

Community Health Needs Assessment

2016



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EXECUTIVE SUMMARY

Introduction

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

Hillcrest is a 453-bed hospital located in Mayfield Heights, Ohio. Hillcrest Hospital ranked within the Top 5 of Cleveland-area hospitals by U.S. News & World Report’s “Best Hospitals in Cleveland.” In addition, U.S. News & World Report recognized Hillcrest Hospital as high-performing in nine adult specialties: Diabetes & Endocrinology, Ear, Nose & Throat, Gastroenterology & GI Surgery, Geriatrics, Nephrology, Neurology and Neurosurgery, Orthopedics, Pulmonology and Urology. Additional information on the hospital and its services is available at: http://my.clevelandclinic.org/locations_directions/Regional-Locations/Hillcrest-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/>.

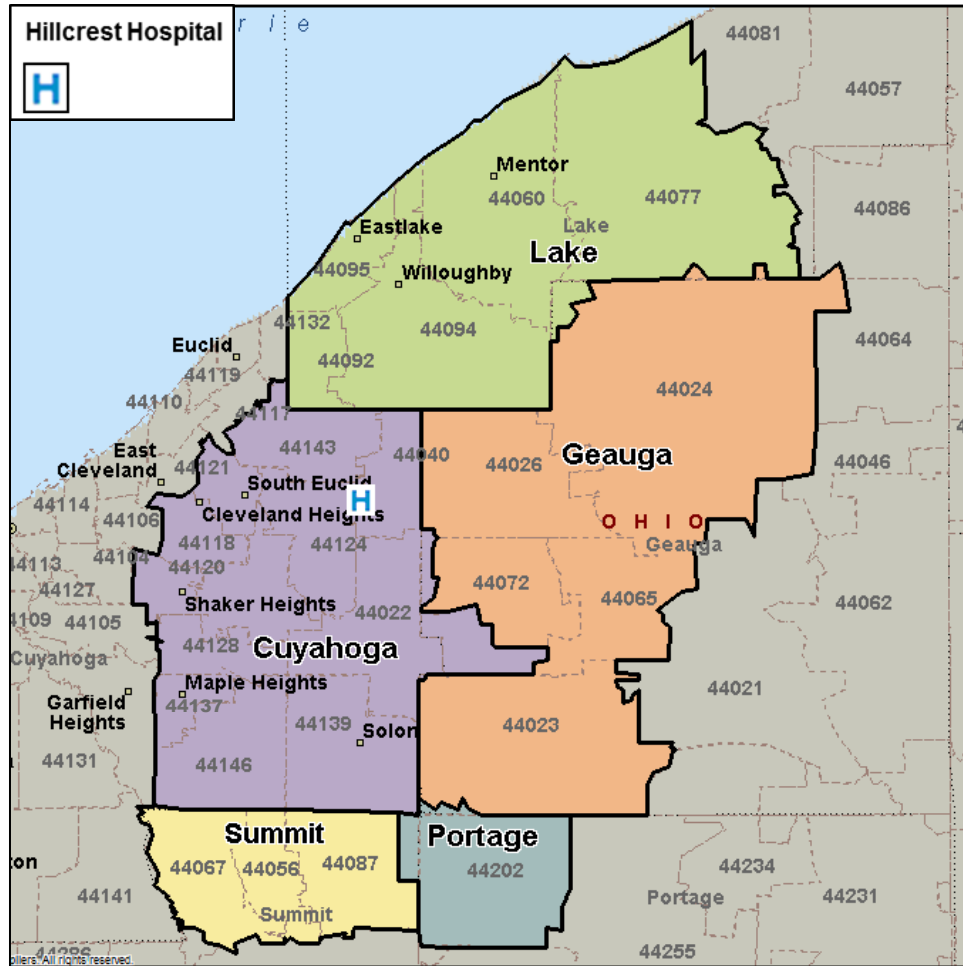
Each Cleveland Clinic hospital is dedicated to the communities it serves. Cleveland Clinic hospitals verify the health needs of communities by performing periodic health needs assessments. These formal assessments are analyzed using widely accepted criteria to determine and measure the health needs of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

Community Definition

For purposes of this report, Hillcrest’s community is defined as 26 ZIP codes in Cuyahoga, Geauga, Lake, Portage, and Summit 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 Hillcrest’s community in 2015 was 667,426.

EXECUTIVE SUMMARY

The following map portrays the community served by Hillcrest.



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 Hillcrest. 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 Hillcrest community who are unaware of how to access and use available services and who experience other access barriers including cost and inadequate transportation. The Hillcrest 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, hypertension, obesity, poor birth outcomes, poor mental health status, and respiratory diseases were identified as prevalent in the Hillcrest community.

Economic Development and Community Conditions

- Several areas within the Hillcrest 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 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 Hillcrest 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 Hillcrest community. Education and opportunities for residents regarding excessive drinking, exercise, nutrition, and smoking cessation specifically were noted.

OBJECTIVES AND METHODOLOGY

Regulatory Requirements

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

The regulations require that each hospital:

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

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

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

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

Community benefit activities and programs also seek to achieve objectives, including:

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

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

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

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

¹ Internal Revenue Code, Section 501(r).

² Instructions for IRS form 990 Schedule H, 2015.

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

³ 501(r) Final Rule, 2014.

OBJECTIVES AND METHODOLOGY

Data Sources

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

Input from 19 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. Other 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

DATA AND ANALYSIS

Definition of Community Assessed

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

On that basis, Hillcrest's community is comprised of 26 ZIP codes in Cuyahoga, Geauga, Lake, Portage, and Summit counties (**Exhibit 1**) which in 2014 accounted for over 74 percent of its inpatient discharges.

Exhibit 1: Hillcrest Inpatient Discharges by ZIP Code, 2014

County	City	ZIP Code	Inpatient Cases (2014)	Percent of Total
Cuyahoga	Cleveland	44124	3,190	12.3%
Cuyahoga	Beachwood	44122	1,292	5.0%
Cuyahoga	Cleveland	44143	1,207	4.7%
Cuyahoga	Cleveland	44121	1,156	4.5%
Lake	Willoughby	44094	1,019	3.9%
Lake	Mentor	44060	1,082	4.2%
Cuyahoga	Cleveland	44118	1,011	3.9%
Cuyahoga	Solon	44139	838	3.2%
Portage	Aurora	44202	769	3.0%
Gauga	Chesterland	44026	695	2.7%
Lake	Eastlake	44095	658	2.5%
Lake	Painesville	44077	652	2.5%
Summit	Twinsburg	44087	626	2.4%
Cuyahoga	Chagrin Falls	44022	611	2.4%
Gauga	Chagrin Falls	44023	577	2.2%
Cuyahoga	Bedford	44146	572	2.2%
Lake	Wickliffe	44092	560	2.2%
Cuyahoga	Cleveland	44128	445	1.7%
Cuyahoga	Cleveland	44120	429	1.7%
Summit	Northfield	44067	403	1.6%
Summit	Macedonia	44056	328	1.3%
Gauga	Chardon	44024	317	1.2%
Cuyahoga	Maple Heights	44137	308	1.2%
Gauga	Novelty	44072	223	0.9%
Cuyahoga	Gates Mills	44040	189	0.7%
Gauga	Newbury	44065	84	0.3%
Subtotal			19,241	74.4%
Other Areas			6,626	25.6%
Total Discharges			25,867	100.0%

Source: Analysis of OHA Discharge Data, 2014.

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The total population of this community in 2015 was approximately 667,000 persons (**Exhibit 2**).

Exhibit 2: Community Population, 2015

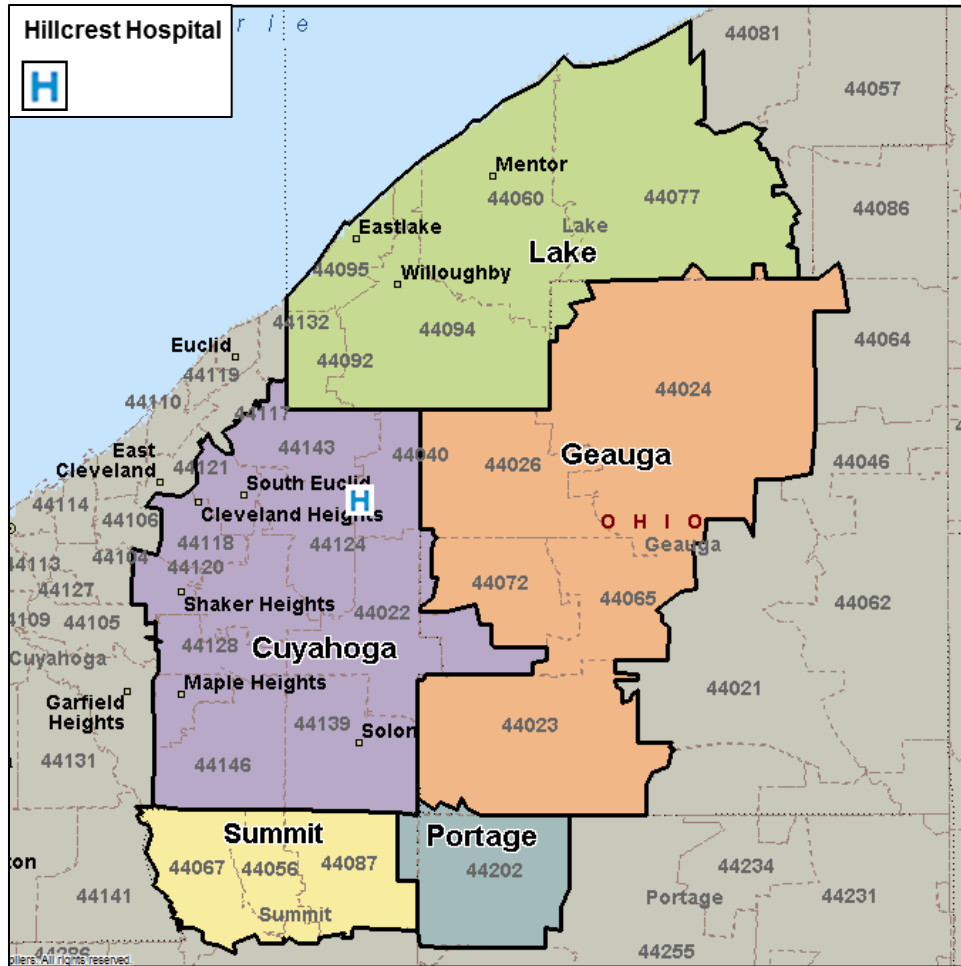
County	City	ZIP Code	Total Population 2015	Percent of Total Population 2015
Cuyahoga	Beachwood	44122	33,661	5.0%
Cuyahoga	Bedford	44146	29,602	4.4%
Cuyahoga	Chagrin Falls	44022	16,811	2.5%
Cuyahoga	Cleveland	44118	39,612	5.9%
Cuyahoga	Cleveland	44120	35,932	5.4%
Cuyahoga	Cleveland	44121	32,122	4.8%
Cuyahoga	Cleveland	44124	38,511	5.8%
Cuyahoga	Cleveland	44128	28,303	4.2%
Cuyahoga	Cleveland	44143	24,142	3.6%
Cuyahoga	Gates Mills	44040	3,029	0.5%
Cuyahoga	Maple Heights	44137	22,566	3.4%
Cuyahoga	Solon	44139	24,770	3.7%
Geauga	Chagrin Falls	44023	18,065	2.7%
Geauga	Chardon	44024	23,615	3.5%
Geauga	Chesterland	44026	11,069	1.7%
Geauga	Newbury	44065	4,018	0.6%
Geauga	Novelty	44072	4,321	0.6%
Lake	Eastlake	44095	32,709	4.9%
Lake	Mentor	44060	59,157	8.9%
Lake	Painesville	44077	58,061	8.7%
Lake	Wickliffe	44092	16,741	2.5%
Lake	Willoughby	44094	36,283	5.4%
Portage	Aurora	44202	19,998	3.0%
Summit	Macedonia	44056	11,970	1.8%
Summit	Northfield	44067	20,775	3.1%
Summit	Twinsburg	44087	21,583	3.2%
Community Total			667,426	100.0%

Source: Truven Market Expert, 2015.

The hospital is located in Mayfield Heights, Ohio (ZIP code 44124). The map in **Exhibit 3** portrays the ZIP codes that comprise the Hillcrest community.

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Exhibit 3: Hillcrest Community



Source: Microsoft MapPoint and Cleveland Clinic, 2015.

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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 Hillcrest community is expected to remain relatively unchanged from 2015 to 2020. Between 2015 and 2020, 15 of the 26 ZIP codes in the Hillcrest community are projected to lose population. The populations in ZIP codes (44120 and 44128) are expected to decrease by more than two percent.

While the total population is expected to remain virtually unchanged, the number of persons aged 65 years and older is projected to increase by 13 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 three ZIP codes on the western side of the community (44128, 44120, and 44137) was Black. In eleven other 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 County and Geauga County had a higher proportion of the population that is linguistically isolated.⁴

Economic Indicators

Many health needs have been associated with poverty. According to the U.S. Census, in 2014 approximately 15.9 percent of people in Ohio were living in poverty. Cuyahoga County (18.5 percent) and Portage County (16.0 percent) both have poverty rates higher than Ohio's during that year. In each of the five Hillcrest community counties, poverty rates have been comparatively high for Black and Hispanic (or Latino) residents. In Portage and Summit counties, poverty rates have been comparatively high for Asian residents. Low income census tracts are prevalent in the western portion of Hillcrest's community.

2014 crime rates in Cuyahoga and Summit counties 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 county, state, and national level decreased significantly. Many receive health insurance coverage through their (or a family member's) employer. Second, in 2010 the Patient Protection and Affordable Care Act (ACA,

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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2010) was enacted, and Ohio was among the states that expanded Medicaid eligibility. In 2015, nineteen out of the 26 ZIP codes in the Hillcrest community had uninsured rates below five percent. By 2020, it is projected that this will increase to twenty-four of the 26 ZIP codes in the community.

Local Health Status and Access Indicators

In the 2016 *County Health Rankings*, 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. Summit County ranked in the bottom 50th percentile among Ohio counties for 11 of the 27 indicators assessed, Portage County for 9 indicators, Lake County for 8 indicators, and Geauga County for 5 indicators. All five counties ranked in the bottom 50th percentile for Inadequate Social Support, Physical Environment, and Air Pollution. Four of the five counties ranked in the bottom 50th percentile for Excessive Drinking, Diabetic Screening, and Severe Housing Problems. The following indicators underlying the rankings are comparatively unfavorable:

- Air pollution
- Binge and heavy drinking
- Diabetic screening
- Percent of driving deaths with alcohol involvement
- Percent of households with severe housing problems
- Percent of the population unemployed
- Percent of the workforce that drives to work alone
- Percent of workers with a long commute who drive alone
- Social associations rate

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:

- Annual average particulate matter concentration and the number of individuals living near highways
- Morbidity associated with Alzheimer's disease, adult asthma, adult depression, and preterm births
- Rates of preventable hospitalizations for older adults
- The number of adult females undergoing routine pap tests

According to the Ohio Department of Health, age-adjusted mortality rates for heart disease, homicide, HIV, and pedestrians killed in traffic collisions were all significantly higher in Cuyahoga County than the Ohio averages. In Lake County, rates for pedestrians killed in traffic collisions were higher than the state average. In Portage County, rates of aortic aneurysm and pedestrians killed in traffic collisions were higher than Ohio averages. In Summit County, age-adjusted mortality rates for influenza and pneumonia, homicide, aortic aneurysm, and pedestrians

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killed in traffic collisions were also higher than the Ohio averages. Overall age-adjusted mortality and incidence rates for cancer in the community 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. Rates of chlamydia, gonorrhea, viral meningitis, and hepatitis A, B, and C were also high in Summit County.
- Virtually all maternal and child health indicators (infant mortality rates, low birth weights, preterm births, and teen pregnancies) are comparatively problematic in Cuyahoga County. Neonatal mortality rates, low birth weights, and preterm births are also comparatively problematic in Summit County.
- Births to women aged 40 to 54 years are also higher in all five counties than the Ohio average.

Data from the Centers for Disease Control’s Behavioral Risk Factor Surveillance System (BRFSS) indicate comparatively high rates of asthma, high cholesterol, 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 Hillcrest community for 14 conditions and Hillcrest community rates have exceeded the Ohio averages for congestive heart failure, hypertension, low birth weight, dehydration, bacterial pneumonia, urinary tract infection, angina without procedure, uncontrolled diabetes, and adult asthma. Rates for congestive heart failure and diabetes were particularly problematic.

Community Need Index

Dignity Health, a California-based hospital system, developed and has made widely available for public use a *Community Need Index*TM (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

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

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- 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 two of the 26 ZIP code in the Hillcrest community scored in the “highest need category,” ZIP codes 44128 and 44120. Three ZIP codes in the community scored in the “high need category,” ZIP codes, 44137, 44146, and 44118.

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 Hillcrest 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 16 census tracts in the hospital’s community that have been designated as medically underserved.

Health Professional Shortage Areas

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present. A number of 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

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- 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.

Access to Healthcare. Interviewees identified different health care services that were particularly difficult to access in the Hillcrest community. Interviewees also expressed a need for more providers throughout the community, including mobile health units, free clinics, and other services. The specific services identified as priority needs were:

- **Access to Dental Care.** Oral health was seen as an important health need throughout the community. Interviewees believed that proper oral health was a key component of good health. However, interviewees stated that finding proper dental care could be difficult in the community. This was especially true for low income or uninsured populations.
- **Access to Primary Care.** Basic primary care was also identified as a priority in the community. Interviewees stated that long waitlists for many services was normal and that many residents in the community were using emergency care services as primary providers due to the waitlists, costs of primary care, or lack of insurance.
- **Access to Specialty Care.** Interviewees also believed that specialty care was an issue in the community. Interviewees indicated that those needing specialty services often faced waitlists or providers who would not accept their insurance. Furthermore, interviewees believed that to get proper specialty care, patients often had to travel long distances for care.

Obesity and Related Conditions. Unhealthy lifestyles that contribute to obesity and resulting conditions were talked about often by interviewees in the Hillcrest community. Obesity was a concern across the community as a result of poor diet and lack of exercise. Interviewees were particularly concerned with childhood obesity. Additionally, several conditions were identified

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as prevalent that are related to obesity. Interviewees indicated that diabetes, hypertension, and cardiovascular disease were all issues in the community. Interviewees also believed that there was a lack of areas to engage in physical activity.

Substance Abuse. A large majority of those interviewed identified the abuse of opiates including heroin, as a significant health concern. Abuse was cited as a widespread issue, affecting individuals in every age and socioeconomic class. The over-prescription of pain medications by physicians and availability of the drugs were believed to be the primary cause of the epidemic.

Care of the Elderly. In response to the growing elderly population in all areas of the community, interviewees believed that adequate care for the elderly to ensure the ability to age in place was a primary concern. Interviewees pointed to common unhealthy-lifestyle conditions (heart disease, diabetes) as problematic among seniors, as well as Alzheimer's disease, dementia, and injuries related to accidents. Furthermore, interviewees identified a need for in-home health care, assisted living facilities, and other care options for the elderly as top priorities and needs.

Mental Health Conditions and Care. A large majority of those interviewed believed that either mental health conditions or accessing mental health services were a primary concern in the community. While all mental health conditions were considered concerns, depression and anxiety were most often identified. Furthermore, adolescent populations were viewed as particularly susceptible to poor mental health, largely as a product of the high stress and expectations put on them for academic achievement. Mental health services were also seen as disproportionately inaccessible in the community. While all mental health services were considered for improvement, interviewees indicated that adolescent services, long-term institutional care, and diverting at-risk populations from incarceration to treatment were most important.

Infant Mortality. A majority of interviewees cited the high rate of infant mortality as a serious concern within the community. A lack of access to prenatal health care services and education, especially among low-income and minority populations, contribute to the high mortality rates. Unhealthy lifestyles and poor management of chronic conditions such as diabetes and hypertension among pregnant women were also believed to influence these rates.

Social and Economic Issues. Within the Hillcrest Hospital community, interviewees noted that several issues disproportionately affected Black residents, including high rates of poverty and unemployment and decreasing property values. Financial challenges were believed to exacerbate mental health issues and severely limit the community's access to quality healthcare services and healthy foods. Interviewees further noted that low-income Black residents had significantly higher rates of heart disease, diabetes, and hypertension.

Information Gaps. Interviewees stated that not having proper information about healthcare providers and prevention services resulted in poor health outcomes in the community. Interviewees stated that residents were often unaware of health programs in place throughout the community and requested a centralized place for information about community health often. Furthermore, interviewees believed that there was a general misunderstanding about health

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insurance as well. Residents were thought to not know how their health insurance plans worked or how to properly secure health insurance, especially for lower income and immigrant populations.

Cancer. Several interviewees identified cancer as a significant health concern within the Hillcrest community. While rates of all types of cancer were believed to be high, pancreatic and colon cancer were specifically mentioned. Interviewees attributed the high cancer rates to the unhealthy lifestyles and eating habits of many residents. Further concern was placed on the rising number of young people being diagnosed with cancer.

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 Hillcrest community who are unaware of how to access and use available services and who experience other access barriers including cost and inadequate transportation. The Hillcrest 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 Populations (MUPs), Medically Underserved Areas (MUAs) and Primary Care Health Professional Shortage Areas (HPSAs) are present in the community served by Hillcrest Hospital (**Exhibits 33 and 34**).
- Rates for ambulatory care sensitive conditions within the Hillcrest 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, Portage, and Summit counties rank poorly compared to peer counties for Older Adult Preventable Hospitalizations. Geauga County ranks poorly compared to peer counties for percent of resident that are uninsured (**Exhibit 21**).
- Access to basic medical care was identified by virtually all interviewees as problematic. Interviewees indicated that segments of the population rely excessively on emergency departments for primary care. Interviewees also identified lack of transportation options, lack of health insurance coverage or understanding of coverage, and service affordability as significant barriers to 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, hypertension, obesity, poor birth outcomes, poor mental health status, and respiratory diseases were identified as prevalent in the Hillcrest community.

SIGNIFICANT COMMUNITY HEALTH NEEDS

- **Cancer**
 - Age-adjusted cancer incidence and mortality rates are higher in the counties served by Hillcrest than the Ohio averages (**Exhibits 23 and 24**).
 - Cuyahoga and Portage counties compared unfavorably to peer counties for Cancer Deaths in Community Health Status Indicators (**Exhibit 21**).
 - Several interviewees identified cancer as a significant health concern within the Hillcrest community. While rates of all types of cancer were believed to be high, pancreatic and colon cancer were specifically mentioned. Interviewees attributed the high cancer rates to the unhealthy lifestyles and eating habits of many residents. Further concern was placed on the rising number of young people being diagnosed with cancer.
- **Chemical Dependency**
 - In County Health Rankings, Cuyahoga and Lake counties ranked unfavorably for Drug Overdose Deaths (**Exhibit 20**).
 - 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 significantly higher than the Ohio average.
 - Abuse of opiates was cited as a significant health concern by many interviewees. A majority 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 Summit and Lake counties ranked 80th and 60th, respectively (**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, gonorrhea, and HIV in Cuyahoga County were all significantly higher than the Ohio averages. Incidence rates of viral meningitis in Cuyahoga, Portage, and Summit counties were also significantly higher than the state average (**Exhibits 22 and 25**).
- **Diabetes, Heart Disease, and Hypertension**
 - In Community Health Status Indicators (CHSI), Cuyahoga and Lake counties ranked poorly compared to peer counties for Coronary Heart Disease Deaths, and Portage County ranked poorly for Diabetes Deaths (**Exhibit 21**).
 - According to the Ohio Department of Health, heart disease was the leading cause of death in Cuyahoga, Lake, Portage, and Summit counties (**Exhibit 22**).
 - ACSC rates for Congestive Heart Failure, Hypertension, and Uncontrolled Diabetes were all significantly higher than the average ACSC rates in Ohio (**Exhibit 27**).
- **Obesity**
 - Federally-designated Food Deserts are present in the community served by Hillcrest (**Exhibit 32**). Lack of access to affordable healthy food options and high concentrations of fast food restaurants, may lead individuals (particularly

SIGNIFICANT COMMUNITY HEALTH NEEDS

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.

- Obesity was the most frequently identified significant need in other, recent health assessments.
- **Poor Birth Outcomes**
 - In the Community Health Status Indicators, Cuyahoga, Portage, and Summit counties ranked in the bottom quartile compared 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 are significantly higher than the Ohio averages. The percent of births to women aged 40-54 years old in Cuyahoga, Geauga, and Lake counties were also significantly higher than the state average (**Exhibit 26**).
 - ACSC rates for Low Birth Weight were higher than the Ohio average in 10 of the 26 ZIP codes in the Hillcrest Hospital community. (**Exhibit 28**).
 - Many interviewees believed that the high rate of infant mortality within the community was a significant concern. Interviewees perceived that the high infant mortality rates were most predominant among low-income Black women. A lack of both pregnancy education and resources are thought to have a role in this disparity.
- **Poor Mental Health Status**
 - Geauga, Lake, Portage, and Summit counties 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 Hillcrest. Several interviewees cited the connection between poor mental health and negative outcomes for physical health.
- **Respiratory Diseases**
 - Cuyahoga, Geauga, Lake, and Summit counties compared unfavorably to peer counties for Older Adult Asthma in Community Health Status Indicators (**Exhibit 21**).
 - The ACSC rate for Adult Asthma in the Hillcrest community was more than eight percent higher than the Ohio average (**Exhibit 29**)

Economic Development and Community Conditions

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

- Cuyahoga and Portage counties have higher poverty rates than both the Ohio and national averages (**Exhibit 12**).
 - Poverty rates among Black populations in Cuyahoga and Portage counties are more than twice as high as the poverty rates of White residents. The poverty rates

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among Asian populations in Portage and Summit counties are also comparatively high (**Exhibit 13**).

- Federally-designated Low Income Areas are present in the community served by Hillcrest (**Exhibit 14**).
- In County Health Rankings, Cuyahoga, Geauga, Lake, and Portage counties ranked in the bottom quartile for Inadequate Social Support (**Exhibit 19**).
- According to the Community Need Index, two out of the 26 ZIP codes in Hillcrest’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 and Summit counties have been well above Ohio averages (**Exhibit 18**) and recent homicide rates have been nearly fifty percent higher than the Ohio average (**Exhibit 22**).
- In County Health Rankings, each of the five counties in the Hillcrest Hospital community ranked poorly for both Physical Environment and Air Pollution. Cuyahoga, Lake, Portage, and Summit counties also ranked poorly for Severe Housing Problems (**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 accessing good healthcare 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 Populations, and Primary Care and Dental Health Professional Shortage Areas are present in the community served by Hillcrest (**Exhibits 33 and 34**).
- County Health Rankings data indicate that there are fewer primary care physicians and mental health providers per capita in Geauga, Lake, and Portage counties, compared to the Ohio average (**Exhibit 20**).
- 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

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.

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- 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 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 Hillcrest 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 Hillcrest's community is projected to remain stagnant between 2015 and 2020; the number of persons 65 years of age and older in the community is projected to increase by 13.0 percent over this period (**Exhibit 7**).
- In Community Health Status Indicators (CHSI), each of the five counties in the Hillcrest community benchmarked unfavorably to peer counties for Alzheimer's disease and dementia. Cuyahoga, Portage, and Summit counties also rank poorly compared to peer counties for Older Adult Preventable Hospitalizations (**Exhibit 21**).
- Interviewees believed that adequate care for the elderly to ensure the ability to age in place was a primary concern in the Hillcrest community. Interviewees pointed to common unhealthy-lifestyle conditions (heart disease, diabetes) as problematic among seniors, as well as Alzheimer's disease, dementia, and injuries related to accidents. Furthermore, interviewees identified a need for in-home health care, assisted living facilities, and other care options for the elderly as top priorities and needs.

Wellness

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

- Federally-designated Food Deserts are present in the community served by Hillcrest (**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.
- In County Health Rankings, Cuyahoga, Geauga, Lake, and Portage counties ranked unfavorably for Excessive Drinking. Cuyahoga, Lake, and Summit counties ranked unfavorably for Alcohol Impaired Driving Deaths. Portage and Summit counties ranked unfavorably for Adult Smoking (**Exhibit 19**).

SIGNIFICANT COMMUNITY HEALTH NEEDS

- Community Health Status Indicators (CHSI) data indicate that Lake and Summit counties benchmarked poorly compared to peer counties for Excessive Drinking and Geauga and Portage counties benchmarked poorly for Adult Smoking (**Exhibit 21**).
- Nearly all interviewees identified diabetes, heart disease, and obesity as serious health concerns within the community served by Hillcrest. Interviewees all believed that poor nutrition and lack of a physical activity were the primary causes of these diseases. They also cited food deserts, lack of knowledge about nutrition, and the high cost of healthy food as the main barriers to healthier eating habits.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

This section identifies other facilities and resources available in the community served by Hillcrest 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 is one FQHC site operating in the Hillcrest community (**Exhibit 4**).

Exhibit 4: Federally Qualified Health Centers

Health Center	County	ZIP Code
UH Mayfield Village Health Center	Cuyahoga	44143

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
Highland Springs Hospital	Psychiatric	72	44122	Cuyahoga
Hillcrest Hospital	General Hospital	496	44124	Cuyahoga
Kindred Hospital- Cleveland	Long-Term Acute Care	68	44120	Cuyahoga
Regency North Central Ohio- Cleveland East	Long-Term Acute Care	44	44128	Cuyahoga
South Pointe Hospital	General Hospital	173	44122	Cuyahoga
University Hospitals Ahuja Medical Center	General Hospital	144	44122	Cuyahoga
University Hospitals Bedford Medical Center Campus	General Hospital	110	44146	Cuyahoga
University Hospitals Rehabilitation Hospital	Rehabilitation	50	44122	Cuyahoga
University Hospitals Richmond Medical Center Campus	General Hospital	125	44143	Cuyahoga
Rehabilitation Hospital at Heather Hill	Rehabilitation	142	44024	Geauga
University Hospitals Geauga Medical Center	General Hospital	226	44024	Geauga
Lake Health Tripoint Medical Center	General Hospital	135	44077	Lake
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 Hillcrest. 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 Hillcrest community.

Community Assessed

As mentioned previously and shown in **Exhibit 1**, Hillcrest’s community is comprised of 26 ZIP codes in Cuyahoga, Geauga, Lake, Portage, and Summit counties in Ohio.

Demographics

Population characteristics and changes directly influence community health needs. The total population in the Hillcrest community is expected to remain virtually unchanged 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	Beachwood	44122	33,661	33,514	-0.4%
Cuyahoga	Bedford	44146	29,602	29,483	-0.4%
Cuyahoga	Chagrin Falls	44022	16,811	16,860	0.3%
Cuyahoga	Cleveland	44118	39,612	38,891	-1.8%
Cuyahoga	Cleveland	44120	35,932	34,539	-3.9%
Cuyahoga	Cleveland	44121	32,122	31,551	-1.8%
Cuyahoga	Cleveland	44124	38,511	38,405	-0.3%
Cuyahoga	Cleveland	44128	28,303	27,539	-2.7%
Cuyahoga	Cleveland	44143	24,142	24,307	0.7%
Cuyahoga	Gates Mills	44040	3,029	2,977	-1.7%
Cuyahoga	Maple Heights	44137	22,566	22,236	-1.5%
Cuyahoga	Solon	44139	24,770	25,234	1.9%
Geauga	Chagrin Falls	44023	18,065	18,577	2.8%
Geauga	Chardon	44024	23,615	23,821	0.9%
Geauga	Chesterland	44026	11,069	10,972	-0.9%
Geauga	Newbury	44065	4,018	3,950	-1.7%
Geauga	Novelty	44072	4,321	4,298	-0.5%
Lake	Eastlake	44095	32,709	32,155	-1.7%
Lake	Mentor	44060	59,157	58,612	-0.9%
Lake	Painesville	44077	58,061	59,108	1.8%
Lake	Wickliffe	44092	16,741	16,646	-0.6%
Lake	Willoughby	44094	36,283	37,132	2.3%
Portage	Aurora	44202	19,998	20,662	3.3%
Summit	Macedonia	44056	11,970	12,403	3.6%
Summit	Northfield	44067	20,775	21,266	2.4%
Summit	Twinsburg	44087	21,583	22,405	3.8%
Community Total			667,426	667,543	0.0%

Source: Truven Market Expert, 2015.

APPENDIX B – SECONDARY DATA ASSESSMENT

Between 2015 and 2020, 15 of the 26 ZIP codes in the community are projected to decrease in population size. The populations in Cleveland ZIP codes 44120 and 44128 are expected to decrease by more than two percent.

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

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

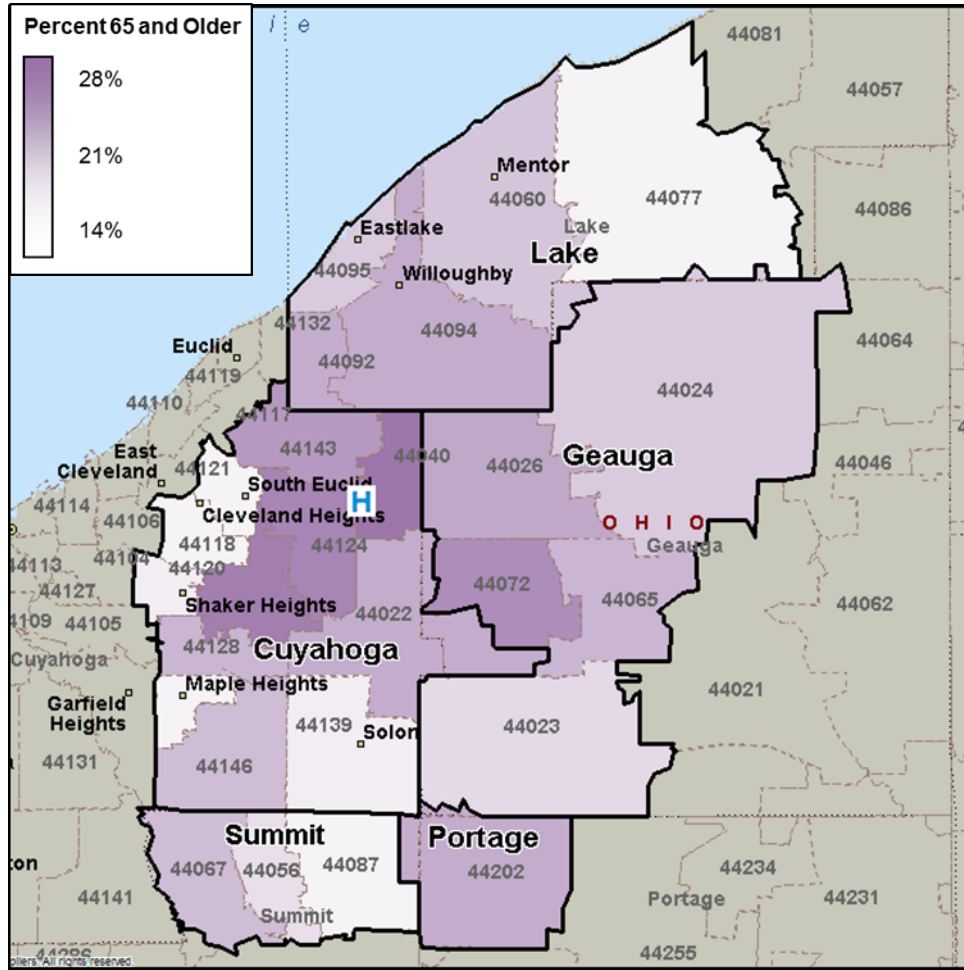
Age/Sex Cohort	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
0-17	140,388	131,980	-6.0%
Female 18-44	103,846	103,696	-0.1%
Male 18-44	99,934	102,457	2.5%
45-64	197,390	187,164	-5.2%
65+	125,868	142,246	13.0%
Total	667,426	667,543	0.0%

Source: Market Expert, 2015.

The number of persons aged 65 years and older is projected to increase by 13 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

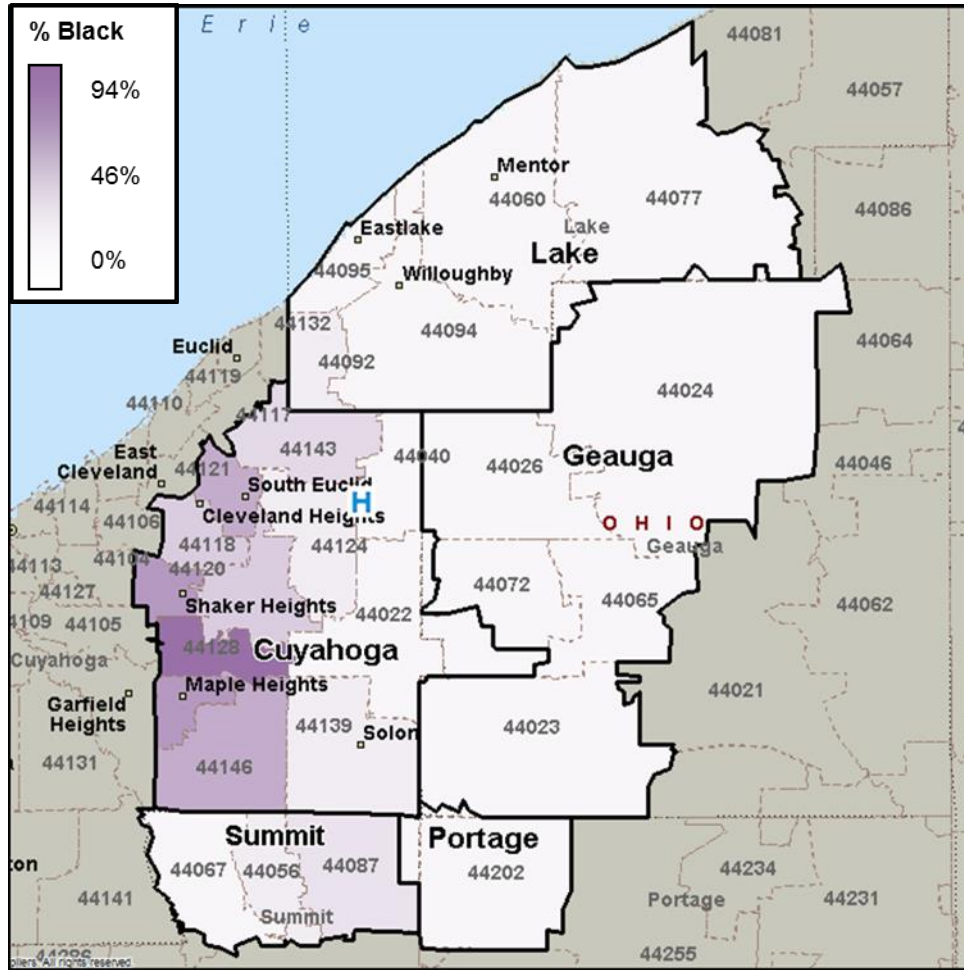


Source: Truven Market Expert, 2015.

In the community, ZIP codes 44040, 44122, and 44124 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.

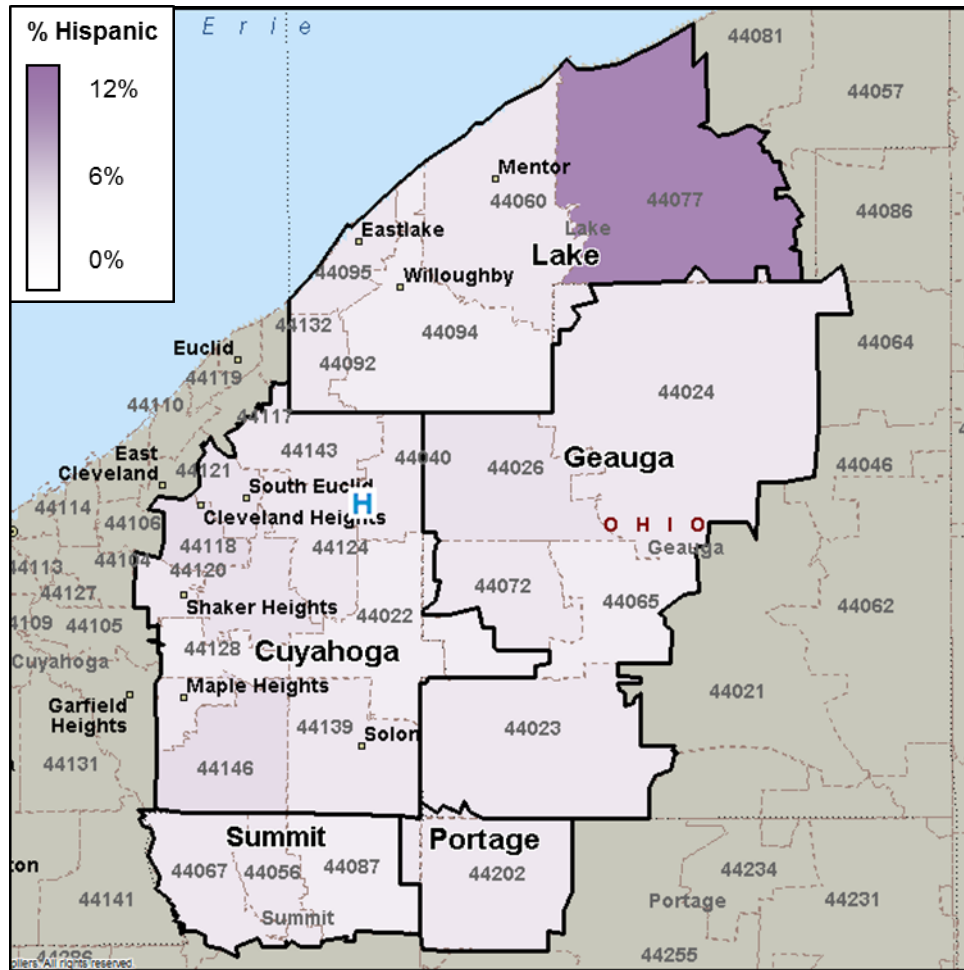
Exhibit 9: Percent of Population - Black, 2015



Source: Truven Market Expert, 2015.

Over seventy percent of residents of ZIP codes 44128, 44120, and 44137 were Black. Fewer than five percent of residents were Black in ZIP codes 44094, 44202, 44022, 44023, 44095, 44065, 44072, 44040, 44060, 44024, and 44026.

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



Source: Truven Market Expert, 2015.

The percentage of residents that are Hispanic (or Latino) was highest in ZIP code 44077.

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 Summit counties, Ohio, and the United States.

Exhibit 11: Other Socioeconomic Indicators, 2014

Measure	Cuyahoga County	Geauga County	Lake County	Portage County	Summit County	Ohio	United States
Population 25+ without High School Diploma	12.1%	8.9%	8.7%	8.9%	9.3%	11.2%	13.6%
Population with a Disability	14.3%	9.7%	11.3%	11.9%	12.5%	13.5%	12.3%
Population Linguistically Isolated	4.1%	4.0%	2.7%	1.6%	2.1%	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 Geauga counties had higher proportions of the population that are linguistically isolated. Linguistic isolation is defined as residents who speak a language other than English and speak English less than “very well.”

Economic indicators

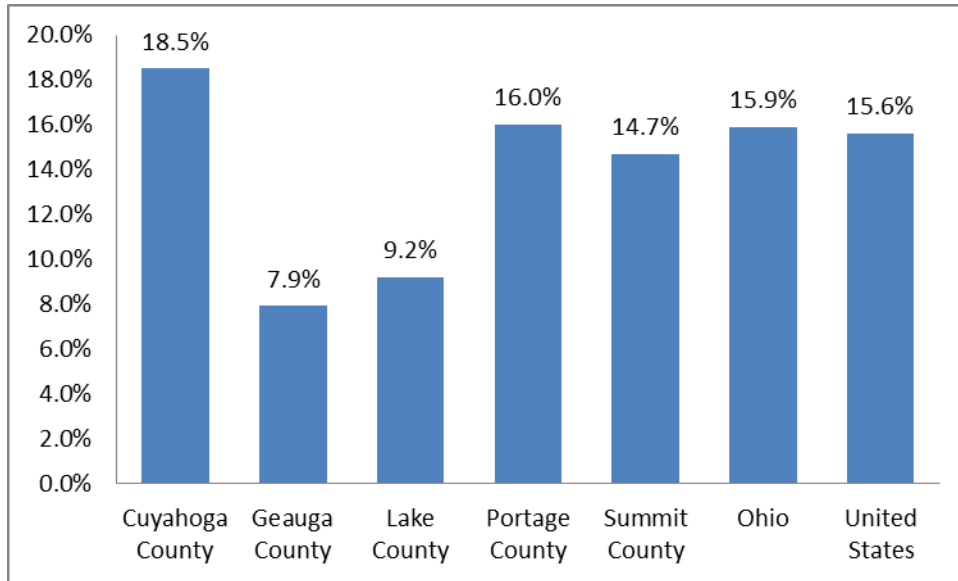
The following categories of economic indicators with implications for health were assessed: (1) people in poverty; (2) unemployment rate; (3) insurance status; and (4) crime.

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 and Portage counties’ poverty rates were higher than Ohio’s poverty rate during that year (**Exhibit 12**).

APPENDIX B – SECONDARY DATA ASSESSMENT

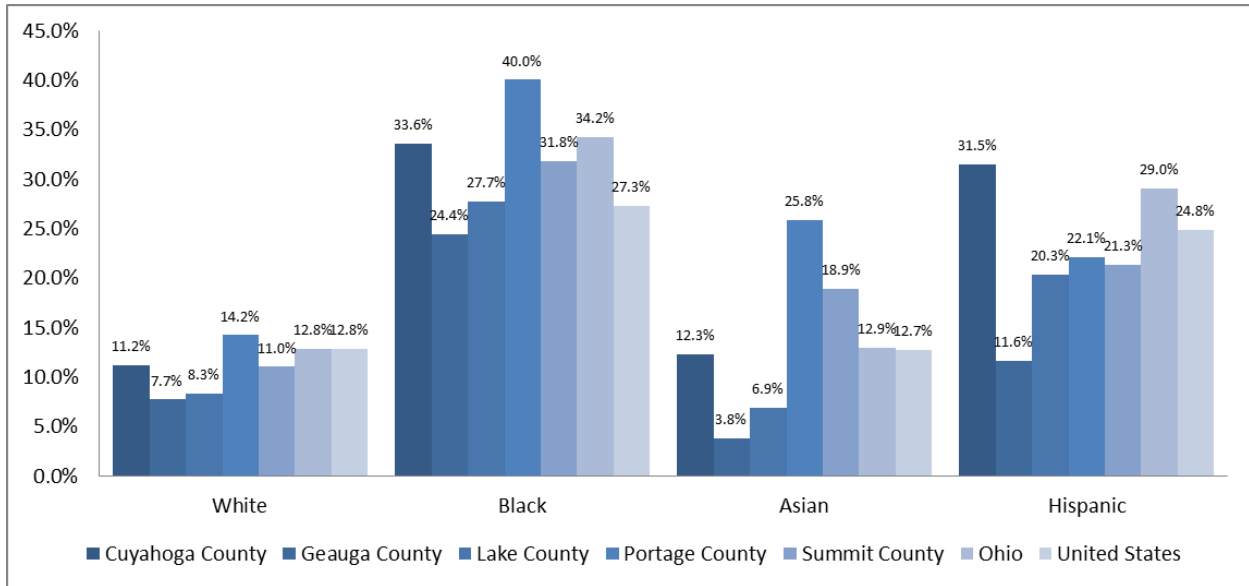
Exhibit 12: Percent of People in Poverty, 2014



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

Considerable variation in poverty rates is present across racial and ethnic categories, in each Hillcrest county and Ohio (**Exhibit 13**).

Exhibit 13: Poverty Rates by Race and Ethnicity, 2014

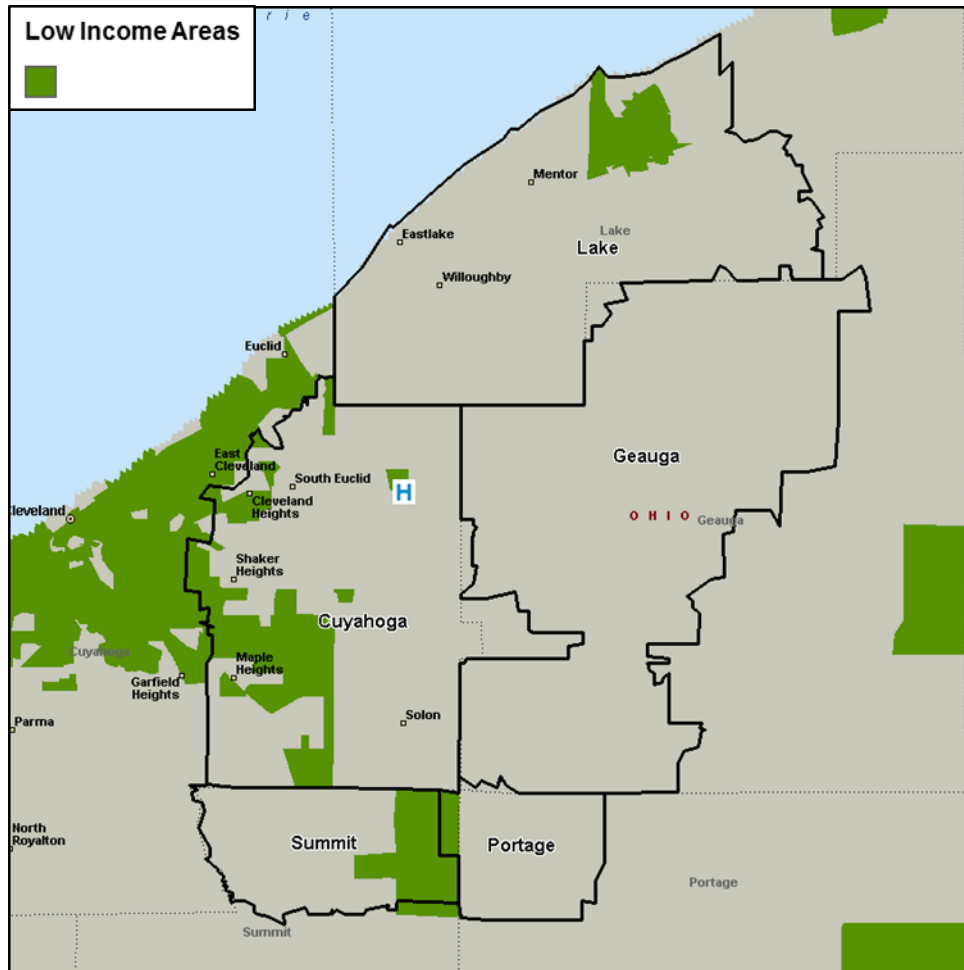


Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

Poverty rates in all five counties and Ohio have been comparatively high for Black residents. The poverty rates for Hispanic (or Latino) residents of Cuyahoga County, White, Black, and Asian residents of Portage County, and Asian residents of Summit County have 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.

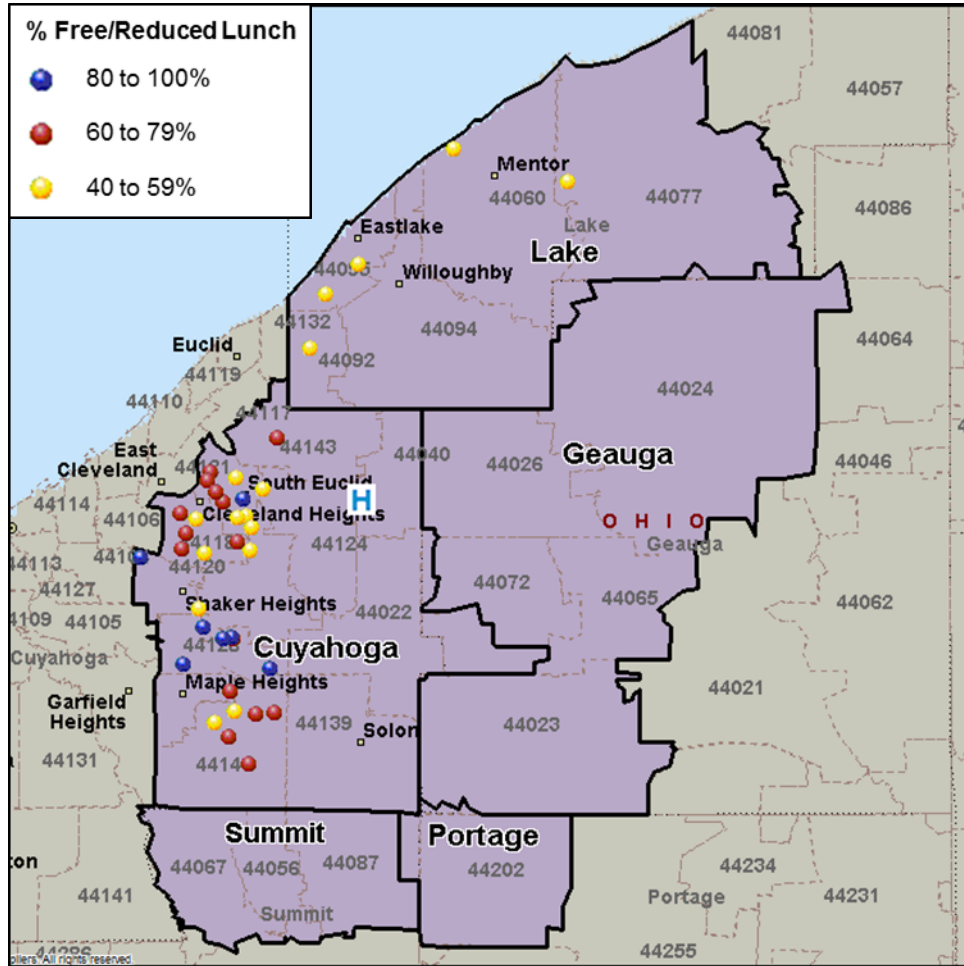
Low income census tracts have been prevalent in the western portion of Hillcrest’s community.

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



Source: Ohio Department of Education, 2014.

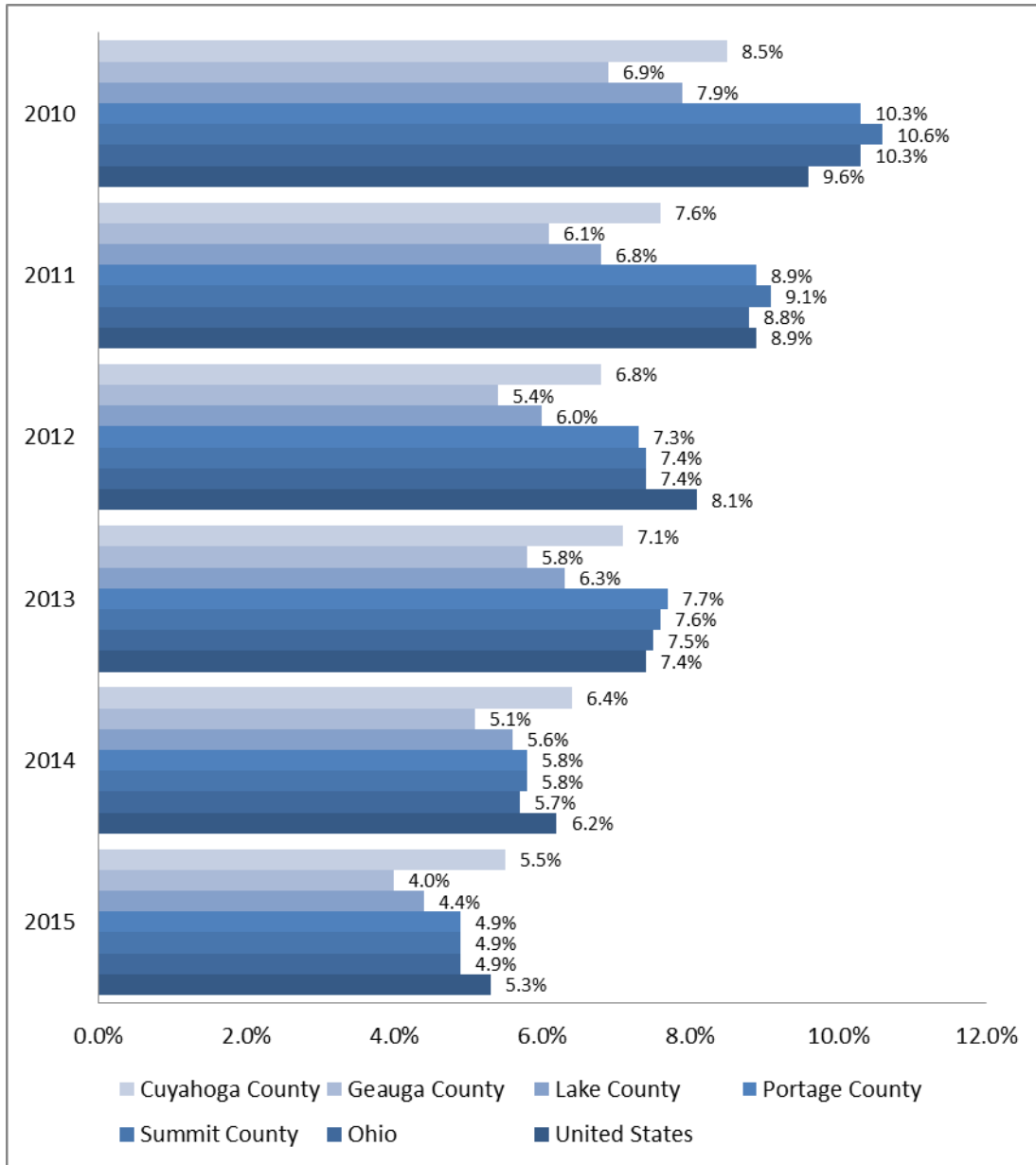
There are 39 schools within the Hillcrest community where at least 40 percent of students are eligible for free or reduced price lunches.

Unemployment

Unemployment is problematic because many residents receive health insurance coverage through their (or a family member's) employer. If unemployment rises, access to employer based health insurance can decrease. **Exhibit 16** shows unemployment rates for 2010 through 2015 for each Hillcrest community county, with Ohio and national rates for comparison.

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 16: Unemployment Rates, 2010-2015



Source: Bureau of Labor Statistics, 2010-2014.

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

APPENDIX B – SECONDARY DATA ASSESSMENT

Insurance Status

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

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

County	City	ZIP Code	Total Population 2015	% Uninsured 2015	Total Population 2020	% Uninsured 2020
Cuyahoga	Beachwood	44122	33,661	5.0%	33,514	3.5%
Cuyahoga	Bedford	44146	29,602	6.4%	29,483	4.3%
Cuyahoga	Chagrin Falls	44022	16,811	3.6%	16,860	2.8%
Cuyahoga	Cleveland	44118	39,612	6.6%	38,891	4.5%
Cuyahoga	Cleveland	44120	35,932	10.3%	34,539	7.0%
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Cuyahoga	Cleveland	44143	24,142	4.8%	24,307	3.4%
Cuyahoga	Gates Mills	44040	3,029	2.7%	2,977	2.1%
Cuyahoga	Maple Heights	44137	22,566	7.1%	22,236	4.9%
Cuyahoga	Solon	44139	24,770	2.5%	25,234	1.9%
Geauga	Chagrin Falls	44023	18,065	2.9%	18,577	2.3%
Geauga	Chardon	44024	23,615	2.7%	23,821	2.0%
Geauga	Chesterland	44026	11,069	2.3%	10,972	1.8%
Geauga	Newbury	44065	4,018	2.6%	3,950	2.0%
Geauga	Novelty	44072	4,321	2.0%	4,298	1.6%
Lake	Eastlake	44095	32,709	4.3%	32,155	2.9%
Lake	Mentor	44060	59,157	3.5%	58,612	2.5%
Lake	Painesville	44077	58,061	4.8%	59,108	3.3%
Lake	Wickliffe	44092	16,741	4.7%	16,646	3.1%
Lake	Willoughby	44094	36,283	3.9%	37,132	2.6%
Portage	Aurora	44202	19,998	2.9%	20,662	2.1%
Summit	Macedonia	44056	11,970	2.6%	12,403	1.9%
Summit	Northfield	44067	20,775	3.2%	21,266	2.2%
Summit	Twinsburg	44087	21,583	2.8%	22,405	2.0%

Source: Truven Market Expert, 2015.

In 2015, seven out of the 26 ZIP codes in the Hillcrest community had uninsured rates above five percent. By 2020, it is projected that only two of the 26 ZIP codes in the community will have uninsured rates above five percent, ZIP codes 44120 and 44128.

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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.

Crime

Exhibit 18 provides certain crime statistics for Cuyahoga, Geauga, Lake, Portage and Summit 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	Gauga County	Lake County	Portage County	Summit County	Ohio
Violent Crime	613.3	44.2	163.9	88.0	377.7	278.4
Property Crime	3,141.8	801.9	1,562.1	1,917.0	3,246.1	2,880.8
Murder	6.4	4.8	-	1.3	6.6	4.4
Rape	48.8	3.6	27.1	19.5	47.8	36.2
Robbery	362.1	7.2	29.5	28.2	124.0	129.2
Aggravated Assault	196.1	28.7	107.3	39.0	199.3	126.1
Burglary	966.2	88.4	272.2	412.6	845.2	786.5
Larceny	1,720.5	699.2	1,243.7	1,464.2	2,239.1	1,921.8
Motor Vehicle Theft	455.1	14.3	46.3	40.3	161.7	172.5
Arson	32.5	2.4	5.4	15.5	24.1	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 Summit County were also above the Ohio average for all crimes except robbery and motor vehicle theft.

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>

Local Health Status and Access Indicators

This section assesses health status and access indicators for the Hillcrest 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 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.

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 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			Geauga County			Lake County			Portage County			Summit County		
	2013	2016	Rank Change	2013	2016	Rank Change	2013	2016	Rank Change	2013	2016	Rank Change	2013	2016	Rank Change
Health Outcomes	67	64		1	2		17	15		20	22	↓	41	52	↓
Health Factors	45	53	↓	3	6	↓	12	13	↓	26	26		29	46	↓
Length of Life	58	54		1	3	↓	12	17	↓	18	21	↓	44	40	
Quality of Life	76	73		4	4		20	13		27	32	↓	47	60	↓
Frequent Physical Distress	N/A	63		N/A	5		N/A	5		N/A	33		N/A	44	
Frequent Mental Distress	N/A	54		N/A	5		N/A	6		N/A	27		N/A	31	
Drug Overdose Deaths	N/A	52		N/A	13		N/A	54		N/A	29		N/A	44	
Health Behaviors	15	39	↓	2	2		18	6		37	15		13	40	↓
Adult Smoking	16	18	↓	12	4		47	10		60	45		19	49	↓
Adult Obesity	7	9	↓	1	4	↓	9	1		16	7		11	16	↓
Excessive Drinking	51	64	↓	61	68	↓	72	88	↓	39	81	↓	52	18	
Sexually Transmitted Infections	55	87	↓	1	2	↓	9	60	↓	6	33	↓	28	80	↓
Teen Births	3	51	↓	18	1		55	11		66	4		22	24	↓
Clinical Care	7	5		8	12	↓	18	16		54	39		13	22	↓
Primary Care Physicians	1	2	↓	27	21		8	49	↓	52	58	↓	6	6	
Dentists	56	1		10	32	↓	18	9		34	37	↓	10	13	↓
Mental Health Providers	3	1		6	17	↓	26	24		11	19	↓	5	11	↓
Preventable Hospital Stays	36	34		15	10		38	27		45	35		39	42	↓
Diabetic Screening	69	62		31	39	↓	58	48		68	55		52	67	↓
Social & Economic Factors	76	79	↓	5	10	↓	10	22	↓	15	29	↓	47	48	↓
Some College	10	9		12	19	↓	9	13	↓	25	22		55	12	
Unemployment	15	59	↓	4	19	↓	6	39	↓	19	45	↓	8	44	↓
Inadequate Social Support	39	78	↓	20	75	↓	18	80	↓	5	83	↓	52	60	↓
Injury Deaths	1	30	↓	11	13	↓	2	19	↓	16	7		5	29	↓
Physical Environment	36	61	↓	17	59	↓	51	49		70	73	↓	78	84	↓
Air Pollution	66	63		75	70		70	65		82	79		79	75	
Severe Housing Problems	N/A	87		N/A	62		N/A	41		N/A	80		N/A	71	

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. Summit County ranked in the bottom 50th percentile among Ohio counties for 12 of the 27 indicators assessed, Portage County for 11 indicators, Lake County for 10 indicators, and Geauga County for 7 indicators. All five counties ranked in the bottom 50th percentile for Inadequate

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Social Support, Physical Environment, and Air Pollution. Four of the five counties ranked in the bottom 50th percentile for Excessive Drinking, Diabetic Screening, and Severe Housing Problems.

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

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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	Geauga County	Lake County	Portage County	Summit County	Ohio	U.S.
Health Outcomes								
Length of Life	Years of potential life lost before age 75 per 100,000 population	7,907.7	4,847.6	6,289.3	6,442.9	7,252.8	7,533.6	7,700.0
Quality of Life	Percent of adults reporting fair or poor health	16.5	12.9	13.4	15.1	16.5	16.0	16.0
	Average number of physically unhealthy days reported in past 30 days	3.9	3.3	3.3	3.6	3.8	3.8	3.7
	Average number of mentally unhealthy days reported in past 30 days	4.0	3.7	3.7	3.9	4.0	4.0	3.7
	Percent of live births with low birthweight (<2500 grams)	10.5	5.9	7.6	7.5	9.0	8.6	8.0
Health Factors								
Health Behaviors								
Adult Smoking	Percent of adults that report smoking >= 100 cigarettes and currently smoking	18.3	16.1	17.6	19.9	20.1	19.2	18.0
Adult Obesity	Percent of adults that report a BMI >= 30	28.6	27.6	26.4	28.5	29.2	30.5	31.0
Food Environment Index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	6.6	8.3	7.5	7.2	6.6	6.9	7.2
Physical Inactivity	Percent of adults aged 20 and over reporting no leisure-time physical activity	25.6	26.6	25.4	23.9	24.0	26.3	28.0
Access to Exercise Opportunities	Percent of population with adequate access to locations for physical activity	95.6	90.0	89.4	78.0	95.7	83.2	62.0
Alcohol Impaired Driving Deaths	Percent of driving deaths with alcohol involvement	45.3	31.8	35.5	21.5	53.5	35.3	30.0
Excessive Drinking	Binge plus heavy drinking	18.2	18.4	19.8	19.1	16.3	17.9	17.0
STDs	Chlamydia rate per 100,000 population	792.4	121.7	292.3	221.1	441.2	460.2	287.7
Teen Births	Teen birth rate per 1,000 female population, ages 15-19	37.7	9.2	21.0	14.7	31.3	34.4	40.0
Clinical Care								
Uninsured	Percent of population under age 65 without health insurance	13.3	13.4	11.5	12.0	12.6	13.0	17.0
Primary Care Physicians	Ratio of population to primary care physicians	879:1	1516:1	2148:1	2410:1	1002:1	1296:1	1990:1
Dentists	Ratio of population to dentists	1028:1	2300:1	1559:1	2490:1	1715:1	1713:1	2590:1
Mental Health Providers	Ratio of population to mental health providers	402:1	650:1	780:1	710:1	529:1	642:1	1060:1
Preventable Hospital Stays	Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	64.7	49.8	63.3	64.8	67.1	64.9	60.0
Diabetic Screening	Percent of diabetic Medicare enrollees that receive HbA1c monitoring	83.9	85.7	85.1	84.7	83.3	84.9	85.0
Mammography Screening	Percent of female Medicare enrollees, ages 67-69, that receive mammography screening	65.0	64.0	65.0	58.0	59.0	60.0	61.0

Source: County Health Rankings, 2016.

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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	Geauga County	Lake County	Portage County	Summit County	Ohio	U.S.
Health Factors								
Social & Economic Factors								
High School Graduation	Percent of ninth-grade cohort that graduates in four years	75.8	92.9	90.0	92.4	83.9	82.7	86.0
Some College	Percent of adults aged 25-44 years with some post-secondary education	68.4	63.7	66.2	63.1	67.1	63.4	56.0
Unemployment	Percent of population age 16+ unemployed but seeking work	6.4	5.1	5.6	5.8	5.8	5.7	6.0
Children in poverty	Percent of children under age 18 in poverty	30.0	11.5	13.4	18.2	20.3	22.7	23.0
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	5.6	4.1	4.0	4.4	4.8	4.8	4.4
Children in single-parent households	Percent of children that live in a household headed by single parent	44.9	16.7	28.5	31.0	36.2	35.4	32.0
Social Associations	Number of associations per 10,000 population	9.2	9.5	9.1	8.8	11.4	11.4	13.0
Violent Crime	Number of reported violent crime offenses per 100,000 population	559.8	38.4	203.0	84.5	405.5	307.2	199.0
Injury Deaths	Injury mortality per 100,000	59.1	53.9	56.4	45.9	58.5	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	13.7	13.6	13.9	13.8	13.5	11.9
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	18.9	14.6	13.0	16.6	15.5	15.2	14.0
Drive Alone to Work	Percent of the workforce that drives alone to work	80.1	81.5	88.0	83.7	87.1	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	45.5	31.9	37.9	27.2	29.4	29.0

Source: County Health Rankings, 2016

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Exhibit 20 highlights the following comparatively unfavorable indicators in which three or more of the counties ranked worse than Ohio averages:

- Percent of driving deaths with alcohol involvement
- Binge and heavy drinking
- Diabetic screening
- Percent of the population unemployed
- Social associations 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 each community county to its respective peer counties and cities and highlights community health issues found to rank in the bottom quartile of the counties included in the analysis.

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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	Geauga County	Lake County	Portage County	Summit 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 morbidity associated with Alzheimer’s disease, adult asthma, older adult depression and preterm births are comparatively high, as are older adult preventable hospitalizations. Indicators for adult female routine pap tests and annual average particulate matter concentration 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	Geauga County	Lake County	Portage County	Summit County	Ohio	Healthy People 2020
Heart Disease	213.9	133.4	184.6	195.8	178.4	191.4	-
Diabetes	23.3	16.6	23.0	21.6	24.5	26.1	-
Influenza and Pneumonia	12.0	6.7	10.7	16.9	19.0	15.4	-
Suicide	9.9	9.7	12.7	12.7	11.6	12.0	10.2
Motor Vehicle Collisions	3.4	4.4	4.4	8.6	5.2	9.0	12.4
Homicide	9.2	0.8	1.8	1.6	5.7	5.4	-
Motor Vehicle Collisions (Alcohol)	1.4	1.1	2.6	2.6	2.2	3.8	-
Aortic Aneurysm	3.8	2.4	3.6	4.1	3.8	3.7	-
HIV	2.7	N/A	0.3	0.5	1.3	1.3	-
Pedestrians Killed in Traffic Collisions	0.6	0.0	0.9	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, rates for pedestrians killed in traffic collisions were higher than the state average. In Portage County, rates of aortic aneurysm and pedestrians killed in traffic collisions were higher than Ohio averages. In Summit County, age-adjusted mortality rates for influenza and pneumonia, homicide, aortic aneurysm, 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	Geauga County	Lake County	Portage County	Summit County	Ohio Rate	U.S. Rate
All Sites/Types	189.9	156.0	183.2	187.0	182.0	186.6	171.2
Lung and Bronchus	52.3	38.6	55.6	58.5	54.5	55.3	47.2
Breast (Female)	24.9	22.0	25.4	20.8	24.3	23.6	21.9
Prostate	27.4	18.4	20.7	16.0	23.4	22.0	21.4
Colon and Rectum	15.6	12.2	17.2	14.5	16.6	17.0	15.5
Pancreas	12.8	12.1	12.4	12.0	11.1	11.5	10.9
Ovary	7.4	6.2	7.9	9.7	7.0	7.9	7.7
Leukemia	7.0	6.5	6.6	7.0	7.1	7.3	7.0
Non-Hodgkin Lymphoma	6.4	6.5	6.9	6.4	6.7	6.9	6.2
Liver and Intrahepatic Bile Duct	6.4	3.5	4.7	7.0	4.9	5.3	6.0
Bladder	5.0	5.0	4.7	7.0	4.8	5.0	4.4
Esophagus	4.9	4.0	4.5	4.4	4.6	5.0	4.2
Uterus	6.5	4.0	4.6	4.7	4.4	4.9	4.4
Brain and Other CNS	4.0	4.9	5.1	6.0	5.0	4.5	4.3
Kidney and Renal Pelvis	4.1	3.5	4.4	3.6	3.2	4.3	3.9
Multiple Myeloma	3.7	4.6	3.4	4.1	3.5	3.5	3.3
Melanoma of Skin	2.1	3.4	3.0	2.4	3.0	3.0	2.7
Stomach	4.4	2.8	2.9	1.9	3.5	2.9	3.4
Cervix	3.0	1.9	1.8	1.6	1.9	2.6	2.3
Oral Cavity and Pharynx	3.1	1.8	2.5	3.9	2.8	2.5	2.5
Larynx	1.5	1.6	0.9	1.4	1.2	1.3	1.1
Thyroid	0.5	-	0.7	0.7	0.5	0.5	0.5
Hodgkin Lymphoma	0.4	-	-	-	0.3	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 and significantly higher in Portage County for oral cavity and pharynx cancer. Cancer mortality rates for breast (female), pancreas, brain and other CNS, multiple myeloma, oral cavity and pharynx, and larynx were higher than Ohio averages in at least three of the community's counties.

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	Geauga County	Lake County	Portage County	Summit County	Ohio
Total	477.9	409.4	462.0	453.6	440.8	452.5
Prostate	116.3	103.8	87.1	114.9	96.2	101.7
Breast	71.4	71.4	72.6	63.4	64.5	67.6
Lung and Bronchus	64.3	39.7	58.5	68.7	61.9	67.4
Colon and Rectum	41.0	33.5	38.8	33.3	33.6	40.6
Other Sites/Types	37.9	29.0	42.2	42.1	39.2	35.8
Uterus	35.4	38.3	31.4	25.7	28.6	28.8
Bladder	19.9	12.4	30.4	22.5	20.5	22.1
Melanoma of Skin	17.0	23.2	21.5	21.8	22.5	19.5
Non-Hodgkins Lymphoma	21.0	25.3	21.1	18.6	21.1	18.6
Kidney and Renal Pelvis	19.0	7.6	19.8	10.0	14.9	16.9
Thyroid	15.9	18.0	18.2	15.1	14.1	15.2
Pancreas	12.9	10.3	13.1	15.0	13.6	12.3
Leukemia	14.4	8.1	13.2	15.0	11.6	11.9
Oral Cavity and Pharynx	11.2	16.5	10.5	10.2	11.0	11.7
Ovary	14.5	11.1	14.0	16.3	10.3	11.3
Brain and Other CNS	7.7	5.9	7.1	9.8	7.5	7.4
Cervix	7.4	-	-	-	10.5	7.4
Stomach	8.4	-	6.3	6.8	6.6	6.8
Liver and Intrahepatic Bile Duct	8.3	5.6	8.1	3.1	6.2	6.6
Multiple Myeloma	8.3	4.6	3.9	6.2	6.2	5.9
Testis	6.3	-	7.7	-	7.0	5.2
Esophagus	5.8	6.8	2.8	6.5	5.1	5.0
Larynx	4.8	-	2.0	3.2	4.7	4.3
Hodgkins Lymphoma	3.1	7.0	3.0	-	2.3	2.6

Source: Ohio Department of Health, 2012.

The incidence rates for all cancers, prostate, breast, other sites/types, uterus, melanoma of skin, Non-Hodgkin’s Lymphoma, thyroid, pancreas, leukemia, ovary, brain and other CNS, multiple myeloma, testis, esophagus, and Hodgkin’s Lymphoma are higher in at least three of Hillcrest community’s counties than Ohio averages. Hodgkin’s Lymphoma is significantly higher than the Ohio average in Geauga County.

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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	Geauga County	Lake County	Portage County	Summit County	Ohio
Chlamydia	801.1	115.6	263.0	280.0	488.4	462.0
HIV	295.8	25.6	55.8	53.9	130.2	154.3
Gonorrhea	290.3	15.0	62.2	37.2	173.3	143.5
Syphilis	9.8	1.1	1.7	0.0	4.8	9.9
Varicella	4.3	1.1	6.5	5.0	2.4	7.0
Viral Meningitis	7.2	2.1	2.6	6.8	10.5	6.1
Hepatitis A, B, and C	0.8	0.0	0.9	0.6	2.0	1.9

Source: Ohio Department of Health, 2012.

Cuyahoga County has had comparatively high incidence rates of chlamydia, HIV, gonorrhea, and viral meningitis. Summit County also had comparatively high incidence rates of chlamydia, gonorrhea, viral meningitis, and hepatitis A, B, and C. Portage County has a comparatively high incidence rate of 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	Geauga County	Lake County	Portage County	Summit County	Ohio	Healthy People 2020
Mortality Rate per 1,000 Live Births							
Infant	9.4	4.1	4.2	6.7	7.7	7.7	N/A
Neonatal	6.5	2.6	3.2	4.2	5.4	5.2	N/A
Post-Neonatal	2.9	1.5	0.9	2.6	2.3	2.5	N/A
% Deliveries							
Low Birth Weight	10.5	6.0	7.6	7.5	9.0	8.6	7.8
Very Low Birth Weight	2.3	N/A	1.3	1.3	1.8	1.6	1.4
% Preterm Births							
< 32 weeks of gestation	3.1	1.4	1.6	2.0	2.4	2.3	1.8
32-33 weeks of gestation	2.0	1.9	1.3	1.5	1.9	1.6	1.4
34-36 weeks of gestation	9.3	7.4	8.3	8.3	9.3	8.6	8.1
< 37 weeks of gestation	14.4	9.7	11.2	11.8	13.6	12.6	11.4
% Births to							
Unmarried Women 18-54 Years Old	49.1	14.0	32.4	36.6	40.9	41.3	N/A
Women 40-54 Years Old	2.7	4.9	2.8	2.3	2.4	2.1	N/A
Women <18 Years Old	3.7	1.0	1.7	2.0	2.9	3.0	N/A
Teenage Pregnancies per 1,000 Births							
Births to Females 15-19 Years Old	39.3	9.9	21.3	15.9	32.9	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 and Summit counties. Births to women aged 40 to 54 years are also higher in all five counties than the Ohio average.

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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 Hillcrest 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	Beachwood	44122	27,001	25.9%	21.8%	11.8%	11.3%	10.4%	32.0%	25.0%	3.6%	21.0%
Cuyahoga	Bedford	44146	24,664	32.3%	25.0%	16.9%	17.1%	19.4%	38.4%	26.3%	5.2%	27.9%
Cuyahoga	Chagrin Falls	44022	13,403	27.7%	15.7%	10.5%	12.0%	11.2%	24.5%	22.2%	3.8%	21.1%
Cuyahoga	Cleveland	44118	29,018	29.7%	22.1%	11.1%	11.2%	12.2%	27.7%	19.7%	4.7%	28.4%
Cuyahoga	Cleveland	44120	28,358	32.7%	21.4%	12.0%	11.8%	15.0%	31.6%	19.8%	6.3%	32.4%
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	44128	21,247	34.1%	22.5%	16.0%	15.2%	19.7%	41.2%	22.3%	5.5%	31.6%
Cuyahoga	Cleveland	44143	19,222	28.0%	21.3%	13.1%	9.3%	12.0%	30.2%	22.9%	3.1%	21.7%
Cuyahoga	Gates Mills	44040	2,615	24.7%	18.7%	12.4%	8.8%	10.8%	28.5%	22.6%	2.8%	17.6%
Cuyahoga	Maple Heights	44137	17,350	31.5%	29.8%	16.8%	13.4%	14.6%	38.6%	27.6%	5.0%	31.3%
Cuyahoga	Solon	44139	18,200	26.2%	16.9%	9.9%	8.0%	9.1%	24.4%	19.3%	2.6%	19.3%
Geauga	Chagrin Falls	44023	14,287	25.6%	13.4%	9.2%	10.4%	10.4%	22.6%	19.9%	2.7%	19.2%
Geauga	Chardon	44024	19,198	30.3%	19.7%	12.4%	10.9%	12.5%	26.0%	22.6%	3.9%	22.5%
Geauga	Chesterland	44026	8,292	26.7%	15.1%	10.2%	13.9%	12.0%	23.5%	23.9%	3.6%	20.6%
Geauga	Newbury	44065	3,711	29.4%	22.1%	11.3%	10.5%	12.3%	29.7%	25.0%	4.3%	22.9%
Geauga	Novelty	44072	2,785	26.2%	14.1%	10.4%	14.1%	12.4%	24.1%	24.6%	3.7%	19.3%
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	Painesville	44077	45,791	30.8%	25.5%	12.6%	10.9%	14.7%	29.0%	24.9%	4.0%	26.1%
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%
Portage	Aurora	44202	15,050	26.8%	18.2%	10.0%	10.1%	11.1%	25.5%	21.1%	3.5%	20.9%
Summit	Macedonia	44056	10,140	27.5%	18.9%	8.7%	6.9%	10.5%	24.7%	20.7%	2.6%	21.5%
Summit	Northfield	44067	16,904	28.4%	17.9%	10.8%	11.0%	11.1%	23.2%	19.6%	3.8%	22.0%
Summit	Twinsburg	44087	16,668	27.3%	19.4%	11.4%	7.8%	10.2%	27.4%	20.2%	3.0%	19.8%
Community Average			527,248	29.7%	22.5%	12.7%	11.5%	13.2%	30.2%	23.1%	4.3%	24.7%
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 Hillcrest community compared unfavorably to the Ohio average for several conditions. Within the Hillcrest community, 10 ZIP codes had higher rates of asthma, 10 ZIP codes had higher rates of high cholesterol, and 9 ZIP codes had higher rates of high blood pressure.

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 Hillcrest 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	Chagrin Falls	44022	8	37	30	254	0	332	76
Geauga	Chagrin Falls	44023	14	42	50	217	28	331	25
Geauga	Chardon	44024	27	24	65	393	44	482	11
Geauga	Chesterland	44026	33	56	77	396	73	572	85
Cuyahoga	Gates Mills	44040	0	0	40	355	0	304	0
Summit	Macedonia	44056	11	42	42	530	61	591	49
Lake	Mentor	44060	65	30	96	410	47	751	47
Geauga	Newbury	44065	91	28	91	787	0	1118	0
Summit	Northfield	44067	72	42	24	431	41	414	41
Geauga	Novelty	44072	0	0	28	251	36	323	22
Lake	Painesville	44077	122	25	118	376	28	668	41
Summit	Twinsburg	44087	55	21	67	312	80	481	58
Lake	Wickliffe	44092	112	28	127	635	98	821	46
Lake	Willoughby	44094	37	28	74	365	34	676	45
Lake	Eastlake	44095	72	6	133	540	45	844	54
Cuyahoga	Cleveland	44118	126	39	96	602	125	698	66
Cuyahoga	Cleveland	44120	193	36	214	1264	193	1077	79
Cuyahoga	Cleveland	44121	92	31	132	711	122	654	78
Cuyahoga	Beachwood	44122	97	48	127	621	76	854	50
Cuyahoga	Cleveland	44124	73	42	118	544	88	719	46
Cuyahoga	Cleveland	44128	263	38	295	1076	232	1451	105
Cuyahoga	Maple Heights	44137	214	50	214	1339	98	1152	115
Cuyahoga	Solon	44139	16	28	53	224	43	274	58
Cuyahoga	Cleveland	44143	75	48	75	958	154	895	109
Cuyahoga	Bedford	44146	100	17	238	890	97	896	88
Portage	Aurora	44202	88	0	94	289	51	604	67
Hillcrest Totals			91	32	117	578	79	726	63
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	Chagrin Falls	44022	64	172	115	0	0	33	0
Geauga	Chagrin Falls	44023	96	148	93	19	0	29	7
Geauga	Chardon	44024	100	217	131	7	15	20	5
Geauga	Chesterland	44026	186	200	316	0	0	0	11
Cuyahoga	Gates Mills	44040	268	99	99	0	0	0	0
Summit	Macedonia	44056	72	207	59	15	15	35	11
Lake	Mentor	44060	99	161	110	12	24	36	4
Geauga	Newbury	44065	51	404	406	0	0	0	0
Summit	Northfield	44067	131	194	81	25	17	21	0
Geauga	Novelty	44072	188	280	211	0	36	0	0
Lake	Painesville	44077	84	143	157	24	24	19	9
Summit	Twinsburg	44087	72	226	157	27	0	59	0
Lake	Wickliffe	44092	176	235	343	11	22	93	15
Lake	Willoughby	44094	137	208	114	10	15	33	13
Lake	Eastlake	44095	109	197	165	11	11	47	11
Cuyahoga	Cleveland	44118	157	210	189	17	34	40	10
Cuyahoga	Cleveland	44120	86	287	222	28	51	41	7
Cuyahoga	Cleveland	44121	108	212	251	19	38	54	8
Cuyahoga	Beachwood	44122	88	169	219	15	20	28	15
Cuyahoga	Cleveland	44124	150	234	217	0	46	31	3
Cuyahoga	Cleveland	44128	207	319	267	27	61	82	23
Cuyahoga	Maple Heights	44137	98	313	228	45	45	82	12
Cuyahoga	Solon	44139	80	155	156	0	0	39	5
Cuyahoga	Cleveland	44143	51	273	206	7	28	36	0
Cuyahoga	Bedford	44146	134	330	237	24	30	40	8
Portage	Aurora	44202	75	166	133	0	0	0	6
Hillcrest Totals			112	213	179	15	24	39	8
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 Hillcrest community exceeded Ohio averages for congestive heart failure, hypertension, low birth weight, dehydration, bacterial pneumonia, urinary tract infection, angina without procedure, uncontrolled diabetes, and adult asthma. Within the community, Cleveland ZIP code 44128 had significantly higher PQI rates for every condition compared to the Ohio averages.

Exhibit 29 provides the ratio of PQI rates in the Hillcrest 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 Hillcrest and Ohio, 2014

Indicator	Hillcrest Hospital	Ohio	Ratio: Hillcrest/Ohio
Uncontrolled Diabetes	23.7	13.2	1.8
Congestive Heart Failure	726.2	423.8	1.7
Hypertension	78.5	52.6	1.5
Urinary Tract Infection	178.8	131.5	1.4
Angina without Procedure	14.9	11.7	1.3
Bacterial Pneumonia	213.3	196.2	1.1
Adult Asthma	39.0	36.0	1.1
Dehydration	112.2	107.2	1.0
Low Birth Weight	62.6	61.4	1.0
Diabetes Long-Term Complications	117.1	118.8	1.0
Diabetes Short-Term Complications	91.1	94.7	1.0
Chronic Obstructive Pulmonary Disease	577.9	608.8	0.9
Lower-Extremity Amputation Among Patients with Diabetes	8.0	8.9	0.9
Perforated Appendix	31.8	36.9	0.9

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

In the Hillcrest community, ACSC rates for uncontrolled diabetes, congestive heart failure, and hypertension were more than fifty percent higher than the Ohio averages.

Community Need Index™ and Food Deserts

Dignity Health Community Need Index

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

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

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

The *Community Need Index*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 Hillcrest community.

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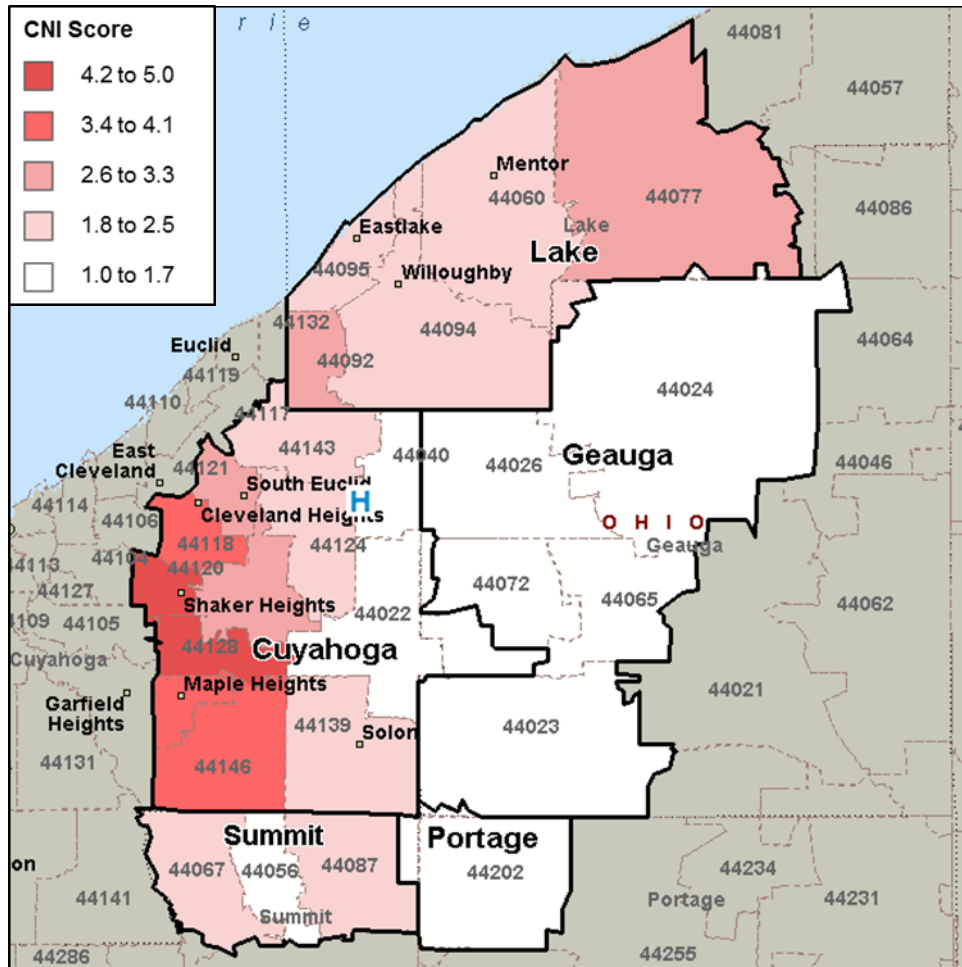
Exhibit 30: Community Need Index™ Score by ZIP Code, 2015

County	City	ZIP Code	CNI Score
Cuyahoga	Cleveland	44128	4.4
Cuyahoga	Cleveland	44120	4.2
Cuyahoga	Maple Heights	44137	4.0
Cuyahoga	Bedford	44146	3.6
Cuyahoga	Cleveland	44118	3.4
Lake	Painesville	44077	3.2
Cuyahoga	Cleveland	44121	3.2
Cuyahoga	Beachwood	44122	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
Summit	Twinsburg	44087	2.0
Lake	Mentor	44060	1.8
Summit	Northfield	44067	1.8
Cuyahoga	Solon	44139	1.8
Summit	Macedonia	44056	1.6
Geauga	Newbury	44065	1.6
Portage	Aurora	44202	1.6
Cuyahoga	Chagrin Falls	44022	1.4
Geauga	Chagrin Falls	44023	1.4
Cuyahoga	Gates Mills	44040	1.4
Geauga	Novelty	44072	1.4
Geauga	Chardon	44024	1.2
Geauga	Chesterland	44026	1.2
Hillcrest Community Average			2.6
Cuyahoga County Average			3.4
Geauga County Average			1.6
Lake County Average			2.4
Portage County Average			2.8
Summit County Average			2.9

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.

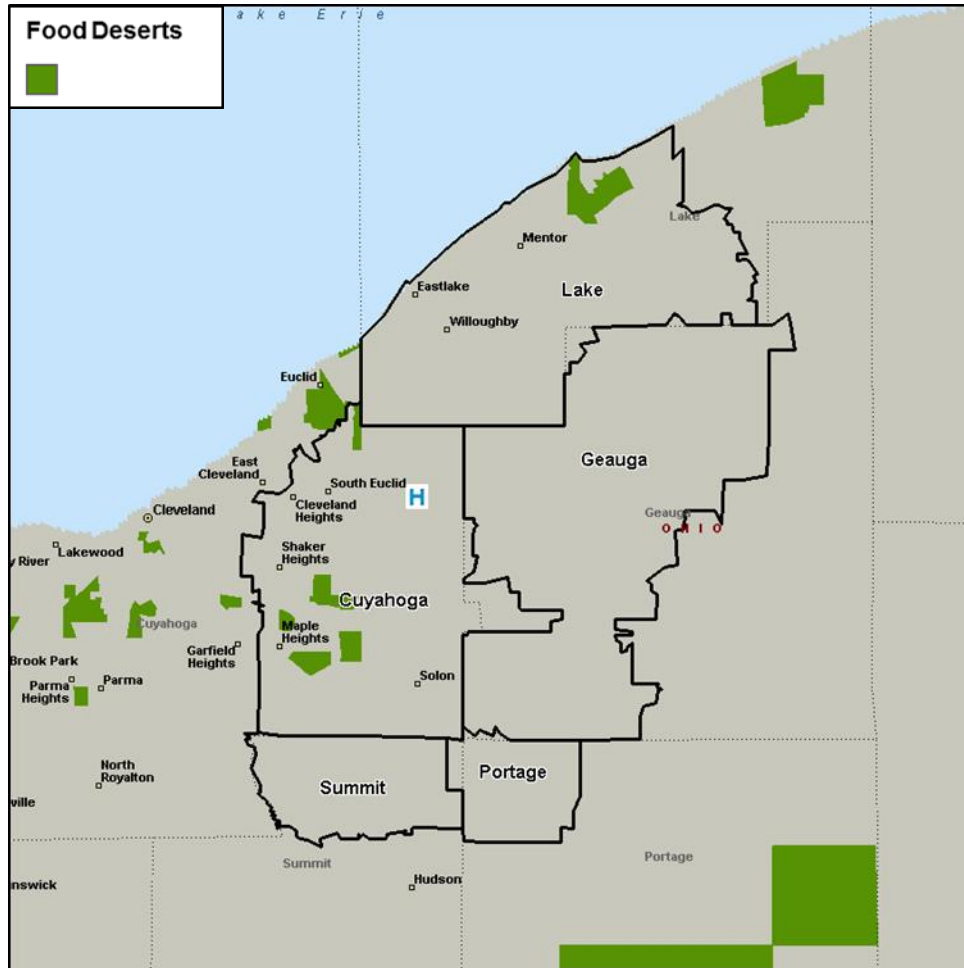
The CNI indicates that two Cleveland ZIP codes of the 26 ZIP codes in the Hillcrest community scored in the “highest need category,” 44128 and 44120. Three other ZIP codes in the community scored in the “high need category,” 44137, 44146, and 44118.

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 Hillcrest 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.”

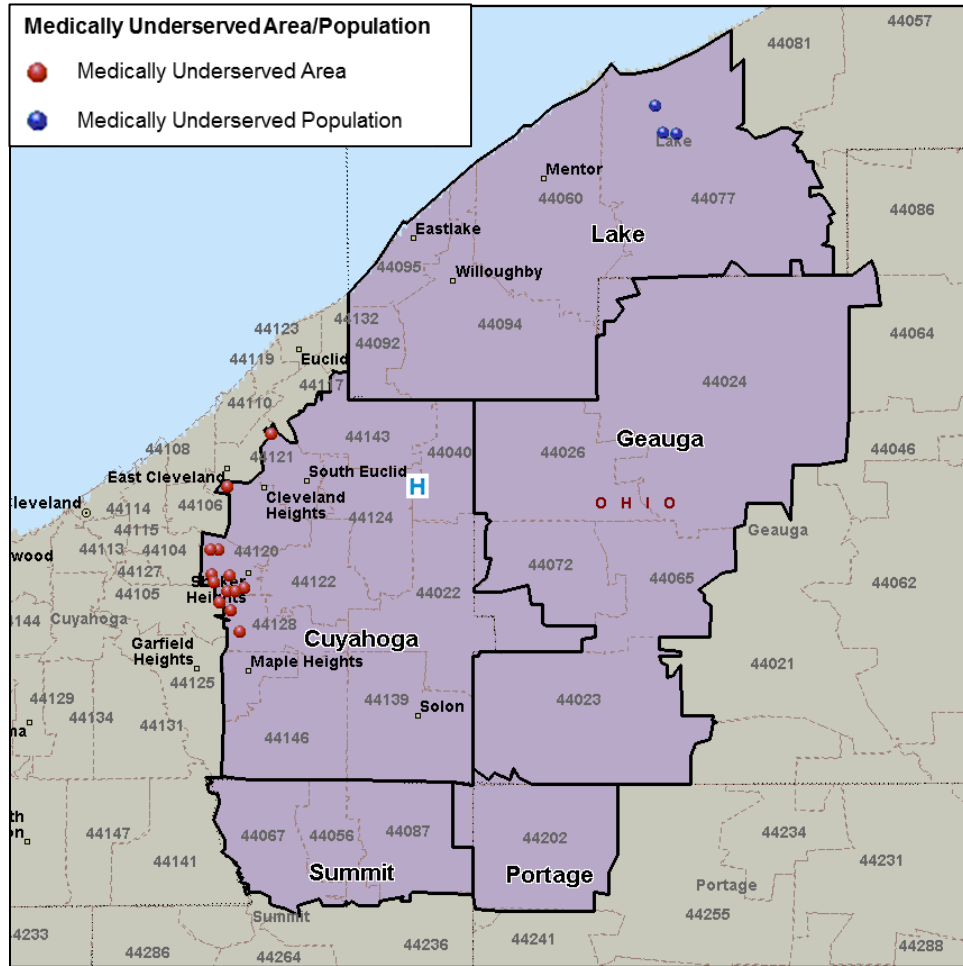
Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if “unusual 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 13 census tracts within the hospital’s community that have been designated as areas where Medically Underserved Areas are present and three census tracts where Medically Underserved Populations 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

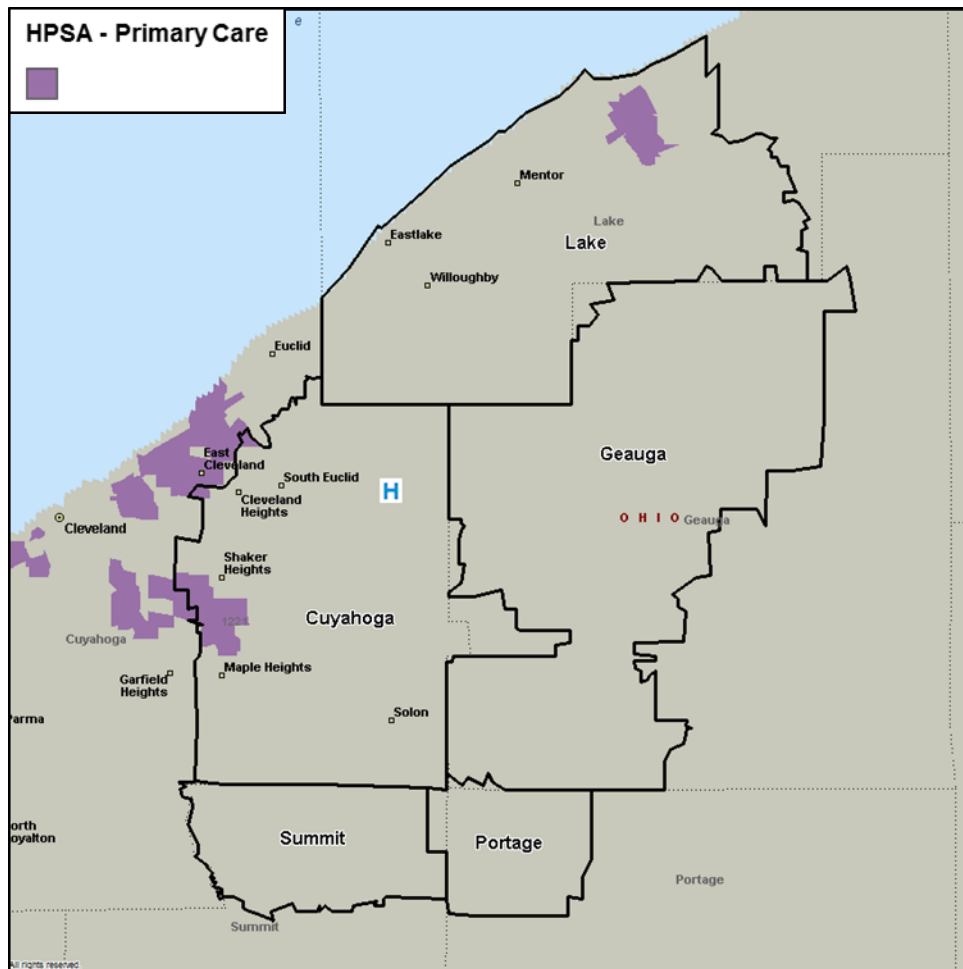
A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present. In addition to areas and populations that can be designated as HPSAs, a health care facility can 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>

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

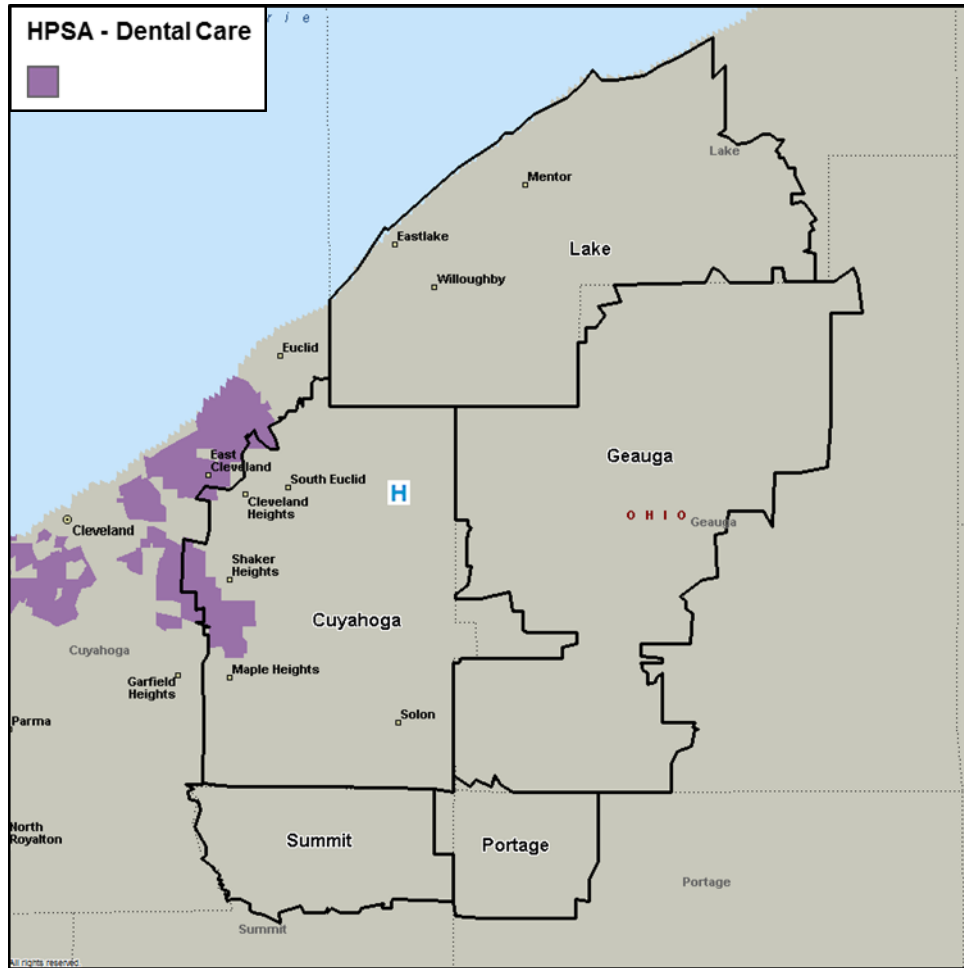
Exhibit 34A: Primary Care Health Professional Shortage Areas



Source: Health Resources and Services Administration, 2015.

Within the Hillcrest community, primary care HPSA designated census tracts are located in Cuyahoga County and Lake 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 Cuyahoga County.

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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**.

APPENDIX B – SECONDARY DATA ASSESSMENT

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.

APPENDIX B – SECONDARY DATA ASSESSMENT

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/>

APPENDIX B – SECONDARY DATA ASSESSMENT

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
Community Partnership	Community partnership on aging	Aging 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
Gathering Place	Cancer support organization	General population
<i>Greater Cleveland NAMI</i>	Mental health agency	Mentally ill
Hillcrest YMCA	Youth development/health living/recreational facility	Youth, general population
Legacy Health	Assisted living facility	Aging population, disabled
Lyndhurst City Government	Mayor	General population
Mayfield Chamber	City government	General population
Mayfield Heights City Government	Mayor	General population
Montefiore	Non-profit nursing home	Aging population, disabled
<i>Northeast Ohio Black Health Coalition</i>	Non-profit addressing the health needs of the black community	Minority populations
Ohio Legislature	State government	General population
Tri-C College	Community college	General population, students

*Two individuals from the Hillcrest YMCA and two individuals from Greater Cleveland NAMI participated in the interview process.

APPENDIX D – ACTIONS TAKEN SINCE THE PREVIOUS CHNA

Hillcrest 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 action items in our 2013 CHNA Implementation Strategy are described below with representative impacts.

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

Action: Hillcrest Hospital, renowned in cardiac medicine, continues to provide a certified Stroke Center and operates a Congestive Heart Failure Clinic. The hospital provides a wide range of clinical and wellness services to treat chronic heart-related diseases, including stroke, congestive heart failure, COPD, and hypertension, all of which are often more prevalent in the elderly populations.

Highlighted Impact:

- The Cleveland Clinic health system reduced heart failure 30 day readmission rates from 2013 through 2015.
- Hillcrest Hospital added a new catheterization laboratory in 2014 along with a new cardio-pulmonary wellness rehabilitation facility.
- A dedicated neurological unit for Hillcrest Hospital patients with acute neurological changes and stroke symptoms is available for stroke patients.

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

Action: Hillcrest Hospital pulmonologists and other physicians continue to provide acute inpatient and outpatient care to patients with Adult Asthma.

Highlighted Impact:

- The Cleveland Clinic health system reduced pneumonia 30 day readmission rates from 2013 through 2015.
- All hospitalized Hillcrest patients are screened for smoking status and smokers receive information on cessation and other resources.

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

Action: Hillcrest Hospital's Diabetes Clinic, located across the street from the hospital, continues to provide outpatient care and community wellness education programs to patients and community members on diabetes and disease management. The hospital also treats patients suffering from diabetes and any diabetic complications on an inpatient and outpatient basis.

Highlighted Impact:

APPENDIX D – ACTIONS TAKEN SINCE THE PREVIOUS CHNA

- Patients are seen in the outpatient Chronic Disease Center by nurses and dieticians to assist with compliance with diet and medications.
- Diabetes education programs were provided at various community locations reaching 267 community members.

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

Action: Hillcrest Hospital continues to offer a wide range of clinical, wellness and education services relating to pediatric and women's health. The hospital's Neonatal Intensive Care Unit treats babies who are born with special needs including breathing problems and problems associated with very low and extremely low birth weight. The hospital also has a pediatric inpatient and subspecialty clinic available to treat the health needs of children. In addition, the hospital offers birthing, prenatal health and parenting classes for expectant parents.

Highlighted Impact:

- Hillcrest Hospital offers Safe Sleep education to decrease incidence of infant mortality. Support groups are offered post discharge to provide support and resources.
- Hillcrest Hospital has been awarded all five stars in the Ohio First Steps for Healthy Babies program for 2015. This initiative is a voluntary breastfeeding designation program developed by Ohio Hospitals Association and the Ohio Department of Health to recognize maternity centers in Ohio for taking steps to promote, protect and support breastfeeding in their organization. First Steps is part of OHA's initiative to reduce infant mortality in Ohio.

5. Identified Need: Wellness

Action: Hillcrest Hospital offers outreach programs and community health talks focused on educating the community on healthy behavior choices including exercise, healthcare navigation, stress management, nutrition, and smoking cessation to promote health and wellness, increase access to healthcare resources, and reduce disease burden. Some of these programs are held in nursing homes and/or focused on seniors or geriatric care.

Highlighted Impact:

- Hillcrest Hospital offers Healthy Community Initiatives, a community collaborative effort to increase healthy behaviors.
- Classes in nutrition, physical activity, life style management and tobacco cessation were provided to 1,734 residents in Lyndhurst, Mayfield Heights, Mayfield Village, Highland Heights, Gates Mills and Munson Township.

6. Identified Need: Access to Health Services

Action: Hillcrest Hospital continues to provide medically necessary services to all patients regardless of race, color, creed, gender, country of national origin or ability to pay. Hillcrest Hospital has a financial assistance policy that is among the most generous in the region that 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.

Hillcrest 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.

Hillcrest Hospital implemented 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.

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: Clinical trials and other clinical research activities continue to occur throughout the Cleveland Clinic health system including at the community hospitals. For example, patients at Hillcrest Hospital are involved in heart failure and ambulatory studies.

Highlighted Impact:

- Hillcrest Hospital’s comprehensive cancer center conducted more than 25 clinical trials involving several different cancer disease sites.

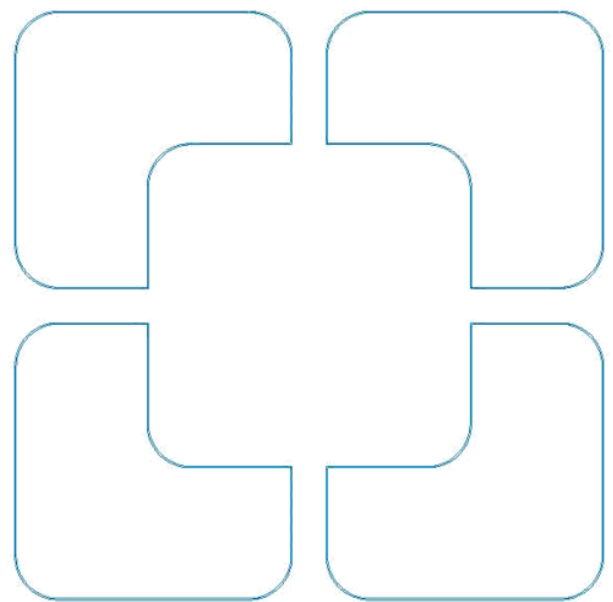
8. Identified Need: Education

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: Hillcrest Hospital continues to provide physician, nurse and allied health residency and other education opportunities and is affiliated with nursing and allied health schools. The hospital also provides community education programs on a variety of topics including wellness, parenting, and nutrition.

Highlighted Impact:

- Hillcrest Hospital serves as clinical site for nursing students along with 21 other Allied Health professions.



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