction	61	0.7%	11	0.1%
Gastro-esophageal reflux disease without esophagitis	18	0.2%	903	10.1%
Diaphragmatic hernia without obstruction or gangrene	17	0.2%	82	0.9%
Constipation, unspecified	10	0.1%	376	4.2%
Diverticulosis of intestine, part unspecified, without perforation or abscess without bleeding	0	0.0%	113	1.3%

N/A – Data is not available

(Source: University Hospital Ambulatory Care Sensitive Data, 2016, as analyzed and reported by Cypress Research)

Geauga County Residents, Primary & Secondary Diagnoses, 2016 Hospitalizations

	Primary Diagnosis (Reason for Hospitalization)		Secondary Diagnosis (Patients can have multiple secondary diagnoses)	
Diseases of the respiratory system	**723**	**8.1%**	N/A	N/A
Pneumonia, unspecified organism	257	2.9%	255	2.8%
Chronic obstructive pulmonary disease with (acute) exacerbation	130	1.5%	165	1.8%
Pneumonitis due to inhalation of food and vomit	74	0.8%	71	0.8%
Acute and chronic respiratory failure with hypercapnia	40	0.4%	98	1.1%
Acute respiratory failure with hypoxia	29	0.3%	370	4.1%
Acute and chronic respiratory failure with hypoxia	22	0.2%	149	1.7%
Acute respiratory failure with hypercapnia	7	0.1%	112	1.3%
Atelectasis	2	<0.1%	173	1.9%
Other secondary pulmonary hypertension	1	<0.1%	110	1.2%
Unspecified asthma, uncomplicated	0	0.0%	353	3.9%
Infectious and parasitic diseases	**620**	**6.9%**	N/A	N/A
Sepsis, unspecified organism	426	4.8%	64	0.7%
Enterocolitis due to Clostridium difficile	32	0.4%	49	0.5%
Unspecified viral hepatitis C without hepatic coma	0	0.0%	131	1.5%
Unspecified Escherichia coli [E. coli] as the cause of diseases classified elsewhere	0	0.0%	96	1.1%
Mental and behavioral disorders	**500**	**5.5%**	N/A	N/A
Opioid dependence with withdrawal	346	3.9%	27	0.3%
Major depressive disorder, recurrent, moderate	76	0.8%	17	0.2%
Schizoaffective disorder, bipolar type	73	0.8%	11	0.1%
Alcohol dependence with withdrawal, unspecified	69	0.8%	39	0.4%
Unspecified mood [affective] disorder	44	0.5%	34	0.4%
Bipolar disorder, unspecified	26	0.3%	116	1.3%
Major depressive disorder, single episode, unspecified	10	0.1%	674	7.5%
Generalized anxiety disorder	10	0.1%	275	3.1%
Anxiety disorder, unspecified	5	0.1%	727	8.1%
Panic disorder [episodic paroxysmal anxiety] without agoraphobia	5	0.1%	105	1.2%
Unspecified dementia without behavioral disturbance	4	<0.1%	228	2.5%
Post-traumatic stress disorder, unspecified	1	<0.1%	124	1.4%
Nicotine dependence, unspecified, uncomplicated	0	0.0%	814	9.1%
Nicotine dependence, cigarettes, uncomplicated	0	0.0%	285	3.2%
Alcohol abuse, uncomplicated	0	0.0%	132	1.5%
Cannabis abuse, uncomplicated	0	0.0%	98	1.1%
Cannabis use, unspecified, uncomplicated	0	0.0%	98	1.1%
Attention-deficit hyperactivity disorder, unspecified type	0	0.0%	79	0.9%
Diseases of the musculoskeletal system and connective tissue	**489**	**5.5%**	N/A	N/A
Unilateral primary osteoarthritis, right knee	101	1.1%	4	<0.1%
Unilateral primary osteoarthritis, left knee	93	1.0%	5	0.1%
Dorsalgia, unspecified	2	<0.1%	161	1.8%
Low back pain	2	<0.1%	89	1.0%
Unspecified osteoarthritis, unspecified site	1	<0.1%	364	4.1%
Rheumatoid arthritis, unspecified	1	<0.1%	77	0.9%
Gout, unspecified	0	0.0%	176	2.0%
Age-related osteoporosis without current pathological fracture	0	0.0%	176	2.0%
Fibromyalgia	0	0.0%	107	1.2%

N/A – Data is not available

(Source: University Hospital Ambulatory Care Sensitive Data, 2016, as analyzed and reported by Cypress Research)

Geauga County Residents, Primary & Secondary Diagnoses, 2016 Hospitalizations

	Primary Diagnosis (Reason for Hospitalization)		Secondary Diagnosis (Patients can have multiple secondary diagnoses)	
Injury	**474**	**5.2%**	N/A	N/A
Endocrine, nutritional and metabolic diseases	**409**	**4.6%**	N/A	N/A
Morbid (severe) obesity due to excess calories	191	2.1%	213	2.4%
Dehydration	41	0.5%	520	5.8%
Hypo-osmolality and hyponatremia	39	0.4%	320	3.6%
Type 2 diabetes mellitus with hyperglycemia	11	0.1%	173	1.9%
Hypokalemia	9	0.1%	664	7.4%
Hypomagnesemia	3	<0.1%	202	2.3%
Hyperkalemia	3	<0.1%	164	1.8%
Hyperosmolality and hypernatremia	2	<0.1%	97	1.1%
Unspecified severe protein-calorie malnutrition	2	<0.1%	85	0.9%
Hypothyroidism, unspecified	1	<0.1%	604	6.7%
Acidosis	1	<0.1%	238	2.7%
Type 2 diabetes mellitus with diabetic neuropathy, unspecified	1	<0.1%	139	1.6%
Hyperlipidemia, unspecified	0	0.0%	1,941	21.7%
Type 2 diabetes mellitus without complications	0	0.0%	529	5.9%
Obesity, unspecified	0	0.0%	423	4.7%
Vitamin D deficiency, unspecified	0	0.0%	123	1.4%
Moderate protein-calorie malnutrition	0	0.0%	98	1.1%
Type 2 diabetes mellitus with diabetic nephropathy	0	0.0%	77	0.9%
Diseases of the genitourinary system	**300**	**3.3%**	N/A	N/A
Acute kidney failure, unspecified	101	1.1%	508	5.7%
Urinary tract infection, site not specified	87	1.0%	333	3.7%
End stage renal disease	1	<0.1%	101	1.1%
Chronic kidney disease, unspecified	0	0.0%	192	2.1%
Benign prostatic hyperplasia without lower urinary tract symptoms	0	0.0%	189	2.1%
Chronic kidney disease, stage 3 (moderate)	0	0.0%	167	1.9%
Chronic kidney disease, stage 4 (severe)	0	0.0%	72	0.8%
Diseases of the skin and subcutaneous tissue	**189**	**2.1%**	N/A	N/A
Cellulitis of left/right lower limb	93	1.1%	190	1.4%
Cancers (neoplasms)	**153**	**1.7%**	N/A	N/A
Symptoms, signs, and ill-defined conditions	**148**	**1.7%**	N/A	N/A
Bradycardia, unspecified	6	0.1%	100	1.1%
Diarrhea, unspecified	4	<0.1%	120	1.3%
Dysphagia, unspecified	1	<0.1%	155	1.7%
Tachycardia, unspecified	1	<0.1%	135	1.5%
Suicidal ideations	0	0.0%	260	2.9%
Hyperglycemia, unspecified	0	0.0%	84	0.9%
Anorexia	0	0.0%	81	0.9%

N/A – Data is not available

(Source: University Hospital Ambulatory Care Sensitive Data, 2016, as analyzed and reported by Cypress Research)

Geauga County Residents, Primary & Secondary Diagnoses, 2016 Hospitalizations

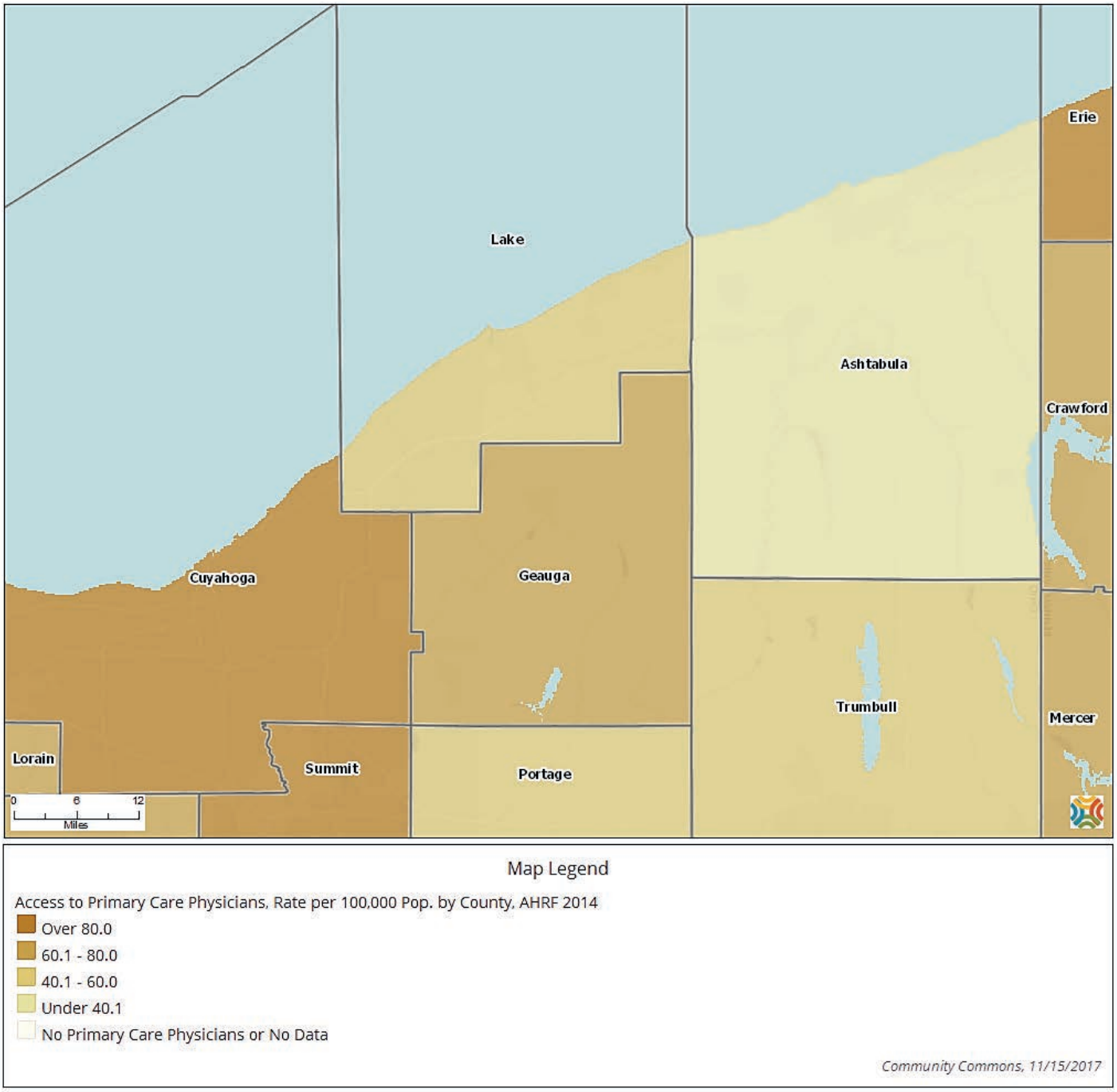
	Primary Diagnosis (Reason for Hospitalization)		Secondary Diagnosis (Patients can have multiple secondary diagnoses)	
Diseases of the nervous system and sense organs	**113**	**1.3%**	N/A	N/A
Epilepsy, unspecified, not intractable, without status epilepticus	18	0.2%	115	1.3%
Metabolic encephalopathy	15	0.2%	327	3.6%
Toxic encephalopathy	14	0.2%	152	1.7%
Encephalopathy, unspecified	7	0.1%	165	1.8%
Parkinsons disease	4	<0.1%	73	0.8%
Migraine, unspecified, not intractable, without status migrainosus	1	<0.1%	139	1.6%
Obstructive sleep apnea (adult) (pediatric)	0	0.0%	423	4.7%
Other chronic pain	0	0.0%	319	3.6%
Polyneuropathy, unspecified	0	0.0%	146	1.6%
Insomnia, unspecified	0	0.0%	136	1.5%
Chronic pain syndrome	0	0.0%	71	0.8%
Poisoning	**65**	**0.7%**	N/A	N/A
Adverse effect of anticoagulants, initial encounter	1	<0.1%	56	0.6%
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	**60**	**0.7%**	N/A	N/A
Acute posthemorrhagic anemia	21	0.2%	392	4.4%
Anemia, unspecified	10	0.1%	385	4.3%
Iron deficiency anemia, unspecified	3	<0.1%	84	0.9%
Thrombocytopenia, unspecified	0	0.0%	127	1.4%
Diseases of the ear and mastoid process	**6**	**0.1%**	N/A	N/A
Unspecified hearing loss, unspecified ear	0	0.0%	174	1.9%
Diseases of the eye and adnexa	**2**	**0.001%**	N/A	N/A
Unspecified glaucoma	0	0.0%	54	0.6%
Unspecified macular degeneration	0	0.0%	50	0.6%
Other	**1,257**	**14.0%**	N/A	N/A
Personal history of nicotine dependence	0	0.0%	1,803	20.1%
Body mass index (BMI) 30.0-39.9, adult	0	0.0%	377	4.2%
Body mass index (BMI) 40.0-49.9, adult	0	0.0%	328	3.6%
Nosocomial condition	0	0.0%	231	2.6%
Body mass index (BMI) 50-59.9, adult	0	0.0%	112	1.3%
Encounter for palliative care	0	0.0%	103	1.1%
Body mass index (BMI) 19 or less, adult	0	0.0%	94	1.0%
Patients other noncompliance with medication regimen	0	0.0%	85	0.9%
Body mass index (BMI) 70 or greater, adult	0	0.0%	31	0.3%
Body mass index (BMI) 60.0-69.9, adult	0	0.0%	26	0.3%
Body mass index (BMI) 20.0-20.9, adult	0	0.0%	20	0.2%

N/A – Data is not available

(Source: University Hospital Ambulatory Care Sensitive Data, 2016, as analyzed and reported by Cypress Research)

Access to Primary Care Physicians, Rate per 100,000 Population by County, Area Health Resource File (AHRF), 2014

- There were 70 primary care physicians in Geauga County in 2014.
- The rate of primary care physicians per 100,000 population for Geauga County was 74.2.

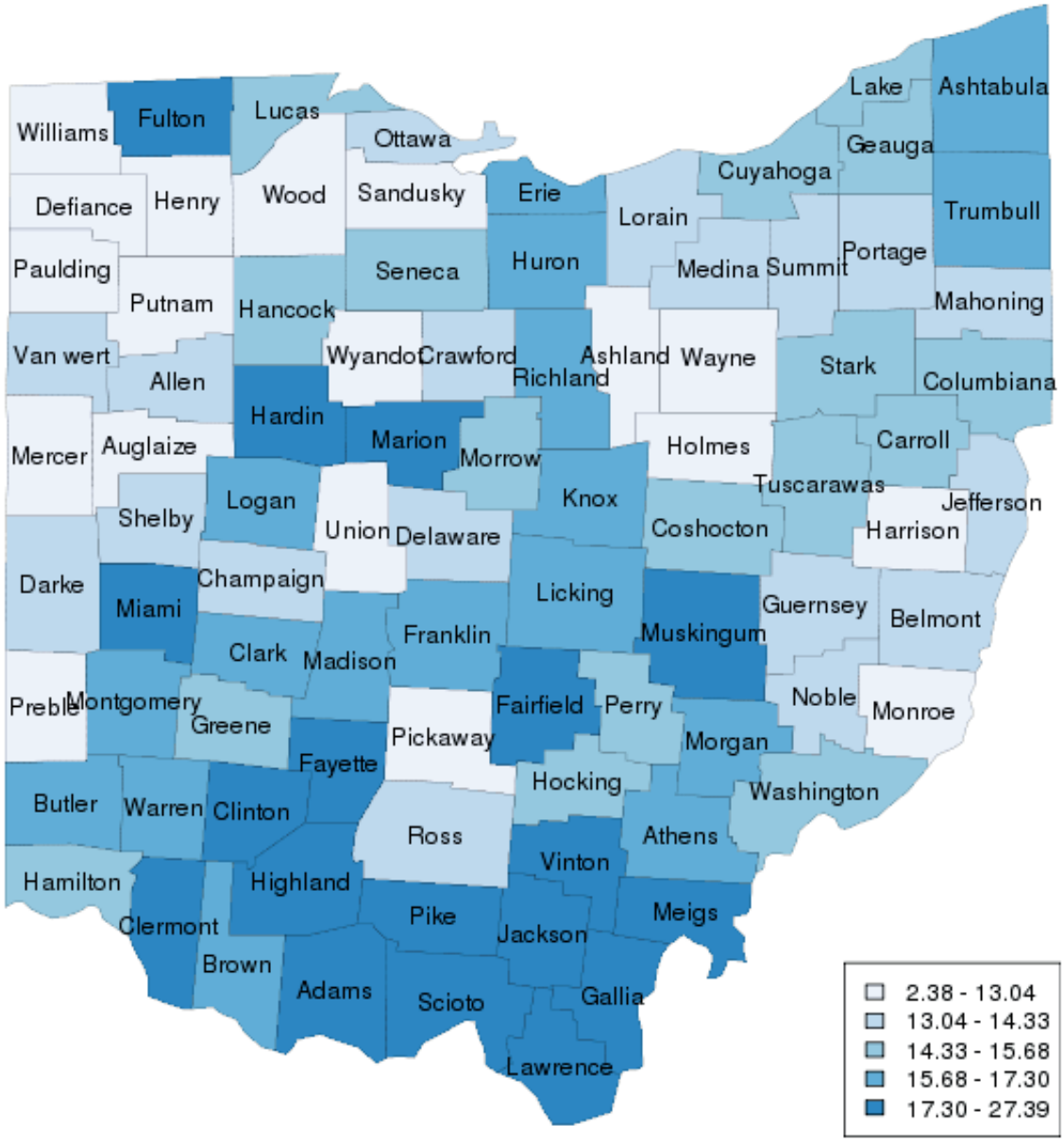


(Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Area Health Resource File (AHRF): 2014, as compiled by Community Commons, obtained on 11/15/17)

The following map shows the estimated proportion of all adults, ages 19 years and older with unmet needs in prescription medication.

- Thirteen percent (14%) of Geauga County adults, ages 19 years and older, had unmet needs in prescription medication.
- Fifteen percent (15%) of Ohio adults, ages 19 years and older, had unmet needs in prescription medication.

Estimated Proportion: Unmet Needs in Prescription Medication, All Adults, Ages 19 and Older (2015) *



(Source: Ohio Medicaid Assessment Survey (OMAS) Adult Dashboard, 2015)
**Unmet needs indicate those who could not get prescriptions due to cost in the past 12 months*

HEALTHCARE ACCESS: PREVENTIVE MEDICINE

Key Findings

In 2016, more than four-fifths (83%) of adults ages 65 and over reported having a flu vaccine in the past year. More than half (54%) of adults ages 50 and over had a colonoscopy or sigmoidoscopy in the past 5 years.

Preventive Medicine

- More than half (51%) of Geauga County adults had a flu vaccine in the past 12 months, increasing to 83% of those ages 65 and over. The 2016 BRFSS reported that 57% of Ohio and 58% of U.S. adults ages 65 and over had a flu vaccine in the past year.
- Just over four-fifths (81%) of adults ages 65 and over had a pneumonia vaccine in their lifetime. The 2016 BRFSS reported that 75% of Ohio and 73% of U.S. adults ages 65 and over had a pneumonia shot in their lifetime.
- Adults have had the following vaccines: tetanus booster (including Tdap) in the past 10 years (71%), MMR in their lifetime (70%), chicken pox in their lifetime (40%), pertussis vaccine in the past 10 years (22%), Zoster (shingles) vaccine in their lifetime (18%), and human papillomavirus (HPV) vaccine in their lifetime (8%).

Preventive Health Screenings and Exams

- More than half (54%) of adults ages 50 and over had a colonoscopy or sigmoidoscopy in the past 5 years.
- Three-quarters (75%) of adults had their vision checked in the past two years, and one-fourth (25%) of adults had their hearing checked in the past two years.
- In the past year, 64% of women ages 40 and over had a mammogram.
- In the past year, more than two-fifths (45%) of men ages 50 and over had a PSA test.
- See the Women's and Men's Health Sections for further prostate, mammogram, clinical breast exam, and Pap smear screening test information for Geauga County adults.

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Had a pneumonia vaccination in lifetime	N/A	81%	75%	73%
Had a flu vaccine in the past year (ages 65 and over)	41%	83%	57%	58%

N/A- Not available

Geauga County Adult Health Screening Results

General Screening Results	Total
Diagnosed with High Blood Cholesterol	36%
Diagnosed with High Blood Pressure	27%
Diagnosed with Diabetes	9%
Survived a Heart Attack	4%
Survived a Stroke	2%

Note: Percentages based on all Geauga County adults surveyed

Healthy People 2020
Immunization and Infectious Diseases (IID)

Objective	Geauga County 2016	Ohio 2016	U.S. 2016	Healthy People 2020 Target
IID-13.1: Increase the percentage of non-institutionalized high-risk adults aged 65 years and older who are vaccinated against pneumococcal disease	81%	75%	73%	90%

Note: U.S. baseline is age-adjusted to the 2000 population standard
(Sources: Healthy People 2020 Objectives, 2016 BRFSS, 2016 Geauga County Health Assessment)

Geauga County Adults Having Discussed Healthcare Topics With Their Healthcare Professional in the Past 12 Months

Healthcare Topics	Total
Immunizations	35%
Family History	33%
Weight Control	32%
Depression, Anxiety, or Emotional Problems	23%
Safe Use of Prescription Medication	20%
Injury Prevention Such as Safety Belt Use & Helmet Use	11%
Tobacco Use	10%
Alcohol Use	9%
Family Planning	6%
Self-Testicular Exams	6%
Safe Use of Opiate-Based Pain Medication	5%
Illicit Drug Abuse	4%
Sexually Transmitted Disease	4%
Domestic Violence	3%

Who Should Get a Yearly Flu Shot?

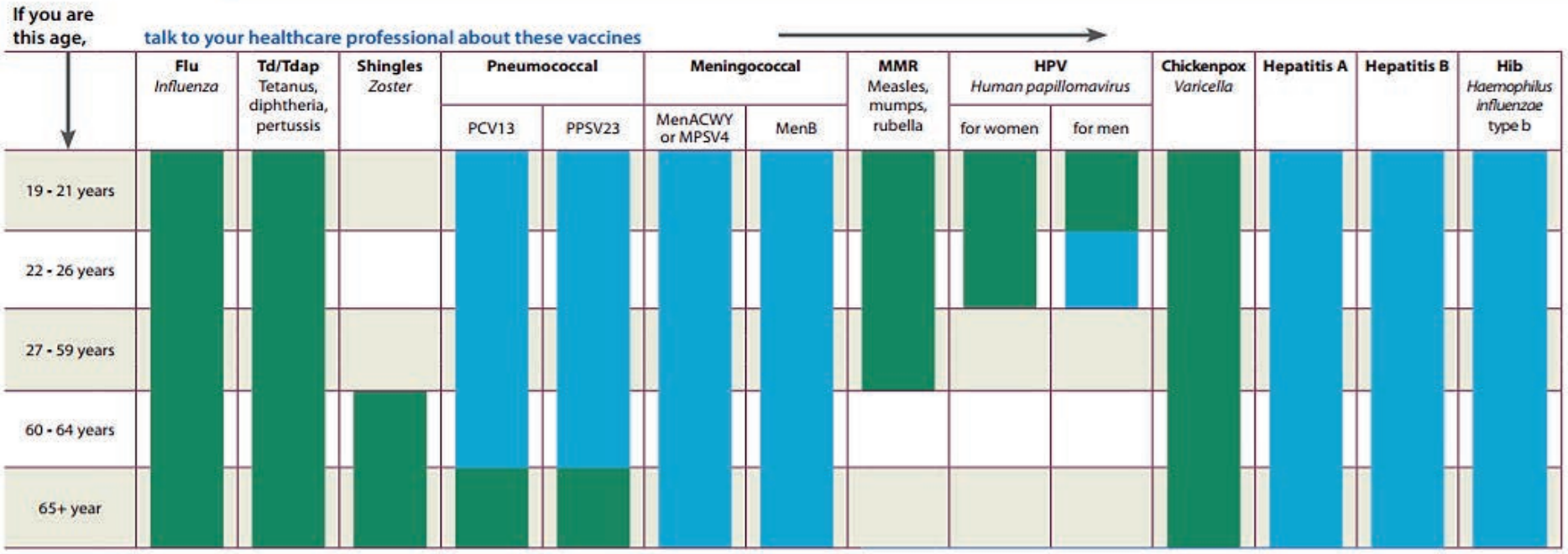
The following groups are recommended to get a yearly flu vaccine:

- All persons aged 6 months and older should be vaccinated annually.
- When vaccine supply is limited, vaccination efforts should focus on delivering vaccination to persons who:
  - Are aged 6 months through 4 years.
  - Are aged 50 years and older.
  - Have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus).
  - Those who are immunosuppressed.
  - Are or will be pregnant during the influenza season.
  - Are residents of nursing homes and chronic-care facilities.
  - Are American Indians/Alaska Natives.
  - Are morbidly obese (body-mass index is 40 or greater).
  - Are health-care personnel.
  - Are household contacts and caregivers of children aged younger than 5 years and adults aged 50 years and older, with particular emphasis on vaccinating contacts of children aged younger than 6 months.
  - Are household contacts and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza.

(Source: CDC, Seasonal Influenza (Flu), Who Should Do It, Who Should Not and Who Should Take Precautions, Updated on October 3, 2017)

INFORMATION FOR ADULT PATIENTS

2017 Recommended Immunizations for Adults: **By Age**



More Information:

- You should get flu vaccine every year.
- You should get a Td booster every 10 years. You also need 1 dose of Tdap. Women should get a Tdap vaccine during every pregnancy to help protect the baby.
- You should get shingles vaccine even if you have had shingles before.
- You should get 1 dose of PCV13 and at least 1 dose of PPSV23 depending on your age and health condition.
- You should get this vaccine if you did not get it when you were a child.
- You should get HPV vaccine if you are a woman through age 26 years or a man through age 21 years and did not already complete the series.

Recommended For You: This vaccine is recommended for you ***unless*** your healthcare professional tells you that you do not need it or should not get it.

May Be Recommended For You: This vaccine is recommended for you if you have certain risk factors due to your health condition or other. Talk to your healthcare professional to see if you need this vaccine.

If you are traveling outside the United States, you may need additional vaccines.
Ask your healthcare professional about which vaccines you may need at least 6 weeks before you travel.

For more information, call 1-800-CDC-INFO (1-800-232-4636) or visit www.cdc.gov/vaccines

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

HEALTHCARE ACCESS: WOMEN'S HEALTH

Key Findings

In 2016, nearly two-thirds (64%) of Geauga County women over the age of 40 reported having a mammogram in the past year. Fifty-six percent (56%) of Geauga County women ages 19 and over had a clinical breast exam and 38% had a Pap smear to detect cancer of the cervix in the past year. Four percent (4%) of women survived a heart attack and 2% survived a stroke at some time in their life. Nearly one-third (32%) were obese, 35% had high blood cholesterol, 25% had high blood pressure, and 10% were identified as smokers, all known risk factors for cardiovascular diseases.

Geauga County Female
Leading Causes of Death, 2014 – 2016

Total female deaths: 1,336

1. Heart Diseases (24% of all deaths)
2. Cancers (22%)
3. Chronic Lower Respiratory Diseases (6%)
4. Stroke (6%)
5. Alzheimer's disease (4%)

(Source: Ohio Public Health Data Warehouse, 2014-2016)

Ohio Female
Leading Causes of Death, 2014 – 2016

Total female deaths: 176,669

1. Heart Diseases (22% of all deaths)
2. Cancers (21%)
3. Chronic Lower Respiratory Diseases (6%)
4. Stroke (6%)
5. Alzheimer's disease (5%)

(Source: Ohio Public Health Data Warehouse, 2014-2016)

Women's Health Screenings

- Almost three-quarters (73%) of women had a mammogram at some time in their life and nearly half (48%) had this screening in the past year.
- Nearly two-thirds (64%) of women ages 40 and over had a mammogram in the past year, and 78% had one in the past two years. The 2016 BRFSS reported that 74% of women 40 and over in Ohio and 72% in the U.S. had a mammogram in the past two years.
- Most (90%) women had a clinical breast exam at some time in their life, and 56% had one within the past year. Three-fourths (75%) of women ages 40 and over had a clinical breast exam in the past two years.
- The assessment has identified that 88% of women had a Pap smear, and 38% reported having had the exam in the past year. 69% of women had a Pap smear in the past three years. The 2016 BRFSS indicated that 82% of Ohio and 80% of U.S. women ages 21-65 had a Pap smear in the past three years.

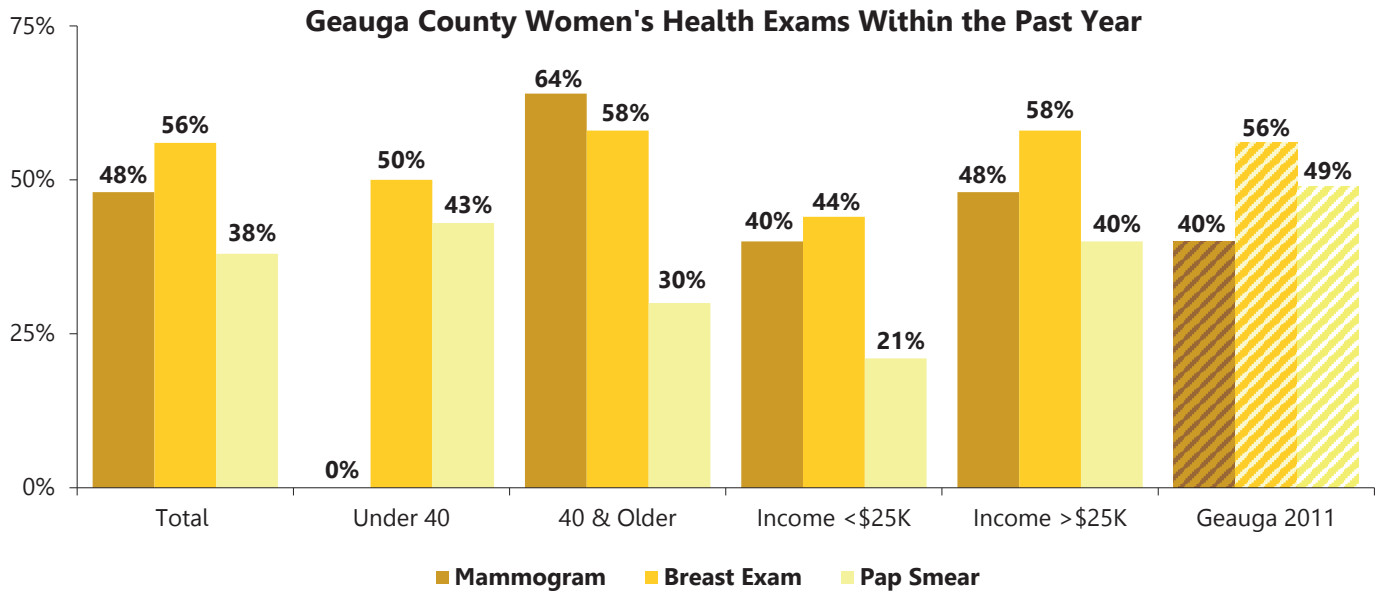
Women's Health Concerns

- Women used the following as their usual source of services for female health concerns: private gynecologist (57%), general or family physician (28%), health department clinic (1%), family planning clinic (<1%), and some other source (1%). Twelve percent (12%) indicated they did not have a usual source of services for female health concerns.
- In 2016, the needs assessment determined that 4% of women had survived a heart attack and 2% had survived a stroke at some time in their life.
- Major risk factors for cardiovascular disease include smoking, obesity, high blood cholesterol, high blood pressure, physical inactivity, and diabetes. In Geauga County, the 2018 needs assessment has identified that:
  - 56% of women were overweight or obese (2016 BRFSS reports 62% for Ohio and 2015 BRFSS reports 59% for U.S.)
  - 35% were diagnosed with high blood cholesterol (2015 BRFSS reports 36% for Ohio and 35% for U.S.)
  - 25% were diagnosed with high blood pressure (2015 BRFSS reports 31% for Ohio and 30% for U.S.)
  - 10% of all women were current smokers (2016 BRFSS reports 21% for Ohio and 2015 BRFSS reports 15% for U.S.)
  - 7% had been diagnosed with diabetes (BRFSS reports 11% for Ohio in 2016 and 10% for U.S. in 2015)
- From 2014-2016, major cardiovascular diseases (heart disease and stroke) accounted for 30% of all female deaths in Geauga County *(Source: Ohio Public Health Data Warehouse, 2014-2016)*

Pregnancy

- Fourteen percent (14%) of women had been pregnant in the past 5 years.
- During their last pregnancy, Geauga County women did the following: got prenatal care in the first 3 months (88%), took a multi-vitamin with folic acid during pregnancy (69%), took a multi-vitamin with folic acid pre-pregnancy (65%), got a dental exam during pregnancy (50%), took folic acid during pregnancy (46%), received WIC services (23%), and took folic acid pre-pregnancy (19%).

The following graph shows the percentage of Geauga County women that had various health exams in the past year. Examples of how to interpret the information shown on the graph include: 48% of Geauga County females had a mammogram within the past year; 56% had a breast exam, and 38% had a Pap smear.



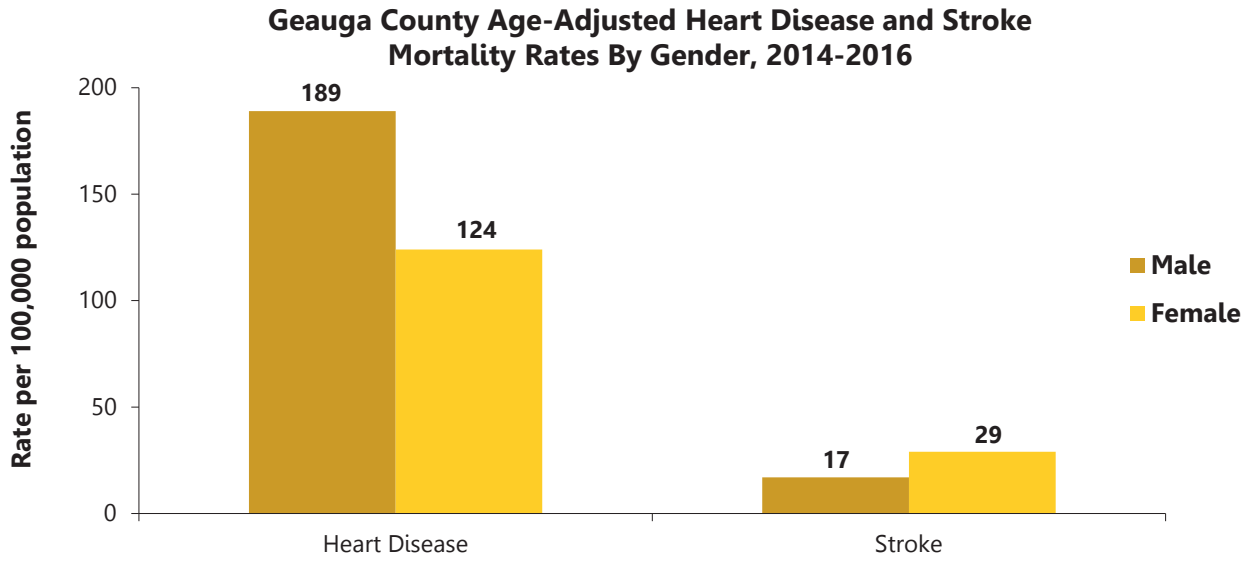
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

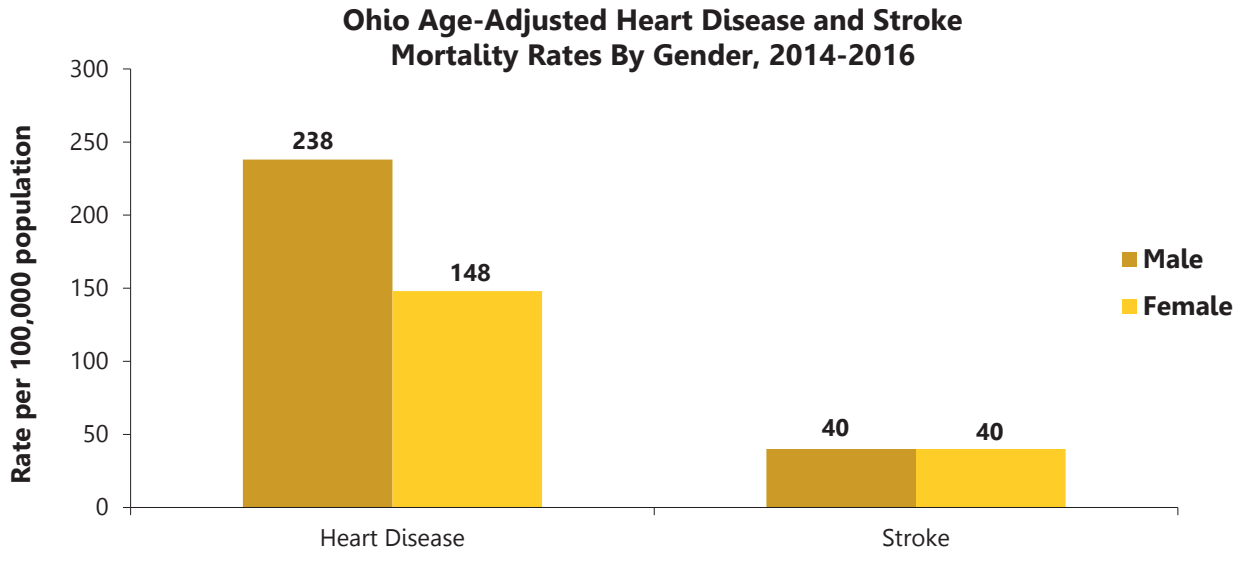
Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Had a mammogram in the past two years (age 40 and over)	77%	78%	74%	72%
Had a Pap smear in the past three years	N/A	69%	82%*	80%*

N/A – Not available
**Ohio and U.S. BRFSS reports women ages 21-65*

The following graphs show the Geauga County and Ohio age-adjusted mortality rates per 100,000 population for cardiovascular diseases. The graphs show:

- From 2014-2016, the Geauga County and Ohio female age-adjusted mortality rate was lower than the male rate for heart disease.
- The Geauga County female heart disease mortality rate was lower than the Ohio female rate from 2014-2016.
- The Geauga County female stroke mortality rate was lower than the Ohio female rate from 2014-2016.





(Source: Ohio Public Health Data Warehouse, 2014-2016)

HEALTHCARE ACCESS: MEN'S HEALTH

Key Findings

In 2016, 45% of Geauga County males over the age of 50 had a Prostate-Specific Antigen (PSA) test. The needs assessment determined that 6% of men survived a heart attack and 2% survived a stroke at some time in their life. More than one-fourth (28%) of men had been diagnosed with high blood pressure, 35% had high blood cholesterol, and 10% were identified as smokers, which, along with obesity (23%), are known risk factors for cardiovascular diseases.

Geauga County Male
Leading Causes of Death, 2014 – 2016

Total male deaths: 1,202

1. Heart Diseases (26% of all deaths)
2. Cancers (25%)
3. Accidents, Unintentional Injuries (7%)
4. Chronic Lower Respiratory Diseases (5%)
5. Diabetes (3%)

(Source: Ohio Public Health Data Warehouse, 2014-2016)

Ohio Male
Leading Causes of Death, 2014 – 2016

Total male deaths: 175,247

1. Heart Diseases (25% of all deaths)
2. Cancers (23%)
3. Accidents, Unintentional Injuries (8%)
4. Chronic Lower Respiratory Diseases (6%)
5. Stroke (4%)

(Source: Ohio Public Health Data Warehouse, 2014-2016)

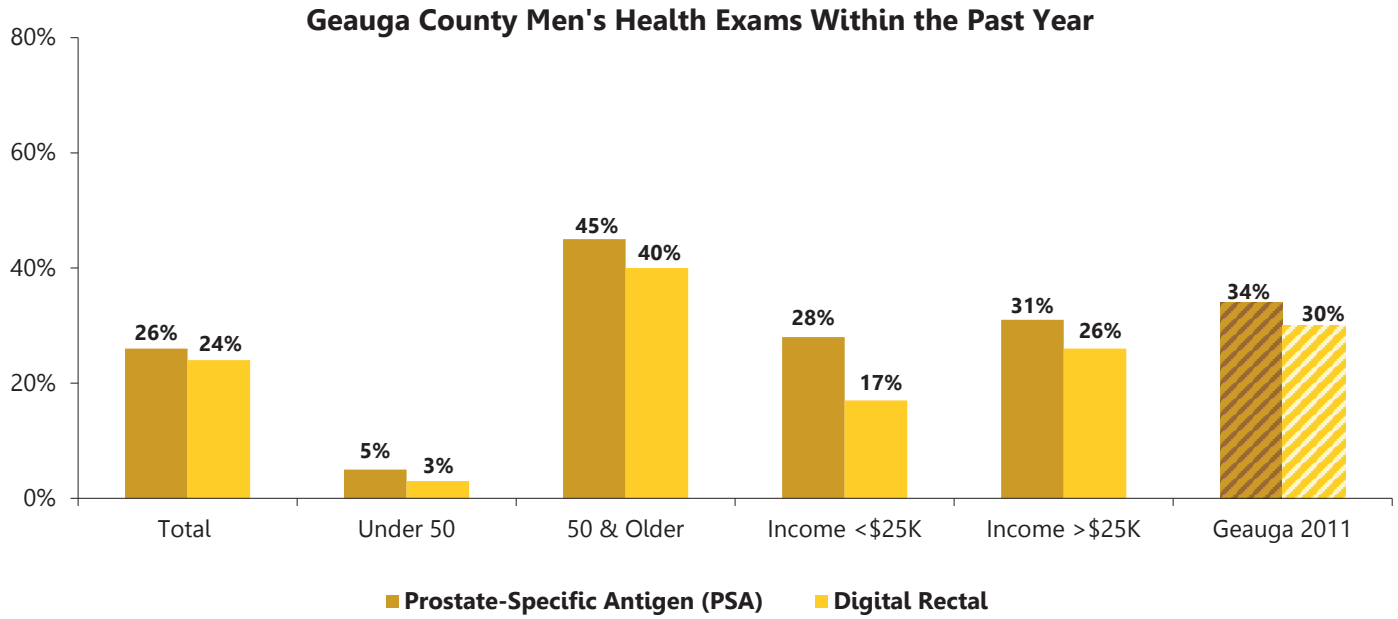
Men's Health Screenings and Concerns

- More than two-fifths (45%) of Geauga County males had a Prostate-Specific Antigen (PSA) test at some time in their life, and 26% had one in the past year.
- Three-fourths (75%) of males age 50 and over had a PSA test at some time in their life, and 45% had one in the past year.
- Three-fifths (60%) of men had a digital rectal exam in their lifetime, and 24% had one in the past year.
- From 2014-2016, major cardiovascular diseases (heart disease and stroke) accounted for 29% of all male deaths in Geauga County *(Source: Ohio Public Health Data Warehouse).*

24% of Geauga County males had a digital rectal exam in the past year.

- In 2016, the needs assessment determined that 6% of men had a heart attack and 2% had a stroke at some time in their life.
- Major risk factors for cardiovascular disease include smoking, obesity, high blood cholesterol, high blood pressure, physical inactivity, and diabetes. In Geauga County, the 2018 needs assessment has identified that:
  - 72% of men were overweight or obese (2016 BRFSS reports 71% for Ohio, and 2015 BRFSS reports 71% for U.S.)
  - 35% were diagnosed with high blood cholesterol (2015 BRFSS reports 38% for Ohio and 34% for U.S.)
  - 28% were diagnosed with high blood pressure (2015 BRFSS reports 38% for Ohio and 38% for U.S.)
  - 12% of all men were current smokers (2016 BRFSS reports 25% for Ohio, and 2015 BRFSS reports 19% for U.S.)
  - 10% had been diagnosed with diabetes (2016 BRFSS reports 11% for Ohio and 11% for U.S.)
- From 2014-2016, lung and bronchus cancer accounted for the most cancer deaths among Geauga County males. Statistics from the same period for Ohio males indicate that lung, prostate, and colon and rectum cancers were the leading cancer deaths *(Source: Ohio Public Health Data Warehouse).*

The following graph shows the percentage of Geauga County male adults that had various health exams in the past year. Examples of how to interpret the information shown on the graph include: 26% of males had a PSA test within the past year, and 24% had a digital rectal exam



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

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Had a PSA test in within the past two years (age 40 and over)	N/A	56%	39%	40%
Had a digital rectal exam within the past year	30%	24%	N/A	N/A

N/A- Not available

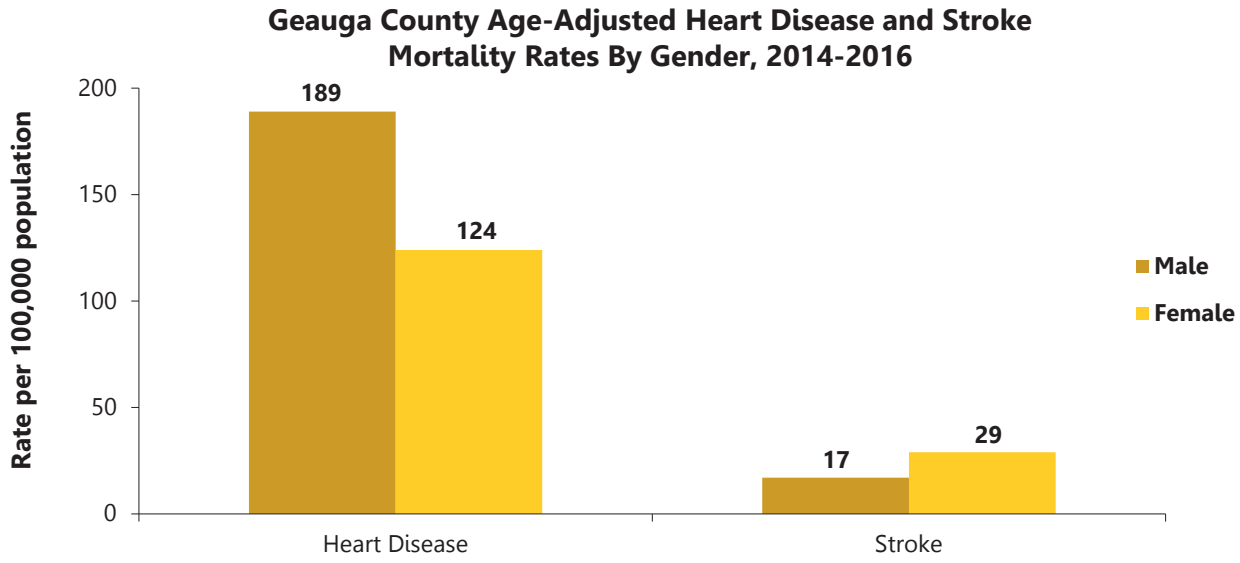
Prostate Cancer Awareness

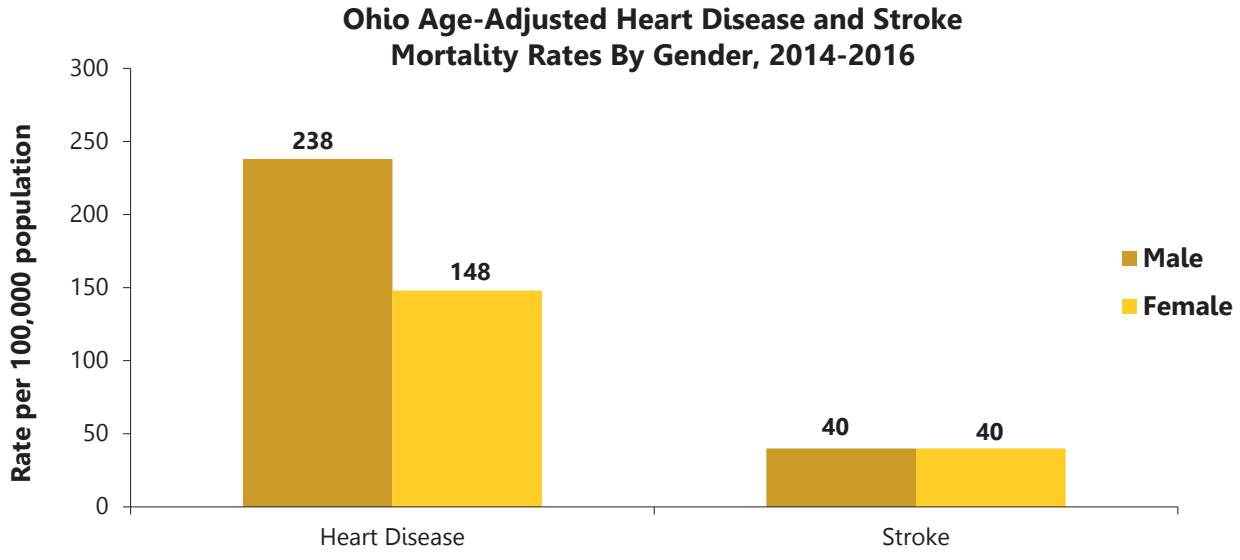
- Prostate cancer is the most common cancer among American men. Most prostate cancers grow slowly and don't cause any health problems in men who have them.
- Men can have different symptoms for prostate cancer. Some men do not have symptoms at all. Some symptoms of prostate cancer are difficulty starting urination, frequent urination (especially at night), weak or interrupted flow of urine, and blood in the urine or semen.
- There is no way to know for sure if you will get prostate cancer. Men have a greater chance of getting prostate cancer if they are 50 years old or older, are African-American, or have a father, brother, or son who has had prostate cancer.
- Two tests are commonly used to screen for prostate cancer:
  - **Digital rectal exam (DRE):** A doctor, nurse, or other health care professional places a gloved finger into the rectum to feel the size, shape, and hardness of the prostate gland.
  - **Prostate specific antigen test (PSA):** PSA is a substance made by the prostate. The PSA test measures the level of PSA in the blood, which may be higher in men who have prostate cancer. However, other conditions such as an enlarged prostate, prostate infection and certain medical procedures also may increase PSA levels.

(Source: Center for Disease Control and Prevention, Prostate Cancer Awareness, Updated September 21, 2017)

The following graphs show the Geauga County and Ohio age-adjusted mortality rates per 100,000 population for cardiovascular diseases. The graphs show:

- From 2014-2016, the Geauga County and Ohio male age-adjusted mortality rate was higher than the female rate for heart disease.
- The Geauga County male heart disease mortality rate was lower than the Ohio male rate from 2014-2016.
- The Geauga County male stroke mortality rate was lower than the Ohio male rate from 2014-2016.

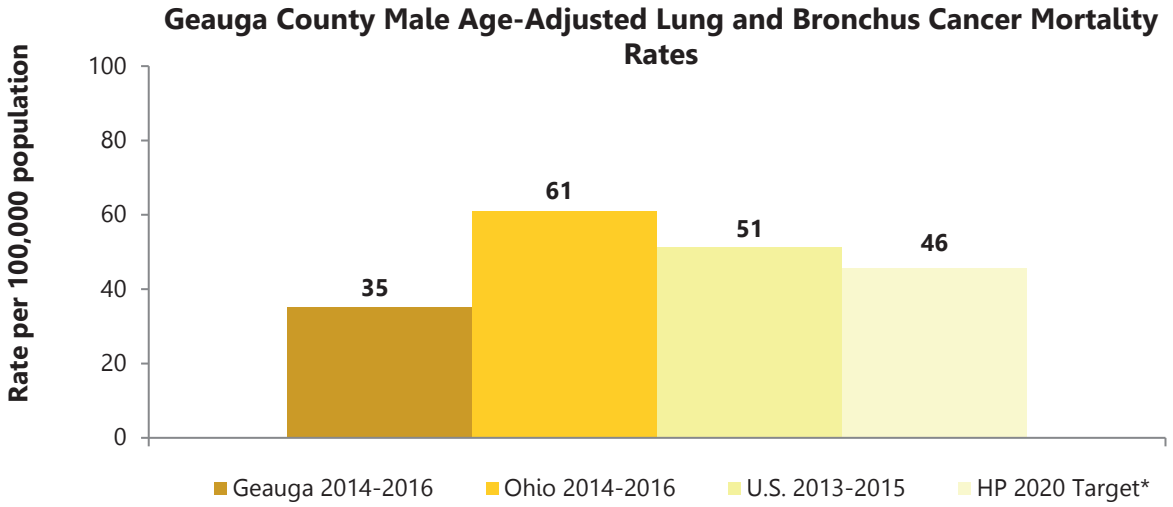




(Source: Ohio Public Health Data Warehouse, 2014-2016)

The following graph shows the Geauga County age-adjusted lung cancer mortality rates per 100,000 population for men with comparison to the Healthy People 2020 objective. The graph shows:

- From 2014-2016, the Geauga County age-adjusted mortality rate for male lung cancer was lower than the Ohio, U.S. rate and the Healthy People 2020 objective.



Note: The Healthy People 2020 target rates are not gender specific.
(Sources: CDC Wonder 2013-2015, Ohio Public Health Data Warehouse 2014-2016, and Healthy People 2020)

Men's Health Data

- Approximately 12% of adult males ages 18 years or older reported fair or poor health.
- 18% of adult males in the U.S. currently smoke.
- Of the adult males in the U.S., 32% had 5 or more drinks in 1 day at least once in the past year.
- Only 56% of adult males in the U.S. met the 2008 federal physical activity guidelines for aerobic activity through leisure-time aerobic activity.
- 35% of men 20 years and over are obese.
- There are 12% of males under the age of 65 without healthcare coverage.
- The leading causes of death for males in the United States are heart disease, cancer and accidents (unintentional injuries).

(Source: CDC, National Center for Health Statistics, Men's Health, Fast Stats, May 3, 2017)

HEALTHCARE ACCESS: ORAL HEALTH

Key Findings

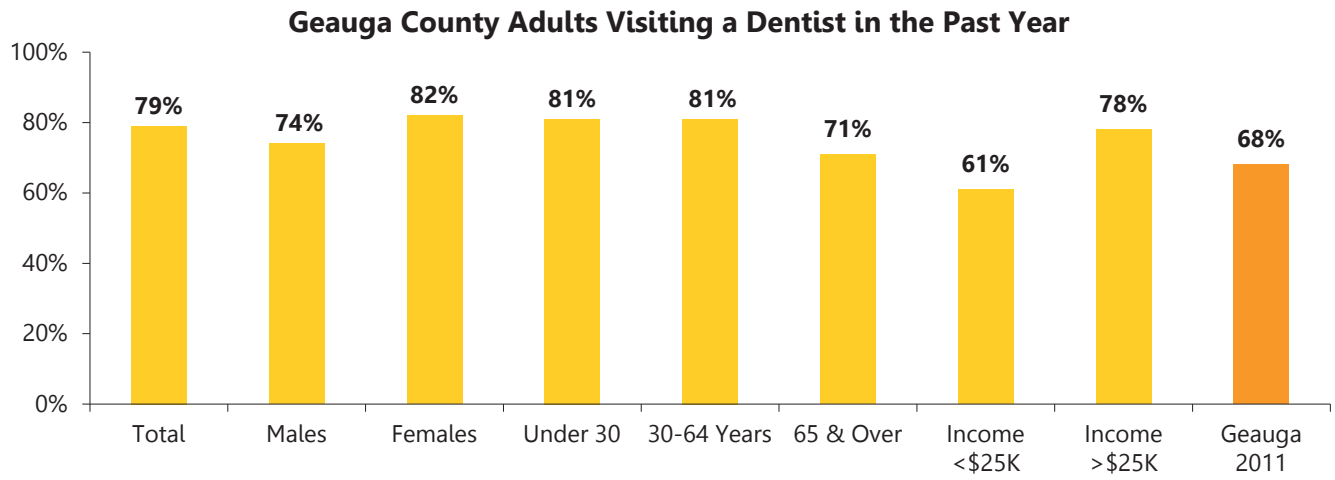
Nearly four-fifths (79%) of Geauga County adults had visited a dentist or dental clinic in the past year. The 2016 BRFSS reported that 68% of Ohio adults and 66% of U.S. adults had visited a dentist or dental clinic in the previous twelve months.

Access to Dental Care

- In the past year, 79% of Geauga County adults had visited a dentist or dental clinic, decreasing to 61% of those with incomes less than $25,000.
- The 2016 BRFSS reported that 68% of Ohio adults and 66% of U.S. adults had visited a dentist or dental clinic in the previous twelve months.
- More than four-fifths (86%) of Geauga County adults with dental insurance had been to the dentist in the past year, compared to 70% of those without dental insurance.
- When asked the main reason for not visiting a dentist in the last year, 33% said cost; 22% had no oral health problems or had not thought of it; 14% had dentures, 10% said fear, apprehension, nervousness, pain, and dislike going; 4% could not get into a dentist; 2% said their dentist did not accept their medical insurance; 2% could not find a dentist who took Medicaid; and 1% did not have/know a dentist.

Adult Oral Health	Within the Past Year	Within the Past 2 Years	Within the Past 5 Years	5 or More years	Never
Time Since Last Visit to Dentist/Dental Clinic					
Males	74%	8%	6%	8%	1%
Females	82%	6%	6%	5%	1%
Total	79%	7%	6%	6%	1%

The following graph provides information about the frequency of Geauga County adult dental visits. Examples of how to interpret the information on the graph include: 79% of all Geauga County adults had been to the dentist in the past year including 81% of those under the age of 30 and 61% of those with incomes less than $25,000.



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

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Adults who have visited the dentist in the past year	68%	79%	68%	66%

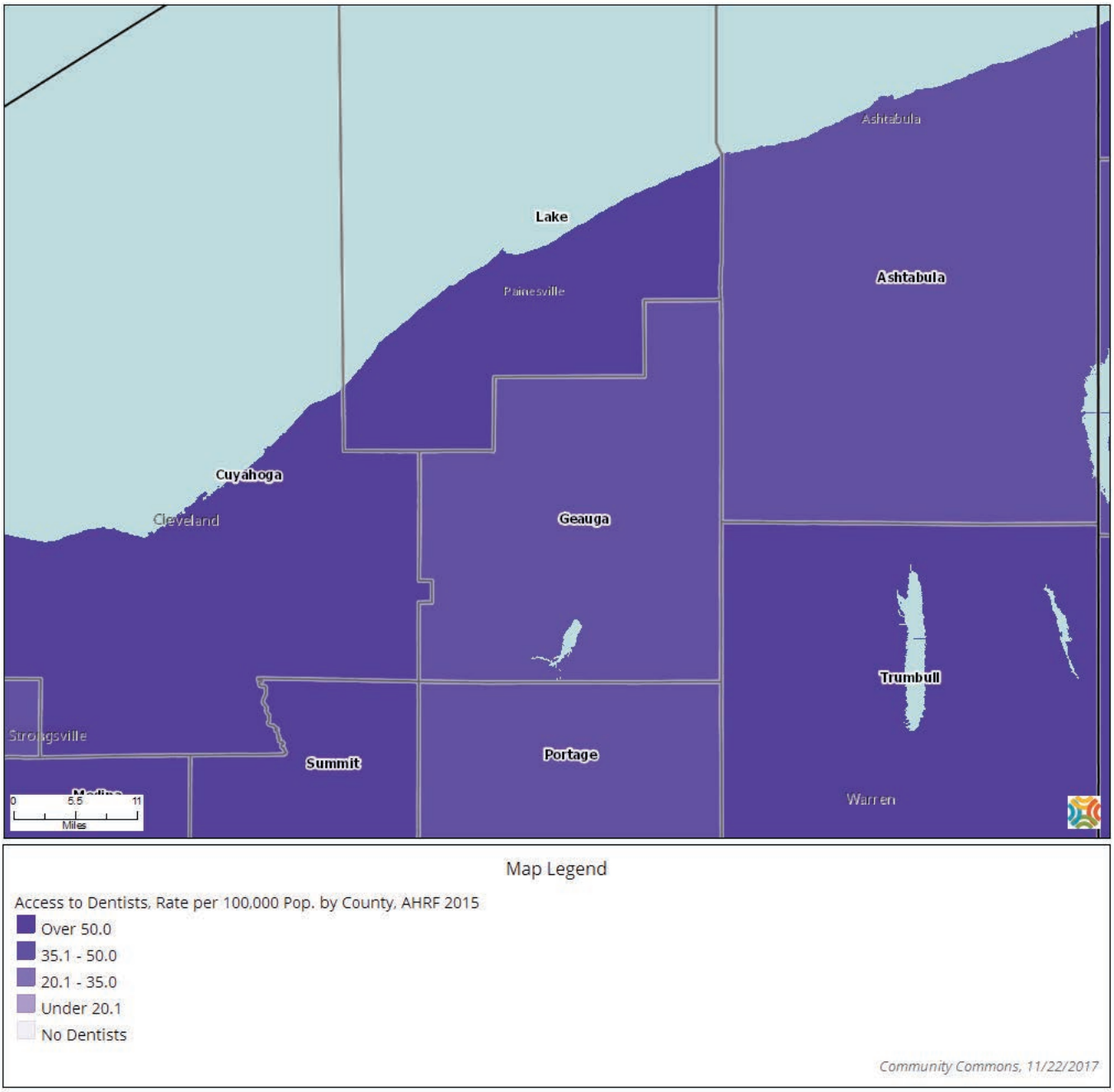
Facts About Adult Oral Health

- The baby boomer generation is the first where most people will keep their natural teeth over their entire lifetime. This is largely because of the benefits of water fluoridation and fluoride toothpaste. However, threats to oral health, including tooth loss, continue throughout life.
- The major risks for tooth loss are tooth decay and gum disease that may increase with age because of problems with saliva production; receding gums that expose "softer" root surfaces to decay-causing bacteria; or difficulties flossing and brushing because of poor vision, cognitive problems, chronic disease, and physical limitations.
- Although more adults are keeping their teeth, many continue to need treatment for dental problems. This need is even greater for members of some racial and ethnic groups—about 3 in 4 Hispanics and non-Hispanic black adults have an unmet need for dental treatment, as do people who are poor. These individuals are also more likely to report having poor oral health.
- In addition, some adults may have difficulty accessing dental treatment. For every adult aged 19 years or older without medical insurance, there are three who don't have dental insurance.
- Oral health problems include the following: untreated tooth decay, gum disease, tooth loss, oral cancer, and chronic diseases such as arthritis, heart disease, and strokes.

(Source: Centers for Disease Control and Prevention, Division of Oral Health, Adult Oral Health, October 23, 2017)

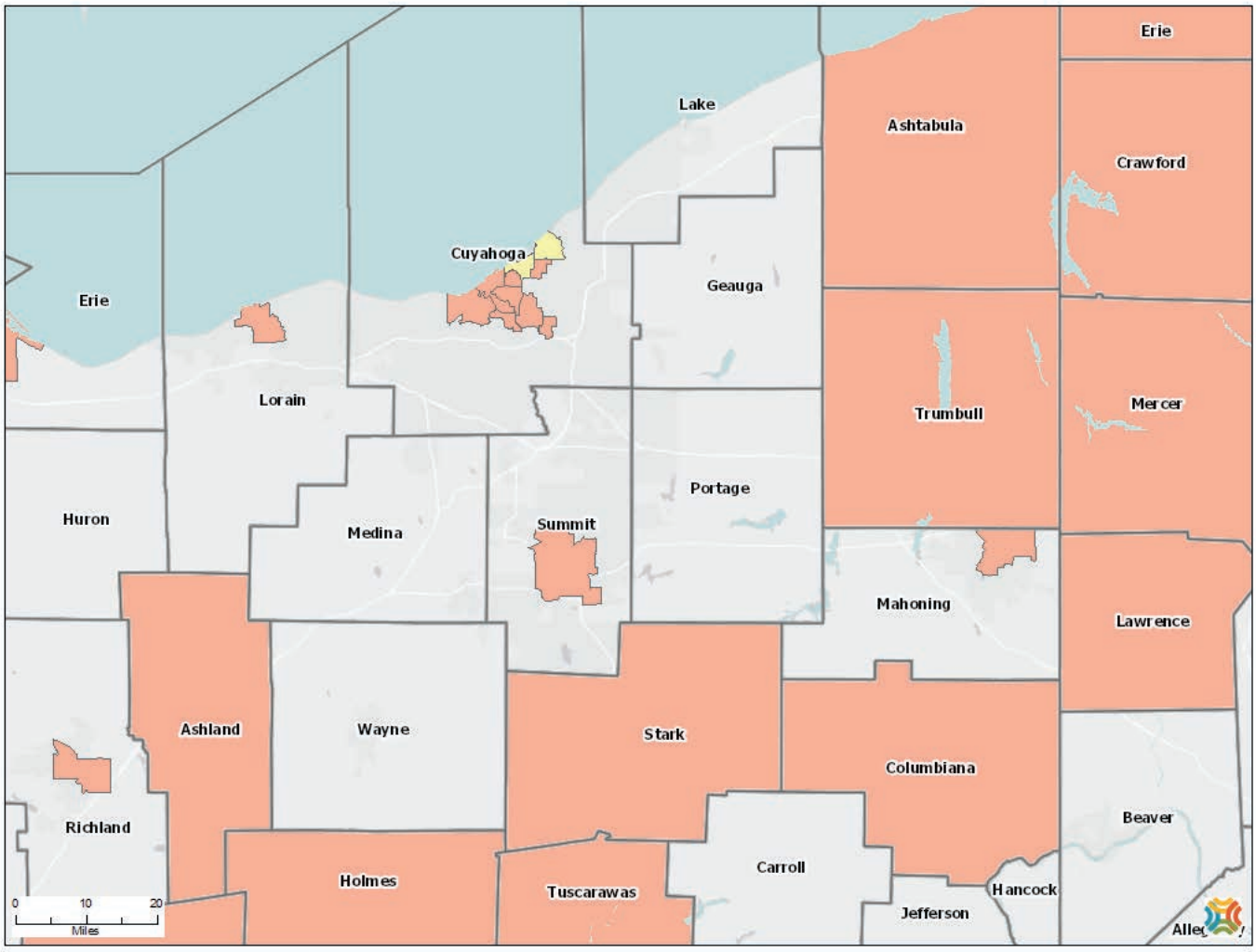
Access to Dentists, Rate per 100,000 Population by County, Area Health Resource File (AHRF), 2015

- There were 43 dentists in Geauga County in 2015.
- The rate of dentists per 100,000 population for Geauga County was 45.7.



(Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Area Health Resource File (AHRF): 2015, as compiled by Community Commons, obtained on 11/22/17)

Health Professional Shortage Area – Dental, Designated Population Group by Shortage Area, Health Resources and Services Administration (HRSA), April 2016



Map Legend

Health Professional Shortage Area - Dental, Designated Population Group by Shortage Area, HRSA HPSA Database April 2016

- Homeless Population HPSA
- Low Income Population HPSA
- Low Income Homeless Population HPSA
- Low Income Migrant Farmworker Population HPSA
- Low Income Homeless Migrant Farmworker Population HPSA
- Low Income Migrant Seasonal Worker Population HPSA
- Low Income Homeless Migrant Seasonal Worker Population HPSA
- Medicaid Eligible Population HPSA
- Migrant Seasonal Worker Population HPSA
- Geographic HPSA

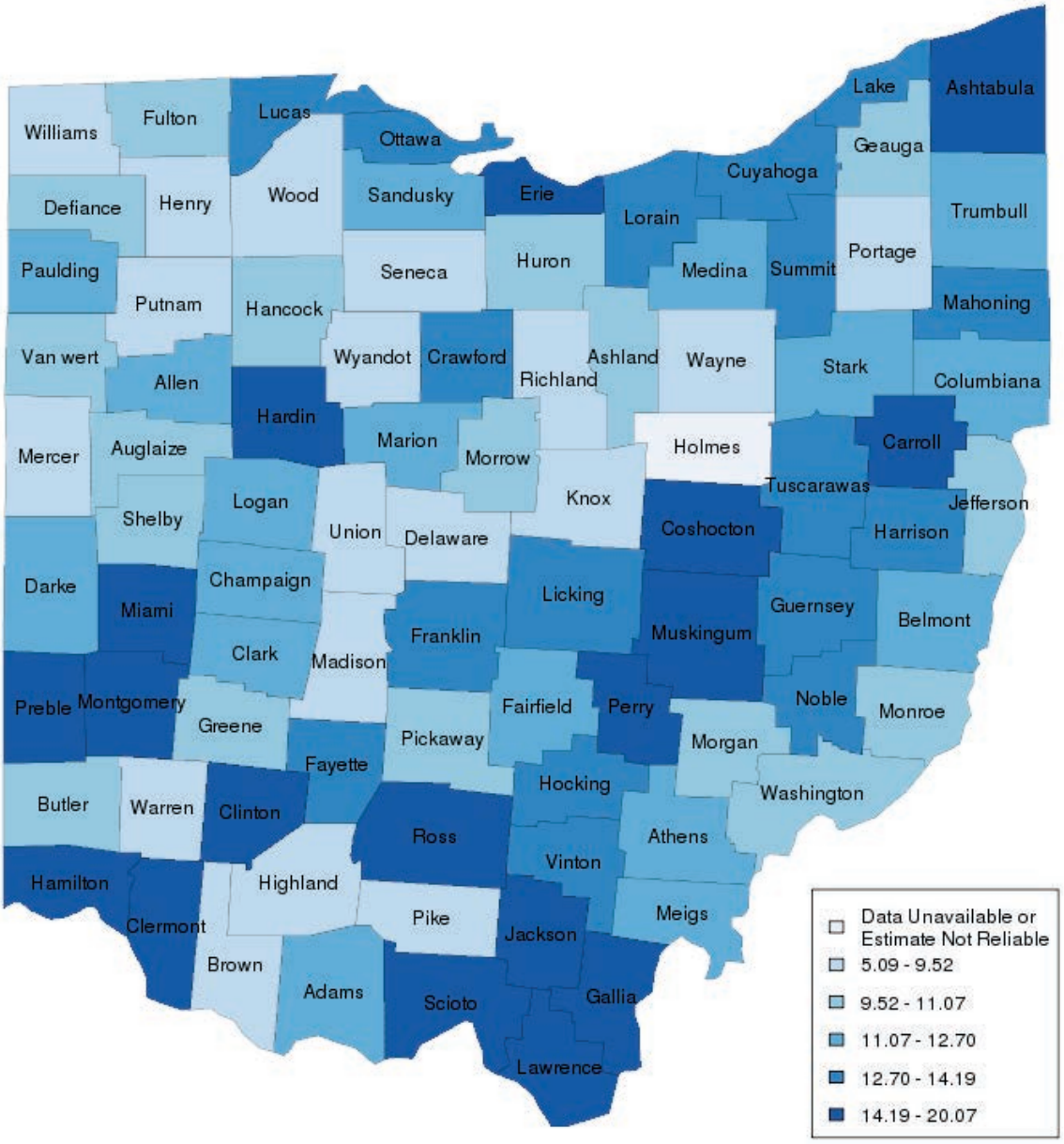
Community Commons, 11/28/2017

(Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, April 2016, as compiled by Community Commons)

The following map shows the estimated proportion of all adults, ages 19 years and older, with unmet needs in dental care.

- Five percent (5%) of Geauga County adults, ages 19 years and older, had unmet needs in dental care.
- Thirteen percent (13%) of Ohio adults, ages 19 years and older, had unmet needs in dental care.

Estimated Proportion: Unmet Needs in Dental Care, All Adults, Ages 19 Years and Older (2015) *



(Source: Ohio Medicaid Assessment Survey (OMAS) Adult Dashboard, 2015)
**Unmet needs indicate those who could not get needed dental care in the past 12 months*

Health Behaviors: Health Status Perceptions

Key Findings

In 2016, almost two-thirds (63%) of Geauga County adults rated their health status as excellent or very good. Conversely, 9% of adults described their health as fair or poor. That percentage increased to 25% of those with incomes less than $25,000.

Adults Who Rated General Health Status Excellent or Very Good

- Geauga County 63% (2016)
- Ohio 51% (2016)
- U.S. 52% (2016)

(Source: BRFSS 2016 for Ohio and U.S.)

General Health Status

- In 2016, almost two-thirds (63%) of Geauga County adults rated their health as excellent or very good. Geauga County adults with higher incomes (66%) were most likely to rate their health as excellent or very good, compared to 41% of those with incomes less than $25,000.
- Nine percent (9%) of adults rated their health as fair or poor. The 2016 BRFSS has identified that 18% of Ohio and 17% of U.S. adults self-reported their health as fair or poor.
- Adults were most likely to rate their health as fair or poor if they:
  - Had an annual household income under $25,000 (25%)
  - Were separated (25%) or divorced (23%)
  - Had been diagnosed with diabetes (22%)
  - Had high blood pressure (17%) or high blood cholesterol (11%)
  - Were 65 years of age or older (14%)

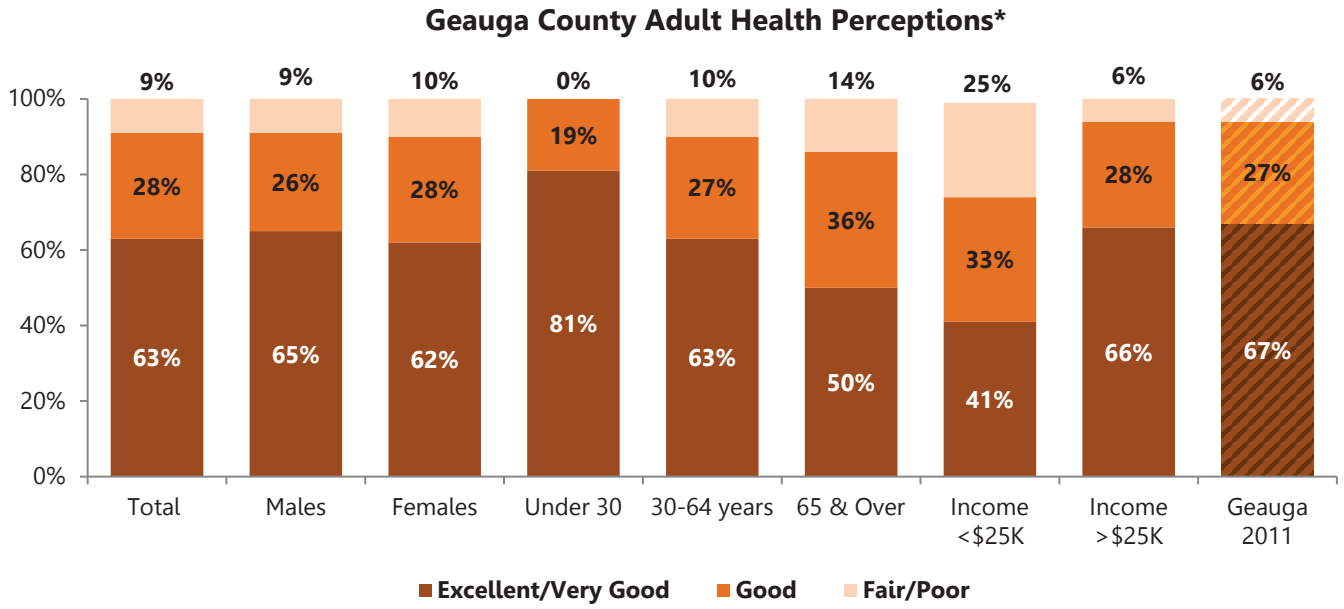
Physical Health Status

- In 2016, 19% of adults rated their physical health as not good on four or more days in the previous month.
- Adults reported their physical health as not good on an average of 3.8 days in the previous month. Ohio and U.S. adults reported their physical health as not good on an average of 3.7 days and 3.8 days, respectively, in the previous month *(Source: 2015 BRFSS as compiled by County Health Rankings).*
- Adults were most likely to rate their physical health as not good if they:
  - Had an annual household income under $25,000 (36%)
  - Were 65 years of age or older (26%)

Mental Health Status

- In 2016, 28% of adults rated their mental health as not good on four or more days in the previous month.
- Adults reported their mental health as not good on an average of 4.8 days in the previous month. Ohio and U.S. adults reported their mental health as not good on an average of 4.0 days and 3.8 days, respectively, in the previous month *(Source: 2015 BRFSS as compiled by 2017 County Health Rankings).*
- More than one-fifth (21%) of adults reported that poor mental or physical health kept them from doing usual activities such as self-care, work, or recreation.
- Adults were most likely to rate their mental health as not good if they:
  - Had an annual household income under $25,000 (35%)
  - Were female (34%)
  - Were under the age of 30 (33%)

The following graph shows the percentage of Geauga County adults who described their personal health status as excellent/very good, good, and fair/poor. Examples of how to interpret the information include: 63% of all Geauga County adults, 81% of those under age 30, and 50% of those ages 65 and older rated their health as excellent or very good. The table shows the percentage of adults with poor physical and mental health in the past 30 days.



**Respondents were asked: "Would you say that in general your health is excellent, very good, good, fair or poor?"*
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 Status	No Days	1-3 Days	4-5 Days	6-7 Days	8 or More Days
Physical Health Not Good in Past 30 Days*					
Males	59%	22%	2%	2%	13%
Females	53%	22%	6%	2%	13%
Total	57%	22%	4%	2%	13%
Mental Health Not Good in Past 30 Days*					
Males	54%	22%	4%	4%	15%
Females	49%	12%	8%	4%	21%
Total	52%	17%	7%	4%	17%

**Totals may not equal 100% as some respondents answered, "Don't know/Not sure".*

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Rated health as excellent or very good	67%	63%	51%	52%
Rated health as fair or poor	6%	9%	18%	17%
Rated their mental health as not good on four or more days in the previous month	18%	28%	N/A	N/A
Average days that physical health not good in past month	N/A	3.8	3.7*	3.8*
Average days that mental health not good in past month	N/A	4.8	4.0*	3.8*

N/A – Not Available
** 2015 BRFSS as compiled by 2017 County Health Rankings*

Health Behaviors: Adult Weight Status

Key Findings

In 2016, 64% of Geauga County adults were overweight (37%) or obese (27%) based on Body Mass Index (BMI). The 2016 BRFSS indicates that 32% of Ohio and 30% of U.S. adults were obese as measured by BMI. Nine percent (9%) of adults ate 5 or more servings of fruits and vegetables per day.

Adult Weight Status

- In 2016, nearly two-thirds (64%) of Geauga County adults were either overweight (37%) or obese (27%) by Body Mass Index (BMI). This puts them at elevated risk for developing a variety of diseases.
- Two-fifths (40%) of adults tried to lose weight, 42% tried to maintain their current weight or keep from gaining weight, and 3% tried to gain weight.
- Geauga County adults did the following to lose weight or keep from gaining weight: exercised (49%); ate less food, fewer calories, or foods low in fat (45%); drank more water (39%); ate a low-carb diet (13%); used a weight loss program (3%); utilized health coaching (2%); participated in a prescribed dietary or fitness program (2%); went without eating 24 or more hours (2%); smoked cigarettes (1%); took diet pills, powders or liquids without a doctor's advice (1%); took prescribed medications (1%); had bariatric surgery (<1%); took laxatives (<1%); and vomited after eating (<1%).

27% of Geauga County adults were obese.

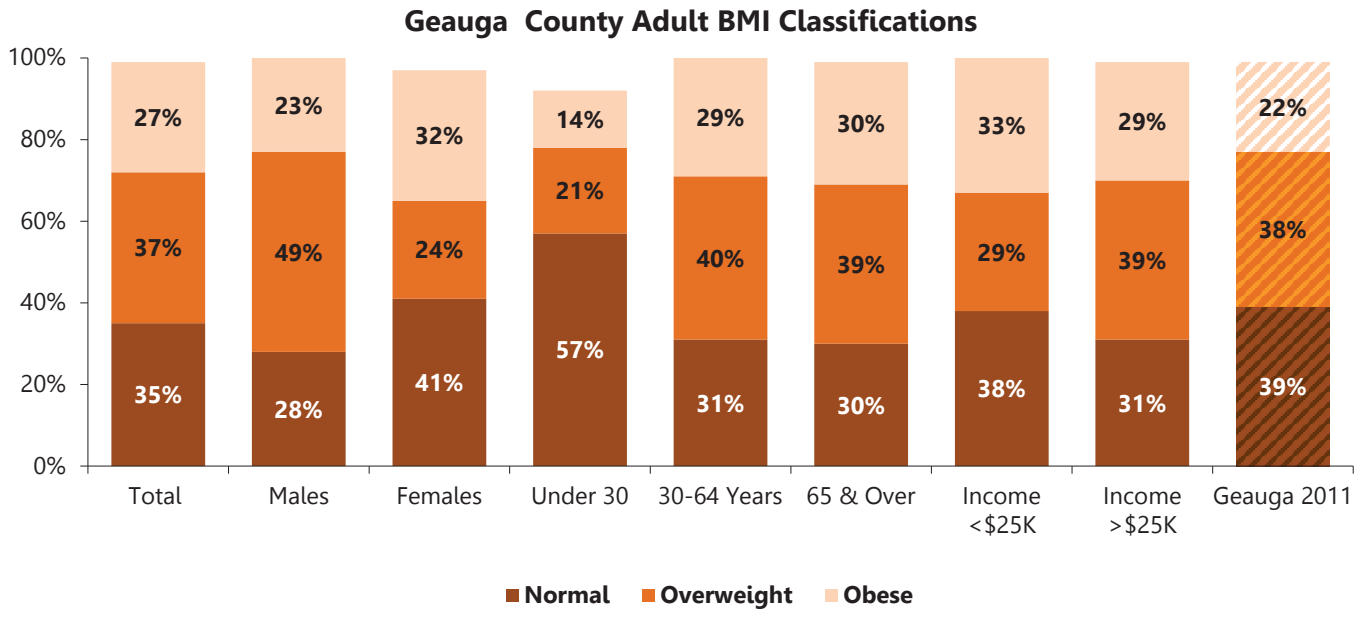
Physical Activity

- In Geauga County, 61% of adults engaged in some type of physical activity or exercise for at least 30 minutes 3 or more days per week; 33% of adults exercised 5 or more days per week. Nearly one-in-six (16%) adults did not participate in any physical activity in the past week, including 2% who were unable to exercise.
- The CDC recommends that adults participate in moderate exercise for at least 2 hours and 30 minutes or vigorous exercise for at least 1 hour and 15 minutes every week. Whether participating in moderate or vigorous exercise, the CDC also recommends muscle-strengthening activities that work all major muscle groups on 2 or more days per week *(Source: CDC, Physical Activity Basics, 2015).*
- Adults spent the most time doing the following physical activities in the past year: walking (31%), occupational exercise (5%), exercise machines (4%), running/jogging (4%), strength training (4%), cycling (2%), group exercise classes (2%), exercise videos (1%), active video games (<1%), swimming (<1%), and other activities (5%). Seven percent (7%) of adults did not exercise at all in the past year, including 1% who were unable to do so.
- Reasons for not exercising included the following: time (27%); too tired (22%); laziness (14%); pain or discomfort (13%); weather (13%); did not like to exercise (10%); could not afford a gym membership (5%); poorly maintained/no sidewalks (5%); no exercise partner (3%); did not know what activities to do (2%); lack of opportunities for those with physical impairments or challenges (2%); no child care (2%); doctor advised them not to exercise (1%); neighborhood safety (1%); no walking, biking trails or parks (1%); no gym available (<1%); and transportation (<1%),
- Adults spent an average of 2.2 hours watching TV, 1.6 hours on the computer (outside of work), 1.2 hours on their cell phone, and 0.2 hours playing video games on an average day of the week.

Nutrition

- In 2016, 9% of adults ate 5 or more servings of fruits and vegetables per day. Thirty-five percent (35%) ate between 3 and 4 servings per day, and 51% ate between 1 and 2 servings. Four percent (4%) ate 0 servings of fruits and vegetables: 2% ate 0 servings because they could not afford them, 1% ate 0 servings because they did not like them, and 1% ate 0 servings because they did not have access to them. The American Cancer Society recommends that adults eat at least 2 ½ cups of fruits and vegetables per day to reduce the risk of cancer and to maintain good health.
- Geauga County adults reported the following reasons they chose the types of food they ate: taste/enjoyment (68%), healthiness of food (60%), cost (46%), what their family prefers (43%), ease of preparation/time (42%), food they were used to (37%), nutritional content (36%), availability (30%), calorie content (28%), if it is organic (17%), if it is genetically modified (14%), artificial sweetener content (11%), health care provider's advice (9%), if it is gluten free (7%), other food sensitivities (5%), if it is lactose free (4%), and other reasons (3%).
- Adults reported the following barriers to consuming fruits and vegetables: too expensive (8%), no access (4%), did not like the taste (3%), did not know how to prepare (2%), no variety (2%), and other barriers (3%).
- Seventy-six percent (76%) of adults ate out in a restaurant or brought home take-out food at least once in a typical week, 5% of whom did so for 5 or more meals. Adults ate out in a restaurant or brought home take-out food an average of 1.6 times per week.

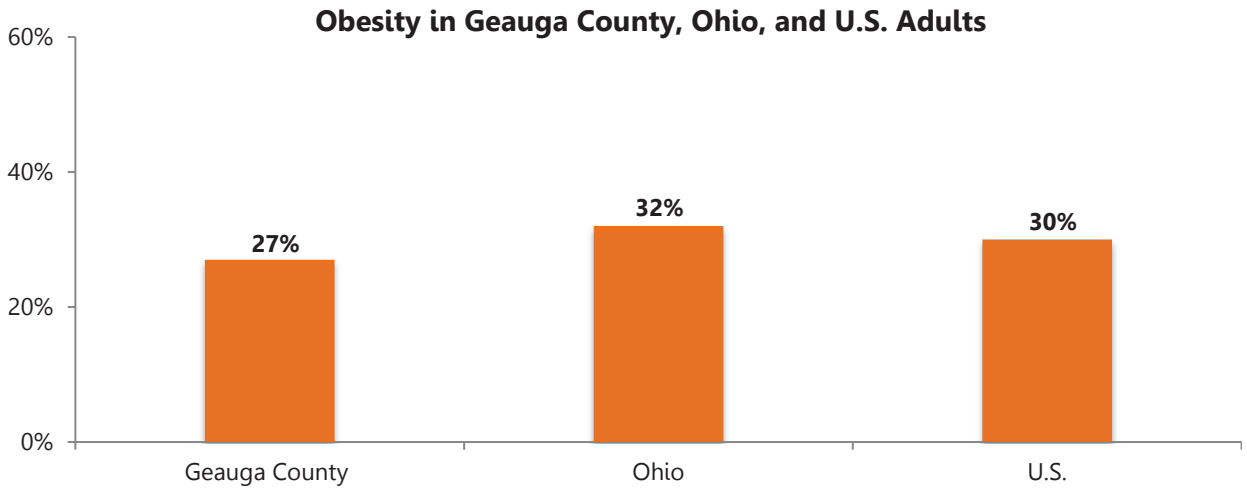
The following graph shows the percentage of Geauga County adults who were overweight or obese by Body Mass Index (BMI). Examples of how to interpret the information include: 35% of adults were classified as normal weight, 37% were overweight, and 27% were obese.



Note: Percentages may not equal 100% due to the exclusion of data for those who were classified as underweight
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Obese	22%	27%	32%	30%
Overweight	38%	37%	35%	35%

The following graph shows the percentage of Geauga County adults who are obese compared to Ohio and U.S.



(Source: 2016 Geauga County Health Assessment and 2016 BRFSS)

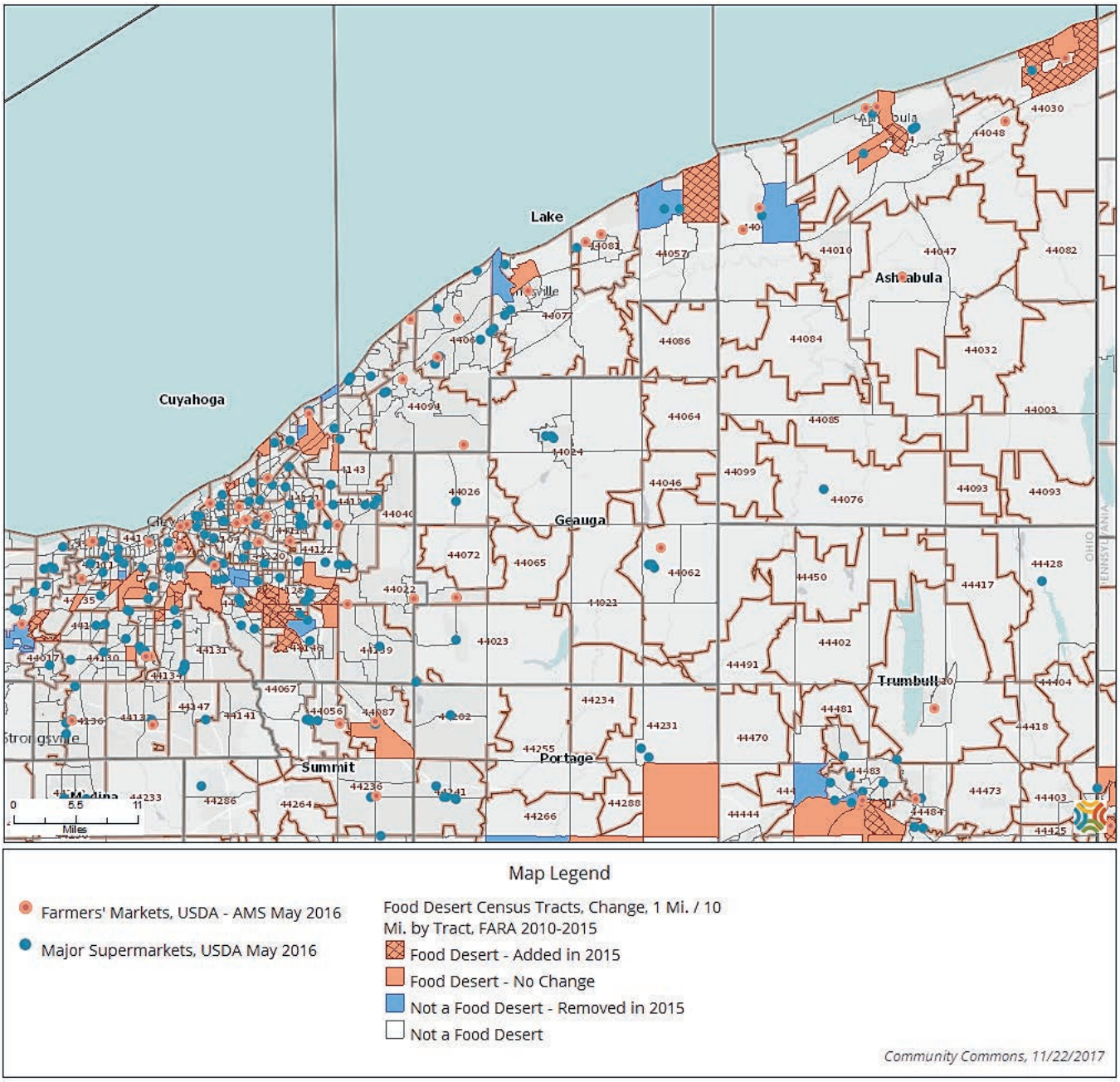
BMI Measurements

- Body Mass Index (BMI) is a person's weight in kilograms divided by the square of height in meters.
- A high BMI can be an indicator of high body fat.
- BMI can be used to screen for weight categories that may lead to health problems but it is not diagnostic of the body fatness or health of any individual.

BMI	Weight Status
Below 18.5	Underweight
18.5 – 24.9	Normal or Healthy Weight
25.0 – 29.9	Overweight
30.0 and above	Obese

(Source: CDC, Healthy Weight, updated August 11, 2017)

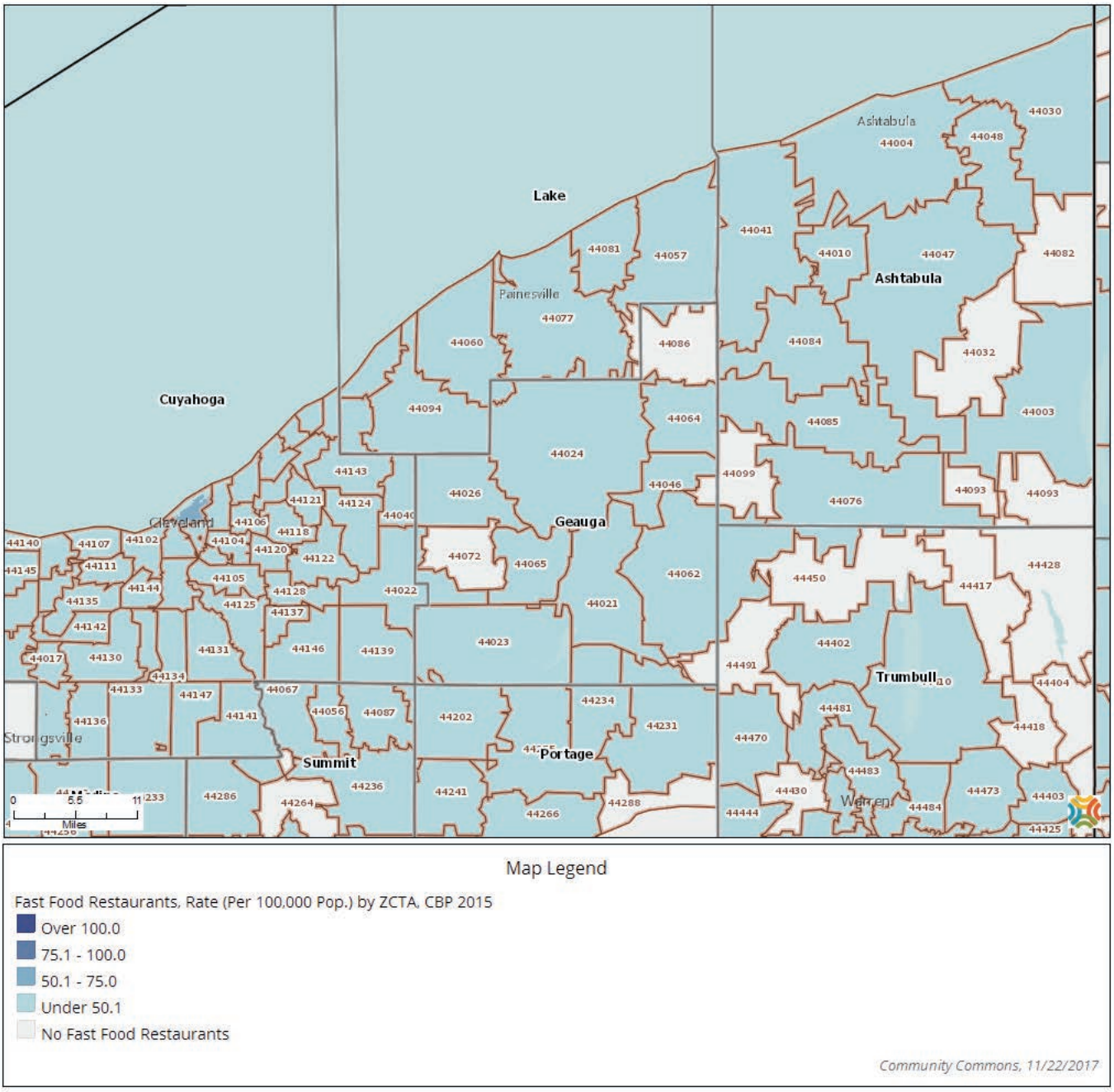
Major Supermarkets, Farmer's Markets and Food Deserts



(Sources: U.S. Department of Agriculture, Food and Nutrition Service, May 2016 and U.S. Department of Agriculture, Economic Research Service, USDA – Food Access Research Atlas: 2015, as compiled by Community Commons)

Total Number of Fast Food Restaurants by Zip Code Tract Area

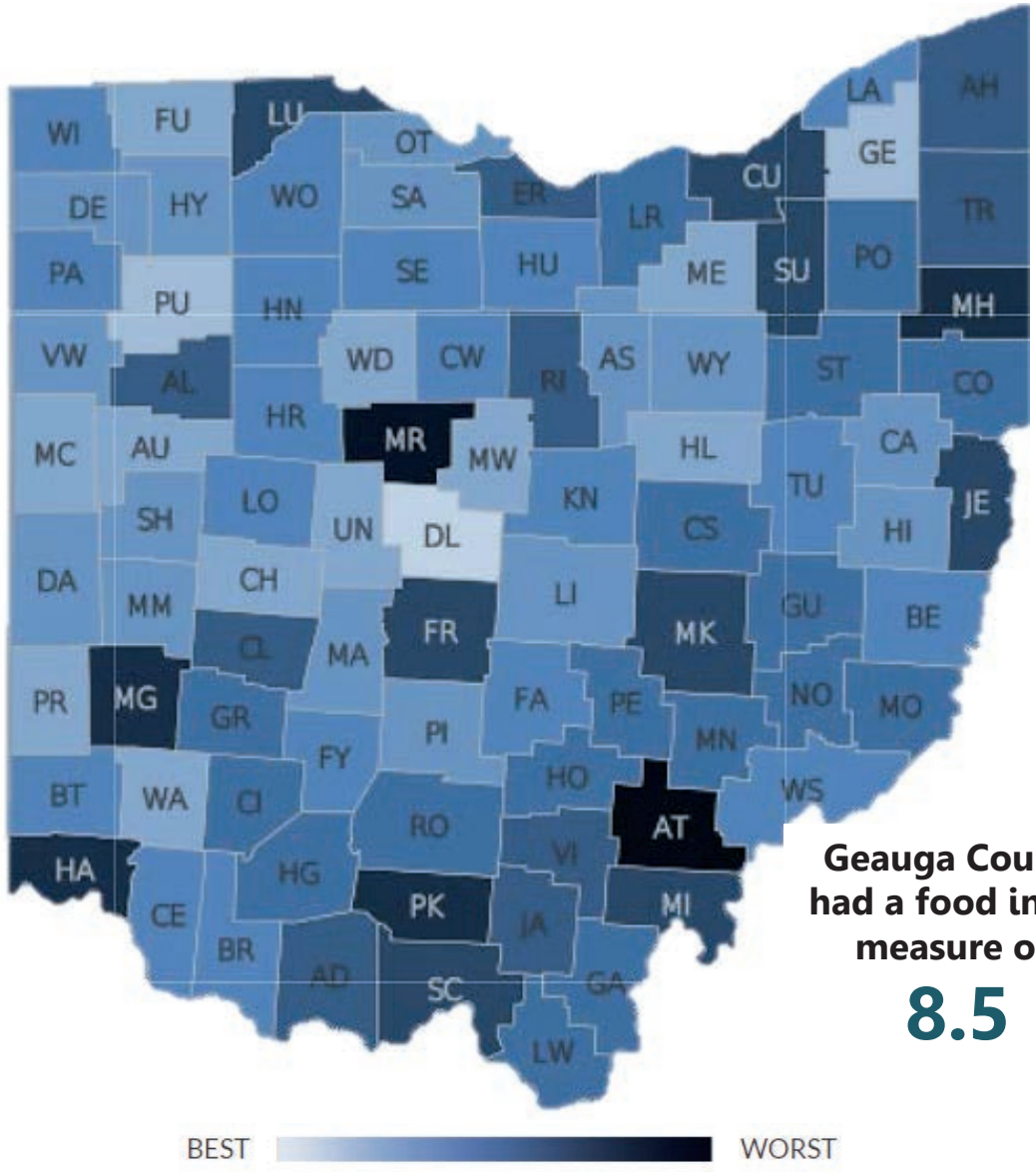
- In 2015, there were 65.3 fast food restaurants per 100,000 population in Geauga County.



(Source: US Census Bureau, County Business Patterns: 2015 as compiled by County Health Rankings)

The Food Environment Index measures the quality of the food environment in a county on a scale from 0 to 10 (zero being the worst value in the nation, and 10 being the best). The two variables used to determine the measure are limited access to healthy foods (i.e. the percentage of the population who are low income and do not live close to a grocery store) & food insecurity (i.e. the percentage of the population who did not have access to a reliable source of food during the past year).

- The food environment index in Geauga County is 8.5.
- The food environment index in Ohio is 7.0.



Geauga County had a food index measure of:

8.5

(Source: USDA Food Environment Atlas, as compiled by County Health Rankings 2017)

Health Behaviors: Adult Tobacco Use

Key Findings

In 2016, 10% of Geauga County adults were current smokers, and 27% were considered former smokers. In 2017, the American Cancer Society (ACS) stated that tobacco use was the most preventable cause of death worldwide and is responsible for the deaths of approximately half of long-term users.

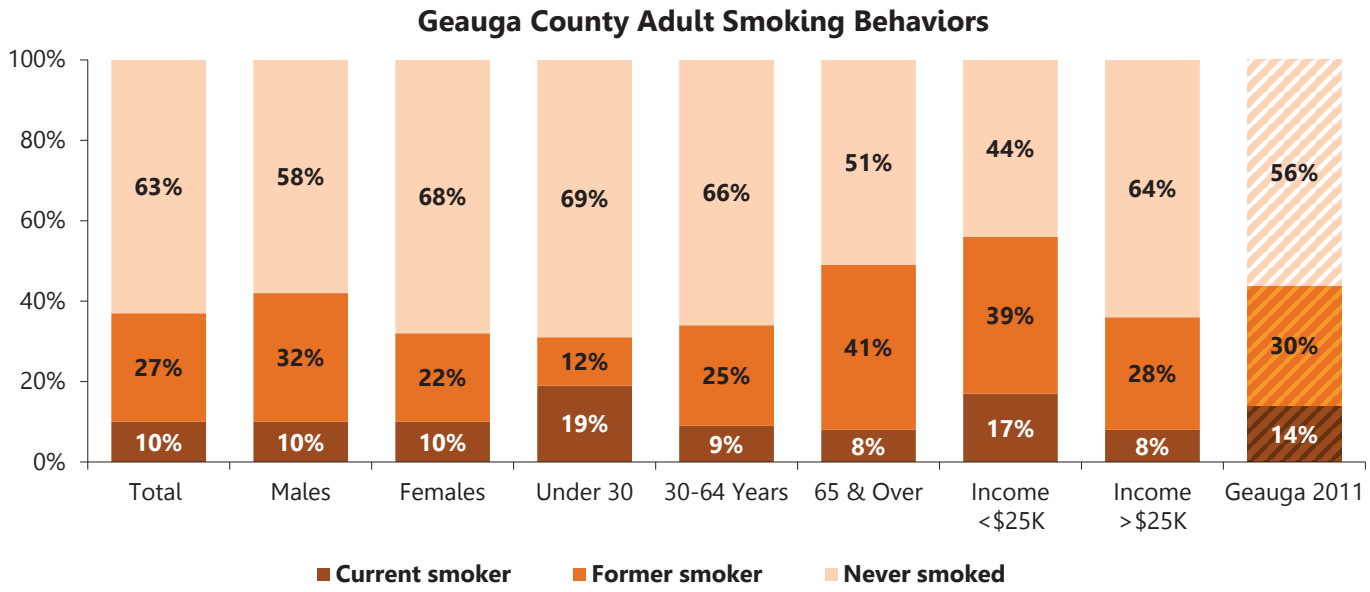
In 2016, 10% of Geauga County adults were current smokers.

Adult Tobacco Use Behaviors

- One-in-ten (10%) Geauga County adults were current smokers (those who indicated smoking at least 100 cigarettes in their lifetime and currently smoked some or all days).
- The 2016 BRFSS reported current smoker prevalence rates of 23% for Ohio and 17% for the U.S.
- More than one-fourth (27%) of adults indicated that they were former smokers (smoked 100 cigarettes in their lifetime and now do not smoke).
- The 2016 BRFSS reported former smoker prevalence rates of 24% for Ohio and 25% for the U.S.
- Adult smokers were more likely to:
  - Have been a member of an unmarried couple (23%)
  - Be under the age of 30 (19%)
  - Have incomes less than $25,000 (17%)
- Adults used the following tobacco products in the past year: cigarettes (15%), chewing tobacco (3%), cigars (3%), e-cigarettes (3%), little cigars (3%), pouch (3%), Black and Milds (1%), hookah (1%), pipes (1%), roll-your-own (1%), snuff (1%), and Swishers (1%).
- Fifty-one percent (51%) of current smokers responded that they had stopped smoking for at least one day in the past year because they were trying to quit smoking.
- Ninety percent (90%) of adults believed secondhand tobacco smoke was harmful to themselves or their family's health.
- Thirty-nine percent (39%) of adults believed e-cigarette vapor was harmful to them, and 36% believed it was harmful to others. 4% of adults did not believe e-cigarette vapor was harmful to anyone.

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Current smoker (currently smokes some or all days)	14%	10%	23%	17%
Former smoker (smoked 100 cigarettes in lifetime and now do not smoker)	30%	27%	24%	25%

The following graph shows the percentage of Geauga County adults who smoked cigarettes. Examples of how to interpret the information include: 10% of adults were current smokers, 27% of adults were former smokers, and 63% had never smoked.



Note: Respondents were asked: "Have you smoked at least 100 cigarettes in your entire life? If yes, do you now smoke cigarettes every day, some days or not at all?"
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

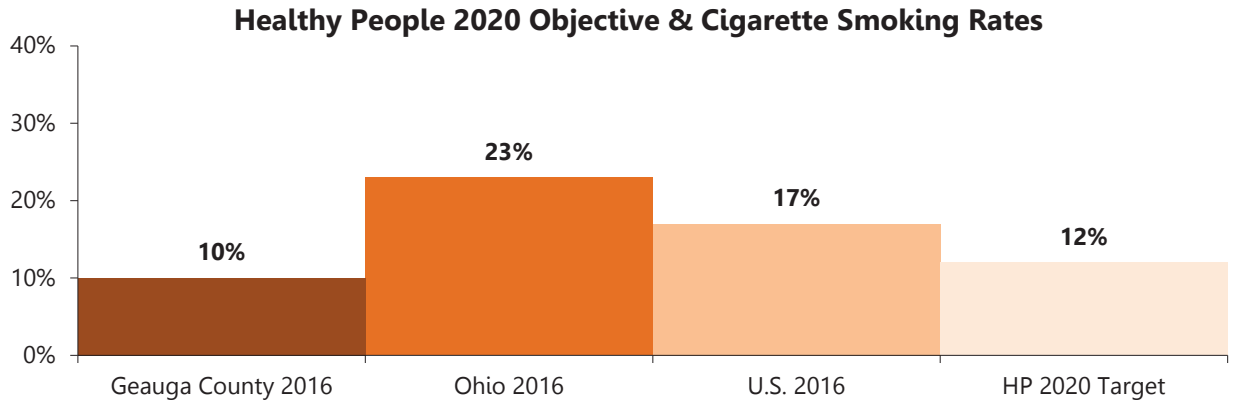
Smoking and Other Health Risks

- Smoking can make it harder for a woman to become pregnant and can affect her baby's health before and after birth. Smoking increases risks for:
  - Preterm (early) delivery
  - Stillbirth (death of the baby before birth)
  - Low birth weight
  - Sudden infant death syndrome (known as SIDS or crib death)
  - Ectopic pregnancy
  - Orofacial clefts in infants
- Smoking can also affect men's sperm, which can reduce fertility and also increase risks for birth defects and miscarriage (loss of the pregnancy).
- Smoking can affect bone health.
  - Women past childbearing years who smoke have lower bone density (weaker bones) than women who never smoked and are at greater risk for broken bones.
- Smoking affects the health of your teeth and gums and can cause tooth loss.
- Smoking can increase your risk for cataracts (clouding of the eye's lens that makes it hard for you to see) and age-related macular degeneration (damage to a small spot near the center of the retina, the part of the eye needed for central vision).
- Smoking is a cause of type 2 diabetes mellitus and can make it harder to control. The risk of developing diabetes is 30-40% higher for active smokers than nonsmokers.
- Smoking causes general adverse effects on the body, including inflammation and decreased immune function.
- Smoking is a cause of rheumatoid arthritis.

(Source: CDC, Effects of Cigarette Smoking, Smoking and Other Health Risks, updated May 15, 2017)

The following graph shows Geauga County, Ohio, and U.S. adult cigarette smoking rates. This graph shows:

- The Geauga County adult cigarette smoking rate was lower than the Ohio and U.S. rates as well as the Healthy People 2020 target objective.



(Source: 2016 Geauga County Health Needs Assessment, 2016 BRFSS and Healthy People 2020)

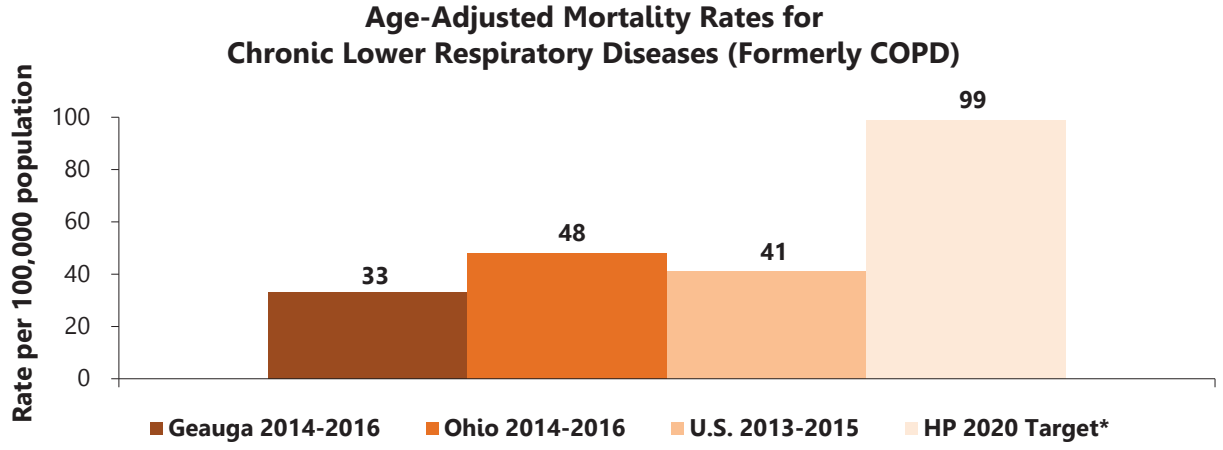
Smoke-free Living: Benefits & Milestones

- According to the American Heart Association and the U.S. Surgeon General, this is how your body starts to recover after quitting:
  - In your first 20 minutes after quitting: your blood pressure and heart rate recover from the cigarette-induced spike.
  - After 12 hours of smoke-free living: the carbon monoxide levels in your blood return to normal.
  - After two weeks to three months of smoke-free living: your circulation and lung function begin to improve.
  - After one to nine months of smoke-free living: clear and deeper breathing gradually returns as coughing and shortness of breath diminishes; you regain the ability to cough productively instead of hacking, which cleans your lungs and reduce your risk of infection.
  - After 1 year: your excess rick of coronary heart disease reduced by 50 percent.
  - After 5 years: Your risk of cancer of the mouth, throat, esophagus, and bladder are cut in half. Your risk of cervical cancer and stroke return to normal.
  - After 10 years: You are half as likely to die from lung cancer. Your risk of larynx or pancreatic cancer decreases.
  - After 15 years: Your risk of coronary heart disease is the same as a non-smoker's.

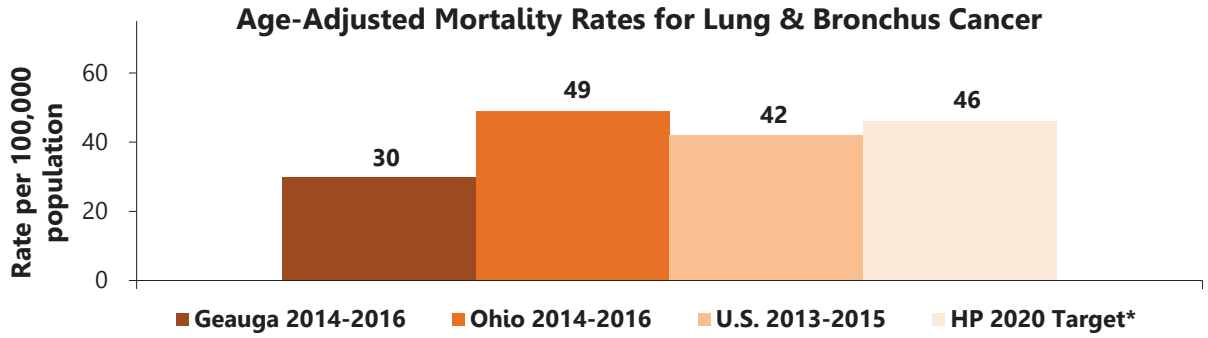
(Source: AHA, Your Non-Smoking Life, April 20, 2017)

The following graphs show Geauga County, Ohio, and U.S. age-adjusted mortality rates per 100,000 populations for chronic lower respiratory diseases (formerly COPD), as well as lung and bronchus cancer in comparison with the Healthy People 2020 objective. Geauga County age-adjusted mortality rates for lung and bronchus cancer by gender is shown below as well. These graphs show:

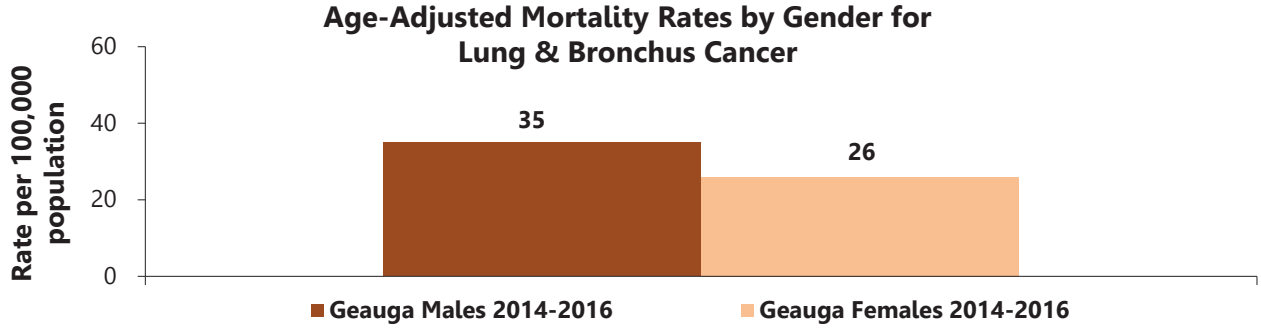
- From 2014-2016, Geauga County's age-adjusted mortality rate for Chronic Lower Respiratory Disease was lower than the U.S., Ohio rate and Healthy People 2020 target objective.
- Geauga County's age-adjusted mortality rate for lung and bronchus cancer was lower than Ohio, U.S. and Healthy People 2020 target objective.
- Disparities existed by gender for Geauga County lung and bronchus cancer age-adjusted mortality rates. The 2014-2016 Geauga male rates were higher than the female rates.



(Sources: Healthy People 2020, Ohio Public Health Data Warehouse 2014-2016, CDC Wonder 2013-2015)
**Healthy People 2020's target rate and the U.S. rate is for adults aged 45 years and older.*

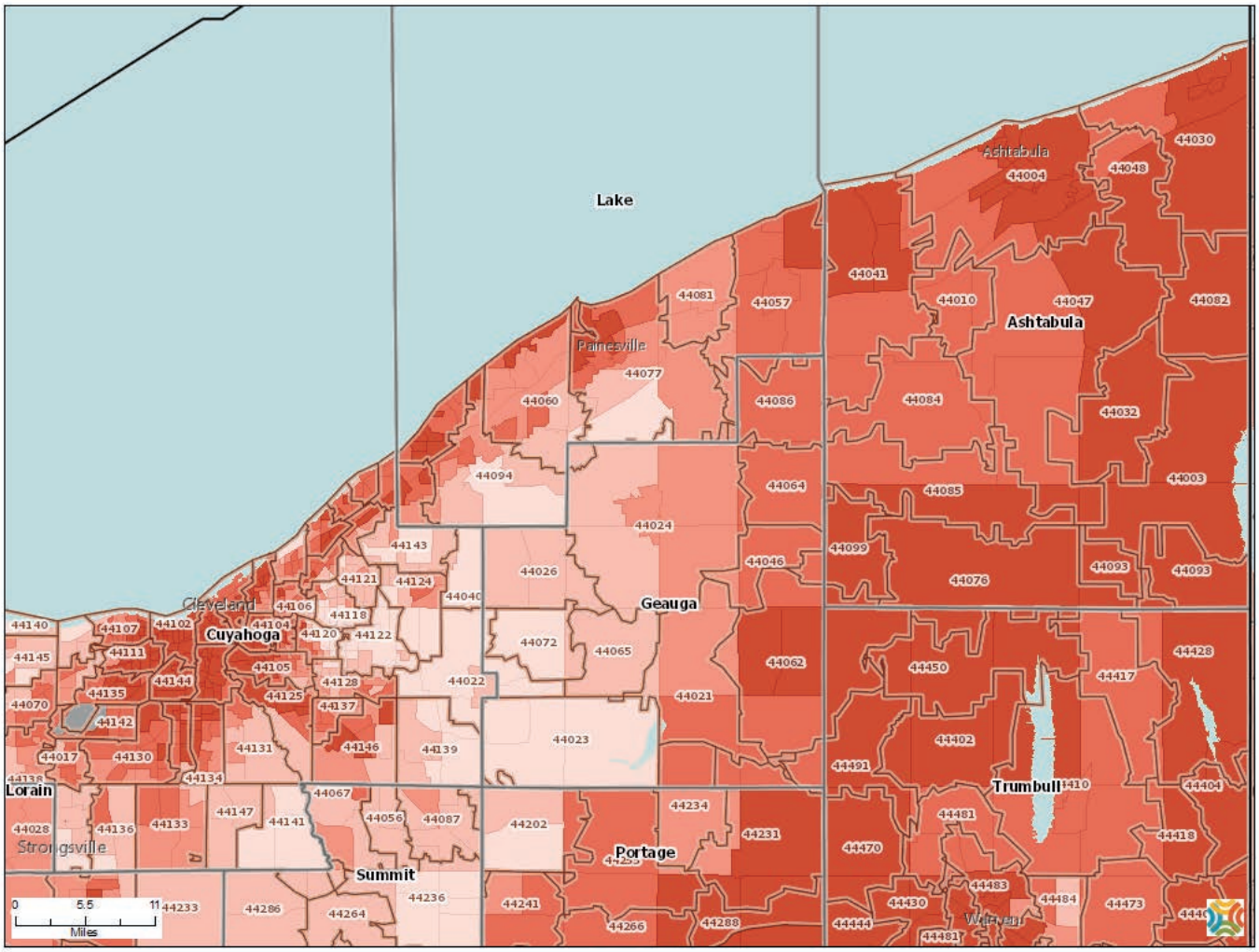


Note: Healthy People 2020's target rate and the U.S. rate is for adults aged 45 years and older.
**Healthy People 2020 Target data is for lung cancer only*
(Sources: Healthy People 2020, Ohio Public Health Data Warehouse 2014-2016, CDC Wonder 2013-2015)



(Sources: Healthy People 2020, Ohio Public Health Data Warehouse 2014-2016)

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



(Source: Community Commons, updated 11/27/2017)
**Tobacco expenditures indicate cigarettes only; cigars and other tobacco products are not included*
Description of indicator: To generate acceptable map output in compliance with the Nielsen terms of use agreement, percent expenditures for each tract were sorted and ranked; quintiles were assigned to each tract based on national rank and symbolized within the map.

Health Behaviors: Adult Alcohol Consumption

Key Findings

In 2016, 38% of current drinkers engaged in binge drinking (defined as five or more drinks for males or four or more drinks for females) on at least one occasion in the past month. Five percent (5%) of adults drove after having perhaps too much to drink.

69% of Geauga County adults had at least one alcoholic drink in the past month.

Adult Alcohol Consumption

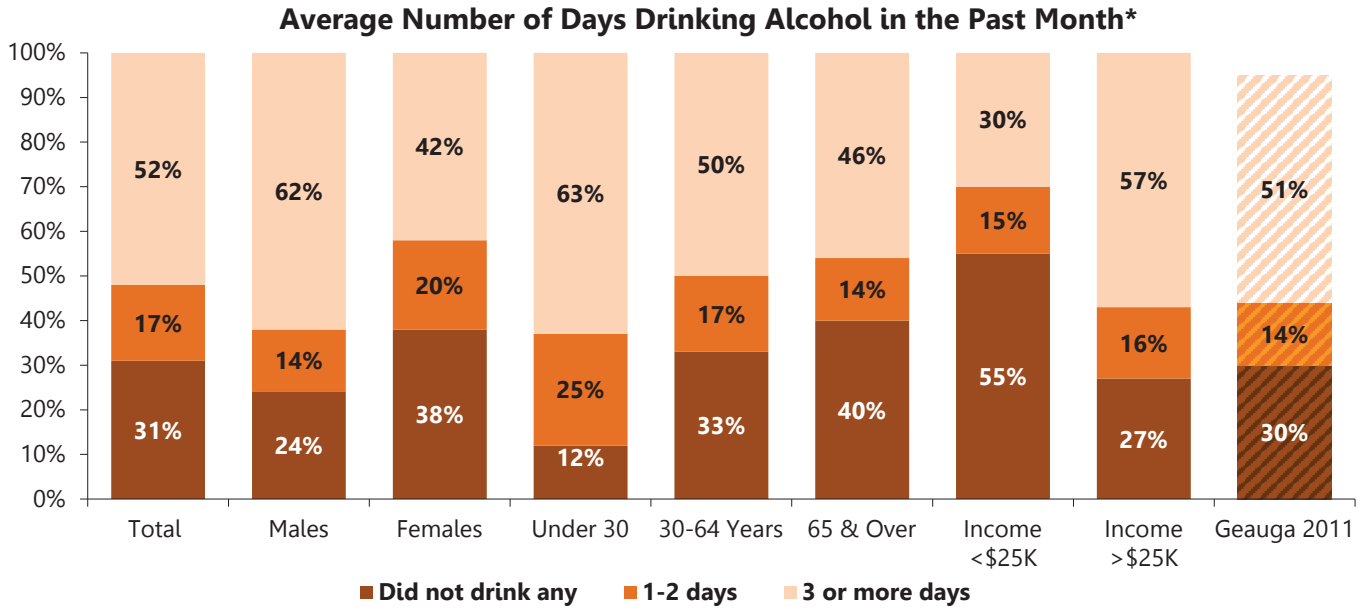
- In 2016, 69% of Geauga County adults had at least one alcoholic drink in the past month, increasing to 88% of those under the age of 30. The 2016 BRFSS reported current drinker prevalence rates of 53% for Ohio and 54% for the U.S.
- Of those who drank, Geauga County adults drank 2.7 drinks on average, increasing to 3.4 drinks for those under the age of 30.
- More than one-quarter (26%) of all Geauga County adults reported they had five or more alcoholic drinks (for males) or 4 or more drinks (for females) on an occasion in the last month and would be considered binge drinkers by definition. The 2016 BRFSS reported binge drinking rates of 18% for Ohio and 17% for the U.S.
- Thirty-eight percent (38%) of current drinkers were considered binge drinkers.

26% of all Geauga County adults were considered binge drinkers.

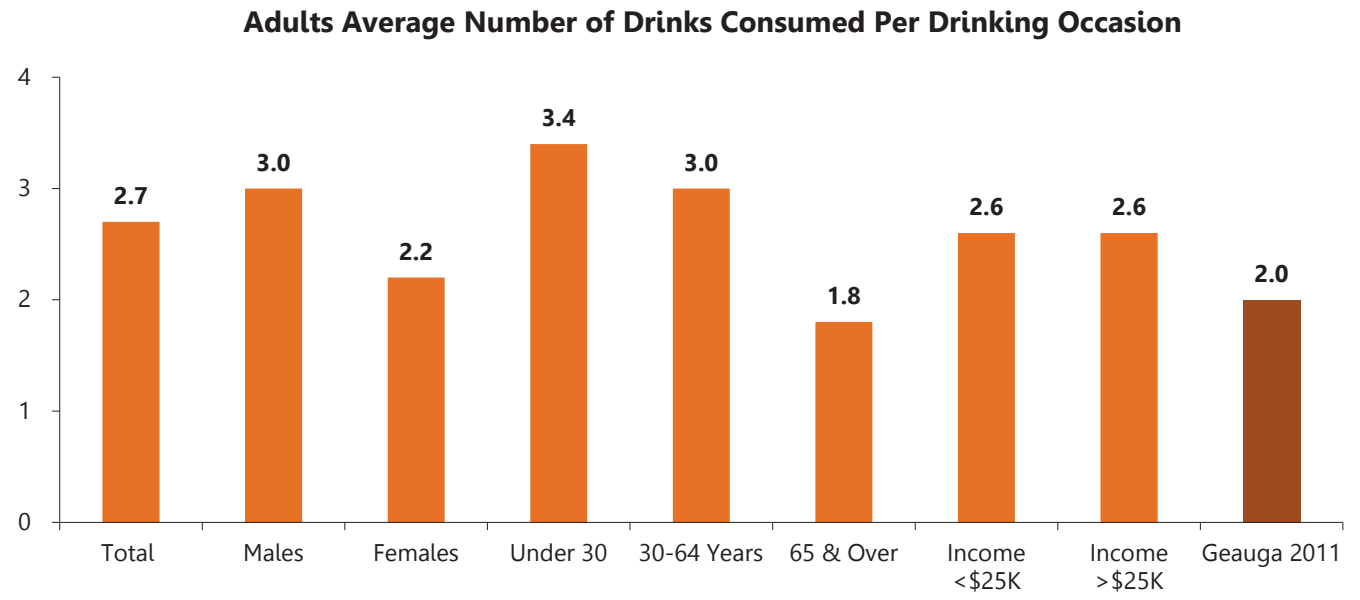
- Five percent (5%) of adults reported driving after having perhaps too much to drink, increasing to 13% of those under the age of 30.
- Three percent (3%) of adults used a program or service to help themselves or a loved one with alcohol problems.
- Reasons for not using a program or service to help with alcohol problems included the following: did not want to miss work (1%), had not thought of it (1%), did not want to get in trouble (<1%), stigma of seeking alcohol services (<1%), and other reasons (2%). 96% of adults indicated this type of program was not needed.

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Current drinker (drank alcohol at least once in the past month)	65%	69%	53%	54%
Binge drinker (defined as consuming more than four [women] or five [men] alcoholic beverages on a single occasion in the past 30 days)	18%	26%	18%	17%

The following graphs show the percentage of Geauga County adults who consumed alcohol and the amount consumed on average. Examples of how to interpret the information shown on the first graph include: 31% of adults did not drink alcohol including 24% of males and 38% of females.

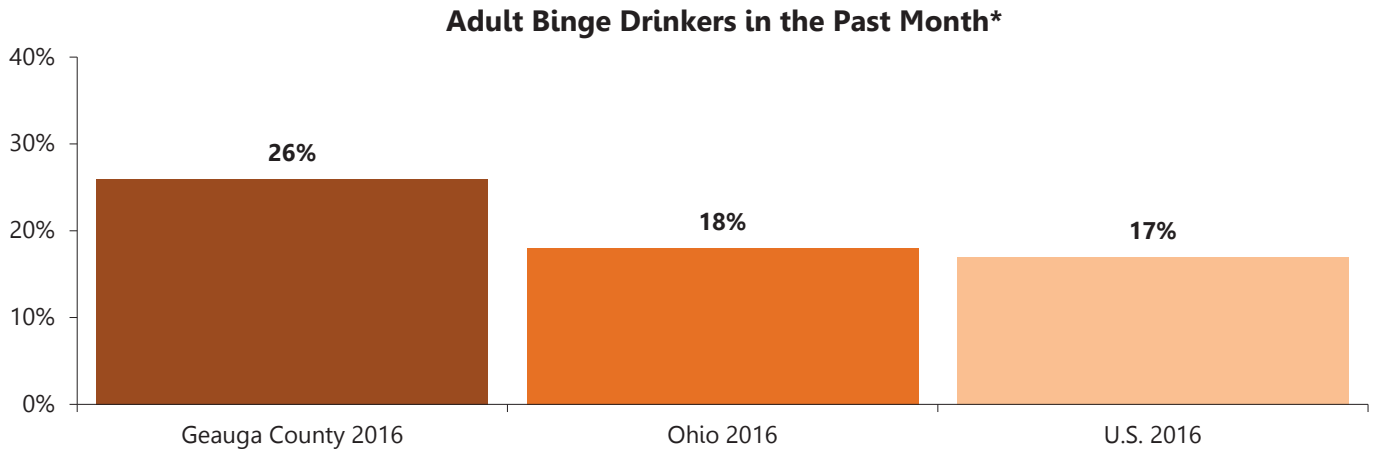


**Percentages may not equal 100% as some respondents answered, "don't know"*
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.



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

The following graph shows a comparison of Geauga County binge drinkers with Ohio and U.S. binge drinkers.



(Source: 2016 BRFSS, 2016 Geauga County Health Assessment)
**Based on all adults. Binge drinking is defined as males having five or more drinks on an occasion, females having four or more drinks on one occasion.*

Economic Costs of Excessive Alcohol Use

- Excessive alcohol consumption cost the United States $249 billion in 2010. This cost amounts to about $2.05 per drink, or about $807 per person.
- Costs due to excessive drinking largely resulted from loses in workplace productivity (72% of the total cost), health care expenses (11%), and other costs due to a combination of criminal justice expenses, motor vehicle crash costs, and property damage.
- Excessive alcohol use cost states and DC a median of 3.5 billion in 2010, ranging from $488 million in North America to $35 billion in California.
  - Excessive alcohol consumption cost Ohio $8.5 billion in 2010. This cost amounts to $2.10 per drink or $739 per person.
- Binge drinking, defined as consuming 4 or more drinks per occasion for women or 5 or more drinks per occasion for men, was responsible for 77% of the cost of excessive alcohol use in all states and DC.
- About $2 of every $5 of the economic costs of excessive alcohol use were paid by federal, state, and local governments.

(Source: CDC, Alcohol and Public Health – Excessive Drinking, updated June 15 2017)

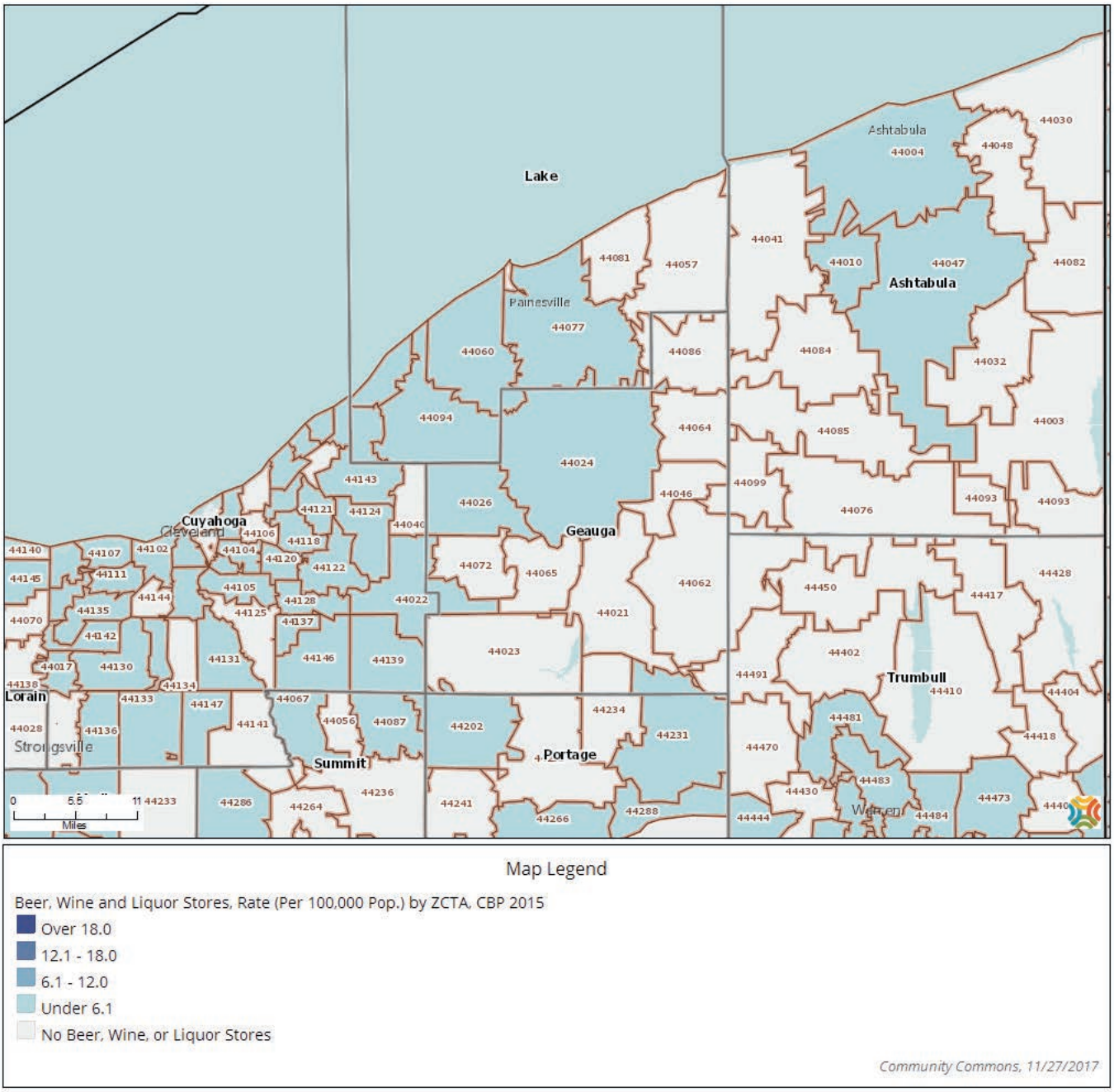
The following table shows the City of Chardon, Geauga County, and Ohio motor vehicle accident statistics. The table shows:

- In 2017, 3% of the total crashes in Geauga County were alcohol-related, relative to 4% for Ohio.
- Of the total number of alcohol-related crashes (99) in Geauga County, 54% were property damage only, 45% were non-fatal injury, and 1% were fatal injury.
- There were 11,580 alcohol-related crashes in Ohio in 2017. Of those crashes, 56% were property damage only, 41% were non-fatal injury, and 3% were fatal injury.

	City of Chardon 2017	Geauga County 2017	Ohio 2017
Total Crashes	223	1,793	294,012
Alcohol-Related Total Crashes	6	99	11,580
Fatal Injury Crashes	0	8	1,082
Alcohol-Related Fatal Crashes	0	1	284
Alcohol Impaired Drivers in Crashes	5	97	11,329
Injury Crashes	41	466	73,358
Alcohol-Related Injury Crashes	3	45	11,580
Property Damage Only	182	1,319	219,572
Alcohol-Related Property Damage Only	3	53	6,527
Total Fatalities	0	10	1,167
Alcohol-Related Deaths	0	1	300
Total Non-Fatal Injuries	56	691	105,863
Alcohol-Related Injuries	4	57	4,769

(Source: Ohio Department of Public Safety, Crash Reports, Updated 1/24/2018, Traffic Crash Facts)

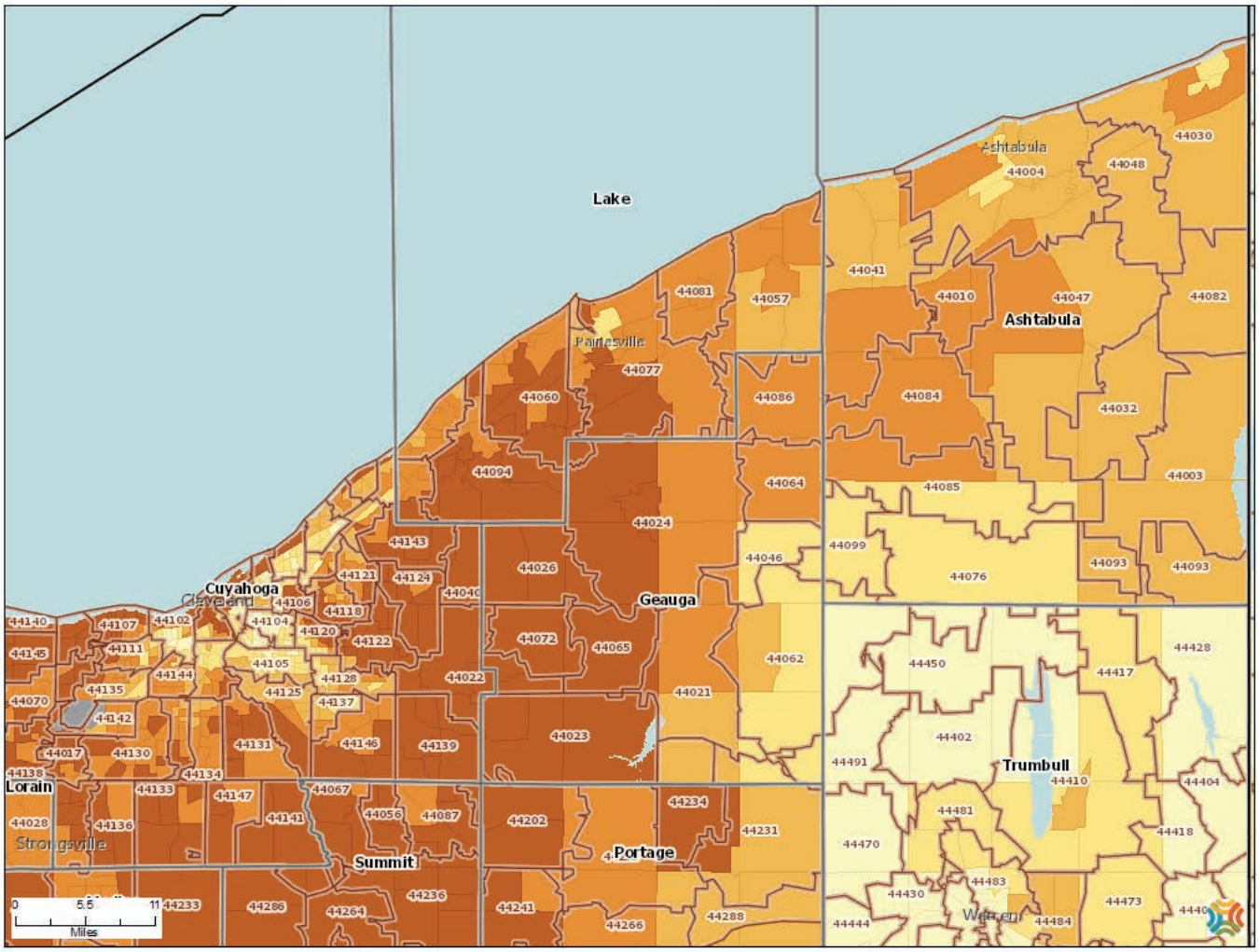
Beer, Wine and Liquor Stores, Rate (Per 100,000 Pop.) by County, Census Business Patterns (CBP), 2015



(Source: Community Commons, updated 11/27/2017)

Description of indicator: This layer provides information about select businesses and establishments across the United States. Data are from the US Census Bureau's County Business Patterns data series, which classifies businesses using the North American Industry Classification System (NAICS). Map layers include county-level establishment totals and establishment rates per 100,000 population. The population figures used in this analysis are from the US 2010 Decennial Census.

Alcohol Beverage Expenditures, National Rank by Tract, Nielsen (2014)



(Source: Community Commons, updated 11/27/2017)

Description of indicator: Alcohol expenditures included in this category are any beer, wine, and liquor purchased for consumption at home. Alcohol purchased at restaurants and bars is not included. Census tract level average and aggregated total household expenditures and category expenditures were acquired from the 2011 Nielsen Consumer Buying Power (CBP) SiteReports. To generate acceptable map output in compliance with the Nielsen terms of use agreement, percent expenditures for each tract were sorted and ranked; quintiles were assigned to each tract based on national rank and symbolized within the map. Additional attributes include each tract's within-state rank and quintile.

Health Behaviors: Adult Drug Use

Key Findings

In 2016, 5% of Geauga County adults had used marijuana during the past 6 months. Five percent (5%) of adults had used medication not prescribed for them or took more than prescribed to feel good or high and/or more active or alert during the past 6 months.

Adult Drug Use

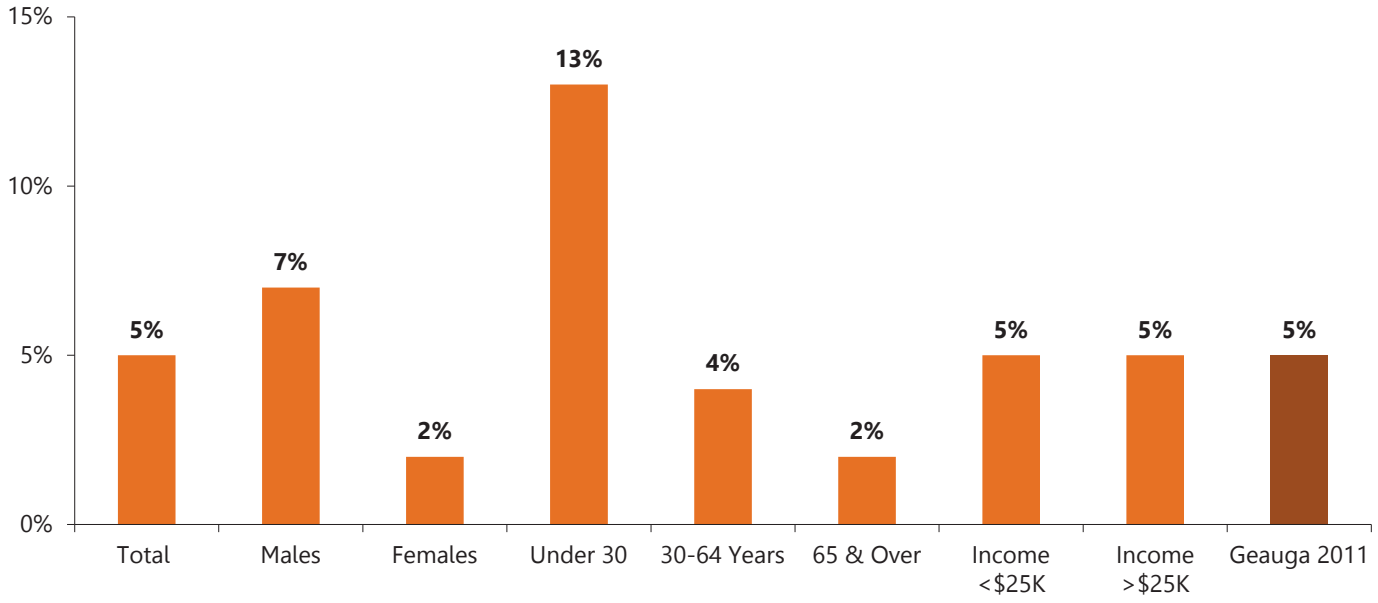
- In 2016, 5% of Geauga County adults had used marijuana in the past 6 months, increasing to 13% of those under the age of 30.
- One percent (1%) of adults reported using other recreational drugs in the past six months, such as cocaine, synthetic marijuana/K2, heroin, LSD, inhalants, Ecstasy, bath salts, and methamphetamines.
- Five percent (5%) of adults had used medication not prescribed for them or they took more than prescribed to feel good or high and/or more active or alert during the past 6 months, increasing to 13% of those under the age of 30.
- Adults indicated they did the following with their unused prescription medication: took as prescribed (20%), threw it in the trash (17%), kept it (14%), flushed it down the toilet (8%), took it to the medication collection program (8%), took it to the sheriff's office (8%), kept in a locked cabinet (3%), gave it away (1%), sold it (1%), took it in on drug take back days (1%), and some other destruction method (2%). Forty-five percent (45%) of adults did not have unused medication.

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Adults who used marijuana in the past six months	5%	5%	N/A	N/A
Adults who misused prescription drugs in the past six months	4%	5%	N/A	N/A

N/A- Not available

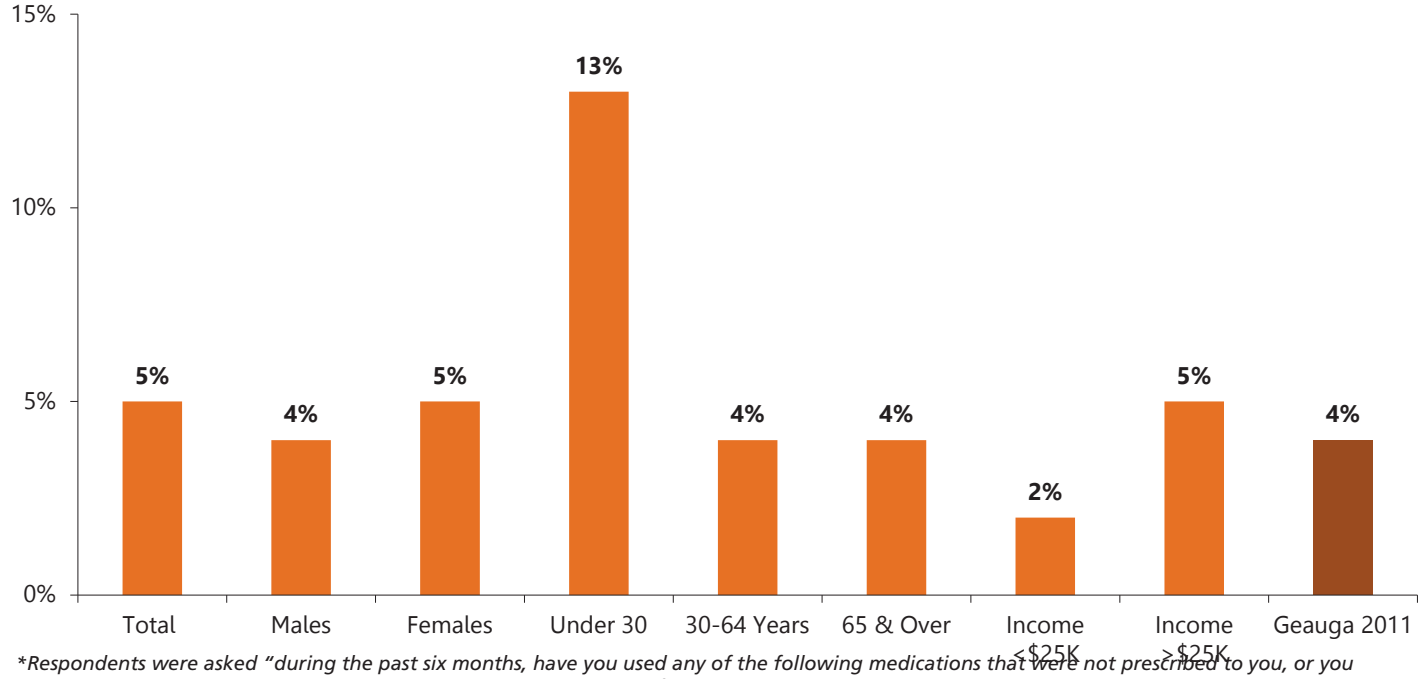
The following graphs indicate adult marijuana use and medication misuse in the past six months. Examples of how to interpret the information include: 5% of all Geauga County adults used marijuana in the past six months, including 13% of adults under the age of 30 and 5% of adults with incomes less than $25,000.

Geauga County Adult Marijuana Use in Past Six Months



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

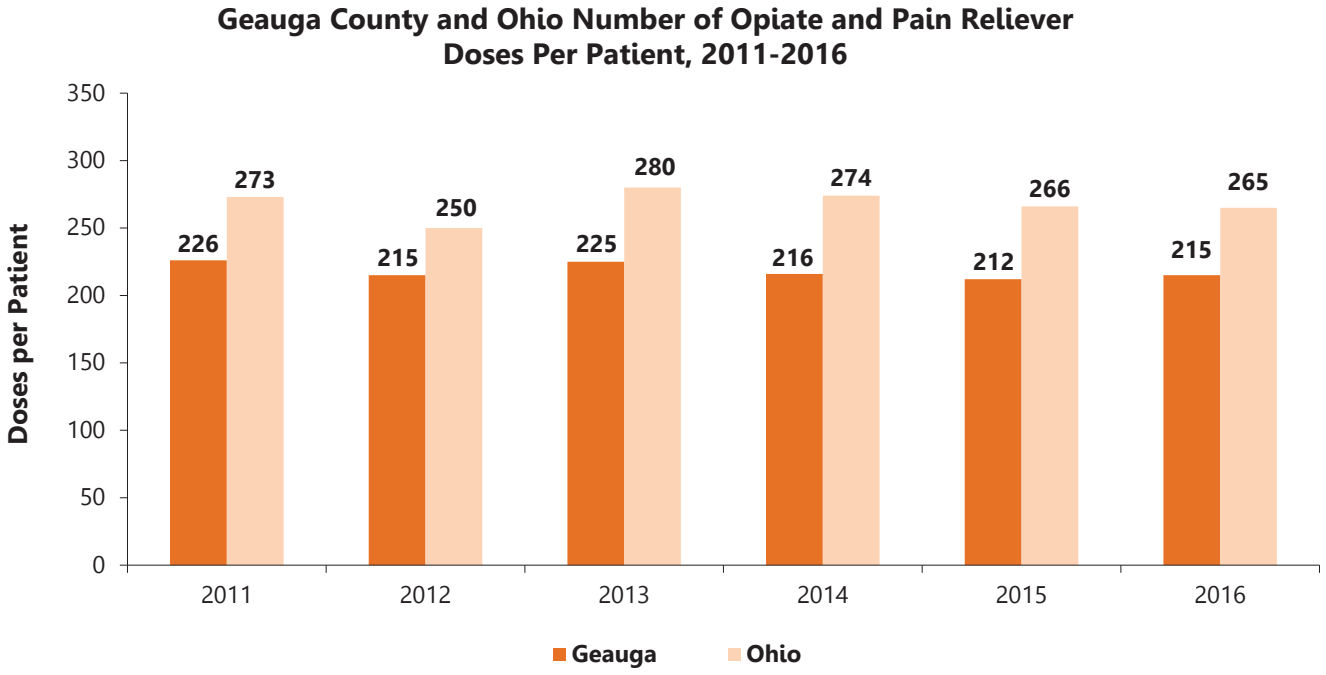
Geauga County Adult Medication Misuse in Past Six Months*

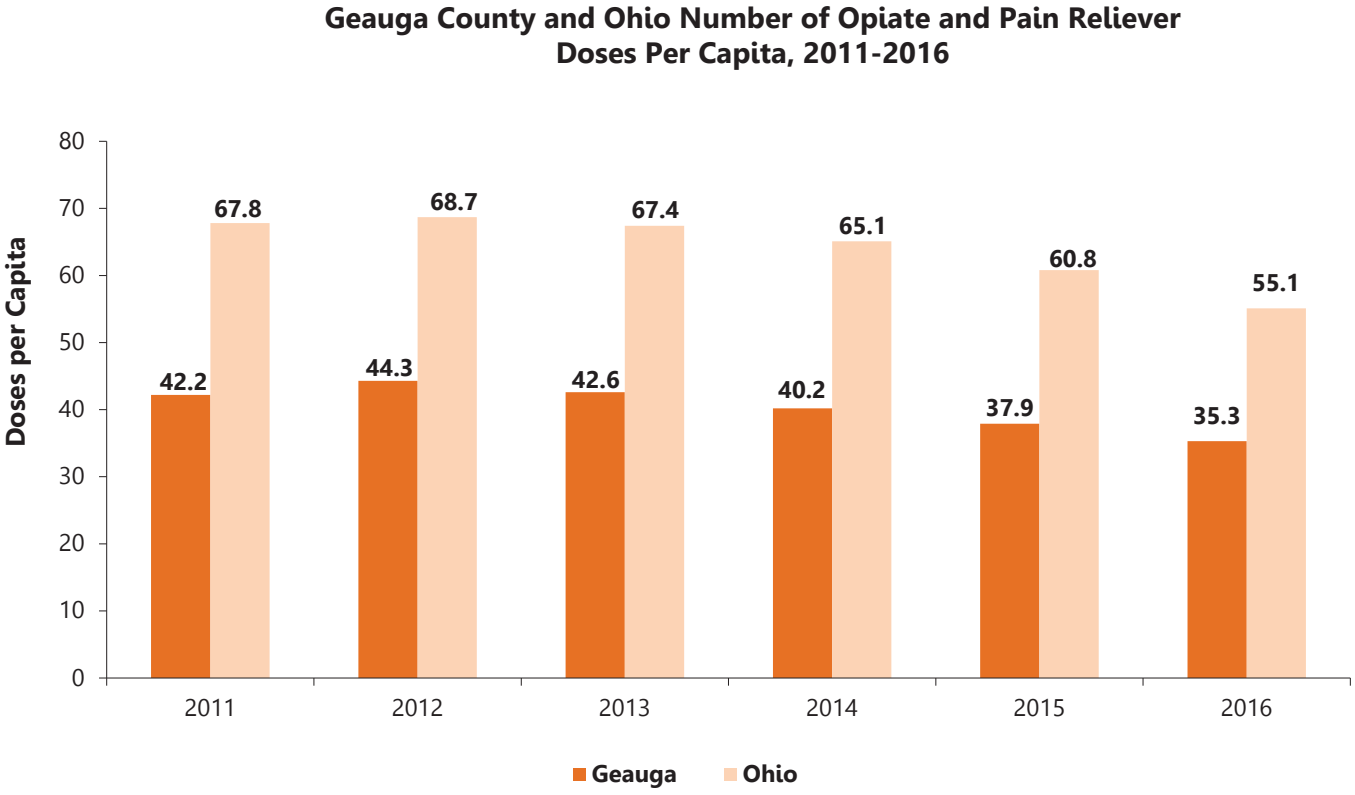


**Respondents were asked "during the past six months, have you used any of the following medications that were not prescribed to you, or you took more than was prescribed to feel good or high, more active or alert?"*

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

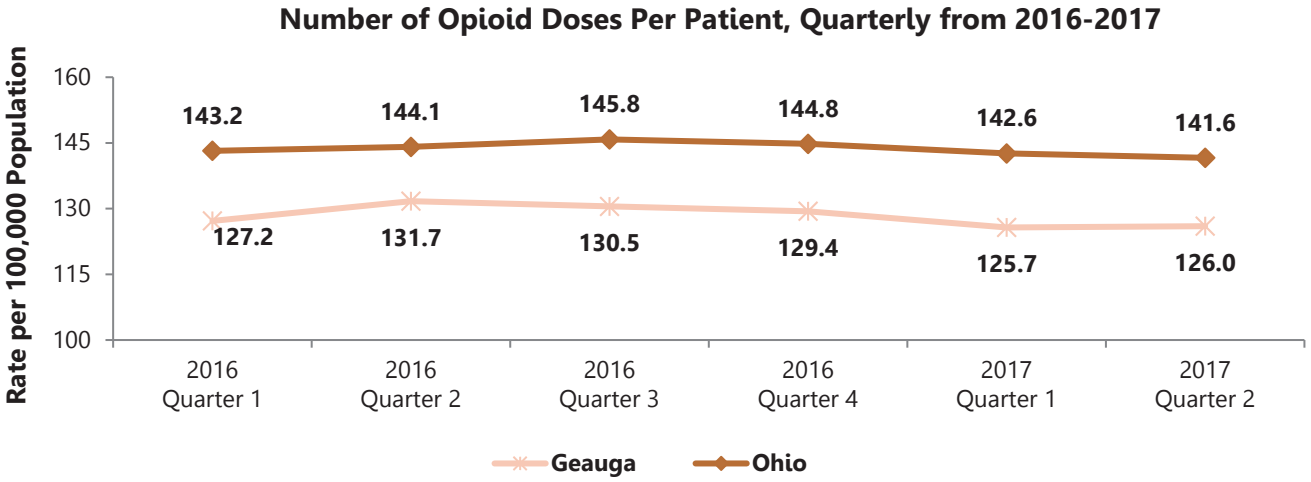
The following graphs show Geauga County and Ohio opiate and pain reliever doses per patient and doses per capita from 2011-2016.



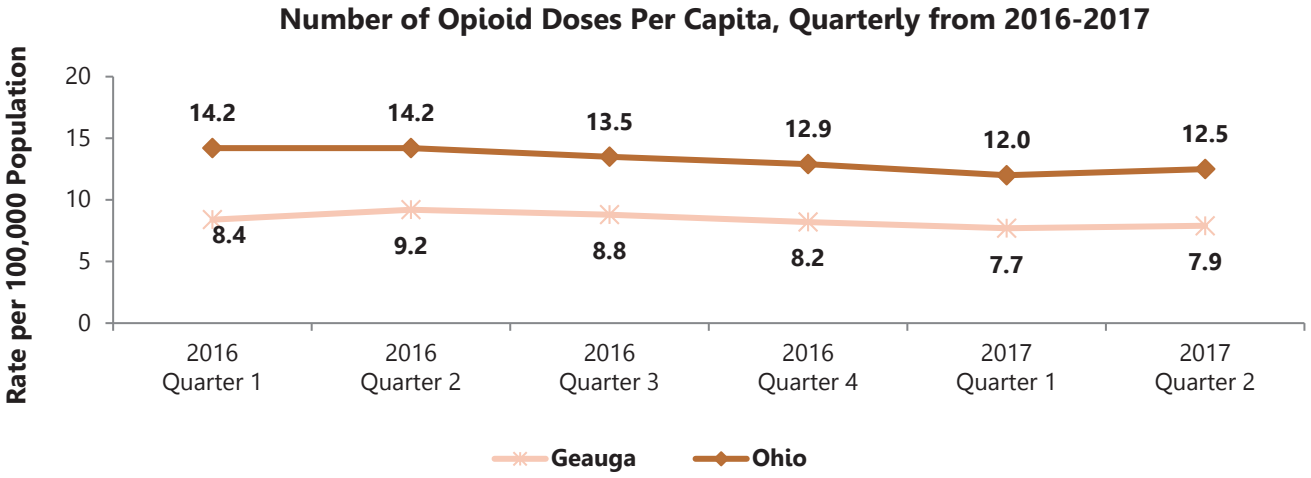


(Source for graphs: Ohio's Automated Rx Reporting System, 2011-2016)

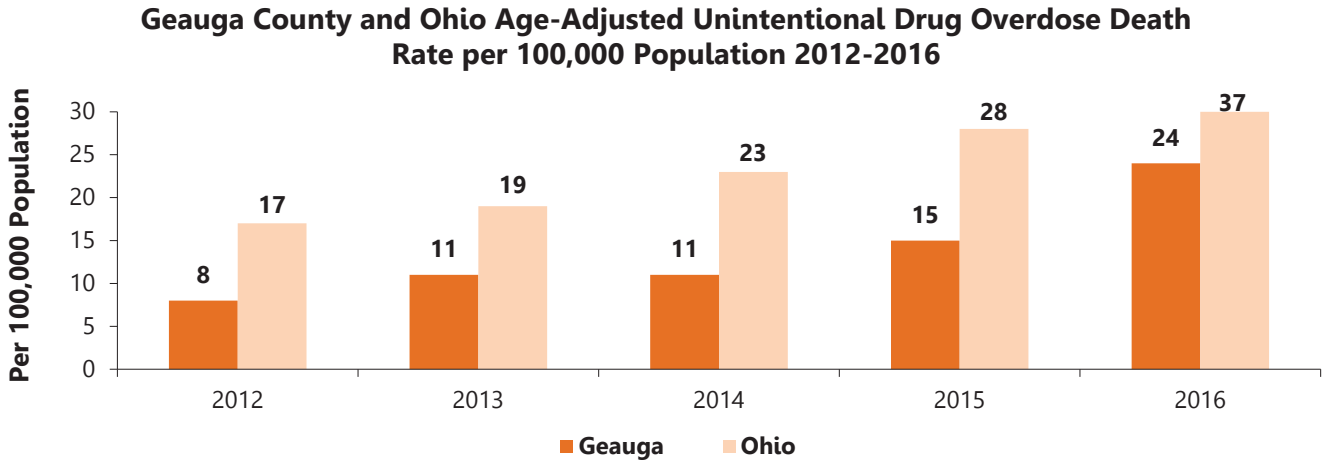
The following graphs show Geauga and Ohio quarterly opioid doses per patient, per capita, and the rate of unintentional drug overdose deaths from 2012-2016 in Geauga County and Ohio.



(Source: Ohio's Automated Rx Reporting System, 2016-2017)



(Source: Ohio's Automated Rx Reporting System, 2016-2017)



(Source: Ohio Public Health Data Warehouse, 2012-2016)

Ohio's New Limits on Prescription Opiates

- The opioid epidemic is undeniably a major public health issue that Ohio has been addressing since 2012. Furthering steps to save lives, Ohio has updated its policies in limiting opiate prescriptions, especially acute pain. With the highlights of Ohio's new opiate prescribing limits below, Ohio hopes to reduce opiate doses by 109 million per year:
  - No more than seven days of opiates can be prescribed for adults; no more than five days of opiates can be prescribed for minors
  - The total morphine equivalent dose (MED) of a prescription for acute pain cannot exceed an average of 30 MED per day
  - Health care providers can prescribe opiates in excess of the new limits only if they provide a specific reason in the patient's medical record. Unless such a reason is given, a health care provider is prohibited from prescribing opiates that exceed Ohio's limits
  - Prescribers will be required to include a diagnosis or procedure code on every controlled substance prescription, which will be entered into Ohio's prescription monitoring program, OARRS
  - The new limits do not apply to opioids prescribed for cancer, palliative care, end-of-life/hospice care or medication-assisted treatment for addiction
  - The new limits will be enacted through rules passed by the State Medical Board, Board of Pharmacy, Dental Board and Board of Nursing

- Since 2012, Ohio has reduced opiate prescriptions by 20% yet, more needs to be done to reduce the possibility of opiate abuse to those who are prescribed.

(Source: Ohio Mental Health and Addiction Services; New Limits on Prescription Opiates Will Save Lives and Fight Addiction, updated March 31, 2017)

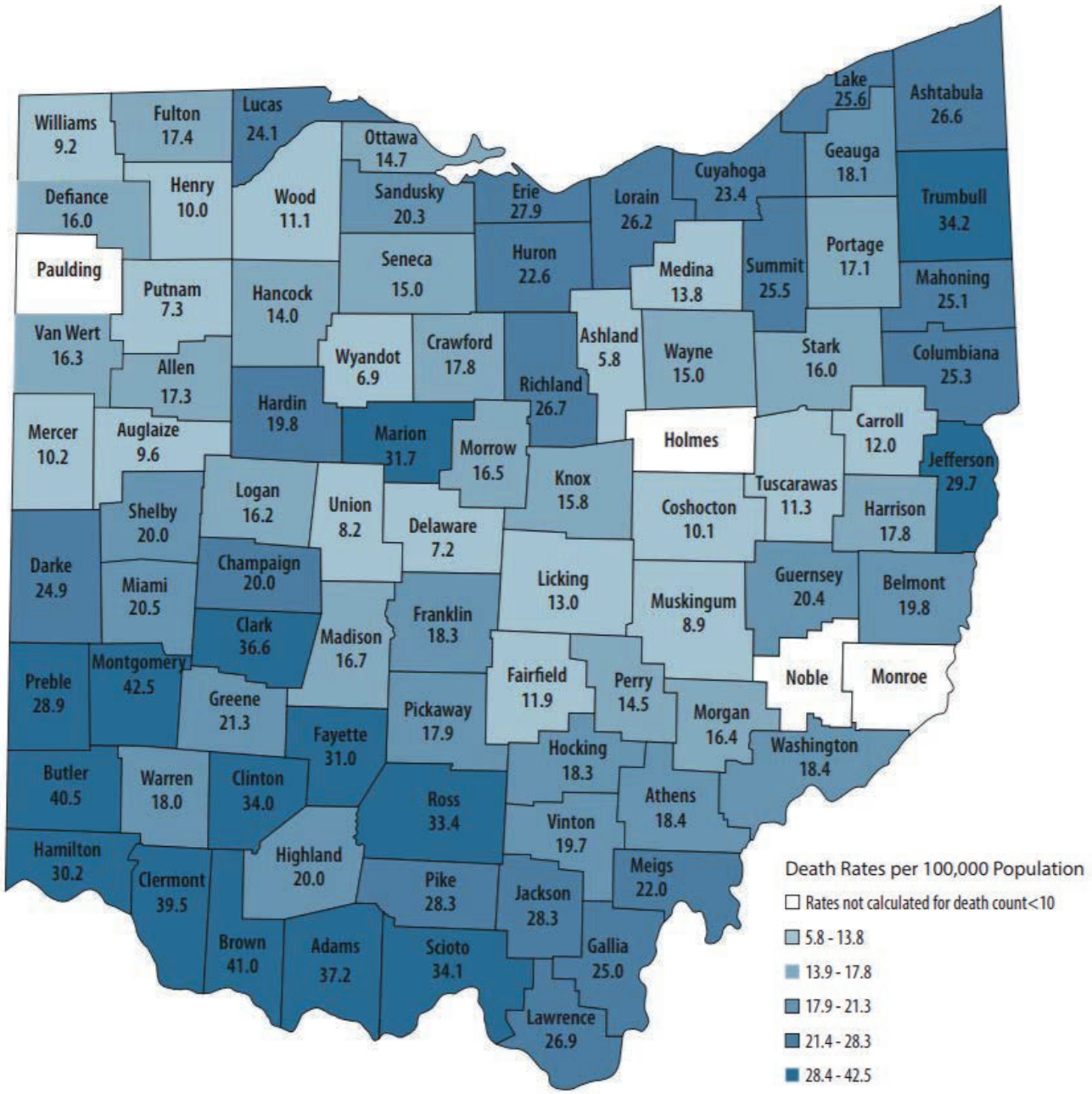
Ohio Automated Rx Reporting System (OARRS)

- OARRS has been collecting information from all Ohio-licensed pharmacies and Ohio personal licensed prescribers regarding outpatient prescriptions for controlled substance since 2006.
  - All data reported is updated every 24 hours and is maintained in a secure database
- OARRS aims to be a reliable tool in addressing prescription drug diversion and abuse
- With many features such as a patient care tool, epidemic early warning system, drug diversion and insurance fraud investigation tool, OARRS is the only statewide electronic database that helps prescribers and pharmacists avoid potential life-threatening drug interactions.
  - OARRS also works in limiting patients who "doctor shop" which refers to individuals fraudulently obtaining prescriptions from multiple health care providers for the same or multiple prescription for abuse or illegal distribution
- Additionally, OARRS is also used for investigating and identifying health care professionals with continual inappropriate prescribing and dispensing to patients, and then aids in law enforcement cases against such acts.

(Source: Ohio Automated RX Reporting System; What is OARRS?, updated August 15, 2017)

Average Age-Adjusted Unintentional Drug Overdose Death Rate Per 100,000 Population, by County, 2011-2016

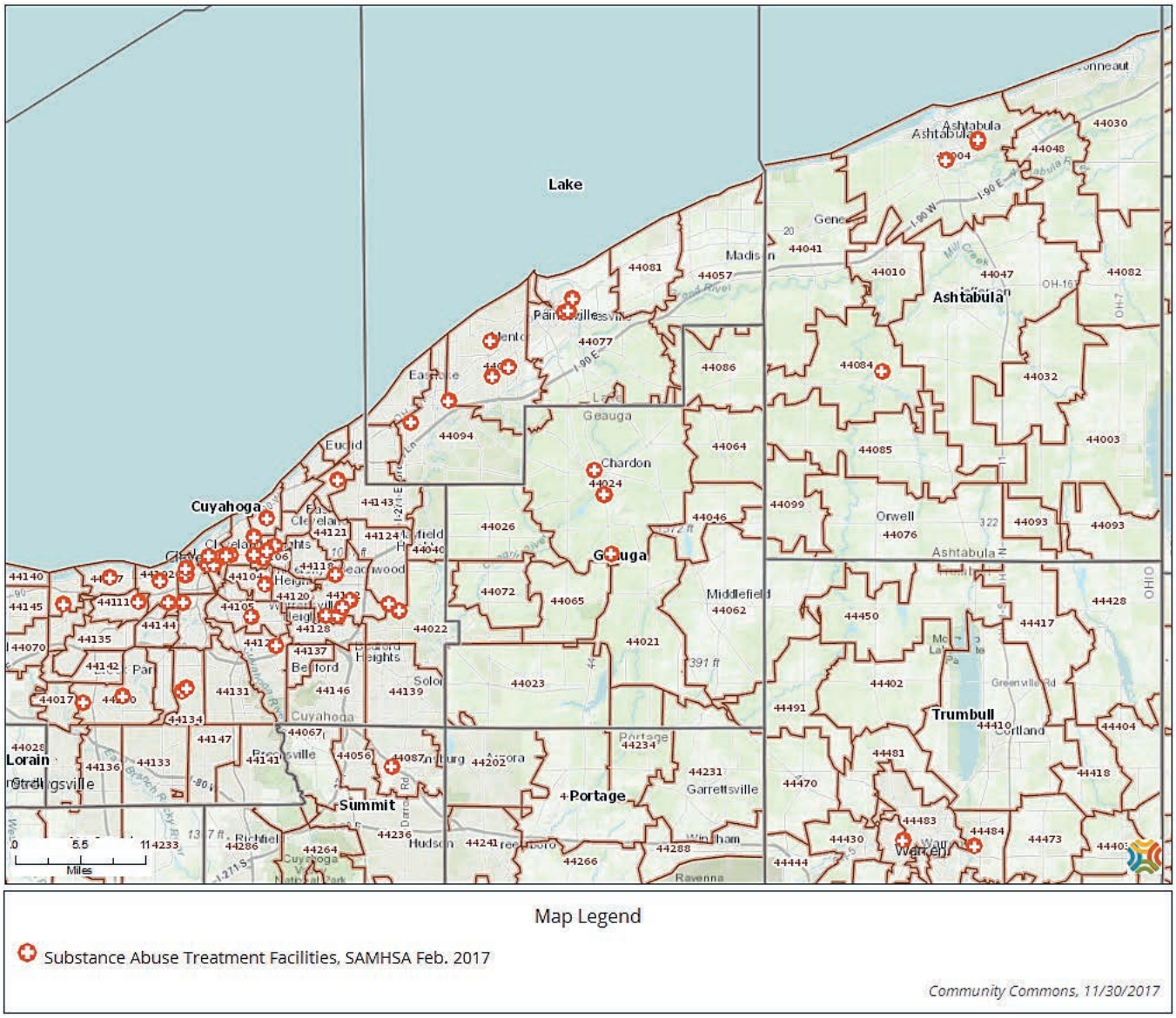
- The Ohio age-adjusted unintentional drug overdose death rate for 2011-2016 was 23.1 deaths per 100,000 population.
- Geauga County's age-adjusted unintentional drug overdose death rate for 2011-2016 was 18.1 deaths per 100,000 population.



Sources: "2016 Ohio Drug Overdoes Data: General Findings," Ohio Department of Health; Ohio Department of Health, Bureau of Vital Statistics; analysis conducted by ODH Violence and Injury Prevention Program; U.S. Census Bureau (Vintage 2016 population estimates)

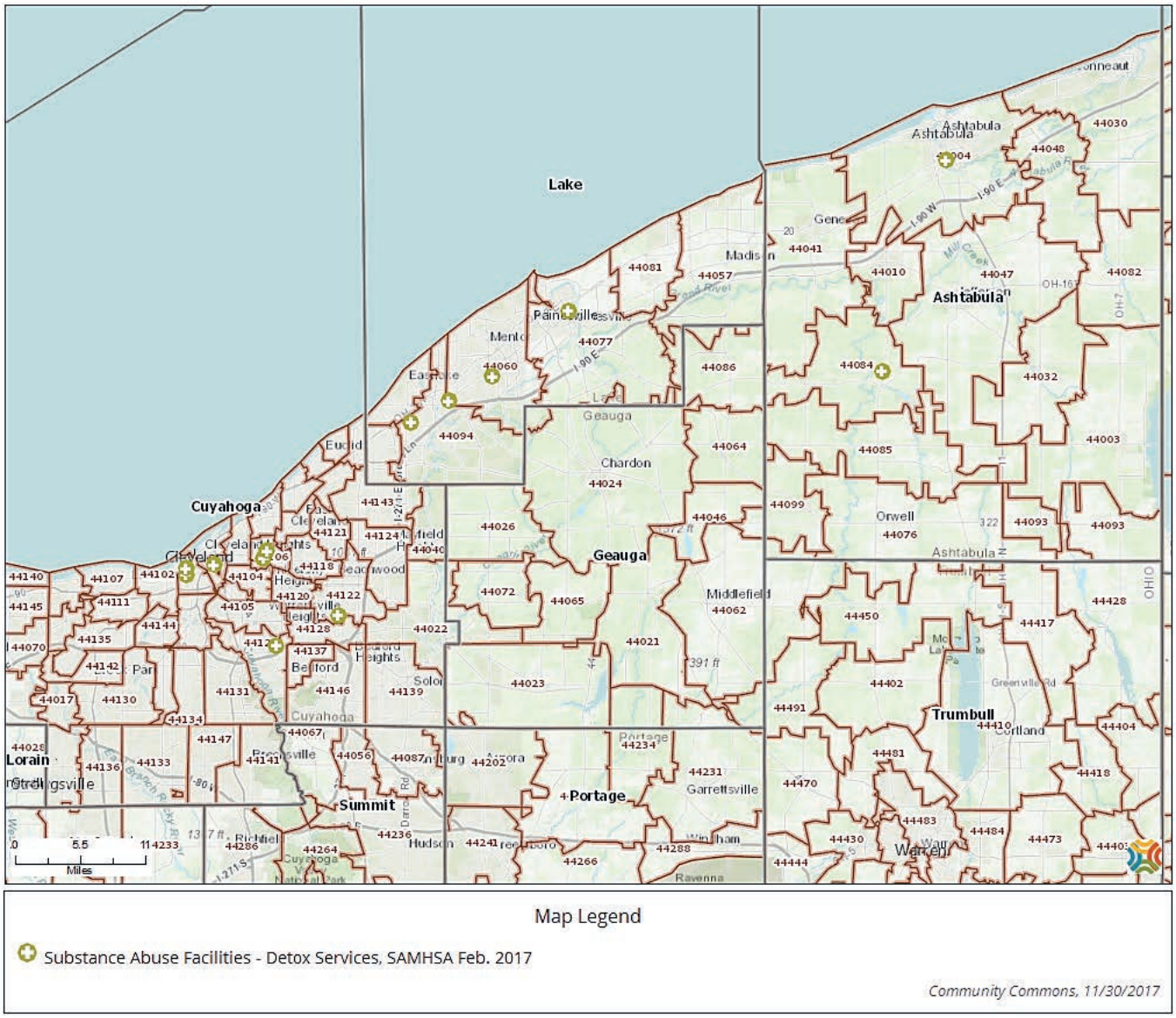
Note: Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44). Rate suppressed if < 10 total deaths for 2011-2016.

Substance Abuse Treatment Facilities, February 2017



(Source: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA): February 2017, as compiled by Community Commons)

Substance Abuse Facilities - Detox Services, February 2017



(Source: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA): February 2017, as compiled by Community Commons)

Health Behaviors: Adult Sexual Behavior

Key Findings

In 2016, more than two-thirds (68%) of Geauga County adults had sexual intercourse. Two percent (2%) of adults had more than one partner. CDC estimates that youth ages 15-24 make up just over one quarter of the sexually active population but account for half of the 20 million new sexually transmitted infections that occur in the United States each year *(Source: CDC, STDs in Adolescents and Young Adults, 2017 STD Surveillance).*

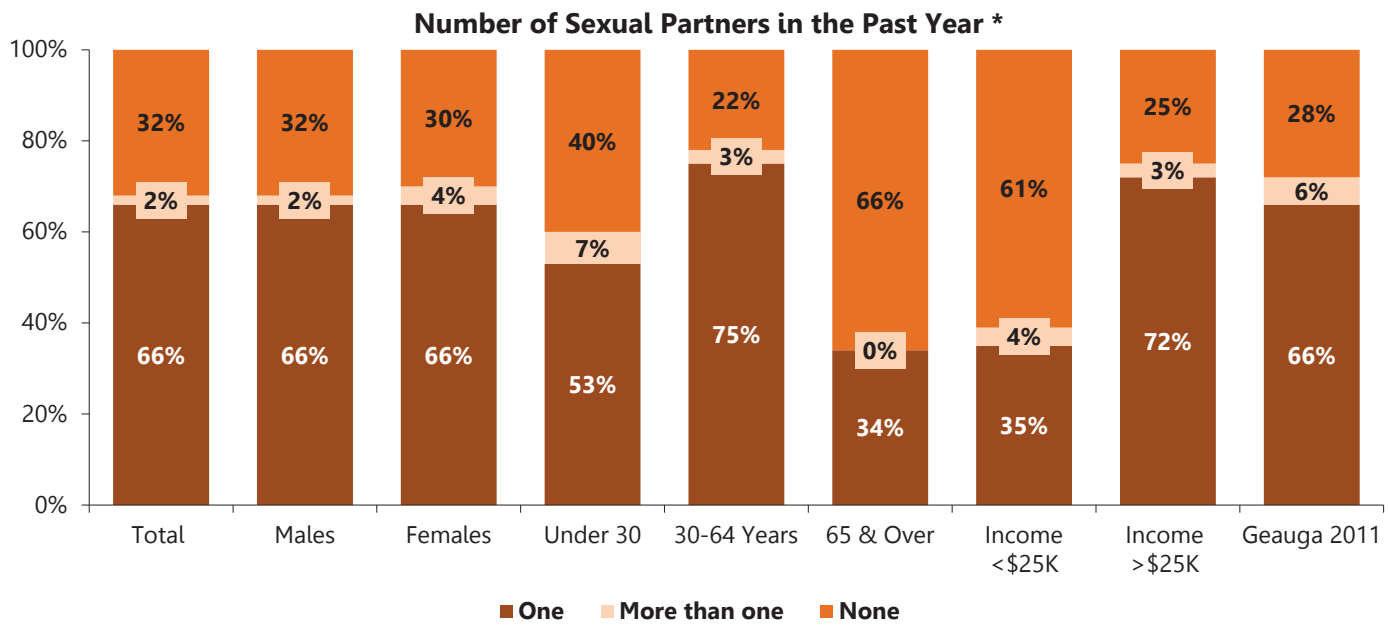
Adult Sexual Behavior

- Two percent (2%) of adults reported they had intercourse with more than one partner in the past year, increasing to 7% of those under the age of 30.
- Adults used the following methods of birth control: they or their partner were too old (26%), abstinence (15%), vasectomy (15%), condoms (10%), tubes tied (8%), birth control pill (7%), hysterectomy (7%), withdrawal (6%), infertility (4%), IUD (4%), ovaries or testicles removed (3%), rhythm method (3%), contraceptive implants (2%), and shots (<1%).
- Twelve percent (12%) of adults were not using any method of birth control.
- The following situations applied to adults in the past year: had anal sex without a condom (2%), tested for an STI (2%), had sex with someone they did not know (1%), tested positive for Hepatitis C (1%), treated for an STI (1%), had sexual activity with someone of the same gender (<1%), and thought they may have had an STI (<1%).
- Twenty percent (20%) of adults had been tested for HIV, increasing to 27% of those under the age of 30 and 35% of those with incomes less than $25,000.
- Based on what they knew about HIV, adults made the following sexual behavior changes in the past year: only had sexual intercourse with the same partner (33%), decreased number of sexual partners or became abstinent (9%), and always used condoms for protection (8%). Fifty-one percent (51%) did not make any sexual behavior changes.
- Geauga County adults had been diagnosed with the following sexually transmitted infections (STIs) in the past 5 years: chlamydia (2%), genital herpes (2%), human papilloma virus (HPV) (2%), and Hepatitis C (<1%).

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Had more than one sexual partner in past year	5%	2%	N/A	N/A

N/A – Not available

The following graph shows the sexual activity of Geauga County adults. Examples of how to interpret the information in the graph include: 66% of all Geauga County adults had one sexual partner in the past 12 months; 2% had more than one, and 66% of males had one partner in the past year.



**Respondents were asked: "During the past 12 months, with how many different people have you had sexual intercourse?"*
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

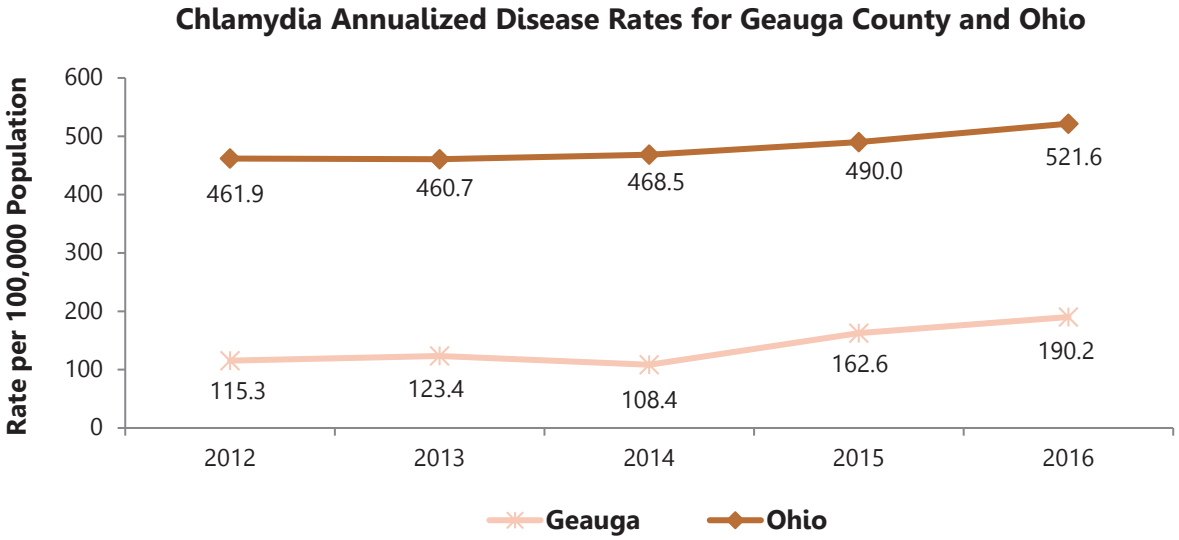
Understanding Sexual Violence

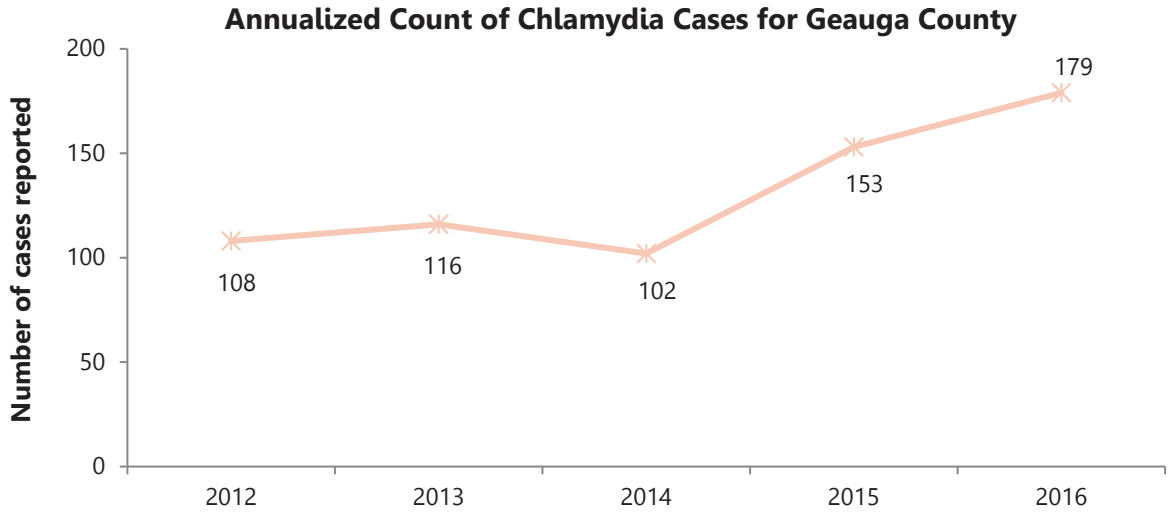
- Sexual violence refers to any sexual activity where consent is not obtained or freely given.
- Anyone can experience or perpetrate sexual violence.
  - Most victims of sexual violence are female
  - Perpetrators are usually someone known to the victim
- There are many types of sexual violence including unwanted touching, unwanted sexual penetration, sexual harassment, and threats.
- Sexual violence is a significant problem in the United States, even though many cases are not reported.
  - 7.3% of high school students reported having been forced to have sex
  - An estimated 20-25% of college women in the U.S. were victims of attempted or completed rape during their college career
  - About 1 in 5 women and 1 in 59 men in the U.S. have been raped at some time in their lives
- Sexual violence can negatively impact health in many ways including chronic pain and STD's and is also linked to negative health behaviors including tobacco, drug, and alcohol abuse.
- The ultimate goal is to stop sexual violence before it begins. Many activities are needed to accomplish this goal including:
  - Engaging middle and high school students in skill-building activities that address healthy sexuality
  - Helping parents identify and address violent attitudes and model healthy relationships
  - Engaging youth and adults as positive bystanders to speak up against sexism and violence supportive behaviors and intervene when they see someone at risk
  - Create and enforce policies at work, school, and other places that address sexual harassment
  - Implement evidence-based prevention strategies in schools and communities

(Source: CDC, Sexual Violence, last updated April 4, 2017)

The following graphs show Geauga County chlamydia disease rates per 100,000 population updated May 7, 2017 by the Ohio Department of Health. The graphs show:

- Geauga County chlamydia rates fluctuated from 2012-2016.
- The number of chlamydia cases in Geauga County increased from 2014-2016.

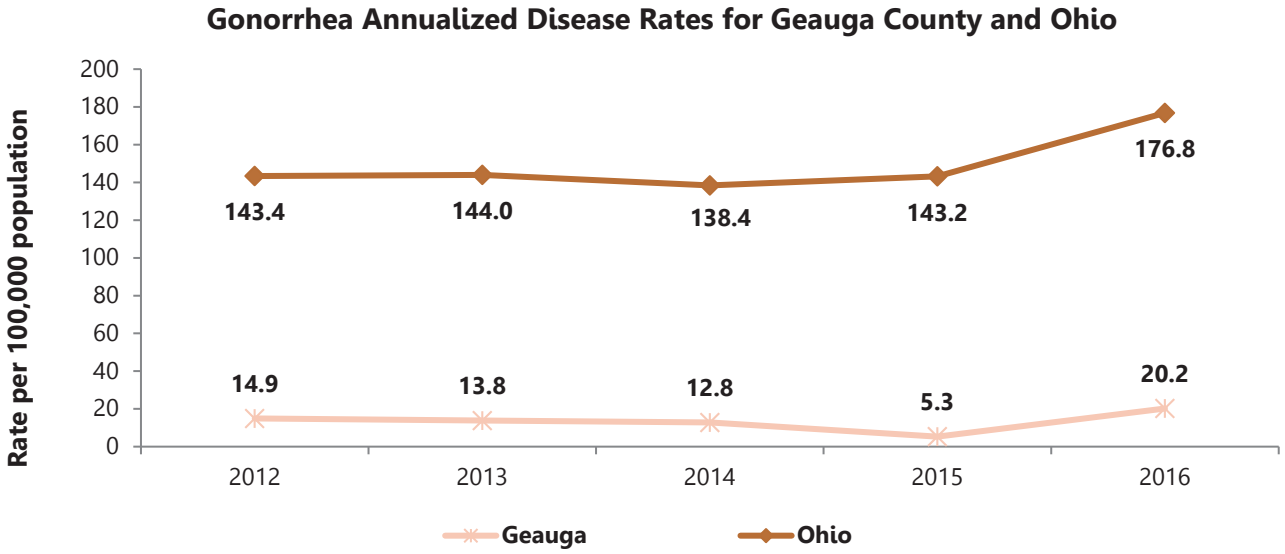


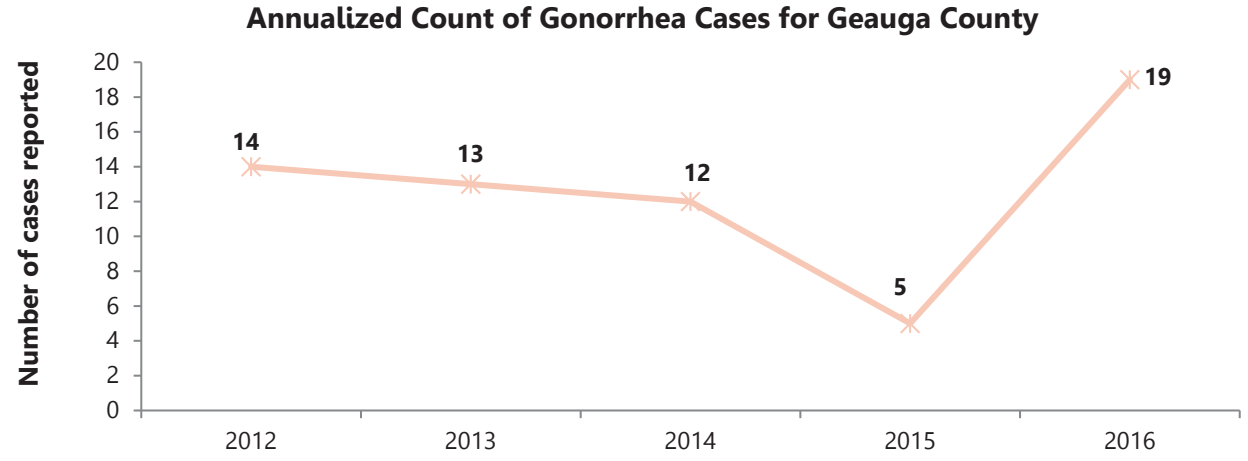


(Source for graphs: ODH, STD Surveillance, data reported through 5/7/17)

The following graphs show Geauga County gonorrhea disease rates per 100,000 population updated May 7, 2017 by the Ohio Department of Health. The graphs show:

- The Geauga County gonorrhea rate increased from 2015-2016.
- The Ohio gonorrhea rate stayed about the same from 2012-2015, but increased in 2016.
- The Healthy People 2020 Objective for gonorrhea is 257 new female and 198 new male cases per 100,000 population.





(Source for graphs: Ohio Department of Health, STD Surveillance Program, Data Reported through 5/7/17)

Health Behaviors: Adult Mental Health

Key Findings

In 2016, 3% of Geauga County adults considered attempting suicide. Eleven percent (11%) of adults rated their daily stress level as high or very high.

Mental Health in the U.S.

- In 2016, 3.6% of adults aged 18 and over experienced serious psychological distress in the past 30 days.
- There were 65.9 million visits to physicians' offices with mental disorders as the primary diagnosis in 2014.
- There were 5.0 million visits to emergency departments with mental disorders as the primary diagnosis in 2014.
- In 2014, there were 42,773 suicide deaths.

(Source: CDC, National Center for Health Statistics, Mental Health, Depression, last updated 5/3/2017)

Adult Mental Health

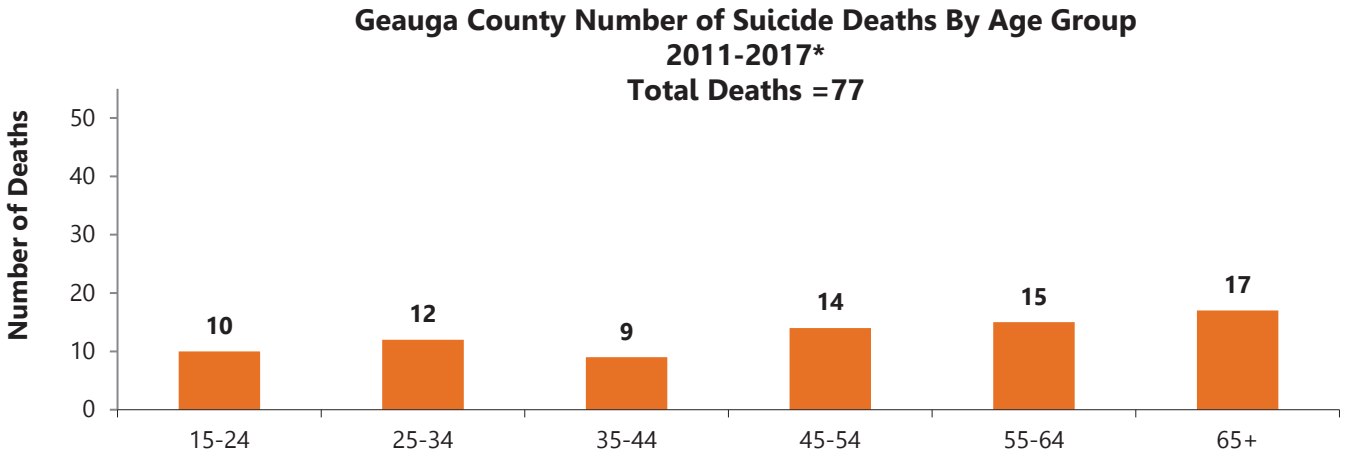
- Three percent (3%) of Geauga County adults considered attempting suicide in the past year.
- No adults reported attempting suicide in the past year.
- When feeling sad, blue, or depressed, Geauga County adults also had a period of two or more weeks when they experienced the following issues: fatigued, no energy (25%); had trouble sleeping or slept too much (21%); woke up before they wanted (15%); had trouble thinking or concentrating (14%); lost interest in most things (11%); felt extremely restless or slowed down (9%); felt worthless or hopeless (9%); had a weight/appetite change (7%); and thought about death or suicide (4%).
- Adults reported they or a family member had been diagnosed with or treated for the following mental health issues: anxiety or emotional problem (21%), depression (17%), anxiety disorder (13%), attention deficit disorder (8%), bipolar disorder (7%), alcohol and illicit drug abuse (5%), developmental disability (3%), autism spectrum (3%), other trauma (2%), psychotic disorder (2%), post-traumatic stress disorder (2%), eating disorder (1%); life adjustment disorder (1%), and another mental health disorder (3%). Seventeen percent (17%) of adults indicated they or a family member had taken medication for a mental health issues.
- Adults indicated the following caused them anxiety, stress or depression: job stress (43%), financial stress (31%), other stress at home (16%), death of close family member or friend (13%), sick family member (12%), marital/dating relationship (12%), poverty/no money (9%), caring for parent (8%), fighting at home (6%), family member with mental illness (5%), unemployment (4%), divorce/separation (2%), not feeling safe in the community (1%), not having enough to eat (1%), not having a place to live (1%), sexual orientation/gender identity (1%), not feeling safe at home (<1%), and other stressors (11%).
- One-in-ten (11%) Geauga County adults rated their stress level on a typical day as high or very high. Forty percent (40%) of adults rated their stress level as low or very low.

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Considered attempting suicide in the past year	2%	3%	N/A	N/A

N/A- Not available

The graph below shows the number of suicide deaths by age group in Geauga County. The graph shows:

- From 2011-2017*, 16% of all Geauga County suicide deaths occurred among 25-34 years old.



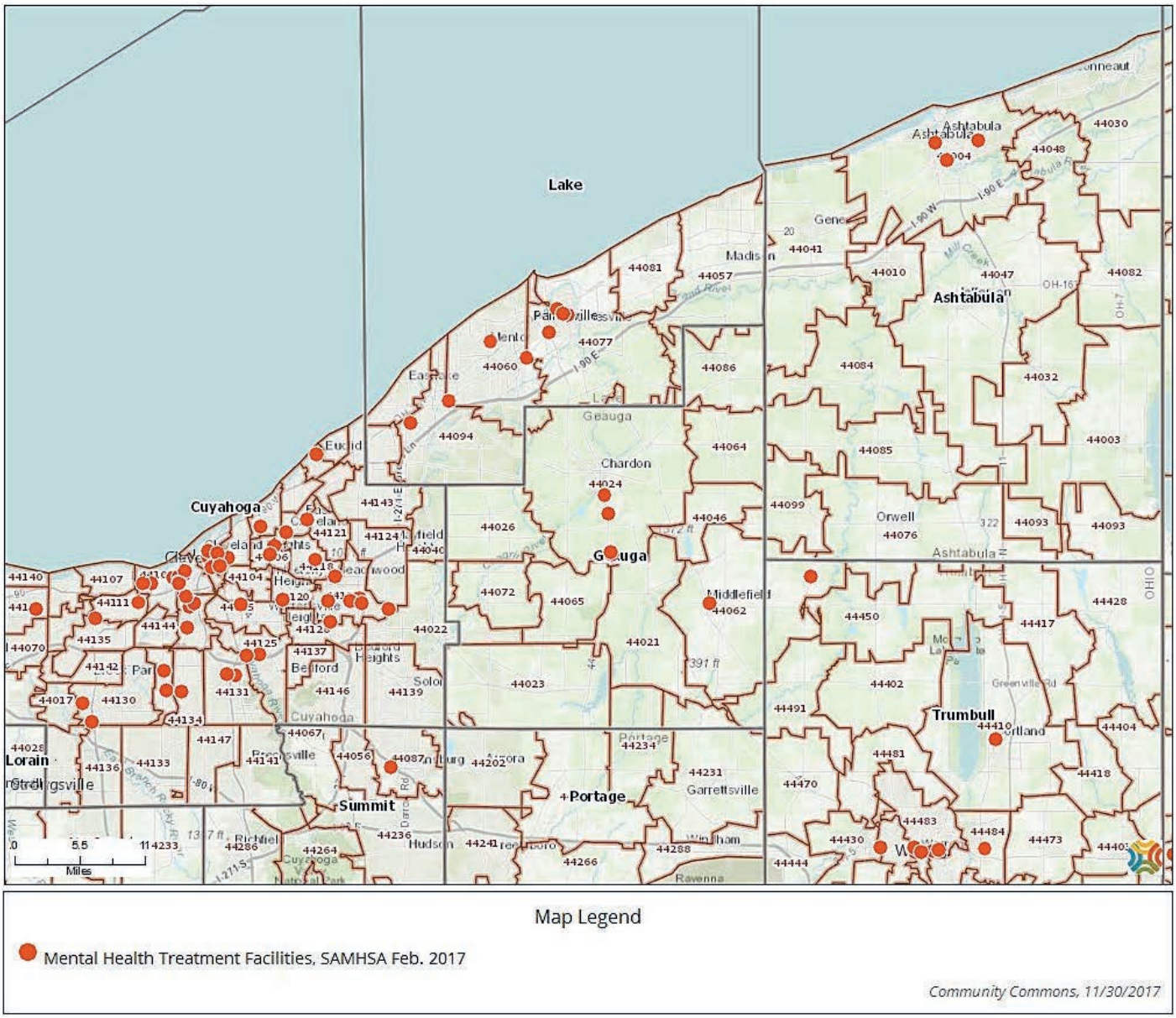
**Data for 2017 are considered partial and may be incomplete, and should be used with caution*
(Source: ODH, Ohio Public Health Data Warehouse, Mortality, Leading Causes of Death, updated 12/4/2017)

National Suicide Statistics

- 44,193 people in the U.S. died from suicide, and 1,104,825 people attempted suicide in 2015.
- An average of one person killed themselves every 11.9 minutes
- Suicide is the 10th ranking cause of death in the U.S, 2nd for young adults
- For every female death by suicide, there are 3.3 male deaths.
- In 2015, there were 1,650 suicide deaths in Ohio.
- The leading suicide methods included:
  - Firearm suicides (49.8%)
  - Suffocation/Hanging (26.8%)
  - Poisoning (15.4%)
  - Cutting/Piercing (1.7%)
  - Drowning (1.2%)

(Source: American Association of Suicidology, Facts & Statistics, Updated January 2017)

Mental Health Treatment Facilities, February 2017



(Source: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA): February 2017, as compiled by Community Commons)

Chronic Disease: Cardiovascular Health

Key Findings

Four percent (4%) of adults had survived a heart attack and 2% had survived a stroke at some time in their life. More than one-third (36%) of Geauga County adults had high blood cholesterol, 27% were obese, 27% had high blood pressure, and 10% were smokers, four known risk factors for heart disease and stroke. Heart disease (25%) and stroke (4%) accounted for 29% of all Geauga County adult deaths from 2014-2016 *(Source: Ohio Public Health Data Warehouse, 2014-2016).*

Geauga County
Leading Causes of Death
2014-2016

Total Deaths: 2,538

- Heart Disease (25% of all deaths)
- Cancer (23%)
- Chronic Lower Respiratory Diseases (5%)
- Accidents, Unintentional Injury (5%)
- Stroke (4%)

(Source: Ohio Public Health Data Warehouse, 2014-2016)

Ohio
Leading Causes of Death
2014-2016

Total Deaths: 352,105

- Heart Disease (23% of all deaths)
- Cancers (22%)
- Chronic Lower Respiratory Diseases (6%)
- Accidents, Unintentional Injuries (6%)
- Stroke (5%)

(Source: Ohio Public Health Data Warehouse, 2014-2016)

Heart Disease and Stroke

- In 2016, 4% of Geauga County adults reported they had survived a heart attack or myocardial infarction, increasing to 12% of those over the age of 65.
- Five percent (5%) of Ohio and 4% of U.S. adults reported they had a heart attack or myocardial infarction in 2016 *(Source: 2016 BRFSS).*
- Two percent (2%) of Geauga County adults reported they had survived a stroke, increasing to 7% of those over the age of 65.
- Four percent (4%) of Ohio and 3% of U.S. adults reported having had a stroke in 2016 *(Source: 2016 BRFSS).*
- Three percent (3%) of adults reported they had angina or coronary heart disease, increasing to 10% of those over the age of 65.
- Five percent (5%) of Ohio and 4% of U.S. adults reported having had angina or coronary heart disease in 2016 *(Source: 2016 BRFSS).*
- Less than one percent (<1%) of adults reported they had congestive heart failure, increasing to 1% of those over the age of 65.

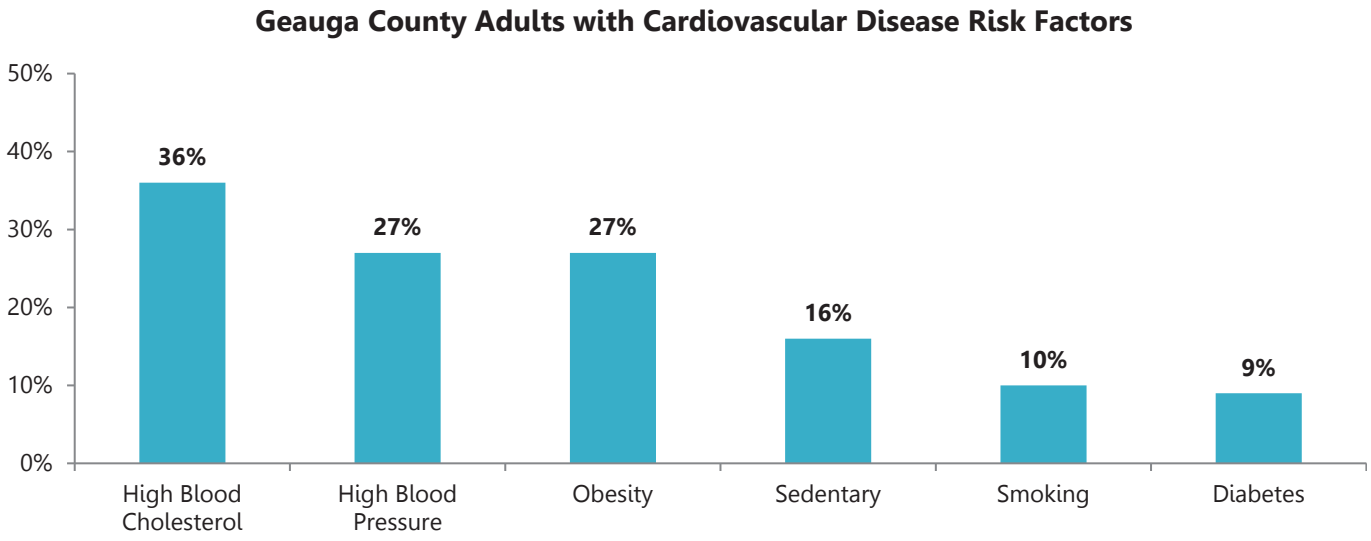
High Blood Pressure (Hypertension)

- More than one-fourth (27%) of adults had been diagnosed with high blood pressure. The 2015 BRFSS reports hypertension prevalence rates of 34% for Ohio and 31% for the U.S.
- 8% of adults were told they were pre-hypertensive/borderline high.
- 90% of adults had their blood pressure checked within the past year.
- Geauga County adults diagnosed with high blood pressure were more likely to:
  - Have rated their overall health as fair or poor (55%)
  - Have been ages 65 years or older (53%)
  - Have incomes less than $25,000 (44%)
  - Have been classified as obese by Body Mass Index-BMI (37%)

High Blood Cholesterol

- More than one-third (36%) of adults had been diagnosed with high blood cholesterol. The 2015 BRFSS reported that 37% of Ohio and 36% of U.S. adults have been told they have high blood cholesterol.
- More than four-fifths (86%) of adults had their blood cholesterol checked within the past 5 years. The 2015 BRFSS reported 78% of Ohio and 78% of U.S. adults had their blood cholesterol checked within the past 5 years.
- Geauga County adults with high blood cholesterol were more likely to:
  - Have been ages 65 years or older (63%)
  - Have been classified as obese by Body Mass Index-BMI (50%)
  - Have rated their overall health as fair or poor (46%)
- Adults were taking medication for the following conditions: blood pressure (21%), blood cholesterol (19%), preventive reasons (15%), heart disease (8%), stroke (2%), and other conditions (19%).

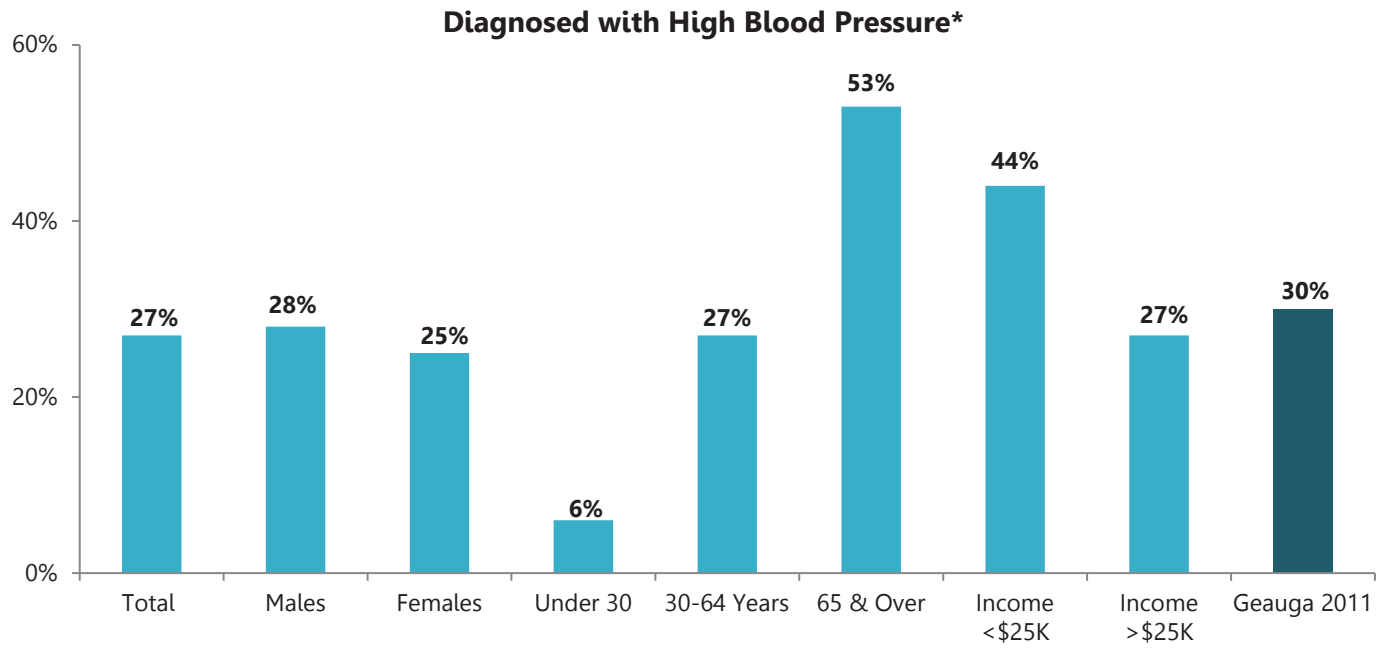
The following graph demonstrates the percentage of Geauga County adults who had major risk factors for developing cardiovascular disease (CVD).



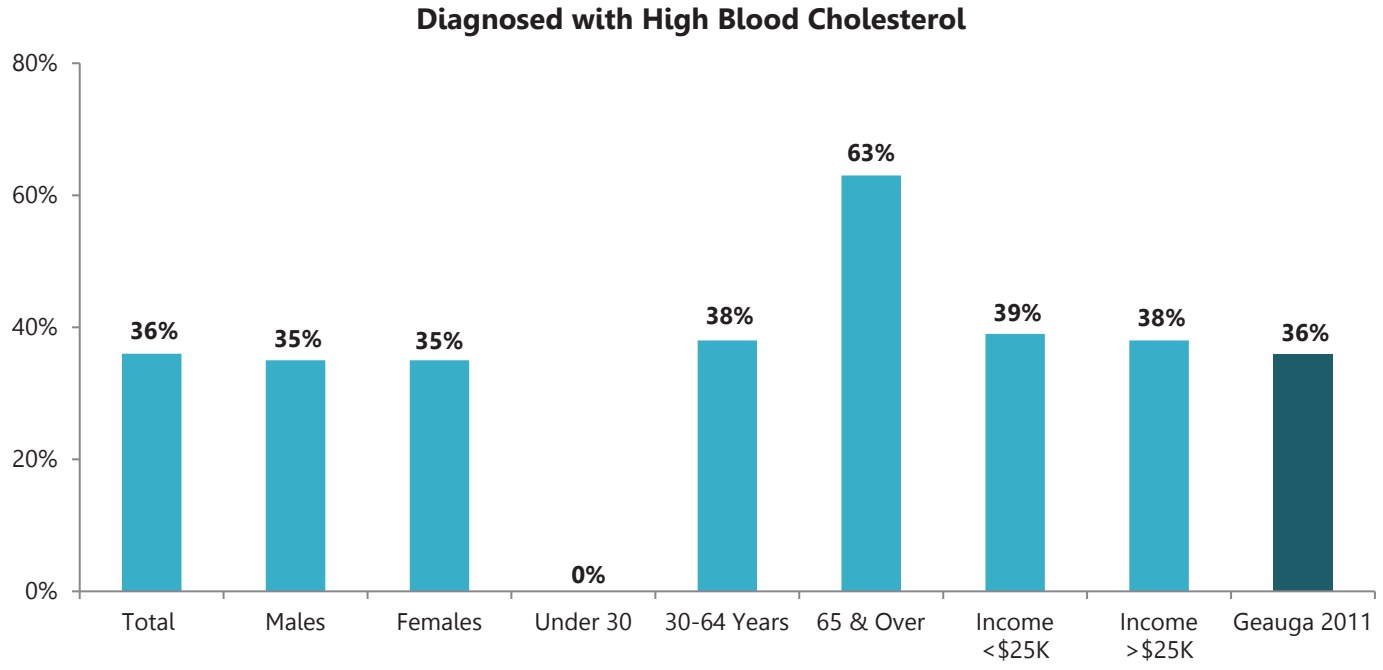
Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Had angina or coronary heart disease	N/A	3%	5%	4%
Had a heart attack	2%	4%	5%	4%
Had a stroke	2%	2%	4%	3%
Had high blood pressure	30%	27%	34%*	31%*
Had high blood cholesterol	36%	36%	37%*	36%*
Had blood cholesterol checked within past 5 years	N/A	86%	78%*	78%*

N/A – Not Available
**2015 BRFSS*

The following graphs show the number of Geauga County adults who had been diagnosed with high blood pressure and high blood cholesterol. Examples of how to interpret the information on the first graph include: 27% of all Geauga County adults have been diagnosed with high blood pressure, including 28% of males, 25% of females, and 53% of those 65 years and older.



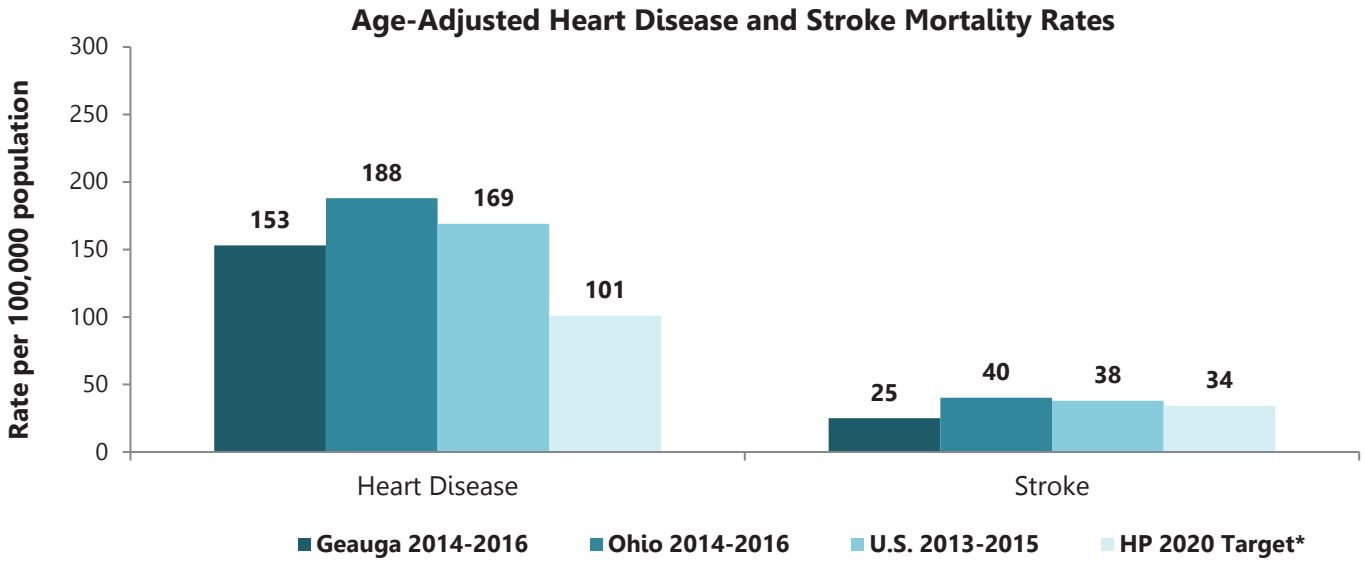
**Does not include respondents who indicated high blood pressure during pregnancy only.*
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.



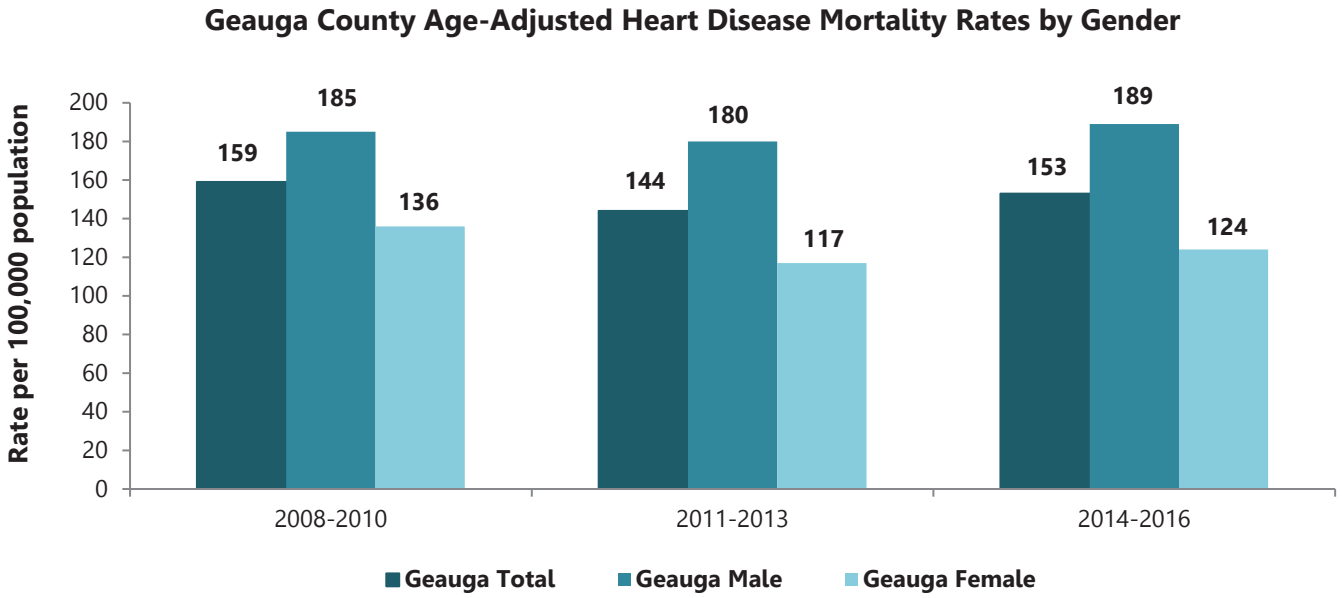
Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

The following graphs show the age-adjusted mortality rates per 100,000 population for heart disease and stroke.

- When age differences are accounted for, the statistics indicate that from 2014-2016, the Geauga County heart disease mortality rate was lower than the state and 2013-2015 U.S. rate, but higher than the Healthy People 2020 target.
- The Geauga County age-adjusted stroke mortality rate from 2014-2016 was lower than the state, the 2013-2015 U.S. rate, and the Healthy People 2020 target objective.
- From 2008-2016, the Geauga County female and male age-adjusted heart disease mortality rates fluctuated.



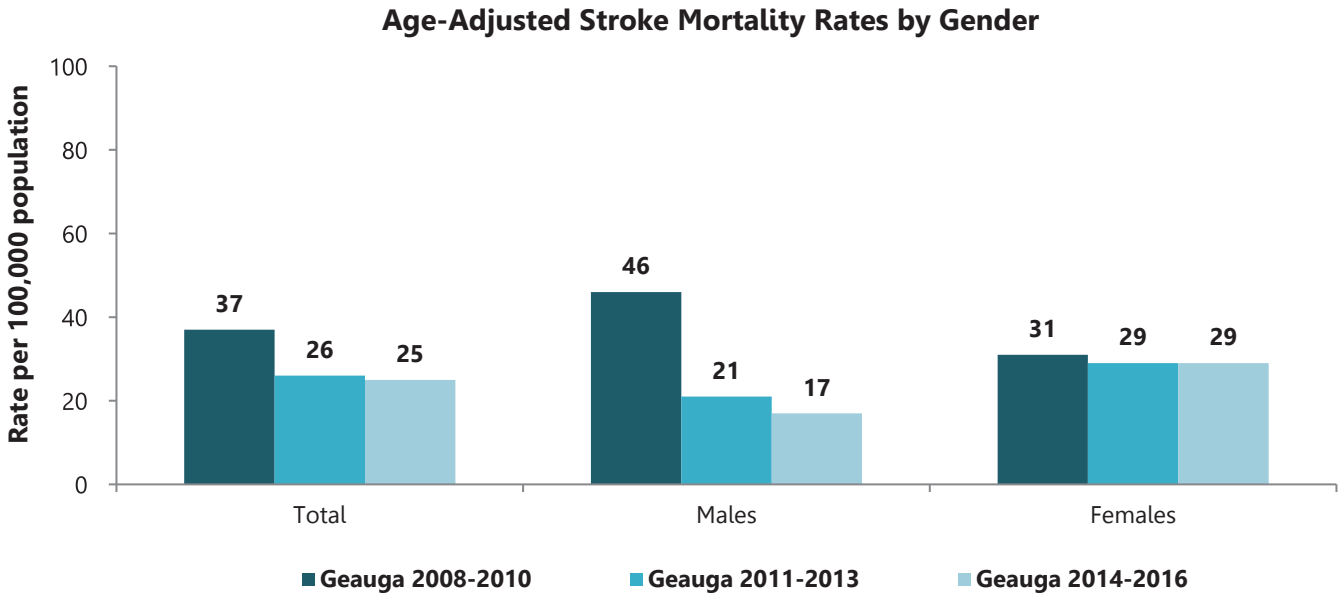
**The Healthy People 2020 Target objective for coronary heart disease is reported for heart attack mortality.*
(Source: Ohio Public Health Data Warehouse, 2014-2016, CDC Wonder 2013-2015, Healthy People 2020)



(Source: Ohio Public Health Data Warehouse, 2008-2016)

The following graph shows the age-adjusted mortality rates per 100,000 population stroke by gender.

- From 2008-2016, the Geauga County stroke mortality rate decreased by total and gender.
- From 2014-2016, the Geauga County stroke mortality rate was slightly higher for females than for males.



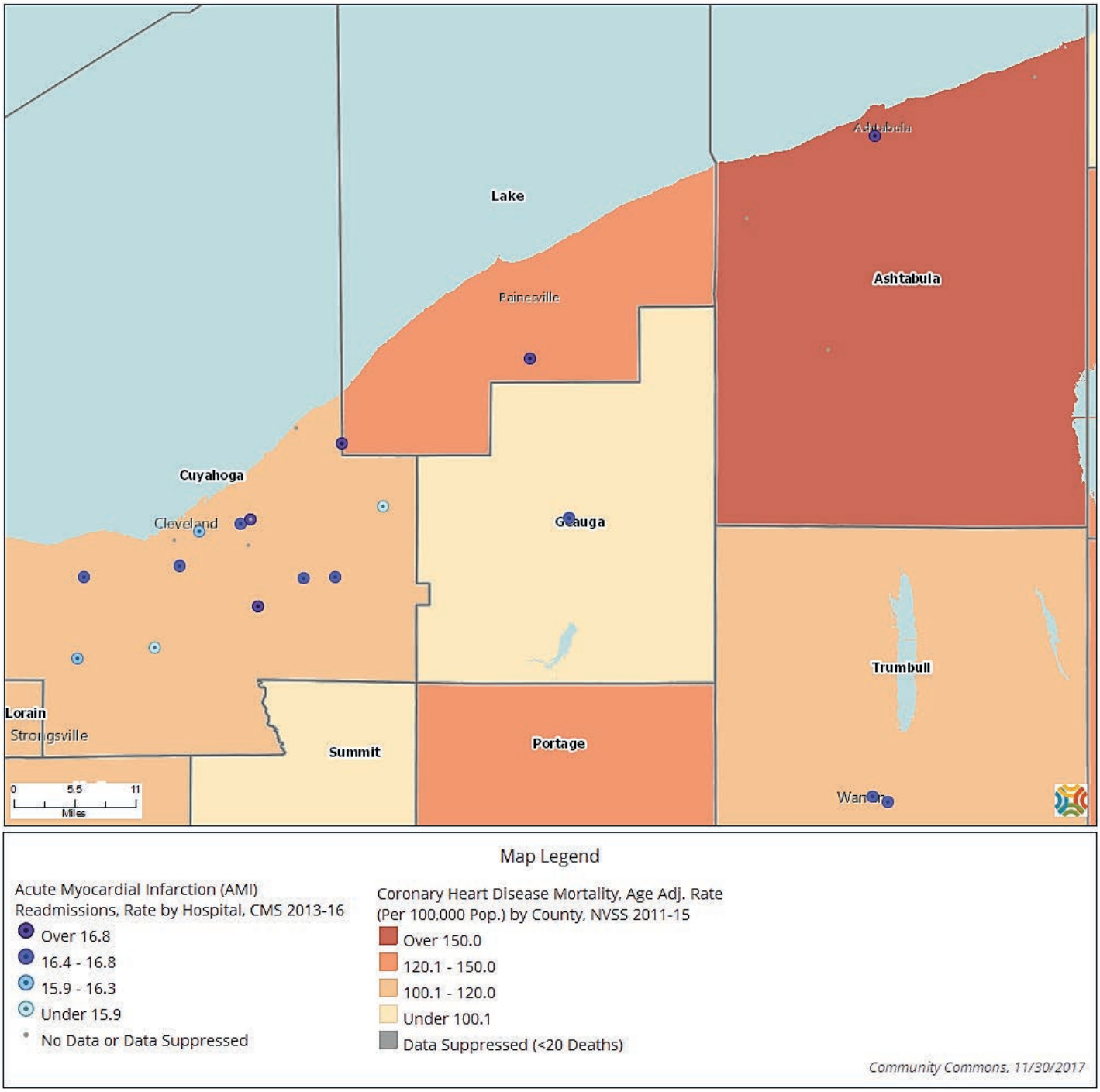
(Source: Ohio Public Health Data Warehouse, 2008-2016)

Healthy People 2020 Objectives
Heart Disease and Stroke

Objective	Geauga Survey Population Baseline	2015 U.S. Baseline*	Healthy People 2020 Target
HDS-5: Reduce proportion of adults with hypertension	33% (2016)	31% Adults age 18 and up	27%
HDS-6: Increase proportion of adults who had their blood cholesterol checked within the preceding 5 years	78% (2016)	75% Adults age 18 & up	82%
HDS-7: Decrease proportion of adults with high total blood cholesterol (TBC)	43% (2016)	36% Adults age 20+ with TBC>240 mg/dl	14%

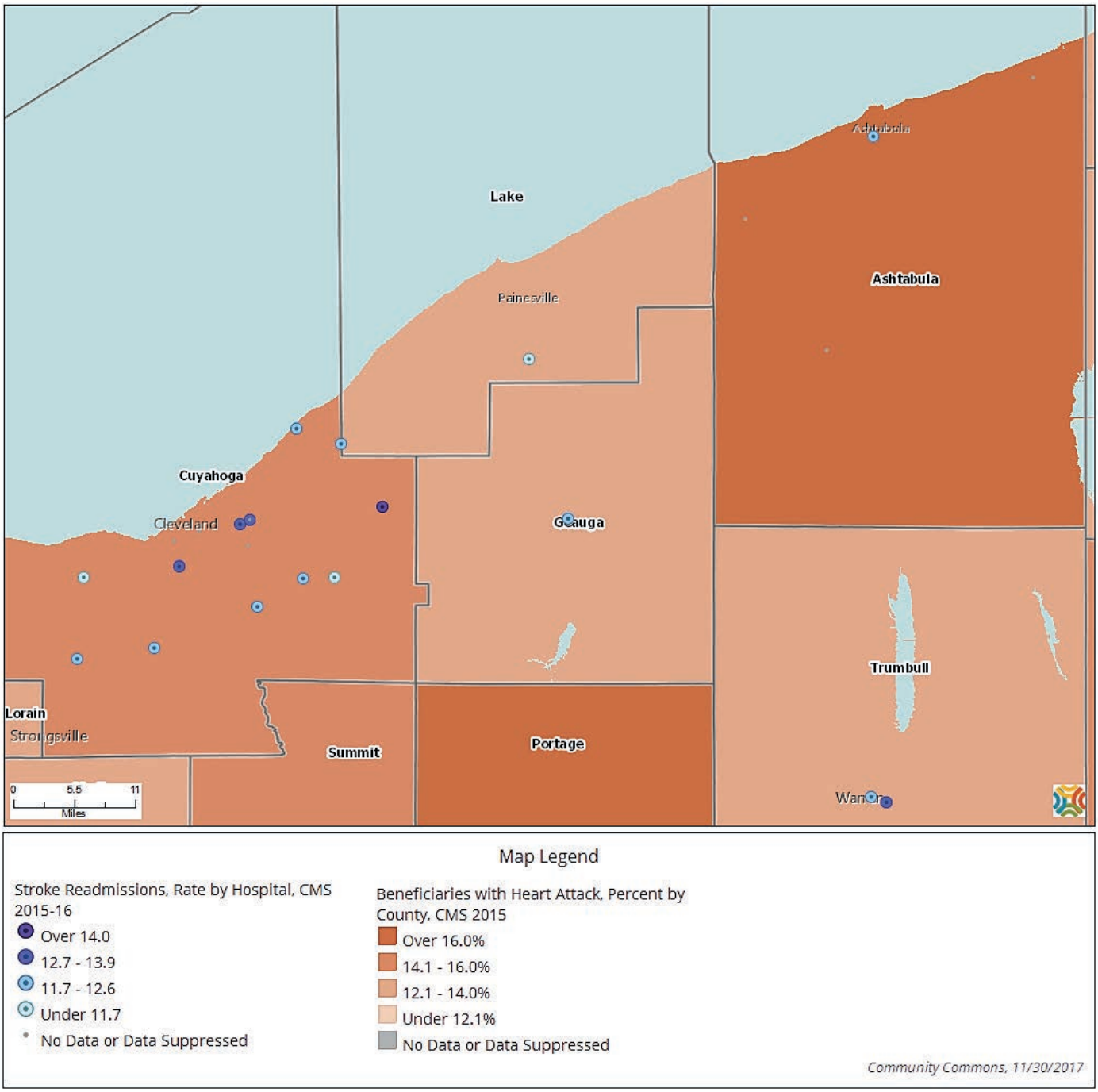
Note: All U.S. figures age-adjusted to 2000 population standard.
(Source: Healthy People 2020, 2015 BRFSS, 2016 Geauga County Health Assessment)

Coronary Heart Disease Mortality, Age Adjusted Rate Per 100,000 Population, 2011-2015, and Acute Myocardial Infarction (AMI) Readmissions, Rate by Hospital, 2013-2016



(Source: Centers for Disease Control and Prevention, National Vital Statistics System: 2011-15. Accessed via CDC WONDER and Centers for Medicare and Medicaid Services, 2013-2016, as compiled by Community Commons

Percent of Medicare Beneficiaries with a Heart Attack, 2015 and Stroke Readmissions, Rate by Hospital, 2015-2016 by Stroke Mortality, 2011-2015



(Source: Centers for Medicare and Medicaid Services, 2015, Centers for Medicare and Medicaid Services, 2015-2016, Centers for Disease Control and Prevention, National Vital Statistics System, 2011-2015, Accessed via CDC Wonder, as compiled by Community Commons)

Chronic Disease: Cancer

Key Findings

In 2016, 13% of Geauga County adults had been diagnosed with cancer at some time in their life. The Ohio Department of Health (ODH) indicates that from 2014-2016, cancers caused 23% of all Geauga County resident deaths. The American Cancer Society advises that avoiding tobacco products, maintaining a healthy weight, adopting a physically active lifestyle, eating more fruits and vegetables, limiting alcoholic beverages, and early detection may reduce overall cancer deaths.

Geauga County
Incidence of Cancer, 2010-2014

All Types: 2,591 cases

- Breast: 409 cases (16%)
- Prostate: 334 cases (13%)
- Lung and Bronchus: 314 cases (12%)
- Colon and Rectum: 216 cases (8%)

In 2014-2016, there were 583 cancer deaths in Geauga County.

(Source: Ohio Public Health Data Warehouse, 2010-2014).

Adult Cancer

- Thirteen percent (13%) of Geauga County adults were diagnosed with cancer at some point in their lives, increasing to 28% of those over the age of 65.

- Of those diagnosed with cancer, they reported the following types: other skin cancer (30%), breast (28%), cervical (12%), multiple types (12%), prostate (9%), testicular (9%), endometrial (8%), melanoma (6%), Hodgkin's Lymphoma (4%), lung (4%), esophageal (2%), larynx (2%), pharyngeal (2%), thyroid (2%), and other types of cancer (4%).

Cancer Facts

- The Ohio Department of Health indicates that from 2014-2016, cancers caused 23% (583 of 2,538 total deaths) of all Geauga County resident deaths *(Source: Ohio Public Health Data Warehouse, 2014-2016)*.

- The American Cancer Society reports that smoking tobacco is associated with cancers of the mouth, lips, nasal cavity (nose) and sinuses, larynx (voice box), pharynx (throat), and esophagus (swallowing tube). Also, smoking has been associated with cancers of the lung, colorectal, stomach, pancreas, kidney, bladder, uterine cervix, ovary (mucinous) and acute myeloid leukemia. The 2016 needs assessment has determined that 10% of Geauga County adults were current smokers.

- The American Cancer Society states that about 600,920 Americans are expected to die of cancer in 2017. Cancer is the second leading cause of death in the U.S., exceeded only by heart disease. Nearly 1 of every 4 deaths is associated with cancer.

Lung Cancer

- In Geauga County, 10% of male adults were current smokers, and 50% had stopped smoking for one or more days in the past 12 months because they were trying to quit.

- Approximately 10% of female adults in the county were current smokers, and 62% had stopped smoking for one or more days in the past 12 months because they were trying to quit.

- The largest percent (22%) of 2014-2016 cancer deaths in Geauga County were from lung and bronchus cancers *(Source: Ohio Public Health Data Warehouse, 2014-2016)*.

- ODH reports that lung and bronchus cancer (n=68) was the leading cause of male cancer deaths from 2014-2016 in Geauga County. Cancer of the colon and rectum (n=30) and prostate cancer caused (n=36) male deaths during the same time *(Source: Ohio Public Health Data Warehouse, 2014-2016)*.

- ODH reports that lung and bronchus cancer was the leading cause of female cancer deaths (n=58) in Geauga County from 2014-2016, followed by breast (n=48) and pancreas (n=34) cancers *(Source: Ohio Public Health Data Warehouse, 2014-2016).*

- According to the American Cancer Society, smoking causes 80% of lung cancer deaths in the U.S. Men and women who smoke are about 15-30 times more likely to develop lung cancer than nonsmokers *(Source: American Cancer Society, Facts & Figures 2017).*

Breast Cancer

- In 2016, 56% of Geauga County females reported having had a clinical breast examination in the past year.
- 64% of Geauga County females over the age of 40 had a mammogram in the past year.
- The 5-year relative survival for women diagnosed with localized breast cancer (cancer that has not spread to lymph nodes or other locations outside the breast) is 99% *(Source: American Cancer Society, Facts & Figures 2017).*
- For women at average risk of breast cancer, recently updated American Cancer Society screening guidelines recommended that those 40 to 44 years of age have the choice of annual mammography; those 45 to 54 have annual mammography; and those 55 years of age and older have biennial or annual mammography, continuing as long as their overall health is good and life expectancy is 10 or more years. For some women at high risk of breast cancer, annual screening using magnetic resonance imaging (MRI) in addition to mammography is recommended, typically starting at age 30 *(Source: American Cancer Society, Facts & Figures 2017).*

Prostate Cancer

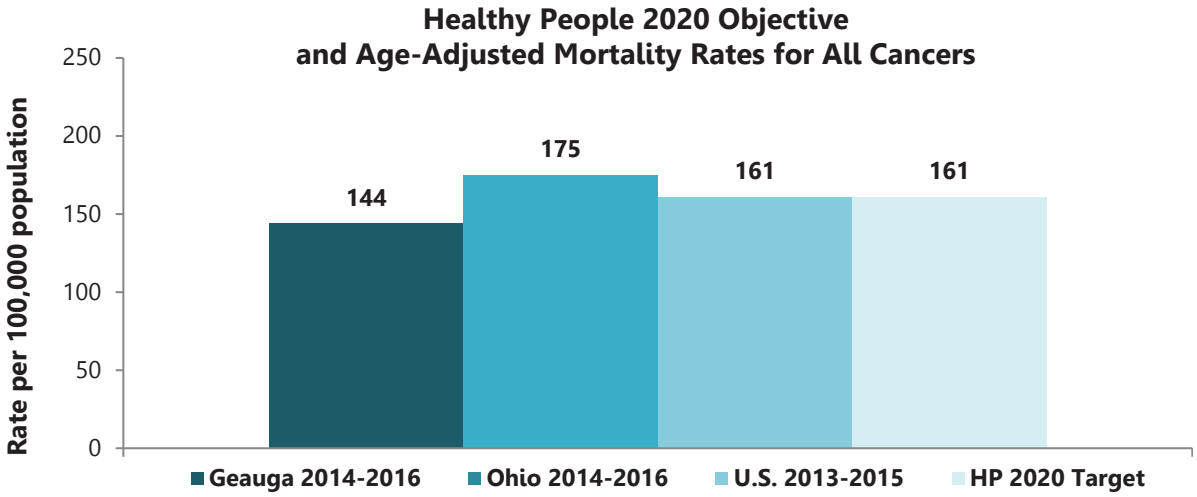
- More than two-fifths (45%) of Geauga County males had a Prostate-Specific Antigen (PSA) test at some time in their life, and 26% had one in the past year.
- ODH statistics indicate that prostate cancer deaths accounted for 6% of all male cancer deaths from 2014-2016 in Geauga County *(Source: Ohio Public Health Data Warehouse, 2014-2016).*
- Incidence rates for prostate cancer are 74% higher in African Americans than in whites, and they are twice as likely to die of prostate cancer. Other risk factors include strong familial predisposition, diet high in processed meat or dairy foods, and obesity. African American men and Caribbean men of African descent have the highest documented prostate cancer incidence rates in the world *(Source: American Cancer Society, Facts & Figures 2017).*

Colon and Rectum Cancers

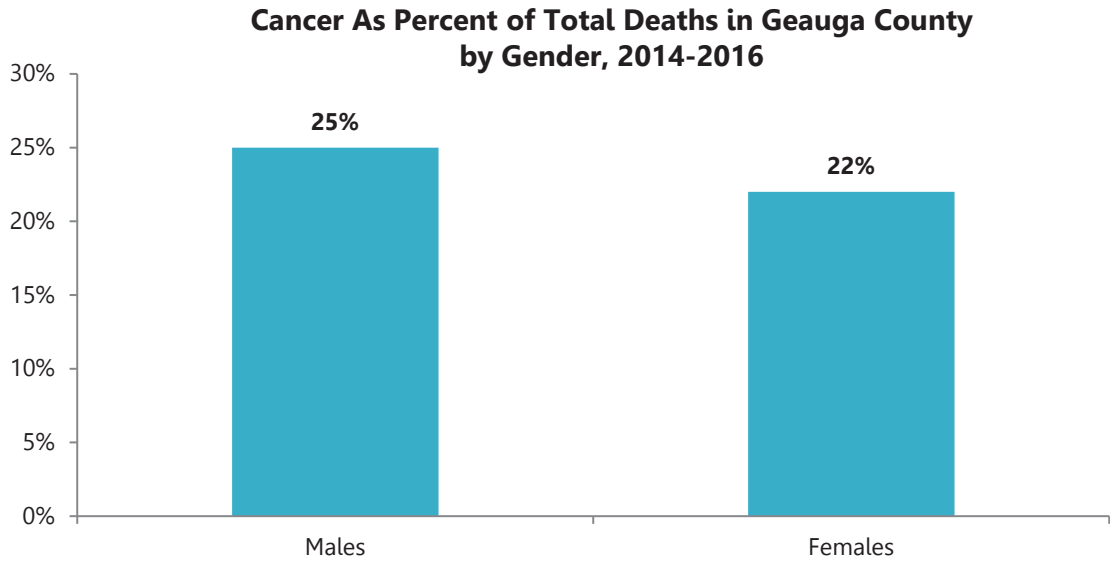
- The health assessment identified that more than half (54%) of adults ages 50 and over had a colonoscopy or sigmoidoscopy in the past 5 years.
- ODH indicates that colon and rectum cancer deaths accounted for 8% of all male and female cancer deaths from 2014-2016 in Geauga County *(Source: Ohio Public Health Data Warehouse, 2014-2016).*
- The American Cancer Society reports several risk factors for colorectal cancer, including age; personal or family history of colorectal cancer, polyps, or inflammatory bowel disease; obesity; physical inactivity; a diet high in red or processed meat; alcohol use; and long-term smoking. Very low intake of fruits and vegetables is also potentially a risk factor for colorectal cancer.
- In the U.S., 90% of colon cancers occur in individuals over the age of 50. Therefore, the American Cancer Society suggests every person over the age of 50 have regular colon cancer screenings

The following graph shows the Geauga County, Ohio and U.S. age-adjusted mortality rates (per 100,000 population, 2000 standard) for all types of cancer in comparison to the Healthy People 2020 objective, as well as cancer as a percent of total deaths in Geauga County. The graphs show:

- When age differences are accounted for, Geauga County had a lower cancer mortality rate than Ohio and the U.S. The Geauga County age-adjusted cancer mortality rate was also lower than the Healthy People 2020 target objective.
- The percentage of Geauga County males who died from all cancers is slightly higher than the percentage of Geauga County females who died from all cancers.



(Source: Ohio Public Health Data Warehouse, CDC Wonder, Healthy People 2020)



(Source: Ohio Public Health Data Warehouse, 2014-2016)

Geauga County Incidence of Cancer
2010-2014

Types of Cancer	Number of Cases	Percent of Total Incidence of Cancer	Age-Adjusted Rate
Breast	409	16%	68.1
Prostate	334	13%	105.4
Lung and Bronchus	314	12%	50.1
Colon and Rectum	216	8%	35.8
Other/Unspecified	180	7%	31.1
Non-Hodgkins Lymphoma	153	6%	26.1
Melanoma of Skin	123	5%	23.9
Bladder	114	4%	18.1
Cancer and Corpus Uteri	105	4%	30.1
Thyroid	89	3%	17.4
Pancreas	86	3%	13.4
Leukemia	80	3%	14.2
Kidney and Renal Pelvis	75	3%	11.9
Oral Cavity & Pharynx	70	3%	11.0
Brain and CNS	40	2%	7.1
Multiple Myeloma	36	1%	5.8
Ovary	32	1%	9.8
Liver and Bile Ducts	31	1%	4.6
Esophagus	26	1%	4.0
Stomach	25	1%	4.0
Hodgkins Lymphoma	19	1%	4.6
Larynx	13	1%	1.9
Testis	12	<1%	6.8
Cancer of Cervix Uteri	9	<1%	3.6
Total	**2,591**	**100%**	

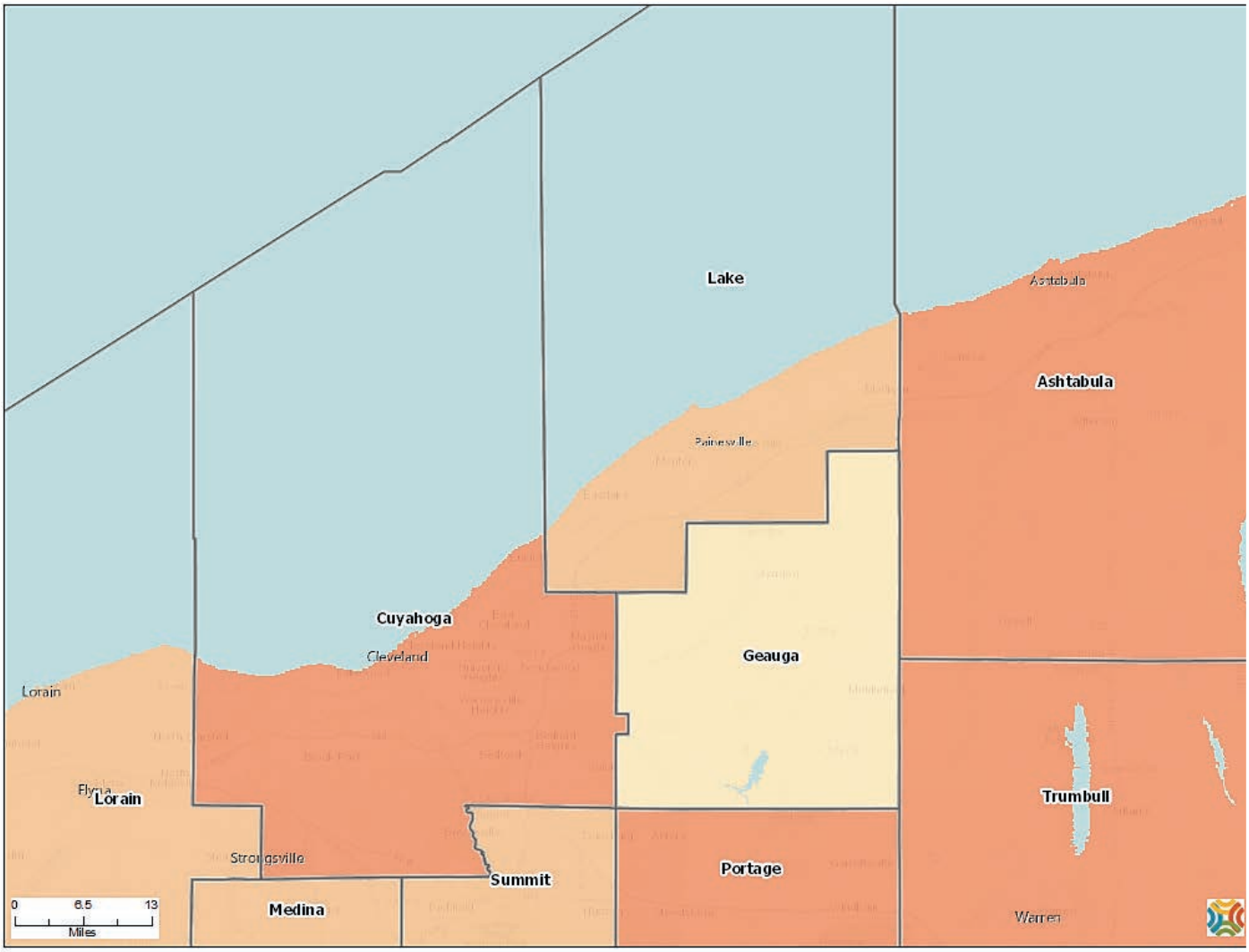
(Source: Ohio Public Health Data Warehouse, 2010-2014)

2017 Cancer Estimations

- In 2017, about 1,688,780 new cancer cases are expected to be diagnosed.
- The World Cancer Research Fund estimates that about 20% of the new cancer cases expected to occur in the U.S. in 2017 will be related to overweight or obesity, physical inactivity, and poor nutrition, and thus could be prevented.
- About 600,920 Americans are expected to die of cancer in 2017.
- In 2017, about 155,870 cancer deaths will be caused by tobacco use.
- In 2017, estimates predict that there will be 68,180 new cases of cancer and 25,430 cancer deaths in Ohio.
- Of the new cancer cases, approximately 10,660 (16%) will be from lung and bronchus cancers and 5,510 (8%) will be from colon and rectum cancers.
- About 9,430 new cases of female breast cancer are expected in Ohio.
- New cases of male prostate cancer in Ohio are expected to be 5,840 (9%).

(Source: American Cancer Society, Facts and Figures 2017)

Cancer Age Adjusted Mortality Rate per 100,000 Population, 2011-2015



Map Legend

Cancer Mortality, Age Adj. Rate (Per 100,000 Pop.) by County, NVSS 2011-15

- Over 200.0
- 180.1 - 200.0
- 160.1 - 180.0
- Under 160.1
- Data Suppressed (<20 Deaths)

Community Commons, 12/13/2017

(Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2011-2015, Accessed via CDC Wonder, compiled by Community Commons)

Chronic Disease: Asthma

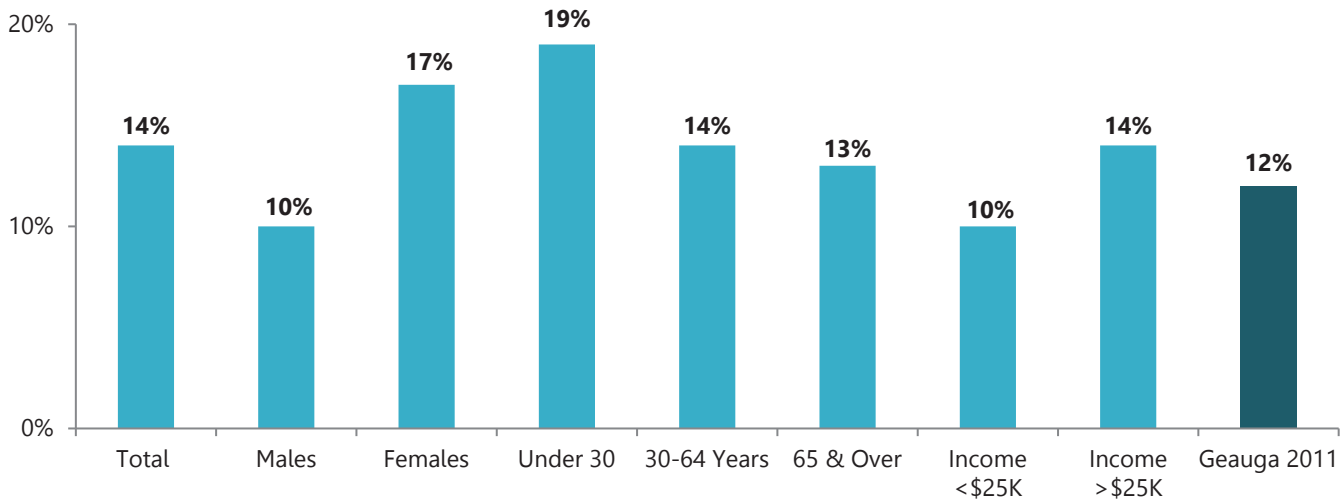
Key Findings

In 2016, 14% of Geauga County adults had been diagnosed with asthma.

Asthma and Other Respiratory Disease

- In 2016, 14% of Geauga County adults had been diagnosed with asthma, increasing to 19% of those under the age of 30
- Fourteen percent (14%) of Ohio and 14% of U.S. adults have ever been diagnosed with asthma *(Source: 2016 BRFSS).*
- There are several important factors that may trigger an asthma attack. Some of these triggers are tobacco smoke, dust mites, outdoor air pollution, cockroach allergens, pets, mold, smoke from burning wood or grass, infections linked to the flu, colds, and respiratory viruses *(Source: CDC, 2017).*
- Chronic lower respiratory disease was the third leading cause of death in Geauga County and the third leading cause of death in Ohio from 2014-2016 *(Source: Ohio Public Health Data Warehouse, 2014-2016)*

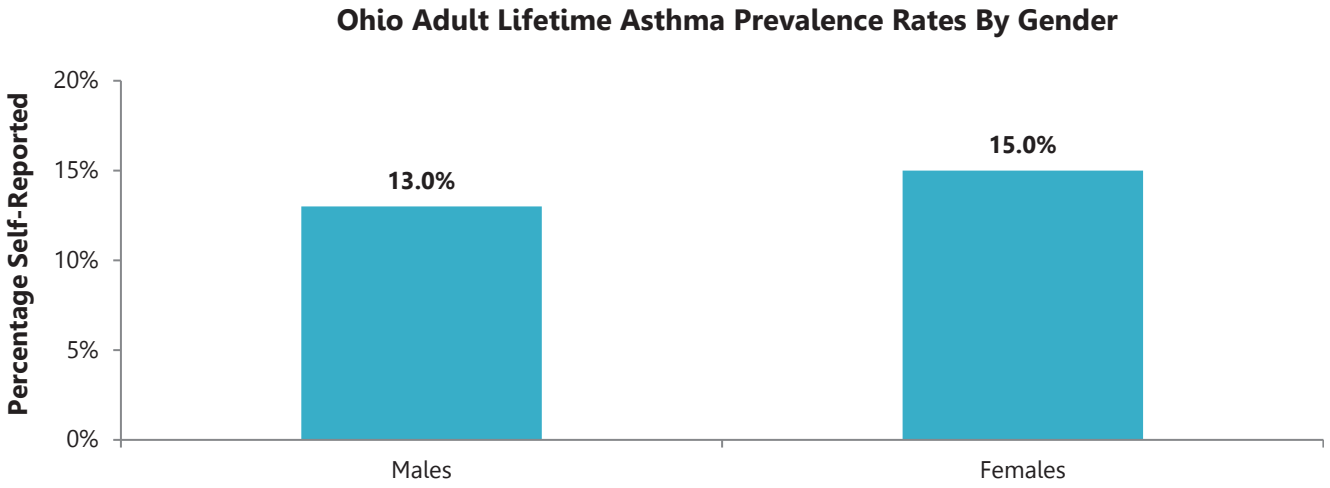
Geauga County Adults Diagnosed with Asthma

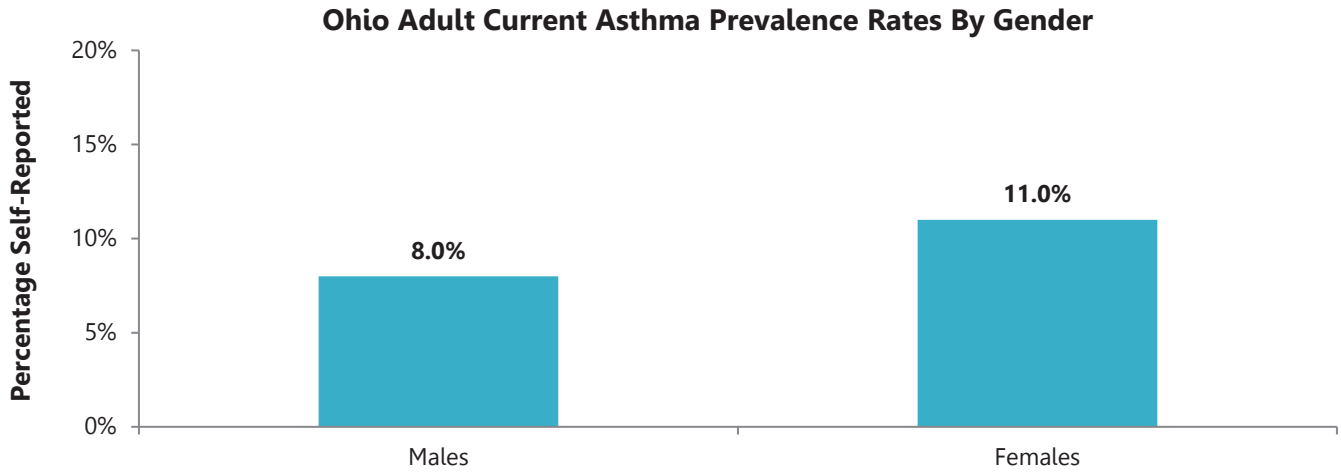


Caution should be used when interpreting subgroup results as the margin of error for any subgroup is higher than that of the overall survey.

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Had been diagnosed with asthma	12%	14%	14%	14%

The following graphs demonstrate the lifetime and current prevalence rates of asthma by gender for Ohio residents.





(Source: 2016 BFRSS)

Asthma Facts

- The number of Americans with asthma grows every year. Currently, 26 million Americans have asthma.
- Asthma mortality is almost 4,000 deaths per year.
- Asthma results in 439,000 hospitalizations and 1.8 million emergency room visits annually.
- Patients with asthma reported 14.2 million visits to a doctor's office and 1.3 million visits to hospital outpatient departments.
- Effective asthma treatment includes monitoring the disease with a peak flow meter, identifying and avoiding allergen triggers, using drug therapies including bronchodilators and anti-inflammatory agents, and developing an emergency plan for severe attacks.

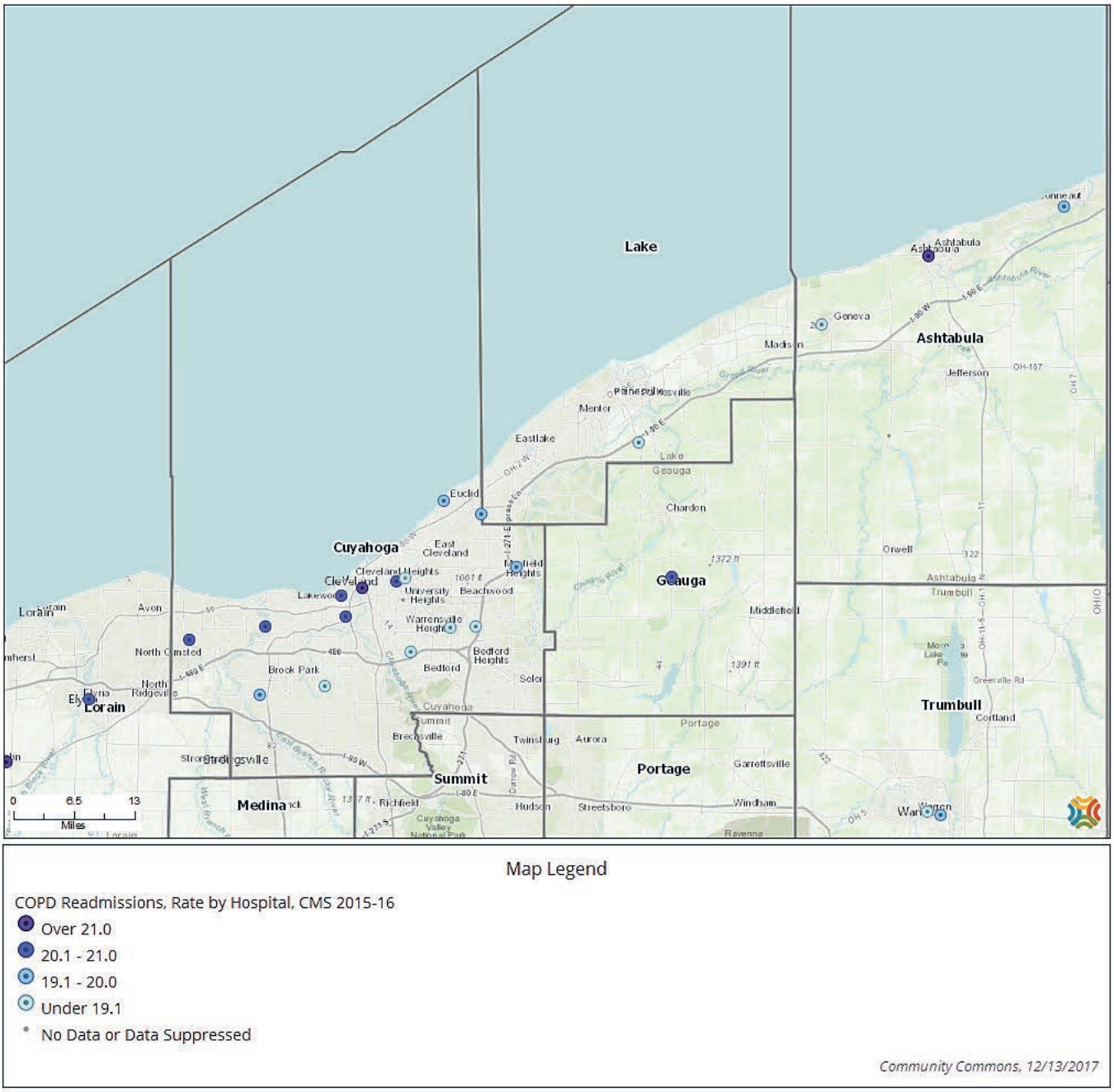
(Source: American College of Allergy, Asthma, & Immunology, Asthma Facts, updated 4/22/16)

What Causes an Asthma Attack?

- **Tobacco Smoke:** People should never smoke near you, in your home, in your car, or wherever you may spend a lot of time if you have asthma. Tobacco smoke is unhealthy for everyone, especially people with asthma. If you have asthma and you smoke, quit smoking.
- **Dust Mites:** If you have asthma, dust mites can trigger an asthma attack. To prevent attacks, use mattress covers and pillowcase covers to make a barrier between dust mites and yourself. Do not use down-filled pillows, quilts, or comforters. Remove stuffed animals and clutter from your bedroom.
- **Outdoor Air Pollution:** This pollution can come from factories, automobiles, and other sources. Pay attention to air quality forecasts to plan activities when air pollution levels will be low.
- **Cockroach Allergens:** Get rid of cockroaches in your home by removing as many water and food sources as you can. Cockroaches are often found where food is eaten and crumbs are left behind. Cockroaches and their droppings can trigger an asthma attack, so vacuum or sweep areas that might attract cockroaches at least every 2 to 3 days.
- **Pets:** Furry pets can trigger an asthma attack. If you think a furry pet may be causing attacks, you may want to find the pet another home. If you can't or don't want to find a new home for a pet, keep it out of the person with asthma's bedroom.
- **Mold:** Breathing in mold can trigger an asthma attack. Get rid of mold in your home to help control your attacks. Humidity, the amount of moisture in the air, can make mold grow. An air conditioner or dehumidifier will help keep the humidity level low.
- **Smoke from Burning Wood or Grass:** Smoke from burning wood or other plants is made up of a mix of harmful gases and small particles. Breathing in too much of this smoke can cause an asthma attack. If you can, avoid burning wood in your home.
- **Other Triggers**: Infections linked to influenza (flu), colds, and respiratory syncytial virus (RSV) can trigger an asthma attack. Sinus infections, allergies, breathing in some chemicals, and acid reflux can also trigger attacks. Physical exercise, some medicines, bad weather, breathing in cold air, some foods, and fragrances can also trigger an asthma attack.

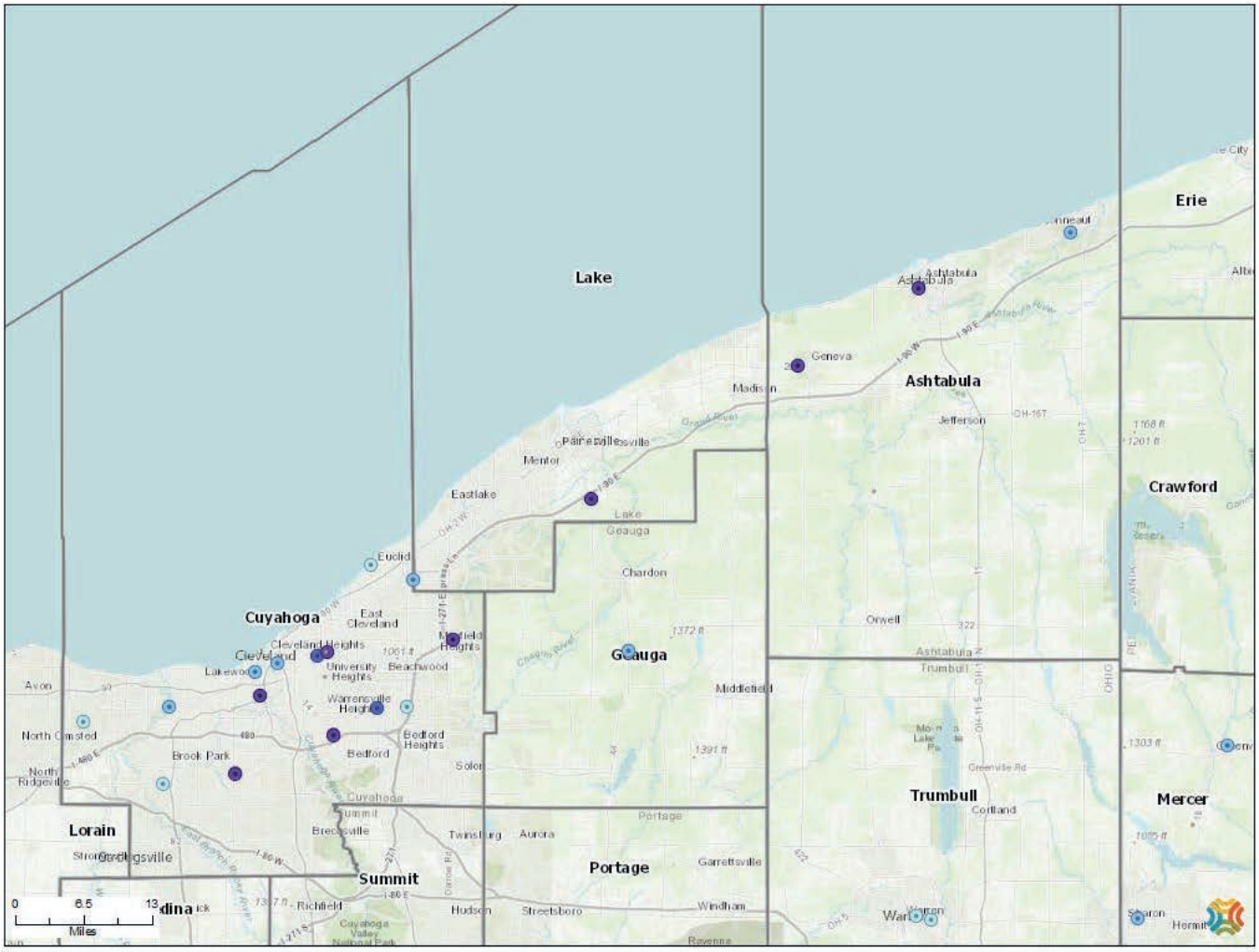
(Source: Centers for Disease Control, Asthma, Common Asthma Triggers, retrieved on 12/17/17)

Chronic Obstructive Pulmonary Disease Readmissions, Rate by Hospital, 2015-2016



(Source: Centers for Medicare and Medicaid Services, 2015-2016, as compiled by Community Commons)

Pneumonia Readmissions, Rate by Hospital, 2015-2016



Map Legend

Pneumonia Readmissions, Rate by Hospital, CMS 2015-16

- Over 18.0
- 17.1 - 18.0
- 16.1 - 17.0
- Under 16.1
- No Data or Data Suppressed

Community Commons, 12/13/2017

(Source: Centers for Medicare and Medicaid Services, 2015-2016, as compiled by Community Commons)

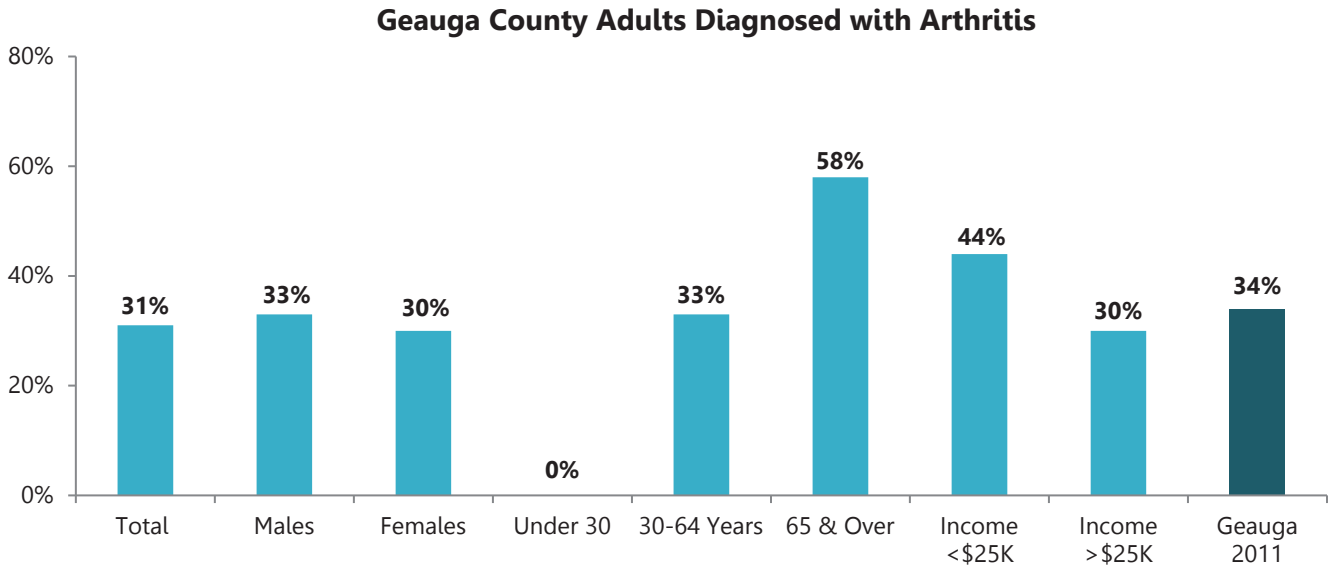
Chronic Disease: Arthritis

Key Findings

In 2016, 31% of adults were diagnosed with arthritis. The 2016 BRFSS indicated that 31% of Ohio adults and 26% of U.S. adults were told they have arthritis.

Arthritis

- Nearly one-third (31%) of Geauga County adults were told by a health professional that they had some form of arthritis, increasing to 58% of those over the age of 65.
- Nearly four-fifths (79%) of adults diagnosed with arthritis were overweight or obese.
- According to the 2016 BRFSS, 31% of Ohio adults and 26% of U.S. adults were told they have arthritis.
- Adults are at higher risk of developing arthritis if they are female, have genes associated with certain types of arthritis, have an occupation associated with arthritis, are overweight or obese, and/or have joint injuries or infections *(Source: CDC, 2016).*
- An estimated 54 million U.S. adults (about 23%) report having doctor-diagnosed arthritis. By 2040, over 78 million people will have arthritis. Arthritis is more common among women (24%) than men (18%), and it affects all racial and ethnic groups. Arthritis commonly occurs with other chronic diseases, like diabetes, heart disease, and obesity, and can make it harder for people to manage these conditions *(Source: CDC, Arthritis at a Glance, March 2017).*



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

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Diagnosed with arthritis	34%	31%	31%	26%

Arthritis: Key Public Health Messages

Early diagnosis of arthritis and self-management activities can help people decrease their pain, improve function, and stay productive.

Key self-management activities include the following:

- **Learn Arthritis Management Strategies** - Arthritis management strategies provide those with arthritis with the skills and confidence to effectively manage their condition. Self-Management Education has proven to be valuable for helping people change their behavior and better manage their arthritis symptoms. Interactive workshops such as the Arthritis Self-Management Program and the Chronic Disease Self-Management Program are low-cost (about $25 – $35) and available in communities across the country. Attending one of these programs can help a person learn ways to manage pain, exercise safely, and gain control of arthritis.
- **Be Active** –Research has shown that physical activity decreases pain, improves function, and delays disability. Make sure you get at least 30 minutes of moderate physical activity at least 5 days a week. You can get activity in 10-minute intervals.
- **Watch your weight** –The prevalence of arthritis increases with increasing weight. Research suggests that maintaining a healthy weight reduces the risk of developing arthritis and may decrease disease progression. A loss of just 11 pounds can decrease the occurrence (incidence) of new knee osteoarthritis and a modest weight loss can help reduce pain and disability.
- **See your doctor** –Although there is no cure for most types of arthritis, early diagnosis and appropriate management is important, especially for inflammatory types of arthritis. For example, early use of disease-modifying drugs can affect the course of rheumatoid arthritis. If you have symptoms of arthritis, see your doctor and begin appropriate management of your condition.
- **Protect your joints** –Joint injury can lead to osteoarthritis. People who experience sports or occupational injuries or have jobs with repetitive motions like repeated knee bending have more osteoarthritis. Avoid joint injury to reduce your risk of developing osteoarthritis.

(Source: Centers for Disease Control and Prevention, Arthritis: Key Public Health Messages, last updated July 2017)

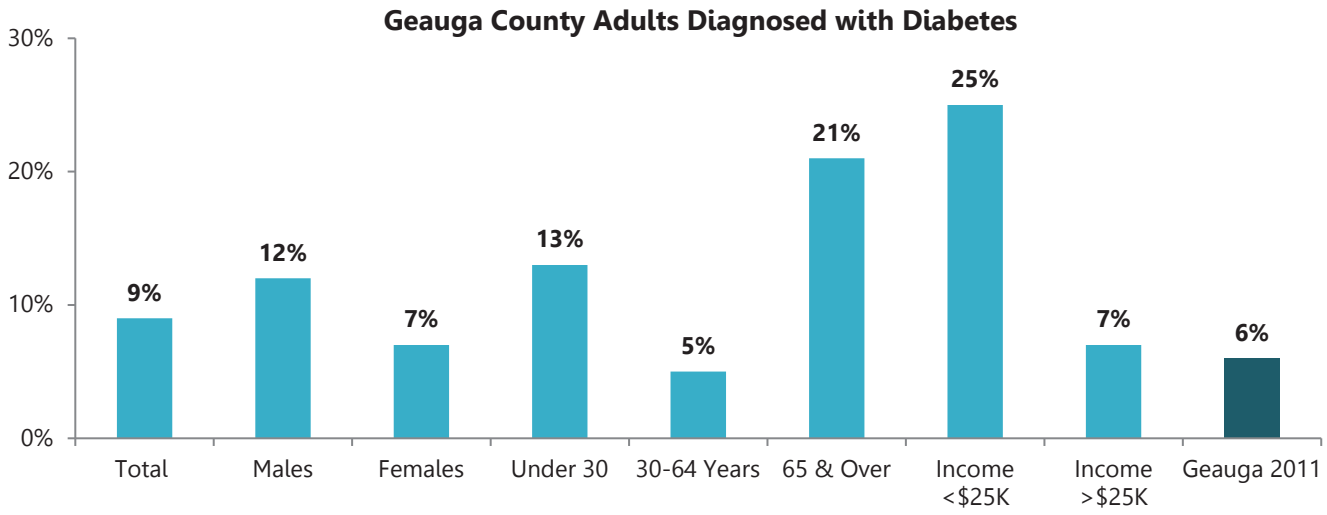
Chronic Disease: Diabetes

Key Findings

In 2016, 9% of Geauga County adults had been diagnosed with diabetes, and 5% were diagnosed with pre-diabetes.

Diabetes

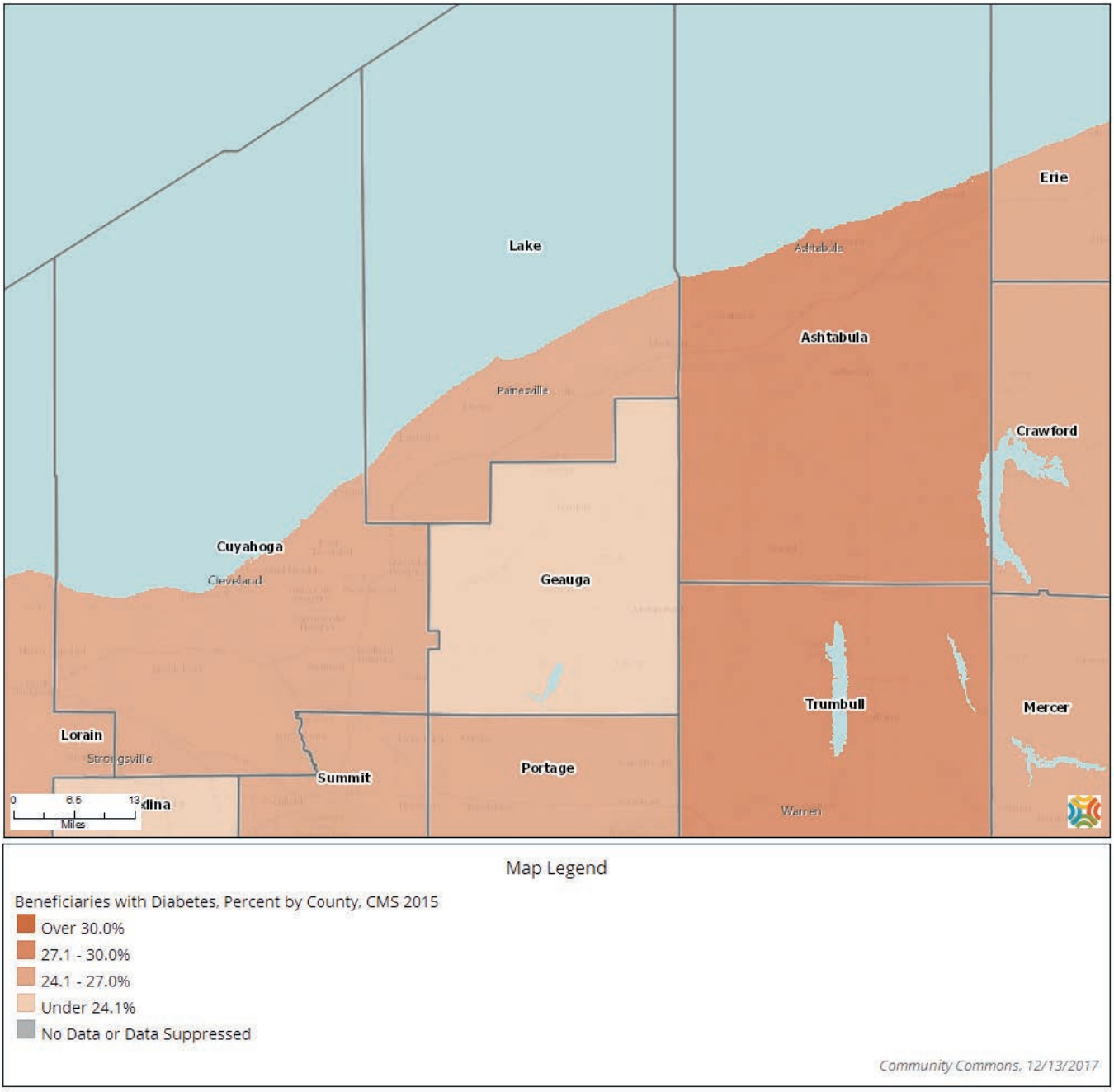
- In 2016, 9% of Geauga County adults had been diagnosed with diabetes, increasing to 25% of those with incomes less than $25,000.
- The 2016 BRFSS reports an Ohio prevalence of 11% and U.S. prevalence of 11%.
- Five percent (5%) adults had been diagnosed with pre-diabetes.
- Adults with diabetes were using the following to treat their diabetes: diabetes pills (61%), 6-month checkup with provider (58%), checking blood sugar (57%), checking A1C annually (50%), diet control (50%), annual vision exam (47%), checking their feet (41%), exercise (38%), insulin (22%), dental exam (14%), and taking a class (11%).
- Nearly one-fourth (22%) of adults with diabetes rated their health as fair or poor.
- Geauga County adults diagnosed with diabetes also had one or more of the following characteristics or conditions:
  - 75% were obese or overweight
  - 61% had been diagnosed with high blood cholesterol
  - 53% had been diagnosed with high blood pressure



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

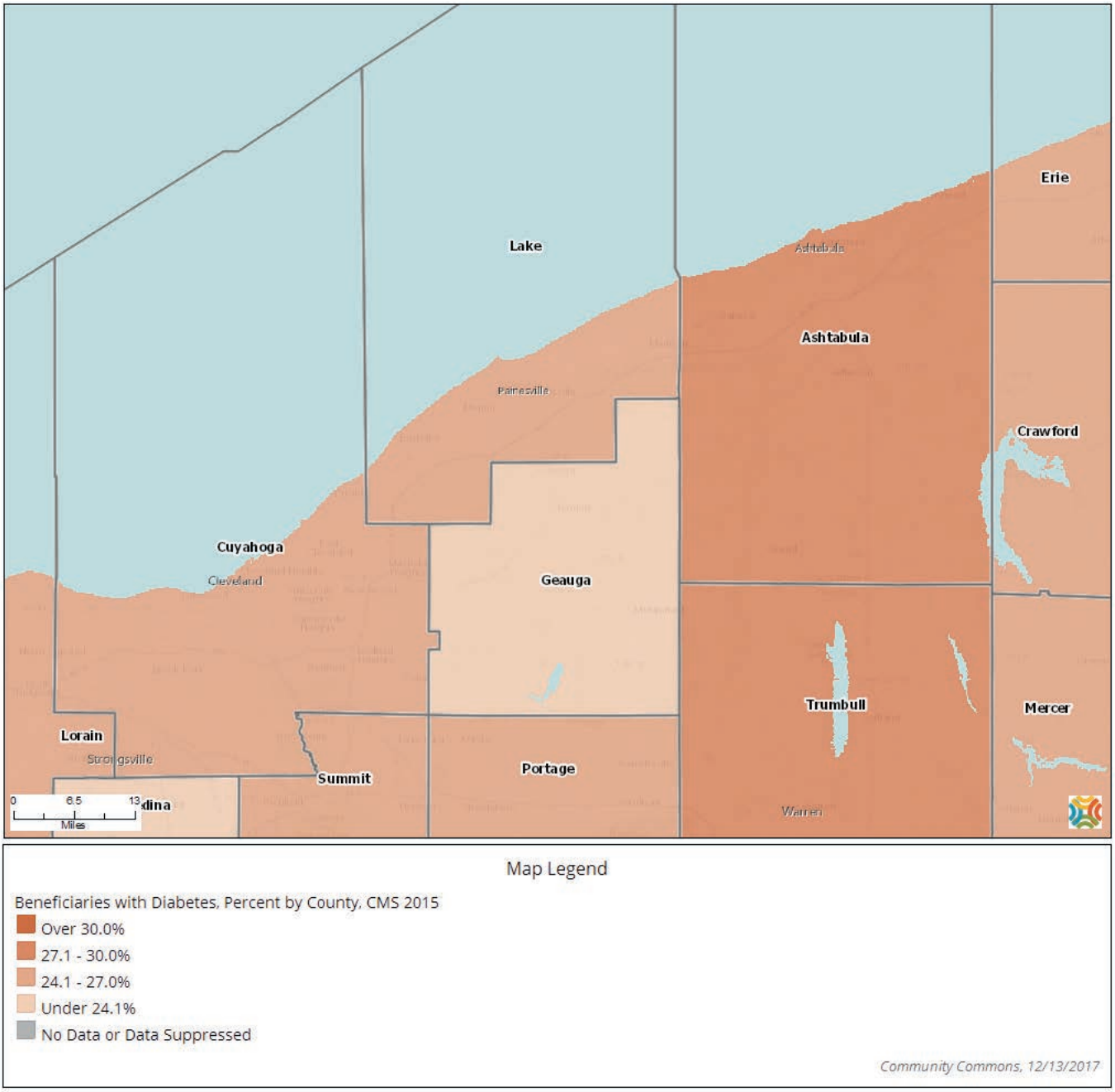
Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2016	U.S. 2016
Diagnosed with diabetes	6%	9%	11%	11%

Medicare Beneficiaries with Diabetes, Percent by County, 2015



(Source: Centers for Medicare & Medicaid Services (CMS): 2015, as compiled by Community Commons)

Diabetes Mortality, Age Adjusted Rate per 100,000 Population, 2011-2015



(Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2011-2015, accessed via CDC Wonder, as compiled by Community Commons)

Chronic Disease: Quality of Life

Key Findings

In 2016, 28% of Geauga County adults were limited in some way because of a physical, mental or emotional problem.

Impairments and Health Problems

- In 2016, more than one-fourth (28%) of Geauga County adults were limited in some way because of a physical, mental or emotional problem (21% Ohio, 21% U.S., 2015 BRFSS), increasing to 44% of those with incomes less than $25,000.
- Among those who were limited in some way, the following most limiting problems or impairments were reported: back or neck problems (44%); arthritis/rheumatism (33%); fitness level (21%); stress, depression, anxiety, or emotional problems (20%); sleep problems (19%); chronic pain (17%); walking problems (17%); chronic illness (13%); fractures, bone/joint injuries (11%); lung/breathing problems (10%); hearing problems (8%); eye/vision problems (6%); mental health illness/disorder (6%); dental problems (4%); learning disability (1%); and substance dependency (1%).
- Adults needed help with the following because of an impairment or health problem: household chores (15%), getting around for other purposes (9%), shopping (8%), doing necessary business (5%), dressing (3%), bathing (2%), getting around the house (2%), and eating (1%).
- Adults would have a problem getting the following if they needed it today: someone to help if they were sick in bed (9%), someone to loan them $50 (7%), someone to take them to the doctor (6%), someone to talk to about their problems (6%), someone to help them pay for medical expenses (6%), someone to accompany them to their doctor appointments (5%), back-up child care (3%), and someone to explain directions from their doctor (1%).
- Adults reported that someone in their household needed assistance in the following areas as a result of confusion or memory loss: safety (1%), household activities (1%), personal care (1%), transportation (1%), and other areas (2%).
- Thirty percent (30%) of adults fell in the past 6 months, increasing to 36% of those ages 30-64.

Adult Comparisons	Geauga County 2011	Geauga County 2016	Ohio 2015	U.S 2015
Limited in some way because of a physical, mental, or emotional problems	20%	28%	21%	21%

Healthy People 2020

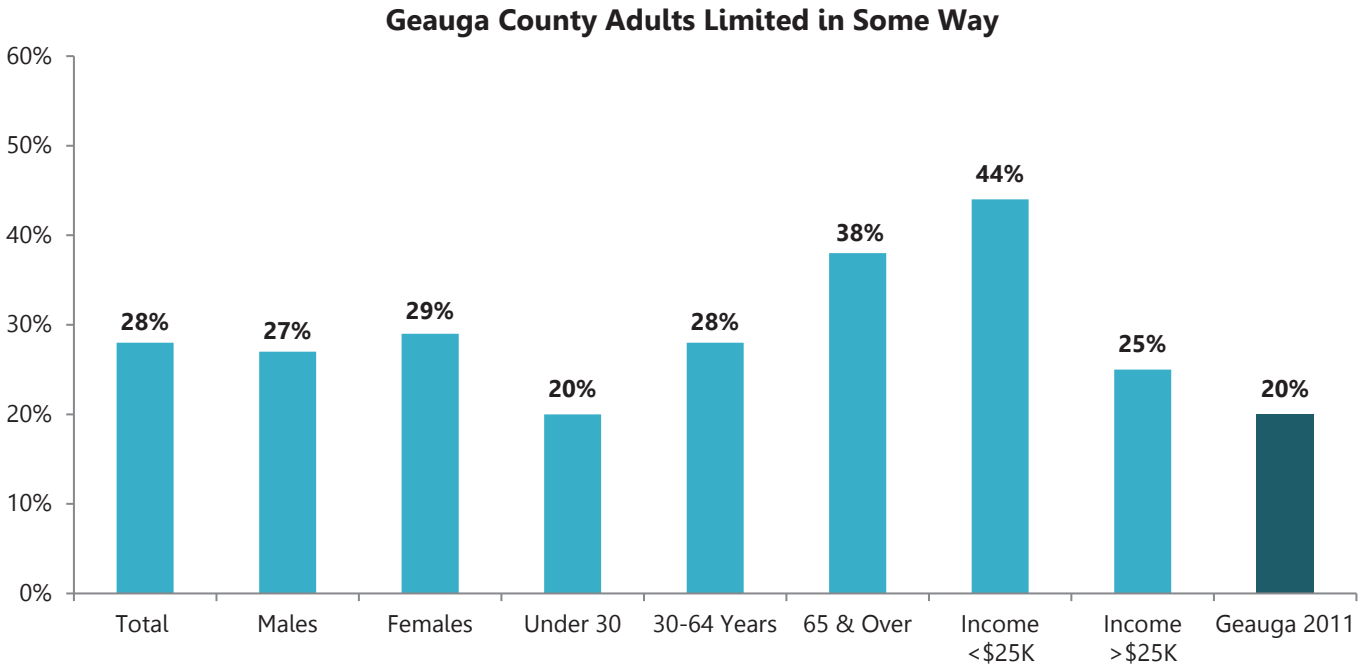
Arthritis, Osteoporosis, and Chronic Back Conditions (AOCBC)

Note: U.S. baseline is age-adjusted to the 2000 population standard

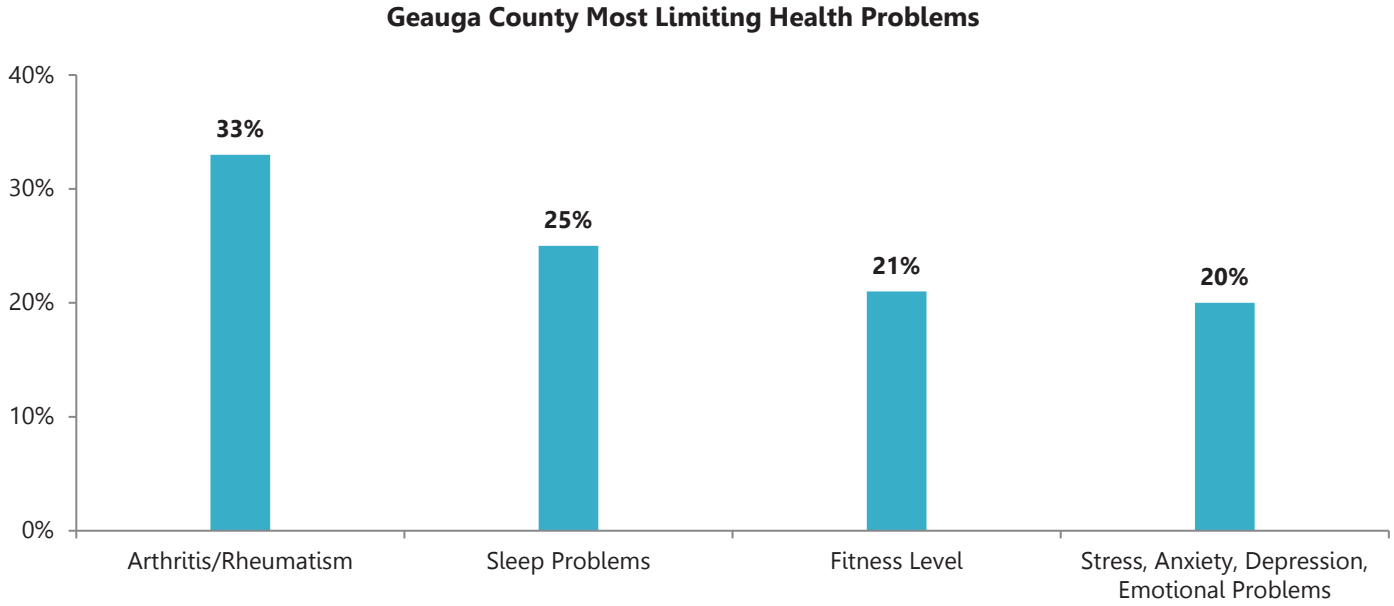
Objective	Geauga County 2016	Healthy People 2020 Target
AOCBC-2: Reduce the proportion of adults with doctor-diagnosed arthritis who experience a limitation in activity due to arthritis or joint symptoms	31%	36%

(Sources: Healthy People 2020 Objectives, 2016 Geauga County Needs Assessment)

The following graphs show the percentage of Geauga County adults that were limited in some way and the most limiting health problems. Examples of how to interpret the information shown on the graph include: 28% of Geauga County adults were limited in some way, including 29% of females and 38% of individuals 65 and over.



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



Social Conditions: Social Determinants of Health

Key Findings

In 2016, 7% of Geauga County adults were abused in the past year (including physical, sexual, emotional, financial, and verbal abuse). Fifteen percent (15%) of Geauga County adults had 3 or more adverse childhood experiences (ACEs) in their lifetime. Nearly half (48%) of adults reported having firearms in or around their homes.

Healthy People 2020

Healthy People 2020 developed five key determinants as a "place-based" organizing framework. These five determinants include:

- Economic stability
- Education
- Social and community context
- Health and health care
- Neighborhood and built environment

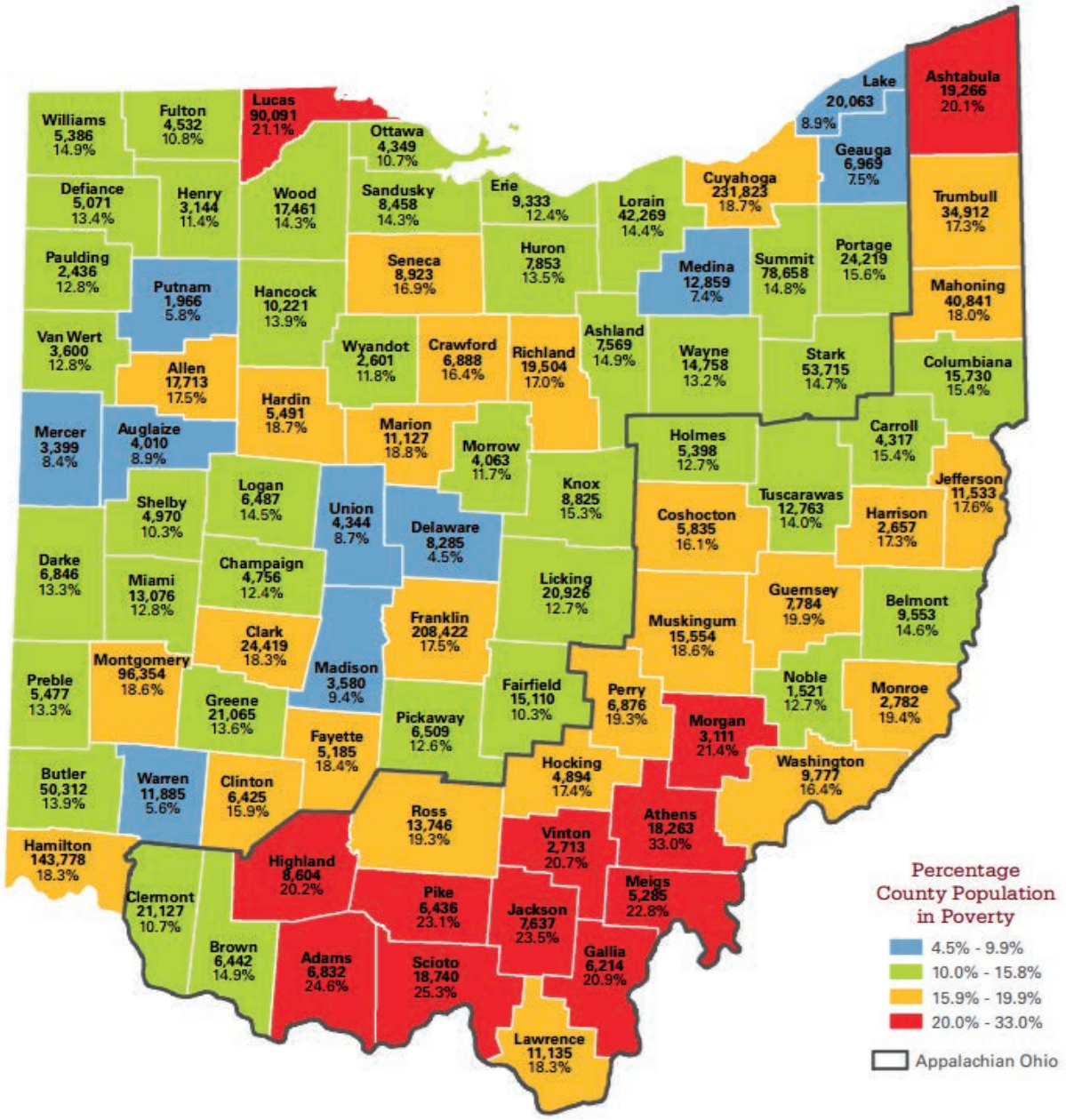
Economic Stability

- Seven percent (7%) of Geauga County adults needed help meeting their general daily needs such as food, clothing, shelter or paying utilities in the past month, increasing to 22% of those with incomes less than $25,000.
- Five percent (5%) of adults were concerned about having enough food for themselves or their family, increasing to 18% of those with incomes less than $25,000.
- Adults received assistance for the following in the past year: healthcare (12%), dental care (9%), prescription assistance (9%), food (7%), home repair (7%), Medicare (7%), utilities (6%), mental illness issues (5%), transportation (4%), employment (3%), free tax preparation (3%), legal aid services (3%), rent/mortgage (3%), affordable childcare (2%), clothing (2%), drug or alcohol addiction (2%), credit counseling (1%), and unplanned pregnancy (1%).
- Adults attempted to get assistance from the following social service agencies: Geauga County Job & Family Services (6%), friend or family member (5%), church (4%), Ravenwood Health (4%), 2-1-1/First Call for Help (2%), 9-1-1 (2%), Geauga County Board of Developmental Disabilities (2%), Geauga County Health Department (2%), United Way (2%), Catholic charities (1%), Geauga County Board of Mental Health (1%), Help Me Grow (1%), NAMI Geauga (1%), Lake Geauga Recovery Center (<1%), and WomenSafe (<1%). One percent (1%) looked for assistance but did not receive any.
- Fifty-six percent (56%) of adults reported less than 30% of their household income went to their housing. Nineteen percent (19%) reported 30-50%, and 11% reported 50% or more of their income went to housing.
- The median household income in Geauga County in 2017 was $74,165. The U.S. Census Bureau reports median income levels of $50,674 for Ohio and $55,332 for the U.S. *(Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-year Estimates).*
- Seven percent (7%) of all Geauga County residents were living in poverty, and 10% of children and youth ages 0-17 were living in poverty *(Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-year Estimates).*
- The unemployment rate for Geauga County civilian labor force was 5.1% as of February 2018 *(Source: Bureau of Labor Statistics, February 2018).*

The map below shows the variation in poverty rates across Ohio during the 2011-15 period.

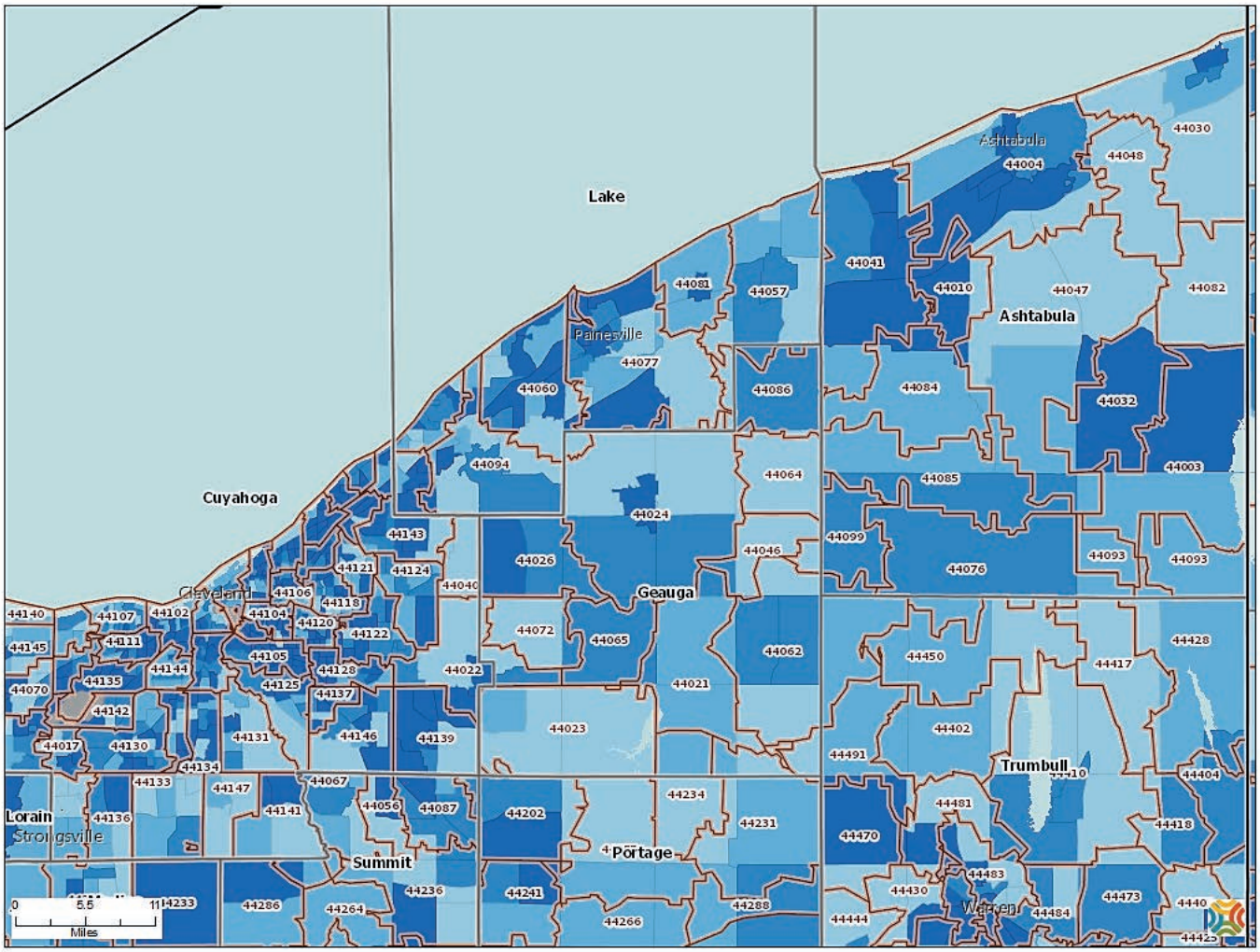
- The 2011-2015 American Community Survey 5 year estimates that approximately 1,775,836 Ohio residents or 15.8% of the population were in poverty.
- From 2011-2015, 7.5% of Geauga County residents were in poverty.

Estimated Poverty Rates in Ohio by County (2011-2015)



(Source: 2011-2015 American Community Survey 5-year estimates, as compiled by Ohio Development Services Agency, Office of Research, Ohio Poverty Report, February 2017)

Households with Housing Costs Over 30% of Household Income, Renter-Occupied, ACS 2011-15



Map Legend

Households with Housing Costs Over 30% of Household Income, Renter-Occupied, Percent by Tract, ACS 2011-15

- Over 50.0%
- 40.1 - 50.0%
- 30.1 - 40.0%
- Under 30.1%
- No Data or Data Suppressed

Community Commons, 12/6/2017

(Source: U.S. Census Bureau, American Community Survey, 2011-2015, as compiled by Community Commons)

Education

- Ninety-one percent (91%) of Geauga County adults 25 years and over had a high school diploma or higher *(Source: U.S. Census Bureau, American Community Survey 5-year Estimates, 2012-2016).*
- Thirty-seven percent (37%) of Geauga County adults 25 years and over had at least a bachelor's degree *(Source: U.S. Census Bureau, American Community Survey 5-year Estimates, 2012-2016).*

Social Determinants of Health

- Social determinants of health are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.
- Conditions (e.g., social, economic, and physical) in these various environments and settings (e.g., school, church, workplace, and neighborhood) have been referred to as "place." In addition to the more material attributes of "place," the patterns of social engagement and sense of security and well-being are also affected by where people live.
- Resources that enhance quality of life can have a significant influence on population health outcomes. Examples of these resources include safe and affordable housing, access to education, public safety, availability of healthy foods, local emergency/health services, and environments free of life-threatening toxins.
- Understanding the relationship between how population groups experience "place" and the impact of "place" on health is fundamental to the social determinants of health—including both social and physical determinants.

(Source: Healthy People 2020, Updated 12/11/17)

Social and Community Context

- Geauga County adults experienced the following in the past 12 months: a close family member went to the hospital (37%); death of a family member or close friend (27%); someone close to them had a problem with drinking or drugs (11%); had bills they could not pay (10%); someone in their household lost their job/had their hours at work reduced (9%); household income was cut by 50% (3%); moved to a new address (3%); were threatened or abused by someone physically, emotionally, sexually or verbally (2%); knew someone who lived in a hotel (2%); their child was threatened or abused by someone physically, emotionally, sexually or verbally (2%); became separated or divorced (1%); had someone homeless living with them (1%); were homeless (1%); and witnessed someone in their family being hit or slapped (1%).
- Adults experienced the following adverse childhood experiences (ACEs): lived with someone who was a problem drinker or alcoholic (20%); a parent or adult in their home swore at, insulted, or put them down (16%); their parents became separated or were divorced (14%); lived with someone who was depressed, mentally ill, or suicidal (13%); someone at least 5 years older than them or an adult touched them sexually (6%); a parent or adult in their home hit, beat, kicked, or physically hurt them (6%); lived with someone who used illegal stress drugs, or who abused prescription medications (5%); their family did not look out for each other, feel close to each other, or support each other (5%); someone at least 5 years older than them or an adult tried to make them touch them sexually (3%); their parents or adults in their home slapped, hit, kicked, punched, or beat each other up (3%); did not have enough to eat, had to wear dirty clothes, and had no one to protect them (2%); lived with someone who served time or was sentenced to serve time in prison, jail or other correctional facility (2%); someone at least 5 years older than them or an adult forced them to have sex (2%); and their parents were not married (1%).
- Nine percent (9%) of Geauga County adults had 4 or more ACEs in their lifetime, increasing to 10% of females and 12% of those ages 30-64.

Behaviors of Geauga County Adults

Experienced 4 or More ACEs vs. Did Not Experience Any ACEs

Adult Behaviors	Experienced 4 or More ACEs	Did Not Experience Any ACEs
Had at least one alcoholic beverage in past month	72%	70%
Binge drinker (defined as consuming more than four [women] or five [men] alcoholic beverages on a single occasion in the past 30 days)	48%	38%
Abused in any way in the past year	34%	3%
Current smoker (currently smoke some or all days)	22%	9%
Highest level of education was a four-year college degree	18%	32%
Contemplated suicide in the past year	9%	<1%
Household income was less than $25,000 per year	3%	14%

Adverse Childhood Experiences (ACEs)

- Adverse childhood experiences (ACEs) are stressful or traumatic events, including abuse and neglect. They may also include household dysfunction such as witnessing domestic violence or growing up with family members who have substance use disorders. Some ACEs include:
  - — Physical abuse
  - — Sexual abuse
  - — Mother treated violently
  - — Physical/emotional neglect
  - — Emotional abuse
  - — Household mental illness
  - — Parental separation or divorce
  - — Incarcerated household member
  - — Substance misuse within household
  - — Intimate partner violence

- Preventing ACEs and engaging in early identification of people who have experienced them could have a significant impact on a range of critical health problems. You can strengthen your substance misuse prevention efforts by: increasing awareness of ACEs among state and community level substance misuse prevention professionals, emphasizing the relevance of ACEs to behavioral health disciplines.
- Research has demonstrated a strong relationship between ACEs, substance use disorders, and behavioral problems. When children are exposed to chronic stressful events, their neurodevelopment can be disrupted. As a result, the child's cognitive functioning or ability to cope with negative or disruptive emotions may be impaired. Over time, and often during adolescence, the child may adopt negative coping mechanisms, such as substance use or self-harm. Eventually, these unhealthy coping mechanisms can contribute to disease, disability, and social problems, as well as premature mortality.

(Source: SAMHSA, Adverse Childhood Experiences, Updated 09/05/2017)

ACEs Can Have Lasting Effects on Behavior & Health

- Childhood experiences have a tremendous, lifelong impact on the health and quality of a person's life. The ACE Study showed dramatic links between adverse childhood experiences and risky behavior, psychological issues, serious illness and the leading causes of death.
- The following charts compare how like a person with 1, 2, 3 or 4 ACEs will experience specified behaviors than a person without ACEs.

What Can be Done About ACEs?

- The following wide-ranging health and social consequences underscore the importance of preventing ACEs before they happen. Safe, stable, and nurturing relationships and environments (SSNREs) can have a positive impact on a broad range of health problems and on the development of skills that will help children reach their full potential. Strategies that address the needs of children and their families include:

(Sources: CDC, Adverse Childhood Experiences, Looking How ACEs Affect our Lives and Society, June 2016)
Note: Having an ACE score does not imply that an individual could not have other risk factors for these health behaviors/diseases

Health and Health Care

- In the past year, 6% of adults were uninsured, increasing to 9% of those with incomes less than $25,000 and those ages 30-64.
- See the Health Perceptions, Health Care Coverage, and Health Care Access sections for further health and health care information for Geauga County adults.

Neighborhood and Built Environment

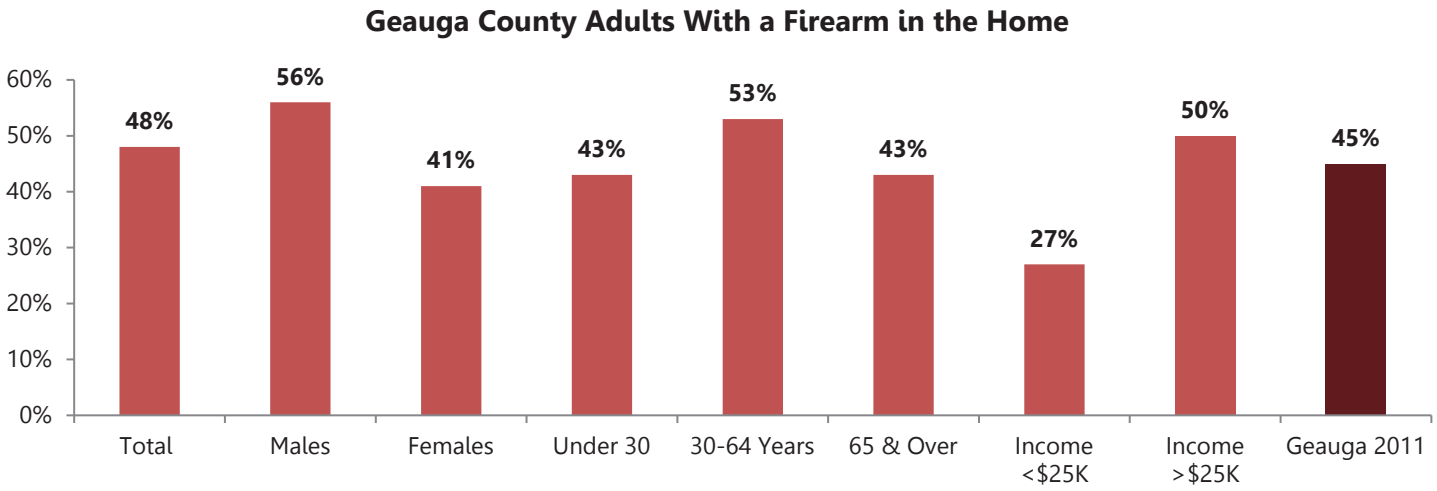
- Nearly half (48%) of Geauga County adults kept a firearm in or around their home. Three percent (3%) of adults reported they were unlocked and loaded.
- Forty-seven percent (47%) of Geauga County adults thought their neighborhood was extremely safe from crime. Forty-five percent (45%) reported their neighborhood was quite safe, 6% said slightly safe, and 1% reported not at all safe from crime.
- Adults reported doing the following while driving: eating (41%); talking on hands-free cell phone (41%); talking on hand-held cell phone (37%); having kids in the car (28%); having pets in the car (25%); playing loud music (21%); texting (11%); not wearing a seatbelt (7%); using internet on their cell phone (6%); being under the influence of alcohol (3%); being under the influence of prescription drugs (2%); reading (1%); being under the influence of recreational drugs (<1%); and other activities (such as applying makeup, shaving, etc.) (2%).
- Eighty-four percent (84%) of adults reported always wearing a seat belt in the car, and 1% reported never wearing a seat belt.
- Adults had the following transportation issues: could not afford gas (3%), no car (2%), suspended/no driver's license (1%), disabled (1%), limited public transportation available or accessible (1%), no public transportation available or accessible (1%), no car insurance (1%), did not feel safe to drive (1%), and other car issues/expenses (2%).
- Geauga County adults thought the following threatened their health in the past year:
  - Insects (9%)
  - Moisture issues (6%)
  - Mold (6%)
  - Rodents (5%)
  - Chemicals found in products (3%)
  - Indoor air quality (3%)
  - Temperature regulation (3%)
  - Unsafe water supply/wells (3%)
  - Lice (2%)
  - Plumbing problems (2%)
  - Radon (2%)
  - Sewage/waste water problems (2%)
  - Agricultural chemicals (1%)
  - Asbestos (1%)
  - Lead paint (1%)
  - Outdoor air quality (1%)
  - Safety hazards (1%)
  - Fracking (<1%)

Victims of Gun Violence in America

- More than 100,000 people are shot in murders, assaults, suicides & suicide attempts, accidents or by police intervention in America in an average year.
  - 33,880 people die from gun violence and 81,114 people survive gun injuries.
- Every day, an average of 315 people is shot in America. Of those 315 people, 93 people die and 222 are shot, but survive.
  - Of the 315 people who are shot every day, an average of 46 are children and teens.
  - Of the 93 people who die, 32 are murdered, 58 are suicides, 1 die accidently, 1 with an unknown intent and 1 by legal intervention.
  - Of the 222 people who are shot but survive, 164 are from assault, 45 are shot accidently, 10 are suicide attempts, and 3 are police interventions.

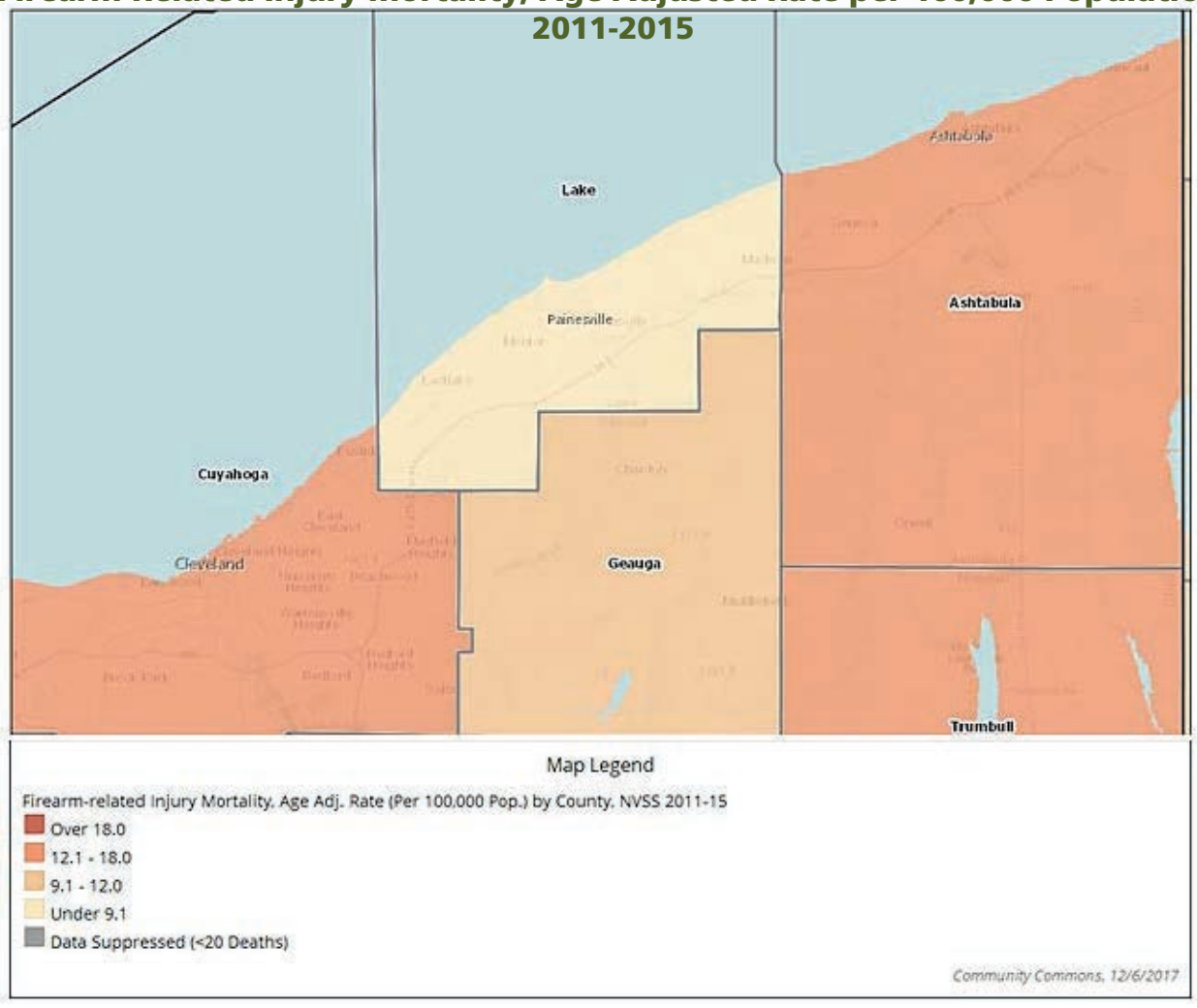
(Source: Brady Campaign to Prevent Gun Violence, "There Are Too Many Victims of Gun Violence" Fact Sheet, June 2017)

The following graph shows the percentage of Geauga County adults that had a firearm in the home. Examples of how to interpret the information shown include: 48% of all Geauga County adults kept a firearm in their home, including 56% of males and 53% of those ages 30-64.



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

Firearm-Related Injury Mortality, Age Adjusted Rate per 100,000 Population, 2011-2015



(Source: Centers for Disease Control and Prevention, National Vital Statistics System, 2011-2015, accessed via CDC Wonder, as compiled by Community Commons

Child Health: Health and Functional Status

Key Findings

In 2016, 96% of Geauga County parents of 0-11 year olds rated their child's health as excellent or very good. Thirty-three percent (33%) of children were classified as obese by Body Mass Index (BMI) calculations. Eighty-three percent (83%) of parents had taken their child ages 2-11 to the dentist in the past year. Twelve percent (12%) of parents reported their child had been diagnosed with asthma.

2016 National Survey of Children's Health

- 9% of Ohio children ages 0-5 were diagnosed with asthma, increasing to 16% of 6-11 year olds.
- 13% of Ohio children ages 6-11 were diagnosed with ADD/ADHD.

(Source: National Survey of Children's Health, 2016)

Health of Children Ages 0-11

- In 2016, 96% of parents rated their child's health as excellent or very good. Four percent (4%) of parents rated their child's health as fair or poor.
- One-third (33%) of children were classified as obese by Body Mass Index (BMI) calculations. Fourteen percent (14%) of children were classified as overweight, 45% were normal weight, and 8% were underweight.
- Children ate the following for breakfast: cereal (79%), milk (60%), toast (45%), eggs (40%), fruit/fruit juice (36%), oatmeal (31%), yogurt (30%), bacon/ham/sausage (26%), Pop Tart/donut/pastry (19%), pizza (1%) soda pop (<1%), and other (14%). Three percent (3%) of children ate at the school breakfast program. Three percent (3%) of children ate nothing for breakfast.
- Children spent an average of 1.4 hours watching TV, 1.1 hours on a computer or tablet, and 0.5 hours playing video games on an average day of the week.
- Outside of the regular school day, children spent an average of 1.4 hours reading, 0.3 hours on the cell phone, and 2.1 hours participating in extra-curricular activities on an average day of the week.
- Over four-fifths (83%) of children ages 2 and older had been to the dentist in the past year.
- Parents gave the following reasons for not getting dental care for their child: child was not old enough to go to the dentist (7%), cost (7%), no referral (4%), no insurance (3%), no convenient times/could not get appointment (2%), treatment was ongoing (2%), dissatisfaction with dentist (1%), child refused to go (1%), could not find a dentist who accepted their insurance (<1%), health plan problem (<1%), did not know where to go for treatment (<1%), missed an appointment and was not allowed to go back to clinic (<1%), and other (4%). No one reported having had transportation problems or not having had dental services available in the area.
- Parents reported their children had the following allergies: environmental allergies (22%), animal allergies (6%), milk (4%), peanuts (3%), gluten (2%), red dye (1%), eggs (1%), wheat (1%), bees (1%), other food allergies (3%), and other (5%). Of those with allergies, 3% of parents had an Epi-pen for their child's allergy.
- Seven percent (7%) of parents reported their children had an episode of asthma or had an asthma attack.

- A doctor or health professional told Geauga County parents their child had the following conditions:
  - Asthma (12%)
  - Dental problems (10%)
  - Speech and language delays (9%)
  - Pneumonia (6%)
  - ADD/ADHD (5%)
  - Urinary tract infection (5%)
  - Anxiety problems (5%)
  - Learning disability (5%)
  - Bone/joint/muscle problems (4%)
  - Developmental delay or physical impairment (3%)
  - Head injury (3%)
  - Vision problems not correctable with glasses (3%)
  - Hearing problems (3%)
  - Behavioral/conduct problem (2%)
  - Genetic disease (2%)
  - Epilepsy (2%)
  - Other life-threatening illness (2%)
  - Depression problems (2%)
  - Birth defect (2%)
  - Intellectual disability/mental retardation (2%)
  - Autism (1%)
  - Appendicitis (1%)
  - Digestive tract infections (1%)
  - Fetal Alcohol Syndrome (1%)
  - Cerebral palsy (1%)
  - Cancer (1%)
  - Addiction disorder (1%)
  - Diabetes (1%)
  - Neonatal Abstinence Syndrome (1%)
- Sixteen percent (16%) of Geauga County children ages 0-11 had at least one health condition.

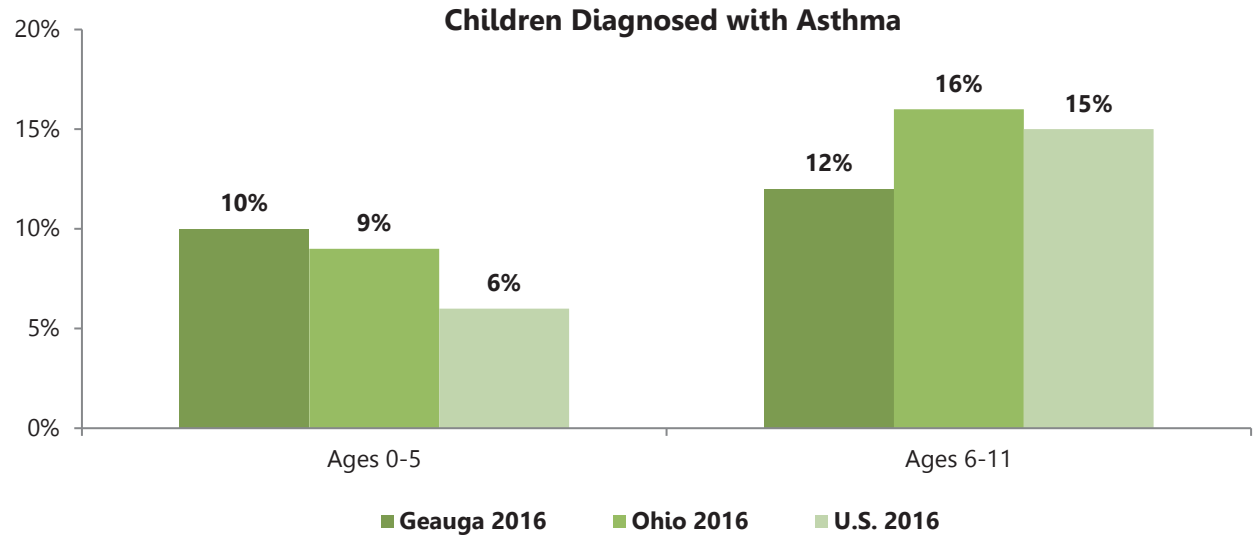
Child Comparisons	Geauga County 2011 Ages 0-5	Geauga County 2016 Ages 0-5	Ohio 2016 Ages 0-5	U.S. 2016 Ages 0-5	Geauga County 2011 Ages 6-11	Geauga County 2016 Ages 6-11	Ohio 2016 Ages 6-11	U.S. 2016 Ages 6-11
Rated health as excellent or very good	96%	96%	94%	93%	96%	96%	91%	89%
Rated health as fair or poor	4%	4%	N/A	N/A	4%	4%	N/A	N/A
Dental care visit in past year	45%	63%	54%*	59%*	77%	85%	95%	91%
Diagnosed with asthma	6%	10%	9%	6%	11%	12%	16%	15%
Diagnosed with ADHD/ADD	1%	0%	2%**	3%**	10%	7%	13%	9%
Diagnosed with behavioral or conduct problems	4%	1%	3%**	5%**	4%	2%	13%	11%
Diagnosed with vision problems that cannot be corrected	3%	1%	N/A	1%	2%	3%	N/A	2%
Diagnosed with bone, joint, or muscle problems	2%	3%	N/A	N/A	2%	5%	N/A	N/A
Diagnosed with epilepsy	2%	3%	N/A	1%	1%	2%	N/A	1%
Diagnosed with a head injury	2%	1%	N/A	1%	3%	4%	N/A	2%
Diagnosed with depression	1%	1%	N/A	N/A	2%	3%	N/A	N/A
Diagnosed with diabetes	1%	1%	N/A	N/A	<1%	1%	N/A	<1%
Experienced two or more adverse childhood experiences	N/A	6%	18%	12%	N/A	4%	29%	23%

N/A– Not available
** Ages 1-5*
*** Ages 3-5*

Asthma

The following graph shows the percent of children who were diagnosed with asthma.

- Geauga County children ages 0-5 had a higher percentage of asthma compared to the state and U.S., however, Geauga County children ages 6-11 had a lower percentage compared to the state and nation.



(Source: National Survey of Children's Health, Data Resource Center, and 2016 Geauga County Health Assessment)

Asthma and Children

- Asthma is the most common chronic conditions among children, currently affecting an estimated 6.2 million children under years old, of which 3.1 million suffered from an asthma attack or episode in 2015.
- An asthma episode is a series of events that results in constricted airways. These include swelling of the airway lining, tightening of the muscle around the airways and increased secretion of mucus inside the airway. This narrowed airway causes difficulty breathing with the familiar "wheeze."
- When a child has asthma, their lungs are extra sensitive to certain "triggers." Each child reacts differently to the factors that may trigger asthma, including:
  - Excitement/stress
  - Indoor and outdoor air pollutants
  - Exposure to cold air or sudden temperature change
  - Allergic reactions to allergens such as pollen, dust, or mold
  - Respiratory infections and colds
  - Cigarette smoke
- Secondhand smoke can cause serious harm to children. An estimated 400,000 to one million children with asthma have their condition worsened due to secondhand smoke.
- Asthma can be life-threatening if not properly managed. In 2014, 161 children under 15 years old died from asthma.
- Asthma is the third leading cause of hospitalization among children under the age of 15.
- Asthma is one of the leading causes of school absenteeism. In 2013, asthma accounted for 13.8 million lost school days in school-aged children with an asthma episode in the previous year.

(Source: American Lung Association, Asthma & Children Fact Sheet, 2017)

Child Health: Health Care Access

Key Findings

In 2016, 1% of Geauga County parents reported their 0-11 year old did not have health insurance. Eighty-seven (87%) of parents reported they had one or more person they think of as their child's personal doctor or nurse. Twenty-nine percent (29%) of parents reported at least one emergency room visit due to accidents, injury or poisonings.

2016 National Survey of Children's Health

- 28% of Ohio 0-5 year olds and 33% of Ohio 6-11 year olds had public insurance.
- 91% of Ohio 0-5 year olds and 83% of Ohio 6-11 year olds had been to the doctor for preventive care in the past year.

(Source: National Survey of Children's Health, 2016)

Health Insurance

- One percent (1%) of parents reported that their child did not currently have health insurance.
- Children had the following types of health insurance: parent's employer (60%); someone else's employer (15%); Medicaid, Buckeye, or other public health benefits (8%); self-paid (6%); Insurance Marketplace (1%); Medicare (<1%); or some other source of insurance (10%).
- Parents reported their child's health insurance covered the following: hospital stays (88%), well visits (85%), immunizations (85%), doctor visits (84%), prescription coverage (82%), mental health (81%), dental (76%), therapies (75%), and vision (66%).

Access and Utilization

- Six percent (6%) of parents reported the following reasons their child did not get all of the medical care they needed in the past year: cost (3%), no referral (2%), treatment is ongoing (1%), inconvenient times/could not get an appointment (1%), no insurance (1%), health plan problem (1%), not available in area (1%), could not find a doctor who accepted child's insurance (<1%), transportation problems (<1%), and other reasons (1%).
- Fifteen percent (15%) of parents reported their child did not get all of the prescription medications they needed in the past year for the following reasons: their child did not need prescription medication (13%), no referral (3%), cost (1%), no insurance (1%), health plan problem (1%), inconvenient times/could not get an appointment (<1%), treatment is ongoing (<1%), transportation problems (<1%), and other reasons (<1%).
- Parents reported at least one emergency room visit due to the following: accidents, injury or poisonings (29%); fever/cold/flu (14%); doctor's office told them to go (11%); broken bones (9%); ear infections (6%); asthma (4%); dental issues (3%); primary care (2%); and other sick visits (13%).

Medical Home

- Nearly nine out of ten (87%) parents reported they had one or more person they think of as their child's personal doctor or nurse.
- In 2016, 99% of Geauga County parents reported that their child had one particular place they usually went if they were sick or needed advice about their health. They reported the following places: a private doctor's office (95%), an urgent care center (1%), an in-store health clinic (1%), a community health center (1%), a hospital emergency room (<1%), and some other kind of place (1%).
- Geauga County children were referred to the following specialists: ear, nose, and throat (ENT) doctor (22%); allergist (14%); pediatric ophthalmologist (13%); dermatologist (7%); cardiologist (heart doctor) (6%); neurologist (6%); psychiatrist (5%); developmental pediatrician (2%); endocrinologist (diabetes doctor) (3%); oncologist (<1%); and other specialist (11%).

- Seventeen percent (17%) of parents reported their child needed the following special services in the past year: speech therapy (7%), counseling (4%), special education (4%), medical equipment (such as a wheelchair) (4%), physical therapy (3%), occupational therapy (3%), respite care (1%), psychiatry (1%), home health nursing (1%), and out of home care (1%).

- Five percent (5%) of Geauga parents reported their child needed more than one type of special service, increasing to 9% of those with less than $25,000.

Child Comparisons	Geauga County 2011 Ages 0-5	Geauga County 2016 Ages 0-5	Ohio 2016 Ages 0-5	U.S. 2016 Ages 0-5	Geauga County 2011 Ages 6-11	Geauga County 2016 Ages 6-11	Ohio 2016 Ages 6-11	U.S. 2016 Ages 6-11
Had public insurance	8%	17%	28%	37%	8%	5%	33%	38%
Received all the medical care they needed	88%	95%	N/A	N/A	87%	94%	N/A	N/A
Had a personal doctor or nurse	79%	88%	75%	74%	81%	87%	77%	72%

N/A- Not Available

Child Health: Early Childhood (Ages 0-5)

Key Findings

The following information was reported by parents of 0-5 year olds. Seventy-seven percent (77%) of mothers received prenatal care within the first three months during their last pregnancy. Sixty-one percent (61%) of parents put their child to sleep on his or her back. Seventeen percent (17%) of mothers never breastfed their child.

Early Childhood

- The following information was reported by parents of 0-5 year olds.
- During their last pregnancy, mothers did the following: took a multi-vitamin with folic acid (80%), got prenatal care within the first 3 months (77%), got a dental exam (50%), took folic acid during pregnancy (22%), took folic acid pre-pregnancy (13%), experienced depression during or after pregnancy (12%), received WIC services (7%), smoked cigarettes (3%), and drank alcohol (2%).
- Thinking back to their last pregnancy, parents felt the following ways about becoming pregnant: they wanted to be pregnant then (51%), they wanted to be pregnant sooner (20%), they wanted to be pregnant later (13%), and they didn't want to be pregnant (5%).
- When asked how parents put their child to sleep as an infant, 61% said on their back, 18% said on their stomach, 15% said on their side, 4% said in bed with them or another person, and 2% said various methods.
- Mothers breastfed their child: less than three months (21%), 4 to 6 months (12%), 7 to 9 months (11%), 10 to 12 months (28%), and more than one year (12%). Seventeen percent (17%) reported having never breastfed their child.
- One-third (33%) of mothers on a public insurance program, such as Medicaid, never breastfed.
- Parents reported using the following in the past year: park district (57%), library programs (50%), Bible School/VBS/Sunday School (33%), kindergarten readiness programs (23%), health department immunization clinics (22%), Devereaux Early Childhood Assessment (16%), breastfeeding counseling (15%), newborn home visits (13%), Dinoschool/Incredible Years (11%), car seat technician (7%), Help Me Grow (7%), and Head Start (4%).

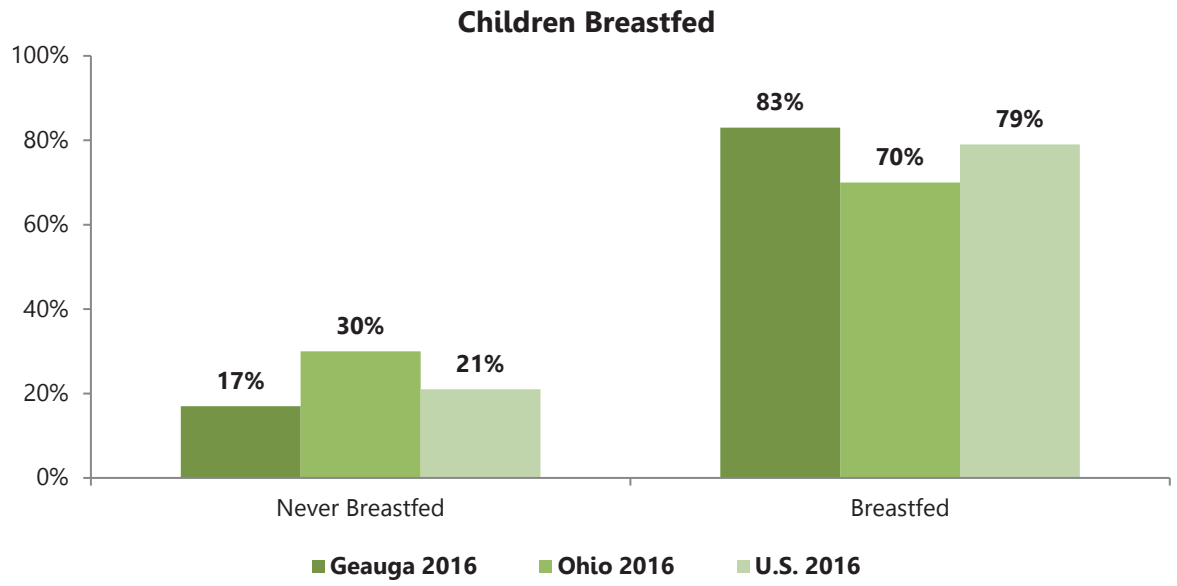
Child Comparisons	Geauga County 2011 Ages 0-5	Geauga County 2016 Ages 0-5	Ohio 2016 Ages 0-5	U.S. 2016 Ages 0-5
Never breastfed their child	N/A	17%	30%	21%

N/A – Not Available

Breastfeeding

The following graph shows the percent of infants who had been breastfed or given breast milk for Geauga County, Ohio, and U.S.

- Geauga County had a larger percent of children who had been breastfed for any length of time, compared to Ohio and the U.S.



(Source: National Survey of Children's Health, Data Resource Center, and 2016 Geauga County Health Assessment)

Sleep-Related Infant Deaths: Who is at Greater Risk?

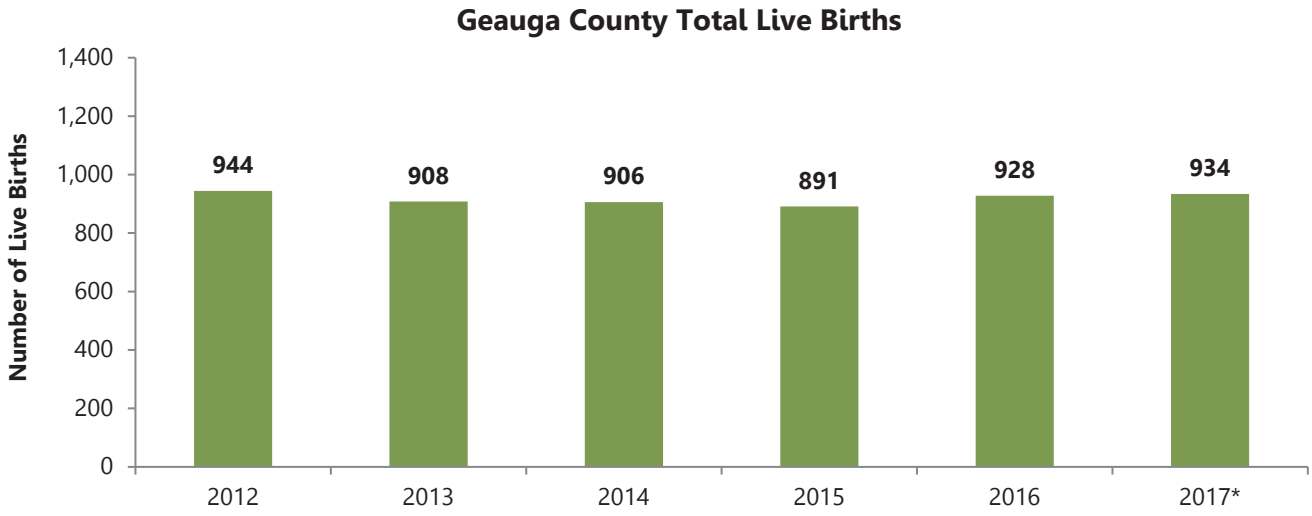
All infants are at risk for sleep-related deaths, but we know the risks are much greater for:

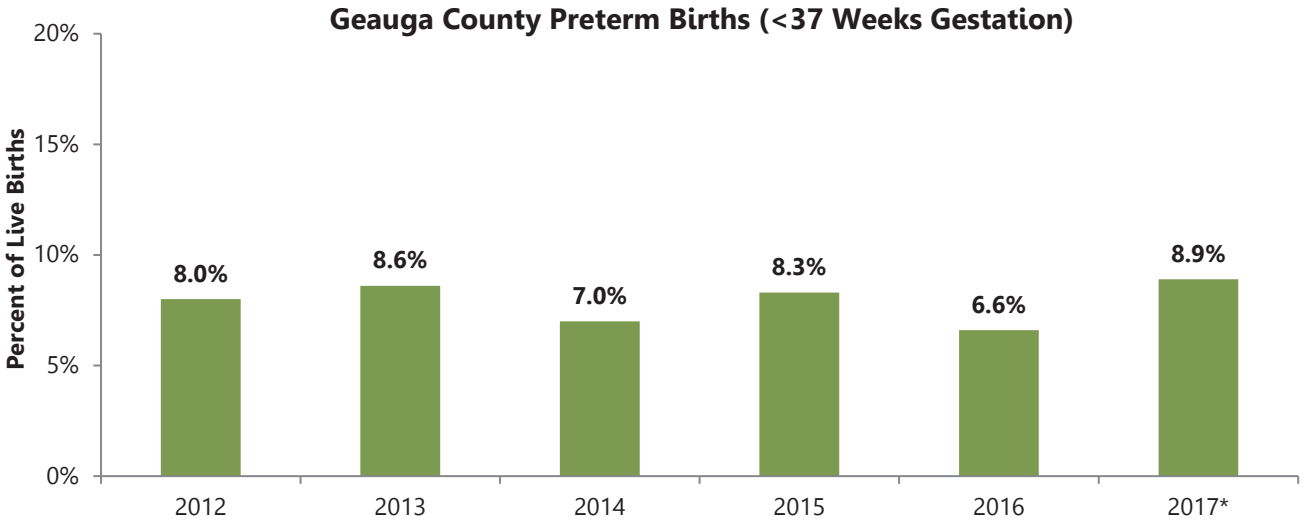
- **Infants who bed share:** 58% of sleep-related deaths occurred while the infant was sharing a sleep surface with another person.
- **Infants not placed to sleep on their backs:** Only 36% of sleep-related deaths had been placed to sleep on their backs.
- **Infants not placed to sleep in a crib:** 71% of sleep-related deaths occurred when infants were sleeping some place other than a crib or bassinet. 45% occurred in adult beds.
- **Infants exposed to tobacco smoke:** 43% of sleep-related deaths were to infants exposed to tobacco smoke in utero and/or after birth. It is estimated that one-third of SIDS deaths would be prevented if maternal smoking during pregnancy were eliminated.
- **Younger infants:** Sleep-related deaths decrease substantially after 3 months of age. 88% occurred prior to 6 months of age.
- **African-American infants:** 38% of sleep-related deaths were African-American infants, which is disproportionately higher than their representation in the general infant population (15 percent). Differences in the prevalence of safe-sleep positioning and other environment conditions among races may contribute to this disparity.

(Source: ODH, Maternal and Child Health, Early Childhood, 2014, Sleep-Related Infant Deaths, 2017)

The following graphs show the number of live births in Geauga County and the percent of preterm births by year. Please note that the pregnancy outcomes data include all births to adults and adolescents.

- From 2012-2017, there was an average of 919 live births per year in Geauga County.





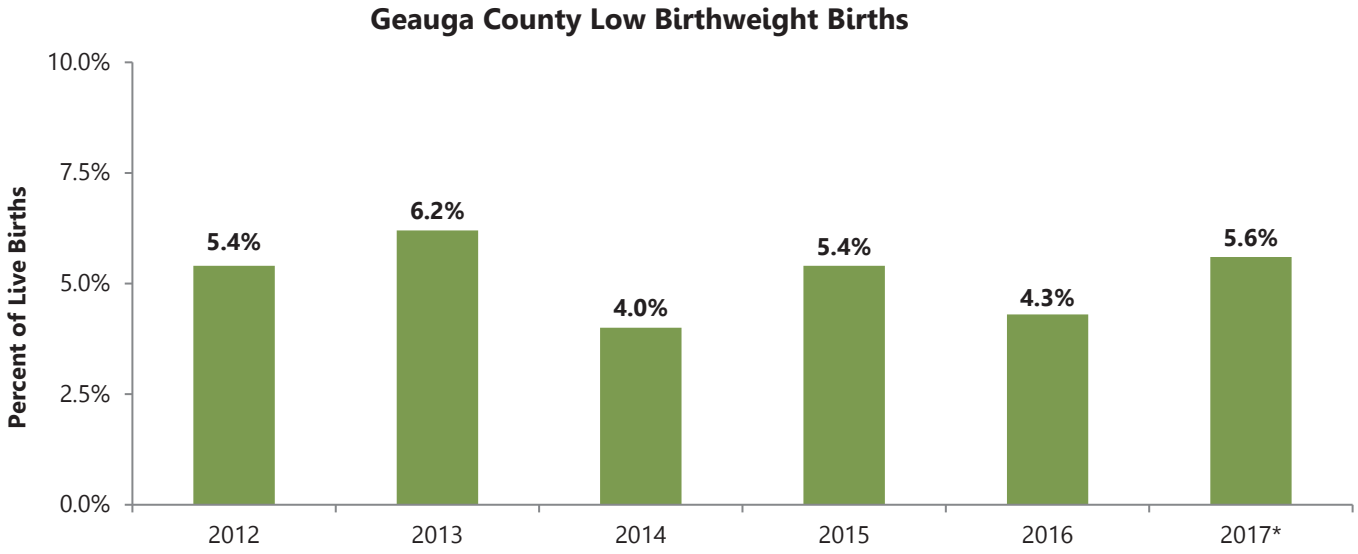
** 2017 birth data is preliminary and should be used with caution*

(Source for graphs: ODH, Ohio Public Health Data Warehouse Updated 3-11-18)

The following graph shows the percent of live births in Geauga County that were low birthweight. Please note that the pregnancy outcomes data include all births to adults and adolescents.

- Low birth weight is defined as weighing less than 2,500 grams or 5 pounds, 8 ounces, but greater than 3 pounds, 4 ounces. Very low birth weight is a term used to describe babies who are born weighing less than 3 pounds, 4 ounces.

- In 2017, approximately 5.6% of the Geauga County births were low birth weight.



** 2017 birth data is preliminary and should be used with caution*
(Source for graph: ODH, Ohio Public Health Data Warehouse Updated 3-11-18)

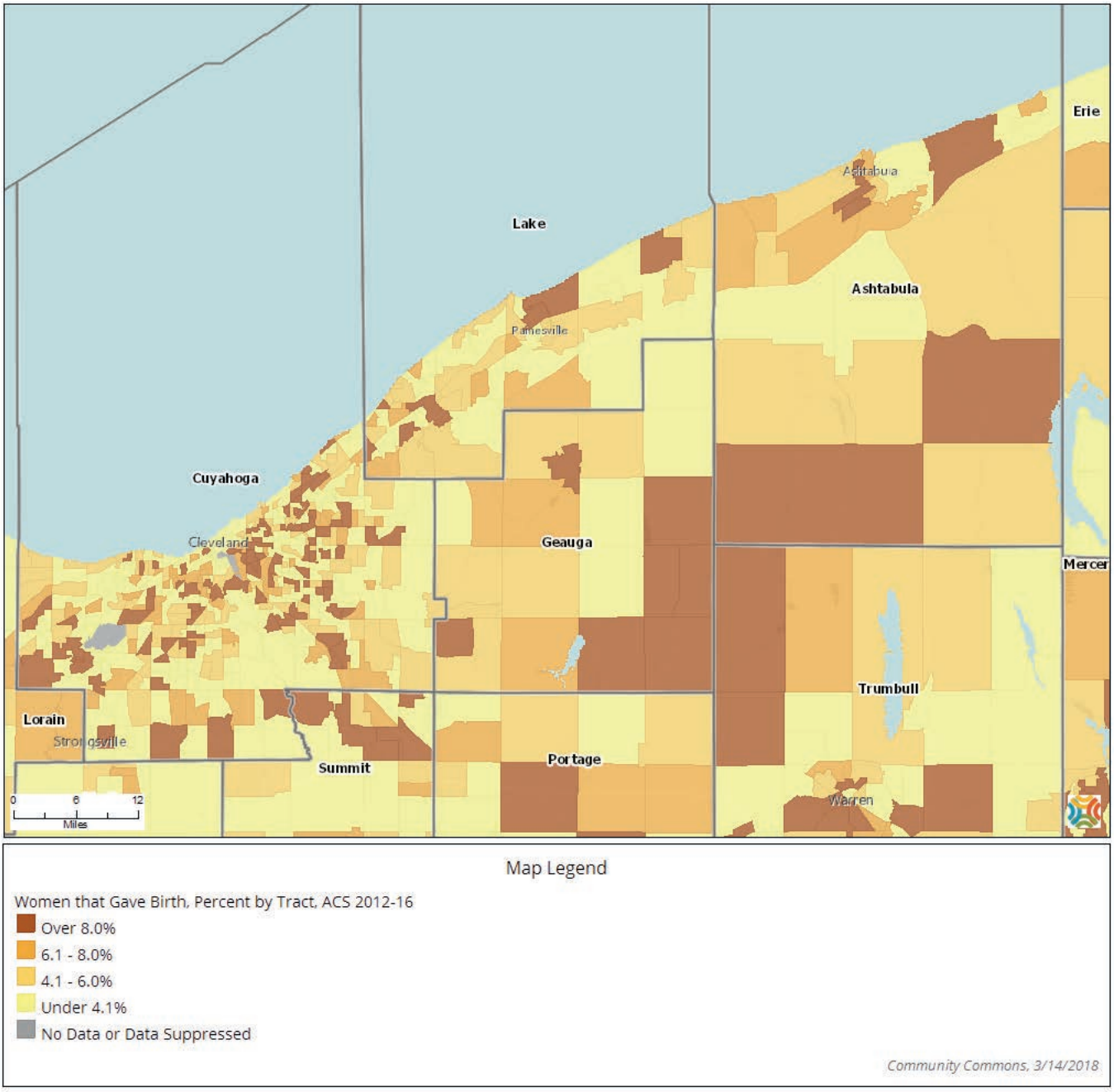
Neonatal, Post-Neonatal and Infant Mortality in 2016

	Number of Neonatal Deaths*	Number of Post-Neonatal Deaths**	Total Number of Infant Deaths	Number of Births
Geauga	3	2	5	928
Ohio	**713**	**311**	**1,024**	**138,198**

**Neonatal death is defined as a death of live born infant during the first 28 days of life.*
*** Post-neonatal death is defined as a death of an infant between 29 days and 364 days of life.*

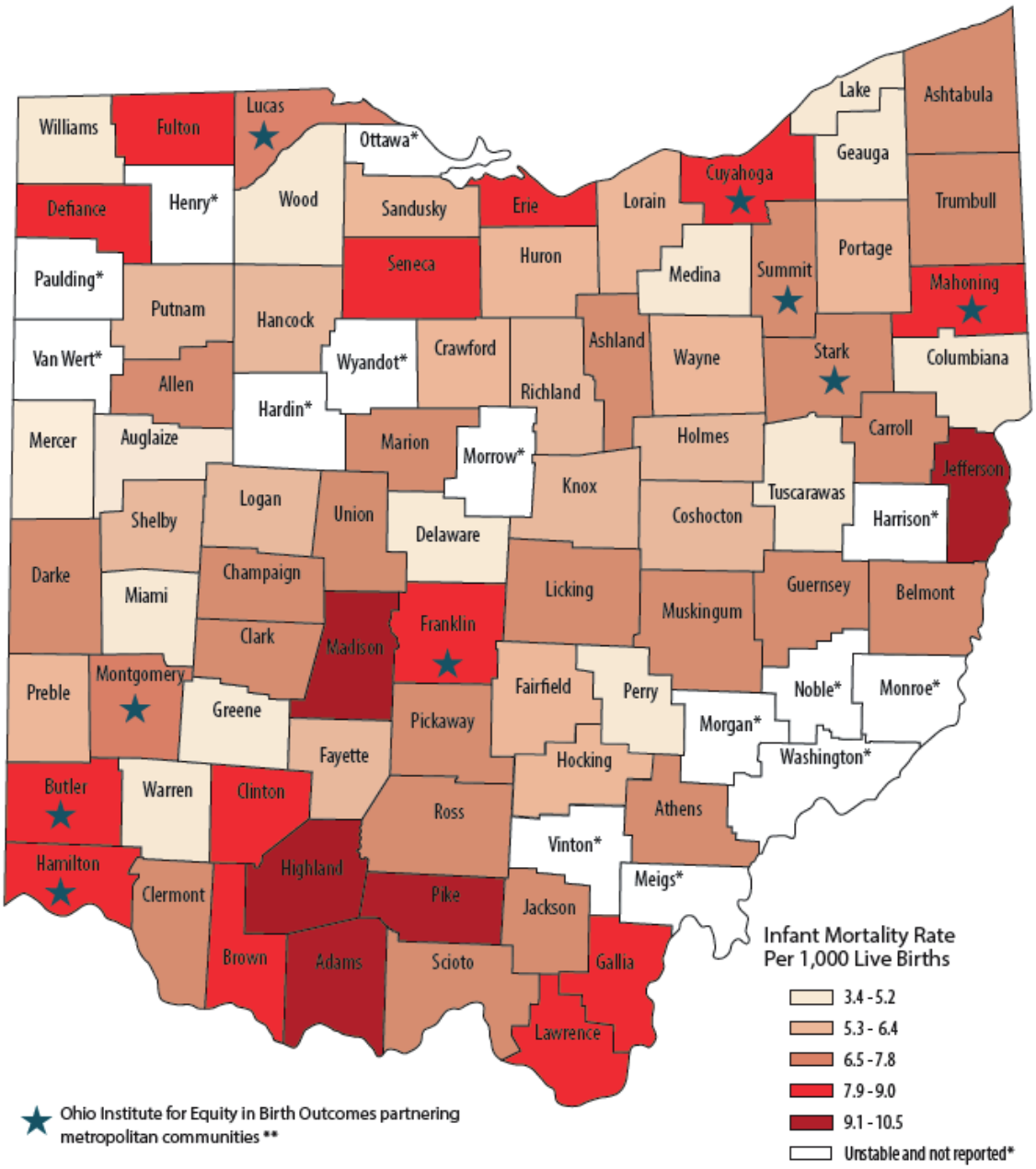
(Source: Ohio Department of Health, Bureau of Vital Statistics, 2016 Ohio Infant Mortality Data: General Findings, obtained from: http://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/cfhs/OEI/2016-Ohio-Infant-Mortality-Report-FINAL.pdf?la=en)

Geauga County Women that Gave Birth, Percent by Census Tract, American Communities Survey, 2012-2016



(Source: American Community Survey, 2012-2016, 5 Year Estimates, as compiled by Community Commons, 3/14/18)

Ohio Infant Mortality Average 5-Year Rate by County, 2012-2016



Source: Ohio Department of Health, Bureau of Vital Statistics.
Infant mortality rate county groupings were determined by Jenks Natural Breaks. This method finds the best way to split up the ranges by minimizing the variation within each group, so the areas within each color are as close as possible in value to each other.
** Rates based on fewer than 10 infant deaths are unstable and not reported.*
*** Ohio Institute for Equity in Birth Outcomes partnering communities seek to improve overall birth outcomes and reduce racial and ethnic disparities in infant mortality. These metropolitan areas accounted for 59 percent of all infant deaths, and 86 percent of black infant deaths, in Ohio in 2016.*

(Source: Ohio Department of Health, Bureau of Vital Statistics, 2016 Ohio Infant Mortality Data: General Findings, obtained from: https://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/cfhs/OEI/2016-Ohio-Infant-Mortality-Report-FINAL.pdf?la=en)

Child Health: Middle Childhood (Ages 6-11)

Key Findings

The following information was reported by Geauga County parents of 6-11 year olds. In 2016, 77% of Geauga County parents reported their child always felt safe at school. Nine percent (9%) of parents reported their child was bullied at some time in the past year. Twenty-one percent (21%) of parents reported their child had an email or a social network account.

2016 National Survey of Children's Health

- 9% of Ohio and 7% of U.S. parents of 6-11 year olds reported their child watched 4 or more hours of TV or played video games each day.
- 82% of Ohio and 76% of U.S. parents of 6-11 year olds reported their child participated in one or more organized activities outside of school.

(Source: National Survey of Children's Health, 2016)

Middle Childhood

- The following information was reported by Geauga County parents of 6-11 year olds.
- Nearly four-fifths (79%) of parents reported their child participated in extracurricular activities in the past year. Their child participated in the following: a sports team or sports lessons (65%), a religious group (27%), a club or organization such as Scouts (24%), Boys/Girls Club (2%), and some other organized activity (33%). Forty-eight percent (48%) of children participated in more than one activity.
- Geauga County children were enrolled in the following types of schools: public (65%), private (33%) and home-schooled (2%).
- Over three-quarters (77%) of parents reported they felt their child was always safe at school. Twenty-two percent (22%) reported their child was usually safe, and 1% reported they felt their child was never safe at school.
- Parents thought their child was unsafe at school for the following reasons: fear of bullying (11%); fear of other children who demonstrate unusual behavior (7%); buildings are not secure (4%); bomb threats (4%); and drug/alcohol activity (3%). Five percent (5%) of parents had more than one safety concern.
- Nine percent (9%) of parents reported their child was bullied in the past year. The following types of bullying were reported:
  - 23% were verbally bullied (teased, taunted or called harmful names)
  - 12% were indirectly bullied (spread mean rumors about or kept out of a "group")
  - 5% were physically bullied (they were hit, kicked, punched or people took their belongings)
  - 1% were cyber bullied (teased, taunted or threatened by e-mail or cell phone)
  - No parents reported their child was sexually bullied (used nude or semi-nude pictures to pressure someone to have sex that did not want to, blackmail, intimidate, or exploit another person)
- Five percent (5%) of parents reported they did not know if their child was bullied.
- Over one-fifth (21%) of parents reported their child had a social network account. Of those who had an account, they reported the following: they had their child's password (71%), they knew all of the people on their child's "friends" list (61%), and their child's account was checked private (57%). Four percent (4%) of parents reported they did not know if their child had a social network account.
- Parents discussed the following topics with their child in the past year: screen time (58%), eating habits (55%), tobacco use (38%), alcohol use (38%), body image (32%), marijuana and other drugs (29%), refusal skills (28%), prescription drug misuse (13%), dating and relationships (13%), abstinence and how to refuse sex (10%), condoms/safe sex/STD prevention (3%) and birth control (3%). Twenty percent (20%) of parents did not discuss any of the topics with their child.

- Nine percent (9%) of parents had contacted the following agencies to help with problems they had with their child: child's school (4%), mental health (4%), children's services (2%), faith-based agency (1%), law enforcement (1%), and juvenile court (1%).
- Parents reported their child had the following unsupervised time after school on an average school day: less than one hour (23%), 1-2 hours (9%), 3-4 more hours (3%) and more than 4 hours (1%). Sixty-five percent (65%) of parents reported their child was never unsupervised.
- Parents believed that reproductive system education should be covered in the following grades: K-2 (4%), 3-5 (34%), 6-8 (48%), and 9-12 (9%). Five percent (5%) said it should not be covered at all.
- Parents believed that abstinence and refusal skills education should be covered in the following grades: K-2 (7%), 3-5 (20%), 6-8 (61%), and 9-12 (10%). Three percent (3%) said it should not be covered at all.
- Parents believed that birth control and condom use education should be covered in the following grades: K-2 (1%), 3-5 (4%), 6-8 (47%), and 9-12 (33%). Fourteen percent (14%) said it should not be covered at all.

Child Comparisons	Geauga County 2011 6-11 Years	Geauga County 2016 6-11 Years	Ohio 2016 6-11 Years	U.S. 2016 6-11 Years
Child participated in 1 or more activities	N/A	51%	82%	76%
Parent felt child was usually/always safe at school	98%	99%	96%*	94%*

N/A – Not Available
**NSCH 2011/12 data*

Child Health: Family and Community Characteristics

Key Findings

In 2016, 35% of parents reported that every family member who lived in their household ate a meal together every day of the week. Nineteen percent (19%) of parents reported they or someone in the family reads to their child every day.

2016 National Survey of Children's Health

- 51% of Ohio and 53% of U.S. parents of 0-5 year olds reported their family ate a meal together every night of the week.
- 19% of 0-5 year old and 28% of 6-11 year old Ohio children lived in a household with someone who smokes.

(Source: National Survey of Children's Health, 2016)

Family Functioning

- Parents or family members took their children on any kind of outing, such as to the park, library, zoo, shopping, church, restaurants, or family gatherings an average of 4.8 times per week.
- Over one-third (38%) of parents reported their child attended religious services three or more times per month, and 34% reported one to two times per month. Twenty-nine percent (29%) of parents reported their child has never attended a religious service. Parents reported their child attended religious services an average of 2.7 times per month.
- Thirty-five percent (35%) of parents reported that every family member who lived in their household ate a meal together every day of the week. Families ate a meal together an average of 4.8 times per week.
- In the past year, parents reported that someone in the household received the following: mental health/substance abuse treatment (4%), benefits from WIC program (3%), free or reduced cost breakfast or lunches at school (3%), SNAP/food stamps (2%), Help Me Grow (2%), subsidized childcare through Geauga County JFS (1%), cash assistance from a welfare program (1%), and Head Start/Early Head Start (1%).
- One percent (1%) of parents reported their child went to bed hungry at least one day per week because they did not have enough food.
- Parents reported they or someone in their family reads to their child: every day (19%), almost every day (18%), a few times a week (18%), a few times a month (9%), and a few times a year (3%). Twenty-seven percent (27%) of parents reported their child reads to themselves. One percent (1%) reported never reading to their child due to lack of interest from the child.
- Parents reported their child regularly attended the following: elementary school (66%); child care in their home provided by a relative other than a parent/guardian (20%); nursery school, pre-school, or kindergarten (15%); child care in their home provided by a baby sitter (13%); child care outside of their home provided by a relative other than a parent or guardian (12%); child care center (10%); family-based child care outside of home (3%); and Head Start or Early Start program (1%).
- Parents reported the following forms of discipline they used for their child: take away privileges (78%), time out (46%), yelling (35%), grounding (32%), spanking (27%), wash mouth out (4%) and other method (10%).
- Ninety-seven percent (97%) of parents reported their child slept 7 or more hours per night.
- Parents reported the following challenges they face in regards to the day-to-day demands of parenthood/raising children: demands of multiple children (45%), financial burdens (19%), child has special needs (6%), loss of freedom (4%), alcohol and/or difficulty with lifestyle changes (4%), being a single parent (3%), post-partum depression (2%) and drug abuse (1%). Twenty percent (20%) of parents reported having more than one challenges.

- Parents felt they were coping with the day-to-day demands of parenthood very well (54%), somewhat well (44%), not very well (1%), and not well at all (1%).

- In order for their child to grow up successful, parents feel they are meeting the needs of their child very well (77%), somewhat well (23%), not very well (<1%), and not well at all (<1%).

- Parents would consider the following for parental help: parenting apps (27%), internet videos (22%), webinars (18%), parenting groups (15%), and parenting classes (12%).

- Parents reported they were very concerned with the following issues with their child: having enough time with their child (12%); child's academic achievement (10%); their relationship with their child (7%); cell phone and technology use (6%); learning difficulties with their child (5%); internet use (5%); how their child copes with stressful things (5%); their child's self-esteem (4%); their child's anxiety (4%); their child being bullied by their classmates (3%); their child getting along with others (3%); their child's depression (2%); their child talking (1%); risky behaviors (1%); eating disorders (1%); violence in the home, school or neighborhood (1%); substance abuse (1%); and their child walking, or running (<1%). Fifty-four percent (54%) of parents reported having more than one concern.

- Eighty-three percent (83%) of parents reported the primary language spoken in their home was English. Seven percent (7%) spoke German, 1% spoke Spanish, and 8% spoke another language.

Neighborhood and Community Characteristics

- Geauga County parents had the following rules about smoking in their home: no one is allowed to smoke inside their home at any time (90%), smoking is not allowed when children are present (9%), smoking is allowed anywhere (5%), and smoking is allowed in some rooms only (4%).

- Geauga County parents had the following rules about smoking in their car: no one is allowed to smoke inside their car at any time (73%), smoking is not allowed when children are present (3%), smoking is allowed as long as a window is open (<1%), and smoking is allowed anywhere (<1%).

- Geauga County parents reported their child experienced the following adverse childhood experiences (ACEs): their parents became separated or were divorced (10%); lived with someone who was mentally ill or suicidal, or severely depressed for more than a couple of weeks (5%); lived with someone who had a problem with alcohol or drugs (2%); lived with a parent/guardian who served time or was sentenced to serve time in prison or jail after they were born (2%); seen or heard any parents or adults in their home hit, beat, kicked, or physically hurt each other (1%); lived with a parent/guardian who died (1%); were treated or judged unfairly because his/her ethnic group (1%); and been the victim of violence or witness violence in their neighborhood (1%).

- Two percent (2%) of children experienced three or more adverse childhood experiences.

- Parents reported their neighborhood was: always safe (66%), usually safe (34%), and never safe (<1%). Seventy-three percent (73%) of those with incomes less than $25,000 reported their neighborhood was always safe, as compared to 67% of those with higher incomes.

- Parents were concerned about their neighborhood for the following reasons: drugs/alcohol activity (9%), bullying (7%), loud/disrespectful noise levels (2%), crime (2%), gangs (<1%), and other reasons (5%).

- Over two-thirds (69%) of parents had talked to their child about what to do if he/she finds a gun. Twenty-two percent (22%) said they had not talked to their child but planned to, and 9% said they had not talked to their child because he/she is not old enough.

- Parents felt their child's school was meeting their child's educational needs very well (81%), somewhat well (16%), not very well (2%), and not well at all (1%).

- Parents felt their child's school was meeting their child's social needs very well (81%), somewhat well (18%), not very well (<1%), and not well at all (1%).
- Parents felt their child's school was meeting their child's behavioral needs very well (84%), somewhat well (15%), not very well (1%), and not well at all (1%).

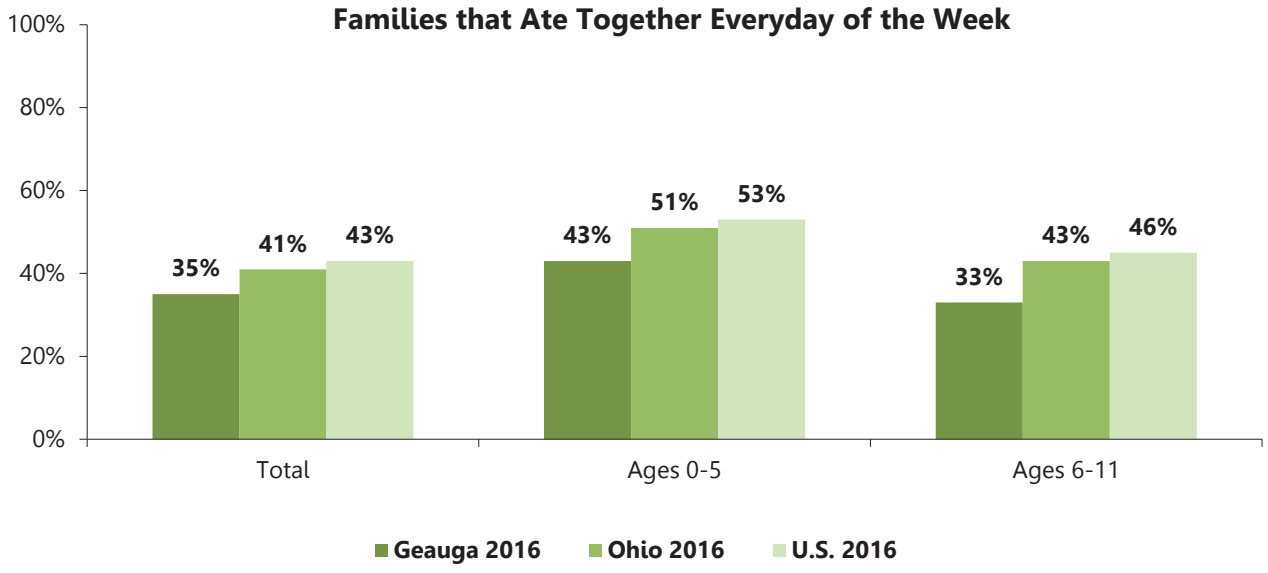
Child Comparisons	Geauga County 2012 0-5 Years	Geauga County 2016 0-5 Years	Ohio 2016 0-5 Years	U.S. 2016 0-5 Years	Geauga County 2012 6-11 Years	Geauga County 2016 6-11 Years	Ohio 2016 6-11 Years	U.S. 2016 6-11 Years
Parent reads to child every day	35%	44%	39%	38%	13%	12%	N/A	N/A
Family eats a meal together every day of the week	38%	43%	51%	53%	15%	33%	43%	45%
Child never attends religious services	27%	28%	N/A	N/A	18%	29%	N/A	N/A

N/A – Not available

Family Dinners

The following graph shows the percent of Geauga County families that ate a meal together every day of the week compared to Ohio and U.S. families.

- U.S. families ate a meal together every day of the week more frequently than Geauga County and Ohio families.



(Source: National Survey of Children's Health & 2016 Geauga County Health Assessment)

Five Ways That Family Meals Keep Kids Healthy

1. Family meals prevent excessive weight gain: Eating 3 or more family meals (meaning at least one parent is present and the meal is prepared at home) results in a 12% lower likelihood of children being overweight.

2. Family meals teach healthy food choices: The eating habits of childhood often last a lifetime. Families that ate at least three meals together each had a 20% decrease in unhealthy food choices. Teaching your children to enjoy healthy foods rather than junk foods is a gift that will stay with them through adulthood.

3. Family meals prevent eating disorders: Children and adolescents who ate family meals at least three times per week had a 35% reduction in disordered eating habits such as anorexia and bulimia.

4. Family dinner improves social-emotional health, too: The ability to understand emotions, express empathy, demonstrate self-regulation, and form positive relationships with peers and adults is called social-emotional health. Young children with high social-emotional health adapt well to the school environment and perform well academically, even in long term studies. Guess which kids had the best social-emotional health? The ones who ate family dinner together regularly and talked about their day, told stories, etc.

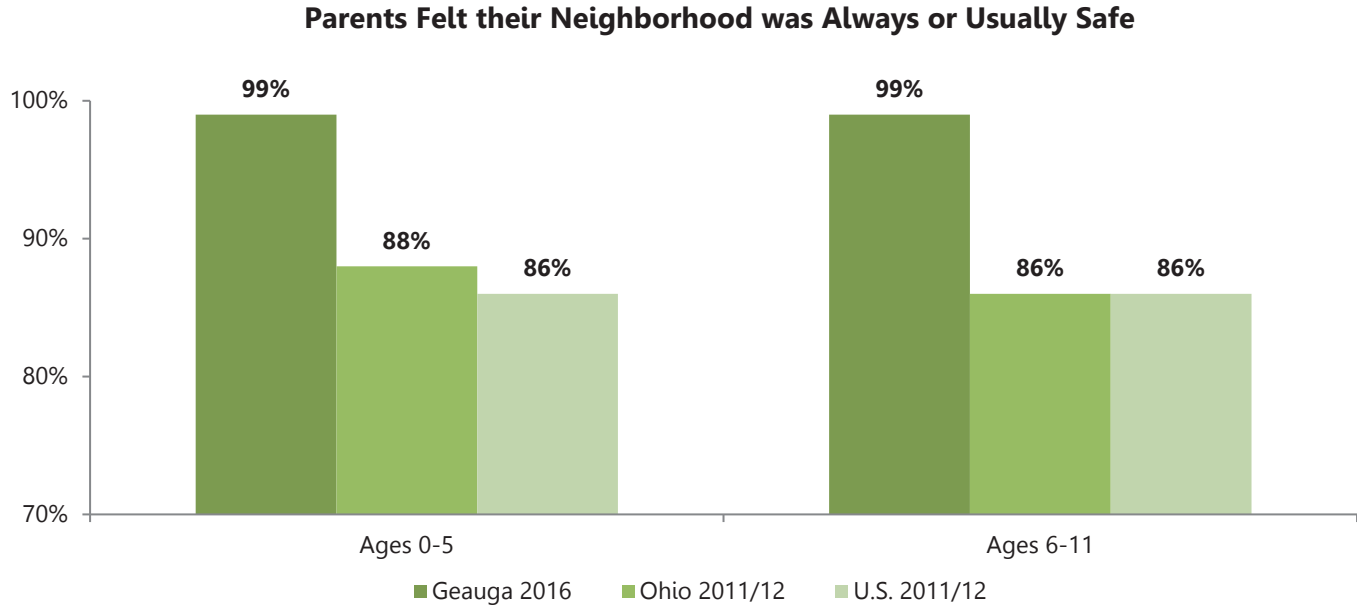
5. Family dinner can help kids deal with cyberbullying: About one-fifth of adolescents are victims of cyberbullying, putting them at risk for depression, substance abuse, and a host of other concerns. But adolescents who eat regular family dinners handle cyberbullying better and are less likely to engage in substance abuse or develop psychiatric health concerns, even after their involvement in face-to-face bullying is taken in to account.

(Source: The Benefits & Tricks to Having a Family Dinner, HealthyChildren.org, 2017)

Neighborhood Safety

The following graph shows the percent of Geauga County, Ohio, and U.S. parents who felt their neighborhood was always or usually safe.

- Geauga County had the largest percent of parents for both the 0-5 age group and the 6-11 age group who felt that their neighborhood was always or usually safe as compared to Ohio and U.S. parents.



**NSCH 2011/12 data*
(Source: National Survey of Children's Health & 2016 Geauga County Health Assessment)

Child Health: Parent Health

Key Findings

In 2016, 91% of parents rated their health as excellent or very good. Parents missed work an average of 0.7 days per year due to their child being ill or injured.

Parent Health

- Those filling out the survey had the following relationship to the child: mother (77%) and father (23%).
- About nine out of ten parents (91%) rated their health as excellent or very good, decreasing to 82% of parents with incomes less than $25,000. Nine percent (9%) of parents rated their health as fair or poor.
- Eighty-six percent (86%) of parents rated their mental and emotional health as excellent or very good. Fourteen percent (14%) rated their mental and emotional health as fair or poor.

2016 National Survey of Children's Health

- 78% of mothers of 0-5 year olds and 77% of mothers of 6-11 year olds in Ohio rated their mental and emotional health as excellent or very good.
- 83% of fathers of 0-5 year olds and 82% of fathers of 6-11 year olds in Ohio rated their mental and emotional health as excellent or very good.
- 5% of Ohio mothers of 0-5 year olds and 9% of mothers of 6-11 year olds rated their mental and emotional health as fair or poor.
- 5% of Ohio fathers of 0-5 year olds and 6% of fathers of 6-11 year olds rated their mental and emotional health as fair or poor.

(Source: National Survey of Children's Health, 2016)

- One-fifth (20%) of mothers and 24% of fathers of 0-5 year olds rated their mental and emotional health as fair or poor.* Twelve percent (12%) of mothers and 14% of fathers of 6-11 year olds rated their mental or emotional health as fair or poor.*
- Parents missed work an average of 0.7 days per year due to their child being ill or injured, 0.5 days per year due to their child's medical appointments, 0.1 days due unreliable child care, 0.7 days due to child's chronic illness, and 0.02 days due to behavioral or emotional problems.

Child Comparisons	Geauga County 2012 0-5 Years	Geauga County 2016 0-5 Years	Ohio 2016 0-5 Years	U.S. 2016 0-5 Years	Geauga County 2012 6-11 Years	Geauga County 2016 6-11 Years	Ohio 2016 6-11 Years	U.S. 2016 6-11 Years
Mother's mental or emotional health is fair/poor	2%	20%*	5%	5%	5%	12%*	9%	6%
Father's mental or emotional health is fair/poor	13%	24%*	5%	3%	2%	14%*	6%	3%

**The response rate for this question was significantly lower compared to 2011 Assessment. Please use numbers with caution.*

Appendix I: Needs Assessment Information Sources

Source	Data Used	Website
American Association of Suicidology	• Suicide Facts	www.suicidology.org/portals/14/docs/resources/factsheets/2015/2015datapgsv1.pdf?ver=2017-01-02-220151-870
American Cancer Society, Cancer Facts and Figures 2017. Atlanta: ACS, 2017	• 2017 Cancer Facts, Figures, and Estimates	www.cancer.org/research/cancer-facts-statistics/all-cancer-facts-figures/cancer-facts-figures-2017.html
American College of Allergy, Asthma & Immunology	• Asthma Facts	http://acaai.org/news/facts-statistics/asthma
American Dental Association	• Oral Health in Older Adults	www.researchamerica.org/sites/default/files/Oral%20Health%20in%20Older%20Americans.pdf
American Diabetes Association, 2017	• Statistics about Diabetes	www.diabetes.org/diabetes-basics/statistics/?referrer=https://www.google.com/
American Heart Association, 2017	• Smoke-free Living: Benefits & Milestones	www.heart.org/HEARTORG/HealthyLiving/QuitSmoking/YourNon-SmokingLife/Smoke-free-Living-Benefits-Milestones_UCM_322711_Article.jsp#.WTl5o-vyvIU
Arthritis at a Glance, 2016, Centers for Disease Control & Prevention,	• Arthritis Statistics	www.cdc.gov/chronicdisease/resources/publications/aag/arthritis.htm
Behavioral Risk Factor Surveillance System, National Center for Chronic Disease Prevention and Health Promotion, Behavioral Surveillance Branch, Centers for Disease Control	• 2016 Adult Ohio and U.S. Correlating Statistics	www.cdc.gov/brfss/index.html
Brady Campaign to Prevent Gun Violence	• Victims of Gun Violence	www.bradycampaign.org/sites/default/files/Brady-Campaign-5Year-Gun-Deaths-Injuries-Stats_June2017.pdf
Caron Pennsylvania	• Characteristics of New Marijuana Users	www.caron.org/understanding-addiction/drug-addiction/marijuana
CDC, Arthritis, 2017	• Arthritis: Key Public Health Messages	www.cdc.gov/arthritis/basics/key.htm
CDC, Asthma	• Asthma Attacks	www.cdc.gov/asthma/pdfs/asthma_facts_program_grantees.pdf
CDC, Cancer Prevention and Control	• Cancer and Men	www.cdc.gov/cancer/dcpc/resources/features/cancerandmen/
CDC, Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion, 2015	• Oral Health Basics	www.cdc.gov/oralhealth/index.html
CDC, Healthy Weight	• Adult BMI	www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html
CDC, HIV/AIDS	• HIV in the U.S.	www.cdc.gov/hiv/default.html

Source	Data Used	Website
CDC, National Center for Health Statistics	• Health Care Access and Utilization	www.cdc.gov/nchs/fastats/access-to-health-care.htm
	• Men's Health	www.cdc.gov/nchs/fastats/mens-health.htm
	• Mental Health	www.cdc.gov/nchs/fastats/mental-health.htm
CDC, Overweight and Obesity	• Progress on Childhood Obesity	www.cdc.gov/vitalsigns/childhoodobesity/
	• Obesity Facts	www.cdc.gov/obesity/data/adult.html
CDC, Physical Activity for Everyone	• Physical Activity Recommendations	www.cdc.gov/physicalactivity/everyone/guidelines/adults.html
CDC, Seasonal Influenza (Flu), 2017	• Who Should Get a Yearly Flu Shot?	www.cdc.gov/flu/protect/whoshouldvax.htm
CDC, Sexually Transmitted Diseases Surveillance, 2017	• U.S. Chlamydia and Gonorrhea Rates	www.cdc.gov/std/stats/
	• STD's in Adolescents and Young Adults	www.cdc.gov/std/life-stages-populations/adolescents-youngadults.htm
	• U.S. STD Surveillance Profile	www.cdc.gov/std/stats/
CDC, Smoking and Tobacco Use	• Electronic Cigarette Use Among Adults	www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/
	• Smoking and Other Health Risks	www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm
CDC, Vaccine Safety, Human Papillomavirus (HPV)	• Human Papillomavirus	www.cdc.gov/vaccinesafety/vaccines/HPV/Index.html
CDC, Vital Signs	• Binge Drinking: A Serious, Under Recognized Problem among Women and Girls	www.cdc.gov/vitalsigns/bingedrinkingfemale/
CDC, Wonder, U.S.	• About Underlying Cause of Death, 2013-2015	http://wonder.cdc.gov/ucd-icd10.html
Community Commons	• Alcohol Beverage Expenditures • Bars and Drinking Establishments • Beer, Wine and Liquor Stores • Cigarette Expenditure	www.communitycommons.org/
Federal Emergency Management Agency (FEMA)	• Basic Disaster Supplies Kit	www.ready.gov/kit
Enough is Enough: Internet Safety 101	• Texting While Driving Statistics and Information	www.internetsafety101.org/textinganddriving.htm
2016 Geauga County Community Health Assessment	• Primary data collected for the 2016 health assessment	www.hcno.org/wp-content/uploads/2017/07/Geauga-County-Final-CHA-7-10-17.pdf

Source	Data Used	Website
Healthy People 2020: U.S. Department of Health & Human Services	• Access to Health Services • All Healthy People 2020 Target Data Points • Predictors of Access to Health Care • Social Determinants of Health • Some U.S. Baseline Statistics	www.healthypeople.gov/2020/topicsobjectives2020
Legacy for Health	• Tobacco Fact Sheet	http://truthinitiative.org/topics/tobacco-products/e-cigarettes
National Institute on Drug Abuse	• Abuse of Prescription (Rx) Drugs Affects Young Adults Most,	www.drugabuse.gov/related-topics/trends-statistics/infographics/abuse-prescription-rx-drugs-affects-young-adults-most
	• Drug Facts: Drugged Driving	www.drugabuse.gov/publications/drugfacts/drugged-driving
	• Drug Facts: Heroin	www.drugabuse.gov/publications/drugfacts/heroin
National Institute of Health, Senior Health	• Hearing Loss	http://nihseniorhealth.gov/hearingloss/hearinglossdefined/01.html
National Survey of Children's Health, Data Resource Center	• Ohio and U.S. child related statistics	http://childhealthdata.org/
Office of Health Transformation	• Ohio Medicaid Assessment Survey	http://grc.osu.edu/OMAS/2015Survey
Office of Criminal Justice Services	• Crime Statistics and Crime Reports	www.ocjs.ohio.gov/crime_stats_reports.stm
Ohio Department of Health, STD Surveillance Data	• Sexually Transmitted Diseases • Geauga County and Ohio Chlamydia and Gonorrhea Disease Rates • Geauga County Chlamydia and Gonorrhea Cases • HIV/AIDS Surveillance Program	www.odh.ohio.gov/odhprograms/stdsurv/stdsur1.aspx
Ohio Department of Health, Information Warehouse	• Geauga County and Ohio Birth Statistics	www.odh.ohio.gov/healthstats/dataandstats.aspx
	• Geauga County and Ohio Leading Causes of Death	http://publicapps.odh.ohio.gov/EDW/DataBrowser/Browse/Mortality
	• Geauga County and Ohio Mortality Statistics	http://publicapps.odh.ohio.gov/EDW/DataBrowser/Browse/Mortality
	• Stroke and heart disease age-adjusted mortality rates	http://publicapps.odh.ohio.gov/EDW/DataBrowser/Browse/Mortality
Ohio Department of Health, Ohio Oral Health Surveillance System	• Geauga County Dental Care Resources	http://publicapps.odh.ohio.gov/oralhealth/default.aspx
Ohio Department of Job and Family Services	• Geauga County and Ohio Medicaid Statistics	http://jfs.ohio.gov/County/cntypro/pdf13/Geauga.stm
Ohio Department of Public Safety	• 2016 Geauga County and Ohio Crash Facts	https://ext.dps.state.oh.us/crashstatistics/CrashReports.aspx

Source	Data Used	Website
Ohio Development Services Agency	• Ohio Poverty Report	www.development.ohio.gov/files/research/p7005.pdf
Ohio Mental Health and Addiction Services	• Opiate and Pain Reliever Doses Per Capital	http://mha.ohio.gov/Portals/0/assets/Research/Maps/Ohio_OARRS_Opioids_2012_v2.pdf
	• Ohio's New Limits on Prescription Opiates	http://mha.ohio.gov/Portals/0/assets/Initiatives/GCOAT/AcutePrescribingLimits_FINAL.pdf
Ohio State Highway Patrol	• Compliant Data • Electronic Crash Records • Felony Cases and Drug Arrests • Geauga County Activity Statistics	www.statepatrol.ohio.gov/doc/2016_Jan-Jun_FelonyAndDrug.pdf
Ohio Suicide Prevention Foundation	• Suicide Deaths by Gender and Age Group	www.ohiospf.org/content.php?pageurl=ohio_statistics
Philadelphia Department of Public Health	• Electronic Cigarette Factsheet	www.smokefreephilly.org/smokfree_philly/assets/File/Electronic%20Cigarette%20Fact%20Sheet_2_27_14.pdf
SAMHSA, Adverse Childhood Experiences	• Adverse Childhood Experiences (ACEs)	www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences
The Henry Kaiser Family Foundation	• How Does Lack of Insurance Affect Access to Health Care?	www.kff.org/uninsured/fact-sheet/key-facts-about-the-uninsured-population/
U. S. Department of Commerce, Census Bureau; Bureau of Economic Analysis	• American Community Survey 5-year estimate, 2016	www.census.gov/programs-surveys/acs/
	• Federal Poverty Threshold	www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html
	• Ohio and Geauga County 2015 Census Demographic Information	https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml
	• Small Area Income and Poverty Estimates	www.census.gov/dud/www/saipe
U.S. Department of Health and Human Services, Ohio Department of Mental Health	• Mental Health Services in Ohio	www.lsc.state.oh.us/fiscal/ohiofacts/sept2012/health&humanservices.pdf

Appendix II: Acronyms and Terms

ACS	**A**mbulatory **C**are **S**ensitive conditions or discharges are conditions for which hospital admission could be prevented by interventions in primary care.
AHS	**A**ccess to **H**ealth **S**ervices, Topic of Healthy People 2020 objectives
Adult	Defined as 19 years of age and older.
Age-Adjusted Mortality Rates	Death rate per 100,000 adjusted for the age distribution of the population.
Adult Binge Drinking	Consumption of five alcoholic beverages or more (for males) or four or more alcoholic beverages (for females) on one occasion.
AOCBC	**A**rthritis, **O**steoporosis, and **C**hronic **B**ack **C**onditions
BMI	**B**ody **M**ass **I**ndex is defined as the contrasting measurement/relationship of weight to height.
BRFSS	**B**ehavior **R**isk **F**actor **S**urveillance **S**ystem, an adult survey conducted by the CDC.
CDC	**C**enters for **D**isease **C**ontrol and **P**revention.
Current Smoker	Individual who has smoked at least 100 cigarettes in their lifetime and now smokes daily or on some days.
CY	**C**alendar **Y**ear
DRE	**D**igital **R**ectal **E**xam
FY	**F**iscal **Y**ear
HCNO	**H**ospital **C**ouncil of **N**orthwest **O**hio
HDS	**H**eart **D**isease and **S**troke, Topic of Healthy People 2020 objectives
HP 2020	**H**ealthy **P**eople **2020**, a comprehensive set of health objectives published by the Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services.
Health Indicator	A measure of the health of people in a community, such as cancer mortality rates, rates of obesity, or incidence of cigarette smoking.
High Blood Cholesterol	240 mg/dL and above
High Blood Pressure	Systolic $\geq$140 and Diastolic $\geq$ 90
IID	**I**mmunizations and **I**nfectious **D**iseases, Topic of Healthy People 2020 objectives
IVP	**I**njury and **V**iolence **P**revention, Topic of Healthy People 2020 objectives
MHMD	**M**ental **H**ealth and **M**ental **D**isorders, Topic of Healthy People 2020 objectives
N/A	Data is not available.
NWS	**N**utrition and **W**eight **S**tatus, Topic of Healthy People 2020 objectives
OARRS	**O**hio **A**utomated Prescription (**R**x) **R**eporting **S**ystem
ODH	**O**hio **D**epartment of **H**ealth
OSHP	**O**hio **S**tate **H**ighway **P**atrol

Race/Ethnicity	**Census 2010:** U.S. Census data consider race and Hispanic origin separately. Census 2010 adhered to the standards of the Office of Management and Budget (OMB), which define Hispanic or Latino as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race." Data are presented as "Hispanic or Latino" and "Not Hispanic or Latino." Census 2010 reported five race categories including: White, Black or African American, American Indian & Alaska Native, Asian, Native Hawaiian and Other Pacific Islander. Data reported, "White alone" or "Black alone", means the respondents reported only one race.
SA	**S**ubstance **A**buse, Topic of Healthy People 2020 objectives
Ohio SHA/SHIP	**Ohio S**tate **H**ealth **A**ssessment/**S**tate **H**ealth **I**mprovement **P**lan
TU	**T**obacco **U**se, Topic of Healthy People 2020 objectives
Weapon	Defined in the YRBS as "a weapon such as a gun, knife, or club"
YPLL/65	**Y**ears of **P**otential **L**ife **L**ost before age 65. Indicator of premature death.
ZCTA	**Z**ip **C**ode **T**abulation **A**rea, Geographic Area represented through Census Business Patterns in Community Commons map

Appendix III: Methods for Weighting the 2016 Geauga County Needs Assessment Data

Data from sample surveys have the potential for bias if there are different rates of response for different segments of the population. In other words, some subgroups of the population may be more represented in the completed surveys than they are in the population from which those surveys are sampled. If a sample has 25% of its respondents being male and 75% being female, then the sample is biased towards the views of females (if females respond differently than males). This same phenomenon holds true for any possible characteristic that may alter how an individual responds to the survey items.

In some cases, the procedures of the survey methods may purposefully over-sample a segment of the population in order to gain an appropriate number of responses from that subgroup for appropriate data analysis when investigating them separately (this is often done for minority groups). Whether the over-sampling is done inadvertently or purposefully, the data needs to be weighted so that the proportioned characteristics of the sample accurately reflect the proportioned characteristics of the population. In the 2016 Geauga County survey, a weighting was applied prior to the analysis that weighted the survey respondents to reflect the actual distribution of Geauga County based on age, sex, race, and income.

Weightings were created for each category within sex (male, female), race (White, Non-White), age (9 different age categories), and income (7 different income categories). The numerical value of the weight for each category was calculated by taking the percent of Geauga County within the specific category and dividing that by the percent of the sample within that same specific category. Using sex as an example, the following represents the data from the 2016 Geauga County Survey and the 2015 Census estimates.

2016 Geauga Survey			**2014 Census Estimate**		**Weight**
Sex	Number	Percent	Number	Percent	
Male	217	49.318182%	46,161	49.17336%	0.99706
Female	223	50.681818%	47,713	50.82664%	1.00285

In this example, it shows that. while nearly the same, there was a slightly larger portion of females in the sample compared to the actual portion in Geauga County. The weighting for males was calculated by taking the percent of males in Geauga County (based on Census information) (49.17336%) and dividing that by the percent found in the 2016 Geauga County sample (49.31818%) [49.17336/49.31818= weighting of 0.99706 for males]. The same was done for females [50.82664/50.68182 = weighting of 1.00286 for females]. Thus males' responses are weighted slightly heavier by a factor of 1.00286 and females' responses weighted slightly less by a factor of 0.99706.

This same thing was done for each of the 20 specific categories as described above. For example, a respondent who was female, White, in the age category 35-44, and with a household income in the $50-$75k category would have an individual weighting of 1.36783 [1.00286 (weight for females) x 1.00840 (weight for White) x 1.61818 (weight for age 35-44) x 0.83586 (weight for income $50-$75k)]. Thus, each individual in the 2016 Geauga County sample has their own individual weighting based on their combination of age, race, sex, and income. See next page for each specific weighting and the numbers from which they were calculated.

Multiple sets of weightings were created and used in the statistical software package (SPSS 23.0) when calculating frequencies. For analyses done for the entire sample and analyses done based on subgroups other than age, race, sex, or income – the weightings that were calculated based on the product of the four weighting variables (age, race, sex, income) for each individual. When analyses were done comparing groups within one of the four weighting variables (e.g., smoking status by race/ethnicity), that specific variable was not used in the weighting score that was applied in the software package. In the example smoking status by race, the weighting score that was applied during analysis included only age, sex, and

income. Thus a total of eight weighting scores for each individual were created and applied depending on the analysis conducted. The weight categories were as follows:

1. **Total weight** (product of 4 weights) – for all analyses that did not separate age, race, sex, or income.
2. **Weight without sex** (product of age, race, and income weights) – used when analyzing by sex.
3. **Weight without age** (product of sex, race, and income weights) – used when analyzing by age.
4. **Weight without race** (product of age, sex, and income weights) – used when analyzing by race.
5. **Weight without income** (product of age, race, and sex weights) – used when analyzing by income.
6. **Weight without sex or age** (product of race and income weights) – used when analyzing by sex and age.
7. **Weight without sex or race** (product of age and income weights) – used when analyzing by sex and race.
8. **Weight without sex or income** (product of age and race weights) – used when analyzing by sex and income.

Category	Geauga Sample	%	2015 Census*	%		Weighting Value
Sex:						
Male	217	49.31818	46,161	49.17336		0.99706
Female	223	50.68182	47,713	50.82664		1.00286
Age:						
20-24	10	2.25225	4,893	7.14359		3.17175
25-34	18	4.05405	7,541	11.00956		2.71569
35-44	41	9.23423	10,235	14.94270		1.61818
45-54	69	15.54054	15,030	21.94321		1.41200
55-59	61	13.73874	7,861	11.47675		0.83536
60-64	73	16.44144	6,556	9.57150		0.58216
65+	172	38.73874	16,379	23.91269		0.61728
Race:						
White	422	95.04505	89,972	95.84336		1.00840
Non-White	22	4.95495	3,902	4.15664		0.83888
Household Income:						
Less than $10,000	7	2.07715	1,244	3.57739		1.72226
$10k-$15k	13	3.85757	1,000	2.87571		0.74547
$15k-$25k	35	10.38576	2,596	7.46535		0.71881
$25k-$35k	23	6.82493	2,544	7.31581		1.07193
$35k-$50	51	15.13353	3,992	11.47984		0.75857
$50k-$75k	76	22.55193	6,555	18.85029		0.83586
$75k-$99k	63	18.69436	4,682	13.46408		0.72022
$100k-$149k	69	20.47478	6,449	18.54547		0.90577
$150k+	49	14.54006	5,712	16.42607		1.12971

Note: The weighting ratios are calculated by taking the ratio of the proportion of the population of Geauga County in each subcategory by the proportion of the sample in the Geauga County survey for that same category.
*** Geauga County population figures taken from the 2015 American Community Survey Estimates of the U.S. Census that were utilized in the 2016 Geauga County Community Health Assessment.**

Appendix IV: Geauga County Sample Demographic Profile*

Variable	2016 Survey Sample	Geauga County Census 2015**	Ohio Census 2015**
Age			
20-29	11.4%	10.0%	13.3%
30-39	12.0%	11.9%	12.2%
40-49	18.0%	15.0%	12.5%
50-59	25.7%	15.6%	14.3%
60 plus	31.0%	21.2%	22.4%
Race/Ethnicity			82.0%
White	95.6%	96.1%	
Black or African American	0.7%	1.2%	12.3%
American Indian and Alaska Native	1.1%	0.1%	0.2%
Asian	0.6%	1.0%	2.0%
Other	1.7%	0.4%	0.8%
Hispanic Origin (may be of any race)	0.3%	1.6%	3.5%
Marital Status†			
Married Couple	59.9%	59.5%	47.5%
Never been married/member of an unmarried couple	21.0%	26.9%	32.1%
Divorced/Separated	10.7%	10.8%	14.0%
Widowed	6.9%	11.5%	6.4%
Education†			
Less than High School Diploma	3.4%	4.7%	10.3%
High School Diploma	26.8%	32.4%	33.7%
Some college/ College graduate	69.3%	41.9%	56.0%
Income (Families)			
$14,999 and less	7.3%	6.4%	7.7%
$15,000 to $24,999	4.6%	8.0%	7.4%
$25,000 to $49,999	13.1%	21.1%	22.1%
$50,000 to $74,999	14.0%	20.5%	20.2%
$75,000 or more	44.7%	15.4%	44.7%

** The percentages reported are the actual percent within each category who responded to the survey. The data contained within the report however are based on weighted data (weighted by age, race, sex, and income). Percentages may not add to 100% due to missing data (non-responses).*

***Geauga County and Ohio population figures taken from the 2015 American Community Survey Estimates of the U.S. Census that were utilized in the 2016 Geauga County Community Health Assessment.*

† The Ohio and Geauga County Census percentages are slightly different than the percent who responded to the survey. Marital status is calculated for those individuals 15 years and older. Education is calculated for those 25 years and older.

Appendix V: Demographics and Household Information

Geauga County Population by Age Groups and Gender, U.S. Census 2010

	Total	Males	Females
Geauga County	**93,408**	**46,235**	**47,173**
0-4 years	**5,211**	**2,680**	**2,531**
1-4 years	4,269	2,200	2,069
< 1 year	942	480	462
1-2 years	1,946	1,020	926
3-4 years	2,323	1,180	1,143
5-9 years	**6,760**	**3,463**	**3,297**
5-6 years	2,588	1,343	1,245
7-9 years	4,172	2,120	2,052
10-14 years	**7,457**	**3,847**	**3,610**
10-12 years	4,327	2,254	2,073
13-14 years	3,130	1,593	1,537
12-18 years	10,673	5,502	5,171
15-19 years	**6,952**	**3,600**	**3,352**
15-17 years	4,809	2,475	2,334
18-19 years	2,143	1,125	1,018
20-24 years	4,027	2,093	1,934
25-29 years	3,488	1,759	1,729
30-34 years	3,711	1,777	1,934
35-39 years	4,884	2,382	2,502
40-44 years	6,700	3,204	3,496
45-49 years	7,708	3,716	3,992
50-54 years	8,453	4,189	4,264
55-59 years	7,355	3,693	3,662
60-64 years	6,209	3,082	3,127
65-69 years	4,751	2,300	2,451
70-74 years	3.257	1,586	1,671
75-79 years	2,515	1,123	1,392
80-84 years	1,979	783	1,196
85-89 years	1,256	444	812
90-94 years	523	139	384
95-99 years	180	40	140
100-104 years	12	2	10
105-109 years	1	0	1
110 years & over	0	0	0
Total 85 years and over	**1,972**	**625**	**1,347**
Total 65 years and over	**14,474**	**6,417**	**8,057**
Total 19 years and over	**67,862**	**32,766**	**35,096**

GEAUGA COUNTY PROFILE

General Demographic Characteristics
(Source: U.S. Census Bureau, Census 2016)

2012-2016 ACS 5-year estimates

Total Population		
2016 Total Population	94,020	
Largest City-Chardon		
2015 Total Population	5,194	100%
2010 Total Population		100%
	5,182	
Population By Race/Ethnicity		
Total Population	94,020	100%
White Alone	90,917	96.7%
Hispanic or Latino (of any race)	1,222	1.3%
African American	1,222	1.3%
Two or more races	1,128	1.2%
Asian	658	0.7%
American Indian and Alaska Native	94	0.1%
Other	282	0.3%
Population By Age		
Under 5 years	4,889	5.2%
5 to 17 years	17,770	18.9%
18 to 24 years	7,616	8.1%
25 to 44 years	17,676	18.8%
45 to 64 years	29,146	31.0%
65 years and more	17,018	18.1%
Median age (years)	**44.2**	
Household By Type		
Total Households	34,890	100%
Family Households (families)	26,346	75.5%
With own children <18 years	10,781	30.9%
Married-Couple Family Households	22,387	64.2%
With own children <18 years	8,552	38.2%
Female Householder, No Husband Present	2,871	12.8%
With own children <18 years	1,428	6.4%
Non-family Households	8,544	38.2%
Householder living alone	7,023	82.2%
Householder 65 years and >	3,101	36.3%
Households With Individuals < 18 years	10,781	30.9%
Households With Individuals 65 years and >	15,107	43.3%
Average Household Size	2.67 people	
Average Family Size	3.10 people	

General Demographic Characteristics, Continued
(Source: U.S. Census Bureau, Census 2016)

2012-2016 ACS 5-year estimates

Median Value of Owner-Occupied Units	$221,500
Median Monthly Owner Costs (With Mortgage)	$1,569
Median Monthly Owner Costs (Not Mortgaged)	$556
Median Gross Rent for Renter-Occupied Units	$815
Median Rooms Per Housing Unit	7.1
Total Occupied Housing Units	34,890
No Telephone Service	1,045
	3.0%
Lacking Complete Kitchen Facilities	1,012
	2.9%
Lacking Complete Plumbing Facilities	211
	0.6%

Selected Social Characteristics
(Source: U.S. Census Bureau, Census 2016)

2012-2016 ACS 5-year estimates

School Enrollment		
Population 3 Years and Over Enrolled In School	22,142	100%
Nursery & Preschool	1,193	5.4%
Kindergarten	723	3.3%
Elementary School (Grades 1-8)	10,862	49.1%
High School (Grades 9-12)	5,270	23.8%
College or Graduate School	4,094	18.5%
Educational Attainment		
Population 25 Years and Over	63,739	100%
< 9th Grade Education	3,554	5.6%
9th to 12th Grade, No Diploma	2,137	3.4%
High School Graduate (Includes Equivalency)	17,216	27.0%
Some College, No Degree	11,912	18.7%
Associate Degree	5,165	8.1%
Bachelor's Degree	15,428	24.2%
Graduate Or Professional Degree	8,327	13.1%
Percent High School Graduate or Higher	*(X)	91.1%
Percent Bachelor's Degree or Higher	*(X)	37.3%

**(X) – Not available*

Selected Social Characteristics, Continued
(Source: U.S. Census Bureau, Census 2016)

2012-2016 ACS 5-year estimate

Marital Status		
Population 15 Years and Over	75,818	100%
Never Married	18,272	24.1%
Now Married, Except Separated	46,325	61.1%
Separated	758	1.0%
Widowed	4,018	5.3%
Female	3,170	8.2%
Divorced	6,445	8.5%
Female	3,556	9.2%
Veteran Status		
Civilian Population 18 years and over	71,298	100%
Veterans 18 years and over	5,911	8.3%
Disability Status of the Civilian Non-Institutionalized Population		
Total Civilian Noninstitutionalized Population	93,367	100%
With a Disability	9,845	10.5%
Under 18 years	22,698	24.3%
With a Disability	913	5.4%
18 to 64 years	54,267	58.1%
With a Disability	4,591	15.5%
65 Years and Over	16,402	17.6%
With a Disability	4,132	57.3%

Selected Economic Characteristics
(Source: U.S. Census Bureau, Census 2016)

2012-2016 ACS 5-year estimates

Employment Status		
Population 16 Years and Over	74,239	100%
In Labor Force	48,463	65.3%
Not In Labor Force	25,776	34.7%
Females 16 Years and Over	37,933	100%
In Labor Force	22,125	58.3%
Population Living With Own Children <6 Years	5,626	100%
All Parents In Family In Labor Force	2,860	50.8%
Class of Worker		
Employed Civilian Population 16 Years and Over	46,497	100%
Private Wage and Salary Workers	38,160	82.%
Government Workers	4,547	9.8%
Self-Employed Workers in Own Not Incorporated Business	3,709	8.0%
Unpaid Family Workers	81	0.2%
Median Earnings		
Male, Full-time, Year-Round Workers	$60,657	
Female, Full-time, Year-Round Workers	$47,594	

Selected Economic Characteristics, Continued
(Source, U.S. Census Bureau, Census 2016)

2012-2016 ACS 5-year estimates

Occupations			
Employed Civilian Population 16 Years and Over		46,497	100%
Production, Transportation, and Material Moving		5,413	11.6%
Management, business, science, and art occupations	18,631	40.1%	
Sales and Office Occupations	11,276	24.3%	
Service Occupations	6,680	14.4%	
Natural Resources, Construction, and Maintenance	4,497	9.7%	
Leading Industries			
Employed Civilian Population 16 Years and Over		46,497	
100%			
Manufacturing	7,544	16.2%	
Educational, health and social services	10,047	21.6%	
Trade (retail and wholesale)	6,482	13.9%	
Arts, entertainment, recreation, accommodation, and food service	3,389	7.3%	
Professional, scientific, management, administrative, and		5,302	11.4%
waste management services			
Transportation and warehousing, and utilities	1,694	3.6%	
Finance, insurance, real estate and rental and leasing	3,160	6.8%	
Other services (except public administration)	2,270	4.9%	
Construction	3,921	8.4%	
Public administration	1,330	2.9%	
Information	663	1.4%	
Agriculture, forestry, fishing and hunting, and mining	695	1.5%	

Bureau of Economic Analysis (BEA) Per Capita Personal Income (PCPI) Figures

	Income	**Rank of Ohio Counties**
BEA Per Capita Personal Income 2016	$61,456	2nd of 88 counties
BEA Per Capita Personal Income 2015	$60,831	2nd of 88 counties
BEA Per Capita Personal Income 2014	$59,561	2nd of 88 counties
BEA Per Capita Personal Income 2013	$56,799	2nd of 88 counties
BEA Per Capita Personal Income 2012	$56,136	2nd of 88 counties

(BEA PCPI figures are greater than Census figures for comparable years due to deductions for retirement, Medicaid, Medicare payments, and the value of food stamps, among other things)

Selected Economic Characteristics, Continued
(Source: U.S. Census Bureau, Census 2016)

2016 ACS 1-year estimate

Income In 2016		
Households	35,519	100%
< $10,000	783	2.2%
$10,000 to $14,999	1,328	3.7%
$15,000 to $24,999	1,239	3.5%
$25,000 to $34,999	2,533	7.1%
$35,000 to $49,999	5,703	16.1%
$50,000 to $74,999	5,869	16.5%
$75,000 to $99,999	4,205	11.8%
$100,000 to $149,999	7,794	21.9%
$150,000 to $199,999	3,256	9.2%
$200,000 or more	2,809	7.9%
Median Household Income	***$76,384***	

Income In 2016		
Families	27,134	100%
< $10,000	591	2.2%
$10,000 to $14,999	183	.7%
$15,000 to $24,999	350	1.3%
$25,000 to $34,999	1,387	5.1%
$35,000 to $49,999	3,841	14.2%
$50,000 to $74,999	4,409	16.2%
$75,000 to $99,999	3,473	12.8%
$100,000 to $149,999	7,217	26.6%
$150,000 to $199,999	3,211	11.8%
$200,000 or more	2,472	9.1%

Median Family Income	***$94,685***

Per Capita Income In 2016	**$36,337**

Poverty Status In 2016	***Number Below Poverty Level***	***% Below Poverty Level***
Families	*(X)	3.1%
Individuals	*(X)	4.6%

**(X) – Not available*

Poverty Rates, 5-year averages
2011 to 2015

Category	Geauga	Ohio
Population in poverty	7.5%	15.8%
< 125% FPL (%)	10.8%	20.3%
< 150% FPL (%)	14.8%	24.8%
< 200% FPL (%)	22.1%	33.9%
Population in poverty (2000)	5.2%	10.6%

(Source: The Ohio Poverty Report, Ohio Development Services Agency, February 2017, https://www.development.ohio.gov/files/research/p7005.pdf)

Employment Statistics

Category	Geauga	Ohio
Labor Force	48,600	5,748,400
Employed	46,100	5,473,400
Unemployed	2,500	275,000
Unemployment Rate* in February 2018	5.1	4.8
Unemployment Rate* in January 2018	5.0	5.1
Unemployment Rate* in February 2017	6.3	5.9

**Rate equals unemployment divided by labor force.*
(Source: Ohio Department of Job and Family Services, February 2018, http://ohiolmi.com/laus/current.htm)

Estimated Poverty Status in 2016

Age Groups	Number	90% Confidence Interval	Percent	90% Confidence Interval
Geauga County				
All ages in poverty	5,451	4,338 to 6,564	5.8%	4.6 to 7.0
Ages 0-17 in poverty	1,806	1,388 to 2,224	8.3%	6.4 to 10.2
Ages 5-17 in families in poverty	1,234	931 to 1,537	7.3%	5.5 to 9.1
Median household income	$77,938	$72,615 to $83,261		
Ohio				
All ages in poverty	1,639,636	1,614,177 to 1,665,095	14.5%	14.3 to 14.7
Ages 0-17 in poverty	521,730	506,894 to 536,566	20.4%	19.8 to 21.0
Ages 5-17 in families in poverty	348,713	335,691 to 361,735	18.7%	18.0 to 19.4
Median household income	$52,357	$52,083 to $52,631		
United States				
All ages in poverty	44,268,996	44,022,086 to 44,515,906	14.0%	13.9 to 14.1
Ages 0-17 in poverty	14,115,713	13,976,345 to 14,255,081	19.5%	19.3 to 19.7
Ages 5-17 in families in poverty	9,648,486	9,548,767 to 9,748,205	18.3%	18.1 to 18.5
Median household income	57,617	$57,502 to $57,732		

(Source: U.S. Census Bureau, 2016 Poverty and Median Income Estimates, https://www.census.gov/data/datasets/2016/demo/saipe/2016-state-and-county.html)

Federal Poverty Thresholds in 2017 by Size of Family and Number of Related Children Under 18 Years of Age

Size of Family Unit	No Children	One Child	Two Children	Three Children	Four Children	Five Children
1 Person <65 years	$12,752					
1 Person 65 and >	$11,756					
2 people Householder < 65 years	$16,414	$16,895				
2 People Householder 65 and >	$14,816	$16,831				
3 People	$19,173	$19,730	$19,749			
4 People	$25,283	$25,696	$24,858	$24,944		
5 People	$30,490	$30,933	$29,986	$29,253	$28,805	
6 People	$35,069	$35,208	$34,482	$33,787	$32,753	$32,140
7 People	$40,351	$40,603	$39,734	$39,129	$38,001	$36,685
8 People	$45,129	$45,528	$44,708	$43,990	$42,971	$41,678
9 People or >	$54,287	$54,550	$53,825	$53,216	$52,216	$50,840

(Source: U. S. Census Bureau, Poverty Thresholds 2017, https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html)

Appendix VI: County Health Rankings

	Geauga County	Ohio	U.S.
Health Outcomes			
Premature death. Years of potential life lost before age 75 per 100,000 population (age-adjusted) (2012-2014)	4,500	7,600	7,700
Overall heath. Percentage of adults reporting fair or poor health (age-adjusted) (2015)	13%	15%	16%
Physical health. Average number of physically unhealthy days reported in past 30 days (age-adjusted) (2015)	3.2	3.7	3.8
Mental health. Average number of mentally unhealthy days reported in past 30 days (age-adjusted) (2015)	3.6	4.0	3.8
Maternal and infant health. Percentage of live births with low birthweight (< 2500 grams) (2008-2014)	6%	9%	8%
Health Behaviors			
Tobacco. Percentage of adults who are current smokers (2015)	16%	22%	17%
Obesity. Percentage of adults that report a BMI of 30 or more (2015)	27%	31%	31%
Food environment. Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best) (2014)	8.5	7.0	7.3
Physical activity. Percentage of adults aged 20 and over reporting no leisure-time physical activity (2013)	25%	25%	26%
Active living environment. Percentage of population with adequate access to locations for physical activity (2010 & 2014)	90%	83%	62%
Drug and alcohol abuse. Percentage of adults reporting binge or heavy drinking (2015)	17%	19%	17%
Drug and alcohol abuse and injury. Percentage of driving deaths with alcohol involvement (2011-2015)	36%	34%	30%
Infectious disease. Number of newly diagnosed chlamydia cases per 100,000 population (2014)	109.6	474.1	294.8
Sexual and reproductive health. Teen birth rate per 1,000 female population, ages 15-19 (2008-2014)	9	32	38

**Source: 2017 County Health Rankings for Geauga County, Ohio and U.S. data*
N/A – Data is not available

	Geauga County	Ohio	U.S
Clinical Care			
Coverage and affordability. Percentage of population under age 65 without health insurance (2014)	10%	10%	14%
Access to health care/medical care. Ratio of population to primary care physicians (2014)	1,410:1	1300:1	2,030:1
Access to dental care. Ratio of population to dentists (2015)	2,190:1	1690:1	2,570:1
Access to behavioral health care. Ratio of population to mental health providers (2016)	590:1	630:1	56
Hospital utilization. Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees (2014)	46	60	86%
Diabetes. Percentage of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring (2014)	87%	85%	61%
Cancer. Percentage of female Medicare enrollees ages 67-69 that receive mammography screening (2014)	66%	61%	14%
Social and Economic Environment			
Education. Percentage of ninth-grade cohort that graduates in four years (2014-2015)	94%	81%	88%
Education. Percentage of adults ages 25-44 years with some post-secondary education (2011-2015)	65%	64%	57%
Employment, poverty, and income. Percentage of population ages 16 and older unemployed but seeking work (2015)	4%	5%	5.3%
Employment, poverty, and income. Percentage of children under age 18 in poverty (2015)	9%	21%	22%
Employment, poverty, and income. Ratio of household income at the 80th percentile to income at the 20th percentile (2011-2015)	4.1	4.8	4.4
Family and social support. Percentage of children that live in a household headed by single parent (2011-2015)	16%	36%	32%
Family and social support. Number of membership associations per 10,000 population (2015)	9.7	11.3	12.6
Violence. Number of reported violent crime offenses per 100,000 population (2012-2014)	43	290	198
Injury. Number of deaths due to injury per 100,000 population (2011-2015)	58	70	77

**Source: 2017 County Health Rankings for Geauga County, Ohio and U.S. data*
N/A – Data is not available

	Geauga County	Ohio	U.S.
Physical Environment			
Air, water, and toxic substances. Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) (2012)	11.4	11.3	9.2
Air, water, and toxic substances. Indicator of the presence of health-related drinking water violations. 1 - indicates the presence of a violation, 0 - indicates no violation (FY 2013-2014)	No	N/A	N/A
Housing. Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities (2009-2013)	14%	15%	14%
Transportation. Percentage of the workforce that drives alone to work (2011-2015)	81%	83%	81%
Transportation. Among workers who commute in their car alone, the percentage that commute more than 30 minutes (2011-2015)	46%	30%	30%

**Source: 2017 County Health Rankings for Geauga County, Ohio and U.S. data*
N/A – Data is not available

Appendix VII: Priority Areas and Resources

The Partnership for a Healthy Geauga (PHG) met multiple times to complete the 2018-2019 Geauga County Community Health Improvement Plan. PHG used the Mobilizing for Action through Planning and Partnerships (MAPP) process, which is a community-driven strategic planning process for improving community health. This framework helps communities apply strategic thinking to prioritize health issues and identify resources to address them.

The Partnership for a Healthy Geauga sub-contracted with the Lake County General Health District to facilitate the community health improvement planning process. PHG used a ranking process with an electronic polling system to determine priorities.

Details of this process and its results can be found on the Geauga County Health Department's website. Geauga County is focused on the following three priority areas: Mental Health and Addiction; Chronic Disease; and Maternal and Infant Health.

The following is a list of available facilities and resources that the University Hospitals Geauga Medical Center uses to assist in meeting identified community health needs:

Priority Area	Coordinating Agencies and Team Members
Mental Health and Addiction	• Big Brothers Big Sisters of Northeast Ohio • Board of Developmental Disabilities • Catholic Charities • DDC Clinic • Family Pride • Geauga County Sheriff's Office • Geauga Public Health • Help Me Grow • Lake-Geauga Recovery Centers • Lake-Geauga WIC • NAMI-Geauga • Ravenwood Health • University Hospitals Geauga Medical Center • WomenSafe, Inc.
Chronic Disease	• Catholic Charities • Geauga Public Health • Lake-Geauga Recovery Centers • Lake-Geauga WIC • University Hospitals Geauga Medical Center
Maternal and Infant Health	• Catholic Charities • Family Planning Association of Northeast Ohio, Inc. • Geauga Public Health • Help Me Grow • Lake-Geauga Recovery Centers • Lake-Geauga WIC • Middlefield Care Center • University Hospitals Geauga Medical Center • WomenSafe, Inc.