

Beachwood

Community Health Needs Assessment 2019

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EXECUTIVE SUMMARY

Introduction

This Community Health Needs Assessment (CHNA) was conducted by Cleveland Clinic Rehabilitation Hospital – Beachwood (“Beachwood” or “the hospital”) to identify significant community health needs and to inform development of an Implementation Strategy to address current needs.

Beachwood is a 60 bed rehabilitation hospital, opened in October 2017. The facility is located in Beachwood, Ohio, and is one of three rehabilitation hospitals operated as a joint venture between Cleveland Clinic health system and Select Medical in northeast Ohio. Additional information on the hospital and its services is available at:

<https://my.clevelandclinic.org/locations/rehabilitation-hospital>.

The hospital is part of the Cleveland Clinic health system, which includes an academic medical center near downtown Cleveland, eleven regional hospitals in northeast Ohio, a children’s hospital, a children’s rehabilitation hospital, five southeast Florida hospitals, and a number of other facilities and services across Ohio, Florida, and Nevada. Additional information about Cleveland Clinic is available at: <https://my.clevelandclinic.org/>.

Select Medical is one of the largest providers of post-acute care, operating 100 critical illness recovery hospitals in 28 states, 28 rehabilitation hospitals in 12 states and 1,695 outpatient rehabilitation clinics in 37 states and the District of Columbia. Additionally, Select Medical's joint venture subsidiary Concentra operates 526 occupational health centers in 41 states. Concentra also provides contract services at employer worksites and Department of Veterans Affairs community-based outpatient clinics. At June 30, 2019, Select Medical had operations in 47 states and the District of Columbia. Additional information about Select Medical is available at: <https://www.selectmedical.com/>.

Each Cleveland Clinic hospital supports a tripartite mission of patient care, research, and education. Research is conducted at and in collaboration with all Cleveland Clinic hospitals. Through research, Cleveland Clinic has advanced knowledge and improved community health for all its communities, from local to national, and across the world. This allows patients to access the latest techniques and to enroll in research trials no matter where they access care in the health system. Through education, Cleveland Clinic helps to train health professionals who are needed and who provide access to health care across Ohio and the United States.

Cleveland Clinic facilities are dedicated to the communities they serve. Each facility conducts a CHNA in order to understand and plan for the current and future health needs of residents and patients in the communities it serves. The CHNAs inform the development of strategies designed to improve community health, including initiatives designed to address social determinants of health.

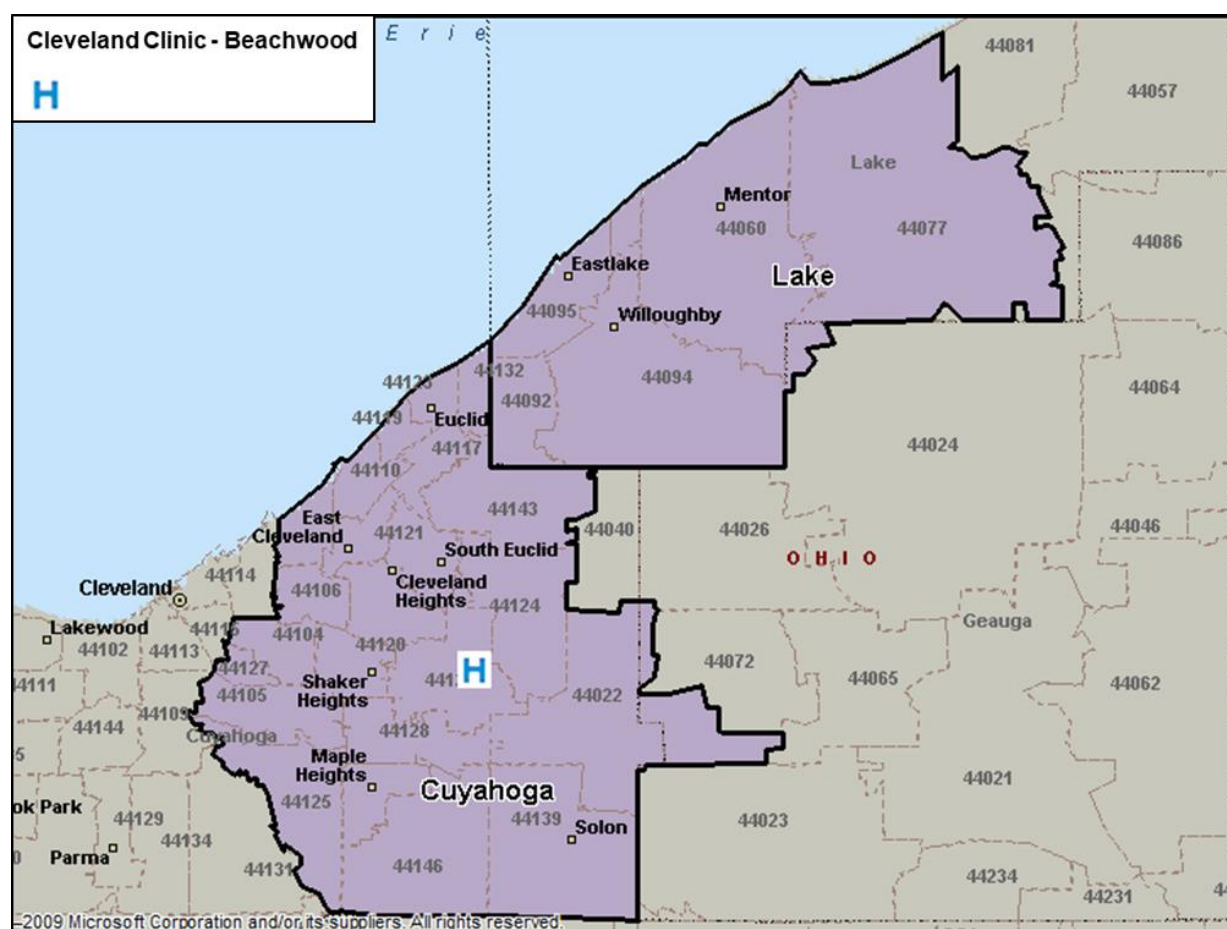
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These assessments are conducted using widely accepted methodologies to identify the significant health needs of a specific community. The assessments also are conducted to comply with federal and state laws and regulations.

Community Definition

For purposes of this report, Beachwood's community is defined as 28 ZIP codes in Cuyahoga and Lake counties, Ohio, that accounted for over 73 percent of the hospital's recent inpatient volumes. The community was defined by considering the geographic origins of the hospital's discharges in calendar year 2017 and the hospital's principal functions as a rehabilitation hospital. The total population of Beachwood's community in 2017 was approximately 763,000.

The following map portrays the community served by Beachwood.



Significant Community Health Needs

Beachwood's significant community health needs as determined by analyses of quantitative and qualitative data are:

- Access to Affordable Health Care

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- Chronic Disease Prevention and Management
- Socioeconomic Concerns

Significant Community Health Needs: Discussion

Access to Affordable Health Care

Access to affordable health care is challenging for some residents, particularly to primary care, mental health, dental care, addiction treatment services, and pain management services. Access barriers include cost, poverty, inadequate transportation, a lack of awareness regarding available services, and an undersupply of providers (mental health professionals, dentists, primary care physicians). The supply of providers in Lake County is below Ohio averages for primary care physicians and mental health providers (Sources: Exhibit 25, key stakeholder interviews).

Ten community ZIP codes (home to 229,000 persons) have been identified as comparatively high need by the Dignity Health Community Need IndexTM. In these ZIP codes, 78 percent of residents are Black, and the poverty rate is 36 percent (nearly twice the Cuyahoga County average). Admissions for ambulatory care sensitive conditions in these ZIP codes (and across the community) have been comparatively high (Sources: Exhibits 23, 31).

Federally-designated Medically Underserved Areas (MUAs), Medically Underserved Populations (MUPs), Primary Care Health Professional Shortage Areas (HPSAs), and Dental Care HPSAs are present. The Beachwood community and Ohio as a whole need more health care professionals to meet current and future access needs.¹ (Sources: Exhibits 33, 34, 35, other assessments, key stakeholder interviews).

Chronic Disease Prevention and Management

Chronic diseases, including addiction and mental health, heart disease, hypertension, obesity, diabetes, COPD, and others are prevalent in the community served by the hospital.

Drug abuse, particularly the abuse of opioids, is a primary concern of individuals interviewed for this CHNA. Perceived over-prescribing of prescription drugs, poverty, and mental health problems were cited as contributing factors. Deaths due to “accidental poisoning by and exposure to drugs and other biological substances” have been increasing across Ohio, and in Cuyahoga and Lake counties have been above average (Sources: Exhibit 27, other assessments, key stakeholder interviews).

Cuyahoga and Lake counties rank poorly for “percent of driving deaths with alcohol involvement,” compared to Ohio, national, and peer-county averages.

Ohio’s State Health Assessment and local health department assessments identify addressing alcohol abuse as a priority. (Sources: Exhibit 26, other assessments).

¹ 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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Mental health also was identified by interviewees as a significant concern. Depression, suicide, hopelessness, and isolation (particularly among elderly residents and those exposed to traumas early in life) are perceived to be increasing in severity. Rates of depression have been highest in lower-income ZIP codes. Access to mental health care is challenging due to cost, insurance benefit limits, and an undersupply of psychiatrists.

The Ohio SHIP and local health department assessment for Cuyahoga County both identified mental health as a priority issue. These assessments cite the need for additional services, early identification of mental health risks, and greater awareness of existing programs. (Sources: Exhibits 25, 26, 27, key stakeholder interviews, other assessments).

The CDC, Cleveland Clinic, and other organizations have identified many chronic diseases as contributors to stroke, a primary cause for the need of rehabilitation services. These conditions include high cholesterol, high blood pressure, diabetes, and obesity (Source: other assessments).

The community benchmarks poorly for the incidence of diabetes, high blood pressure, and high cholesterol, and for hospital admissions for diabetes and heart failure. Higher diabetes and heart disease rates are observed in lower-income communities. Addressing heart (or cardiovascular) disease was identified as a priority by the Ohio SHIP and the Cuyahoga County Community Health Assessment. (Sources: Exhibits 23, 30, 31, other assessments, key stakeholder interviews).

Key stakeholders also identified obesity as a persistent and worsening problem, driven by physical inactivity and poor nutrition. Poor nutrition results from the higher cost of fresh and healthy food, the presence of food deserts, and a lack of time and knowledge about how to prepare healthy meals. Physical inactivity is worsened by a lack of safe places to exercise, time, and education regarding the importance of remaining active.

In Cuyahoga and Lake counties, the percent of adults obese (Body Mass Index greater than 30) has been above the national average. The Ohio SHIP and local health department assessments consistently identify obesity and diabetes (and reducing physical inactivity and enhancing nutrition) as priorities. (Sources: Exhibit 25, other assessments).

Key stakeholders emphasized the importance of changing unhealthy behaviors. Exercise, nutrition, and tobacco cessation programs are needed. Health education and literacy programs also are needed.

Smoking rates are comparatively high. The Ohio SHIP emphasizes the need for Ohioans to consume healthy food, reduce physical inactivity, reduce adult smoking, and reduce youth all-tobacco use. According to the Cuyahoga County Community Health Assessment, health behaviors that need attention include: flu vaccination rates, tobacco use, and physical inactivity. (Sources: Exhibit 26, other assessments, key stakeholder interviews).

Beachwood's 65+ population is projected to grow much faster than other age groups. Providing an effective continuum of care for seniors will be challenging. Elderly residents are at greater

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risk for falls, food insecurity, transportation issues, and unsafe or inadequate housing. Social isolation contributes to poor physical and mental health conditions. Falls contribute to Traumatic Brain Injuries and to the need for rehabilitation services (Sources: Exhibit 8, key stakeholder interviews, other assessments).

Socioeconomic Concerns

Key stakeholders also identified poverty and other social determinants of health as significant concerns. Poverty has significant implications for health, including the ability for households to access health services, afford basic needs, and benefit from prevention initiatives. Problems with housing, educational achievement, and access to workforce training opportunities also contribute to poor health.

Adverse Childhood Experiences (ACEs) increasingly are recognized as problematic in Ohio and the nation. ACEs refer to all types of abuse, neglect, and other traumas experienced by children. According to the CDC, ACEs have been linked to risky healthy behaviors, chronic health conditions, low life potential, and premature death.² America's Health Rankings indicates that Ohio ranks 43rd nationally for ACEs (a composite indicator that includes: socioeconomic hardship, divorce/parental separation, lived with someone who had an alcohol or drug problem, victim or witness of neighborhood violence, lived with someone who was mentally ill or suicidal, domestic violence witness, parent served time in jail, treated or judged unfairly due to race/ethnicity, and death of a parent).³

Fifty-three (53) percent of rented households have been designated as “rent burdened,” a level above the Ohio average (47 percent). In five lower-income ZIP codes, over 60 percent of these households devote more than 30 percent of household income to rent. Cuyahoga County also benchmarks poorly for “percent of households experiencing severe housing problems” (Source: Exhibits 19, 25).

Cuyahoga County has had a higher poverty rate than Ohio and the U.S. Across both counties served by Beachwood, poverty rates for Black and Hispanic (or Latino) populations have been well above rates for Whites. Substantial variation in poverty rates is present across the community. (Sources: Exhibits 13, 14, 23).

Social determinants of health are particularly problematic in Cuyahoga County, including poverty, unemployment, affordable housing, violent crime, and high-school graduation rates. Low income areas are present throughout Lake County, and unemployment is an issue in the county as well (Sources: Exhibits 13, 14, 15, 16, 18, 19, 25, key stakeholder interviews, other assessments).

The Northeast Ohio Coalition for the Homeless has estimated that “there were about 23,000 people experiencing homelessness in 2018 in Cuyahoga County.”⁴ In recent years, several

² <https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/aboutace.html>

³ <https://www.america'shealthrankings.org/explore/health-of-women-and-children/measure/ACEs/state/OH>

⁴ <https://www.neoch.org/2019-overview-of-the-numbers>

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Cleveland Clinic hospitals have experienced increases in emergency room encounters by homeless patients.

The Ohio SHIP establishes social determinants of health as a “cross-cutting factor” and emphasizes the need to increase third grade reading proficiency, reduce school absenteeism, address burdens associated with high cost housing, and reduce secondhand smoke exposure for children. The Cuyahoga County CHIP emphasizes how poverty and income inequality contribute to poor health. (Sources: other assessments).

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Definition of Community Assessed

This section identifies the community that was assessed by Beachwood. The community was defined by considering the geographic origins of the hospital's discharges in calendar year 2017. The definition also considered the hospital's principal functions as a rehabilitation hospital.

On that basis, Beachwood's community is defined as 28 ZIP codes in Cuyahoga and Lake counties, Ohio. These ZIP codes accounted for over 73 percent of the hospital's recent inpatient volumes (**Exhibit 1**).

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Exhibit 1: Beachwood Inpatient Discharges by ZIP Code, 2017

ZIP Code	County	City/Town	Discharges	Percent Discharges
44128	Cuyahoga	Cleveland	54	5.7%
44124	Cuyahoga	Cleveland	52	5.5%
44122	Cuyahoga	Beachwood	43	4.5%
44125	Cuyahoga	Cleveland	39	4.1%
44146	Cuyahoga	Bedford	34	3.6%
44121	Cuyahoga	Cleveland	33	3.5%
44143	Cuyahoga	Cleveland	33	3.5%
44137	Cuyahoga	Maple Heights	32	3.4%
44105	Cuyahoga	Cleveland	31	3.3%
44060	Lake	Mentor	30	3.2%
44120	Cuyahoga	Cleveland	30	3.2%
44132	Cuyahoga	Euclid	24	2.5%
44094	Lake	Willoughby	24	2.5%
44117	Cuyahoga	Euclid	23	2.4%
44123	Cuyahoga	Euclid	23	2.4%
44095	Lake	Eastlake	22	2.3%
44022	Cuyahoga	Chagrin Falls	20	2.1%
44118	Cuyahoga	Cleveland	19	2.0%
44110	Cuyahoga	Cleveland	18	1.9%
44108	Cuyahoga	Cleveland	17	1.8%
44104	Cuyahoga	Cleveland	16	1.7%
44139	Cuyahoga	Solon	16	1.7%
44092	Lake	Wickliffe	15	1.6%
44077	Lake	Painesville	14	1.5%
44112	Cuyahoga	Cleveland	13	1.4%
44106	Cuyahoga	Cleveland	11	1.2%
44119	Cuyahoga	Cleveland	10	1.1%
44127	Cuyahoga	Cleveland	1	0.1%
Community ZIP Codes			697	73.4%
All Other ZIP Codes			253	26.6%
All ZIP Codes			950	100.0%

Source: Analysis of Cleveland Clinic Discharge Data, 2018.

The community includes portions of Cuyahoga and Lake counties. The total population of this community in 2017 was approximately 763,000 persons (**Exhibit 2**).

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Exhibit 2: Community Population, 2017

ZIP Code	County	City/Town	Total Population 2017	Percent of Total Population 2017
44060	Lake	Mentor	58,848	7.7%
44077	Lake	Painesville	58,455	7.7%
44118	Cuyahoga	Cleveland	39,364	5.2%
44124	Cuyahoga	Cleveland	38,246	5.0%
44105	Cuyahoga	Cleveland	36,906	4.8%
44094	Lake	Willoughby	36,188	4.7%
44120	Cuyahoga	Cleveland	35,517	4.7%
44122	Cuyahoga	Beachwood	34,331	4.5%
44095	Lake	Eastlake	32,289	4.2%
44121	Cuyahoga	Cleveland	32,090	4.2%
44146	Cuyahoga	Bedford	29,582	3.9%
44128	Cuyahoga	Cleveland	28,023	3.7%
44125	Cuyahoga	Cleveland	27,179	3.6%
44106	Cuyahoga	Cleveland	26,981	3.5%
44139	Cuyahoga	Solon	24,669	3.2%
44143	Cuyahoga	Cleveland	24,304	3.2%
44108	Cuyahoga	Cleveland	23,491	3.1%
44137	Cuyahoga	Maple Heights	22,349	2.9%
44104	Cuyahoga	Cleveland	22,061	2.9%
44112	Cuyahoga	Cleveland	21,671	2.8%
44110	Cuyahoga	Cleveland	18,683	2.4%
44123	Cuyahoga	Euclid	16,968	2.2%
44022	Cuyahoga	Chagrin Falls	16,604	2.2%
44092	Lake	Wickliffe	16,587	2.2%
44132	Cuyahoga	Euclid	14,014	1.8%
44119	Cuyahoga	Cleveland	12,063	1.6%
44117	Cuyahoga	Euclid	10,099	1.3%
44127	Cuyahoga	Cleveland	5,109	0.7%
Community Total			762,671	100.0%

Source: Truven Market Expert, 2018.

The hospital is located in Beachwood, Ohio (ZIP code 44122).

The map in **Exhibit 3** portrays the ZIP codes that comprise the Beachwood community.

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In 2017, over 90 percent of the population in four ZIP codes was Black. These ZIP codes, located in Cuyahoga County, also are associated with comparatively high poverty rates and comparatively poor health status. In five ZIP codes, the percent of the population Black was under ten percent.

Economic Indicators

On average, people living in low-income households are less healthy than those living in more prosperous areas. According to the U.S. Census, in the 2012-2016 period, approximately 15.1 percent of people in the U.S. were living in poverty. At 18.5 percent, Cuyahoga County's poverty rate was above average. The poverty rate in Lake County has been below the national average.

Across both counties in the community, poverty rates for Black and for Hispanic (or Latino) residents have been higher than rates for Whites. For example, in Cuyahoga County the rate for Black residents was 33.3 percent. For Whites, it was 11.1 percent.

A number of low-income census tracts can be found in Beachwood's community. Most of these same areas are where over 50 percent of households are "rent burdened."

After several years of improvement, between 2015 and 2017, unemployment rates in Cuyahoga and Lake counties increased. In 2017, rates in both counties were above national averages.

Notably, crime rates in Cuyahoga County have been above Ohio averages. Crime rates in Lake County have been below Ohio averages for all offenses except aggravated assault.

Ohio was among the U.S. states that expanded Medicaid eligibility pursuant to the Patient Protection and Affordable Care Act (ACA, 2010). On average, approximately five percent of those living in the community served by Beachwood were uninsured in 2017.

Community Need Index™

Dignity Health, a California-based hospital system, developed and published a *Community Need Index™* (CNI) that measures barriers to health care access. The index is based on five social and economic indicators:

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

A CNI score is calculated for each ZIP code. Scores range from "Lowest Need" (1.0-1.7) to "Highest Need" (4.2-5.0).

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Ten of the 28 ZIP codes in the Beachwood community scored in the “highest need” category, all located in Cuyahoga County. Four ZIP codes received a score of 5.0, the highest possible. Three other ZIP codes scored in the “lowest need” category.

Other Local Health Status and Access Indicators

In the 2018 *County Health Rankings* and for overall health outcomes, Cuyahoga County ranked 60th (out of 88 counties) and Lake County ranked 13th.

These overall rankings are derived from 42 measures that themselves are grouped into several categories such as “health behaviors,” and “social & economic factors.”

- In 2018, Cuyahoga County ranked in the bottom 50th percentile among Ohio counties for 28 of the 42 indicators assessed. Of those, 15 were in the bottom quartile, including quality of life, social and economic factors, physical environment, and various socioeconomic indicators.
- In Lake County, nine indicators ranked in the bottom 50th percentile among Ohio Counties. Three were in the bottom quartile, including alcohol-impaired driving deaths, social associations, and percent that drive alone to work.
- Both counties ranked in the bottom quartile for alcohol-impaired driving deaths and social associations.

The 2018 *County Health Rankings* shows that each county has unique community health issues. However, a few are present across the community, including:

- Percent of adults who drive alone to work with long commutes
- Percent of driving deaths with alcohol involvement
- Social associations rate

Community Health Status Indicators (“CHSI”) compares indicators for each county with those for peer counties across the United States. Each county is compared to 30 to 35 of its peers. Peers are selected based on a number of socioeconomic characteristics, such as population size, population density, percent elderly, and poverty rates.

The counties served by Beachwood benchmark most poorly for:

- Percent low birth weight births
- Percent of adults who smoke
- Food environment index
- Percent of driving deaths alcohol-impaired
- Chlamydia rate
- Preventable hospitalizations rate
- High school graduation rate
- Air pollution (average daily PM2.5)

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- Percent of adults who drive alone to work

Mortality statistics published by the Ohio Department of Health show how deaths due to “accidental poisoning by and exposure to drugs and other biological substances” have been increasing across the state. At 44.6 per 100,000, the 2016 mortality rate in Cuyahoga County was well over the Ohio average (36.8 per 100,000); the Lake County rate of 46.4 was above the state rate as well.

Cuyahoga and Lake counties each have had higher than average age-adjusted incidence rates for cancer.

The Centers for Disease Control’s Behavioral Risk Factor Surveillance System (BRFSS) provides self-reported data on many health behaviors and conditions. According to BRFSS, arthritis, asthma, diabetes, high blood pressure, high cholesterol, and COPD were more prevalent in ZIP codes served by Beachwood than in other parts of Ohio.

Ambulatory Care Sensitive Conditions

Ambulatory Care Sensitive Conditions (“ACSCs”) include thirteen health conditions (also referred to as “PQIs”) “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: diabetes, perforated appendixes, chronic obstructive pulmonary disease (“COPD”), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

ACSC rates in Beachwood community ZIP codes have exceeded Ohio averages for all conditions except perforated appendix.

Food Deserts

The U.S. Department of Agriculture’s Economic Research Service identifies census tracts that are considered “food deserts” because they include lower-income persons without supermarkets or large grocery stores nearby. Several community census tracts 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. Areas with a score of 62 or less are considered “medically underserved.” Several census tracts in Cuyahoga County have been

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

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designated as medically underserved areas, and census tracts in Lake County have been designated as medically underserved populations.

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. Several census tracts in Cuyahoga and Lake counties have been designated as primary care HPSAs, and census tracts in Cuyahoga County have been designated as dental care HPSAs.

Relevant Findings of Other CHNAs

In recent years, the Ohio Department of Health and local health departments in Cuyahoga and Lake counties conducted Community Health Assessments and developed State or Community Health Improvement Plans (SHIP or CHIP). This CHNA also has integrated the findings of that work.

The issues most frequently identified as *significant* in these other assessments are:

- Drug addiction and abuse
- Mental health
- Social determinants of health
- Maternal and child health (including infant mortality)
- Prevalence (and need to manage) chronic diseases
- Obesity and diabetes
- Access to primary care and prevention services
- Health disparities

The Beachwood CHNA also has identified the above issues as *significant*, in part because this CHNA considered findings from these other assessments as an important factor in the prioritization process. The Beachwood CHNA places more emphasis on health needs of a growing seniors population and includes more information on preventable hospital admissions.

Significant Indicators

Exhibit 4 presents many of the indicators discussed in the above secondary data summary. An indicator is considered *significant* if it was found to vary materially from a benchmark statistic (e.g., an average value for the State of Ohio or for the United States). For example, 44 percent of Cuyahoga County's driving deaths have involved alcohol; the average for Ohio was 34 percent. The last column of the **Exhibit 4** identifies where more information regarding the data sources can be found.

The benchmarks include Ohio averages, national averages, and in some cases averages for "peer counties" from across the United States. In the *Community Health Status Indicators* analysis,

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community counties' peers were selected because they are similar in terms of population density, household incomes, and related characteristics. Benchmarks were selected based on judgements regarding how best to assess each data source.

Exhibit 4: Significant Indicators

Indicator	Area	Value	Benchmark		Exhibit
			Value	Area	
65+ Population change, 2017-2022	Community ZIP codes	11.5%	-0.8%	Total Community Population	8
Poverty rate, 2012-2016	Cuyahoga County	18.5%	15.4%	Ohio	13
Poverty rate, 2012-2016	"Highest Need" ZIP codes	36.4%	5.2%	"Lowest Need" ZIP codes	23
% of Population Black, 2017	"Highest Need" ZIP codes	78.2%	4.4%	"Lowest Need" ZIP codes	23
Poverty rate, Black, 2012-2016	Cuyahoga County	33.3%	18.5%	Cuyahoga County, Total	14
Unemployment rate	Cuyahoga County	5.9%	4.4%	United States	16
Percent ninth-grade cohort graduates	Cuyahoga County	74.8%	83.0%	United States	25
Percent children in poverty	Cuyahoga County	26.4%	20.0%	United States	25
Percent of households with severe housing problems	Cuyahoga County	18.5%	15.0%	Ohio	25
Percent of households rent burdened	Community ZIP codes	53.0%	46.7%	Ohio	19
Violent Crimes per 100,000	Cuyahoga County	695	306	Ohio	18
Years of potential life lost per 100,000	Cuyahoga County	8,037	7,734	Ohio	25
Percent live births with low birthweight	Cuyahoga County	10.6%	8.0%	United States	25
Percent driving deaths w/alcohol involvement	Cuyahoga County	44.4%	26.6%	Peer Counties	26
Mortality rate for accidental poisoning by drugs and other substances per 100,000	Cuyahoga County	44.6	36.8	Ohio	27
	Lake County	46.4	36.8	Ohio	27
Percent of adults that report a BMI >= 30	Cuyahoga County	29.9%	28.0%	United States	25
	Lake County	28.8%	28.0%	United States	25
Percent of adults that smoke	Cuyahoga County	20.6%	16.2%	Peer Counties	26
	Lake County	17.6%	15.5%	Peer Counties	26
Cancer incidence rate per 100,000	Cuyahoga County	483	462	Ohio	29
	Lake County	486	462	Ohio	29
Population per mental health provider	Lake County	676	470	United States	25
Preventable admissions (for ambulatory care sensitive conditions) per 1,000 Medicare enrollees	Cuyahoga County	53	49	Peer Counties	26
	Lake County	59	54	Peer Counties	26
PQI: Young adult asthma rate per 100,000	Community ZIP codes	87	36	Ohio	31
PQI: Uncontrolled diabetes per 100,000	Community ZIP codes	90	50	Ohio	31
PQI: Hypertension per 100,000	Community ZIP codes	131	72	Ohio	31
PQI: Congestive heart failure per 100,000	Community ZIP codes	877	584	Ohio	31
PQI: COPD per 100,000	Community ZIP codes	1,032	696	Ohio	31
Average Daily PM 2.5 (Particulate Matter, a measure of air pollution)	Cuyahoga County	12.9	10.6	Peer Counties	26
	Lake County	10.7	9.4	Peer Counties	26

Source: Verité Analysis.

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Primary Data Summary

Primary data were gathered by conducting interviews with key stakeholders (*See Appendix C for additional information on those providing input*). Thirty-one (32) interviews were conducted with individuals regarding significant community health needs in the community served by Beachwood and why such needs are present.

Interviewees most frequently identified the following community health issues as significant concerns.

- **Poverty and other social determinants of health** were identified as significant concerns. Interviewees stated that poverty has significant implications for health, including the ability for households to access health services, afford basic needs, and benefit from prevention initiatives.
 - **Housing** is an issue, with many community residents unable to find housing that is both affordable and safe. Low income and elderly populations were identified as especially vulnerable. Poor housing contributes to lead exposure and falling risks, among other health problems.
 - Problems with **educational achievement** and access to **workforce training** opportunities reduce employment prospects and increase poverty rates.
 - Poverty contributes to **food insecurity** and the inability to afford healthy food.
 - **Health services** are expensive, particularly for lower-income, uninsured individuals.
- **Mental health** was identified by many as a significant concern. Depression, suicide, hopelessness, and isolation (particularly among elderly residents and those exposed to traumas early in life) are perceived to be increasing in severity. Access to mental health care is challenging due to cost (and limited benefits) and an undersupply of psychiatrists and other providers.
- **Substance abuse and addiction**, particularly the abuse of opioids, was a primary concern of many interviewees. Perceived over-prescribing of prescription drugs, poverty and economic insecurity, and mental health problems were cited as contributing factors.
 - While problems with opioids were mentioned most frequently, several interviewees stated that misuse of other drugs (primarily methamphetamines) is on the rise. They emphasized that underlying addiction is the real problem.
- **Obesity** was identified as growing problem, driven by ongoing difficulties with physical inactivity and poor nutrition.
 - Many are not eating healthy foods due to the higher costs of fresh and healthy options, food deserts that create access problems, a lack of knowledge about

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healthy cooking, and a lack of time (particularly for people working several jobs) to prepare meals.

- Contributors to physical inactivity include a lack of safe places to exercise, a lack of time, and a lack of education regarding the importance of remaining active.
- The prevalence of and need to manage **chronic conditions** were identified as significant needs, specifically: diabetes, hypertension, and cardiovascular diseases. Obesity (and its contributing factors) is considered a primary contributor to these conditions.
- **Transportation** was identified as a barrier to maintaining good health. Few public transportation options are available, and many neighborhoods are not serviced at all. Transportation affects access to health care services, healthy foods, and employment opportunities. Low-income and elderly residents were identified as groups that had the largest unmet transportation needs.
- Many identified a need for more **localized, community-based health clinics and programs**. While the region has many hospitals and physician groups, these entities “do not have a great connection with the community.” Health systems need to improve their local presence, building up connections with local stakeholders and communities.
 - **Collaboration** between health organizations and community partners needs to be enhanced. While collaboration recently appears to have improved, interviewees stated that beneficial opportunities remain that would contribute to improved access to (and less duplication of) services.
- Interviewees stated that community needs more **health education** and better understanding of the health care system. Community residents are unsure about where and how they can access certain services. Questions about insurance coverage and more generally how to achieve a healthy life are prevalent. Prevention initiatives are needed by many.
- **Health disparities** are present – particularly for infant mortality rates and the prevalence of chronic conditions. Low-income, Black, and Hispanic (or Latino) residents were specifically identified as groups with disproportionately poor health outcomes.
 - Health care services need to be more culturally competent. Language and cultural barriers make it challenging for providers to improve the health of many residents.
- Growth in the **seniors population** and the ability to age in place are significant concerns. Elderly residents are at greater risk for falls, food insecurity, transportation issues, and unsafe or inadequate housing. **Isolation** contributes to poor physical and mental health conditions.
- While the region has numerous health care providers, interviewees expressed concerns about **access to care**.

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- Cost of care, insurance gaps, waitlists, and providers not accepting Medicaid and other insurances were thought to be primary contributors.
- Primary care, dental/oral health care, psychiatrists, and substance abuse treatment services were identified as particularly difficult to access.

An additional interview was conducted with a member of the management team of Cleveland Clinic Rehabilitation Hospital – Beachwood. The interview focused on rehabilitation services, conditions that were leading to the need for such services, and available resources in the community. Key points from that interview include the following:

- A majority of Beachwood's patients are admitted for conditions such as trauma, spine injury, stroke, brain injuries, brain tumors, cardiac conditions, and pulmonary conditions.
- Unhealthy diets and a lack of exercise are two of the most significant community health issues, and both are contributing to a growing number of stroke patients.
- Mental health is also a concern. More psychiatrists are needed both to work with admitted patients and in the community at large.
- Substance abuse is another significant issue. Services are difficult to access, and some providers are unsure of where to refer patients who need treatment.
- Smoking rates remain high. A number of patients fail to follow through with referrals and prescriptions that would help them quit tobacco use.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

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

Federally Qualified Health Centers

Federally Qualified Health Centers (FQHCs) are established to promote access to ambulatory care in areas designated as “medically underserved.” These clinics provide primary care, mental health, and dental services for lower-income members of the community. FQHCs receive enhanced reimbursement for Medicaid and Medicare services and most also receive federal grant funds under Section 330 of the Public Health Service Act. There currently are 15 FQHC sites operating in the Beachwood community (**Exhibit 5**).

Exhibit 5: Federally Qualified Health Centers, 2018

County	ZIP Code	Site Name	City	Address
Cuyahoga	44104	Carl B. Stokes Clinic	Cleveland	6001 Woodland Ave
Cuyahoga	44110	Collinwood Health Center	Cleveland	15322 Saint Clair Ave
Cuyahoga	44112	East Cleveland Health Center	Cleveland	15201 Euclid Ave
Cuyahoga	44106	Magnolia Clubhouse	Cleveland	11101 Magnolia Dr
Cuyahoga	44105	Miles Broadway Health Center	Cleveland	9127 Miles Ave
Cuyahoga	44112	Neon Dental Mobile Unit	East Cleveland	15320 Euclid Ave
Cuyahoga	44137	Signature Health Maple Heights Health Center	Maple Heights	21100 Southgate Park Blvd
Lake	44060	Signature Health, Inc. Administrative Location	Mentor	7232 Justin Way
Cuyahoga	44122	Signature Health, Inc. Connections Location	Beachwood	24200 Chagrin Blvd
Lake	44077	Signature Health, Inc. Painesville Clinic	Painesville	462 Chardon St
Lake	44094	Signature Health, Inc. Willoughby Clinic	Willoughby	38882 Mentor Ave
Lake	44094	Signature Health, Inc., And Willoughby Clinic	Willoughby	38879 Mentor Ave
Cuyahoga	44105	Southeast Health Center	Cleveland	13301 Miles Ave
Cuyahoga	44106	Superior Health Center	Cleveland	12100 Superior Ave
Cuyahoga	44106	The Free Medical Clinic Of Greater Cleveland	Cleveland	12201 Euclid Ave

Source: HRSA, 2018.

Data published by HRSA indicate that in 2017, FQHCs served approximately 28 percent of uninsured, Beachwood community residents and 18 percent of the community’s Medicaid recipients.⁶ In Ohio, FQHCs served about 15 percent of both population groups. Nationally, FQHCs served 22 percent of uninsured individuals and 18 percent of Medicaid recipients. These percentages ranged from 6 percent (Nevada) to 40 percent (Washington State).

Hospitals

Exhibit 6 presents information on hospital facilities located in the Beachwood community.

⁶ HRSA refers to these statistics as FQHC “penetration rates.”

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

Exhibit 6: Hospitals, 2018

ZIP Code	County	City/Town	Hospital Name	Address
44104	Cuyahoga	Cleveland	Cleveland Clinic Children's Hospital for Rehab	2801 Martin Luther King, Jr Drive
44119	Cuyahoga	Cleveland	Euclid Hospital	18901 Lake Shore Boulevard
44122	Cuyahoga	Beachwood	Grace Hospital	20000 Harvard Road
44122	Cuyahoga	Beachwood	Highland Springs	4199 Mill Pond Drive
44124	Cuyahoga	Cleveland	Hillcrest Hospital	6780 Mayfield Road
44077	Lake	Painesville	Lake Health	7590 Auburn Road
44122	Cuyahoga	Beachwood	Lake Health Beachwood Medical Center	25501 Chagrin Blvd
44125	Cuyahoga	Cleveland	Marymount Hospital	12300 McCracken Road
44106	Cuyahoga	Cleveland	Rainbow Babies and Childrens Hospital	11100 Euclid Avenue
44128	Cuyahoga	Cleveland	Regency Hospital of Cleveland East	4200 Interchange Corporate Center Road
44120	Cuyahoga	Cleveland	Select Specialty Hospital- Cleveland Fairhill	11900 Fairhill Road
44122	Cuyahoga	Beachwood	South Pointe Hospital	20000 Harvard Road
44106	Cuyahoga	Cleveland	UH Cleveland Medical Center	11100 Euclid Avenue
44143	Cuyahoga	Cleveland	UHHS Richmond Heights Hospital	27100 Chardon Road
44122	Cuyahoga	Beachwood	University Hospitals Ahuja Medical Center	3999 Richmond Road
44122	Cuyahoga	Beachwood	University Hospitals Rehabilitation Hospital	23333 Harvard Road
44094	Lake	Willoughby	Windsor Laurelwood Center for Behavioral Medicine	35900 Euclid Avenue

Source: Ohio Department of Health, 2019.

Other Community Resources

A wide range of agencies, coalitions, and organizations that provide health and social services is available in the region served by Beachwood. 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/>.

IMPACT EVALUATION

Regulations that apply to CHNAs conducted by tax-exempt hospitals require CHNA reports to include “an evaluation of the impact of any actions that were taken, since the hospital facility finished conducting its immediately preceding CHNA, to address the significant health needs identified in the hospital facility’s prior CHNA(s).”

Beachwood opened in October 2017. Beachwood is a new hospital facility and this is the first CHNA conducted by the hospital. Data regarding the impact of various services and programs identified during a previous CHNA process therefore were not gathered.

Beachwood looks forward to describing the impact of these and other actions that address community health needs in its 2022 CHNA report.

APPENDIX A – 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.⁷ In conducting a CHNA, each tax-exempt hospital facility must:

- Define the community it serves;
- Assess the health needs of that community;
- Solicit and take into account input from persons who represent the broad interests of that community, including those with special knowledge of or expertise in public health;
- Document the CHNA in a written report that is adopted for the hospital facility by an authorized body of the facility; and,
- Make the CHNA report 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.

Ohio law⁸ requires local health departments (LHDs) and tax-exempt hospitals to submit their Community Health Improvement Plans and Implementation Strategy reports to the Ohio Department of Health (the department). Beginning January 1, 2020, Ohio law also requires LHDs and tax-exempt hospitals to complete assessments and plans “in alignment on a three-year interval established by the department.” Specific methods and approaches for achieving “alignment” are evolving.

Methodology

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

⁷ Internal Revenue Code, Section 501(r).

⁸ ORC 3701.981

APPENDIX A – OBJECTIVES AND METHODOLOGY

The focus on **who** is most vulnerable and **where** they live is important to identifying groups experiencing health inequities and disparities. Understanding **why** these issues are present is challenging, but is important to designing effective community health improvement initiatives. The question of **how** each hospital can address significant community health needs is the subject of the separate Implementation Strategy.

Federal regulations 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).⁹ Accordingly, the community definition considered the geographic origins of the hospital’s patients and also the hospital’s mission, target populations, principal functions, and strategies.

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

Data from multiple sources were gathered and assessed, including secondary data¹⁰ published by others and primary data obtained through community input. *See* Appendix B. 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. 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.

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 the State of Ohio and local health departments, 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, Beachwood collaborated with the following Cleveland Clinic and Cleveland Clinic – Select Medical hospitals: Main Campus, Cleveland Clinic Children’s, Cleveland Clinic Children’s Hospital for Rehabilitation, Avon, Akron General, Euclid, Fairview, Hillcrest, Lodi, Lutheran, Marymount, Medina, South Pointe, Union, Cleveland Clinic Florida, Select Specialty Hospital – Cleveland Fairhill, Select Specialty Hospital – Cleveland Gateway, Regency Hospital of Cleveland East, and Regency Hospital of Cleveland West. These facilities collaborated by

⁹ 501(r) Final Rule, 2014.

¹⁰ “Secondary data” refers to data published by others, for example the U.S. Census and the Ohio Department of Health. “Primary data” refers to data observed or collected from first-hand experience, for example by conducting interviews.

APPENDIX A – OBJECTIVES AND METHODOLOGY

gathering and assessing community health data together and relying on shared methodologies, report formats, and staff to manage the CHNA process.

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 32 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.

The Cleveland Clinic health system posts CHNA reports online at www.clevelandclinic.org/CHNAReports and makes an email address (chna@ccf.org) available for purposes of receiving comments and questions. No written comments have yet been received on CHNA reports.

Information Gaps

This CHNA relies on multiple data sources and community input gathered between July 2018 and January 2019. A number of data limitations should be recognized when interpreting results. For example, some data (e.g., County Health Rankings, Community Health Status Indicators, 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.

The community assessed by Beachwood includes portions of two separate counties (Cuyahoga and Lake counties). County-wide data for each of these counties should be assessed accordingly.

Secondary data upon which this assessment relies measure community health in prior years and may not reflect current conditions. 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 that assessed this community. Differences in data sources, geographic areas assessed (e.g., hospital service areas versus counties or cities), interview questions, and prioritization processes can contribute to differences in findings.

APPENDIX A – OBJECTIVES AND METHODOLOGY

Consultant Qualifications

Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Arlington, Virginia. The firm serves clients throughout the United States as a resource that helps hospitals conduct Community Health Needs Assessments and develop Implementation Strategies to address significant health needs. Verité has conducted more than 60 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 Beachwood community. Beachwood's community is comprised of 28 ZIP codes in Cuyahoga and Lake counties, Ohio.

Demographics

Exhibit 7: Percent Change in Community Population by ZIP Code, 2017-2022

County	City/Town	ZIP Code	Estimated Population 2017	Projected Population 2022	Percent Change 2017 - 2022
Lake	Painesville	44077	58,455	59,471	1.7%
Lake	Willoughby	44094	36,188	36,812	1.7%
Cuyahoga	Solon	44139	24,669	24,941	1.1%
Cuyahoga	Cleveland	44143	24,304	24,403	0.4%
Cuyahoga	Cleveland	44106	26,981	27,017	0.1%
Cuyahoga	Euclid	44132	14,014	14,027	0.1%
Cuyahoga	Beachwood	44122	34,331	34,351	0.1%
Cuyahoga	Bedford	44146	29,582	29,488	-0.3%
Cuyahoga	Cleveland	44124	38,246	38,116	-0.3%
Cuyahoga	Chagrin Falls	44022	16,604	16,539	-0.4%
Cuyahoga	Cleveland	44104	22,061	21,971	-0.4%
Lake	Wickliffe	44092	16,587	16,515	-0.4%
Lake	Mentor	44060	58,848	58,478	-0.6%
Cuyahoga	Cleveland	44118	39,364	38,835	-1.3%
Cuyahoga	Euclid	44117	10,099	9,959	-1.4%
Cuyahoga	Maple Heights	44137	22,349	22,039	-1.4%
Cuyahoga	Cleveland	44121	32,090	31,635	-1.4%
Lake	Eastlake	44095	32,289	31,804	-1.5%
Cuyahoga	Euclid	44123	16,968	16,700	-1.6%
Cuyahoga	Cleveland	44128	28,023	27,523	-1.8%
Cuyahoga	Cleveland	44119	12,063	11,821	-2.0%
Cuyahoga	Cleveland	44125	27,179	26,633	-2.0%
Cuyahoga	Cleveland	44112	21,671	21,195	-2.2%
Cuyahoga	Cleveland	44120	35,517	34,621	-2.5%
Cuyahoga	Cleveland	44110	18,683	18,144	-2.9%
Cuyahoga	Cleveland	44108	23,491	22,738	-3.2%
Cuyahoga	Cleveland	44127	5,109	4,936	-3.4%
Cuyahoga	Cleveland	44105	36,906	35,622	-3.5%
Community Total			762,671	756,334	-0.8%

Source: Truven Market Expert, 2018.

APPENDIX B – SECONDARY DATA ASSESSMENT

Description

Exhibit 7 portrays the estimated population by ZIP code in 2017 and projected to 2022.

Observations

- Between 2017 and 2022, 21 of 28 ZIP codes are projected to decrease in population. The total community population is expected to decrease by 0.8 percent.
- The population in ZIP code 44122 (where the hospital is located) is expected to increase by 0.1 percent.

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 8: Percent Change in Population by Age/Sex Cohort, 2017-2022

Age/Sex Cohort	Estimated Population 2017	Projected Population 2022	Percent Change 2017 - 2022
0 - 17	163,249	156,520	-4.1%
Female 18 - 34	83,922	81,485	-2.9%
Male 18 - 34	81,151	81,263	0.1%
35 - 64	293,980	280,521	-4.6%
65+	140,369	156,545	11.5%
Community Total	762,671	756,334	-0.8%

Source: Truven Market Expert, 2018.

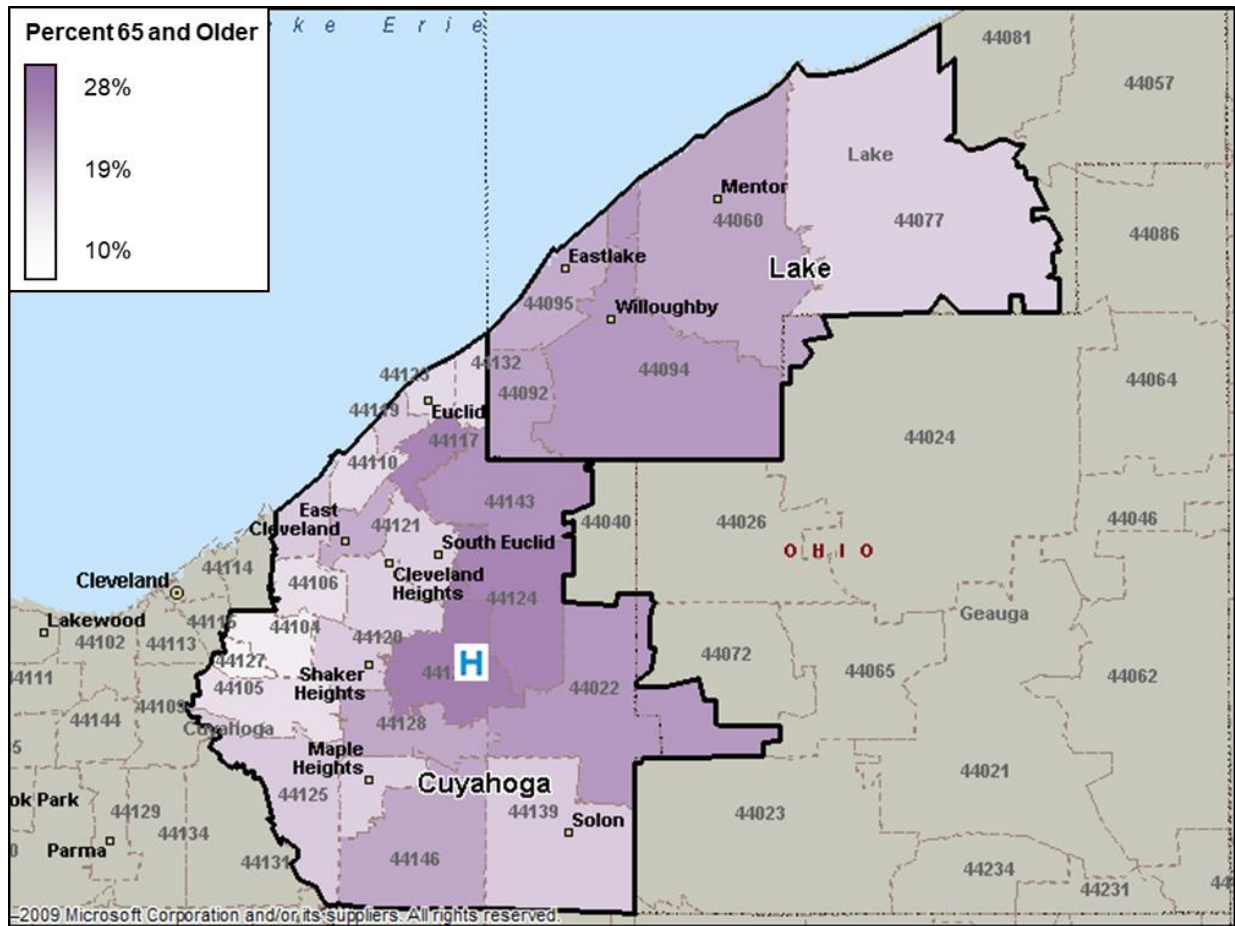
Description

Exhibit 8 shows the community's population for certain age and sex cohorts in 2017, with projections to 2022.

Observations

- While the total community population is expected to decrease between 2017 and 2022, the number of persons aged 65 years and older is projected to increase by 11.5 percent.
- 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 9: Percent of Population Aged 65+ by ZIP Code, 2017



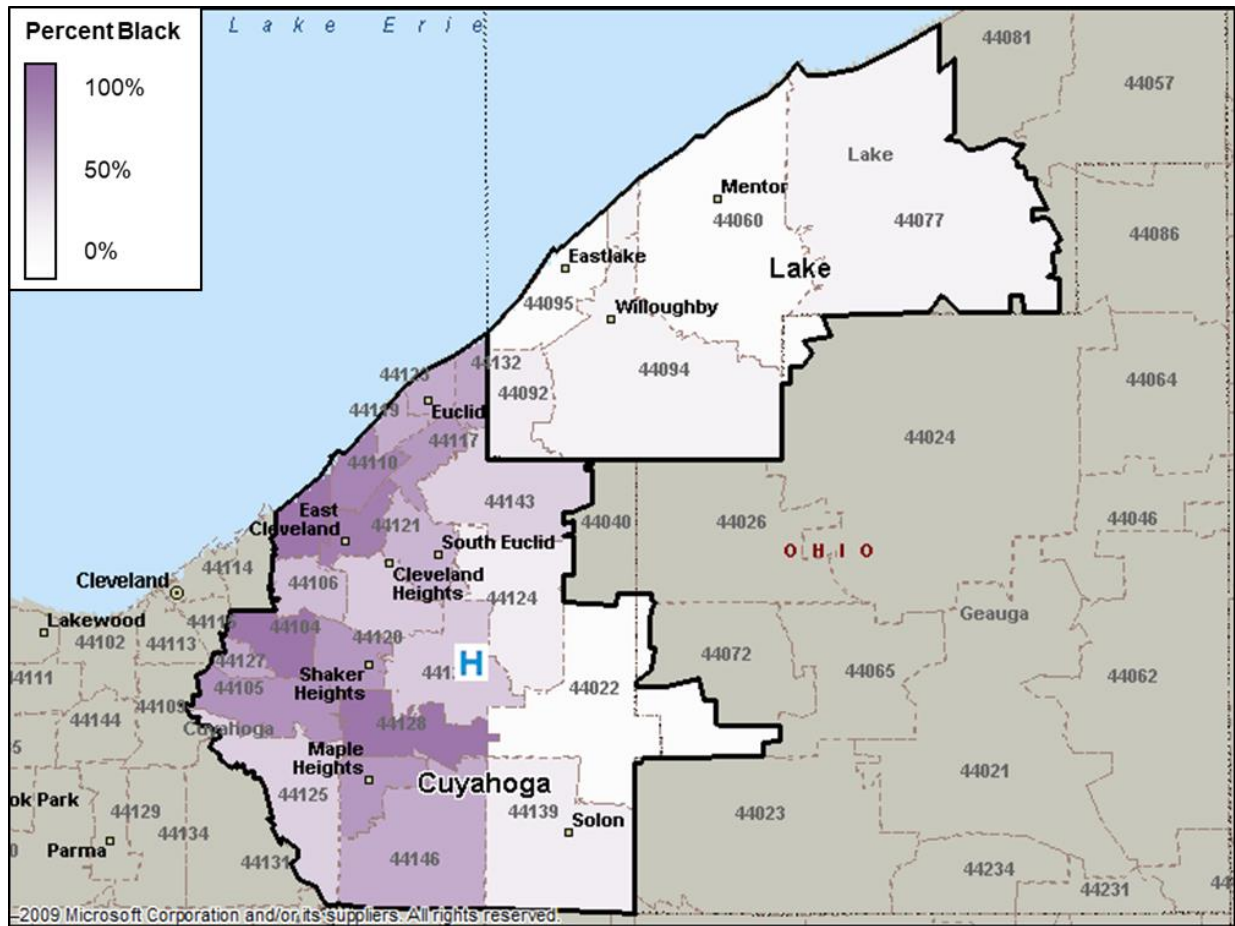
Description

Exhibit 9 portrays the percent of the population 65 years of age and older by ZIP code.

Observations

- Cuyahoga County ZIP codes 44122, 44117, and 44124 have the highest proportions of the population 65 years of age and older, each over 25 percent.

Exhibit 10: Percent of Population - Black, 2017



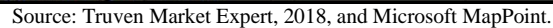
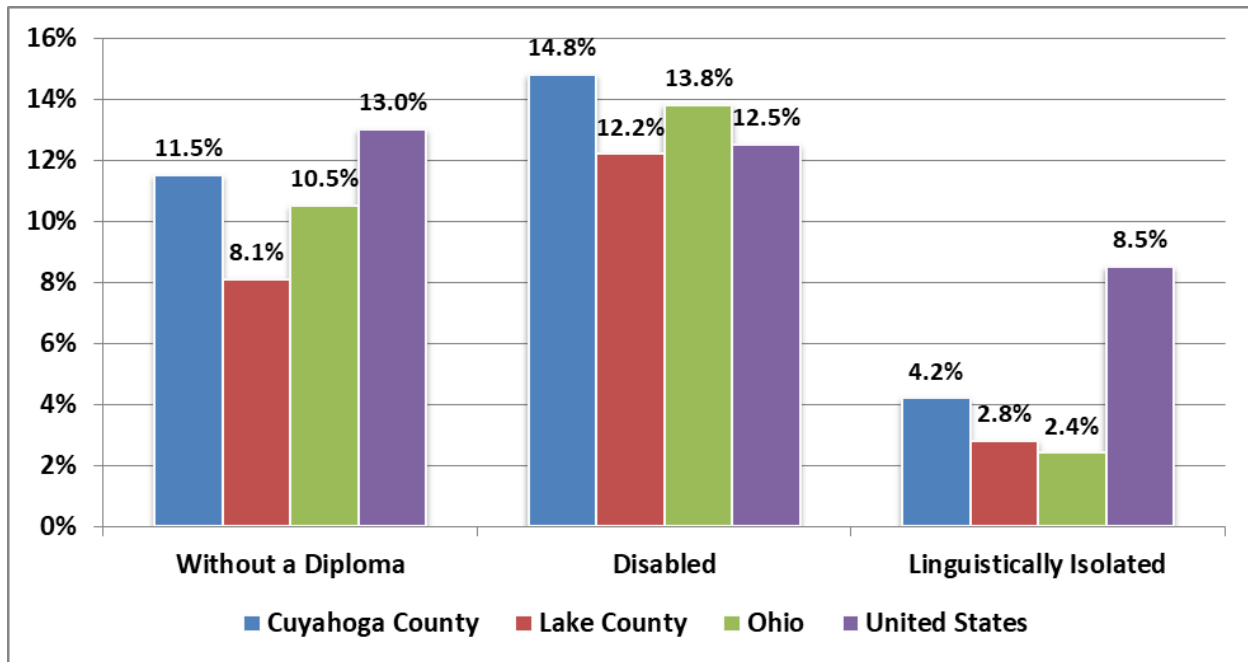


Exhibit 11 portrays locations where the percentages of the population that are Hispanic (or Latino) were highest in 2017.

- The percentage of residents that are Hispanic (or Latino) was highest in Lake County ZIP code 44077 (11.3 percent) and Cuyahoga County ZIP code 44127 (9.6 percent). No other community ZIP code was over four percent.

Exhibit 12: Other Socioeconomic Indicators, 2012-2016



Source: U.S. Census, ACS 5-Year Estimates, 2017.

Description

Exhibit 12 portrays the percent of the population (aged 25 years and above) without a high school diploma, with a disability, and linguistically isolated, by county.

Observations

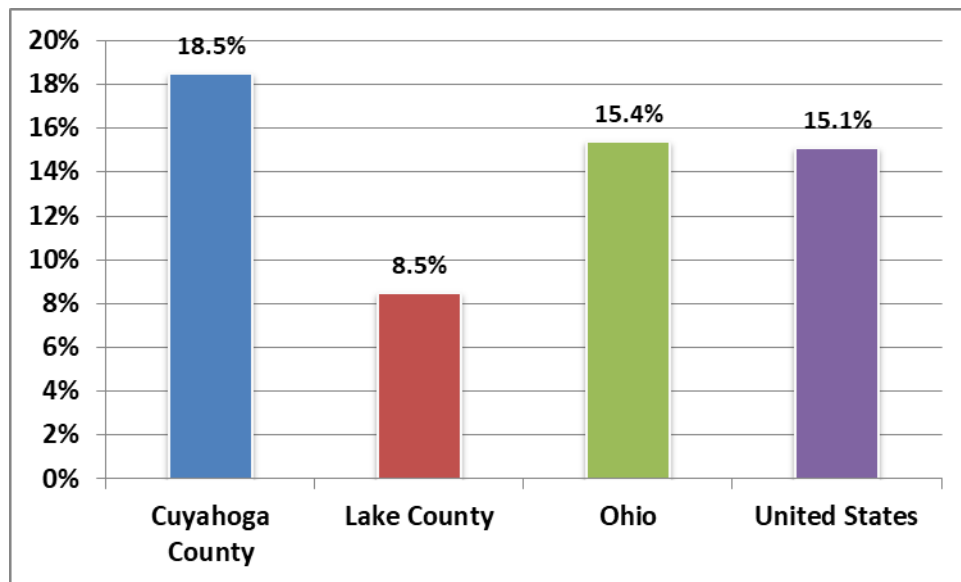
- The percentage of residents aged 25 years and older without a high school diploma in Cuyahoga County has been higher than the Ohio average.
- Cuyahoga County had a higher percentage of the population with a disability compared to Ohio and United States averages.
- Compared to Ohio (but not to the United States), Cuyahoga and Lake counties had a higher proportion of the population that is linguistically isolated. Linguistic isolation is defined as residents who speak a language other than English and speak English less than “very well.”

Economic indicators

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

People in Poverty

Exhibit 13: Percent of People in Poverty, 2012-2016



Source: U.S. Census, ACS 5-Year Estimates, 2017.

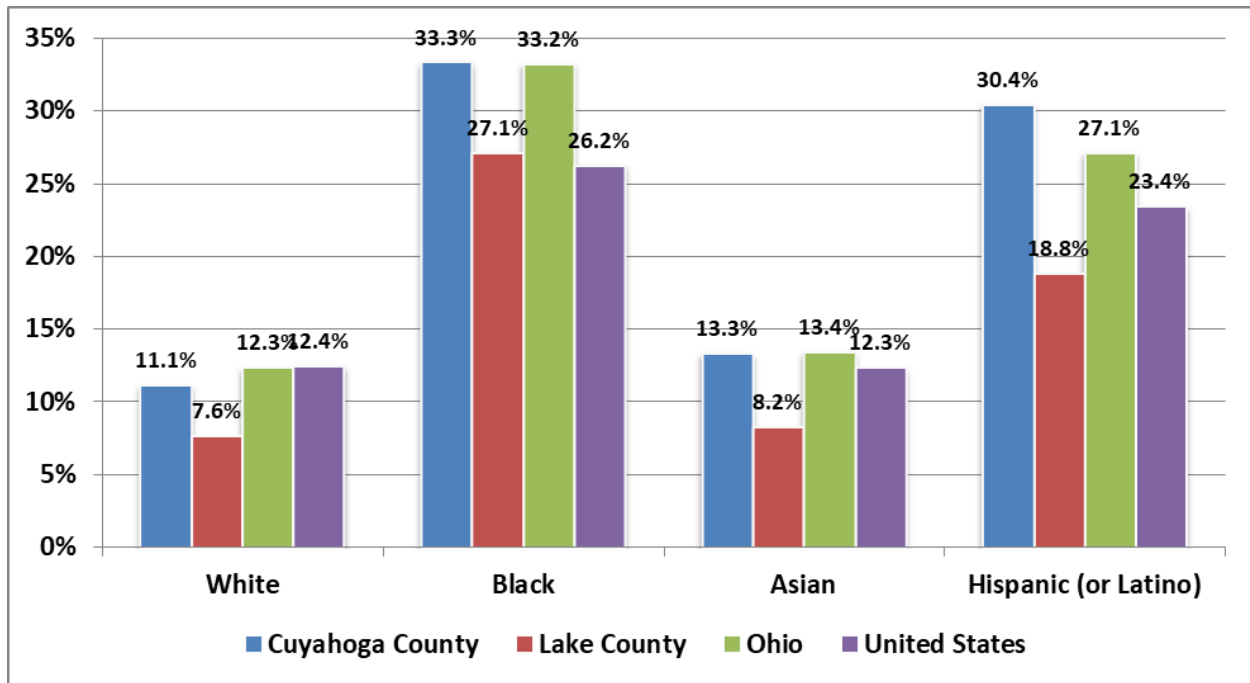
Description

Exhibit 13 portrays poverty rates by county.

Observations

- The poverty rate in Cuyahoga County was higher than Ohio and national averages throughout 2012-2016.
- The rate in Lake County was below Ohio and United States averages.

Exhibit 14: Poverty Rates by Race and Ethnicity, 2012-2016



Source: U.S. Census, ACS 5-Year Estimates, 2017.

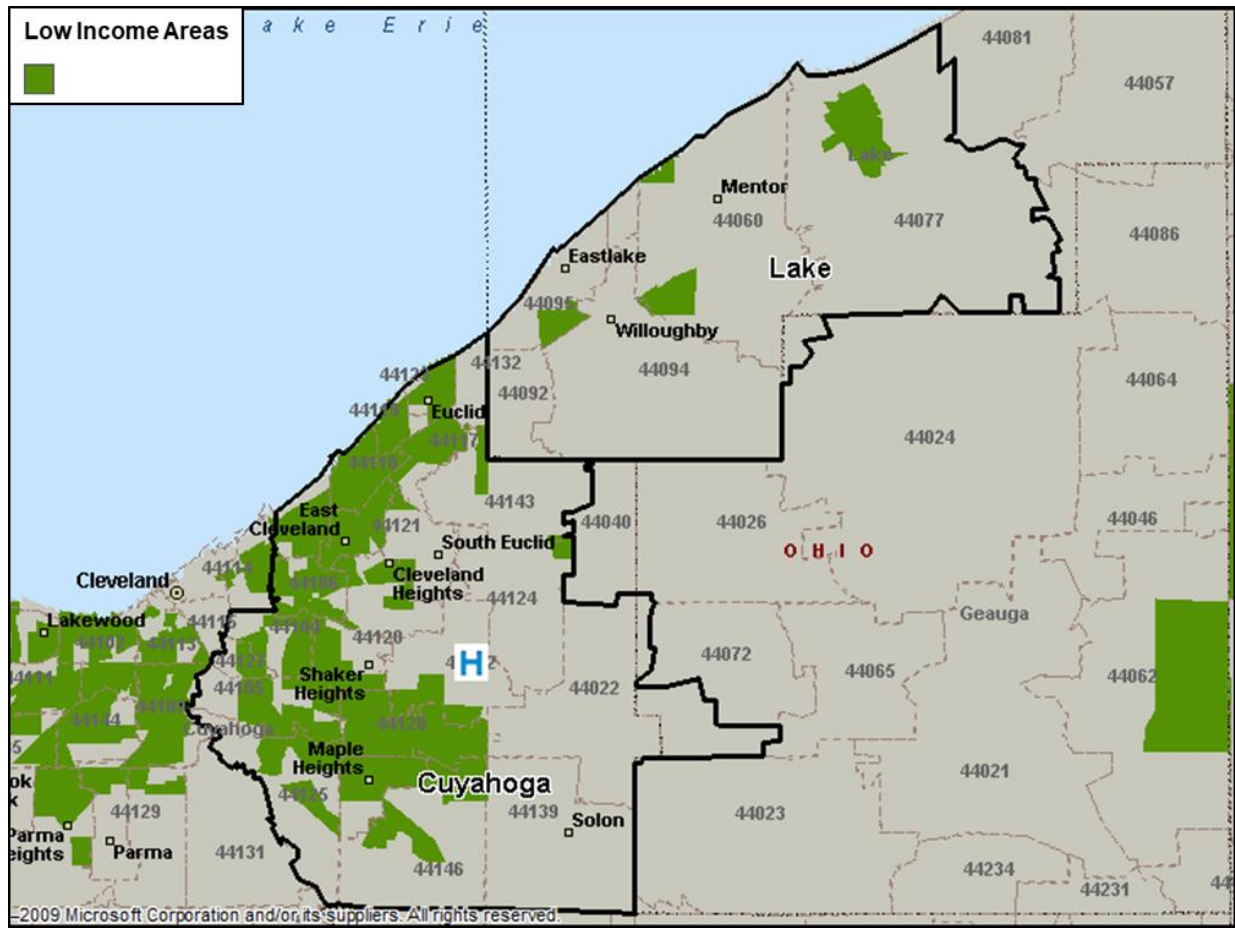
Description

Exhibit 14 portrays poverty rates by race and ethnicity.

Observations

- Poverty rates have been higher for Black and Hispanic (or Latino) residents than for Whites.
- The poverty rate for Black residents in Cuyahoga County has been higher than poverty rates for Black individuals across Ohio and the United States.

Exhibit 15: Low Income Census Tracts, 2017



Source: US Department of Agriculture Economic Research Service, ESRI, 2017.

Description

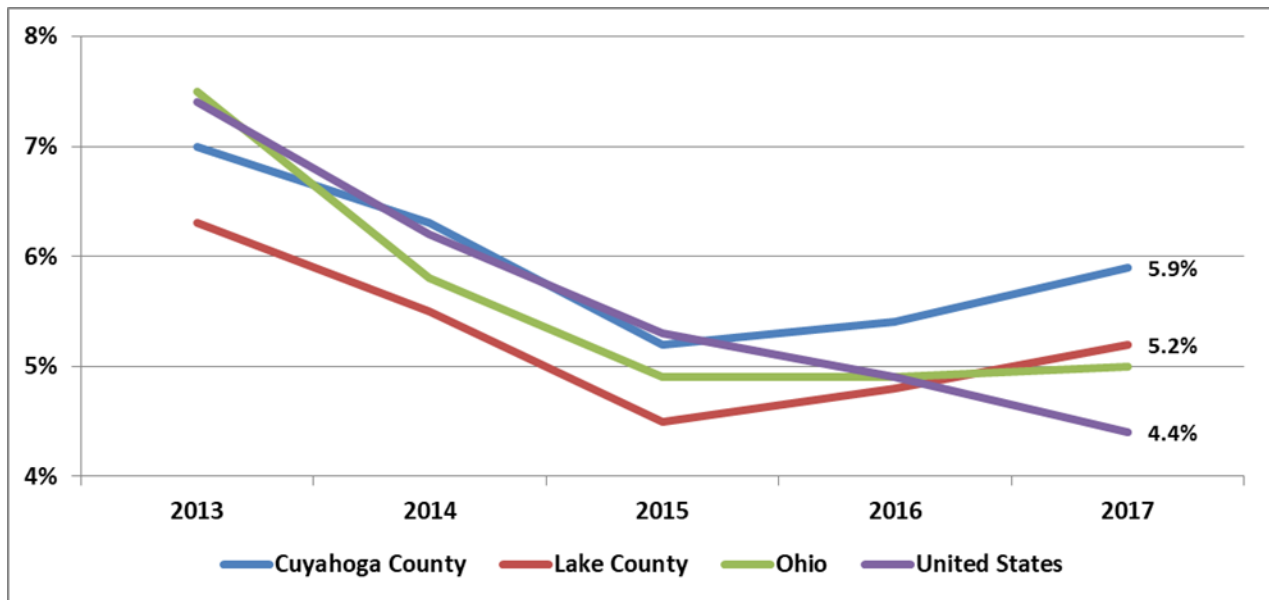
Exhibit 15 portrays the location of federally-designated low income census tracts.

Observations

- Low income census tracts have been present in both Cuyahoga and Lake counties.

Unemployment

Exhibit 16: Unemployment Rates, 2013-2017



Description

Exhibit 16 shows unemployment rates for 2013 through 2017 by county, with Ohio and national rates for comparison.

Observations

- Between 2012 and 2015, unemployment rates at the local, state, and national levels declined significantly. Between 2015 and 2017, unemployment rates increased slightly in both Cuyahoga and Lake counties.
- Rates in Cuyahoga and Lake counties were above Ohio and U.S. averages in 2017.

APPENDIX B – SECONDARY DATA ASSESSMENT

Insurance Status

Exhibit 17: Percent of the Population without Health Insurance, 2017-2022

County	City/Town	ZIP Code	Total Population 2017	Percent Uninsured 2017	Total Population 2022	Percent Uninsured 2022
Cuyahoga	Cleveland	44104	22,061	8.1%	21,971	7.6%
Cuyahoga	Cleveland	44106	26,981	7.6%	27,017	6.5%
Cuyahoga	Cleveland	44110	18,683	7.5%	18,144	6.7%
Cuyahoga	Cleveland	44127	5,109	7.4%	4,936	6.5%
Cuyahoga	Cleveland	44108	23,491	7.4%	22,738	6.5%
Cuyahoga	Cleveland	44112	21,671	7.3%	21,195	6.4%
Cuyahoga	Euclid	44117	10,099	7.2%	9,959	6.4%
Cuyahoga	Cleveland	44105	36,906	7.0%	35,622	6.2%
Cuyahoga	Cleveland	44120	35,517	6.4%	34,621	5.6%
Cuyahoga	Cleveland	44128	28,023	5.7%	27,523	5.0%
Cuyahoga	Maple Heights	44137	22,349	5.4%	22,039	4.7%
Cuyahoga	Euclid	44132	14,014	5.4%	14,027	4.6%
Cuyahoga	Euclid	44123	16,968	4.8%	16,700	4.1%
Cuyahoga	Cleveland	44125	27,179	4.7%	26,633	4.1%
Cuyahoga	Cleveland	44119	12,063	4.5%	11,821	3.9%
Cuyahoga	Bedford	44146	29,582	4.4%	29,488	3.7%
Cuyahoga	Cleveland	44118	39,364	4.2%	38,835	3.6%
Cuyahoga	Cleveland	44121	32,090	4.1%	31,635	3.5%
Cuyahoga	Cleveland	44143	24,304	3.4%	24,403	2.9%
Cuyahoga	Beachwood	44122	34,331	3.3%	34,351	2.9%
Cuyahoga	Cleveland	44124	38,246	3.2%	38,116	2.7%
Lake	Painesville	44077	58,455	3.0%	59,471	2.6%
Lake	Wickliffe	44092	16,587	2.7%	16,515	2.3%
Lake	Eastlake	44095	32,289	2.7%	31,804	2.3%
Lake	Willoughby	44094	36,188	2.4%	36,812	2.1%
Cuyahoga	Chagrin Falls	44022	16,604	2.2%	16,539	2.1%
Lake	Mentor	44060	58,848	2.2%	58,478	1.9%
Cuyahoga	Solon	44139	24,669	1.7%	24,941	1.5%
Community Total			762,671	4.5%	756,334	3.9%

Source: Truven Market Expert, 2018.

Description

Exhibit 17 presents the estimated percent of population in community ZIP codes without health insurance (uninsured) – in 2017 and with projections to 2022.

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Observations

- In 2017, the highest “uninsurance rates” were in Cuyahoga County ZIP codes.
- 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. Across the United States, uninsurance rates have fallen most in states that decided to expand Medicaid.¹¹

¹¹ See: <http://hrms.urban.org/briefs/Increase-in-Medicaid-under-the-ACA-reduces-uninsurance.html>

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Crime Rates

Exhibit 18: Crime Rates by Type and Jurisdiction, Per 100,000, 2016

Crime	Cuyahoga County	Lake County	Ohio
Violent Crime	694.9	214.1	305.9
Property Crime	2,977.7	1,514.8	2,537.4
Murder	15.1	1.1	5.9
Rape	57.6	19.6	47.4
Robbery	327.7	31.6	111.1
Aggravated Assault	294.5	161.8	141.5
Burglary	753.6	217.9	573.5
Larceny	1,742.1	1,244.7	1,789.7
Motor Vehicle Theft	482.0	52.3	174.2
Arson	33.6	5.4	23.4

Source: FBI, 2017.

Description

Exhibit 18 provides crime statistics. Light grey shading indicates rates that were higher (worse) than the Ohio average; dark grey shading indicates rates that were more than 50 percent higher than the Ohio average.

Observations

- 2016 crime rates in Cuyahoga County were more than 50 percent higher than the Ohio averages for violent crime, murder, robbery, aggravated assault, and motor vehicle theft.
- Lake County rates were below Ohio averages for all crime types except aggravated assault.

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Housing Affordability

Exhibit 19: Percent of Rented Households Rent Burdened, 2013-2017

County	City/Town	ZIP Code	Occupied Units Paying Rent	Households Paying >30%	Rent Burden > 30% of Income
Cuyahoga	Cleveland	44105	7,182	4,689	65.3%
Cuyahoga	Euclid	44117	2,597	1,636	63.0%
Cuyahoga	Cleveland	44110	5,142	3,141	61.1%
Cuyahoga	Euclid	44132	3,507	2,137	60.9%
Cuyahoga	Cleveland	44127	1,180	708	60.0%
Cuyahoga	Cleveland	44128	5,469	3,246	59.4%
Cuyahoga	Cleveland	44125	3,397	2,015	59.3%
Cuyahoga	Cleveland	44112	5,346	3,171	59.3%
Cuyahoga	Cleveland	44108	4,223	2,449	58.0%
Cuyahoga	Cleveland	44120	8,325	4,798	57.6%
Cuyahoga	Cleveland	44119	2,227	1,263	56.7%
Cuyahoga	Maple Heights	44137	3,390	1,891	55.8%
Cuyahoga	Cleveland	44121	4,362	2,401	55.0%
Lake	Wickliffe	44092	2,090	1,150	55.0%
Cuyahoga	Cleveland	44104	5,239	2,857	54.5%
Cuyahoga	Euclid	44123	3,545	1,861	52.5%
Cuyahoga	Cleveland	44143	2,778	1,397	50.3%
Cuyahoga	Solon	44139	1,417	704	49.7%
Cuyahoga	Cleveland	44106	6,824	3,361	49.3%
Cuyahoga	Bedford	44146	5,538	2,670	48.2%
Cuyahoga	Cleveland	44118	5,793	2,752	47.5%
Cuyahoga	Beachwood	44122	4,529	2,143	47.3%
Lake	Eastlake	44095	3,397	1,605	47.2%
Lake	Painesville	44077	5,741	2,587	45.1%
Cuyahoga	Chagrin Falls	44022	865	384	44.4%
Lake	Mentor	44060	3,984	1,683	42.2%
Cuyahoga	Cleveland	44124	5,540	2,333	42.1%
Lake	Willoughby	44094	5,513	2,132	38.7%
Community Total			119,140	63,164	53.0%
Ohio			1,453,379	678,101	46.7%
United States			39,799,272	20,138,321	50.6%

Source: U.S. Census, ACS 5-Year Estimates, 2018.



The U.S. Department of Housing and Urban Development (“HUD”) has defined households that are “rent burdened” as those spending more than 30 percent of income on housing.¹² On that basis and based on data from the U.S. Census, Exhibits 19 and 20 portray the percentage of rented households in each ZIP code that are rent burdened.

As stated by the Federal Reserve, “households that have little income left after paying rent may not be able to afford other necessities, such as food, clothes, health care, and transportation.”¹³

¹³ *Ibid.*

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- 53 percent of households have been designated as “rent burdened,” a level above the Ohio average.
- The percentage of rented households rent burdened was highest in ZIP codes where poverty rates and the Dignity Health Community Need IndexTM (CNI) also are above average (see next section for information on the CNI).

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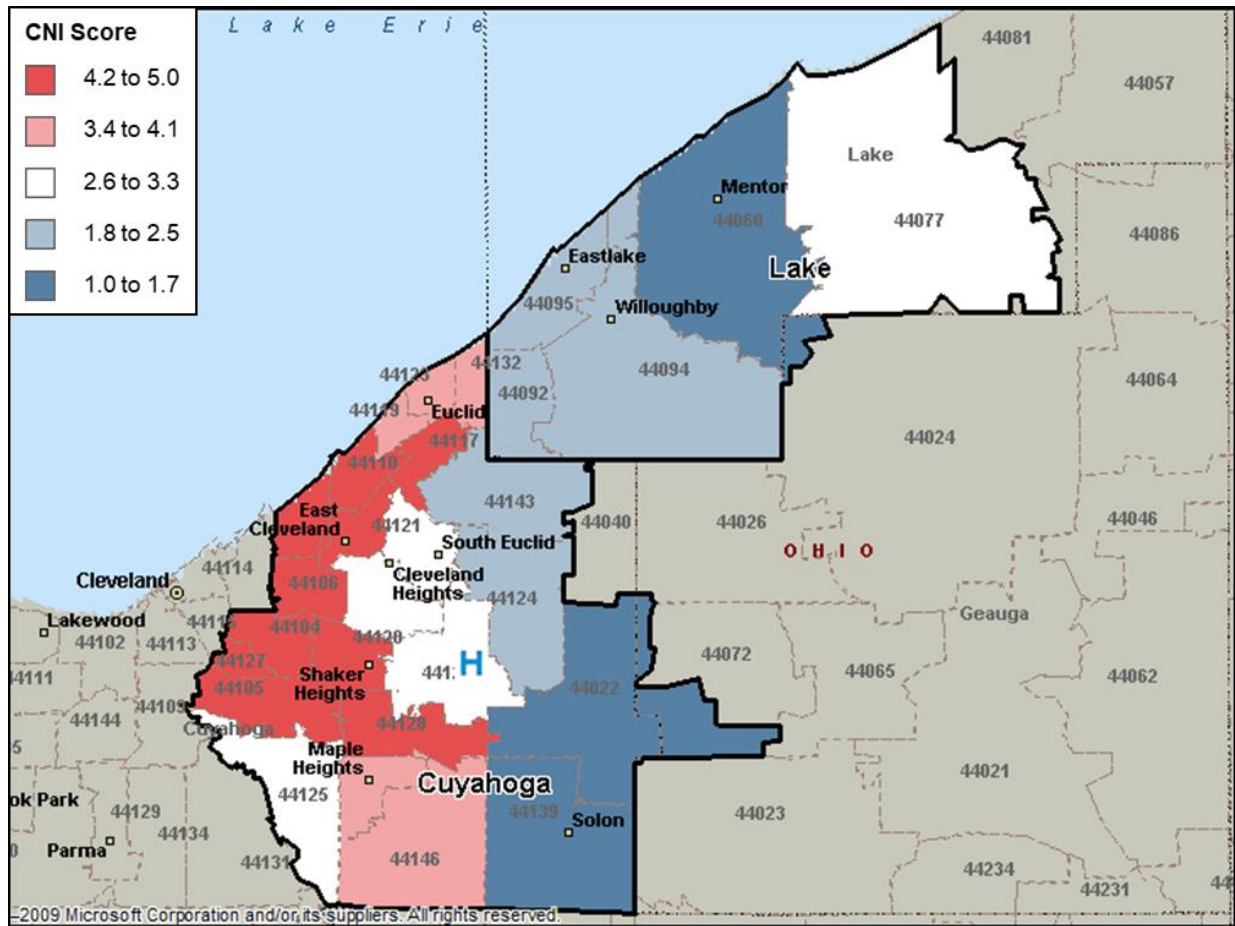
Dignity Health Community Need Index

Exhibit 21: Community Need Index™ Score by ZIP Code, 2018

County	City/Town	ZIP Code	CNI Score
Cuyahoga	Cleveland	44104	5.0
Cuyahoga	Cleveland	44105	5.0
Cuyahoga	Cleveland	44108	5.0
Cuyahoga	Cleveland	44127	5.0
Cuyahoga	Cleveland	44110	4.8
Cuyahoga	Cleveland	44106	4.6
Cuyahoga	Cleveland	44112	4.6
Cuyahoga	Euclid	44117	4.6
Cuyahoga	Cleveland	44120	4.4
Cuyahoga	Cleveland	44128	4.2
Cuyahoga	Euclid	44132	4.0
Cuyahoga	Maple Heights	44137	4.0
Cuyahoga	Cleveland	44119	3.8
Cuyahoga	Euclid	44123	3.8
Cuyahoga	Bedford	44146	3.6
Cuyahoga	Cleveland	44125	3.4
Cuyahoga	Cleveland	44118	3.2
Lake	Painesville	44077	3.0
Cuyahoga	Cleveland	44121	3.0
Cuyahoga	Beachwood	44122	3.0
Lake	Willoughby	44094	2.4
Cuyahoga	Cleveland	44124	2.4
Lake	Wickliffe	44092	2.2
Lake	Eastlake	44095	2.2
Cuyahoga	Cleveland	44143	2.2
Lake	Mentor	44060	1.6
Cuyahoga	Solon	44139	1.6
Cuyahoga	Chagrin Falls	44022	1.2
Community Average			3.3
Cuyahoga County Average			3.3
Lake County Average			2.3

Source: Dignity Health, 2018.

Exhibit 22: Community Need Index, 2018



Description

Exhibits 21 and 22 present the *Community Need Index*[™] (CNI) score for each ZIP code in the Beachwood community. Higher scores (e.g., 4.2 to 5.0) indicate the highest levels of community need. The index is calibrated such that 3.0 represents a U.S.-wide median score.

Dignity Health, a California-based hospital system, developed and published the CNI as a way to assess barriers to health care access. The index, available for every ZIP code in the United States, is derived from five social and economic indicators:

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

CNI scores are grouped into “Lowest Need” (1.0-1.7) to “Highest Need” (4.2-5.0) categories

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Observations

- Ten of the 28 ZIP codes in the Beachwood scored in the “highest need” category, all located in Cuyahoga County. Four ZIP codes received a score of 5.0, the highest possible. Three other ZIP codes scored in the “lowest need” category.
- At 3.3, the weighted average CNI score for the Beachwood community is above the U.S. median of 3.0.

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Exhibit 23: Statistics Arrayed by CNI Range

Indicators	Highest Need	<= CNI Range ==>			Lowest Need
	4.2-5.0	3.4-4.1	2.6-3.3	1.8-2.5	1.0-1.7
Demographic Characteristics					
ZIP Codes	10	6	4	5	3
Total Persons	228,541	122,155	164,240	147,614	100,121
Poverty Rate	36%	17%	13%	8%	5%
% African American	78%	53%	28%	10%	4%
BRFSS Indicators					
% Arthritis	28.4%	27.5%	20.9%	24.2%	21.5%
% Asthma	14.3%	13.1%	11.2%	11.0%	10.7%
% Depression	21.7%	20.1%	17.0%	17.5%	16.9%
% Diabetes	22.5%	16.4%	14.9%	16.5%	13.8%
% Heart Disease	9.5%	11.3%	10.5%	12.1%	10.5%
% Heart Failure	4.2%	4.9%	3.6%	4.7%	3.8%
PQI Rates					
COPD	1,581	1,114	696	899	602
Congestive Heart Failure	1,246	903	663	746	578
Diabetes long-term complications	201	205	89	117	65
Bacterial pneumonia	289	291	240	293	205
Dehydration	394	383	279	332	217
Diabetes short-term complications	139	124	43	66	30
Urinary tract infection	281	267	235	355	257
Hypertension	239	126	85	78	53
Low birth weight (per 1,000 births)	34	30	16	10	8
Young adult asthma	168	72	42	51	17
Lower-extremity amputation among patients with diabetes	68	48	33	31	24

Source: Verité Analysis.

Description

Exhibit 23 provides data for community ZIP codes arranged by CNI Score.

Observations

- ZIP codes found to be higher need are associated with higher rates of poverty, a higher proportion of the population Black, more problematic BRFSS indicators (e.g., rates of arthritis and diabetes), and higher rates of admissions for Ambulatory Care Sensitive Conditions (“PQI rates” or “ACSCs”).

Other Local Health Status and Access Indicators

This section assesses other health status and access indicators for the Beachwood community. Data sources include:

- (1) County Health Rankings
- (2) Community Health Status Indicators, published by County Health Rankings
- (3) Ohio Department of Health
- (4) 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.

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County Health Rankings

Exhibit 24: County Health Rankings, 2015 and 2018
(Light Grey Shading Denotes Bottom Half of Ohio Counties; Dark Grey Denotes Bottom Quartile)

Measure	Cuyahoga County		Lake County	
	2015	2018	2015	2018
Health Outcomes	65	60	19	13
Health Factors	50	62	14	9
Length of Life	51	48	15	20
Premature death	51	48	15	20
Quality of Life	72	67	29	11
Poor or fair health	32	46	23	7
Poor physical health days	24	24	20	7
Poor mental health days	49	12	22	5
Low birthweight	87	88	36	37
Health Behaviors	36	49	9	6
Adult smoking	14	50	27	9
Adult obesity	9	12	1	3
Food environment index	75	71	28	27
Physical inactivity	23	12	4	16
Access to exercise opportunities	3	2	9	12
Excessive drinking	33	22	63	49
Alcohol-impaired driving deaths	67	79	42	68
Sexually transmitted infections	87	86	57	47
Teen births	51	47	10	12
Clinical Care	6	4	25	16
Uninsured	53	49	10	24
Primary care physicians	2	2	47	41
Dentists	1	1	8	7
Mental health providers	2	3	26	24
Preventable hospital stays	33	25	40	40
Diabetes monitoring	65	62	60	46
Mammography screening	8	18	18	7
Social & Economic Factors	78	79	15	25
High school graduation	85	83	50	60
Some college	8	9	13	14
Unemployment	51	52	25	36
Children in poverty	68	72	9	14
Income inequality	86	85	30	30
Children in single-parent households	88	86	31	27
Social associations	79	77	83	80
Violent crime	85	85	69	63
Injury deaths	31	47	17	39
Physical Environment	68	86	58	11
Air pollution	63	87	65	4
Severe housing problems	87	87	34	41
Driving alone to work	7	7	85	77
Long commute - driving alone	45	48	50	45

Source: County Health Rankings, 2018.

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Description

Exhibit 24 presents *County Health Rankings*, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation that 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,¹⁴ social and economic factors, and physical environment.¹⁵ *County Health Rankings* is updated annually. *County Health Rankings 2018* relies on data from 2006 to 2017, with most data from 2011 to 2016.

The exhibit presents 2015 and 2018 rankings for each available indicator category. Rankings indicate how the county ranked in relation to all 88 counties in Ohio, with 1 indicating the most favorable rankings and 88 the least favorable. Light grey shading indicates rankings in the bottom half of Ohio counties; dark grey shading indicates rankings in bottom quartile of Ohio counties.

Observations

- In 2018, Cuyahoga County ranked in the bottom 50th percentile among Ohio counties for 28 of the 42 indicators assessed. Of those, 15 were in the bottom quartile, including quality of life, social and economic factors, physical environment, and various socioeconomic indicators.
- In Lake County, nine indicators ranked in the bottom 50th percentile among Ohio Counties. Three were in the bottom quartile, including alcohol-impaired driving deaths, social associations, and percent that drive alone to work.
- Both counties ranked in the bottom quartile for alcohol-impaired driving deaths and social associations.

¹⁴A 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.

¹⁵A 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 25: County Health Rankings Data Compared to Ohio and U.S. Averages, 2018
(Light Grey Shading Denotes Bottom Half of Ohio Counties; Dark Grey Denotes Bottom Quartile)

Indicator Category	Data	Cuyahoga County	Lake County	Ohio	United States
Health Outcomes					
Length of Life	Years of potential life lost before age 75 per 100,000 population	8,037	6,569	7,734	6,700
Quality of Life	Percent of adults reporting fair or poor health	16.4%	12.8%	17.0%	16.0%
	Average number of physically unhealthy days reported in past 30 days	3.7	3.4	4.0	3.7
	Average number of mentally unhealthy days reported in past 30 days	3.7	3.6	4.3	3.8
	Percent of live births with low birthweight (<2500 grams)	10.6%	7.4%	8.6%	8.0%
Health Factors					
Health Behaviors					
Adult Smoking	Percent of adults that report smoking >= 100 cigarettes and currently smoking	20.6%	17.6%	22.5%	17.0%
Adult Obesity	Percent of adults that report a BMI >= 30	29.9%	28.8%	31.6%	28.0%
Food Environment Index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	7.0	8.0	6.6	7.7
Physical Inactivity	Percent of adults aged 20 and over reporting no leisure-time physical activity	24.3%	24.7%	25.7%	23.0%
Access to Exercise Opportunities	Percent of population with adequate access to locations for physical activity	96.1%	88.7%	84.7%	83.0%
Excessive Drinking	Binge plus heavy drinking	16.8%	17.9%	19.1%	18.0%
Alcohol-Impaired Driving Deaths	Percent of driving deaths with alcohol involvement	44.0%	37.7%	34.3%	29.0%
STDs	Chlamydia rate per 100,000 population	720	277	489	479
Teen Births	Teen birth rate per 1,000 female population, ages 15-19	30.3	17.9	27.6	27.0
Clinical Care					
Uninsured	Percent of population under age 65 without health insurance	7.8%	7.0%	7.7%	11.0%
Primary Care Physicians	Ratio of population to primary care physicians	898:1	2,142:1	1,307:1	1,320:1
Dentists	Ratio of population to dentists	979:1	1,465:1	1,656:1	1,480:1
Mental Health Providers	Ratio of population to mental health providers	356:1	676:1	561:1	470:1
Preventable Hospital Stays	Hospitalization rate for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	53	59	57	49
Diabetes Screening	Percent of diabetic Medicare enrollees that receive HbA1c monitoring	83.8%	85.5%	85.1%	85.0%
Mammography Screening	Percent of female Medicare enrollees, ages 67-69, that receive mammography screening	64.7%	67.6%	61.2%	63.0%

Source: County Health Rankings, 2018.

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Exhibit 25: County Health Rankings Data Compared to Ohio and U.S. Averages, 2018 (continued)
(Light Grey Shading Denotes Bottom Half of Ohio Counties; Dark Grey Denotes Bottom Quartile)

Indicator Category	Data	Cuyahoga County	Lake County	Ohio	United States
Health Factors					
Social & Economic Factors					
High School Graduation	Percent of ninth-grade cohort that graduates in four years	74.8%	87.3%	81.2%	83.0%
Some College	Percent of adults aged 25-44 years with some post-secondary education	68.7%	67.0%	64.5%	65.0%
Unemployment	Percent of population age 16+ unemployed but seeking work	5.4%	4.8%	4.9%	4.9%
Children in Poverty	Percent of children under age 18 in poverty	26.4%	12.5%	20.4%	20.0%
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	5.6	4.0	4.8	5.0
Children in Single-Parent Households	Percent of children that live in a household headed by single parent	45.0%	28.5%	35.7%	34.0%
Social Associations	Number of associations per 10,000 population	9.3	9.1	11.3	9.3
Violent Crime	Number of reported violent crime offenses per 100,000 population	589	174	290	380
Injury Deaths	Injury mortality per 100,000	76.4	71.8	75.5	65.0
Physical Environment					
Air Pollution	The average daily measure of fine particulate matter in micrograms per cubic meter (PM2.5) in a county	12.9	10.7	11.3	8.7
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	18.5%	12.6%	15.0%	19.0%
Driving Alone to Work	Percent of the workforce that drives alone to work	79.8%	87.4%	83.4%	76.0%
Long Commute – Drive Alone	Among workers who commute in their car alone, the percent that commute more than 30 minutes	32.6%	32.3%	30.0%	35.0%

Source: County Health Rankings, 2018.

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Description

Exhibit 25 provides data that underlie the County Health Rankings.¹⁶ The exhibit also includes Ohio and national averages. Light grey shading highlights indicators found to be worse than the Ohio average; dark grey shading highlights indicators more than 50 percent worse than the Ohio average.

Observations

- The following indicators (presented alphabetically) compared particularly unfavorably:
 - Percent of driving deaths with alcohol involvement
 - Percent who drive alone and have a long commute
 - Social associations rate
- In Exhibit 25, Cuyahoga County's crime rate is more than 50 percent worse than the Ohio average. The county's chlamydia rate is just under 50 percent above average. Lake County's primary care physician rate is more than 50 percent worse than the Ohio average.
- Ohio-wide indicators are worse than U.S. averages for virtually all of the indicators presented.

¹⁶ 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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Community Health Status Indicators

Exhibit 26: Community Health Status Indicators, 2018
(Light Grey Shading Denotes Bottom Half of Peer Counties; Dark Grey Denotes Bottom Quartile)

Category	Indicator	Cuyahoga County	Lake County
Length of Life	Years of Potential Life Lost Rate		
Quality of Life	% Fair/Poor Health		
	Physically Unhealthy Days		
	Mentally Unhealthy Days		
	% Births - Low Birth Weight		
Health Behaviors	% Smokers		
	% Obese		
	Food Environment Index		
	% Physically Inactive		
	% With Access to Exercise Opportunities		
	% Excessive Drinking		
	% Driving Deaths Alcohol-Impaired		
	Chlamydia Rate		
Clinical Care	Teen Birth Rate		
	% Uninsured		
	Primary Care Physicians Rate		
	Dentist Rate		
	Mental Health Professionals Rate		
	Preventable Hosp. Rate		
	% Receiving HbA1c Screening		
Social & Economic Factors	% Mammography Screening		
	High School Graduation Rate		
	% Some College		
	% Unemployed		
	% Children in Poverty		
	Income Ratio		
	% Children in Single-Parent Households		
	Social Association Rate		
Physical Environment	Violent Crime Rate		
	Injury Death Rate		
	Average Daily PM2.5		
	% Severe Housing Problems		
	% Drive Alone to Work		
	% Long Commute - Drives Alone		

Source: Community Health Status Indicators, 2017.

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Description

County Health Rankings has organized community health data for all 3,143 counties in the United States. Following a methodology developed by the Centers for Disease Control’s *Community Health Status Indicators* Project (CHSI), County Health Rankings also publishes lists of “peer counties,” so comparisons with peer counties in other states can be made. Each county in the U.S. is assigned 30 to 35 peer counties based on 19 variables including population size, population growth, population density, household income, unemployment, percent children, percent elderly, and poverty rates.

This *Community Health Status Indicators* analysis formerly was available from the CDC. Because comparisons with peer counties (rather than only counties in the same state) are meaningful, Verité Healthcare Consulting rebuilt the CHSI comparisons for this and other CHNAs.

Exhibit 26 compares Beachwood community counties to their respective peer counties and highlights community health issues found to rank in the bottom half and bottom quartile of the counties included in the analysis. Light grey shading indicates rankings in the bottom half of peer counties; dark grey shading indicates rankings in the bottom quartile of peer counties.

Observations

- The CHSI data indicate that both counties served by Beachwood compared unfavorably to their peers for the following indicators:
 - Percent low birth weight births
 - Percent of adults who smoke
 - Food environment index
 - Percent of driving deaths alcohol-impaired
 - Chlamydia rate
 - Preventable hospitalizations rate
 - High school graduation rate
 - Air pollution (average daily PM2.5)
 - Percent of adults who drive alone to work

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Ohio Department of Health

Exhibit 27: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2016
(Light Grey Shading Denotes Indicators Worse than Ohio Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Ohio Average)

Specific Causes of Death	Cuyahoga County	Lake County	Ohio
All Causes of Death	827.3	787.8	832.3
All other forms of chronic ischemic heart disease	52.3	65.1	53.2
Other chronic obstructive pulmonary disease	33.6	37.7	43.7
Organic dementia	46.5	46.5	38.4
Alzheimer's disease	20.5	31.1	33.4
Acute myocardial infarction	24.4	19.4	32.1
Accidental poisoning by and exposure to drugs and other biological substances	44.6	46.4	36.8
Diabetes mellitus	25.9	11.8	24.6
Conduction disorders and cardiac dysrhythmias	21.0	20.7	20.2
Congestive heart failure	17.8	18.9	19.5
Stroke, not specified as hemorrhage or infarction	16.1	15.6	17.8
Atherosclerotic cardiovascular disease	34.5	37.0	15.4
Renal failure	15.3	11.2	15.1
Septicemia	17.1	13.4	13.7
Pneumonia	9.3	11.9	13.3
All other diseases of nervous system	9.6	9.5	12.3
Hypertensive heart disease	15.0	8.6	11.9
All other diseases of respiratory system	8.3	6.7	11.4
Other cerebrovascular diseases and their sequelae	7.7	9.2	10.4
Parkinson's disease	6.9	6.3	8.7
Intentional self-harm (suicide) by discharge of firearms	6.2	6.4	7.4
Alcoholic liver disease	5.8	6.5	5.1
Unspecified fall	0.7	3.3	4.7

Source: Ohio Department of Health, 2017.

Description

The Ohio Department of Health maintains a database that includes county-level mortality rates and cancer incidence rates. Exhibit 27 provides age-adjusted mortality rates for selected causes of death in 2016.

Observations

- The following mortality rates compared particularly unfavorably to Ohio averages:
 - Organic dementia

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- Accidental poisoning by and exposure to drugs and other biological substances
- Conduction disorders and cardiac dysrhythmias
- Atherosclerotic cardiovascular disease
- Alcohol liver disease

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Exhibit 28: Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2016
(Light Grey Shading Denotes Indicators Worse than Ohio Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Ohio Average)

Cancer Site/Type	Cuyahoga County	Lake County	Ohio
All Cancer Types	180.0	170.2	173.8
Lung and Bronchus	44.7	51.2	47.9
Prostate	23.2	19.3	19.8
Other Sites/Types	21.5	13.5	19.6
Colon & Rectum	14.5	14.6	15.5
Breast	12.7	10.8	12.0
Pancreas	13.1	9.3	11.5
Ovary	8.9	9.7	7.8
Leukemia	7.9	8.3	6.9
Liver & Intrahepatic Bile Duct	7.6	6.5	6.1
Non-Hodgkins Lymphoma	5.7	5.9	5.9
Uterus	6.9	N/A	5.2
Esophagus	4.7	4.6	5.1
Bladder	6.2	8.9	5.1
Brain and Other CNS	4.1	5.6	4.8
Kidney & Renal Pelvis	3.4	4.2	3.8
Multiple Myeloma	3.3	3.0	3.3
Oral Cavity & Pharynx	3.1	2.9	2.9
Melanoma of Skin	1.4	N/A	2.6
Stomach	4.1	N/A	2.5
Cervix	3.3	N/A	2.1
Larynx	1.0	N/A	1.2
Thyroid	0.8	N/A	0.4

Source: Ohio Department of Health, 2017.

Description

Exhibit 28 provides age-adjusted mortality rates for selected types of cancer in 2016.

Observations

- Cuyahoga County's age-adjusted stomach, cervix, and thyroid cancer mortality rates were significantly higher than the Ohio average.
- Cancer mortality rates for prostate, other sites/types, breast, and pancreas were higher than the state average in both counties.

APPENDIX B – SECONDARY DATA ASSESSMENT

Exhibit 29: Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2011-2015
(Light Grey Shading Denotes Indicators Worse than Ohio Average)

Cancer Site/Type	Cuyahoga County	Lake County	Ohio
All Cancer Types	483.2	486.1	461.6
Prostate	131.7	100.9	108.0
Lung and Bronchus	65.6	70.4	69.3
Breast	73.1	74.7	68.0
Colon & Rectum	43.4	43.2	41.7
Other Sites/Types	39.5	39.5	36.4
Uterus	32.5	32.6	29.2
Bladder	20.9	26.5	21.9
Melanoma of Skin	16.8	23.2	21.7
Non-Hodgkins Lymphoma	20.1	20.9	19.0
Kidney & Renal Pelvis	16.9	18.4	16.8
Thyroid	16.4	18.4	14.8
Pancreas	13.8	12.4	12.7
Leukemia	12.7	14.0	12.2
Oral Cavity & Pharynx	11.1	11.8	11.7
Ovary	12.2	13.1	11.4
Cervix	6.6	4.8	7.6
Brain and Other CNS	6.7	8.2	6.9
Liver & Intrahepatic Bile Duct	8.9	5.7	6.7
Stomach	7.9	5.8	6.4
Multiple Myeloma	7.4	5.1	5.8
Testis	6.8	8.3	5.8
Esophagus	5.1	4.3	5.1
Larynx	4.3	3.3	4.1
Hodgkins Lymphoma	3.3	3.5	2.7

Source: Ohio Department of Health, 2016.

Description

Exhibit 29 presents age-adjusted cancer incidence rates by county.

Observations

- The overall cancer incidence rates in Cuyahoga and Lake counties were higher than the Ohio average.
- In both counties, the incidence rates for breast, colon and rectum, other sites and types, uterus, non-Hodgkins lymphoma, kidney and renal pelvis, thyroid, leukemia, ovary, testis, and Hodgkins lymphoma cancers were above Ohio averages.

APPENDIX B – SECONDARY DATA ASSESSMENT

Behavioral Risk Factor Surveillance System

Exhibit 30: Behavioral Risk Factor Surveillance System, Chronic Conditions, 2017
(Light Grey Shading Denotes Indicators Worse than Ohio Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Ohio Average)

County	City/Town	ZIP Code	Total Population 18+	% Arthritis	% Asthma	% Depression	% Diabetes	% Heart Disease	% Heart Failure	% High Blood Pressure	% High Cholesterol	% Adult Smoking	% COPD	% Back Pain
Cuyahoga	Chagrin Falls	44022	13,477	19.2%	10.8%	16.3%	13.1%	9.6%	3.8%	32.1%	29.2%	19.2%	3.9%	23.1%
Lake	Mentor	44060	47,032	22.0%	10.9%	17.2%	14.6%	11.1%	4.1%	33.8%	24.1%	22.4%	4.9%	26.3%
Lake	Painesville	44077	46,229	21.9%	11.5%	18.1%	13.8%	9.5%	3.7%	31.0%	24.6%	24.9%	5.2%	28.1%
Lake	Wickliffe	44092	14,062	23.8%	11.2%	18.0%	16.7%	13.1%	4.6%	34.3%	26.4%	24.2%	6.2%	29.1%
Lake	Willoughby	44094	28,761	26.1%	10.2%	16.8%	16.1%	11.2%	4.8%	31.5%	27.2%	22.9%	5.2%	28.1%
Lake	Eastlake	44095	26,161	25.2%	11.6%	18.7%	16.8%	11.7%	5.4%	33.4%	26.6%	26.1%	6.1%	30.5%
Cuyahoga	Cleveland	44104	13,885	29.0%	15.1%	24.3%	25.9%	9.1%	4.2%	37.6%	28.7%	34.0%	6.9%	38.6%
Cuyahoga	Cleveland	44105	28,310	29.2%	14.8%	23.5%	22.8%	7.8%	4.2%	41.0%	26.5%	35.9%	8.2%	33.8%
Cuyahoga	Cleveland	44106	23,636	22.3%	14.5%	18.1%	20.7%	11.2%	2.8%	30.2%	24.7%	31.1%	5.3%	31.9%
Cuyahoga	Cleveland	44108	17,334	29.6%	14.3%	22.8%	23.7%	7.9%	4.0%	42.1%	26.7%	34.0%	7.7%	32.8%
Cuyahoga	Cleveland	44110	13,582	29.4%	15.2%	23.1%	23.5%	9.7%	4.2%	39.9%	27.7%	34.1%	7.4%	35.1%
Cuyahoga	Cleveland	44112	16,206	31.6%	14.8%	22.3%	24.5%	9.4%	4.5%	43.0%	31.1%	35.3%	8.3%	36.5%
Cuyahoga	Euclid	44117	9,080	30.7%	14.3%	19.7%	20.6%	13.2%	6.1%	35.8%	30.2%	29.4%	8.0%	35.6%
Cuyahoga	Cleveland	44118	28,841	19.9%	10.3%	15.6%	15.2%	11.3%	3.1%	28.7%	23.5%	25.3%	4.9%	30.1%
Cuyahoga	Cleveland	44119	10,290	28.3%	12.4%	19.5%	16.3%	11.4%	4.6%	34.8%	28.6%	31.0%	7.6%	32.8%
Cuyahoga	Cleveland	44120	28,209	26.3%	12.9%	20.0%	20.1%	9.0%	3.8%	37.8%	25.9%	30.2%	6.7%	32.7%
Cuyahoga	Cleveland	44121	25,637	17.6%	11.8%	18.1%	13.3%	8.8%	3.4%	29.3%	20.6%	27.6%	6.2%	26.5%
Cuyahoga	Beachwood	44122	27,750	23.6%	11.1%	15.9%	18.1%	12.8%	4.2%	31.0%	29.3%	21.0%	5.6%	29.8%
Cuyahoga	Euclid	44123	13,122	25.6%	14.3%	21.5%	15.9%	9.9%	5.6%	31.1%	23.0%	30.1%	7.0%	35.5%
Cuyahoga	Cleveland	44124	31,643	23.1%	11.0%	16.9%	16.6%	12.7%	4.5%	32.3%	27.5%	22.3%	5.1%	27.4%
Cuyahoga	Cleveland	44125	20,670	26.7%	12.2%	19.6%	17.4%	12.3%	4.1%	31.2%	26.9%	30.8%	7.0%	32.7%
Cuyahoga	Cleveland	44127	3,768	28.0%	15.5%	24.0%	23.3%	7.7%	3.5%	40.6%	26.8%	36.4%	7.5%	34.0%
Cuyahoga	Cleveland	44128	21,270	30.1%	13.5%	21.2%	21.2%	11.3%	5.4%	36.6%	28.6%	32.0%	7.8%	32.7%
Cuyahoga	Euclid	44132	10,591	28.2%	15.3%	22.1%	15.6%	13.6%	4.0%	35.0%	25.1%	29.9%	6.5%	35.4%
Cuyahoga	Maple Heights	44137	17,350	28.2%	13.5%	20.7%	15.4%	10.0%	5.2%	32.8%	26.1%	31.3%	7.3%	34.3%
Cuyahoga	Solon	44139	18,499	21.9%	10.0%	16.4%	12.3%	9.5%	3.0%	28.7%	26.7%	21.0%	3.5%	23.7%
Cuyahoga	Cleveland	44143	19,354	21.9%	11.4%	17.7%	16.2%	12.2%	3.8%	31.7%	26.0%	21.2%	4.5%	26.7%
Cuyahoga	Bedford	44146	24,745	28.1%	12.3%	18.8%	17.0%	11.2%	5.4%	33.4%	26.7%	27.8%	7.1%	31.6%
Hospital Community			599,494	24.9%	12.3%	18.9%	17.5%	10.7%	4.2%	33.7%	26.2%	27.3%	6.1%	30.4%
Ohio Average			9,044,061	24.2%	11.9%	19.2%	15.7%	10.7%	4.5%	31.8%	25.0%	27.5%	6.0%	31.1%

Source: Truven Market Expert/Behavioral Risk Factor Surveillance System, 2018.

APPENDIX B – SECONDARY DATA ASSESSMENT

Description

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.

Exhibit 30 depicts BRFSS data for each ZIP code in the Beachwood community and compared to the averages for Ohio.

Observations

- Beachwood community averages for the prevalence of arthritis, asthma, diabetes, high blood pressure, high cholesterol, and COPD were worse than the Ohio averages.
- Cuyahoga County ZIP codes 44117 and 44119 compared unfavorably to Ohio averages for all conditions.

Ambulatory Care Sensitive Conditions

Exhibit 31: Ratio of PQI Rates for Beachwood Community and Ohio, 2017

Indicator	Community Averages	Ohio Averages	Ratio: Beachwood / Ohio
Young Adult Asthma	87.4	35.7	2.5
Hypertension	131.0	71.6	1.8
Uncontrolled Diabetes	90.4	50.2	1.8
Dehydration	331.5	218.3	1.5
Congestive Heart Failure	876.7	584.2	1.5
Chronic Obstructive Pulmonary Disease	1,031.8	695.6	1.5
Urinary Tract Infection	280.6	197.5	1.4
Low Birth Weight	22.8	18.1	1.3
Diabetes Short-Term Complications	86.8	70.1	1.2
Lower-Extremity Amputation Among Patients with Diabetes	43.9	36.3	1.2
Diabetes Long-Term Complications	142.5	120.2	1.2
Bacterial Pneumonia	268.4	238.4	1.1
Perforated Appendix	528.8	594.7	0.9

Source: Cleveland Clinic, 2018.

Note: Rates are not age-sex adjusted. Perforated appendix rate calculated per 1,000; low birth weight calculated per 1,000 births.

Description

Exhibit 31 provides the ratio of ACSCs or PQI rates in the Beachwood community to rates for Ohio as a whole. Conditions where the ratios are highest (meaning that the PQI rates in the community are the most above average) are presented first.

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.”¹⁷ 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.

¹⁷Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

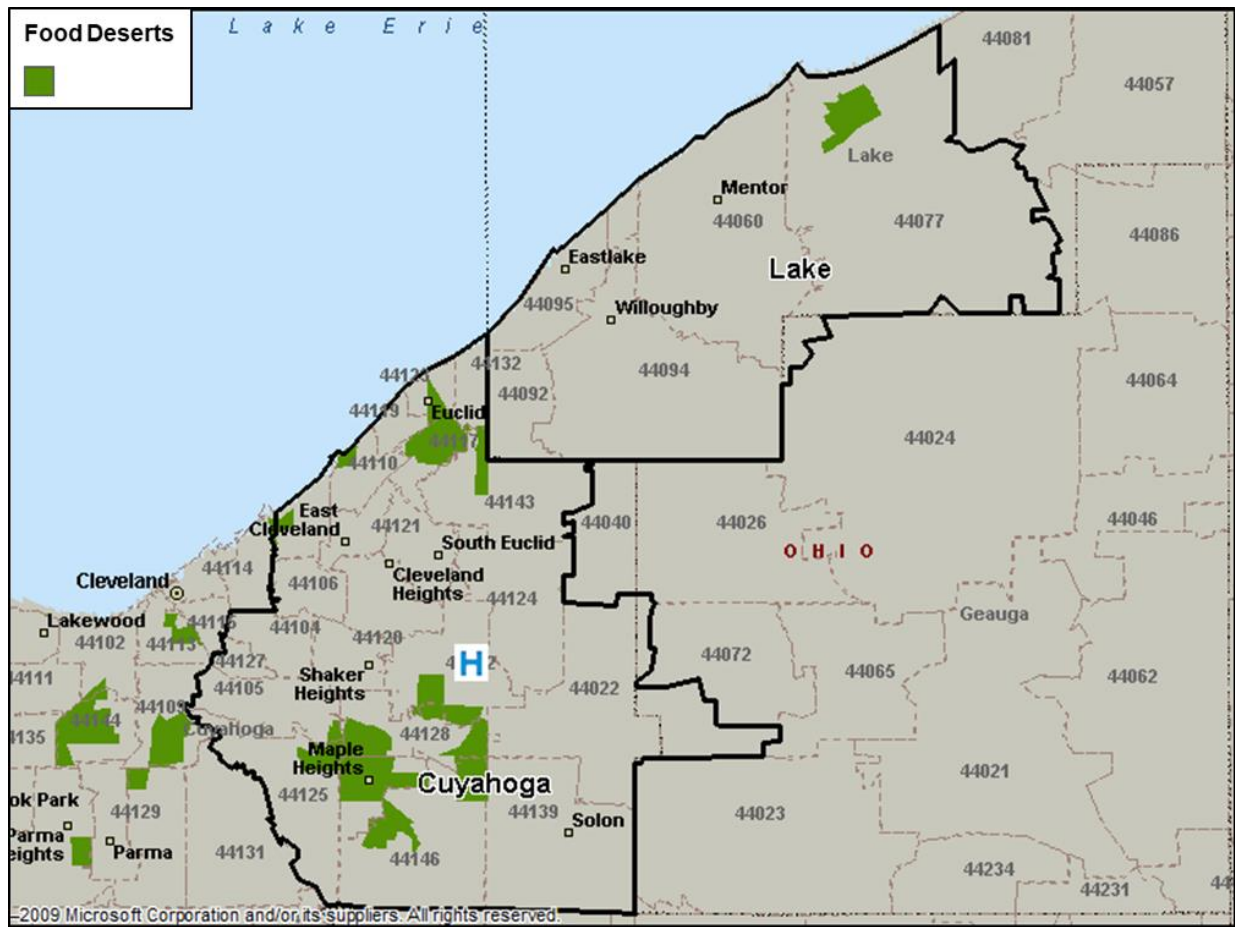
APPENDIX B – SECONDARY DATA ASSESSMENT

Observations

- The community ACSC rate for adult asthma was more than double the Ohio average. Rates for hypertension, uncontrolled diabetes, dehydration, congestive heart failure, and COPD were above the Ohio average by 50 percent or more.

Food Deserts

Exhibit 32: Food Deserts, 2017



Source: Microsoft MapPoint and U.S. Department of Agriculture, 2017.

Description

Exhibit 32 shows the location of “food deserts” in the community.

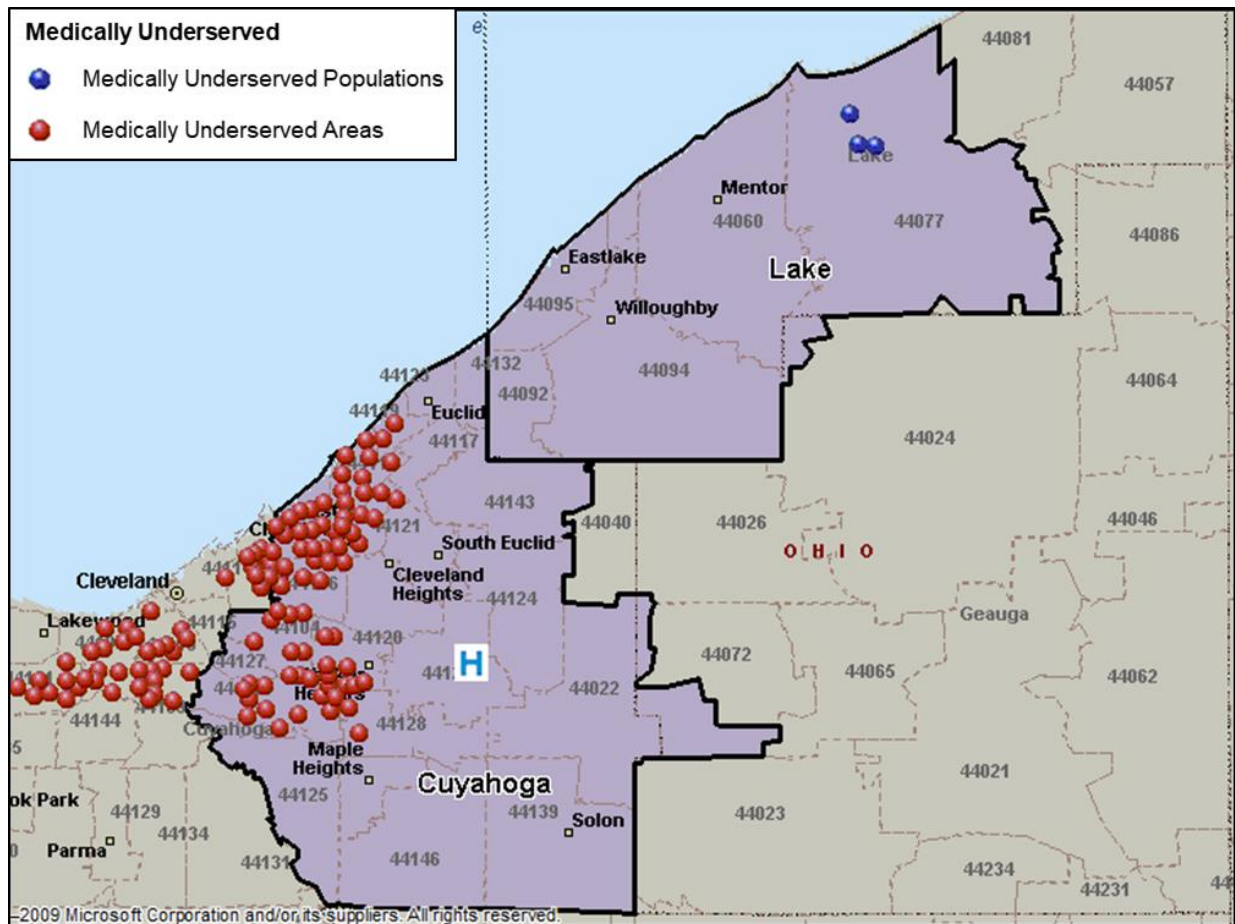
The U.S. Department of Agriculture’s Economic Research Service defines urban food deserts as low-income areas more than one mile from a supermarket or large grocery store and rural food deserts as more than 10 miles from a supermarket or large grocery store. Many government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these areas.

Observations

- Several census tracts in Cuyahoga and Lake counties have been designated as food deserts.

Medically Underserved Areas and Populations

Exhibit 33: Medically Underserved Areas and Populations, 2018



Source: Microsoft MapPoint and HRSA, 2018.

Description

Exhibit 33 illustrates the location of Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) in the community.

Medically Underserved Areas and Populations (MUA/Ps) are designated by 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.¹⁸ 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

¹⁸ Heath Resources and Services Administration. See <http://www.hrsa.gov/shortage/mua/index.html>

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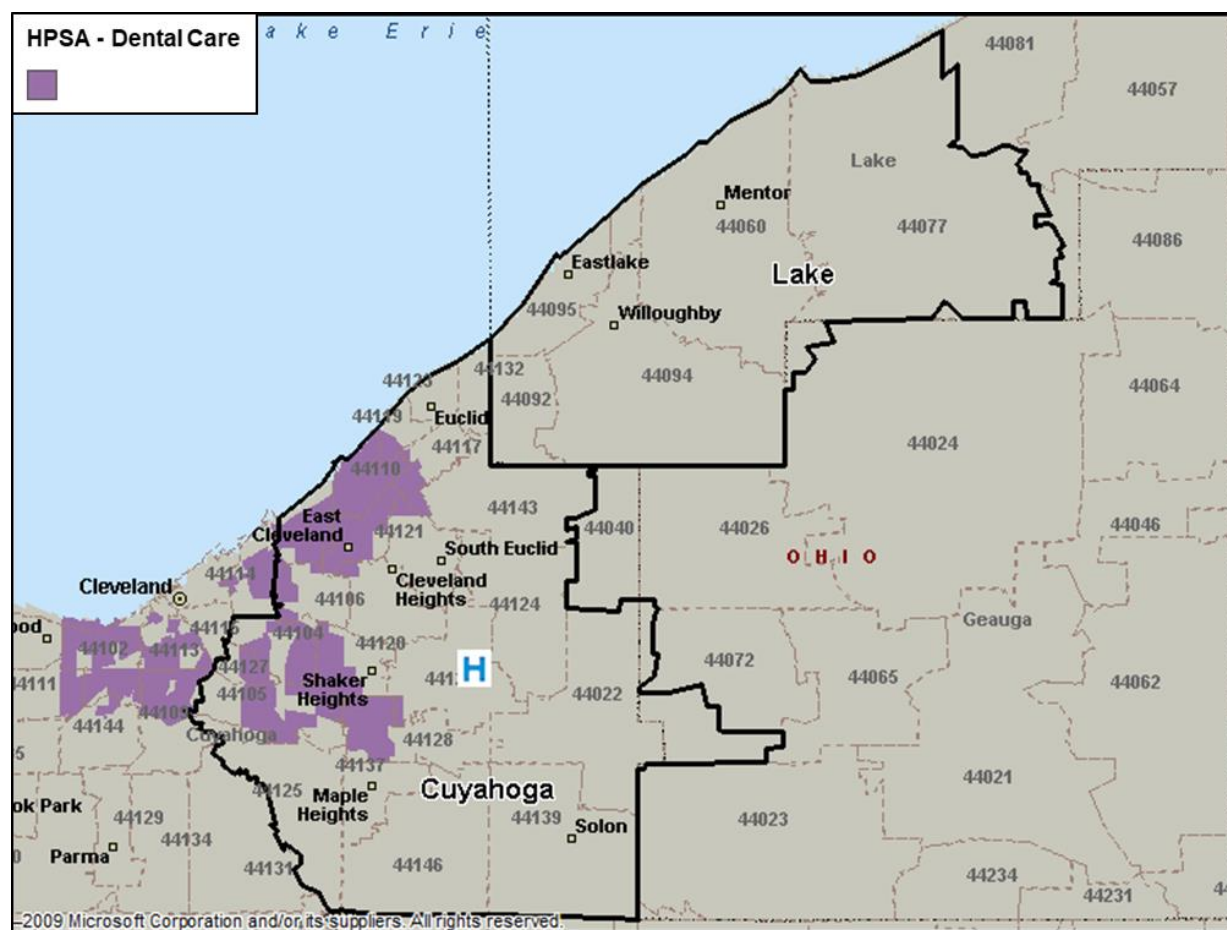
designation if “unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides.”¹⁹

Observations

- Several census tracts have been designated as areas where Medically Underserved Areas are present, particularly in Cuyahoga County.
- Several census tracts have been designated as areas where Medically Underserved Populations are present, particularly in Lake County.

¹⁹*Ibid.*

Exhibit 35: Dental Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Description

Exhibits 34 and 35 show the locations of federally-designated primary care and dental care HPSA Census Tracts.

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.

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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.”²⁰

Observations

- Census tracts in Cuyahoga County have been designated as primary care and dental care HPSAs, and census tracts in Lake County have been designated as primary care HPSAs.

²⁰ U.S. Health Resources and Services Administration, Bureau of Health Professionals. (n.d.). *Health Professional Shortage Area Designation Criteria*. Retrieved 2012, from <http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/index.html>

Findings of Other Assessments

In recent years, the Ohio Department of Health and local health departments in Cuyahoga and Lake counties conducted Community Health Assessments and developed Health Improvement Plans. This section identifies community health priorities found in that work. This CHNA report considers those findings when *significant* community health needs are specified.

State Health Improvement Plan, 2017-2019

The Ohio Department of Health prepared a 2017-2019 State Health Improvement Plan (SHIP), informed by its State Health Assessment. The SHIP established two overall health outcomes (improving health status and reducing premature death) and ten priority outcomes organized into three “topics,” as follows:

1. Mental Health and Addiction
 - Depression
 - Suicide
 - Drug dependency/abuse
 - Drug overdose deaths
2. Chronic Disease
 - Heart disease
 - Diabetes
 - Child asthma
3. Maternal and infant health
 - Preterm births
 - Low birth weight
 - Infant mortality

For each outcome, the plan calls for achieving equity for “priority populations” specified throughout the report, including low-income adults, Black (non-Hispanic males), and other specific groups.

The plan also addresses the outcomes through strategies focused on “cross-cutting factors,” namely:

1. Social Determinants of Health, e.g.,
 - Increase third grade reading proficiency,
 - Reduce school absenteeism,
 - Address high housing cost burden, and
 - Reduce secondhand smoke exposure for children.
2. Public Health System, prevention and health behaviors, e.g.,
 - Consume healthy food,
 - Reduce physical inactivity,
 - Reduce adult smoking, and

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- Reduce youth all-tobacco use.
- 3. Healthcare system and access, e.g.,
 - Reduce percent of adults who are uninsured,
 - Reduce percent of adults unable to see a doctor due to cost, and
 - Reduce primary care health professional shortage areas.
- 4. Equity strategies likely to decrease disparities for priority populations.

Cuyahoga County Community Health Assessment 2018

A Community Health Assessment (“CHA”) for Cuyahoga County was developed through a collaboration between Case Western Reserve University School of Medicine, the Cleveland Department of Public Health, the Cuyahoga County Board of Health, the Health Improvement Partnership- Cuyahoga, The Center for Health Affairs, and University Hospitals. Data sources that informed the 2018 Cuyahoga County CHA include interviews from community stakeholders, existing community perceptions gathered by other organizations, and secondary data from national, state and local sources.

Thirteen “Top Health Needs” were identified in the Cuyahoga County CHA, as follows:

Quality of Life

1. Poverty
2. Food insecurity

Chronic Disease

3. Lead poisoning
4. Cardiovascular disease
5. Childhood asthma
6. Diabetes

Health Behaviors

7. Flu vaccination rates
8. Tobacco use/COPD
9. Lack of physical activity

Mental Health and Addiction

10. Suicide/mental health
11. Homicide/violence/safety
12. Opioids/substance use disorders

Maternal/Child Health

13. Infant mortality

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Lake County Drug-Related Overdose Deaths: 2013 to 2017

The Lake County General Health District assessed drug overdose deaths and vital statistics data to identify populations most at risk and to inform development of community-based overdose prevention initiatives.

The study found that those most at risk include:

- Males and those 25 to 54 years of age.
- Individuals who are single, never married, or divorced.
- Those working in labor, maintenance, and trade occupations.

The study also found that:

- The vast majority (and a growing proportion) of substances contributing to overdose deaths were either illicit, or a combination of illicit and prescription substances.
- Deaths attributed to prescription-only substances have declined.
- The shift towards increased illicit and illicit/prescription combinations warrants increased concern because potency, impacts of drug combinations, and substance awareness are variable.

Preventing Falls among Older Adults

As the population in the community ages, the risk of falls among older adults also increases. According to the Ohio Department of Health, an older adult falls every minute on average in the state, resulting in three deaths daily, two hospitalizations each hour and an ED visit every six and one-half minutes. Falls are the leading cause of injury-related ED visits, hospitalizations, and deaths for Ohioans aged 65 and older, and the total lifetime costs of unintentional falls among those aged 65 years and older is estimated at nearly \$2 billion.²¹

The Centers for Disease Control and Prevention has identified conditions that are most likely to contribute to falling. These risk factors include: lower body weakness, vitamin D deficiency, difficulties with walking and balance, use of medicines (such as tranquilizers, sedatives, or antidepressants), vision problems, foot pain or poor footwear, and home hazards and dangers (such as broken or uneven steps and throw rugs or clutter).²²

To prevent falls, the CDC proposes the following steps to reduce risk factors:

²¹ <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/core-violence-injury-prevention-program/falls-among-older-adults>

²² <https://www.cdc.gov/homeandrecreationalsafety/falls/adultfalls.html>

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1. Talk to your doctor to evaluate your risk for falling and review your medicines to see if any may contribute to fall risk factors (dizziness or sleepiness);
2. Do leg strength and balance exercises;
3. Have your eyes checked by an eye doctor at least once a year; and
4. Make your home safer by eliminating trip risks, adding grab bars inside bathing facilities, putting railings on both sides of the stairs, and making sure your home is well lit.

Preventing Stroke

Stroke is another condition that leads to the need for rehabilitation services. The Centers for Disease Control and Prevention has identified different strategies for stroke prevention, organized into healthy living habits and other medical conditions prevention.²³

Healthy Living Habits

1. Healthy diet, as choosing healthy meal and snack options (eating foods low in saturated fats, trans fat, and cholesterol) can help prevent stroke;
2. Healthy weight, as being overweight or obese increases your risk;
3. Physical activity, helping you stay at a healthy weight and lowering your cholesterol and blood pressure levels;
4. No smoking; and
5. Limited Alcohol.

Other Medical Conditions Prevention

1. Check cholesterol, at least once every five years;
2. Control blood pressure;
3. Control diabetes;
4. Treat heart disease;
5. Comply with all medication regimes;
6. Continued dialogue with your doctor and health care team.

Cleveland Clinic has also studied stroke and its risk and prevention. Through this work, the Cleveland Clinic has identified the following stroke prevention strategies:²⁴

- Control your blood pressure;
- Find out if you have heart disease (especially an irregular heartbeat known as atrial fibrillation, or AF);
- Do not smoke;
- Lower your cholesterol;
- Control your blood sugar levels if you have diabetes;
- Eat a healthy diet;
- Get regular exercise;
- Limit your alcohol use; and

²³ https://www.cdc.gov/stroke/medical_conditions.htm

²⁴ <https://my.clevelandclinic.org/health/diseases/17519-stroke/prevention>

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- Control your weight.

Preventing Traumatic Brain Injuries (TBI)

Traumatic Brain Injuries (TBIs), caused by impact to the head that disrupts the normal function of the brain, lead to a substantial number of deaths and permanent disabilities annually. The Ohio Department of Health reports that in 2014, 2,327 people in Ohio died where TBI was reported as a cause of death, 6,768 were hospitalized with a TBI, and 111,757 were treated and released from emergency departments with a TBI.²⁵

According to the Centers for Disease Control and Prevention, the number of TBI-related emergency department visits, hospitalizations, and deaths increased by 53 percent from 2006 to 2014. In 2014, an average of 155 people in the United States died each day from injuries that include a TBI.²⁶ The CDC prescribes several strategies for preventing traumatic brain injuries, including:

- Using seat belts every time you ride in a vehicle;
- Never driving while under the influence of alcohol or drugs;
- Wearing a helmet or headgear for a multitude of activities, including for: bike riding, motorcycle riding, snowmobile, scooter, all-terrain vehicle, contact sports (football, ice hockey, boxing, etc.), using in-line skate, skateboarding, riding a horse, skiing or snowboarding, and others;
- Preventing older adult falls; and
- Making homes and play areas safer for children (through installing window guards to prevent falling out windows, safety gates on stairways, and making playgrounds with soft material underneath).

²⁵ https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/violence-injury-prevention-program/media/specialemphasisreport_tbi_in_ohio_2014

²⁶ https://www.cdc.gov/traumaticbraininjury/get_the_facts.html

APPENDIX C – COMMUNITY INPUT PARTICIPANTS

Individuals from a wide variety of organizations and communities participated in the interview process (**Exhibit 36**).

Exhibit 36: Interviewee Organizational Affiliations

Organization	
American Heart Association	Health Policy Institute of Ohio
Benjamin Rose Institute on Aging	Kent State School of Public Health
Boys & Girls Clubs of Cleveland	Lake County ADAMHS
Carmella Rose Health Foundation	Lake County Department of Health
Center for Community Solutions	NAMI
Center for Health Affairs	Ohio Department of Health
City of Cleveland	The Catholic Health Association
City of Cleveland - Department of Public Health	The Centers (for families and children)
Cleveland Foundation	The Gathering Place
Cuyahoga County Board of Health	United Cerebral Palsy
Cuyahoga Metropolitan Housing Authority	United Way of Greater Cleveland
Esperanza	United Way of Lake County
Fairhill Partners	Western Reserve Area Agency on Aging
Greater Cleveland Food Bank	

Beachwood

Implementation Strategy Report 2019

Cleveland Clinic Rehabilitation Hospital, Beachwood
3025 Science Park Drive
Beachwood OH 44122

2019 Community Health Needs Assessment
Implementation Strategy for Years 2020 - 2022
As required by Internal Revenue Code § 501(r)(3)

Date Approved by
Authorized Governing Body: May 1, 2020

Authorized Governing Body: The Board of Directors of Cleveland Clinic
Rehabilitation Hospitals, LLC

Contact: Cleveland Clinic
chna@ccf.org

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Cleveland Clinic Rehabilitation Hospital, Beachwood

2019 IMPLEMENTATION STRATEGY

I. INTRODUCTION AND PURPOSE

This written plan is intended to satisfy the requirements set forth in Internal Revenue Code Section 501(r)(3) regarding community health needs assessments and implementation strategies. The overall purpose of the implementation strategy process is to align the hospital's limited resources, program services and activities with the findings of the community health needs assessment ("CHNA").

A. Description of Hospital

Cleveland Clinic Rehabilitation Hospital – Beachwood (Beachwood Rehabilitation), is a 60-bed rehabilitation hospital, which opened in October 2017. The facility is located in Beachwood, Ohio, and is one of three rehabilitation hospitals operated as a joint venture between Cleveland Clinic health system and Select Medical in northeast Ohio. Beachwood Rehabilitation is an adult inpatient rehabilitation hospital offering comprehensive rehabilitation treatment for patients with complex neurological, medical, and musculoskeletal disabilities. The hospital features private rooms and the latest rehabilitation equipment to care for people with stroke, spinal cord injury, brain injury, and a variety of medical and surgical conditions. As part of a continuum of care, Beachwood Rehabilitation's goal is for each patient to reach his/her optimal level of physical, mental, and social functioning in the community.

At Beachwood Rehabilitation, Cleveland Clinic physicians manage our patients' complex medical needs, and around-the-clock Rehabilitation Nurses provide compassionate, evidence-based care to each patient. Physical, occupational, and speech therapists involve patients in an intensive and comprehensive treatment program for a minimum of three hours each day. Psychologists address cognitive, emotional, or behavioral issues. Case managers carefully coordinate the individual's stay and discharge plans. In addition, consulting services are available based on patient need.

Our unique combination of clinical expertise and education provided in a compassionate environment, serves patient needs while helping individuals and their families set goals and plan for the future.

Additional information on the hospital and its services is available at:
<https://my.clevelandclinic.org/locations/rehabilitation-hospital>.

II. COMMUNITY DEFINITION

For purposes of this report, Beachwood Rehabilitation's community is defined as 28 ZIP codes in Cuyahoga and Lake counties, Ohio, that accounted for over 73 percent of the hospital's recent inpatient volumes. The community was defined by considering the geographic origins of the hospital's discharges in calendar year 2017 and the hospital's principal functions as a rehabilitation hospital. The total population of Beachwood Rehabilitation's community in 2017 was approximately 763,000.

III. HOW IMPLEMENTATION STRATEGY WAS DEVELOPED

This Implementation Strategy was developed by a team of members of senior leadership at Beachwood Rehabilitation and Cleveland Clinic representing several departments of the organizations. Each year this team will review this Implementation Strategy to determine whether changes should be made to better address the health needs of its communities.

IV. SUMMARY OF THE COMMUNITY HEALTH NEEDS IDENTIFIED

Secondary data and key stakeholder interviews were reviewed to identify and analyze the needs identified by each source. The top health needs of the Beachwood Rehabilitation community are those that are supported both by secondary data and raised by key stakeholders. Needs identified in the 2019 CHNA are listed below by category.

Needs the Hospital Will Address:

- Access to Affordable Healthcare
- Chronic Disease Prevention and Management

Needs the Hospital Will Not Address:

- Socioeconomic Concerns

See the 2019 CHNA Cleveland Clinic Rehabilitation Hospital, Beachwood at www.clevelandclinic.org/CHNAREports.

V. NEEDS HOSPITAL WILL ADDRESS

Access to Affordable Healthcare

Access to affordable healthcare was identified as a significant need in the 2019 CHNA for Beachwood Rehabilitation. Access to care is challenging for some residents, particularly to primary care, mental health, dental care, addiction treatment services, and pain management services. Access barriers include cost, poverty, inadequate transportation, a lack of awareness regarding available services, and an undersupply of providers. Initiatives for 2020 – 2022 include:

Financial Assistance

Beachwood Rehabilitation provides medically necessary services to all patients regardless of race, color, creed, gender, country of national origin, or ability to pay. Beachwood Rehabilitation has a financial assistance policy that provides free or discounted care based on financial need. Financial assistance may also be provided to patients on a case-by-case basis under certain medical circumstances. The financial assistance policy can be found here: [Beachwood Rehabilitation Financial Assistance](#)

Awareness

The term “rehabilitation” is widely used to describe many different levels of care, which contributes to confusion among stakeholders. The rehabilitation offered at Beachwood Rehabilitation is defined by licensure and regulatory requirements. For patients, confusion surrounding rehabilitation can be a barrier to accessing the right level of care at the right time. Beachwood Rehabilitation will develop and share educational materials with patients, families, and providers to broaden community awareness and improve patients’ ability to choose the most appropriate care setting.

How to Access Care

A key cornerstone of inpatient rehabilitation is the prevention of stroke and brain injury through patient and community education. Clinical staff serving the Brain Injury and Stroke Program teams at Beachwood Rehabilitation will develop support groups and educational sessions for families and community residents. As part of this education and outreach, the hospital will provide information on post-acute care settings, how to access different levels of care, and community-based resources.

Chronic Disease Prevention and Management

Chronic disease prevention and the management of chronic disease were identified as needs within the 2019 CHNA for Beachwood Rehabilitation. Chronic diseases, including addiction and mental health, heart disease, hypertension, obesity, diabetes, COPD, and others are prevalent in the community served by the hospital. Initiatives for 2020 – 2022 include:

- Each patient is followed by a physician's service throughout their stay at the rehabilitation hospital. Physicians educate patients on their overall healthcare and on potential risk factors that may affect their recovery. They also educate patients on their past medical history and how their existing conditions may be impacted by their new injury. There are consulting physicians including but not limited to cardiologists, pulmonologists, and nephrologists that are available for consultation regarding secondary diagnoses or complications related to the new injury/illness. Additionally, through Beachwood Rehabilitation's linkage with Cleveland Clinic, patients have access to comprehensive diagnostic, medical, and surgical services.
- Physical and functional impairments may be exacerbated by obesity. To encourage weight loss, the clinical team, which includes the attending physician, therapy, and nursing teams, provide education and training to patients to increase mobility and activity. Discussions regarding healthy eating and interpretation of food labels may be initiated as part of the therapy care plan.
- Continuing education is routinely provided to nursing and pharmacy staff specific to diabetes medication and diabetic management.
- Depression and emotional changes are common following illness or injury. These occur as primary effects of the illness, as in the case of stroke, or as secondary reactions to new disabilities that may have commonly pre-existed the event.
 - Psychologists are capable of evaluation and psychotherapeutic treatment of a variety of disorders. The attending psychiatrist often will start pharmacological intervention with antidepressant medications, mood stabilizers, and anxiolytics. It is important to use medications that can improve recovery and to avoid and/or discontinue those medications that have been shown or hypothesized to impede recovery.
 - Therapists and nursing staff also provide emotional support, encouragement, and hope. It is also essential to use non-pharmacological techniques to help with these psychological disorders.
 - Recreational therapy is essential to help add some "downtime" to the rigors of the therapy schedule as well as to help patients realize and replicate common activities of daily living that will need to be performed after discharge.

Chronic Disease Prevention and Management (continued)

- Beachwood Rehabilitation is committed to preventing deaths from opioid overdose by improving opioid prescribing practices, reducing exposure to opioids, and preventing misuse. The hospital has formalized an internal opioid management process for reviewing healthcare prescribing, data collection, and the use of non-pharmacologic treatment for pain.
 - Healthcare providers screen all patients for pain on admission and develop a pain management plan based on the patient's input, history, and desired goals.
 - Appropriate referrals to community programs, such as AA, NA, or mental health resources are delivered by case management and psychology staff.
- The population in Beachwood Rehabilitation's community is expected to age. Providing an effective continuum of care, including rehabilitation services, for those over 65 years of age in the future will be challenging. Beachwood Rehabilitation will leverage relationships with providers across the continuum of post-acute care in order to cross-refer, provide patient education, and support self-advocacy. Recognizing the health literacy needs of the community and the wide array of post-acute care options available, Beachwood Rehabilitation has developed a large network of clinical liaisons throughout the community to assist elderly consumers in understanding their post-acute care options. The hospital offers facility tours and coordinates with our acute care case management partners.
- Falls represent a particular concern for our elderly populations. Beachwood Rehabilitation has developed evidence-based falls prevention education for internal and external stakeholders including information on environmental modifications, balance exercises, and home safety assessments. In addition to focusing on falls prevention, the hospital also provides educational materials detailing how to reduce the likelihood of injury should a fall occur.
- Tobacco use is a risk factor for several medical conditions commonly treated in the inpatient rehabilitation setting. Smoking can also increase the risk of disease recurrence and presents a significant barrier to healthy living. Smoking cessation aligns well with Beachwood Rehabilitation's goals for our patients. Since Beachwood Rehabilitation is a smoke free campus, inpatients have a head start on smoking cessation following discharge. A smoking cessation program is more than just nicotine replacement therapy (NRT). Though NRT addresses the physiologic need for nicotine, the psychological need to smoke must also be of focus. Patients are more likely to succeed in quitting when they receive both pharmacologic therapy and counseling. A formalized smoking cessation program will be developed including resources and education that can be provided to patients during an inpatient rehabilitation stay. Patients will also be connected with organizations in the community for ongoing follow up and support. Low-cost or free smoking cessation resources will also be investigated.

VI. NEEDS HOSPITAL WILL NOT ADDRESS

Socioeconomic Concerns

The 2019 CHNA for Beachwood Rehabilitation identified poverty and other social determinants of health as significant concerns. Poverty has significant implications for health, including the ability for households to access health services, afford basic needs, and benefit from prevention initiatives. Problems with housing, educational achievement, and access to workforce training opportunities also contribute to poor health.

Due to the specialized nature of the clinical care provided by Beachwood Rehabilitation, and the facility's focus on serving patients requiring rehabilitation following an illness or injury, the facility has chosen not to address socioeconomic concerns at the community level within the 2020-2022 Implementation Strategy. Beachwood Rehabilitation will rely on other governmental and/or nonprofit organizations within the community to commit resources to addressing broad socioeconomic concerns. Although Beachwood Rehabilitation will not address this need directly, it does support governmental and other organizations in their efforts to impact poverty and other social determinants of health.

For more information regarding Cleveland Clinic - Select Medical Community Health Needs Assessments and Implementations Strategy Reports, please visit www.clevelandclinic.org/CHNAREports or contact CHNA@ccf.org.

