



Community Health Needs Assessment

2016

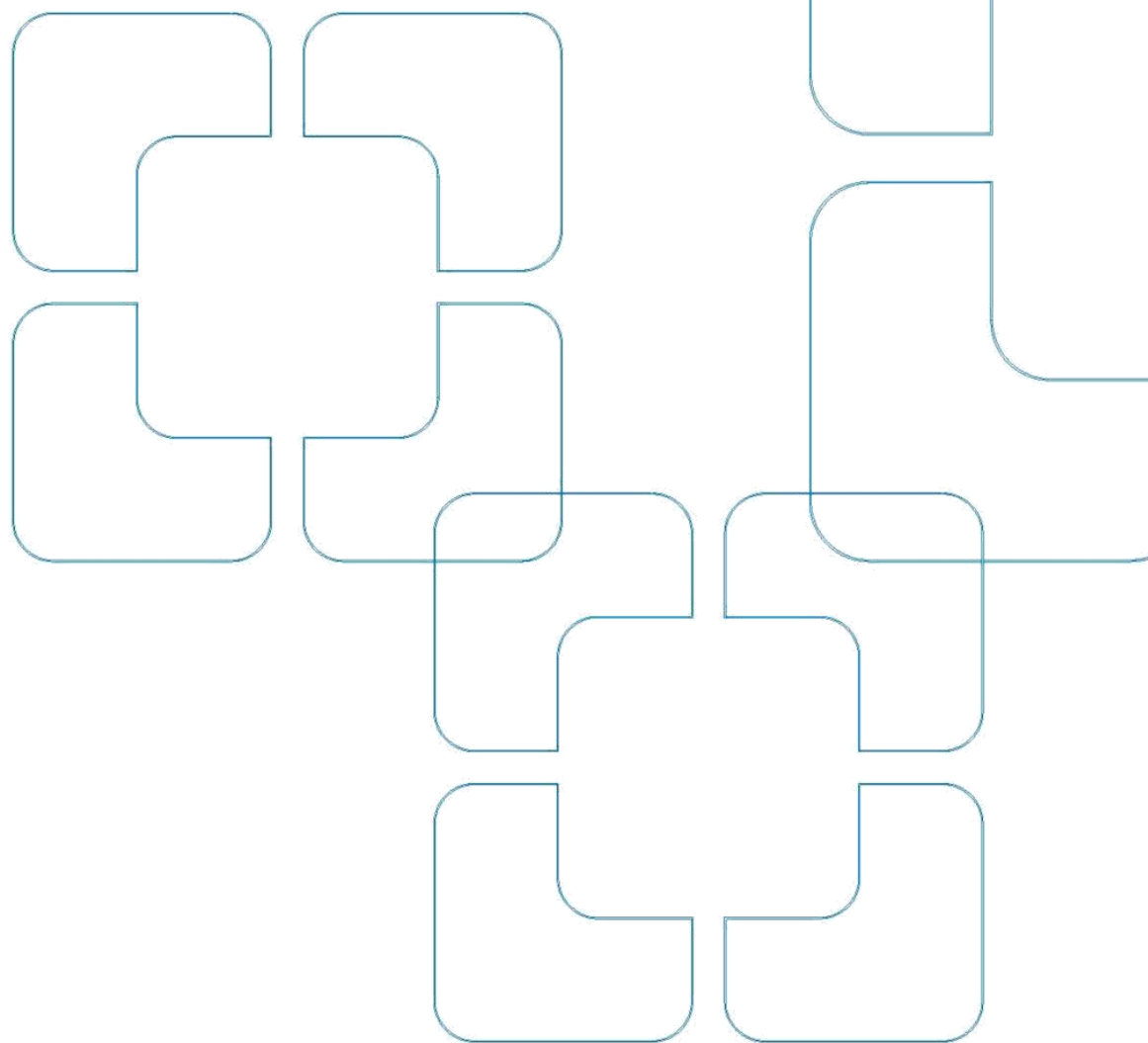


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EXECUTIVE SUMMARY

Introduction

This Community Health Needs Assessment (CHNA) was conducted by Cleveland Clinic Euclid Hospital (“Euclid” 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.

Euclid Hospital is home to one of the region's leading rehabilitation and orthopaedic centers. The 221-bed hospital offers a complete continuum of care: emergency services, acute and sub-acute care, rehabilitation, behavioral health services, and outpatient care. Additional information on the hospital and its services is available at:
http://my.clevelandclinic.org/locations_directions/Regional-Locations/Euclid-hospital.

The hospital is part of 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/>.

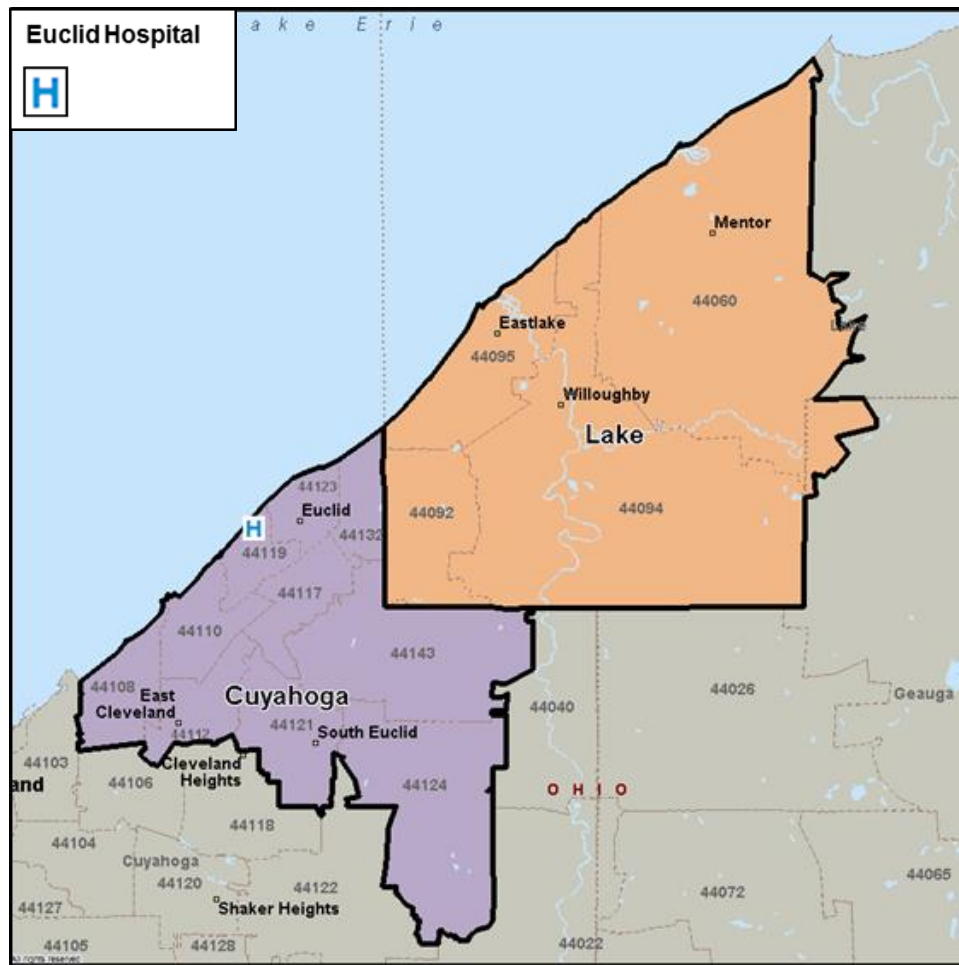
Each Cleveland Clinic hospital is dedicated to the communities it serves. Cleveland Clinic hospitals verify the health needs of communities by performing periodic health needs assessments. These formal assessments are analyzed using widely accepted criteria to determine and measure the health needs of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

Community Definition

For purposes of this report, Euclid’s community is defined as 14 ZIP codes in Cuyahoga and Lake counties in Ohio comprising over 74 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 Euclid’s community in 2015 was 357,768.

EXECUTIVE SUMMARY

The following map portrays the community served by Euclid.



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 Education and Research
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 Euclid. The needs are presented below in alphabetical order, along with certain highlights regarding why each issue was identified as “significant.”

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Access to Affordable Health Care

- Access to basic health care is challenging for some segments of the Euclid community who are unaware of how to access and use available services and who experience other access barriers including cost and inadequate transportation. The Euclid community has comparatively unfavorable socioeconomic indicators, particularly in medically underserved areas. The recent election of the new president raises questions regarding whether access improvements associated with the Affordable Care Act will be sustained.

Chronic Diseases and Other Health Conditions

- Chronic diseases and other health conditions including, in alphabetical order: cancer, chemical dependency, communicable diseases (including sexually transmitted infections), diabetes, heart disease and hypertension, obesity, poor birth outcomes, poor mental health status, and respiratory diseases were identified as prevalent in the Euclid community.

Economic Development and Community Conditions

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

Health Professions Education and Research

- There is a need for more trained health professionals in the community, particularly primary care physicians, mental health providers, and dentists. Research conducted by Cleveland Clinic, has improved health for community members through advancements in new clinical techniques, devices and treatment protocols in diseases and health conditions such as cancer, heart disease, diabetes, and others. There is a need for more research to address these and other community health needs.

Healthcare for the Elderly

- The elderly population in the Euclid 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 Euclid community. Education and opportunities for residents regarding exercise, nutrition, alcohol abuse, 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.

OBJECTIVES AND METHODOLOGY

- **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 Euclid accounts for over 74 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

For this assessment, Euclid collaborated with the following Cleveland Clinic hospitals: Main Campus, Cleveland Clinic Children’s, Akron General, Fairview, Hillcrest, Lodi, Lutheran, Marymount, Medina, South Pointe, Edwin Shaw Rehabilitation, and Cleveland Clinic Florida. Euclid also collaborated with Ashtabula County Medical Center and Glenbeigh.

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

³ 501(r) Final Rule, 2014.

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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 23 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 Euclid. The community was defined by considering the geographic origins of the hospital's 2014 inpatient discharges.

On that basis, Euclid's community is comprised of 14 ZIP codes in Cuyahoga and Lake counties (**Exhibit 1**) which in 2014 accounted for over 74 percent of its inpatient discharges.

Exhibit 1: Euclid Inpatient Discharges by ZIP Code, 2014

County	City	ZIP Code	Inpatient Cases (2014)	Percent of Total
Cuyahoga	Cleveland	44110	910	13.2%
Cuyahoga	Euclid	44123	706	10.3%
Cuyahoga	Cleveland	44119	561	8.2%
Cuyahoga	Euclid	44132	488	7.1%
Cuyahoga	Euclid	44117	446	6.5%
Lake	Eastlake	44095	330	4.8%
Lake	Mentor	44060	243	3.5%
Cuyahoga	Cleveland	44143	236	3.4%
Cuyahoga	Cleveland	44112	224	3.3%
Lake	Willoughby	44094	213	3.1%
Cuyahoga	Cleveland	44108	205	3.0%
Lake	Wickliffe	44092	194	2.8%
Cuyahoga	Cleveland	44121	189	2.7%
Cuyahoga	Cleveland	44124	167	2.4%
Subtotal			5,112	74.3%
Other Areas			1,771	25.7%
Total Discharges			6,883	100.0%

Source: Analysis of OHA Discharge Data, 2014.

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The total population of this community in 2015 was approximately 358,000 persons (**Exhibit 2**).

Exhibit 2: Community Population, 2015

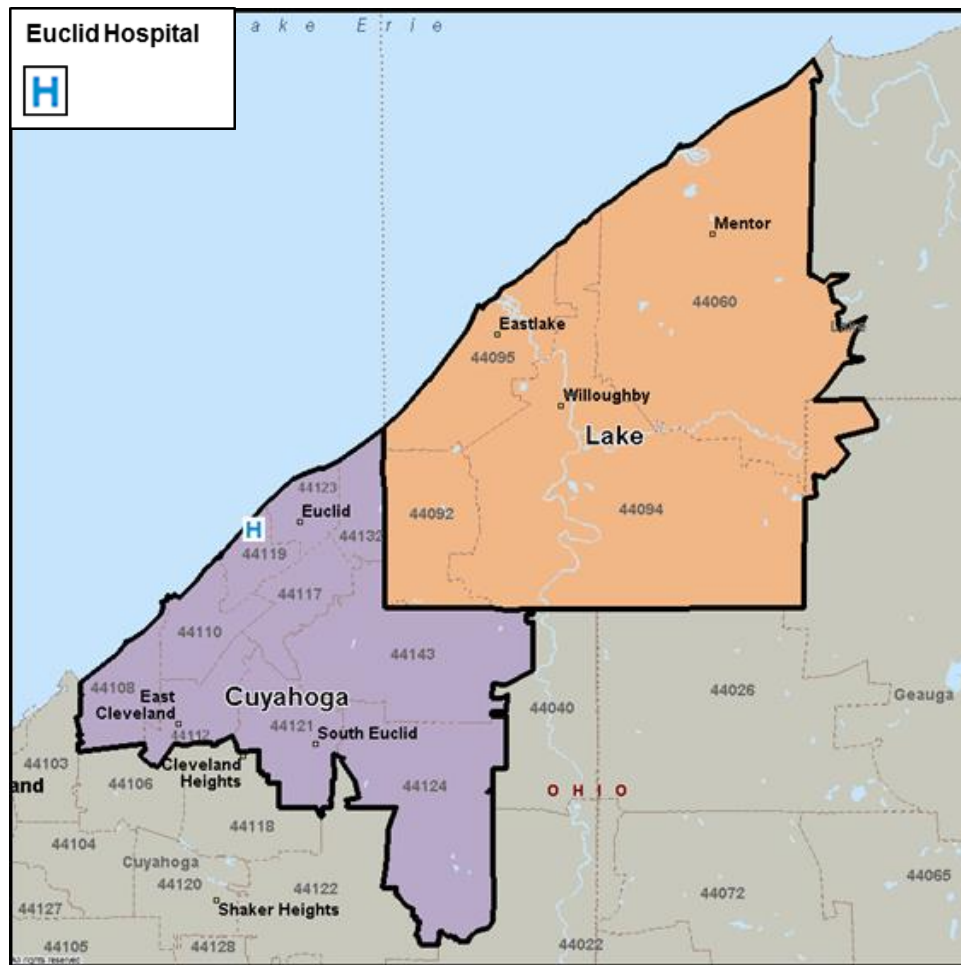
County	City	ZIP Code	Total Population 2015	Percent of Total Population 2015
Cuyahoga	Cleveland	44108	23,919	6.7%
Cuyahoga	Cleveland	44110	18,719	5.2%
Cuyahoga	Cleveland	44112	22,151	6.2%
Cuyahoga	Cleveland	44119	12,270	3.4%
Cuyahoga	Cleveland	44121	32,122	9.0%
Cuyahoga	Cleveland	44124	38,511	10.8%
Cuyahoga	Cleveland	44143	24,142	6.7%
Cuyahoga	Euclid	44117	10,075	2.8%
Cuyahoga	Euclid	44123	16,980	4.7%
Cuyahoga	Euclid	44132	13,989	3.9%
Lake	Eastlake	44095	32,709	9.1%
Lake	Mentor	44060	59,157	16.5%
Lake	Wickliffe	44092	16,741	4.7%
Lake	Willoughby	44094	36,283	10.1%
Community Total			357,768	100.0%

Source: Truven Market Expert, 2015.

The hospital is located in Euclid, Ohio (ZIP code 44119). The map in **Exhibit 3** portrays the ZIP codes that comprise the Euclid community.

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Exhibit 3: Euclid Community



Source: Microsoft MapPoint and Cleveland Clinic, 2015.

Secondary Data Summary

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

Demographics

Population characteristics and changes directly influence community health needs. The total population in the Euclid community is expected to decrease 1.2 percent from 2015 to 2020. Between 2015 and 2020, 12 of the 14 ZIP codes in the Euclid community are projected to lose population. The populations in two Cleveland ZIP codes (44108 and 44110) are expected to decrease by more than four percent.

While the total population is expected to decrease, the number of persons aged 65 years and older is projected to increase by 11.3 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 2015, over 70 percent of the population in four ZIP codes on the western side of the community (44108, 44112, 44110, and 44117) was Black. In three Lake County ZIP codes, this percentage was under 5 percent.

Cuyahoga 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, Cuyahoga and Lake counties had higher proportions of the population that are 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 18.5 percent, Cuyahoga County's poverty rate was higher than Ohio's poverty rate during that year. In Cuyahoga and Lake counties, poverty rates have been comparatively high for Black and Hispanic (or Latino) residents. Low income census tracts are prevalent in the western portion of Euclid's community.

2014 crime rates in Cuyahoga County were well above Ohio averages.

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 (Cuyahoga and Lake counties), 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 2015, ten out of the 14 ZIP codes in the Euclid community had

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

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uninsured rates below ten percent. By 2020, it is projected that this will increase to all of the 14 ZIP codes in the community.

Local Health Status and Access Indicators

In the 2016 *County Health Rankings*, Cuyahoga County ranked in the bottom one-half of Ohio counties for 17 of the 27 indicators assessed. For five issue areas, the county ranked in the bottom quartile including: Quality of Life, Sexually Transmitted Infections, Social and Economic Factors, Inadequate Social Support, and Severe Housing Problems. The county's ranking fell between 2013 and 2016, particularly for various social and economic factors, social determinants of health, Excessive Drinking, and Teen Births.

Lake County ranked in the bottom 50th percentile among Ohio counties for 8 of the 27 indicators assessed. Of those 8 indicators ranking in the bottom 50th percentile, four of them ranked in the bottom quartile, including, Excessive Drinking, and Inadequate Social Support. Between 2013 and 2016, rankings for 10 indicators fell in Lake County. The following indicators underlying the rankings are comparatively unfavorable:

- Air pollution
- Average number of physically unhealthy days
- Binge and heavy drinking
- Chlamydia rate
- Diabetic screening
- Food environment index
- High school graduation rate
- Income inequality rate
- Mental health providers rate
- Percent of adults reporting fair or poor health
- 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 households with severe housing problems
- Percent of live births with low birth weight
- Percent of the population unemployed
- Percent of the population without health insurance
- Percent of the workforce that drives to work alone
- Percent of workers with a long commute who drive alone
- Primary care physicians rate
- Social associations rate
- Teen birth rate
- Violent crime rate
- Years of potential life lost

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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 indicators appear to be most significant:

- Adult binge drinking and
- Adult female routine pap tests
- Annual average particulate matter concentration and access to healthy food
- Morbidity associated with adult diabetes, Alzheimer's disease, gonorrhea, adult asthma, adult depression, and preterm births
- Mortality rates for cancer and coronary heart disease
- Rates of preventable hospitalizations for older adults
- The number of children living in single-parent households

According to the Ohio Department of Health, age-adjusted mortality rates for heart disease, homicide, aortic aneurysm, HIV, and pedestrians killed in traffic collisions were all significantly higher in Cuyahoga County than the Ohio averages. In Lake County, age-adjusted mortality rates for suicide and pedestrians killed in traffic collisions were also higher than the Ohio averages. Overall age-adjusted mortality and incidence rates for cancer in Cuyahoga County have been slightly above average.

Ohio Department of Health data also indicate that:

- The incidence of several communicable diseases has been particularly high in Cuyahoga County, including chlamydia, HIV, gonorrhea, and viral meningitis.
- Virtually all maternal and child health indicators (infant mortality rates, low birth weights, preterm births, and teen pregnancies) are comparatively problematic in Cuyahoga County.

Data from the Centers for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS) indicate comparatively high rates of asthma, COPD, and high blood pressure in several ZIP codes across the community.

Ambulatory Care Sensitive Conditions

Ambulatory Care Sensitive Conditions (ACSCs) include fourteen health conditions we analyzed "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.

We reviewed ACSC rates in the Euclid community for 14 conditions and Euclid community rates have exceeded the Ohio averages for all but one condition (perforated appendix). Rates for

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

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congestive heart failure, hypertension, diabetes, urinary tract infection, and adult asthma 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

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 Euclid community scored in the “highest need category.” Cleveland ZIP codes 44108 and 44110 each received a score of 5.0 – the highest score possible.

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 Euclid 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 approximately 34 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

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be present. A number of census tracts have been designated to be HPSAs in the hospital's community – for primary care and for dental care.

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:

- Obesity
- Mental/Behavioral health
- Access to basic/primary health care
- Diabetes
- Cardiovascular/heart disease
- Tobacco use/smoking
- Drug/substance abuse
- Alcohol abuse and excessive drinking
- Elderly care/aging population
- Cancer
- Infant mortality (disparities)
- Access to dental care
- Access/lack of health insurance coverage
- Cost of care
- Poverty
- Transportation

The assessment prepared by the Cuyahoga County Health Improvement Partnership (2015) also highlighted issues with violence and health disparities/equity.

Primary Data Summary

The following community health issues were identified by interviewees as significant. The issues are presented based on the frequency with which they were mentioned.

Unhealthy Lifestyle and Related Conditions. In nearly all interviews, the health behaviors of greatest concern were poor eating habits and physical inactivity. Unhealthy diets were attributed to limited access to healthy foods for many in lower socio-economic classes and certain cultural groups. Insufficient knowledge about nutrition was mentioned in many interviews as a contributing factor to poor health conditions, along with a misunderstanding of the perceived affordability of fast food. Interviewees believed that the increasingly sedentary lifestyles of residents were caused by a lack of emphasis on physical activity in the schools and hectic work schedules among adults. Interviewees indicate that unhealthy lifestyles are contributing to chronic disease in the community. Obesity, diabetes/pre-diabetes, heart disease, and hypertension were the most often cited conditions. Interviewees stressed the need for additional preventive and wellness services as well as the importance of addressing this issue at a young age.

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Access Issues. Interviewees cited the inability to access available resources as a barrier to improving community health outcomes. Lack of awareness of available services, lack of health insurance or of knowledge on its use, limited transportation options, and providers not accepting Medicaid are some of the main barriers to access. 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. Barriers to accessing healthcare services were believed to lead to the overutilization of emergency departments and increased the probability that an individual would develop a chronic disease. Urgent care centers and preventive services were identified as needed resources in the Euclid community.

Substance Abuse. A majority of those interviewed identified the abuse of opiates including heroin, as a significant health concern. Abuse was viewed as a widespread issue, affecting individuals in every age and socioeconomic class. Law enforcement representatives from the community were particularly concerned with the increasing number of heroin overdose deaths, associated with the increased availability and affordability of heroin, stating that the police force was now carrying Narcan (naloxone) to try to alleviate the issue. In addition to narcotics abuse, interviewees also indicated that excessive drinking and alcohol abuse were problematic in the Euclid community.

Mental Health and Access to Behavioral Health Services. Interviewees identified poor mental health and challenges accessing behavioral health resources as a significant need in the community. A number of those interviewed mentioned that the stigma around mental health was negatively affecting the community. Groups that were identified as particularly prone to mental health concerns were adolescents, and those from low-income families. Concerns were also raised regarding the type of mental health services that were accessible, including long-term mental health care, outpatient psychiatric care, and adolescent services. Long waiting lists for substance abuse rehabilitation centers were also brought up as a concern.

Infant Mortality. The high infant mortality rate, particularly among low income Black women, was identified as a serious concern in the Euclid community. A lack of access to prenatal health care services and education was believed to contribute to the high mortality rates. Unhealthy lifestyles and poor management of chronic conditions such as diabetes and hypertension were also thought to negatively impact these rates.

Violence and Crime. Interviewees indicated that the high rates of violence and crime in the Euclid community are of significant concern. While many interviewees attributed this concern to the increased presence of narcotics within the community, others cited high unemployment rates and financial strain, particularly among low income Black residents, as possible causes. Increased violence was also believed to impede residents' physical activity as there were limited places to safely exercise within the community.

Food Insecurity. Unhealthy eating habits associated with a lack of access to healthy food options were believed to contribute to the high rates of diabetes, obesity, and heart disease. Interviewees cited limited finances and food deserts as primary motivators for eating unhealthy meals. It was also believed that some residents of the community are unaware of the importance

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of good nutrition. Community farmers markets were also cited as being poorly attended, indicating that the community may also be unaware of the healthy food options that are available to them at an affordable price.

Elderly Conditions and Care. With the changing demographics of the community trending towards a growing elderly population, elderly conditions and proper care for the population arose as an issue from several interviews. Outside of conditions related to unhealthy lifestyle mentioned previously, other conditions cited included Alzheimer's disease, dementia, and problems related to falls. Interviewees also expressed concern about caring for the elderly in the community, particularly ensuring that they could age in place healthily. In-home care and expanded assisted living communities were cited as services that could be bolstered.

Physical Environment and Transportation. Interviewees indicated that the Euclid community had several problems with its physical environment and infrastructure that resulted in poor health outcomes. Several interviewees stated that residents have poor access to recreational space and other walkable areas. This limitation promotes sedentary lifestyles and concerns related to obesity. Furthermore, transportation options were considered limited in the community. Transportation issues were also thought to disproportionately affect low-income and elderly residents, both of whom may not have regular access to cars. A general belief among interviewees was that a lack of transportation severely limited residents' ability to access care and resources within the community.

Sexually Transmitted Diseases. Several interviewees identified sexually transmitted diseases as a significant concern within the community. While high rates for a number of sexually transmitted diseases were mentioned, interviewees were especially concerned with the transmission of HIV. This issue was thought to be connected to the growing heroin epidemic in the area, as many users share needles, which may spread the disease.

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 Euclid community who are unaware of how to access and use available services and who experience other access barriers including cost and inadequate transportation. The Euclid community has comparatively unfavorable socioeconomic indicators, particularly in medically underserved areas. The recent election of the new president raises questions regarding whether access improvements associated with the Affordable Care Act will be sustained.

- Federally-designated Medically Underserved Areas (MUAs) and Primary Care Health Professional Shortage Areas (HPSAs) are present in the community served by Euclid (**Exhibits 33 and 34**).
- Rates for ambulatory care sensitive conditions within the Euclid community were significantly higher than the Ohio averages (**Exhibits 28 and 29**). 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), Cuyahoga County ranks poorly compared to peer counties for Older Adult Preventable Hospitalizations (**Exhibit 21**).
- Data from County Health Rankings indicate that there are fewer primary care physicians and mental health providers per capita in Lake County than the Ohio averages (**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 health conditions including, in alphabetical order, cancer, chemical dependency, communicable diseases (including sexually transmitted infections), diabetes, heart disease and hypertension, obesity, poor birth outcomes, poor mental health status, and respiratory diseases were identified as prevalent in the Euclid community.

SIGNIFICANT COMMUNITY HEALTH NEEDS

- **Cancer**
 - According to the Ohio Department of Health, cancer was the second leading cause of death in both Cuyahoga and Lake counties (**Exhibit 23**).
 - The mortality rate for stomach cancer in Cuyahoga County was more 50 percent higher than the Ohio average. Mortality rates for lung, breast, prostate, colon and rectum, pancreas, uterus, liver and intrahepatic bile duct, multiple myeloma, oral cavity and pharynx, cervix, larynx, kidney and renal pelvis, and testis cancer were also higher than the state averages. (**Exhibit 23**).
- **Chemical Dependency**
 - In County Health Rankings, Cuyahoga County ranked 52nd and Lake County ranked 54th out of 88 Ohio counties for Drug Overdose Deaths (**Exhibit 19**).
 - According to the 2014 Ohio Department of Health Drug Overdose Report, fentanyl drug seizures in the United States increased by 300 percent between 2013 and 2014. In 2014, fentanyl-related overdoses accounted for 19.9 percent of accidental overdoses, a significant rise from 4.0 percent in 2013. Additionally, the rate of heroin poisoning in Cuyahoga County was significant higher than the Ohio average.
 - Abuse of opiates was cited as a significant health concern by many interviewees. Many of the recent health assessments analyzed in this report identified chemical dependency as a significant health need.
- **Communicable Diseases**
 - In County Health Rankings, Cuyahoga County ranked 87th out of the 88 counties in Ohio for Sexually Transmitted Infections and Lake County ranked 60th (**Exhibit 19**).
 - According to the Ohio Department of Health, the age-adjusted mortality rate for HIV in Cuyahoga County was more than twice as high as the state average. Incidence rates for chlamydia, HIV, gonorrhea, and viral meningitis in Cuyahoga County were all significantly higher than the Ohio averages (**Exhibits 22 and 25**).
- **Diabetes**
 - In Community Health Status Indicators, Lake County compared unfavorably to peer counties for morbidity related to diabetes (**Exhibit 21**).
 - The ACSC rate for Uncontrolled Diabetes in the Euclid community was nearly triple the Ohio average (**Exhibit 29**).
- **Heart Disease and Hypertension**
 - The age-adjusted mortality rate for Heart Disease in Cuyahoga County was significantly higher than the Ohio average and both Cuyahoga and Lake counties compared unfavorably to peer counties in Community Health Status Indicators for Coronary Heart Disease Deaths (**Exhibits 21 and 22**).
 - ACSC rates for Congestive Heart Failure, Hypertension, Angina without Procedure, and Uncontrolled Diabetes were all significantly higher than the average ACSC rates in Ohio (**Exhibit 28**).
 - Ten of the fourteen ZIP codes in the Euclid community had higher rates of high blood pressure than the Northeast Ohio average (**Exhibit 27**).
- **Obesity**
 - Federally-designated Food Deserts are present in the community served by Euclid (**Exhibit 32**) and Lake County ranks poorly to peer counties for Access to

SIGNIFICANT COMMUNITY HEALTH NEEDS

Healthy Food (**Exhibit 21**). 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.

- Interviewees identified obesity and its comorbid conditions, including hypertension and diabetes as a significant health concern within the Euclid community. Obesity was also the most frequently prioritized need among the sixteen other, recent assessments.
- **Poor Birth Outcomes**
 - In Community Health Status Indicators, Cuyahoga County benchmarked unfavorably to peer counties for Preterm Births (**Exhibit 21**).
 - Data from the Ohio Department of Health indicate that rates of infant mortality, low birth weights, and preterm births in Cuyahoga County have been significantly higher than the Ohio averages (**Exhibit 26**).
 - ACSC rates for Low Birth Weight were significantly higher than the Ohio average in the Euclid community (**Exhibit 28**).
- **Poor Mental Health Status**
 - Lake County had a higher suicide rate than the Ohio average (**Exhibit 22**) and also compared unfavorably to peer counties for Older Adult Depression in Community Health Status Indicators (**Exhibit 21**).
 - Many interviewees identified mental illness and a lack of mental health services as a significant concern for all age groups within the area served by Euclid. Poor mental health was believed to negatively impact physical health.
- **Respiratory Diseases**
 - Behavioral Risk Factor Surveillance System data show that many of the ZIP codes in the Euclid community have comparatively high rates for asthma and chronic obstructive pulmonary disease compared to the average of the 21 counties in Northeast Ohio (**Exhibit 27**).
 - ACSC rates for adult asthma and chronic obstructive pulmonary disease were significantly higher in the Euclid community than the Ohio averages (**Exhibit 28**).
 - Interviewees indicated that respiratory illnesses were problematic in the Euclid community. Air pollution and high smoking rates among residents were believed to exacerbate the problem.

Economic Development and Community Conditions

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

- Cuyahoga County has a higher poverty rate than both the Ohio and national averages (**Exhibit 12**).
 - Poverty rates among Black and Hispanic (or Latino) populations in Cuyahoga and Lake counties are more than twice as high as the poverty rate of White residents (**Exhibit 12**).

SIGNIFICANT COMMUNITY HEALTH NEEDS

- Federally-designated Low Income Areas are present in the community served by Euclid (**Exhibit 14**).
- In County Health Rankings, Cuyahoga County ranked 79th out of the 88 counties in Ohio for Social and Economic Factors, 59th for Unemployment, and 78th for Inadequate Social Support. Lake County ranked 80th out of the 88 counties in Ohio for Inadequate Social Support (**Exhibit 19**).
- According to the Community Need Index, four out of the 14 ZIP codes in Euclid's community scored in the "highest need category" (**Exhibit 30**).
- A majority of interviewees identified economic and healthcare disparities among minority residents as significant community health issues.
- Crime rates in Cuyahoga County have been well above Ohio averages (**Exhibit 18**) and recent homicide rates in the county have been nearly fifty percent higher than the Ohio average (**Exhibit 22**).
- In County Health Rankings, Cuyahoga County ranked 61st out of 88 counties, in Physical Environment, 63rd in Air Pollution, and 87th in Severe Housing Problems. Lake County ranked 49th in Physical Environment and 65th in Air Pollution. (**Exhibit 19**).
- Other health assessments also identified transportation and environmental concerns as priorities.
- Interviewees identified a lack of transportation options as a significant barrier to good health in the community. This was especially true for low-income, elderly, and disabled residents.

Health Professions Education and Research

There is a need for more research to address these and other community health needs. More trained health professionals are needed locally, regionally and nationally. Research conducted by Cleveland Clinic has improved health for community members through advancements in new clinical techniques, devices and treatment protocols in diseases and health conditions such as cancer, heart disease and diabetes.

- Federally-designated Medically Underserved Areas and Primary Care and Dental Health Professional Shortage Areas are present in the community served by Euclid (**Exhibits 33 and 34**).
- 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
- Through research, Cleveland Clinic has advanced knowledge and improved community health for all its communities, from local to national, and across the world. Cleveland Clinic is involved in both basic research and clinical studies and seeks to translate discoveries into advanced treatments and cures for a variety of diseases and conditions. Cleveland Clinic's tripartite mission of patient care, research and education facilitates

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.

SIGNIFICANT COMMUNITY HEALTH NEEDS

bringing new therapies and treatments to patients and their providers, because Cleveland Clinic physicians provide quality clinical care closely integrated with the latest research and educational developments. Research is conducted at and in collaboration with all Cleveland Clinic hospitals. This allows patients to access the latest techniques and to enroll in research trials no matter where they access care in the health system.

Healthcare for the Elderly

The elderly population in the Euclid 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 Euclid's community is projected to decrease by 1.2 percent between 2015 and 2020; the number of persons 65 years of age and older in the community is projected to increase by 11.3 percent over this period (**Exhibit 7**).
- In Community Health Status Indicators (CHSI), Cuyahoga and Lake counties rank poorly compared to peer counties for Alzheimer's disease and Dementia. Cuyahoga County also ranks poorly for Older Adult Preventable Hospitalizations (**Exhibit 21**).
- Interviewees identified care of the elderly as a challenge in the community, including the need for additional in-home health care, services, and day care services. Concerns were also raised regarding the lack of providers accepting Medicare and the number of seniors who live alone.

Wellness

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

- Behavioral Risk Factor Surveillance System data show that half of the ZIP codes in the Euclid community have significant percentages of residents who smoke compared to the average percent of the 21 counties in Northeast Ohio (**Exhibit 27**).
- Alcohol abuse was identified by many interviewees as a significant concern in the Euclid community. In County Health Rankings, Lake County was ranked as the worst county (88th out of 88 counties) for Excessive Drinking; Cuyahoga County ranked 64th (**Exhibit 19**). Lake County also compared poorly to peer counties for Binge Drinking in Community Health Status Indicators (**Exhibit 21**).
- Federally-designated Food Deserts are present in the community served by Euclid (**Exhibit 32**). 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.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

This section identifies other facilities and resources available in the community served by Euclid 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 sites operating in the Euclid community (**Exhibit 4**).

Exhibit 4: Federally Qualified Health Centers

Health Center	County	ZIP Code
Collinwood Health Center	Cuyahoga	44110
East Cleveland Health Center	Cuyahoga	44112
Shaw Wellness Center	Cuyahoga	44112

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
Euclid Hospital	General Hospital	371	44119	Cuyahoga
Hillcrest Hospital	General Hospital	496	44124	Cuyahoga
University Hospitals Richmond Medical Center Campus	General Hospital	125	44143	Cuyahoga
Lake Health West Medical Center	General Hospital	267	44094	Lake
Windsor-Laurelwood Center for Behavioral Medicine	Psychiatric	159	44094	Lake

Source: Ohio Hospital Association, 2016.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

Other Community Resources

A wide range of agencies, coalitions, and organizations that provide health and social services is available in the region served by Euclid. United Way 2-1-1 Ohio maintains a large, online 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 United Way chapters in Cleveland. United Way 2-1-1 Ohio contains information on organizations and resources in the following categories:

- Donations and Volunteering
- Education, Recreation, and the Arts
- Employment and Income Support
- Family Support and Parenting
- Food, Clothing, and Household Items
- Health Care
- Housing and Utilities
- Legal Services and Financial Management
- Mental Health and Counseling
- Municipal and Community Services
- Substance Abuse and Other Addictions

Additional information about these resources is available at: <http://www.211oh.org/>.

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 Euclid community.

Community Assessed

As mentioned previously and shown in **Exhibit 1**, Euclid’s community is comprised of 14 ZIP codes in Cuyahoga and Lake counties in Ohio.

Demographics

Population characteristics and changes directly influence community health needs. The total population in the Euclid community is expected to decrease 1.2 percent from 2015 to 2020 (**Exhibit 6**).

Exhibit 6: Percent Change in Community Population by ZIP Code

County	City	ZIP CODE	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
Cuyahoga	Cleveland	44108	23,919	22,783	-4.7%
Cuyahoga	Cleveland	44110	18,719	17,730	-5.3%
Cuyahoga	Cleveland	44112	22,151	21,627	-2.4%
Cuyahoga	Cleveland	44119	12,270	12,020	-2.0%
Cuyahoga	Cleveland	44121	32,122	31,551	-1.8%
Cuyahoga	Cleveland	44124	38,511	38,405	-0.3%
Cuyahoga	Cleveland	44143	24,142	24,307	0.7%
Cuyahoga	Euclid	44117	10,075	9,905	-1.7%
Cuyahoga	Euclid	44123	16,980	16,612	-2.2%
Cuyahoga	Euclid	44132	13,989	13,852	-1.0%
Lake	Eastlake	44095	32,709	32,155	-1.7%
Lake	Mentor	44060	59,157	58,612	-0.9%
Lake	Wickliffe	44092	16,741	16,646	-0.6%
Lake	Willoughby	44094	36,283	37,132	2.3%
Community Total			357,768	353,337	-1.2%

Source: Truven Market Expert, 2015.

Between 2015 and 2020, 12 of the 14 ZIP codes in the community are projected to decrease in population size. The populations in Cleveland ZIP codes 44108 and 44110 are expected to decrease by more than four percent.

Exhibit 7 shows the community’s population for certain age and sex cohorts in 2015, with projections to 2020.

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 7: Percent Change in Population by Age/Sex Cohort, 2015-2020

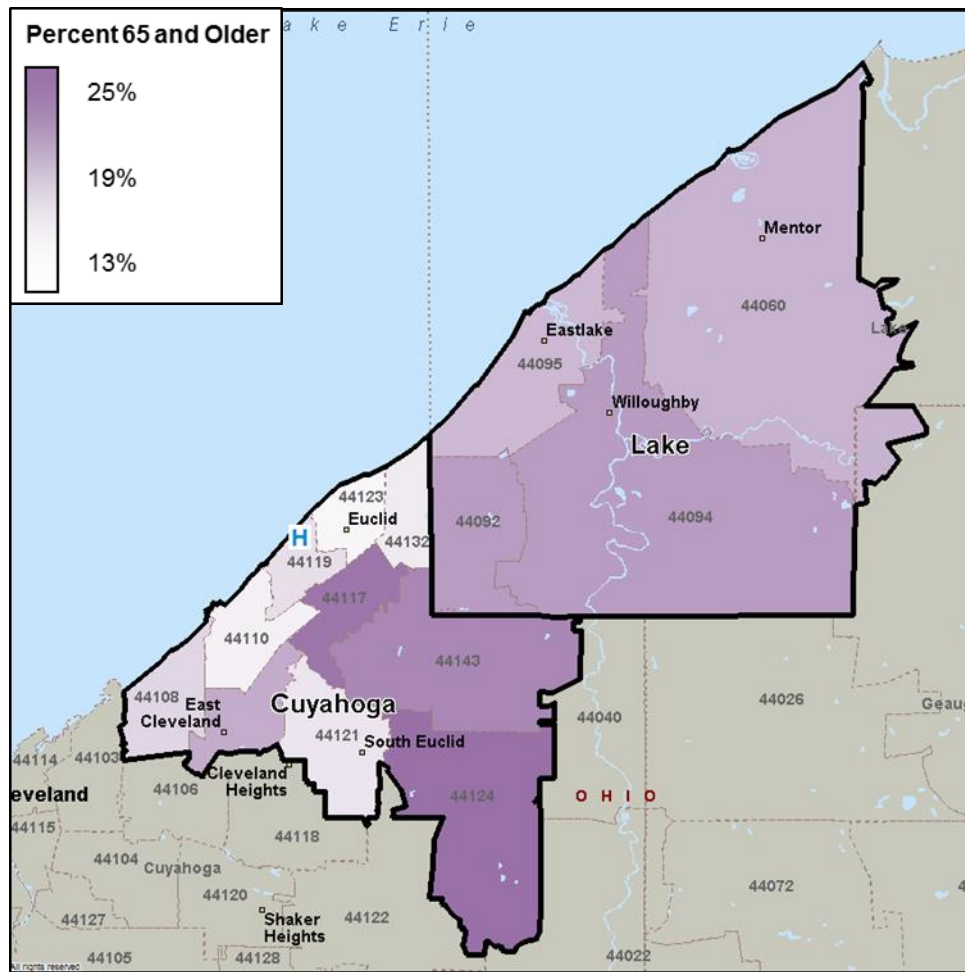
Age/Sex Cohort	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
0-17	73,299	69,616	-5.0%
Female 18-44	57,964	56,612	-2.3%
Male 18-44	54,466	54,541	0.1%
45-64	103,916	96,727	-6.9%
65+	68,123	75,841	11.3%
Community Total	357,768	353,337	-1.2%

Source: Truven Market Expert, 2015.

The number of persons aged 65 years and older is projected to increase by 11.3 percent between 2015 and 2020. The 0-17, female 18-44, 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 8 illustrates the percent of the population 65 years of age and older in the community by ZIP code.

Exhibit 8: Percent of Population Aged 65+ by ZIP Code, 2015

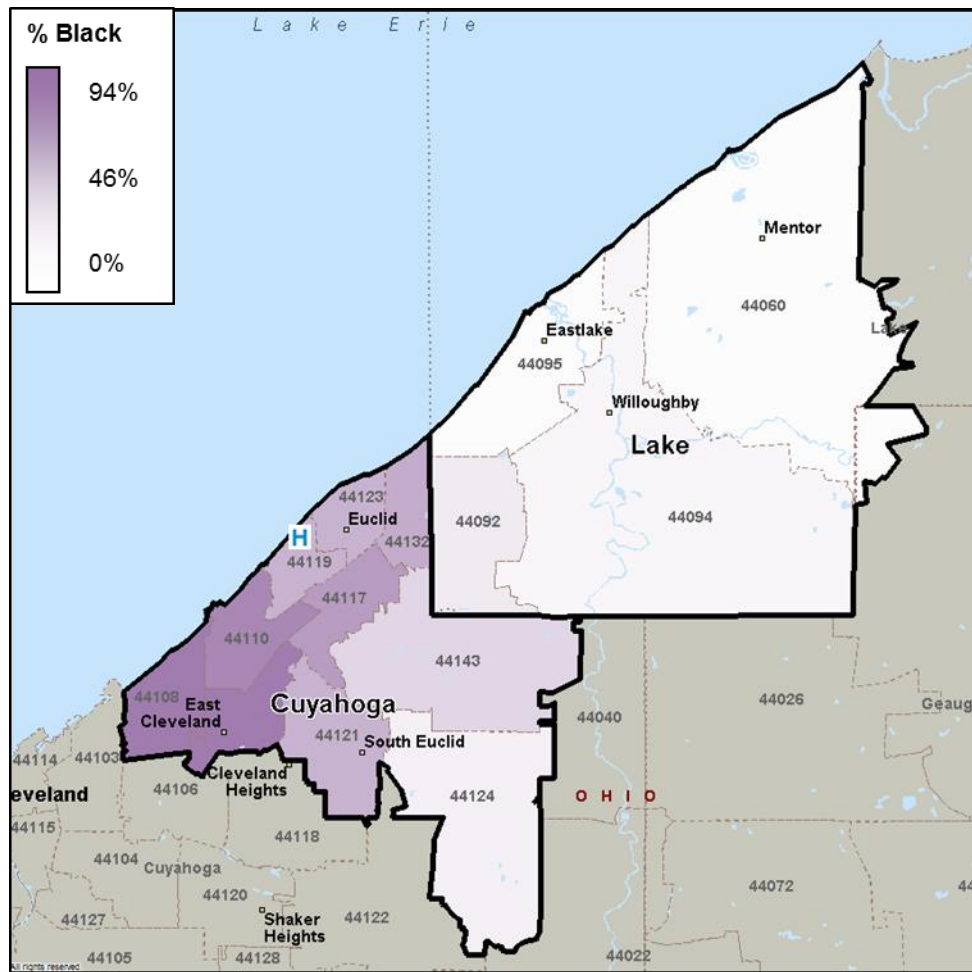


Source: Truven Market Expert, 2015.

In the community, ZIP codes 44124, 44117, and 44143 had the highest proportions of residents 65 years of age and older.

Exhibits 9 and 10 show locations in the community where the percentages of the population that are Black and Hispanic (or Latino) were highest in 2015.

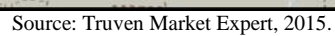
Exhibit 9: Percent of Population - Black, 2015



Source: Truven Market Expert, 2015.

Over seventy percent of residents of ZIP codes 44108, 44112, 44110, and 44117 were Black. Fewer than five percent of residents were Black in ZIP codes 44094, 44095, and 44060.

Exhibit 10: Percent of Population – Hispanic (or Latino), 2015



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APPENDIX B – SECONDARY DATA ASSESSMENT

Data regarding residents without a high school diploma, with a disability, and who are linguistically isolated are presented in **Exhibit 11** for Cuyahoga and Lake counties, Ohio, and the United States.

Exhibit 11: Other Socioeconomic Indicators, 2014

Measure	Cuyahoga County	Lake County	Ohio	United States
Population 25+ without High School Diploma	12.1%	8.7%	11.2%	13.6%
Population with a Disability	14.3%	11.3%	13.5%	12.3%
Population Linguistically Isolated	4.1%	2.7%	2.4%	8.6%

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

Exhibit 11 indicates that:

- Cuyahoga County had a higher percentage of residents aged 25 years and older without a high school diploma than the Ohio average.
- Cuyahoga County had a higher percentage of the population with a disability compared to Ohio and United States averages.
- Compared to Ohio, Cuyahoga and Lake counties had a higher 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

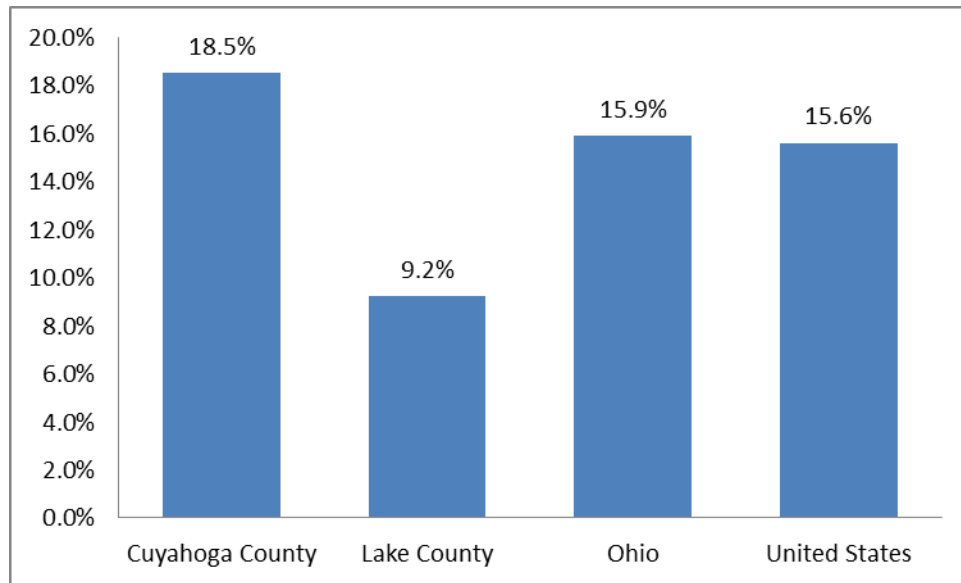
The following categories of economic indicators with implications for health were assessed: (1) people in poverty; (2) unemployment rate; (3) insurance status; and (4) crime.

People in Poverty

Many health needs 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. Cuyahoga County’s poverty rate was higher than Ohio’s poverty rate during that year (**Exhibit 12**).

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Exhibit 12: Percent of People in Poverty, 2014

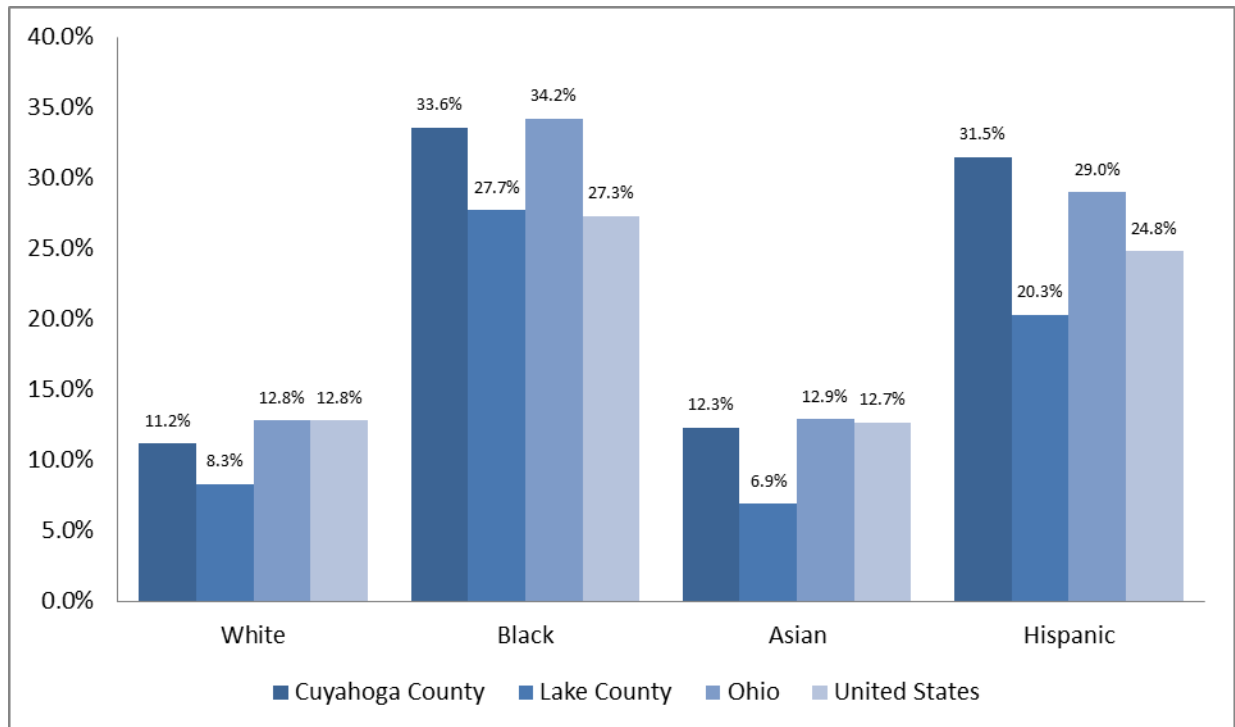


Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

Considerable variation in poverty rates is present across racial and ethnic categories, in Cuyahoga County, Lake County, and Ohio (**Exhibit 13**).

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 13: Poverty Rates by Race and Ethnicity, 2014

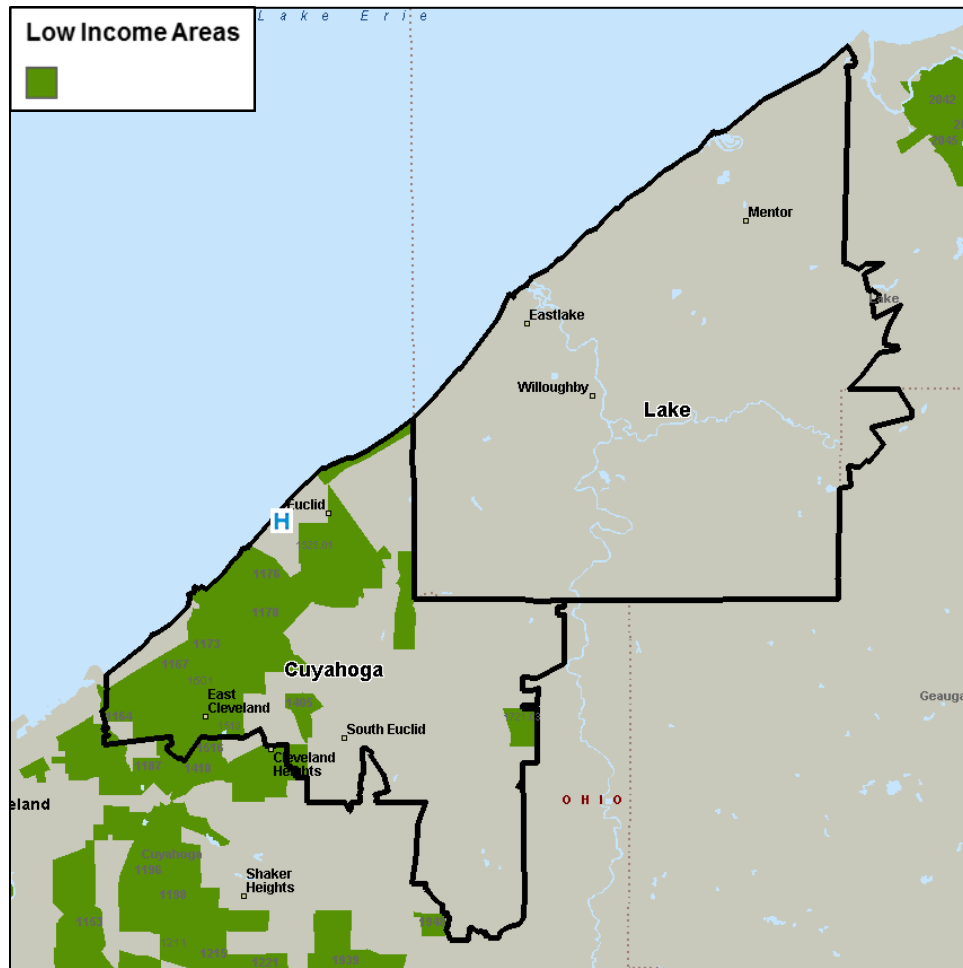


Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

Poverty rates in Cuyahoga and Lake counties and Ohio have been comparatively high for Black residents. The poverty rate for Hispanic (or Latino) residents of Cuyahoga County exceeded the Ohio average.

Exhibit 14 portrays (in green shading) 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 within the metropolitan area.

Exhibit 14: Low Income Census Tracts



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

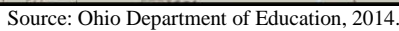
Low income census tracts have been prevalent in Euclid’s community, particularly in Cuyahoga County.

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 15 illustrates the locations of the schools with at least 40 percent of the students eligible for free or reduced price lunch.

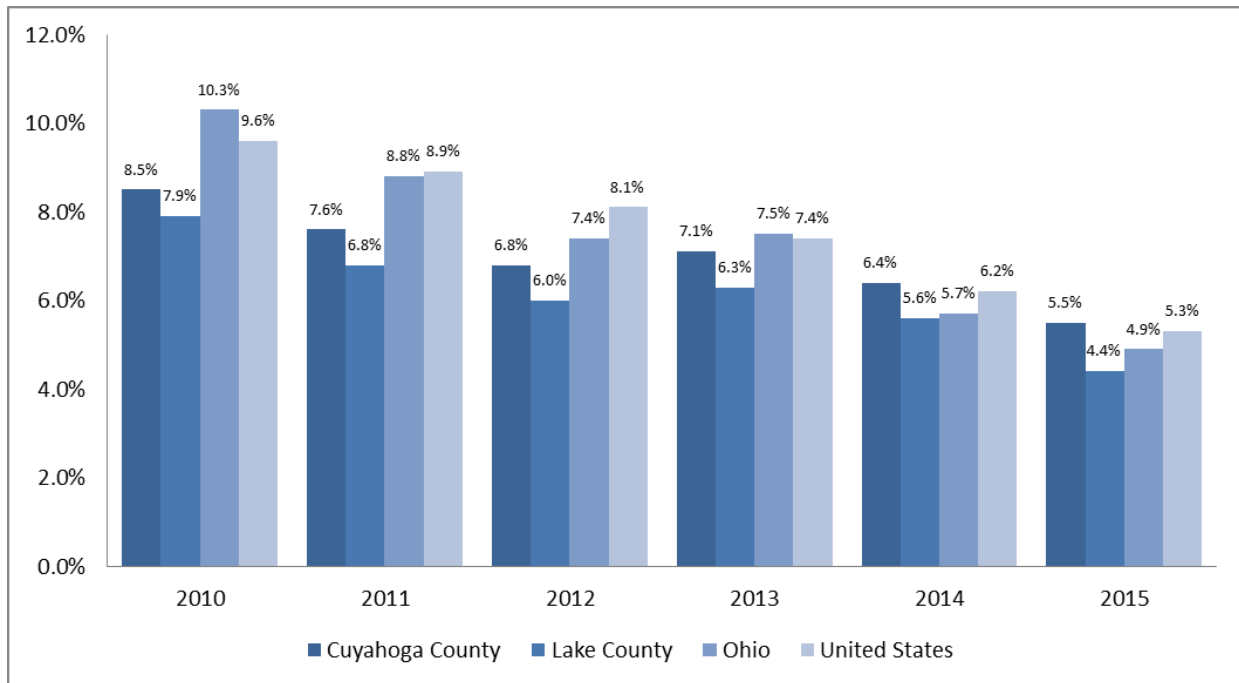
Exhibit 15: Public Schools with over 40 Percent of Students Eligible for Free or Reduced-Price Lunches, School Year 2014-2015



Unemployment

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Exhibit 16: Unemployment Rates, 2010-2015



Between 2010 and 2015, unemployment rates at the local (Cuyahoga and Lake counties), state, and national level decreased significantly. In 2015, the unemployment rate in Cuyahoga County was higher than both the state and national rates.

Insurance Status

Exhibit 17 presents the estimated percent of populations in the Cuyahoga and Lake counties without health insurance (uninsured), by ZIP code.

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Exhibit 17: Percent of the Population without Health Insurance, 2015-2020

County	City	ZIP Code	Households	Total Population 2015	% Uninsured 2015	Total Population 2020	% Uninsured 2020
Cuyahoga	Cleveland	44108	9,883	23,919	11.5%	22,783	7.9%
Cuyahoga	Cleveland	44110	8,522	18,719	12.5%	17,730	8.4%
Cuyahoga	Cleveland	44112	10,151	22,151	11.8%	21,627	8.0%
Cuyahoga	Cleveland	44119	5,601	12,270	8.0%	12,020	5.4%
Cuyahoga	Cleveland	44121	13,517	32,122	6.4%	31,551	4.3%
Cuyahoga	Cleveland	44124	18,258	38,511	4.0%	38,405	2.6%
Cuyahoga	Cleveland	44143	10,672	24,142	4.8%	24,307	3.4%
Cuyahoga	Euclid	44117	5,235	10,075	11.9%	9,905	8.1%
Cuyahoga	Euclid	44123	7,768	16,980	6.4%	16,612	4.3%
Cuyahoga	Euclid	44132	6,437	13,989	7.1%	13,852	4.8%
Lake	Eastlake	44095	14,208	32,709	4.3%	32,155	2.9%
Lake	Mentor	44060	24,678	59,157	3.5%	58,612	2.5%
Lake	Wickliffe	44092	7,475	16,741	4.7%	16,646	3.1%
Lake	Willoughby	44094	16,391	36,283	3.9%	37,132	2.6%

Source: Truven Market Expert, 2015.

In 2015, four out of the 14 ZIP codes in the Euclid community had uninsured rates above ten percent. By 2020, it is projected that none of the 14 ZIP codes in the community will have uninsured rates above ten 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>

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Crime

Exhibit 18 provides certain crime statistics for Cuyahoga and Lake counties and Ohio.

Exhibit 18: 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	Cuyahoga County	Lake County	Ohio
Violent Crime	613.3	163.9	278.4
Property Crime	3,141.8	1,562.1	2,880.8
Murder	6.4	-	4.4
Rape	48.8	27.1	36.2
Robbery	362.1	29.5	129.2
Aggravated Assault	196.1	107.3	126.1
Burglary	966.2	272.2	786.5
Larceny	1,720.5	1,243.7	1,921.8
Motor Vehicle Theft	455.1	46.3	172.5
Arson	32.5	5.4	21.1

Source: FBI, 2014.

2014 crime rates in Cuyahoga County were well above the Ohio average for all crimes except larceny. Crime rates in Lake County were below the Ohio average for all crimes.

Local Health Status and Access Indicators

This section assesses health status and access indicators for the Euclid 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 exceed benchmarks (typically, Ohio averages). Where confidence interval data are available, cells are highlighted only if variances are unfavorable and 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

¹⁰A 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

APPENDIX B – SECONDARY DATA ASSESSMENT

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

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.

¹¹A 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.

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Exhibit 19: 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)

	Cuyahoga County			Lake County		
	2013	2016	Rank Change	2013	2016	Rank Change
Health Outcomes	67	64		17	15	
Health Factors	45	53	↓	12	13	↓
Length of Life	58	54		12	17	↓
Quality of Life	76	73		20	13	
Frequent Physical Distress	N/A	63		N/A	5	
Frequent Mental Distress	N/A	54		N/A	6	
Drug Overdose Deaths	N/A	52		N/A	54	
Health Behaviors	15	39	↓	18	6	
Adult Smoking	16	18	↓	47	10	
Adult Obesity	7	9	↓	9	1	
Excessive Drinking	51	64	↓	72	88	↓
Sexually Transmitted Infections	55	87	↓	9	60	↓
Teen Births	3	51	↓	55	11	
Clinical Care	7	5		18	16	
Primary Care Physicians	1	2	↓	8	49	↓
Dentists	56	1		18	9	
Mental Health Providers	3	1		26	24	
Preventable Hospital Stays	36	34		38	27	
Diabetic Screening	69	62		58	48	
Social & Economic Factors	76	79	↓	10	22	↓
Some College	10	9		9	13	↓
Unemployment	15	59	↓	6	39	↓
Inadequate Social Support	39	78	↓	18	80	↓
Injury Deaths	1	30	↓	2	19	↓
Physical Environment	36	61	↓	51	49	
Air Pollution	66	63		70	65	
Severe Housing Problems	N/A	87		N/A	41	

Source: County Health Rankings, 2016.

In 2016, Cuyahoga County ranked in the bottom 50th percentile among Ohio counties for 17 of the 27 indicators assessed. Of those 17 indicators ranking in the bottom 50th percentile, five of them ranked in the bottom quartile, including Quality of Life, Sexually Transmitted Infections, Social and Economic Factors, Inadequate Social Support, and Severe Housing Problems. Between 2013 and 2016, rankings for 13 indicators fell in Cuyahoga County. Lake County ranked in the bottom 50th percentile among Ohio counties for 8 of the 27 indicators assessed. Of those 8 indicators ranking in the bottom 50th percentile, four of them ranked in the bottom quartile, including Excessive Drinking, and Inadequate Social Support. Between 2013 and 2016, rankings for 10 indicators fell in Lake County.

Exhibit 20 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

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 20: 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	Cuyahoga County	Lake County	Ohio	U.S.
Health Outcomes					
Length of Life	Years of potential life lost before age 75 per 100,000 population	7,907.7	6,289.3	7,533.6	7,700.0
Quality of Life	Percent of adults reporting fair or poor health	16.5	13.4	16.0	16.0
	Average number of physically unhealthy days reported in past 30 days	3.9	3.3	3.8	3.7
	Average number of mentally unhealthy days reported in past 30 days	4.0	3.7	4.0	3.7
	Percent of live births with low birthweight (<2500 grams)	10.5	7.6	8.6	8.0
Health Factors					
Health Behaviors					
Adult Smoking	Percent of adults that report smoking \geq 100 cigarettes and currently smoking	18.3	17.6	19.2	18.0
Adult Obesity	Percent of adults that report a BMI \geq 30	28.6	26.4	30.5	31.0
Food Environment Index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	6.6	7.5	6.9	7.2
Physical Inactivity	Percent of adults aged 20 and over reporting no leisure-time physical activity	25.6	25.4	26.3	28.0
Access to Exercise Opportunities	Percent of population with adequate access to locations for physical activity	95.6	89.4	83.2	62.0
Alcohol Impaired Driving Deaths	Percent of driving deaths with alcohol involvement	45.3	35.5	35.3	30.0
Excessive Drinking	Binge plus heavy drinking	18.2	19.8	17.9	17.0
STDs	Chlamydia rate per 100,000 population	792.4	292.3	460.2	287.7
Teen Births	Teen birth rate per 1,000 female population, ages 15-19	37.7	21.0	34.4	40.0
Clinical Care					
Uninsured	Percent of population under age 65 without health insurance	13.3	11.5	13.0	17.0
Primary Care Physicians	Ratio of population to primary care physicians	879:1	2148:1	1296:1	1990:1
Dentists	Ratio of population to dentists	1028:1	1559:1	1713:1	2590:1
Mental Health Providers	Ratio of population to mental health providers	402:1	780:1	642:1	1060:1
Preventable Hospital Stays	Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	64.7	63.3	64.9	60.0
Diabetic Screening	Percent of diabetic Medicare enrollees that receive HbA1c monitoring	83.9	85.1	84.9	85.0
Mammography Screening	Percent of female Medicare enrollees, ages 67-69, that receive mammography screening	65.0	65.0	60.0	61.0

Source: County Health Rankings, 2016.

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 20: 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	Cuyahoga County	Lake County	Ohio	U.S.
Health Factors					
Social & Economic Factors					
High School Graduation	Percent of ninth-grade cohort that graduates in four years	75.8	90.0	82.7	86.0
Some College	Percent of adults aged 25-44 years with some post-secondary education	68.4	66.2	63.4	56.0
Unemployment	Percent of population age 16+ unemployed but seeking work	6.4	5.6	5.7	6.0
Children in poverty	Percent of children under age 18 in poverty	30.0	13.4	22.7	23.0
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	5.6	4.0	4.8	4.4
Children in single-parent households	Percent of children that live in a household headed by single parent	44.9	28.5	35.4	32.0
Social Associations	Number of associations per 10,000 population	9.2	9.1	11.4	13.0
Violent Crime	Number of reported violent crime offenses per 100,000 population	559.8	203.0	307.2	199.0
Injury Deaths	Injury mortality per 100,000	59.1	56.4	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	13.6	13.6	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	18.9	13.0	15.2	14.0
Drive Alone to Work	Percent of the workforce that drives alone to work	80.1	88.0	83.5	80.0
Long Commute- Drive Alone	Among workers who commute in their car alone, the percent that commute more than 30 minutes	31.9	31.9	29.4	29.0

Source: County Health Rankings, 2016

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 20 highlights the following comparatively unfavorable indicators:

- Years of potential life lost
- Percent of adults reporting fair or poor health
- Average number of physically unhealthy days
- Percent of live births with low birth weight
- Food environment index
- Percent of driving deaths with alcohol involvement
- Binge and heavy drinking
- Chlamydia rate
- Teen birth rate
- Percent of the population without health insurance
- Primary care physicians rate
- Mental health providers rate
- Diabetic screening
- High school graduation rate
- Percent of the population unemployed
- Percent of children in poverty
- Income inequality rate
- Percent of children living in a household headed by a single parent
- Social associations rate
- Violent crime rate
- Air pollution
- Percent of households with severe housing problems
- Percent of the workforce that drives to work alone
- Percent of workers with a long commute who drive alone

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.” 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 21 compares Cuyahoga and Lake counties to their respective peer counties and cities and highlights community health issues found to rank in the bottom quartile of the counties included in the analysis.

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Exhibit 21: Community Health Status Indicators, 2015
(Shading indicates indicator in bottom quartile compared to peer counties)

Category	Indicator	Cuyahoga County	Lake 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.

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The CHSI data indicate that cancer and coronary heart disease mortality rates and morbidity associated with adult diabetes, Alzheimer’s disease, gonorrhea, adult asthma, older adult depression and preterm births are comparatively high, as are older adult preventable hospitalizations. Indicators for adult binge drinking, adult female routine pap tests, children in single-parent households, annual average particulate matter concentration, and limited access to healthy food also benchmark unfavorably.

Ohio Department of Health

The Ohio Department of Health maintains a data warehouse that includes county-level indicators regarding mortality rates (**Exhibits 22 and 23**), cancer incidence (**Exhibit 24**), communicable disease incidence (**Exhibit 25**), and maternal and child health indicators (**Exhibit 26**).

Exhibit 22 provides age-adjusted mortality rates for selected causes of death in 2012.

Exhibit 22: 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	Cuyahoga County	Lake County	Ohio	Healthy People 2020
Heart Disease	213.9	184.6	191.4	-
Diabetes	23.3	23.0	26.1	-
Influenza and Pneomonia	12.0	10.7	15.4	-
Suicide	9.9	12.7	12.0	10.2
Motor Vehicle Collisions	3.4	4.4	9.0	12.4
Homicide	9.2	1.8	5.4	-
Motor Vehicle Collisions (Alcohol)	1.4	2.6	3.8	-
Aortic Aneurysm	3.8	3.6	3.7	-
HIV	2.7	0.3	1.3	-
Pedestrians Killed in Traffic Collisions	0.6	0.9	0.5	1.4

Source: Ohio Department of Health, 2012.

In Cuyahoga County, age-adjusted mortality rates for heart disease, homicide, aortic aneurysm, HIV, and pedestrians killed in traffic collisions were all higher than the Ohio averages. In Lake County, age-adjusted mortality rates suicide and pedestrians killed in traffic collisions were also higher than the Ohio averages.

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Exhibit 23: 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	Cuyahoga County	Lake County	Ohio Rate	U.S. Rate
All Sites/Types	189.9	183.2	186.6	171.2
Lung and Bronchus	52.3	55.6	55.3	47.2
Breast (Female)	24.9	25.4	23.6	21.9
Prostate	27.4	20.7	22.0	21.4
Colon and Rectum	15.6	17.2	17.0	15.5
Pancreas	12.8	12.4	11.5	10.9
Ovary	7.4	7.9	7.9	7.7
Leukemia	7.0	6.6	7.3	7.0
Non-Hodgkin Lymphoma	6.4	6.9	6.9	6.2
Liver and Intrahepatic Bile Duct	6.4	4.7	5.3	6.0
Bladder	5.0	4.7	5.0	4.4
Esophagus	4.9	4.5	5.0	4.2
Uterus	6.5	4.6	4.9	4.4
Brain and Other CNS	4.0	5.1	4.5	4.3
Kidney and Renal Pelvis	4.1	4.4	4.3	3.9
Multiple Myeloma	3.7	3.4	3.5	3.3
Melanoma of Skin	2.1	3.0	3.0	2.7
Stomach	4.4	2.9	2.9	3.4
Cervix	3.0	1.8	2.6	2.3
Oral Cavity and Pharynx	3.1	2.5	2.5	2.5
Larynx	1.5	0.9	1.3	1.1
Thyroid	0.5	0.7	0.5	0.5
Hodgkin Lymphoma	0.4	-	0.4	0.4
Testis	0.4	-	0.3	0.3

Source: Ohio Department of Health, 2013.

Age-adjusted cancer mortality rates in Cuyahoga County were significantly higher than the Ohio averages for stomach cancer. Cancer mortality rates for breast, prostate, pancreas, uterus, liver and intrahepatic bile duct, multiple myeloma, oral cavity and pharynx, cervix, larynx, and testis cancer. In Lake County, age-adjusted cancer mortality rates were higher than the Ohio averages for lung and bronchus, breast, colon and rectum, pancreas, brain and other CNS, kidney and renal pelvis, and thyroid.

Exhibit 24 presents age-adjusted cancer incidence rates in the community.

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Exhibit 24: 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)

Site/Type	Cuyahoga County	Lake County	Ohio
Total	477.9	462.0	452.5
Prostate	116.3	87.1	101.7
Breast	71.4	72.6	67.6
Lung and Bronchus	64.3	58.5	67.4
Colon and Rectum	41.0	38.8	40.6
Other Sites/Types	37.9	42.2	35.8
Uterus	35.4	31.4	28.8
Bladder	19.9	30.4	22.1
Melanoma of Skin	17.0	21.5	19.5
Non-Hodgkins Lymphoma	21.0	21.1	18.6
Kidney and Renal Pelvis	19.0	19.8	16.9
Thyroid	15.9	18.2	15.2
Pancreas	12.9	13.1	12.3
Leukemia	14.4	13.2	11.9
Oral Cavity and Pharynx	11.2	10.5	11.7
Ovary	14.5	14.0	11.3
Brain and Other CNS	7.7	7.1	7.4
Cervix	7.4	-	7.4
Stomach	8.4	6.3	6.8
Liver and Intrahepatic Bile Duct	8.3	8.1	6.6
Multiple Myeloma	8.3	3.9	5.9
Testis	6.3	7.7	5.2
Esophagus	5.8	2.8	5.0
Larynx	4.8	2.0	4.3
Hodgkins Lymphoma	3.1	3.0	2.6

Source: Ohio Department of Health, 2012.

The incidence rates for prostate, breast, colon and rectum, uterus, Non-Hodgkin's Lymphoma, kidney and renal pelvis, thyroid, pancreas, leukemia, ovary, brain and other CNS, stomach, liver and intrahepatic bile duct, multiple myeloma, testis, esophagus, larynx, and Hodgkin's Lymphoma in Cuyahoga County were higher than the Ohio averages. In Lake County, age-adjusted cancer incidence rates for breast, other types, uterus, bladder, melanoma of the skin, non-Hodgkin's lymphoma, kidney and renal pelvis, thyroid, pancreas, leukemia, ovary, liver and intrahepatic bile duct, and Hodgkin's Lymphoma were higher than the Ohio averages.

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Exhibit 25: 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	Cuyahoga County	Lake County	Ohio
Chlamydia	801.1	263.0	462.0
HIV	295.8	55.8	154.3
Gonorrhea	290.3	62.2	143.5
Syphilis	9.8	1.7	9.9
Varicella	4.3	6.5	7.0
Viral Meningitis	7.2	2.6	6.1
Hepatitis A, B, and C	0.8	0.9	1.9

Source: Ohio Department of Health, 2012.

Cuyahoga County has had comparatively high incidence rates of chlamydia, HIV, gonorrhea, and viral meningitis.

Exhibit 26: 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	Cuyahoga County	Lake County	Ohio	Healthy People 2020
Mortality Rate per 1,000 Live Births				
Infant	9.4	4.2	7.7	N/A
Neonatal	6.5	3.2	5.2	N/A
Post-Neonatal	2.9	0.9	2.5	N/A
% Deliveries				
Low Birth Weight	10.5	7.6	8.6	7.8
Very Low Birth Weight	2.3	1.3	1.6	1.4
% Preterm Births				
< 32 weeks of gestation	3.1	1.6	2.3	1.8
32-33 weeks of gestation	2.0	1.3	1.6	1.4
34-36 weeks of gestation	9.3	8.3	8.6	8.1
< 37 weeks of gestation	14.4	11.2	12.6	11.4
% Births to				
Unmarried Women 18-54 Years Old	49.1	32.4	41.3	N/A
Women 40-54 Years Old	2.7	2.8	2.1	N/A
Women <18 Years Old	3.7	1.7	3.0	N/A
Teenage Pregnancies per 1,000 Births				
Births to Females 15-19 Years Old	39.3	21.3	36.0	N/A

Source: Ohio Department of Health, 2012.

Exhibit 26 indicates that infant mortality rates, low birth weights, and preterm births are comparatively problematic in Cuyahoga County.

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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 Euclid community and compared to the averages for the 21 counties in Northeast Ohio.¹³

¹³ 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.

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Exhibit 27: 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)

County	City	ZIP Code	Total Population 18+ 2015	% Obese	% Back Pain	% Diabetes	% Asthma	% Depression	% High Blood Pressure	% High Cholesterol	% COPD	% Smoking
Cuyahoga	Cleveland	44108	17,618	34.8%	23.8%	12.4%	8.8%	11.9%	34.8%	19.3%	5.2%	33.0%
Cuyahoga	Cleveland	44110	13,577	35.2%	24.4%	14.2%	9.8%	12.7%	31.2%	21.2%	5.1%	34.9%
Cuyahoga	Cleveland	44112	16,504	35.0%	22.8%	14.3%	9.5%	12.7%	35.3%	20.2%	6.4%	33.5%
Cuyahoga	Cleveland	44119	10,380	32.5%	31.4%	16.4%	19.7%	20.4%	30.9%	27.5%	5.2%	30.0%
Cuyahoga	Cleveland	44121	25,585	31.7%	25.7%	12.5%	10.5%	12.2%	32.0%	21.2%	4.9%	28.0%
Cuyahoga	Cleveland	44124	31,728	29.5%	25.1%	13.2%	12.6%	14.3%	31.4%	24.6%	4.3%	23.2%
Cuyahoga	Cleveland	44143	19,222	28.0%	21.3%	13.1%	9.3%	12.0%	30.2%	22.9%	3.1%	21.7%
Cuyahoga	Euclid	44117	9,099	34.0%	26.8%	20.2%	17.4%	20.8%	42.4%	29.0%	5.7%	32.6%
Cuyahoga	Euclid	44123	13,073	31.3%	31.8%	14.1%	17.0%	19.7%	27.7%	27.6%	5.1%	28.0%
Cuyahoga	Euclid	44132	10,425	29.7%	30.8%	14.7%	14.7%	17.7%	32.0%	26.4%	5.0%	27.0%
Lake	Eastlake	44095	26,369	31.2%	29.7%	14.7%	14.3%	15.4%	32.9%	24.6%	5.6%	25.6%
Lake	Mentor	44060	46,895	30.0%	24.2%	11.8%	9.4%	11.0%	29.5%	24.7%	3.9%	23.2%
Lake	Wickliffe	44092	14,156	30.8%	27.5%	16.8%	10.5%	13.0%	37.0%	27.9%	4.9%	25.7%
Lake	Willoughby	44094	28,611	29.7%	21.7%	14.2%	13.4%	14.7%	29.9%	23.5%	4.6%	23.9%
Community Total			283,242	31.2%	25.5%	13.8%	11.9%	14.0%	31.9%	23.9%	4.7%	26.6%
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: Truven Market Expert/Behavioral Risk Factor Surveillance System, 2015.

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Compared to the 21-County averages, the Euclid community compared unfavorably to the Ohio average for asthma, high blood pressure. Within the Euclid community, 11 ZIP codes had higher rates of COPD, 10 ZIP codes had higher rates of high blood pressure, and 9 ZIP codes had higher rates of diabetes.

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 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.”¹⁴ 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 28 provides 2014 PQI rates (per 100,000 persons) for ZIP codes in the Euclid community – with comparisons to Ohio averages.

¹⁴Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

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Exhibit 28: 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)

County	City	ZIP Code	Diabetes Short-Term Complications	Perforated Appendix	Diabetes Long-Term Complications	Chronic Obstructive Pulmonary Disease	Hypertension	Congestive Heart Failure	Low Birth Weight
Cuyahoga	Cleveland	44108	211	21	317	1,429	333	1,376	114
Cuyahoga	Cleveland	44110	283	51	269	1,890	199	1,381	124
Cuyahoga	Cleveland	44112	203	-	348	1,644	359	1,355	124
Cuyahoga	Cleveland	44119	134	42	113	719	45	794	79
Cuyahoga	Cleveland	44121	92	31	132	711	122	654	78
Cuyahoga	Cleveland	44124	73	42	118	544	88	719	46
Cuyahoga	Cleveland	44143	75	48	75	958	154	895	109
Cuyahoga	Euclid	44117	132	21	144	1,422	336	1,342	83
Cuyahoga	Euclid	44123	214	42	130	836	96	848	101
Cuyahoga	Euclid	44132	188	17	141	1,088	136	1,118	76
Lake	Eastlake	44095	72	6	133	540	45	844	54
Lake	Mentor	44060	65	30	96	410	47	751	47
Lake	Wickliffe	44092	112	28	127	635	98	821	46
Lake	Willoughby	44094	37	28	74	365	34	676	45
Euclid Totals			113	30	146	796	123	894	78
Ohio Totals			95	37	119	609	53	424	61

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

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Exhibit 28: 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)

County	City	ZIP Code	Dehydration	Bacterial Pneumonia	Urinary Tract Infection	Angina without Procedure	Uncontrolled Diabetes	Adult Asthma	Lower-Extremity Amputation Among Patients with Diabetes
Cuyahoga	Cleveland	44108	244	325	223	44	88	61	17
Cuyahoga	Cleveland	44110	108	539	238	66	66	98	14
Cuyahoga	Cleveland	44112	206	375	326	-	52	69	29
Cuyahoga	Cleveland	44119	87	175	235	30	30	65	21
Cuyahoga	Cleveland	44121	108	212	251	19	38	54	8
Cuyahoga	Cleveland	44124	150	234	217	-	46	31	3
Cuyahoga	Cleveland	44143	51	273	206	7	28	36	-
Cuyahoga	Euclid	44117	81	499	376	32	48	96	24
Cuyahoga	Euclid	44123	116	303	187	-	48	43	15
Cuyahoga	Euclid	44132	95	471	178	60	76	150	28
Lake	Eastlake	44095	109	197	165	11	11	47	11
Lake	Mentor	44060	99	161	110	12	24	36	4
Lake	Wickliffe	44092	176	235	343	11	22	93	15
Lake	Willoughby	44094	137	208	114	10	15	33	13
Euclid Totals			127	262	201	17	37	56	12
Ohio Totals			107	196	131	12	13	36	9

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

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The rates of admissions for ACSC in the Euclid community exceeded Ohio averages for all conditions except perforated appendix. Within the community, Cleveland ZIP codes 44108 and 44112 had significantly higher PQI rates for every condition except perforated appendix, compared to the Ohio averages.

Exhibit 29 provides the ratio of PQI rates in the Euclid 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 29: Ratio of PQI Rates for Euclid and Ohio, 2014

Indicator	Euclid Hospital	Ohio	Ratio: Euclid/ Ohio
Uncontrolled Diabetes	36.8	13.2	2.8
Hypertension	123.4	52.6	2.3
Congestive Heart Failure	894.0	423.8	2.1
Adult Asthma	55.7	36.0	1.5
Urinary Tract Infection	201.2	131.5	1.5
Angina without Procedure	16.6	11.7	1.4
Bacterial Pneumonia	261.9	196.2	1.3
Chronic Obstructive Pulmonary Disease	796.0	608.8	1.3
Lower-Extremity Amputation Among Patients with Diabetes	11.6	8.9	1.3
Low Birth Weight	78.1	61.4	1.3
Diabetes Long-Term Complications	145.9	118.8	1.2
Diabetes Short-Term Complications	113.2	94.7	1.2
Dehydration	126.5	107.2	1.2
Perforated Appendix	30.4	36.9	0.8

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

In the Euclid community, ACSC rates for uncontrolled diabetes, hypertension, and congestive heart failure were more than twice as high as 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;

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- 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*TM 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).

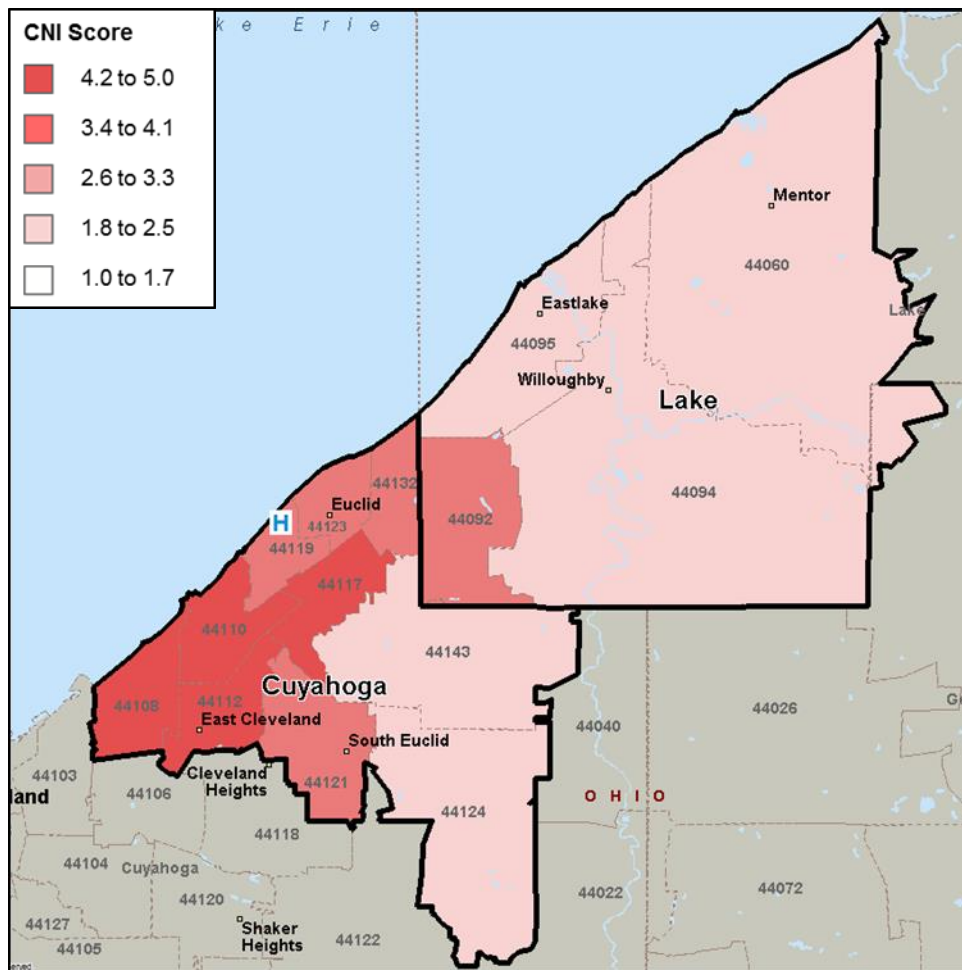
Exhibit 30 presents the *Community Need Index*TM (CNI) score of each ZIP code in the Euclid community.

Exhibit 30: Community Need IndexTM Score by ZIP Code, 2015

County	City	ZIP Code	CNI Score
Cuyahoga	Cleveland	44108	5.0
Cuyahoga	Cleveland	44110	5.0
Cuyahoga	Cleveland	44112	4.8
Cuyahoga	Euclid	44117	4.6
Cuyahoga	Cleveland	44119	4.0
Cuyahoga	Euclid	44123	4.0
Cuyahoga	Euclid	44132	3.6
Cuyahoga	Cleveland	44121	3.2
Lake	Wickliffe	44092	2.6
Lake	Willoughby	44094	2.4
Cuyahoga	Cleveland	44124	2.4
Cuyahoga	Cleveland	44143	2.4
Lake	Eastlake	44095	2.2
Lake	Mentor	44060	1.8
Euclid Community Average			3.0
Cuyahoga County Average			3.4
Lake County Average			2.4

Source: Dignity Health, 2015.

Exhibit 31 presents these data in a community map format.

Exhibit 31: Community Need Index, 2015

Source: Microsoft MapPoint and Dignity Health, 2015.

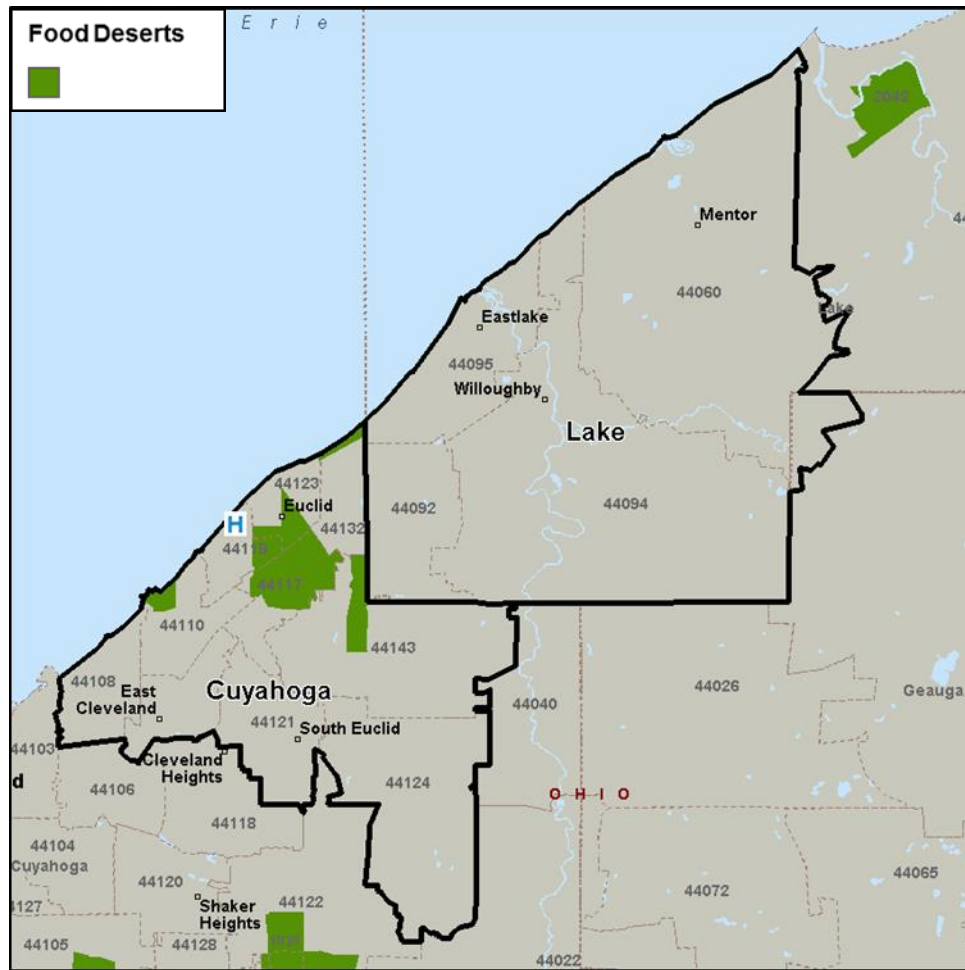
The CNI indicates that four of the 14 ZIP codes in the Euclid community scored in the “highest need category.” Cleveland ZIP codes 44108 and 44110 each received a score of 5.0 – the highest score possible.

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 32 illustrates the location of food deserts in the community.

Exhibit 32: Food Deserts



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

Several locations within the Euclid community have been designated as food deserts, particularly in Cuyahoga County.

Medically Underserved Areas and Populations

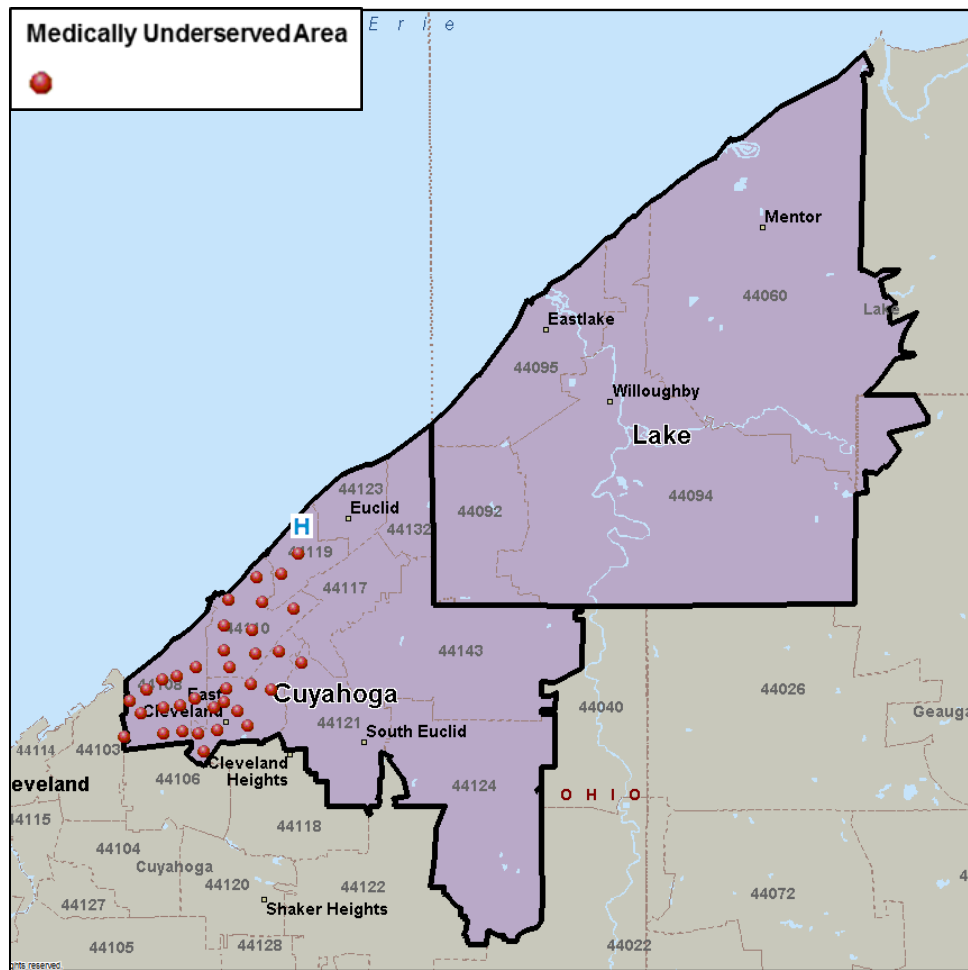
Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) based on an “Index of Medical Underservice.” The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.¹⁵ 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.”¹⁶

There are approximately 34 census tracts within the hospital’s community that have been designated as areas where Medically Underserved Areas are present (**Exhibit 33**).

¹⁵ Health Resources and Services Administration. See <http://www.hrsa.gov/shortage/mua/index.html>

¹⁶*Ibid.*

Exhibit 33: Medically Underserved Areas

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.

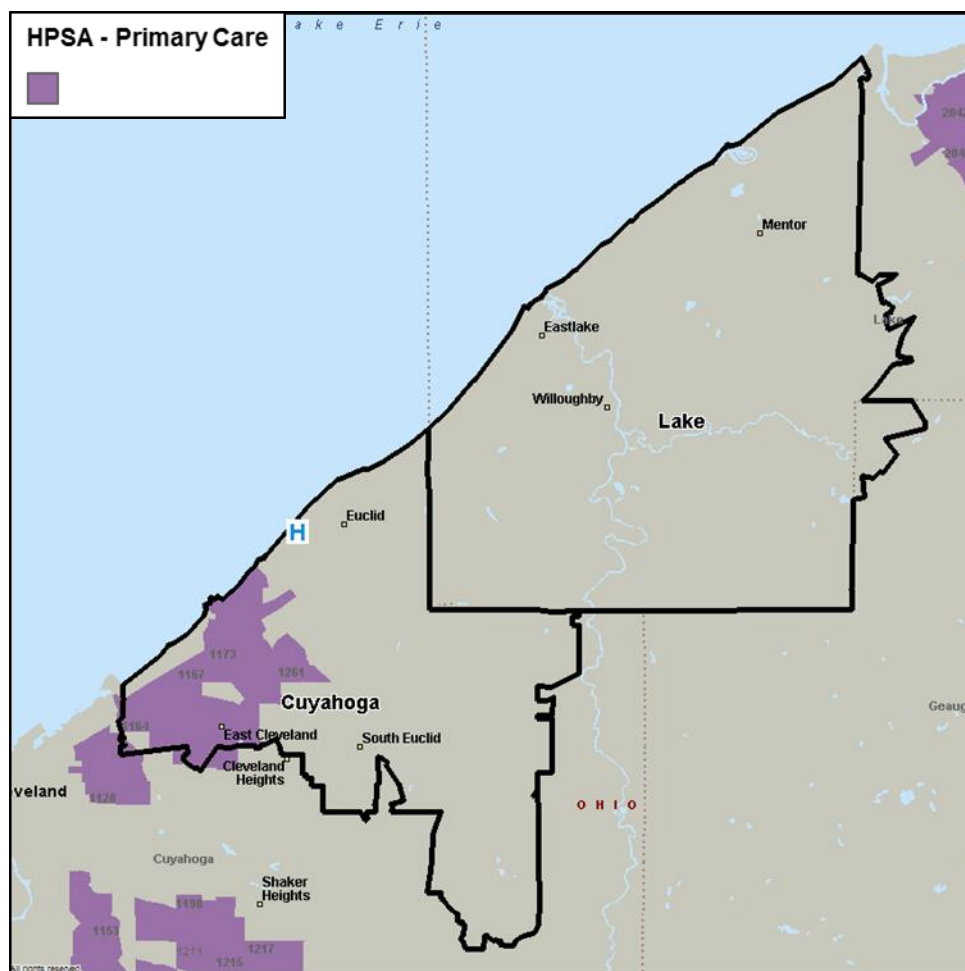
HPSAs can be: “(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility.”¹⁷

¹⁷U.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>

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Exhibit 34 illustrates the locations of the federally-designated HPSAs.

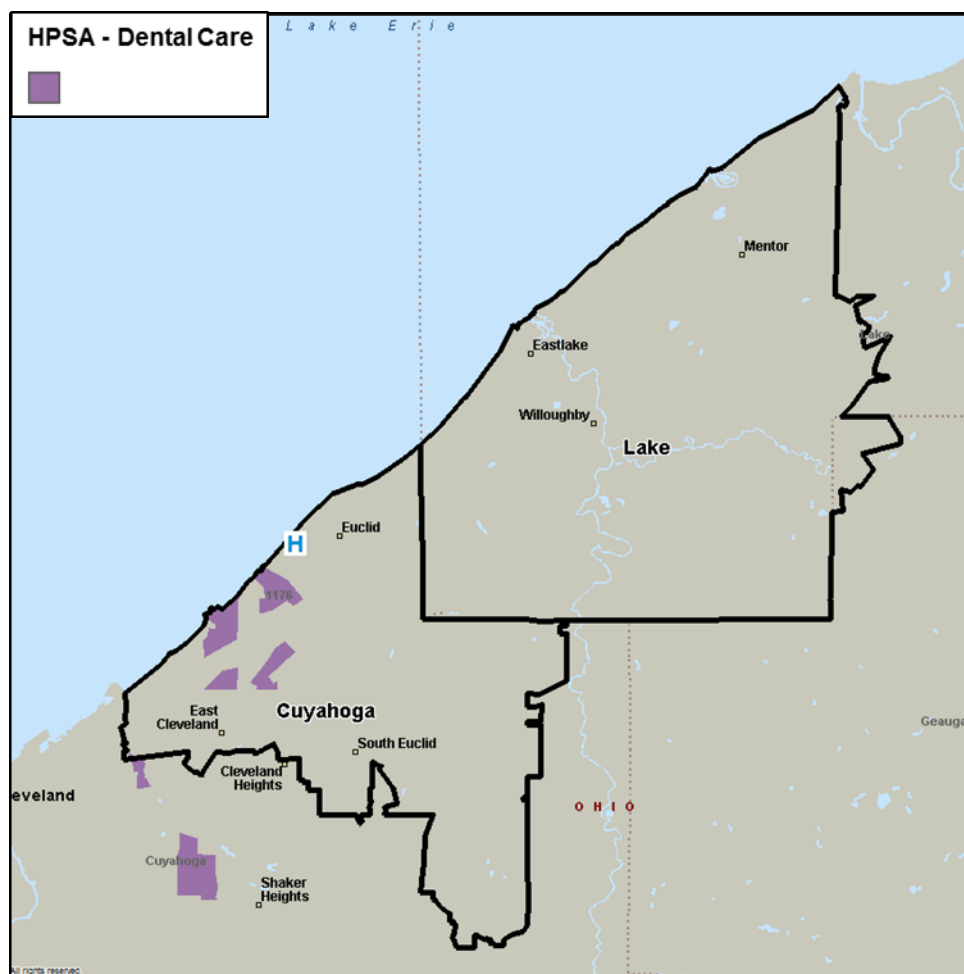
Exhibit 34A: Primary Care Health Professional Shortage Areas



Source: Health Resources and Services Administration, 2015.

Within the Euclid community, primary care HPSA designated census tracts are located in the western part of the community in Cuyahoga County.

Exhibit 34B: Dental Care Health Professional Shortage Areas



Source: Health Resources and Services Administration, 2015.

Dental care HPSA designated census tracts are located in the western part of the community.

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Findings of Other Community Health Needs Assessments

Several other needs assessments and health reports conducted by hospital facilities and other organizations that provide services for the community also were reviewed. The reviewed assessments include the following:

Other Community Assessments
Akron Children's Hospital CHNA 2013
Akron General Medical Center CHNA 2013
Geauga County CHA 2011
Health Improvement Partnership- Cuyahoga CHSA 2015
Lake County Community Health Assessment 2015
Lake Health CHNA 2013
Lorain County Health CNA 2015
Medina County CHIP 2013
Mercy Allen Hospital CHNA 2013
Mercy Medical Center CHNA 2013
Mercy Regional Medical Center CHNA 2013
Portage County CHNA 2015
Southwest General Health Center 2012
St. Vincent Charity Medical Center Implementation Plan 2013
Summa Health System CHNA 2013
Summit County CHIP 2015
UH Ahuja Medical Center CHNA 2015
UH Bedford Medical Center CHNA 2015
UH Case Medical Center CHNA 2015
UH Elyria Medical Center CHNA 2015
UH Geauga Medical Center CHNA 2015
UH Geneva Medical Center CHNA 2015
UH Parma Medical Center CHNA 2015
UH Rainbow Babies & Children's Hospital CHNA 2015
UH Rehabilitation Hospital CHNA 2015
UH Richmond Medical Center CHNA 2015
UH St. John Medical Center CHNA 2015

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

The significant needs identified by these reports are presented in **Exhibit 35**.

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Exhibit 35: Significant Needs Identified in Other CHNAs

Significant Need	Frequency
Obesity	23
Mental/Behavioral health	22
Access to basic/primary health care	20
Cardiovascular/ heart disease	19
Diabetes	19
Drug/ substance abuse	18
Tobacco use/ smoking	18
Alcohol abuse and excessive drinking	15
Elderly care/ aging population	15
Cancer	14
Infant mortality (disparities)	14
Cost of care	11
Access to dental care	10
Access/lack of health insurance coverage	10
Poverty	10
Transportation	10
Unemployment	10
Asthma/childhood asthma	9
Respiratory diseases	9
Access to mental health services	8
Nutrition/ access to healthy food	7
Physical inactivity/lack of exercise	7
Alzheimer's disease	6
Drug/ substance abuse (youth)	6
Violence	6
Tobacco use during pregnancy	5
Access to prescription drugs/cost	4
Drug abuse- opioids/heroin	4
Drug abuse- prescriptions	4
Health disparities/ equity	4
Hypertension	4
Preventive care (immunizations, screenings, etc.)	4
Teenage pregnancy/ births	4
Access to substance abuse care	3
Low birth weight	3
Premature births	3
Pre-term births	3
Uninsured and underinsured populations	3
Violence (youth)	3

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

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A State Health Assessment also recently was published by the Ohio Department of Health.¹⁸ 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 to 70.8 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

¹⁸ Available at: <http://www.healthpolicyohio.org/sha-ship/>

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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 36**). Organizations listed in italics indicate that the interviewee has public health expertise.

Exhibit 36: Interview Participants

Organization	Description	Populations Represented
<i>ADAMHSCC</i>	Alcohol, drug addiction, and mental health services	Mentally ill, substance abuse
American Heart and Stroke Association	National voluntary health agency	General population
City of Eastlake Fire Department	City fire department	General population
City of Euclid Fire Department	City fire department	General population
City of Euclid Government	City government official	General population
City of Euclid Police Department	City law enforcement	General population
Cleveland Job Corps	Residential education and vocational training program	Disadvantaged youth
Collinwood Catholic Neighborhood Ministry	Faith-based organization	General population
<i>Cuyahoga County Board of Health</i>	County board of health	General population
<i>Cuyahoga County Office of Health and Human Services</i>	County health office	General population
Cuyahoga County Office of Reentry	County re-entry services program	Formally incarcerated persons
Euclid Hunger Center	Food bank	Low income, homeless
<i>Greater Cleveland NAMI</i>	Mental health agency	Mentally ill
Lady of the Lakes	Faith-based organization	General population
Lakeshore Golden Age Centers	Senior services center	Aging population
Nationwide Insurance	Local business	General population
<i>Northeast Ohio Black Health Coalition</i>	Non-profit addressing the health needs of the black community	Minority populations
Northeast Shores Development Corporation	Non-profit community development organization	General population
Salvation Army	Religious and social services	Low income, homeless, youth, seniors
Ohio Legislature	State government	General population
State of Ohio	State government	General population
Tri-C College	Community college	General population, students

*Two individuals from Greater Cleveland NAMI participated in the interview process.

APPENDIX D – ACTIONS TAKEN SINCE THE PREVIOUS CHNA

Euclid Hospital 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 related action items from our 2013 CHNA Implementation Strategy are described below with representative impacts.

1. Identified Need: Chronic Disease and Health Conditions, Heart Related Diseases

Action: Euclid Hospital continues to offer a variety of clinical and support services focused on improving cardiovascular health. The hospital offers inpatient and outpatient cardiovascular health and rehabilitation services, including through its Joint Commission - certified Stroke and Congestive Heart Failure Clinics.

Highlighted Impact:

- The Cleveland Clinic health system reduced heart failure 30 day readmission rates from 2013 through 2015.
- Euclid Hospital Outreach programs, including healthy heart screenings, health fair and education talks, reached over 1,760 community members.

2. Identified Need: Chronic Disease and Health Conditions, Adult Asthma

Action: Euclid Hospital continues to provide acute inpatient care, outpatient care, respiratory therapy, and pulmonary rehabilitation services to patients suffering from asthma.

Highlighted Impact:

- Euclid Hospital provided pulmonary rehabilitation services to an increased numbers of patients from 2013 through 2015
- The Cleveland Clinic health system reduced pneumonia 30 day readmission rates from 2013 through 2015.

3. Identified Need: Chronic Disease and Health Conditions, Diabetes

Action: Euclid Hospital continues to offer inpatient, outpatient and education services focused on diabetes and its long term complications and disease management, including wound care services and nutrition counseling

Highlighted Impact:

- The number of wound care procedures at Euclid Hospital increased from 2014 to 2015.
- Euclid Hospital Outreach programs, including diabetes screenings, health talks and cooking demonstrations, reached over 400 community members.

4. Identified Need: Chronic Disease and Health Conditions, Low Birth Weight

Action: In 2013, Euclid Hospital provided gynecology and obstetrics primary care services to its patients. The hospital worked with Hillcrest Hospital to get treatment for pediatric patients in need of more specialized care, including care affiliated with low birth weight babies.

Highlighted Impact:

- As of 2016, Euclid Hospital no longer provides obstetric or inpatient pediatric services. However, the hospital partners with Hillcrest Hospital to get treatment for pediatric patients in need of more specialized care, including care affiliated with low birth weight babies.

5. Identified Need: Wellness

Action: Euclid Hospital continues to offer outreach programs and community health talks focused on educating the community on healthy behavior choices including exercise, disease management, nutrition, and smoking cessation. In addition, Euclid Hospital collaborates with the City of Euclid to offer smoking cessation programs. The goals of these programs and efforts are to promote health and wellness, increase access to healthcare resources, and reduce disease burden and the prevalence of smoking and obesity in the Euclid Hospital community.

Highlighted Impact:

- Euclid Hospital provided health literacy courses and disease management classes.
- Outreach programs, including Fitness Challenges, smoking cessation classes, senior exercise classes and Euclid City wellness programs reached over 5,540 community residents.

6. Identified Need: Access to Health Services

Action: Euclid Hospital continues to provide medically necessary services to all patients regardless of race, color, creed, gender, country of national origin or ability to pay. Euclid Hospital has a financial assistance policy that is among the most generous in the region and covers both hospital services and physician services provided by physicians employed by Cleveland Clinic.

Highlighted Impact:

- In 2015, Cleveland Clinic health system provided \$69.3 million in financial assistance to the communities served by its main campus, family health centers and NEO Regional Hospitals.

Euclid Hospital continues to work to improve its scheduling and support service model to provide consistent experience, improve metrics, and increase efficiency including providing Internet scheduling, accelerating technology implementation and scheduling training.

Euclid Hospital continues to provide a split-flow model for its Emergency Department shortening the time to physicians and overall length of stay and placing patients in areas devoted to their unique needs to improve patient satisfaction and outcomes.

Highlighted Impact:

- Since 2013, the split –flow model in Cleveland Clinic health system Emergency Departments resulted in shortened wait times for patients.

7. Identified Need: Research

Cleveland Clinic health system conducts clinical research activities throughout the system, including regional hospitals. In 2015, Cleveland Clinic scientists conducted more than 2,000 clinical trials and generated 54 invention disclosures, 14 new licenses, and 76 patents.

Action: Euclid Hospital conducted or participated in nearly a dozen clinical trials and studies on treatments of torn rotator cuffs, the effects of total joint arthroplasty on the elderly, and the effectiveness of the use of certain agents used during total hip arthroplasty.

Highlighted Impact:

- In 2013 – 2015, Euclid Hospital participated in 15 research studies pertaining to orthopedics, neurology, Nursing, heart and vascular diseases, and Arts and Medicine.

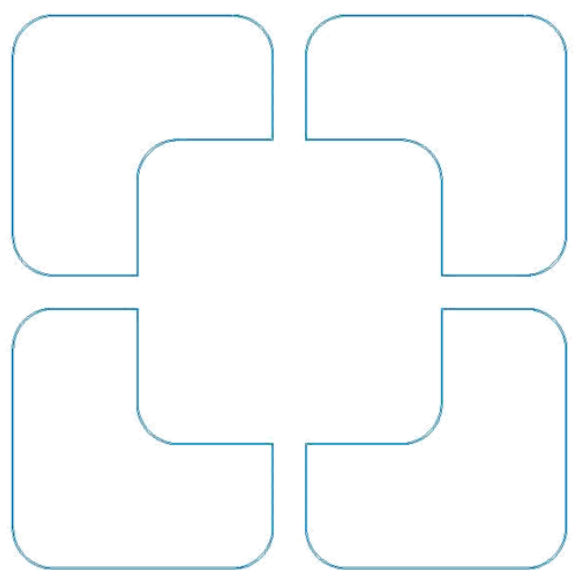
8. Identified Need: Education

Cleveland Clinic and all regional hospitals provide education of medical professions. In 2015, Cleveland Clinic trained over 1,700 residents and fellows, and provided over 1,800 student rotations in 65 allied health education programs.

Action: Euclid Hospital continues to support a Pharmacy Residency Program and schools for EMS and Radiology training. The hospital continues to provide medical education opportunities for nursing, respiratory and occupational therapy, ultrasound technology, and phlebotomy students.

Highlighted Impact:

- Euclid Hospital trained over 88 allied health professionals in 2013 – 2015.
- The school of Diagnostic Imaging at Euclid Hospital trained 125 technicians in 2013 – 2015.



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