Ashtabula County Medical Center

ACMC Healthcare System

An affiliate of Cleveland Clinic

Community Health Needs Assessment

2016

October 26, 2016

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EXECUTIVE SUMMARY

Introduction

This Community Health Needs Assessment (CHNA) was conducted by Ashtabula County Medical Center ("ACMC" or "the hospital") to identify significant community health needs, to inform development of an Implementation Strategy to address current needs and to evaluate the impact of ongoing efforts to address previously identified community needs.

ACMC is a private, not-for-profit, community-oriented medical center that provides the best possible medical care through all phases of life to those seeking help. The ACMC health care team is committed to preserving the human rights and dignity of those who receive care and those who provide it. Additional information on the hospital and its services is available at: http://www.acmchealth.org/

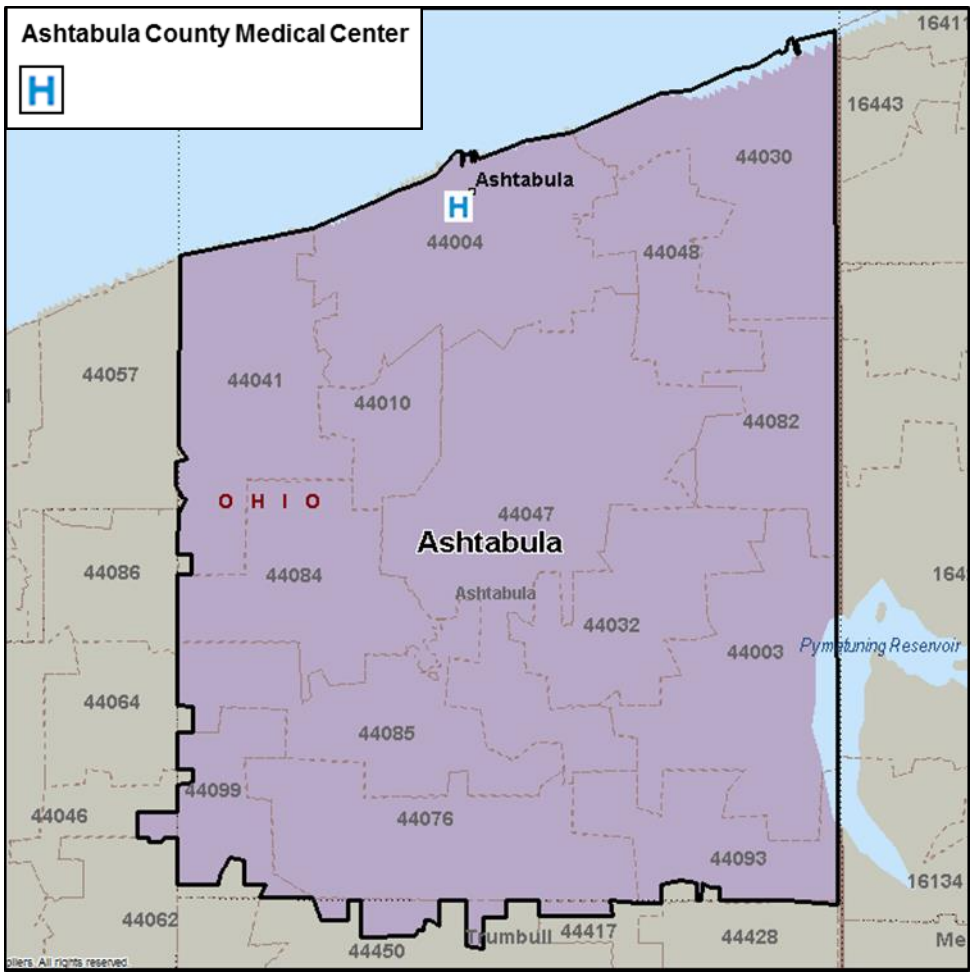
The hospital is affiliated with the Cleveland Clinic health system, which includes an academic medical center, multiple regional hospitals, two children's hospitals, a rehabilitation hospital, a Florida hospital and a number of other facilities and services across Northeast Ohio and Florida. Additional information about Cleveland Clinic is available at: https://my.clevelandclinic.org/.

Each Cleveland Clinic hospital is dedicated to the communities it serves. Cleveland Clinic hospitals verify the health needs of communities by performing periodic health needs assessments. These formal assessments are analyzed using widely accepted criteria to determine and measure the health needs of a specific community.

Community Definition

For purposes of this report, ACMC's community is defined as Ashtabula County, Ohio comprising virtually 100 percent of the hospital's inpatient volumes. This area has comparatively unfavorable health status and socioeconomic indicators, particularly for minority residents. The total population of ACMC's community in 2015 was 101,450.

The following map portrays the community served by ACMC.



Significant Community Health Needs

Six significant community health needs were identified through this assessment:

1. Access to Affordable Healthcare
2. Chronic Diseases and Other Health Conditions
3. Economic Development and Community Conditions
4. Health Professions Recruitment
5. Healthcare for the Elderly
6. Wellness

Based on an assessment of secondary data (a broad range of health status and access to care indicators) and of primary data (received through key stakeholder interviews), the following were identified as significant health needs in the community served by ACMC. The needs are presented below in alphabetical order, along with certain highlights regarding why each issue was identified as "significant."

Access to Affordable Health Care

- Access to basic health care is challenging for some segments of the ACMC community who are unaware of how to access and use available services and who experience other access barriers including cost and inadequate transportation. The ACMC community has comparatively unfavorable socioeconomic indicators, particularly in medically underserved areas.

Chronic Diseases and Other Health Conditions

- Chronic diseases and other health conditions including, in alphabetical order: cancer, chemical dependency, diabetes, heart disease, hypertension, obesity, poor birth outcomes, and poor mental health were identified as prevalent in the ACMC community.

Economic Development and Community Conditions

- Several areas within the ACMC community lack adequate social services and experience high rates of poverty, unemployment, and crime.

Health Professions Recruitment

- There is a need for more trained health professionals in the community, particularly primary care physicians, dentists, and mental health providers.

Healthcare for the Elderly

- The elderly population in the ACMC community is expected to increase in the next five years and meeting the health and social service needs of the aging population is a significant issue.

Wellness

- Programs and activities that target behavioral health change were identified as needed in the ACMC community. Education and opportunities for residents regarding exercise, nutrition, and smoking cessation specifically were noted.

OBJECTIVES AND METHODOLOGY

Regulatory Requirements

Federal law requires that tax-exempt hospital facilities conduct a CHNA every three years and adopt an Implementation Strategy that addresses significant community health needs.[1] Each tax-exempt hospital facility must conduct a CHNA that identifies the most significant health needs in the hospital's community.

The regulations require that each hospital:

- Take into account input from persons representing the broad interests of the community, including those knowledgeable about public health issues, and
- Make the CHNA widely available to the public.

The CHNA report must include certain information including, but not limited to:

- A description of the community and how it was defined,
- A description of the methodology used to determine the health needs of the community, and
- A prioritized list of the community's health needs.

Tax-exempt hospital organizations also are required to report information about the CHNA process and about community benefits they provide on IRS Form 990, Schedule H. As described in the instructions to Schedule H, community benefits are programs or activities that provide treatment and/or promote health and healing as a response to identified community needs. Community benefit activities and programs also seek to achieve objectives, including:

- improving access to health services,
- enhancing public health,
- advancing increased general knowledge, and
- relief of a government burden to improve health.[2]

To be reported, community need for the activity or program must be established. Need can be established by conducting a Community Health Needs Assessment.

CHNAs seek to identify significant health needs for particular geographic areas and populations by focusing on the following questions:

- ***Who*** in the community is most vulnerable in terms of health status or access to care?
- ***What*** are the unique health status and/or access needs for these populations?
- ***Where*** do these people live in the community?

[1] Internal Revenue Code, Section 501(r).
[2] Instructions for IRS form 990 Schedule H, 2015.

- ***Why*** are these problems present?

The question of ***how*** each hospital can address significant community health needs is the subject of the separate Implementation Strategy.

Methodology

Federal regulations that govern the CHNA process allow hospital facilities to define the community they serve based on "all of the relevant facts and circumstances," including the "geographic location" served by the hospital facility, "target populations served" (e.g., children, women, or the aged), and/or the hospital facility's principal functions (e.g., focus on a particular specialty area or targeted disease)."[3] The community defined by ACMC accounts for virtually 100 percent of the hospital's 2014 inpatient discharges.

This assessment was conducted by Verité Healthcare Consulting, LLC. *See* Appendix A.

Secondary data from multiple sources were gathered and assessed. *See* Appendix B. Considering a wide array of information is important when assessing community health needs to ensure the assessment captures a wide range of facts and perspectives and to increase confidence that significant community health needs have been identified accurately and objectively.

Input from the community was received through key informant interviews. These informants represented the broad interests of the community and included individuals with special knowledge of or expertise in public health. *See* Appendix C.

Certain community health needs were determined to be "significant" if they were identified as problematic in at least two of the following three data sources: (1) the most recently available secondary data regarding the community's health, (2) recent assessments developed by other organizations, and (3) input from the key informants who participated in the interview process.

In addition, data was gathered to evaluate the impact of various services and programs identified in the previous CHNA process. *See* Appendix D.

Collaborating Organizations

ACMC is affiliated with the Cleveland Clinic health system. As such, the hospital collaborated with Cleveland Clinic Main Campus, Cleveland Clinic Children's, as well as seven other Cleveland Clinic community hospitals, including Euclid Hospital, Fairview Hospital, Hillcrest Hospital, Lutheran Hospital, Marymount Hospital, Medina Hospital, and South Pointe Hospital. ACMC also collaborated with Glenbeigh, a member of the ACMC Healthcare System.

[3] 501(r) Final Rule, 2014.

Data Sources

Community health needs were identified by collecting and analyzing data from multiple sources. Statistics for numerous community health status, health care access, and related indicators were analyzed, including data provided by local, state, and federal government agencies, local community service organizations, and Cleveland Clinic. Comparisons to benchmarks were made where possible. Findings from recent assessments of the community's health needs conducted by other organizations (e.g., local health departments) were reviewed as well.

Input from 15 persons representing the broad interests of the community was taken into account through key informant interviews. Interviewees included: individuals with special knowledge of or expertise in public health; local public health departments; agencies with current data or information about the health and social needs of the community; representatives of social service organizations; and leaders, representatives, and members of medically underserved, low-income, and minority populations.

Information Gaps

This CHNA relies on multiple data sources and community input gathered between January 2016 and July 2016. A number of data limitations should be recognized when interpreting results. For example, some data (e.g., County Health Rankings, Community Health Status Indicators, Behavioral Risk Factors Surveillance System, and others) exist only at a county-wide level of detail. Those data sources do not allow assessing health needs at a more granular level of detail, such as by ZIP code or census tract.

Secondary data upon which this assessment relies measure community health in prior years. For example, the most recently available mortality data published by the Ohio Department of Health are from 2012. Others sources incorporate data from 2010. The impacts of recent public policy developments, changes in the economy, and other community developments are not yet reflected in those data sets.

The findings of this CHNA may differ from those of others conducted in the community. Differences in data sources, communities assessed (e.g., hospital service areas versus counties or cities), and prioritization processes can contribute to differences in findings.

DATA AND ANALYSIS

Definition of Community Assessed

This section identifies the community that was assessed by ACMC. The community was defined by considering the geographic origins of the hospital's 2014 inpatient discharges.

On that basis, ACMC's community is comprised of the 17 ZIP codes in Ashtabula County (**Exhibit 1**) which in 2014 accounted for virtually 100 percent of its inpatient discharges.

Exhibit 1: ACMC Inpatient Discharges by ZIP Code, 2014

City	ZIP Code	Inpatient Cases (2014)	Percent of Total
Ashtabula	44004	3,060	61%
Conneaut	44030	538	11%
Jefferson	44047	485	10%
Kingsville	44048	226	4%
Geneva	44041	215	4%
Andover	44003	89	2%
Rock Creek	44084	79	2%
Dorset	44032	73	1%
Austinburg	44010	59	1%
Ashtabula	44005	58	1%
Pierpont	44082	48	1%
North Kingsville	44068	33	1%
Orwell	44076	31	1%
Rome	44085	23	0%
Williamsfield	44093	11	0%
Windsor	44099	2	0%
Unionville	44088	1	0%
Subtotal		5,031	**100%**
Other Areas		0	0%
Total Discharges		5,031	100%

Source: Analysis of OHA Discharge Data, 2014.
*ZIP codes 44005, 44068, and 44088 are classified as P.O. Boxes and will not appear in subsequent exhibits.

The total population of this community in 2014 was approximately 101,000 persons (**Exhibit 2**).

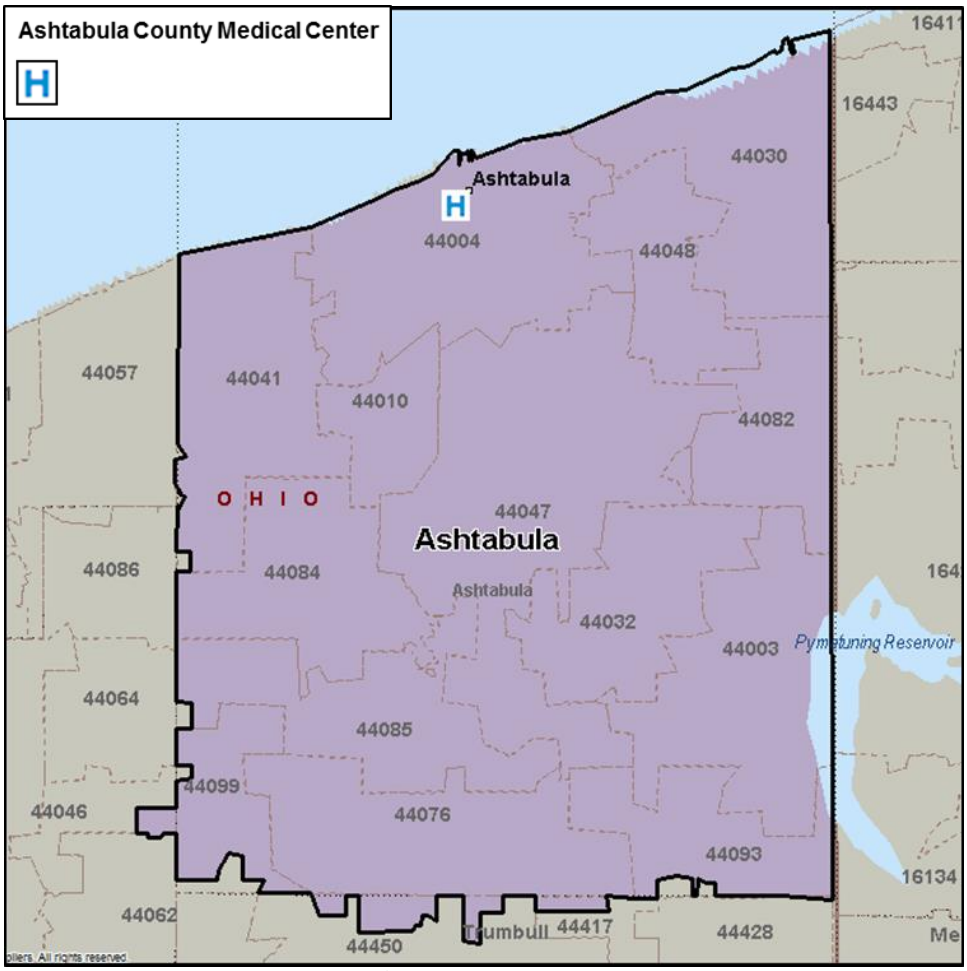
Exhibit 2: Community Population, 2014

City	ZIP Code	Total Population 2014	Percent of Total Population 2014
Andover	44003	4,761	4.7%
Ashtabula	44004	32,956	32.7%
Austinburg	44010	1,760	1.7%
Conneaut	44030	16,518	16.4%
Dorset	44032	1,418	1.4%
Geneva	44041	14,724	14.6%
Jefferson	44047	8,787	8.7%
Kingsville	44048	3,075	3.1%
Orwell	44076	4,956	4.9%
Pierpont	44082	1,271	1.3%
Rock Creek	44084	3,746	3.7%
Rome	44085	3,208	3.2%
Williamsfield	44093	1,537	1.5%
Windsor	44099	2,101	2.1%
Total		**100,818**	**100.0%**

Source: US Census Bureau, ACS 5-Year Estimates, 2010-2014.

The hospital is located in Ashtabula, Ohio (ZIP code 44004). The map in **Exhibit 3** portrays the ZIP codes that comprise the ACMC community.

Exhibit 3: ACMC Community



Source: Microsoft MapPoint and Cleveland Clinic, 2015.

Secondary Data Summary

The following section summarizes principal findings from the secondary data analysis. Appendix C provides more detailed information.

Demographics

Population characteristics and changes directly influence community health needs. The total population in the ACMC community is expected to decrease 0.2 percent from 2015 to 2020.

While the total population is expected to decrease, the number of persons aged 65 years and older is projected to increase by 12.8 percent between 2015 and 2020. The growth of older populations is likely to lead to growing need for health services, since on an overall per-capita basis, older individuals typically need and use more services than younger persons.

In 2014, over five percent of the population in two ZIP codes on the northern side of the community (44030 and 44004) was Black. In six other ZIP codes, this percentage was under one percent.

Ashtabula County had a higher percentage of residents aged 25 years and older without a high school diploma than Ohio and United States averages. Compared to Ohio, Ashtabula County had a lower proportion of the population that is linguistically isolated.[4]

Economic Indicators

Many health needs have been associated with poverty. According to the U.S. Census, in 2014 approximately 15.9 percent of people in Ohio were living in poverty. At 19 percent, Ashtabula County's poverty rate was higher than Ohio's poverty rate during that year. In Ashtabula County, poverty rates have been comparatively high for Black and Hispanic (or Latino) residents. Low income census tracts are prevalent around ACMC and in the southeastern and northwestern areas of the community. Poverty rates have been above 35 percent in ZIP codes 44003, 44004, and 44093.

2014 crime rates in Ashtabula County were below Ohio averages for all crimes.

The percentage of people uninsured has declined in recent years, due to two primary factors. First, between 2010 and 2015, unemployment rates at the local (Ashtabula County), state, and national level decreased significantly. Many receive health insurance coverage through their (or a family member's) employer. Second, in 2010 the Patient Protection and Affordable Care Act (ACA, 2010) was enacted, and Ohio was among the states that expanded Medicaid eligibility. In 2014, eleven out of the 14 ZIP codes in the ACMC community had uninsured rates above ten percent.

[4] Linguistic isolation is defined as residents who speak a language other than English and speak English less than "very well."

Local Health Status and Access Indicators

In the 2016 *County Health Rankings*, Ashtabula County ranked in the bottom one-half of Ohio counties for 24 of the 27 indicators assessed. For 15 issue areas, the county ranked in the bottom quartile including: Health Factors, Length of Life, Health Behaviors, Clinical Care, Social & Economic Factors, and Physical Environment. The county's ranking fell between 2013 and 2016, particularly for various social and economic factors, clinical care, adult smoking, and physical environment. The following indicators underlying the rankings are comparatively unfavorable:

- Ambulatory-care sensitive condition hospitalization rate
- Injury mortality rate
- Percent of adults that report smoking
- Percent of adults with some post-secondary education
- Percent of children in poverty
- Percent of children living in a household headed by a single parent
- Percent of driving deaths with alcohol involvement
- Percent of females receiving mammography screenings
- Percent of households with severe housing problems
- Percent of population with adequate access to locations for physical activity
- Percent of the population unemployed
- Percent of the population without health insurance
- Percent of workers with a long commute
- Ratio of population to dentists
- Ratio of population to mental health providers
- Ratio of population to primary care physicians
- Teen birth rate
- Years of potential life lost

In the 2015 *Community Health Status Indicators*, which compares community health indicators for each county with those for peers across the United States, the following needs appear to be most significant:

- Cancer
- Coronary Heart Disease
- Diabetes Mortality Rates
- Female Life Expectancy
- High Housing Costs
- Housing Stress
- Limited Access to Healthy Food
- Poverty
- Primary Care Provider Access
- Unemployment

According to the Ohio Department of Health, age-adjusted mortality rates for heart disease, suicide, motor vehicle collisions (both involving and not involving alcohol), aortic aneurysms, HIV, and pedestrians killed in traffic collisions were all significantly higher in Ashtabula County than the Ohio averages. Overall age-adjusted mortality and incidence rates for cancer have been above average.

Ohio Department of Health data also indicate that:

- The incidence of several communicable diseases has been particularly high in Ashtabula County, including varicella and hepatitis A, B, and C.
- Infant and post-neonatal mortality rates and birth rates for teens and unmarried women are comparatively high in Ashtabula County.

Data from the Centers for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS) indicate comparatively high rates for all chronic conditions, including obesity, back pain, diabetes, asthma, depression, high blood pressure, high cholesterol, COPD, and smoking across the community.

Ambulatory Care Sensitive Conditions

Ambulatory Care Sensitive Conditions (ACSCs) are fourteen health "conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease."[5] Among these conditions are: angina without procedure, diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

ACSC rates in the ACMC community have exceeded the Ohio averages for 8 of 14 conditions. Rates for hypertension, congestive heart failure, bacterial pneumonia, urinary tract infections, angina without procedure, and uncontrolled diabetes were particularly problematic.

Community Need Index

Dignity Health, a California-based hospital system, developed and has made widely available for public use a *Community Need Index*™ (CNI) that measures barriers to health care access by county/city and ZIP code. The index is based on five social and economic indicators:

- The percentage of elders, children, and single parents living in poverty
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White
- The percentage of the population without a high school diploma
- The percentage of uninsured and unemployed residents
- The percentage of the population renting houses

[5]Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

The CNI calculates a score for each ZIP code based on these indicators. Scores range from "Lowest Need" (1.0-1.7) to "Highest Need" (4.2-5.0).

The CNI indicates that four of the 14 ZIP codes in the ACMC community scored in the "high need category." Ashtabula ZIP code 44004 had the highest CNI score at 4.0 and ZIP codes 44003, 44030, and 44041 had CNI scores of 3.6, 3.6, and 3.4, respectively.

Food Deserts

The U.S. Department of Agriculture's Economic Research Service estimates the number of people in each census tract that live in a "food desert," defined as low-income areas more than one mile from a supermarket or large grocery store in urban areas and more than 10 miles from a supermarket or large grocery store in rural areas. Several locations within the ACMC community have been designated as food deserts.

Medically Underserved Areas and Populations

Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over. Areas with a score of 62 or less are considered "medically underserved." There are 9 census tracts in the hospital's community that have been designated as medically underserved.

Health Professional Shortage Areas

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present. A number of areas have been designated to be HPSAs in the hospital's community for primary care, along with the entire county designated for dental health and mental health.

Relevant Findings of Other CHNAs

The following community health needs were most frequently found to be significant in other, recently conducted community health needs assessments:

- Access to basic/primary health care
- Drug/substance abuse
- Mental/behavioral health
- Obesity
- Diabetes
- Tobacco use/smoking
- Cancer
- Cost of care

- Transportation
- Unemployment
- Access to dental care
- Cardiovascular/heart disease

Primary Data Summary

The following issues were identified by external informants as those of greatest concern to community health in the ACMC community, and are presented in general order of importance.

Obesity and Comorbid Conditions. Obesity and associated conditions, including diabetes and heart disease, were the most frequently cited significant health concerns in the ACMC community. Interviewees attributed the high rate of obesity to a lack of education about nutrition and a lack of access to healthy food. Lower-income residents were perceived as being most affected by this concern, as they were least likely to be able to afford healthy food options, which are generally more expensive and less calorie dense than other foods. Interviewees also believed that many of the health issues related to obesity were exacerbated by a lack of knowledge about wellness in general and believed that increasing community awareness about the importance of prevention could greatly improve the health of the community.

Access to Care. One of the chief barriers to improving community-wide health outcomes is the inability to access available resources. Lack of awareness of available services, lack of health insurance or of knowledge on its use, transportation, and providers not accepting Medicaid and other insurances also impede access to care. Many interviewees indicated that social determinants of health were also a large barrier, and disproportionately affect the community's low socio-economic status groups, immigrant populations, those with language barriers, minority populations, elderly adults, and adolescents. Of the health care services that were identified as particularly challenging to access, obstetrics/gynecological services and dental care were mentioned most frequently. Most interviewees believed that there is a shortage of physicians and dentists within the community.

Substance Abuse. A majority of interviewees indicated that substance abuse and addiction were significant health concerns. The abuse of narcotics, particularly heroin, was seen as a pervasive issue, affecting individuals of all ages, races, and incomes. Treatment services needed to remediate this problem were cited as being fragmented and difficult to access. The increased availability and affordability of substances like heroin was perceived as worsening the issue. Interviewees also believed that there was a relationship between the substance abuse problem and unemployment rates in the community.

Conditions and Care of the Elderly. Aging well in the community was a top concern of many interviewees. With an aging population, many chronic conditions associated with elderly populations arose as areas of need, with dementia the most notable. The growth of this population means more resources will be needed, and interviewees noted that there are not enough senior living facilities (especially for low-income populations), a lack of providers accepting Medicaid, a challenges with transportation for seniors, and isolation among this population.

Poor Mental Health and Lack of Access to Behavioral Health Services. A majority of interviewees identified poor mental health and a lack of mental health services as significant health concerns. Individuals suffering from mental illnesses were believed to be more susceptible to chronic conditions including heart disease and diabetes. A shortage of mental health providers in the community has made accessing mental health services difficult, especially for individuals without health insurance. Interviewees also believed that the mentally disabled population will experience even greater challenges in the future due to recent state policy actions affecting mental health care.

Smoking. More than half of all those interviewed indicated that smoking was a serious health concern. Interviewees stated that the high smoking rates were a result of a general lack of education and awareness about the importance of good health as well as a lack of motivation to change the behavior in light of the risks associated with smoking.

Infant and Maternal Health. Interviewees identified a lack of proper prenatal care and a high infant mortality rate as significant concerns in the community. A lack of access to prenatal health care services and pregnancy education, especially among low-income and minority populations, were attributed to the high mortality rates. Unhealthy lifestyles and poor management of chronic conditions such as diabetes and hypertension among pregnant women were also believed to influence these rates.

Transportation. Several interviewees identified a lack of transportation as a serious concern within the county, stating that the issue prevented individuals from accessing important community health resources. Interviewees noted that the transportation issues within the community were particularly problematic for seniors, low-income individuals, and residents living in more rural parts of the county.

SIGNIFICANT COMMUNITY HEALTH NEEDS

Prioritization Process

The following section highlights why certain community health needs were determined to be "significant." Needs were determined to be significant if they were identified as problematic by at least two of the following three data sources: (1) the most recently available secondary data regarding the community's health, (2) recent assessments developed by other organizations (e.g., local Health Departments), and (3) the key informants who participated in the interview process.

Access to Affordable Health Care

Access to basic health care is challenging for some segments of the ACMC community who are unaware of how to access and use available services and who experience other access barriers including cost and inadequate transportation. The ACMC community has comparatively unfavorable socioeconomic indicators, particularly in medically underserved areas.

- Federally-designated Medically Underserved Populations (MUPs) and Primary Care Health Professional Shortage Areas (HPSAs) are present in the community served by ACMC **(Exhibits 32 and 33)**.
- Rates for ambulatory care sensitive conditions within the ACMC community were significantly higher than the Ohio averages **(Exhibits 27 and 28)**. Disproportionately high rates indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes.
- In Community Health Status Indicators (CHSI), Ashtabula County ranks poorly compared to peer counties for Primary Care Provider Access **(Exhibit 20)**.
- Access to basic medical care was identified by nearly all interviewees as problematic. It was often cited that segments of the population rely excessively on emergency departments for primary care.

Chronic Diseases and Other Health Conditions

Chronic diseases and other health conditions including, in alphabetical order: cancer, chemical dependency, diabetes, heart disease, hypertension, obesity, poor birth outcomes, and poor mental health were identified as prevalent in the ACMC community.

- **Cancer**
  - In CHSI, Ashtabula County ranks poorly compared to peer counties for Cancer Deaths **(Exhibit 20)**.
  - Ashtabula County age-adjusted cancer incidence and mortality rates are higher than Ohio averages for multiple cancer types **(Exhibits 22 and 23)**.

- **Chemical Dependency**
  - In County Health Rankings, Ashtabula County ranked 61st out of the 88 counties in Ohio for Drug Overdose Deaths **(Exhibit 18)**. Ashtabula County also had a higher percent of driving deaths with alcohol involvement than the Ohio average **(Exhibit 19)**.
  - The Ashtabula County age-adjusted mortality rate for motor vehicle collisions involving alcohol was nearly three times as high as the Ohio average **(Exhibit 21)**.
  - A majority of interviewees indicated that substance abuse and addiction were significant health concerns in the ACMC community. The issue has been linked to the increasing availability and affordability of illegal substance like heroin.
- **Diabetes, Heart Disease, and Hypertension**
  - Hospitalization rates for ambulatory care sensitive conditions (ACSC), including hypertension, congestive heart failure, angina without procedure, and uncontrolled diabetes were higher in Ashtabula County than the Ohio averages **(Exhibit 28)**.
  - CHSI data indicate that Ashtabula County benchmarked unfavorably to peer counties for Coronary Heart Disease Deaths and Diabetes Deaths **(Exhibit 20)**.
- **Obesity**
  - Federally-designated Food Deserts are present in the community served by ACMC **(Exhibit 31)**. Lack of access to affordable healthy food options and high concentrations of fast food restaurants, may lead individuals (particularly those in lower socio-economic classes) to consume calorie dense, nutrient poor foods that lead to obesity. Chronic conditions such as hypertension and diabetes are much more prevalent among individuals who are obese.
  - According to BRFSS data, the percent of obese residents in every ZIP code in Ashtabula County was higher than the Northeast Ohio average **(Exhibit 26)**.
- **Poor Birth Outcomes**
  - In County Health Rankings, Ashtabula County ranked 66th out of the 88 counties in Ohio for Teen Births **(Exhibit 18)**.
  - Data from the Ohio Department of Health indicate that infant and post-neonatal mortality rates in Ashtabula County were higher than the Ohio averages. Birth rates to teens and unmarried women were also high in Ashtabula County **(Exhibit 25)**.
  - Several ZIP codes in the ACMC community had ACSC rates for low birth weight that were significantly higher than the Ohio average **(Exhibit 27)**.
- **Poor Mental Health Status**
  - In County Health Rankings, Ashtabula County ranked 53rd out of the 88 counties in Ohio for Mental Health Providers **(Exhibit 18)**.
  - Ohio Department of Health data indicate that the suicide rate in Ashtabula County is significantly higher than the Ohio average and goal set by Healthy People 2020 **(Exhibit 21)**.
  - Behavioral Risk Factor Surveillance System (BRFSS) data show that rates of depression in 15 of the 17 ZIP codes in the ACMC community were higher than the average of the 21 counties in Northeast Ohio **(Exhibit 26)**.

Economic Development and Community Conditions

Several areas within the ACMC community lack adequate social services and experience high rates of poverty, unemployment, crime and adverse environmental conditions.

- Ashtabula County has a higher poverty rate than both the Ohio and national averages **(Exhibit 11).**
    - Poverty rates among Black and Hispanic (or Latino) populations in Ashtabula County are more than twice as high as the poverty rate of White residents **(Exhibit 12)**.
    - Federally-designated Low Income Areas are present in the community served by ACMC **(Exhibit 13)**.
    - The unemployment rate in Ashtabula County was higher than both the Ohio and national averages in 2015 **(Exhibit 15)**.
    - In County Health Rankings, Ashtabula County ranked 76th out of the 88 counties in Ohio for Social & Economic Factors and 70th for Unemployment **(Exhibit 18)**. Ashtabula County also had a higher percent of children living in poverty and children living in a household headed by a single parent than the Ohio average **(Exhibit 19)**.
    - According to the Community Need Index, four out of the 14 ZIP codes in ACMC's community scored in the "high need category" **(Exhibit 29)**.
- In County Health Rankings, Ashtabula County ranked 82nd out of the 88 counties in Ohio for Physical Environment, 73rd for Air Pollution, and 82nd for Severe Housing Problems **(Exhibit 18)**.
- In CHSI, Ashtabula County benchmarked unfavorably to peer counties for Housing Stress **(Exhibit 20)**.
- Reports prepared by University Hospitals Case Medical Center, Conneaut Medical Center, Geauga Medical Center and Geneva Medical Center each identified transportation as a significant health concern **(Exhibit 34)**.
- Several interviewees identified a lack of transportation as a significant concern in Ashtabula County.

Health Professions Recruitment

There is a need for more trained health professionals in the community, particularly primary care physicians, dentists, and mental health providers.

- Federally-designated Medically Underserved Populations and Primary Care, Dental, and Mental Health Health Professional Shortage Areas are present in the community served by ACMC **(Exhibits 32 and 33)**.
- A report conducted by the Robert Graham Center indicates that Ohio will need an additional 681 primary care physicians by 2030 (an eight percent increase) to maintain current levels of primary care access. Physicians nearing retirement age and increases in

demand associated with increases in insurance coverage are expected to exacerbate this need.[6]

Healthcare for the Elderly

The elderly population in the ACMC community is expected to increase in the next five years and meeting the health and social service needs of the aging population is a significant issue.

- While the population in ACMC's community is projected to decrease by 0.2 percent between 2015 and 2020; the number of persons 65 years of age and older in the community is projected to increase by 12.8 percent over this period **(Exhibit 6)**.
- In County Health Rankings, Ashtabula County ranked 76th out of the 88 counties in Ohio for Preventable Hospital Stays **(Exhibit 18)**.
- Interviewees identified care of the elderly as one of the primary challenges in the community.

Wellness

Programs and activities that target behavioral health change were identified as needed in the ACMC community. Education and opportunities for residents regarding exercise, nutrition, and smoking cessation specifically were noted.

- In County Health Rankings, Ashtabula County ranked 79th out of the 88 counties in Ohio for Adult Smoking **(Exhibit 18)**.
- County Health Rankings data indicate that the percent of women who receive mammography screenings and the percent of the total population who receive diabetic screenings are lower in Ashtabula County than the percent in Ohio overall **(Exhibit 19)**.
- BRFSS data indicate that rates of smoking were higher in Ashtabula County than the average of the 21 counties in Northeast Ohio **(Exhibit 26)**.
- Federally-designated Food Deserts are present in the community served by ACMC **(Exhibit 31)**. Lack of access to affordable healthy food options and high concentrations of fast food restaurants, may lead individuals (particularly those in lower socio-economic classes) to consume nutrient poor foods.
- The lack of access to healthy food and a lack of nutrition-based education were believed to be two of the main reasons individuals in the community had poor diets.

[6] Petterson, Stephen M; Cai, Angela; Moore, Miranda; Bazemore, Andrew. State-level projections of primary care workforce, 2010-2030. September 2013, Robert Graham Center, Washington, D.C.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

This section identifies other facilities and resources available in the community served by ACMC that are available to address community health needs.

Federally Qualified Health Centers

Federally Qualified Health Centers (FQHCs) are established to promote access to ambulatory care in areas designated as "medically underserved." These clinics provide primary care, mental health, and dental services for lower-income members of the community. FQHCs receive enhanced reimbursement for Medicaid and Medicare services and most also receive federal grant funds under Section 330 of the Public Health Service Act. There currently are three FQHC organizations operating in the ACMC community (**Exhibit 4**).

Exhibit 4: Federally Qualified Health Centers

Health Center	Town	ZIP Code
Andover Primary Care	Andover, OH	44003
Ashtabula Community Health Center	Rome, OH	44085
Signature Health Inc.	Ashtabula, OH	44004

Source: Health Resources and Services Administration, 2016.

Hospitals

Exhibit 5 presents information on hospital facilities that operate in the community.

Exhibit 5: Hospitals

Hospital Name	Type	Beds	ZIP Code	County
Ashtabula County Medical Center	Acute Care	249	44004	Ashtabula
Glenbeigh	Alcohol/Drug Rehabilitation	114	44084	Ashtabula
University Hospitals Conneaut Medical Center	Critical Access	25	44030	Ashtabula
University Hospitals Geneva Medical Center	Critical Access	25	44041	Ashtabula

Source: Ohio Hospital Association, 2016.

Other Community Resources

There is a wide range of agencies, coalitions, and organizations available in the region served by ACMC. 2-1-1 Ashtabula maintains a large database to help refer individuals in need to health and human services in Ohio. This is a service of the Ohio Department of Social Services and is provided in partnership with the Council of Community Services, The Planning Council, and the Ashtabula County Community Action Agency.

- Basic Needs (including food, housing/shelters, material goods, transportation, and utilities)

- Consumer Services (including consumer assistance and protection, consumer regulation, money management, and tax services).
- Criminal Justice and Legal (including courts, correctional system, judicial services, law enforcement agencies and services, legal assistance, legal education and information, and legal services and organizations).
- Education (including educational institutions and schools, educational programs and support services).
- Environmental/Public Health/Public Safety (including environmental protection and improvement, public health, and public safety).
- Health Care (including emergency and general medical services, screening and diagnostic services, health care support services, reproductive services, inpatient and outpatient facilities, rehabilitation facilities, specialized treatment, and specialty services).
- Income Support and Employment – (including employment services, public assistance and social insurance programs, and temporary final assistance).
- Mental Health and Substance Abuse (including counseling approaches and settings, mental health care facilities, mental health evaluation and treatment programs, mental health support services, and substance abuse services).
- Individual and Family Life (volunteer programs and services, recreation and leisure activities, spiritual enrichment, individual and family support services, domestic animal services, and death certification and burial arrangements).
- Organizational, Community, and International (including arts and culture, community facilities and centers, disaster services, donor services, community planning and public works, community economic development and finance, occupational and professional associations, organization development and management services, military services, and international affairs).

Additional information about these resources is available at:
http://communityaction.wix.com/accaa#!2-1-1-ashtabula-county/cnte

APPENDIX A – CONSULTANT QUALIFICATIONS

Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Alexandria, Virginia. The firm serves clients throughout the United States as a resource that helps health care providers conduct Community Health Needs Assessments and develop Implementation Strategies to address significant health needs. Verité has conducted more than 50 needs assessments for hospitals, health systems, and community partnerships nationally since 2010.

The firm also helps hospitals, hospital associations, and policy makers with community benefit reporting, program infrastructure, compliance, and community benefit-related policy and guidelines development. Verité is a recognized national thought leader in community benefit and Community Health Needs Assessments.

APPENDIX B – SECONDARY DATA ASSESSMENT

This section presents an assessment of secondary data regarding health needs in the ACMC community.

Community Assessed

As mentioned previously and shown in **Exhibit 1**, ACMC's community is comprised of 17 ZIP codes, all of which are located in Ashtabula County, Ohio.

Demographics

Population characteristics and changes directly influence community health needs. The total population in the ACMC community is expected to decrease 0.2 percent from 2015 to 2020 (**Exhibit 6**).

Exhibit 6: Percent Change in Community Population 2015-2020

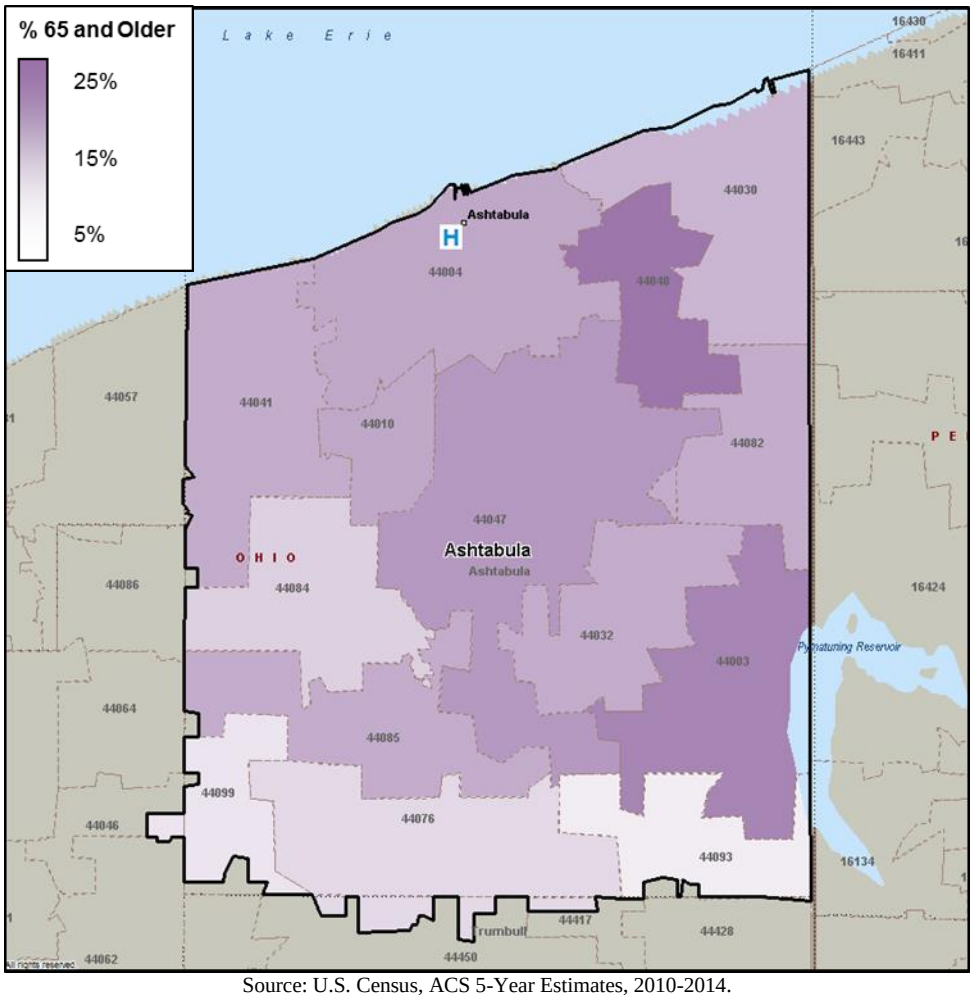
Age/Sex Cohort	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
0-19	24,730	25,150	1.7%
Female 20-44	14,020	13,140	-6.3%
Male 20-44	15,700	15,210	-3.1%
45-64	29,380	27,840	-5.2%
65+	17,620	19,870	12.8%
Community Total	**101,450**	**101,210**	**-0.2%**

Source: Ohio Development Services Agency, 2015.

While the community-wide population is expected to decline, the number of persons aged 65 years and older is projected to increase by 12.8 percent between 2015 and 2020. The female and male 20-44 and 45-64 age groups are expected to decrease in population. The growth of older populations is likely to lead to growing need for health services, since on an overall per-capita basis, older individuals typically need and use more services than younger persons.

Exhibit 7 illustrates the percent of the population 65 years of age and older in the community by ZIP code.

Exhibit 7: Percent of Population Aged 65+ by ZIP Code, 2014

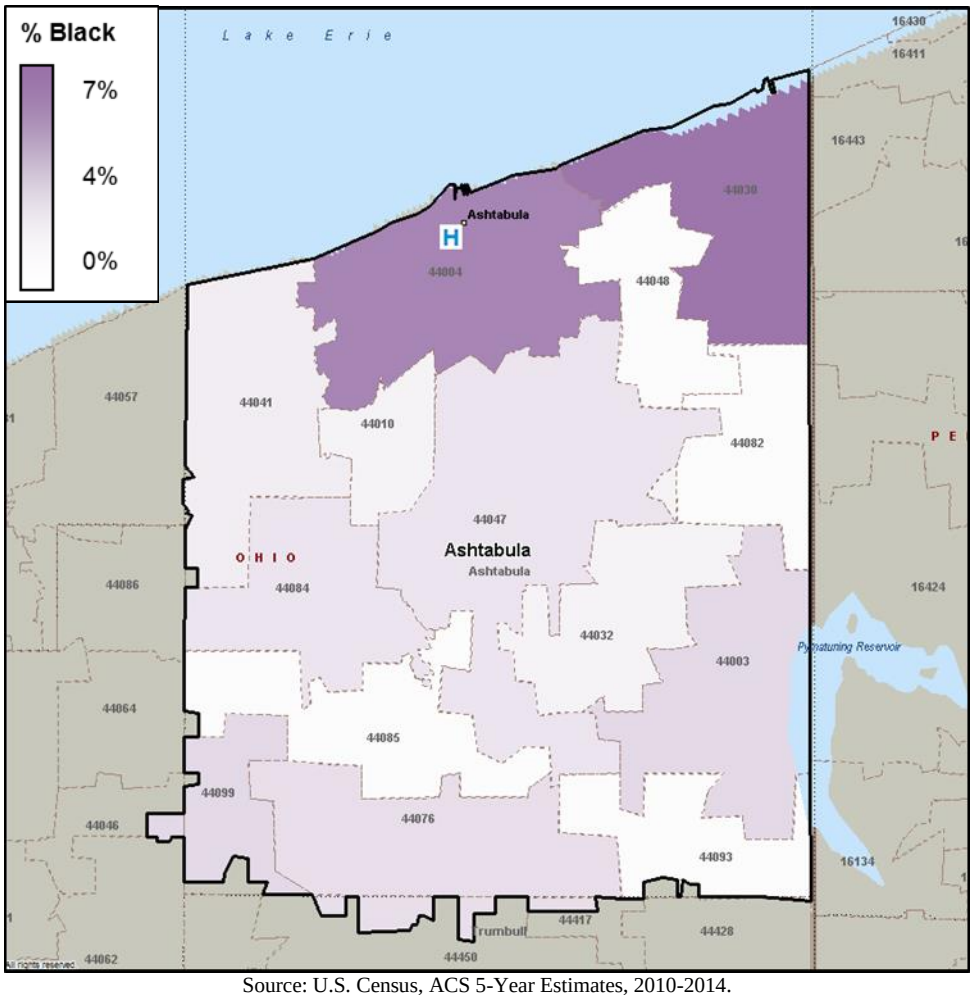


Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

In 2014, the highest proportions of persons aged 65 and older were located in ZIP codes 44048 and 44003. The lowest proportion of persons aged 65 and older was located in ZIP code 44099.

Exhibits 8 and 9 show locations in the community where the percentages of the population that are Black and Hispanic (or Latino) were highest in 2014.

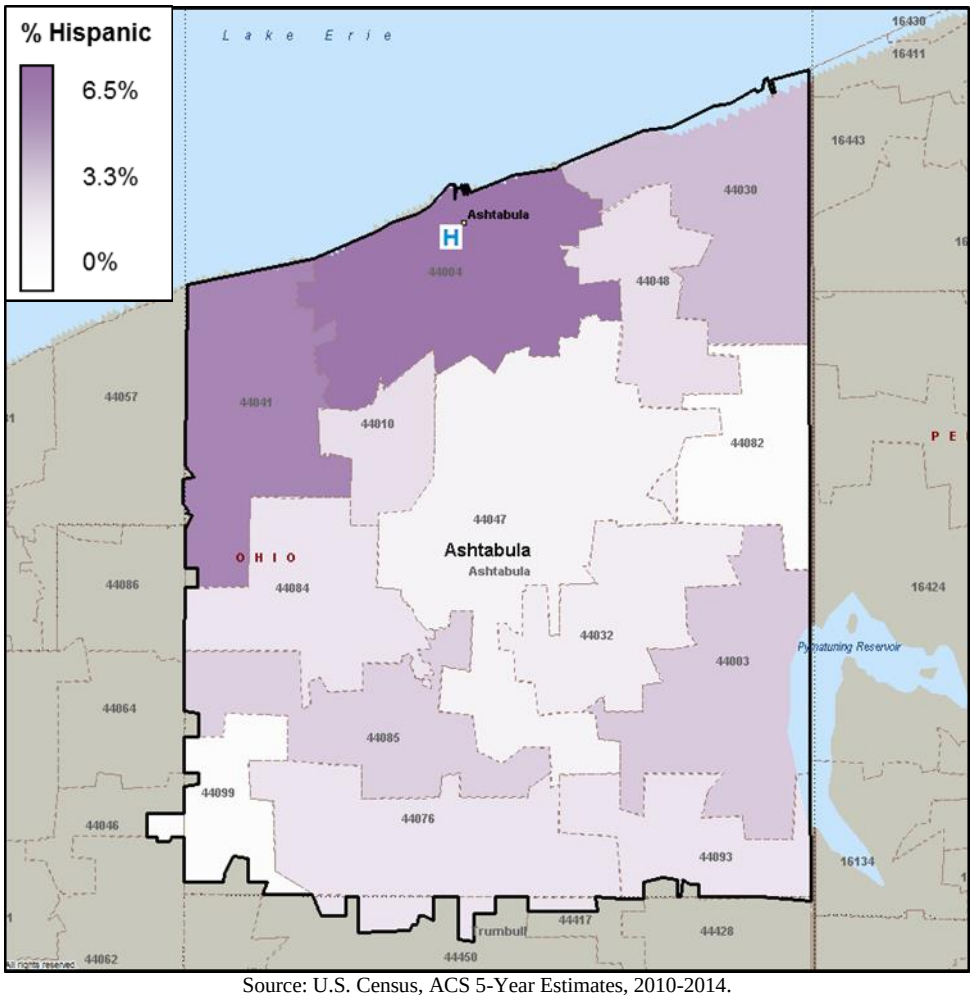
Exhibit 8: Percent of Population - Black, 2014



Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

The highest percentages of Black residents were located in ZIP codes 44030 and 44004.

Exhibit 9: Percent of Population – Hispanic (or Latino), (2014)



Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

The highest percentage of Hispanic (or Latino) residents in the ACMC community were located in ZIP codes 44004 and 44041.

Data regarding residents without a high school diploma, with a disability, and who are linguistically isolated are presented in **Exhibit 10** for Ashtabula County and for Ohio, and the United States.

Exhibit 10: Other Socioeconomic Indicators, 2014

Measure	Ashtabula County	Ohio	United States
Population 25+ without High School Diploma	14.4%	11.2%	13.7%
Population with a Disability	15.0%	13.5%	12.3%
Population Linguistically Isolated	1.6%	2.4%	8.6%

Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

Exhibit 10 indicates that:

- Ashtabula County had a higher percentage of residents aged 25 years and older without a high school diploma than Ohio and United States averages.
- Ashtabula County had a higher percentage of the population with a disability compared to Ohio and United States averages.
- Compared to Ohio, Ashtabula County had a lower proportion of the population that is linguistically isolated. Linguistic isolation is defined as residents who speak a language other than English and speak English less than "very well."

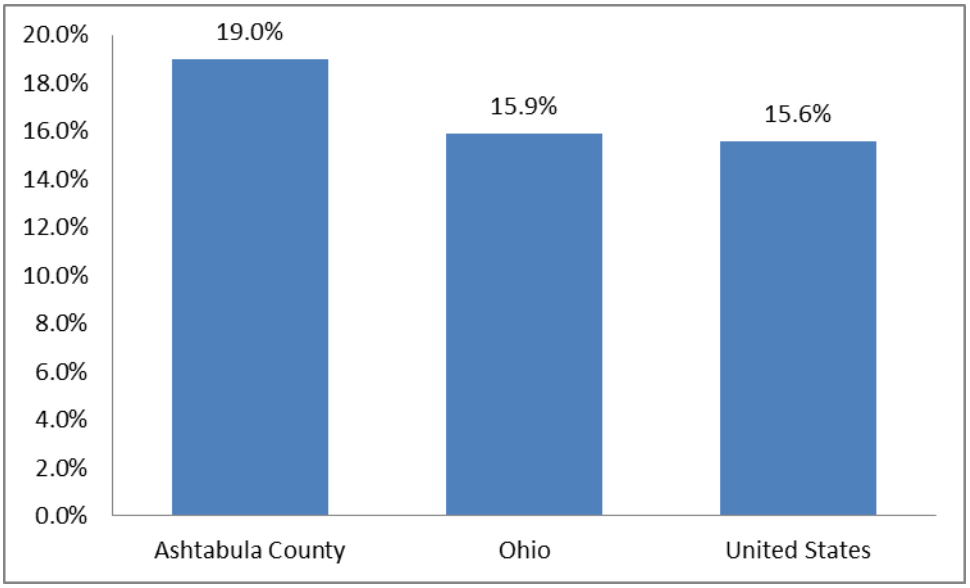
Economic indicators

The following categories of economic indicators with implications for health were assessed: (1) people in poverty; (2) unemployment rate; (3) insurance status; and (4) crime.

People in Poverty

Many health needs are associated with poverty. According to the U.S. Census, in 2014 approximately 15.9 percent of people in Ohio were living in poverty. At 19.0 percent, Ashtabula County's poverty rate was higher than Ohio's rate during that year (**Exhibit 11**).

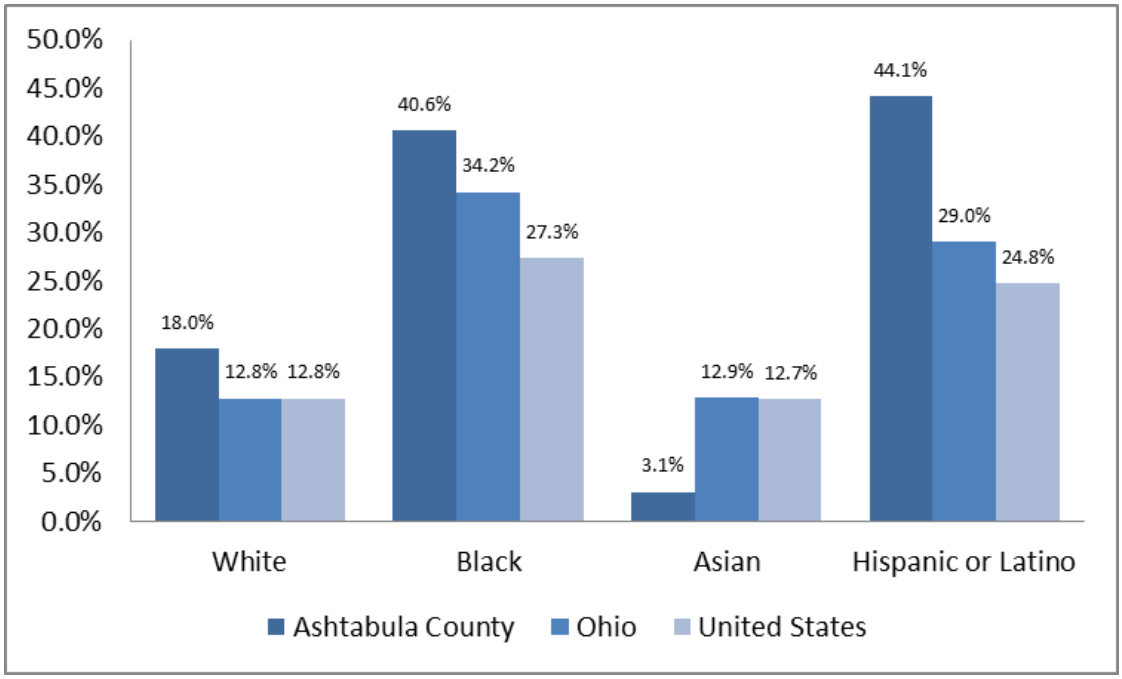
Exhibit 11: Percent of People in Poverty, 2014



Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

Considerable variation in poverty rates is present in Ashtabula County and Ohio across racial and ethnic categories (**Exhibit 12**).

Exhibit 12: Poverty Rates by Race and Ethnicity, 2014

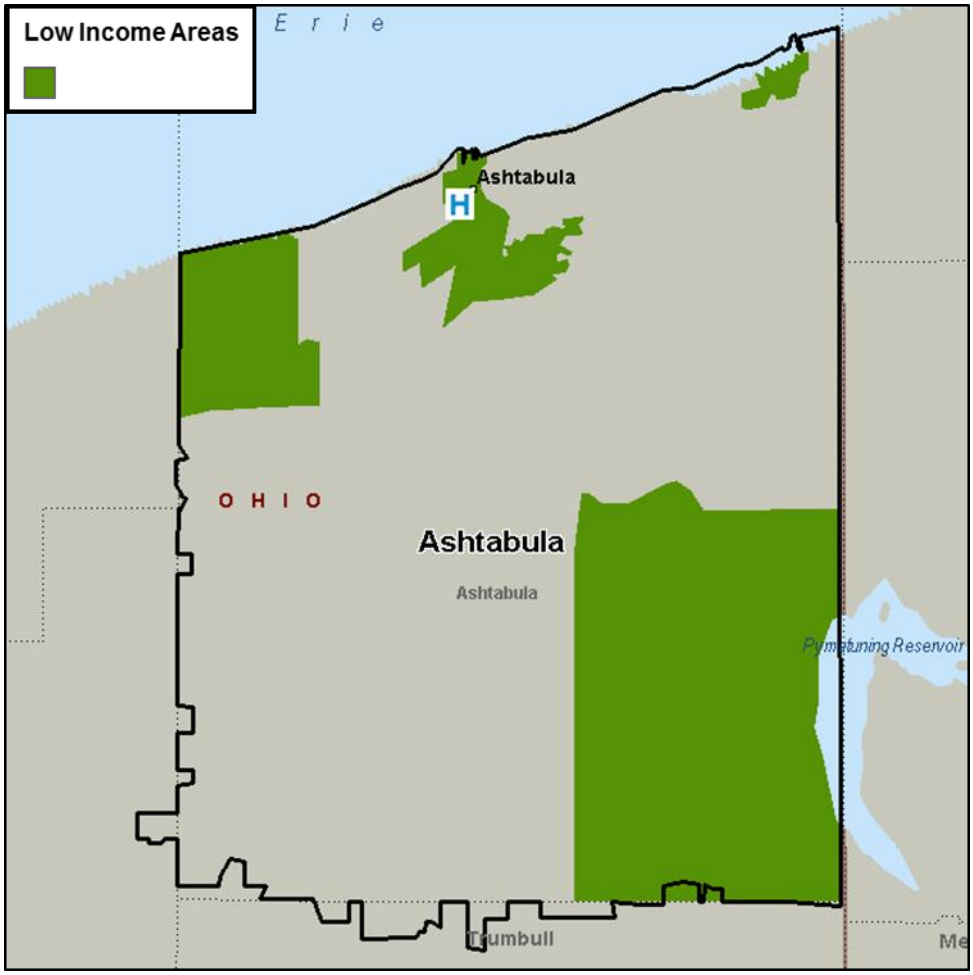


Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

Poverty rates have been comparatively high for African Americans and Hispanic (or Latino) residents. The poverty rates for White, Black, and Hispanic (or Latino) residents of Ashtabula County exceeded the Ohio averages for those groups.

Exhibit 13 portrays the locations of low income census tracts in the community. The U.S. Department of Agriculture defines "low income census tracts" as areas where poverty rates are 20 percent or higher or where median family incomes are 80 percent or lower than the area-wide average.

Exhibit 13: Low Income Census Tracts



Source: US Department of Agriculture Economic Research Service, ESRI, 2015.

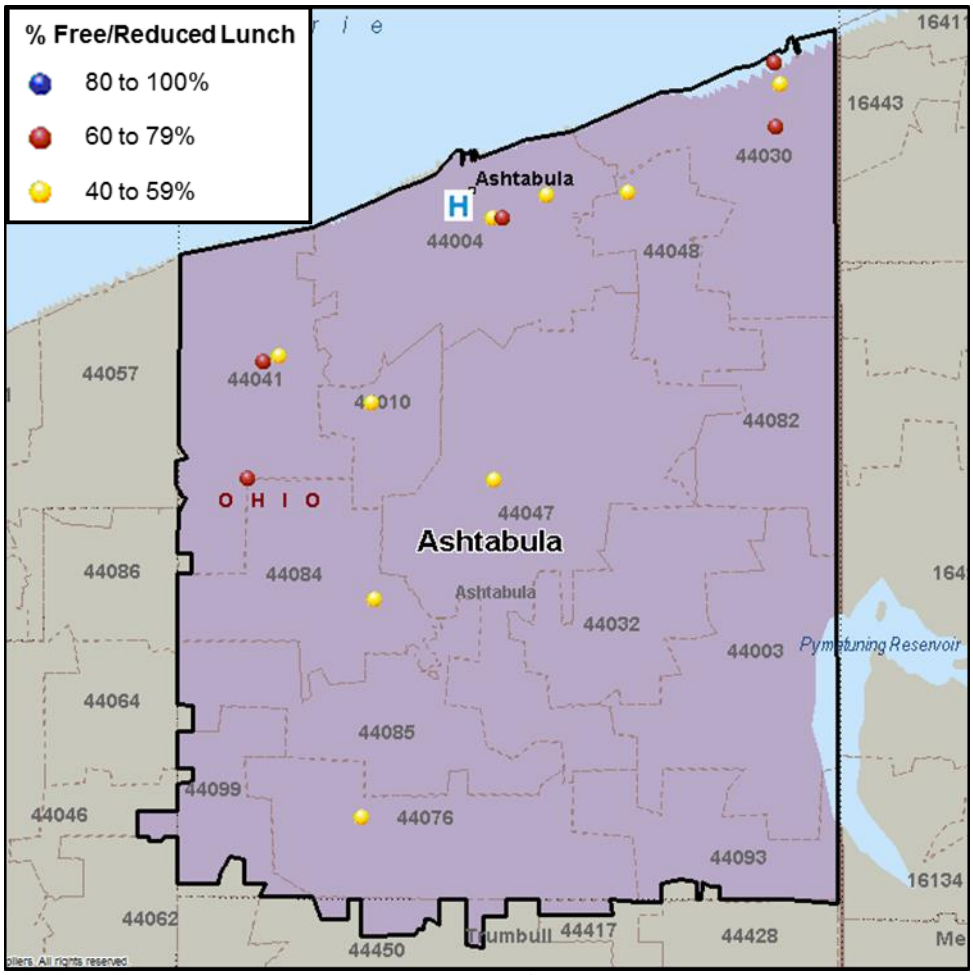
Low income census tracts are present in the neighborhoods adjacent to the hospital, as well as the northwestern and southeastern portions of Ashtabula County.

Eligibility for the National School Lunch Program

Schools participating in the National School Lunch Program are eligible to receive financial assistance from the United States Department of Agriculture (USDA) to provide free or reduced-price meals to low-income students. Schools with 40 percent or more of their student body receiving this assistance are eligible for school-wide Title I funding, designed to ensure that students meet grade-level proficiency standards.

Exhibit 14 illustrates the locations of the schools in which at least 40 percent of the students are eligible for free or reduced price lunch.

Exhibit 14: Public Schools with over 40 Percent of Students Eligible for Free or Reduced-Price Lunches, School Year 2014-2015



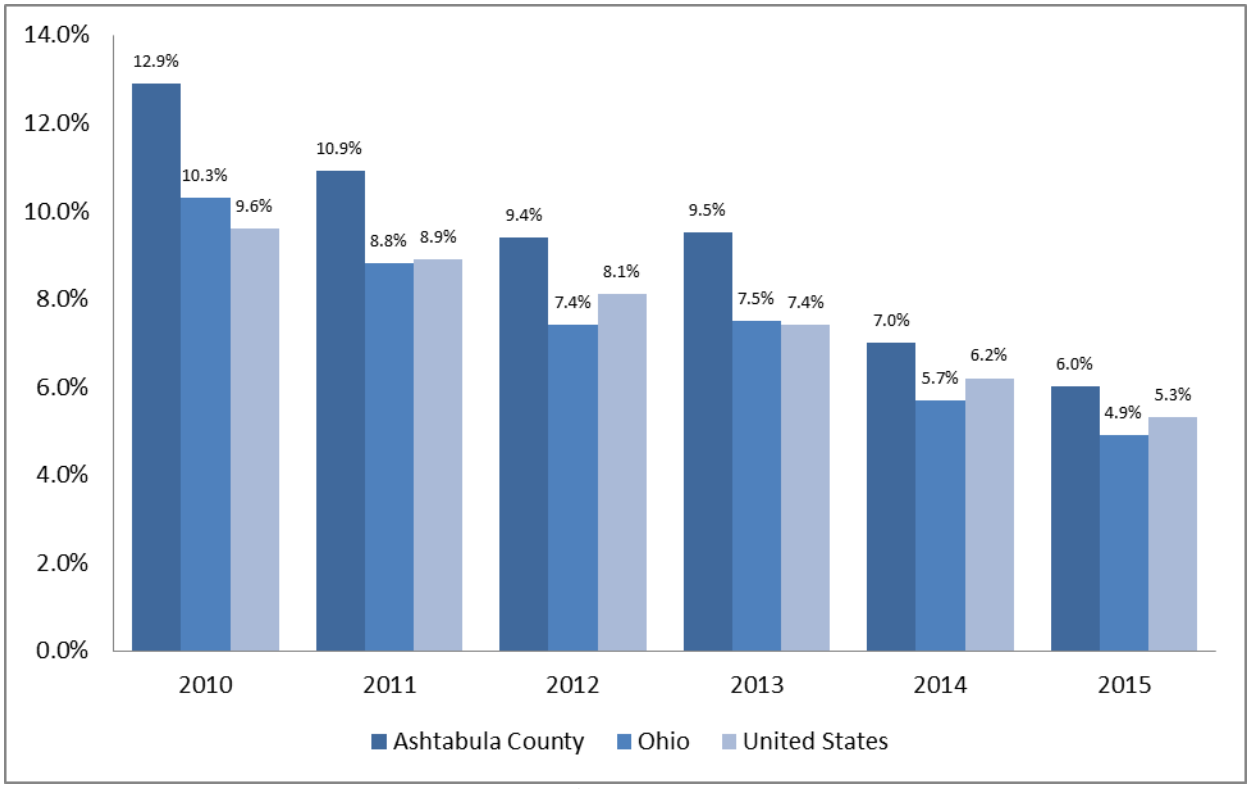
Source: Ohio Department of Education, 2015.

There are 14 schools within the ACMC community where at least 40 percent of students are eligible for free or reduced price lunches.

Unemployment

Unemployment is problematic because many residents receive health insurance coverage through their (or a family member's) employer. If unemployment rises, access to employer based health insurance can decrease. **Exhibit 15** shows unemployment rates for 2010 through 2015 for Ashtabula County, with Ohio and national rates for comparison.

Exhibit 15: Unemployment Rates, 2010-2015



Source: Bureau of Labor Statistics, 2010-2015.

Between 2010 and 2015, unemployment rates at the local (Ashtabula County), state, and national level decreased significantly. However, the unemployment rates in Ashtabula County consistently have been higher than both the state and national rates.

Insurance Status

Exhibit 16 presents the estimated percent of populations in Ashtabula County without health insurance (uninsured), by ZIP code.

Exhibit 16: Percent of the Population without Health Insurance, 2013-2014

City	ZIP Code	Total Population 2014	Percent Uninsured 2014
Andover	44003	4,616	11.2%
Ashtabula	44004	32,575	11.8%
Austinburg	44010	1,657	2.4%
Conneaut	44030	14,763	12.7%
Dorset	44032	1,418	7.6%
Geneva	44041	14,398	11.3%
Jefferson	44047	8,582	10.9%
Kingsville	44048	2,952	5.4%
Orwell	44076	4,927	21.0%
Pierpont	44082	1,271	13.5%
Rock Creek	44084	3,701	10.2%
Rome	44085	3,208	17.2%
Williamsfield	44093	1,537	26.7%
Windsor	44099	2,069	41.0%
Community Total		**97,674**	**12.8%**

Source: US Census Bureau, ACS 5-Year Estimates, 2010-2014.

In 2014, eleven out of the 14 ZIP codes in the Ashtabula County Medical Center community had uninsured rates above ten percent. ZIP code 44099 had the highest percent of uninsured residents at an estimated 41.0 percent.

Ohio Medicaid Expansion

Subsequent to the ACA's passage, a June 2012 Supreme Court ruling provided states with discretion regarding whether or not to expand Medicaid eligibility. Ohio was one of the states that expanded Medicaid. Medicaid expansion accounted for over 76 percent of Ohio's ACA enrollment and plans purchased through the federal healthcare.gov exchange accounted for about 24 percent.[7]

In Ohio, Medicaid primarily is available for low-income individuals, pregnant women, children, low-income elderly persons, and individuals with disabilities.[8] With a network of more than 83,000 providers, the Ohio Department of Medicaid covers over 2.9 million Ohio residents. Across the United States, uninsured rates have fallen most in states that decided to expand Medicaid.[9]

The recent election of the new president raises questions regarding whether access improvements associated with the Affordable Care Act will be sustained.

[7] http://watchdog.org/237980/75percent-ohio-obamacare/
[8] http://medicaid.ohio.gov/FOROHIOANS/WhoQualifies.aspx
[9] See: http://hrms.urban.org/briefs/Increase-in-Medicaid-under-the-ACA-reduces-uninsurance.html

Crime

Exhibit 17 provides crime statistics for Ashtabula County and Ohio. Cells in the exhibit are shaded if the indicator for the county exceeded the Ohio average.

Exhibit 17: Crime Rates by Type and County, Per 100,000, 2014
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Crime	Ashtabula County	Ohio
Violent Crime	73.3	**278.4**
Property Crime	1,930.3	**2,880.8**
Murder	1.4	**4.4**
Rape	5.7	**36.2**
Robbery	14.4	**129.2**
Aggravated Assault	51.7	**126.1**
Burglary	485.8	**786.5**
Larceny	1,359.7	**1,921.8**
Motor Vehicle Theft	84.8	**172.5**
Arson	4.3	**21.1**

Source: FBI, 2014.

2014 crime rates in Ashtabula County were below the Ohio average for all types presented.

Local Health Status and Access Indicators

This section assesses health status and access indicators for the ACMC community. Data sources include: (1) County Health Rankings, (2) the Centers for Disease Control's (CDC) Community Health Status Indicators, (3) the Ohio Department of Health, and (4) the CDC's Behavioral Risk Factor Surveillance System.

Throughout this section, data and cells are highlighted if indicators are unfavorable – because they are worse than comparison benchmarks (e.g., Ohio averages). Where confidence interval data are available, cells are highlighted only if variances are unfavorable and also statistically significant.

County Health Rankings

County Health Rankings, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation, incorporates a variety of health status indicators into a system that ranks each county/city within each state in terms of "health factors" and "health outcomes." These health factors and outcomes are composite measures based on several

variables grouped into the following categories: health behaviors, clinical care,[10] social and economic factors, and physical environment.[11] *County Health Rankings* is updated annually. *County Health Rankings 2016* relies on data from 2006 to 2015, with most data from 2010 to 2013.

Exhibit 18 presents 2013 and 2016 rankings for each available indicator category. Rankings indicate how Ashtabula County ranked in relation to all 88 counties in the Ohio, with 1 indicating the most favorable ranking and 88 the least favorable. The table also indicates if rankings fell between 2013 and 2016.

[10] A composite measure of Access to Care, which examines the percent of the population without health insurance and ratio of population to primary care physicians, and Quality of Care, which examines the hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last 8 months of life.

[11] A composite measure that examines Environmental Quality, which measures the number of air pollution-particulate matter days and air pollution-ozone days, and Built Environment, which measures access to healthy foods and recreational facilities and the percent of restaurants that are fast food.

Exhibit 18: County Health Rankings, 2013 and 2016
(Light grey shading indicates indicator in bottom half of Ohio counties; Dark grey shading indicates in bottom quartile of Ohio counties)

	Ashtabula County		
	2013	2016	Rank Change
Health Outcomes	**60**	**62**	↓
Health Factors	**77**	**79**	↓
Length of Life	**66**	**70**	↓
Quality of Life	**51**	**59**	↓
Frequent Physical Distress		70	
Frequent Mental Distress		66	
Drug Overdose Deaths		61	
Health Behaviors	**81**	**68**	
Adult Smoking	62	79	↓
Adult Obesity	38	32	
Excessive Drinking	68	11	
Sexually Transmitted Infections	60	50	
Teen Births	65	66	↓
Clinical Care	**62**	**80**	↓
Primary Care Physicians	46	66	↓
Dentists	72	44	
Mental Health Providers	38	53	↓
Preventable Hospital Stays	47	76	↓
Diabetic Screening	74	78	↓
Social & Economic Factors	**73**	**76**	↓
Some College	66	75	↓
Unemployment	69	70	↓
Inadequate Social Support	53	56	↓
Injury Deaths	52	68	↓
Physical Environment	**67**	**82**	↓
Air Pollution	78	73	
Severe Housing Problems		82	

Source: County Health Rankings, 2016.

In 2016, Ashtabula County ranked in the bottom half of Ohio counties for 24 of the 27 assessed community health issues included in County Health Rankings. For 15 community health issues, the county ranked in the bottom quartile, including Health Factors, Length of Life, Health Behaviors, Clinical Care, Social & Economic Factors, and Physical Environment. Between 2013 and 2016, rankings for 17 issues fell.

Exhibit 19 provides data for each underlying indicator of the composite categories in the County Health Rankings.[12] The exhibit also includes national averages.

[12] County Health Rankings provides details about what each indicator measures, how it is defined, and data sources at http://www.countyhealthrankings.org/sites/default/files/resources/2013Measures_datasources_years.pdf

Exhibit 19: County Health Rankings Data Compared to Ohio and U.S. Averages, 2016

(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Indicator Category	Data	Ashtabula County	Ohio	U.S.
Health Outcomes				
Length of Life	Years of potential life lost before age 75 per 100,000 population	8,711.6	**7,533.6**	7,700.0
Quality of Life	Percent of adults reporting fair or poor health	16.8	**16.0**	16.0
	Average number of physically unhealthy days reported in past 30 days	4.0	**3.8**	3.7
	Average number of mentally unhealthy days reported in past 30 days	4.2	**4.0**	3.7
	Percent of live births with low birthweight (<2500 grams)	8.0	**8.6**	8.0
Health Factors				
Health Behaviors				
Adult Smoking	Percent of adults that report smoking >= 100 cigarettes and currently smoking	22.1	**19.2**	18.0
Adult Obesity	Percent of adults that report a BMI >= 30	30.7	**30.5**	31.0
Food Environment Index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	6.6	**6.9**	7.2
Physical Inactivity	Percent of adults aged 20 and over reporting no leisure-time physical activity	26.2	**26.3**	28.0
Access to Exercise Opportunities	Percent of population with adequate access to locations for physical activity	63.1	**83.2**	62.0
Alcohol Impaired Driving Deaths	Percent of driving deaths with alcohol involvement	40.3	**35.3**	30.0
Excessive Drinking	Binge plus heavy drinking	15.9	**17.9**	17.0
STDs	Chlamydia rate per 100,000 population	271.9	**460.2**	287.7
Teen Births	Teen birth rate per 1,000 female population, ages 15-19	42.0	**34.4**	40.0
Clinical Care				
Uninsured	Percent of population under age 65 without health insurance	14.6	**13.0**	17.0
Primary Care Physicians	Ratio of population to primary care physicians	2559:1	**1296:1**	1990:1
Dentists	Ratio of population to dentists	2755:1	**1713:1**	2590:1
Mental Health Providers	Ratio of population to mental health providers	1340:1	**642:1**	1060:1
Preventable Hospital Stays	Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	86.9	**64.9**	60.0
Diabetic Screening	Percent of diabetic Medicare enrollees that receive HbA1c monitoring	81.5	**84.9**	85.0
Mammography Screening	Percent of female Medicare enrollees, ages 67-69, that receive mammography screening	54.0	**60.0**	61.0

Source: County Health Rankings, 2016.

Exhibit 19: County Health Rankings Data Compared to Ohio and U.S. Averages, 2016 (continued)

(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Indicator Category	Data	Ashtabula County	Ohio	U.S.
Health Factors				
Social & Economic Factors				
High School Graduation	Percent of ninth-grade cohort that graduates in four years	89.7	**82.7**	86.0
Some College	Percent of adults aged 25-44 years with some post-secondary education	47.9	**63.4**	56.0
Unemployment	Percent of population age 16+ unemployed but seeking work	7.0	**5.7**	6.0
Children in poverty	Percent of children under age 18 in poverty	32.1	**22.7**	23.0
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	4.5	**4.8**	4.4
Children in single-parent households	Percent of children that live in a household headed by single parent	38.9	**35.4**	32.0
Social Associations	Number of associations per 10,000 population	11.8	**11.4**	13.0
Violent Crime	Number of reported violent crime offenses per 100,000 population	139.9	**307.2**	199.0
Injury Deaths	Injury mortality per 100,000	73.9	**62.7**	74.0
Physical Environment				
Air Pollution	The average daily measure of fine particulate matter in micrograms per cubic meter (PM2.5) in a county	13.8	**13.5**	11.9
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	17.0	**15.2**	14.0
Drive Alone to Work	Percent of the workforce that drives alone to work	83.4	**83.5**	80.0
Long Commute- Drive Alone	Among workers who commute in their car alone, the percent that commute more than 30 minutes	32.9	**29.4**	29.0

Source: County Health Rankings, 2016

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Exhibit 19 highlights the following comparatively unfavorable indicators:

- Ambulatory-care sensitive condition hospitalization rate
- Injury mortality rate
- Percent of adults that report smoking
- Percent of adults with some post-secondary education
- Percent of children in poverty
- Percent of children living in a household headed by a single parent
- Percent of driving deaths with alcohol involvement
- Percent of females receiving mammography screenings
- Percent of households with severe housing problems
- Percent of population with adequate access to locations for physical activity
- Percent of the population unemployed
- Percent of the population without health insurance
- Percent of workers with a long commute
- Ratio of population to dentists
- Ratio of population to mental health providers
- Ratio of population to primary care physicians
- Teen birth rate
- Years of potential life lost

Community Health Status Indicators

The Centers for Disease Control and Prevention's *Community Health Status Indicators* provide health profiles for all 3,143 counties in the United States. Counties are assessed using 44 metrics associated with health outcomes including health care access and quality, health behaviors, social factors, and the physical environment.

The *Community Health Status Indicators* allows for a comparison of a given county to other "peer counties[13]." Peer counties are assigned based on 19 variables including population size, population growth, population density, household income, unemployment, percent children, percent elderly and poverty rates.

Exhibit 20 compares Ashtabula County to its respective peer counties and cities and highlights community health issues found to rank in the bottom quartile of the counties included in the analysis.

[13] Peer counties include Kennebec, ME; Clinton, NY; St. Lawrence, NY; Fulton, NY; Montgomery, NY; Genesee, NY; Steuben, NY; Cattaraugus, NY; Chautauqua, NY; McKean, PA; Schuylkill, PA; Northumberland, PA; Mifflin, PA; Clearfield, PA, Indiana, PA; Somerset, PA; Crawford, PA; Lawrence, PA; Columbiana, OH; Guernsey, OH; Muskingum, OH; Crawford, OH; Marion, OH; Seneca, OH; Ross, OH; Raleigh, WV; Miami, IN; Grant, IN; Wayne, IN; Henry, IN; Scott, IN; Lawrence, IN; Marion, IL; St. Francois, MO; Knox, IL; Stephenson, IL; Branch, MI; St. Joseph, MI; Gratiot, MI; Mecosta, MI; Wexford, MI; and Kalkaska, MI.

Exhibit 20: Community Health Status Indicators, 2015
(Shading indicates indicator in bottom quartile compared to peer counties)

Category	Indicator	Ashtabula County
Mortality	Alzheimer's Disease Deaths	
	Cancer Deaths	
	Chronic Kidney Disease Deaths	
	Chronic Lower Respiratory Disease (CLRD) Deaths	
	Coronary Heart Disease Deaths	
	Diabetes Deaths	
	Female Life Expectancy	
	Male Life Expectancy	
	Motor Vehicle Deaths	
	Stroke Deaths	
	Unintentional Injury (including motor vehicle)	
Morbidity	Adult Diabetes	
	Adult Obesity	
	Adult Overall Health Status	
	Alzheimer's Disease/Dementia	
	Cancer	
	Gonorrhea	
	HIV	
	Older Adult Asthma	
	Older Adult Depression	
	Preterm Births	
	Syphilis	
Health Care Access and Quality	Cost Barrier to Care	
	Older Adult Preventable Hospitalizations	
	Primary Care Provider Access	
	Uninsured	
Health Behaviors	Adult Binge Drinking	
	Adult Female Routine Pap Tests	
	Adult Physical Inactivity	
	Adult Smoking	
	Teen Births	
Social Factors	Children in Single-Parent Households	
	High Housing Costs	
	Inadequate Social Support	
	On Time High School Graduation	
	Poverty	
	Unemployment	
	Violent Crime	
Physical Environment	Access to Parks	
	Annual Average PM2.5 Concentration	
	Drinking Water Violations	
	Housing Stress	
	Limited Access to Healthy Food	
	Living Near Highways	

Source: Community Health Status Indicators, 2015.

The CHSI data indicate that Ashtabula County benchmarked unfavorably to peer counties for cancer, coronary heart disease, and diabetes mortality rates, female life expectancy, primary care provider access, high housing costs, poverty, unemployment, housing stress, and limited access to healthy food.

Ohio Department of Health

The Ohio Department of Health maintains a data warehouse that includes county-level indicators regarding mortality (**Exhibits 21 and 22**), cancer incidence (**Exhibit 23**), communicable diseases (**Exhibit 24**), and maternal and child health (**Exhibit 25**).

Exhibit 21 provides age-adjusted mortality rates for selected causes of death in 2012.

Exhibit 21: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2012
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Measure	Ashtabula County	Ohio	Healthy People 2020
Heart Disease	223.8	**191.4**	-
Diabetes	25.7	**26.1**	-
Influenza and Pneomonia	15.3	**15.4**	-
Suicide	14.3	**12.0**	10.2
Motor Vehicle Collisions	16.6	**9.0**	12.4
Homicide	3.6	**5.4**	-
Motor Vehicle Collisions (Alcohol)	10.7	**3.8**	-
Aortic Aneurysm	4.3	**3.7**	-
HIV	1.5	**1.3**	-
Pedestrians Killed in Traffic Collisions	2.0	**0.5**	1.4

Source: Ohio Department of Health, 2012.

In Ashtabula County, age-adjusted mortality rates for heart disease, suicide, motor vehicle collisions (including those involving alcohol), aortic aneurysms, HIV, and pedestrians killed in traffic collisions were significantly higher than the Ohio averages.

Exhibit 22: Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2013
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Cancer Site/Type	Ashtabula County	Ohio Rate	U.S. Rate
All Sites/Types	204.4	**186.6**	171.2
Lung and Bronchus	59.4	**55.3**	47.2
Breast (Female)	20.0	**23.6**	21.9
Prostate	21.7	**22.0**	21.4
Colon and Rectum	18.7	**17.0**	15.5
Pancreas	13.2	**11.5**	10.9
Ovary	9.1	**7.9**	7.7
Leukemia	7.8	**7.3**	7.0
Non-Hodgkin Lymphoma	9.3	**6.9**	6.2
Liver and Intrahepatic Bile Duct	5.7	**5.3**	6.0
Bladder	6.9	**5.0**	4.4
Esophagus	4.5	**5.0**	4.2
Uterus	6.3	**4.9**	4.4
Brain and Other CNS	4.6	**4.5**	4.3
Kidney and Renal Pelvis	5.5	**4.3**	3.9
Multiple Myeloma	2.2	**3.5**	3.3
Melanoma of Skin	2.9	**3.0**	2.7
Stomach	5.1	**2.9**	3.4
Cervix	3.8	**2.6**	2.3
Oral Cavity and Pharynx	3.2	**2.5**	2.5
Larynx	1.1	**1.3**	1.1
Thyroid	-	**0.5**	0.5
Hodgkin Lymphoma	-	**0.4**	0.4
Testis	-	**0.3**	0.3

Source: Ohio Department of Health, 2013.

Age-adjusted cancer mortality rates in Ashtabula County were significantly higher than the Ohio averages for lung and bronchus, colon and rectum, pancreas, ovary, Leukemia, non-Hodgkin lymphoma, liver and intrahepatic bile duct, bladder, uterus, kidney and renal pelvis, stomach, cervix, and oral cavity and pharynx. The stomach cancer mortality rate in Ashtabula County was more than 50 percent above the Ohio average.

Exhibit 23 presents age-adjusted cancer incidence rates in the community.

Exhibit 23: Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2008-2012
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Cancer Type	Ashtabula County	Ohio
Total	476.7	**452.5**
Prostate	84.3	**101.7**
Breast	65.0	**67.6**
Lung and Bronchus	80.2	**67.4**
Colon and Rectum	49.9	**40.6**
Other Sites/Types	33.7	**35.8**
Uterus	33.4	**28.8**
Bladder	28.8	**22.1**
Melanoma of Skin	19.7	**19.5**
Non-Hodgkins Lymphoma	21.7	**18.6**
Kidney and Renal Pelvis	17.3	**16.9**
Thyroid	15.8	**15.2**
Pancreas	14.6	**12.3**
Leukemia	8.5	**11.9**
Oral Cavity and Pharynx	12.1	**11.7**
Ovary	-	**11.3**
Brain and Other CNS	6.0	**7.4**
Cervix	-	**7.4**
Stomach	9.5	**6.8**
Liver and Intrahepatic Bile Duct	11.6	**6.6**
Multiple Myeloma	3.9	**5.9**
Testis	11.3	**5.2**
Esophagus	5.5	**5.0**
Larynx	3.7	**4.3**
Hodgkins Lymphoma	-	**2.6**

Source: Ohio Department of Health, 2013.

The incidence rates for lung and bronchus, colon and rectum, uterus, bladder, melanoma of skin, non-Hodgkins lymphoma, kidney and renal pelvis, thyroid, pancreas, oral cavity and pharynx, stomach, liver and intrahepatic bile duct, testis, and esophageal cancer in Ashtabula County were higher than the Ohio averages. Incidence rates for liver and intrahepatic bile duct and testis cancers were more than 50 percent higher in Ashtabula County than the state average.

Exhibit 24: Communicable Disease Incidence Rates per 100,000 Population, 2012
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Measure	Ashtabula County	Ohio
Chlamydia	223.7	**462.0**
HIV	55.8	**154.3**
Gonorrhea	51.2	**143.5**
Syphilis	1.0	**9.9**
Varicella	15.9	**7.0**
Viral Meningitis	0.0	**6.1**
Hepatitis A, B, and C	3.0	**1.9**

Source: Ohio Department of Health, 2012.

Ashtabula County has had comparatively high incidence rates of varicella and hepatitis A, B, and C.

Exhibit 25: Maternal and Child Health Indicators, 2012
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Measure	Ashtabula County	Ohio	Healthy People 2020
Mortality Rate per 1,000 Live Births			
Infant	8.5	**7.7**	N/A
Neonatal	4.8	**5.2**	N/A
Post-Neonatal	3.8	**2.5**	N/A
% Deliveries			
Low Birth Weight	8.0	**8.6**	7.8
Very Low Birth Weight	1.4	**1.6**	1.4
% Preterm Births			
< 32 weeks of gestation	2.0	**2.3**	1.8
32-33 weeks of gestation	1.6	**1.6**	1.4
34-36 weeks of gestation	8.5	**8.6**	8.1
< 37 weeks of gestation	12.1	**12.6**	11.4
% Births to			
Unmarried Women 18-54 Years Old	45.5	**41.3**	N/A
Women 40-54 Years Old	1.8	**2.1**	N/A
Women <18 Years Old	3.3	**3.0**	N/A
Teenage Pregnancies per 1,000 Births			
Births to Females 15-19 Years Old	43.1	**36.0**	N/A

Source: Ohio Department of Health, 2012.

Exhibit 25 indicates that infant and post-neonatal mortality rates and birth rates for teens and unmarried women are comparatively high in Ashtabula County.

Behavioral Risk Factor Surveillance System

The Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) gathers data through a telephone survey regarding health risk behaviors, healthcare access, and preventive health measures. Data are collected for the entire United States. Analysis of BRFSS data can identify localized health issues, trends, and health disparities, and can enable county, state, or nation-wide comparisons.

BRFSS data were assessed for each ZIP code in the ACMC community and compared to the averages of the 21 counties in Northeast Ohio.[14]

[14] The 21 counties include Ashland, Ashtabula, Carroll, Columbiana, Crawford, Cuyahoga, Erie, Geauga, Holmes, Huron, Lake, Lorain, Mahoning, Medina, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas, and Wayne counties.

Exhibit 26: Behavioral Risk Factor Surveillance System, Chronic Conditions, 2015

(Light grey shading indicates indicator worse than the 21-County average; Dark grey shading indicates more than 50 percent worse than the 21-County average)

City	ZIP Code	Total Population 18+ 2015	% Obese	% Back Pain	% Diabetes	% Asthma	% Depresssion	% High Blood Pressure	% High Cholesterol	%COPD	% Smoking
Andover	44003	3,986	35.7%	25.2%	15.7%	11.7%	16.4%	33.1%	25.7%	5.8%	32.4%
Ashtabula	44004	25,059	35.4%	32.1%	17.0%	12.9%	20.9%	37.3%	29.5%	6.5%	32.1%
Austinburg	44010	1,029	39.9%	30.4%	13.9%	10.7%	16.6%	33.3%	24.5%	4.7%	24.7%
Conneaut	44030	14,068	37.9%	28.5%	16.7%	11.8%	17.8%	33.0%	25.4%	5.2%	33.0%
Dorset	44032	1,214	36.7%	27.6%	19.1%	15.7%	18.0%	35.4%	29.5%	6.3%	28.1%
Geneva	44041	10,582	36.8%	31.5%	19.2%	11.8%	17.9%	35.2%	27.9%	5.3%	32.7%
Jefferson	44047	7,145	36.0%	28.5%	14.3%	11.5%	16.3%	32.4%	25.1%	5.2%	27.1%
Kingsville	44048	2,025	37.7%	32.0%	15.3%	15.7%	20.6%	33.3%	25.7%	6.0%	29.9%
Orwell	44076	4,398	36.5%	26.3%	15.1%	9.8%	17.0%	30.0%	24.5%	4.5%	35.9%
Pierpont	44082	943	36.6%	27.7%	19.6%	15.6%	17.8%	35.7%	29.7%	6.4%	27.7%
Rock Creek	44084	3,428	33.4%	18.5%	10.9%	11.2%	12.9%	24.6%	20.1%	4.5%	29.3%
Rome	44085	976	37.1%	28.0%	19.3%	15.4%	18.2%	35.5%	30.2%	6.5%	28.4%
Williamsfield	44093	756	41.0%	28.8%	17.5%	9.9%	17.6%	34.8%	22.5%	4.9%	36.4%
Windsor	44099	1,345	33.9%	15.8%	9.6%	8.1%	14.9%	20.8%	17.9%	3.6%	35.6%
Ashtabula Community Total		**76,954**	**36.3%**	**29.2%**	**16.4%**	**12.1%**	**18.4%**	**34.0%**	**26.8%**	**5.6%**	**31.8%**
21-County Average		**3,454,621**	**31.7%**	**25.6%**	**14.0%**	**11.6%**	**15.1%**	**30.6%**	**24.1%**	**4.7%**	**27.5%**

Source: Market Expert/Behavioral Risk Factor Surveillance System, 2015.

Compared to the average of the 21 counties in Northeast Ohio, the Ashtabula County Medical Center community compared unfavorably for all chronic conditions.

Ambulatory Care Sensitive Conditions

This section examines the frequency of discharges for Ambulatory Care Sensitive Conditions (ACSCs, frequently referred to as Prevention Quality Indicators or PQIs) throughout the community.

ACSCs are fourteen health "conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease."[15] As such, rates of hospitalization for these conditions can "provide insight into the quality of the health care system outside of the hospital," including the accessibility and utilization of primary care, preventive care and health education. Among these conditions are: angina without procedure, diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

Disproportionately high rates of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes.

Exhibit 27 provides 2014 PQI rates (per 100,000 persons) for ZIP codes in the ACMC community – with comparisons to Ohio averages.

[15]Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

Exhibit 27: PQI (ACSC) Rates per 100,000, 2014

(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

City	ZIP Code	Diabetes Short-Term Complications	Perforated Appendix	Diabetes Long-Term Complications	Chronic Obstructive Pulmonary Disease	Hypertension	Congestive Heart Failure	Low Birth Weight
Andover	44003	199	0	142	397	28	369	59
Ashtabula	44004	73	47	118	1099	65	640	39
Austinburg	44010	0	0	0	498	0	148	0
Conneaut	44030	45	0	97	442	30	364	107
Dorset	44032	78	0	311	908	311	389	0
Geneva	44041	125	42	80	593	18	590	78
Jefferson	44047	56	0	83	500	56	389	66
Kingsville	44048	0	0	196	686	49	782	0
Orwell	44076	87	0	145	846	58	725	45
Pierpont	44082	0	0	0	511	0	257	0
Rock Creek	44084	34	28	203	440	0	339	65
Rome	44085	81	42	81	948	0	365	73
Williamsfield	44093	0	0	0	146	0	1072	167
Windsor	44099	70	0	70	0	0	418	24
Ashtabula County		**74**	**32**	**109**	**717**	**136**	**768**	**58**
Ohio Totals		**95**	**37**	**119**	**609**	**53**	**424**	**61**

Source: Cleveland Clinic, 2014.
Note: Rates are not age-sex adjusted.

Exhibit 27: PQI (ACSC) Rates per 100,000, 2014 (continued)

(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

City	ZIP Code	Dehydration	Bacterial Pneumonia	Urinary Tract Infection	Angina without Procedure	Uncontrolled Diabetes	Adult Asthma	Lower-Extremity Amputation Among Patients with Diabetes
Andover	44003	48	277	111	0	0	0	0
Ashtabula	44004	186	191	152	20	37	13	4
Austinburg	44010	0	433	435	0	0	0	0
Conneaut	44030	63	145	117	15	7	0	7
Dorset	44032	132	759	153	0	0	0	0
Geneva	44041	151	227	158	9	9	58	0
Jefferson	44047	117	163	191	28	0	46	28
Kingsville	44048	413	477	575	0	0	0	0
Orwell	44076	245	283	114	0	0	0	0
Pierpont	44082	0	167	504	0	0	0	0
Rock Creek	44084	115	198	133	34	0	110	34
Rome	44085	69	237	159	0	0	0	41
Williamsfield	44093	0	190	191	0	0	0	0
Windsor	44099	0	272	0	0	0	0	0
Ashtabula County		**136**	**322**	**245**	**21**	**21**	**20**	**8**
Ohio Totals		**107**	**196**	**131**	**12**	**13**	**36**	**9**

Source: Cleveland Clinic, 2014.
Note: Rates are not age-sex adjusted.

The rate of admissions for ACSC in the ACMC community exceeded the Ohio average for chronic obstructive pulmonary disease, hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, angina without procedure, and uncontrolled diabetes.

Exhibit 28 provides the ratio of PQI rates in the ACMC community compared to the Ohio averages. Conditions where the ratios are highest (meaning that the PQI rates in the community are the most above average) are presented first.

Exhibit 28: Ratio of PQI Rates for ACMC and Ohio, 2014

Indicator	Ashtabula County Medical Center Community	Ohio	Ratio: Ashtabula/ Ohio
Hypertension	135.91	**52.63**	2.58
Urinary Tract Infection	244.74	**131.50**	1.86
Congestive Heart Failure	768.40	**423.76**	1.81
Angina without Procedure	21.13	**11.67**	1.81
Bacterial Pneumonia	322.15	**196.17**	1.64
Uncontrolled Diabetes	21.13	**13.16**	1.61
Dehydration	135.95	**107.17**	1.27
Chronic Obstructive Pulmonary Disease	716.54	**608.75**	1.18
Low Birth Weight	57.58	**61.45**	0.94
Diabetes Long-Term Complications	108.99	**118.79**	0.92
Lower-Extremity Amputation Among Patients with Diabetes	7.78	**8.90**	0.87
Perforated Appendix	31.86	**36.95**	0.86
Diabetes Short-Term Complications	73.96	**94.71**	0.78
Adult Asthma	19.99	**35.99**	0.56

Source: Cleveland Clinic, 2014.
Note: Rates are not age-sex adjusted.

In the ACMC community, ACSC rates for hypertension, urinary tract infection, congestive heart failure, angina without procedure, bacterial pneumonia, and uncontrolled diabetes were more than fifty percent higher than the Ohio averages.

Community Need Index™ and Food Deserts

Dignity Health Community Need Index

Dignity Health, a California-based hospital system, developed and has made widely available for public use a *Community Need Index*™ that measures barriers to health care access by county/city and ZIP code. The index is based on five social and economic indicators:

- The percentage of elders, children, and single parents living in poverty;

- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without a high school diploma;
- The percentage of uninsured and unemployed residents; and
- The percentage of the population renting houses.

The *Community Need Index*™ calculates a score for each ZIP code based on these indicators. Scores range from "Lowest Need" (1.0-1.7) to "Highest Need" (4.2-5.0).

Exhibit 29 presents the *Community Need Index*™ (CNI) score of each ZIP code in the ACMC community.

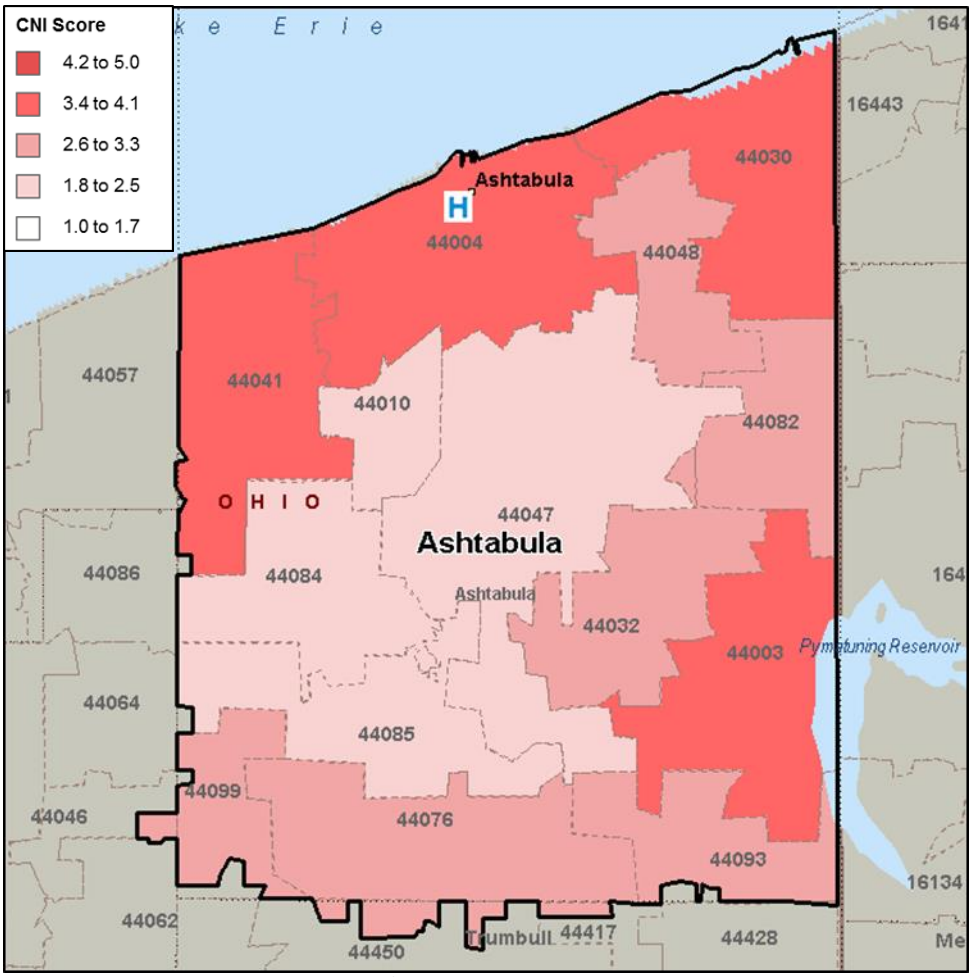
Exhibit 29: Community Need Index™ Score by ZIP Code, 2015

City	ZIP Code	CNI Score
Ashtabula	44004	4.0
Andover	44003	3.6
Conneaut	44030	3.6
Geneva	44041	3.4
Orwell	44076	3.2
Williamsfield	44093	3.2
Pierpont	44082	3.0
Dorset	44032	2.8
Kingsville	44048	2.8
Windsor	44099	2.6
Jefferson	44047	2.4
Rome	44085	2.2
Rock Creek	44084	2.0
Austinburg	44010	2.0
Ashtabula County Average		**3.4**

Source: Dignity Health, 2015.

Exhibit 30 presents these data in a community map format.

Exhibit 30: Community Need Index, 2015



Source: Microsoft MapPoint and Dignity Health, 2015.

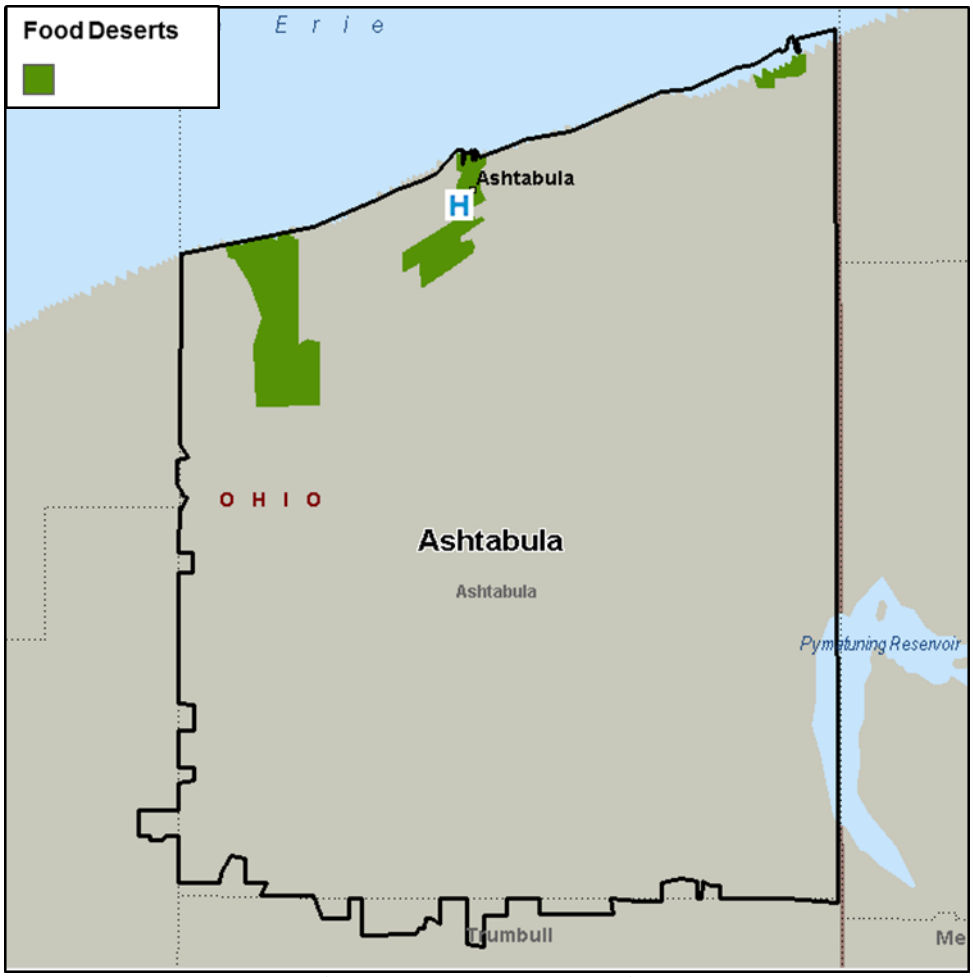
The CNI indicates that four of the 17 ZIP codes in the ACMC community scored in the "high need category." Ashtabula ZIP code 44004 had the highest CNI score at 4.0 and ZIP codes 44003, 44030, and 44041 had CNI scores of 3.6, 3.6, and 3.4, respectively.

Food Deserts

The U.S. Department of Agriculture's Economic Research Service estimates the number of people in each census tract that live in a "food desert," defined as low-income areas more than one mile from a supermarket or large grocery store in urban areas and more than 10 miles from a supermarket or large grocery store in rural areas. Many government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these food deserts.

Exhibit 31 illustrates the location of food deserts in the community.

Exhibit 31: Food Deserts



Source: Microsoft MapPoint and U.S. Department of Agriculture, 2015.

Three census tracts within the ACMC community have been designated as food deserts.

Medically Underserved Areas and Populations

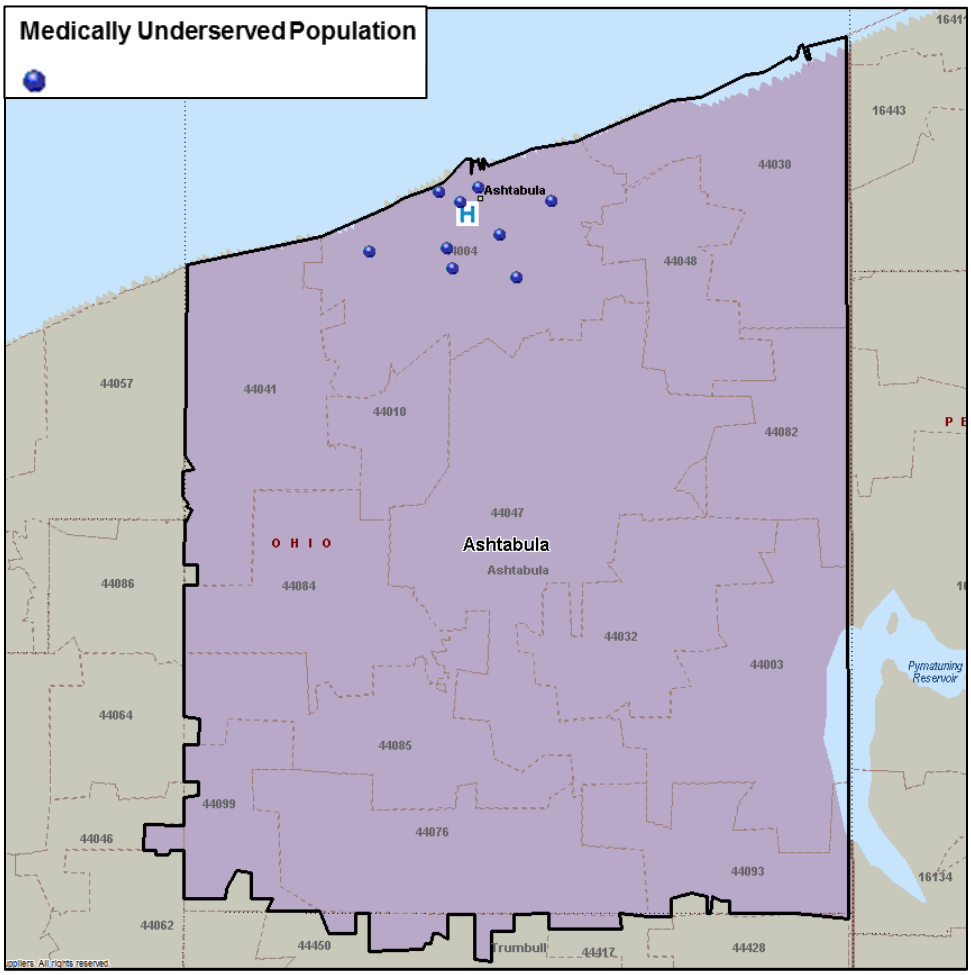
Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.[16] Areas with a score of 62 or less are considered "medically underserved."

Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides."[17]

There are nine census tracts within the hospital's community that have been designated as areas where Medically Underserved Populations are present (**Exhibit 32**).

[16] Heath Resources and Services Administration. See http://www.hrsa.gov/shortage/mua/index.html
[17] *Ibid.*

Exhibit 32: Medically Underserved Populations



Source: Microsoft MapPoint and HRSA, 2015.

Health Professional Shortage Areas

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present. In addition to areas and populations that can be designated as HPSAs, a health care facility can receive federal HPSA designation and an additional Medicare payment if it provides primary medical care services to an area or population group identified as having inadequate access to primary care, dental, or mental health services.

HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility."[18]

[18]U.S. Health Resources and Services Administration, Bureau of Health Professionals. (n.d.). *Health Professional Shortage Area Designation Criteria*. Retrieved 2012, from http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/index.html

Exhibit 33 lists the locations of the federally-designated HPSAs.

Exhibit 33: Health Professional Shortage Areas

County	HPSA Name	HPSA Type	Designation Type
Ashtabula	Orwell	Primary Care	Minor Civil Division
Ashtabula	Andover	Primary Care	Minor Civil Division
Ashtabula	Cherry Valley	Primary Care	Minor Civil Division
Ashtabula	Colebrook	Primary Care	Minor Civil Division
Ashtabula	Dorset	Primary Care	Minor Civil Division
Ashtabula	Hartsgrove	Primary Care	Minor Civil Division
Ashtabula	Lenox	Primary Care	Minor Civil Division
Ashtabula	Morgan	Primary Care	Minor Civil Division
Ashtabula	New Lyme	Primary Care	Minor Civil Division
Ashtabula	Orwell	Primary Care	Minor Civil Division
Ashtabula	Richmond	Primary Care	Minor Civil Division
Ashtabula	Rome	Primary Care	Minor Civil Division
Ashtabula	Trumbull	Primary Care	Minor Civil Division
Ashtabula	Wayne	Primary Care	Minor Civil Division
Ashtabula	Williamsfield	Primary Care	Minor Civil Division
Ashtabula	Windsor	Primary Care	Minor Civil Division
Ashtabula	Ashtabula	Dental Health	Single County
Ashtabula	Ashtabula	Mental Health	Single County

Source: Health Resources and Services Administration, 2015.

Within the ACMC community, there are 16 primary care HPSA designated minor civil divisions. Ashtabula County is also designated as a dental health and mental health HPSA.

Findings of Other Community Health Needs Assessments

Several other needs assessments and health reports relevant to the ACMC community also were reviewed. The significant needs identified by each report are presented in **Exhibit 34**:

Exhibit 34: Significant Needs Identified in Relevant CHNAs

Significant Need	UH Case Medical Center CHNA 2015	UH Conneaut Medical Center CHNA 2015	UH Geauga Medical Center CHNA 2015	UH Geneva Medical Center CHNA 2015	UH Rainbow Babies & Children's Hospital CHNA 2015	Ashtabula County Medical Center CHNA 2013	Glenbeigh CHNA 2013	Frequency
Access to basic/primary health care	•	•	•	•	•	•		6
Drug/ substance abuse		•	•	•	•	•	•	6
Mental/Behavioral health	•	•	•	•	•	•		6
Obesity	•	•	•	•	•	•		6
Diabetes	•	•	•	•	•	•		6
Tobacco use/ smoking	•	•	•	•	•	•		6
Cancer	•	•	•	•		•		5
Cost of care	•	•	•	•	•			5
Transportation	•	•	•	•		•		5
Unemployment	•	•	•	•	•			5
Access to dental care		•	•	•	•	•		5
Cardiovascular/ heart disease	•	•	•	•		•		5
Access/lack of health insurance coverage		•		•		•	•	4
Elderly care/ aging population	•	•	•	•				4
Infant mortality (disparities)	•	•		•	•			4
Poverty	•		•		•	•		4
Violence	•	•		•	•			4
Alcohol abuse and excessive drinking			•		•	•	•	4
Health disparities/ equity	•	•			•			3
Alzheimer's disease	•		•					2
Asthma/childhood asthma			•		•			2
Chronic stress		•		•				2
Digestive diseases	•		•					2
Drug/ substance abuse (youth)			•				•	2
Food deserts		•		•				2
Nutrition/ access to healthy food	•					•		2
Prenatal care					•	•		2
Respiratory diseases	•		•					2
Social determinants of health (general)						•	•	2
Teenage pregnancy/ births		•		•				2

Source: Analysis of Other CHNA Reports by Verité, 2016.

A State Health Assessment also recently was published by the Ohio Department of Health.[19] The State Health Assessment (SHA) is a comprehensive report directed by a steering committee comprised of directors of Ohio's health-related state agencies. The Ohio Department of Health contracted with the Health Policy Institute of Ohio to facilitate preparation of the assessment. The purpose of the SHA is both to provide a template for state agencies and local partners for analysis as well as inform the identification and prioritization of community health needs for the State Health Improvement Plan (SHIP).

State-wide needs. The assessment found that Ohio performed worse than the U.S. overall on most measures of population health with many opportunities to improve both physical and mental health outcomes. For example:

- The average number of days Ohio residents experienced limited activity due to mental or physical difficulties increased 17 percent between 2013 and 2014.
- Over the same period, adult asthma, child asthma, and diabetes also increased by 10 percent.
- Drug overdose deaths increased 18 percent and were significantly higher in Ohio than the United States (24.7 per 100,000 compared to 14.6).
- Infant mortality also is a significant issue in Ohio, and is particularly problematic for black and Hispanic (or Latino) infants.
- Ohio ranks particularly poorly for the number mothers who smoke during pregnancy. Only 59 percent of black mothers in Ohio receive prenatal care in the first trimester, compared to70.8 percent in the U.S. overall.
- Per-capita health spending has been higher in Ohio than in other states.
- The percentage of hospital inpatients with opiate-related diagnoses increased substantially from 2012 to 2014 (from 25.2 percent to 37.0).
- Ohio has experienced rates of avoidable emergency department visits for Medicare beneficiaries, admissions for pediatric asthma, and admissions for diabetes long-term complications that exceed United States averages.
- Access to mental health services and drug treatment services is particularly problematic, and a comparatively high percentage of Ohio residents live in areas underserved for dental care.
- Ohio has 9.9 public health agency staff per 100,000, a number substantially below the national average of 30.6.
- Infection rates for a number of communicable diseases exceed national averages, including chlamydia. The state's child immunization and HPV vaccination rates have been below average.
- Based on national comparisons, other concerns with children are also present in Ohio, including: childhood poverty rates, number of children in single-parent households, percent of children with adverse childhood experiences, and children exposed to secondhand smoke.
- There are also significant needs related to the physical environment in Ohio. The average amount of particulate matter and cases of lead poisoning are both higher in Ohio than the

[19] Available at: http://www.healthpolicyohio.org/sha-ship/

United States. Food insecurity is higher in the state as well, and Ohio residents have less access to exercise opportunities than the country on average.

The SHA reviewed 211 local health department and hospital community health assessments that covered 94 percent of counties to evaluate what the most significant needs were. That review found ten most commonly identified significant community health needs: obesity, mental health, access to health care, drug and alcohol abuse, maternal and infant health, cancer, cardiovascular disease, diabetes, tobacco, and chronic diseases.

More than 400 stakeholders provided input into the SHA. Ten priority areas were identified based on this input: obesity, access to behavioral health care, drug and alcohol abuse, mental health, employment/poverty/income, equity and disparities, access to dental care, cardiovascular disease, and nutrition.

Northeast Ohio. The northeast Ohio region also had particularly significant needs identified in the SHA. Concerns about the physical environment (air pollution and lead poisoning) are particularly prevalent in northeast Ohio. Other health assessments reviewed as part of the SHA process most frequently identified the following community health needs:

- Access to health and medical care (76 percent)
- Obesity (63 percent)
- Mental health (57 percent)
- Drug and alcohol abuse (47 percent)
- Maternal and infant health (41 percent)
- Diabetes (40 percent)
- Coverage and affordability (32 percent)
- Cardiovascular disease (29 percent)
- Cancer (29 percent)
- Tobacco use (29 percent)

Stakeholders from northeast Ohio most frequently identified the following as significant community health needs: obesity, drug and alcohol abuse, mental health, access to behavioral health care, employment/ poverty /income, equity and disparities, maternal and infant health, nutrition, coverage and affordability, and diabetes.

APPENDIX C – COMMUNITY INPUT PARTICIPANTS

Individuals from a wide variety of organizations and communities participated in the interview process (shown in **Exhibit 35**).

Exhibit 35: Interview Participants

Organization
Ohio's 99th District
Ashtabula Senior Advocacy and Protection Network
City of Conneaut
ACMC Board of Directors
Ashtabula Community Health Center
Ashtabula County Health Department
City of Ashtabula
Catholic Charities of Ashtabula
City of Geneva
ACMC Community Advisory Council

Two individuals from the Ashtabula County Health Department and five individuals from the ACMC Community Advisory Council participated in the interview process.

APPENDIX D – ACTIONS TAKEN SINCE THE PREVIOUS CHNA

Ashtabula County Medical Center (ACMC) uses evidence-based approaches in the delivery of healthcare services and educational outreach with the aim of achieving healthy outcomes for the community it serves. It undertakes periodic monitoring of its programs to measure and determine their effectiveness and ensure that best practices continue to be applied.

Given that the process for evaluating the impact of various services and programs on population health is longitudinal by nature, significant changes in health outcomes may not manifest for several community health needs assessment cycles. We continue to evaluate the cumulative impact.

Each identified health need and action items in our 2013 CHNA Implementation Strategy are described below with representative impacts.

1. **Identified Need: Availability of Primary Care Providers**
   Action: ACMC continues to recruit primary care providers (physicians, nurse practitioners, physician assistants) to the community and placing offices in shortage areas. These primary care providers include those in family medicine, internal medicine, pediatrics, and obstetrics and gynecology. An employed physician recruiter and the Senior Vice President of Health System Advancement and Administration lead recruitment efforts through a variety of methods, including recruiting websites, direct mail, contracts with recruitment agencies, and others.
   Highlighted Impact:
   - ACMC reviewed over 1,000 CVs for primary care providers, conducting 85 on-site interviews which resulted in the hiring of 8 new providers.

2. **Identified Need: Availability of Specialty Physicians**
   Action: ACMC continues to recruit specialty physicians to the community to ensure that residents do not have to leave the community for specialty care. One way ACMC works towards this goal is continued collaboration with Cleveland Clinic in providing specialty clinics for services not available in the community. An employed physician recruiter and the Senior Vice President of Health System Advancement and Administration lead recruitment efforts through a variety of methods, including recruiting websites, direct mail, contracts with recruitment agencies, and others.
   Highlighted Impact:
   - ACMC reviewed over 500 CVs for specialty physicians, conducting 55 on-site interviews which resulted in the hiring of 5 new specialists.

3. **Identified Need: Lack of Transportation**
   Action: To help alleviate transportation shortages in the community, ACMC continues to provide the Health Express free shuttle service. The hospital also explored collaboration opportunities with the Ashtabula County Department of Job & Family Services to use the county transit system for medical appointments.

Highlighted Impact:

- The ACMC Health Express shuttle provided 13,000 rides from 2013 to 2015. Usage figures suggested there was not a need to change routes or add a second shuttle, though this claim will continue to be monitored over the next three years.
- The hospital met with the Ashtabula County Department of Job & Family Services and examined opportunities for the county transit system to supplement the Health Express shuttle. No viable option was determined.

4. **Identified Need: Uninsured and Underinsured Residents**

Action: ACMC collaborated with the Ashtabula County Department of Job & Family Services to develop and implement a plan to accommodate the increase in Medicaid recipients in 2014. Additionally, the hospital continues to offer financial counseling services to assist residents in qualifying for public assistance and the hospital's charity care program.

Highlighted Impact:

- ACMC designated 2 full-time financial counselors to meet with patients to determine eligibility for Medicaid and to explain the hospital's charity care program.

5. **Identified Need: Heart Disease**

Action: ACMC continued to operate the community's only diagnostic cardiac catheterization laboratory and maintained its certification in stroke, heart failure, and chest pain. The hospital also continued to offer annual women's heart health awareness luncheons. ACMC recruited a third and fourth invasive cardiologist, and a cardiac nurse practitioner, to reduce the wait time for initial physician appointments and expanded heart care specialty services to include an electrophysiology specialty clinic.

Highlighted Impact:

- From 2013 to 2015, 543 diagnostic cardiac catheterization procedures were performed at ACMC.
- ACMC had 828 women attend the annual women's heart health luncheon
- Two additional cardiologists were recruited to the hospital, increasing the total full-time cardiologist physician count to 4 at the hospital.

6. **Identified Need: Diabetes**

Action: ACMC continued to offer diabetes education classes and support groups to the community to assist those with diabetes and pre-diabetes manage their disease. The hospital held individual diabetes information sessions, group classes, community presentations, and free glucose checks throughout the previous three years. ACMC also continues to retain a full-time certified diabetes educator on their staff.

Highlighted Impact:

- From 2013 to 2015, 467 individual diabetes education sessions and 32 free group classes were offered through Ashtabula County.
- ACMC also offered 67 free community presentations and health fairs, many of which included free glucose checks.

7. **Identified Need: Obesity**

Action: ACMC offered a variety of health and weight loss programs, including Results Weight Management, Commit to Stay Fit, Health for Life, Walk with a Doc, Lunch and Learn, and others. The hospital also continued to offer healthy food options in the facility's cafeteria and vending machines. ACMC also continued to offer community memberships at the hospital-owned fitness facility and explored a plan to open the facility free of charge on a limited basis. ACMC employees were also offered an incentive program to receive discounts and rebates on health insurance for attaining specified health metrics.

Highlighted Impact:

- Membership at the ACMC fitness center increased by 19.5 percent from 2013 to 2015, from 1,297 to 1,550 members.
- Over 300 hospital employees participated in the Workplace Wellness program that included a personal health risk assessment and biometric screening. These participants are also eligible for a reduction on health insurance premiums if they meet specified goals by June 2016.