Cleveland Clinic
Lutheran Hospital

Community Health Needs Assessment

2019

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Introduction

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

Lutheran is a 194 staffed bed hospital located in Cleveland, Ohio. Lutheran offers quality medical care, cutting-edge technology and advanced research and surgery. From primary care physicians to leading specialists, Lutheran Hospital offers expert care in areas such as Orthopaedics, Spine, Pain Management, General Surgery, Behavioral Health, Alcohol and Drug Recovery, Wound Care, Lab and Imaging Services, and Emergency Medicine. Additional information on the hospital and its services is available at: https://my.clevelandclinic.org/locations/lutheran-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/.

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.

Each Cleveland Clinic hospital also is dedicated to the communities it serves. Each Cleveland Clinic hospital 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.

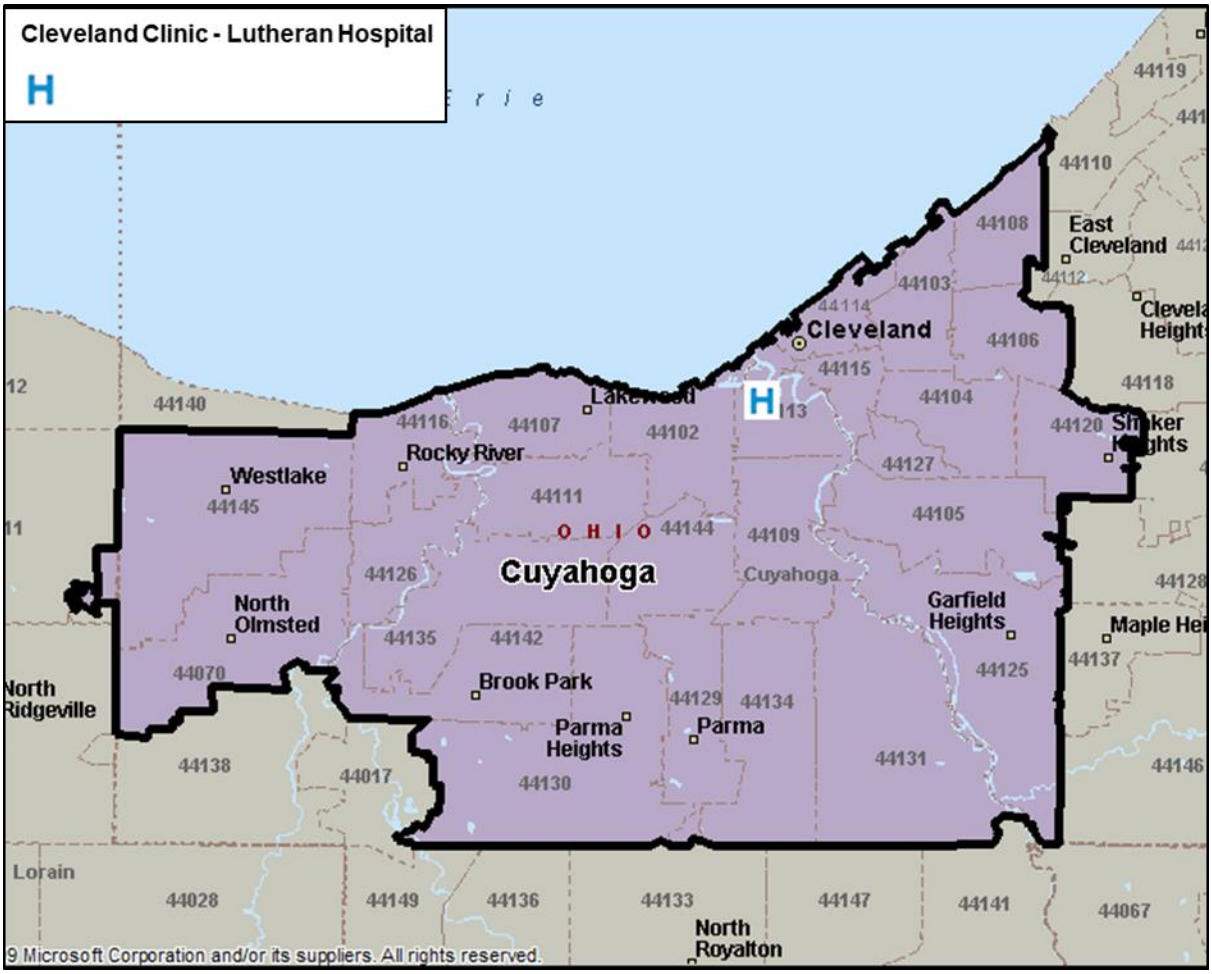
These assessments are conducted using widely accepted methodologies to identify the significant health needs of a specific community. The assessments also are conducted to comply with federal and state laws and regulations.

Community Definition

For purposes of this report, Lutheran's community is defined as 26 ZIP codes in Cuyahoga County, Ohio, accounting for over 63 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. The total population of Lutheran's community in 2017 was 702,116.

The following map portrays the community served by Lutheran.



Significant Community Health Needs

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

- Access to Affordable Health Care
- Addiction and Mental Health
- Chronic Disease Prevention and Management
- Infant Mortality
- Medical Research and Health Professions Education
- 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, and addiction treatment services. Access barriers include cost, poverty, a lack of awareness regarding available services, an undersupply of providers, a lack of addiction treatment and dental services, and inadequate transportation.

Thirteen ZIP codes (home to 309,000 persons or 44 percent of those living in the community) have been identified as comparatively high need by the Dignity Health Community Need Index™. Admissions for ambulatory care sensitive conditions from these ZIP codes have been comparatively high.

Federally-designated Medically Underserved Areas (MUAs), Primary Care Health Professional Shortage Areas (HPSAs), and Dental Care HPSAs are present. The Lutheran community and Ohio as a whole need more health care professionals to meet current and future access needs.[1] (Sources: Exhibits 4, 5, 22, 26, 38, 39, and 40, other assessments, key stakeholder interviews).

Addiction and Mental Health

Drug abuse, particularly the abuse of opioids, is a primary concern of many key stakeholder interviewees. 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 County have been above average.

The Ohio State Health Improvement Plan (SHIP) and Cuyahoga County Community Health Assessment (CHA) emphasize the need to address the growing opioid epidemic and to reduce drug overdose deaths. (Sources: Exhibit 27, key stakeholder interviews, other assessments).

Cuyahoga County ranked 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: Exhibits 25, 26, and 27, other assessments).

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, and the overall depression incidence rate is higher in Lutheran community ZIP codes than the Ohio average. Access to mental health care is challenging due to cost, insurance benefit limits, and an undersupply of psychiatrists.

[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.

The Ohio SHIP and the Cuyahoga County CHA 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 9, 25, 26, key stakeholder interviews, other assessments).

Chronic Disease Prevention and Management

Chronic diseases, including heart disease, hypertension, obesity, diabetes, young adult asthma, chronic obstructive pulmonary disease (COPD), and others are prevalent in the Lutheran community.

Heart disease and hypertension are leading causes of death. Lutheran's community benchmarks poorly for the incidence of diabetes, high blood pressure, high cholesterol, COPD, and for hospital admissions for hypertension and for congestive heart failure. Higher hypertension 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 CHA. (Sources: Exhibits 27, 34, 36, other assessments).

Key stakeholders also identified obesity as a persistent and growing 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 Lutheran's community, the rate of per-capita admissions for asthma (young adults) has been 106 percent above the Ohio average. Rates have been 61 percent higher for hypertension, 59 percent higher for COPD, and 51 percent higher for "uncontrolled diabetes" (Source: Exhibit 36).

The Ohio SHIP and Cuyahoga County CHA both identify obesity, diabetes, and heart disease (and reducing physical inactivity and enhancing nutrition) as priorities. (Source: other assessments).

Key stakeholders emphasized the importance of changing unhealthy behaviors. The demand for exercise, nutrition, and tobacco cessation programs has been identified, as have health education and literacy programs.

Smoking rates are comparatively high. The Ohio State 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 CHA, health behaviors that need attention include: flu vaccination rates, tobacco use, and physical inactivity. (Sources: Exhibit 26, other assessments, key stakeholder interviews).

Lutheran'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 risk

for falls, food insecurity, transportation issues, and unsafe or inadequate housing. Social isolation contributes to poor physical and mental health conditions.

Infant Mortality

Cuyahoga County compare unfavorably to Ohio averages for most maternal and child health indicators. The infant mortality rate in Cuyahoga County has been well above Ohio and U.S. averages. Rates have been particularly high for Black infants; key stakeholders frequently mentioned racial disparities as an important concern.

The Ohio SHIP established ten "priority outcomes," three of which are addressing: preterm births, low birth weight, and infant mortality. The Cuyahoga County Community Health Assessment established "maternal and infant health" and reducing infant mortality as priorities. (Sources: Exhibits 31 and 32, other assessments).

Medical Research and Health Professions Education

The presence of Health Professional Shortage Areas and workforce studies indicate that more trained health professionals are needed locally, regionally, and nationally. Research conducted by Cleveland Clinic has improved health for community members through advancements in new clinical techniques, devices, and treatment protocols in such areas as cancer, heart disease, and diabetes. More research can address these and other community health needs.

Socioeconomic Concerns

Key stakeholders 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 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]

[2] https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/aboutace.html
[3] https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/ACEs/state/OH

More than 50 percent of rented households have been designated as "rent burdened," a level above the Ohio average. In three lower-income ZIP codes, 60 percent or more of rented households devote over 30 percent of household income to rent.

Cuyahoga County has had a higher poverty rate than Ohio and the U.S. Across both Cuyahoga County and Ohio, 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.

Social determinants of health are particularly problematic in Cuyahoga County, including poverty, unemployment, affordable housing, violent crime, and high-school graduation rates.

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 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: Exhibits 14, 15, 16, 17, 19, 20, 21, 25, key stakeholder interviews, other assessments).

[4] https://www.neoch.org/2019-overview-of-the-numbers

DATA AND ANALYSIS

Definition of Community Assessed

This section identifies the community that was assessed by Lutheran. 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 mission, target populations, principal functions, and strategies.

On that basis, Lutheran's community is defined as 26 ZIP codes in Cuyahoga County, Ohio. These ZIP codes accounted for 63 percent of the hospital's recent inpatient volumes (**Exhibit 1**).

Exhibit 1: Lutheran Inpatient Discharges by ZIP Code, 2017

ZIP Code	County	City/Town	Discharges	Percent of Discharges
44102	Cuyahoga	Cleveland	1,040	11.8%
44109	Cuyahoga	Cleveland	578	6.6%
44107	Cuyahoga	Lakewood	571	6.5%
44113	Cuyahoga	Cleveland	492	5.6%
44111	Cuyahoga	Cleveland	406	4.6%
44135	Cuyahoga	Cleveland	284	3.2%
44103	Cuyahoga	Cleveland	187	2.1%
44131	Cuyahoga	Independence	186	2.1%
44144	Cuyahoga	Cleveland	159	1.8%
44114	Cuyahoga	Cleveland	151	1.7%
44105	Cuyahoga	Cleveland	149	1.7%
44070	Cuyahoga	North Olmsted	122	1.4%
44145	Cuyahoga	Westlake	121	1.4%
44130	Cuyahoga	Cleveland	121	1.4%
44126	Cuyahoga	Cleveland	116	1.3%
44120	Cuyahoga	Cleveland	109	1.2%
44134	Cuyahoga	Cleveland	104	1.2%
44116	Cuyahoga	Rocky River	103	1.2%
44106	Cuyahoga	Cleveland	98	1.1%
44108	Cuyahoga	Cleveland	96	1.1%
44104	Cuyahoga	Cleveland	91	1.0%
44125	Cuyahoga	Cleveland	75	0.9%
44129	Cuyahoga	Cleveland	71	0.8%
44115	Cuyahoga	Cleveland	50	0.6%
44142	Cuyahoga	Brook Park	44	0.5%
44127	Cuyahoga	Cleveland	27	0.3%
Community ZIP Codes			**5,551**	**63.0%**
All Other ZIP Codes			3,254	37.0%
All ZIP Codes			8,805	100.0%

Source: Analysis of Cleveland Clinic Discharge Data, 2018.

The community includes portions of Cuyahoga County. The total population of this community in 2017 was approximately 702,000 persons (**Exhibit 2**).

Exhibit 2: Community Population, 2017

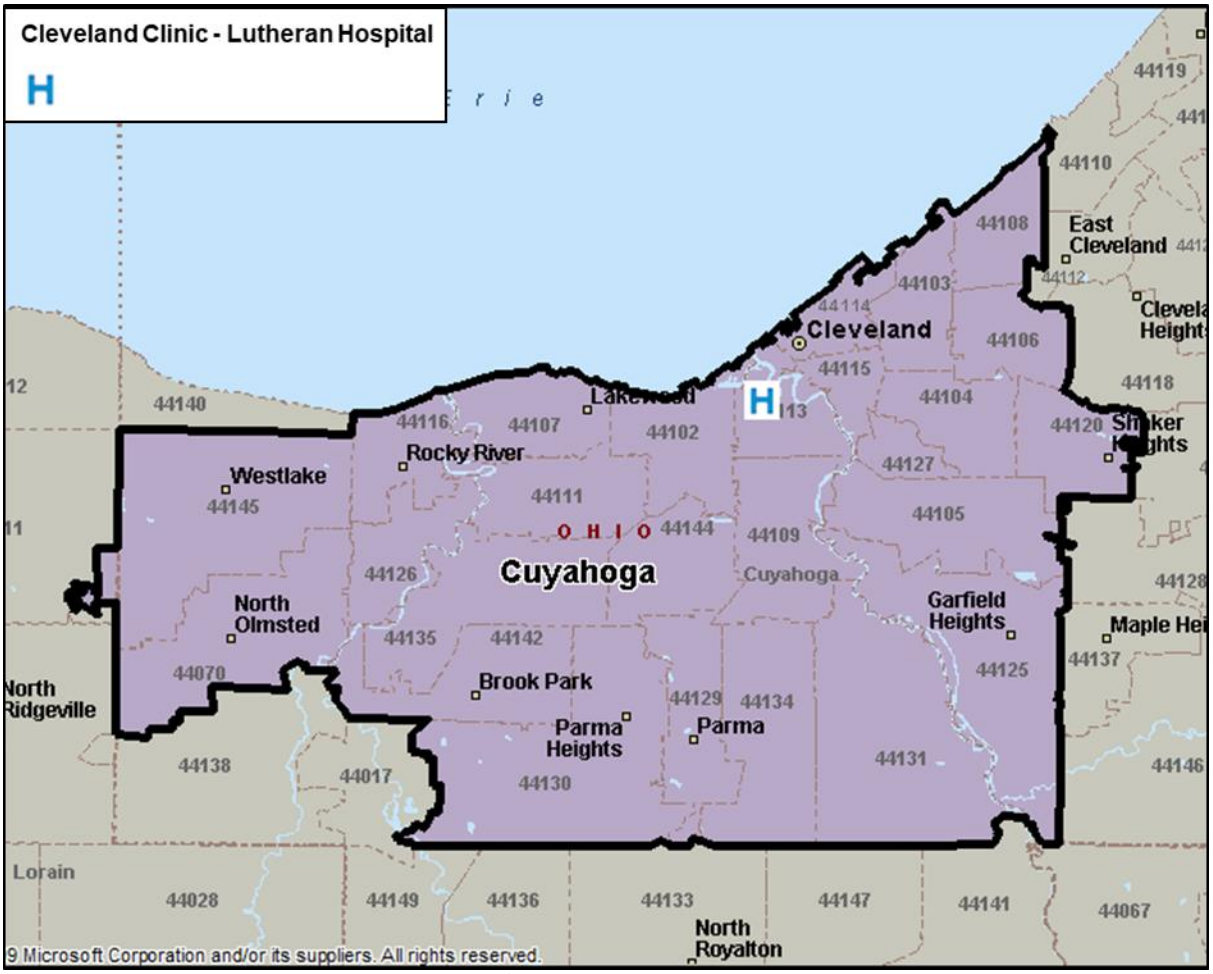
ZIP Code	County	City/Town	Total Population 2017	Percent of Total Population 2017
44107	Cuyahoga	Lakewood	51,600	7.3%
44130	Cuyahoga	Cleveland	49,176	7.0%
44102	Cuyahoga	Cleveland	42,397	6.0%
44111	Cuyahoga	Cleveland	38,260	5.4%
44109	Cuyahoga	Cleveland	38,259	5.4%
44134	Cuyahoga	Cleveland	37,822	5.4%
44105	Cuyahoga	Cleveland	36,906	5.3%
44120	Cuyahoga	Cleveland	35,517	5.1%
44145	Cuyahoga	Westlake	33,048	4.7%
44070	Cuyahoga	North Olmsted	32,080	4.6%
44129	Cuyahoga	Cleveland	28,222	4.0%
44125	Cuyahoga	Cleveland	27,179	3.9%
44106	Cuyahoga	Cleveland	26,981	3.8%
44135	Cuyahoga	Cleveland	26,332	3.8%
44108	Cuyahoga	Cleveland	23,491	3.3%
44104	Cuyahoga	Cleveland	22,061	3.1%
44144	Cuyahoga	Cleveland	20,770	3.0%
44116	Cuyahoga	Rocky River	20,273	2.9%
44113	Cuyahoga	Cleveland	20,094	2.9%
44131	Cuyahoga	Independence	19,919	2.8%
44142	Cuyahoga	Brook Park	18,312	2.6%
44103	Cuyahoga	Cleveland	16,808	2.4%
44126	Cuyahoga	Cleveland	15,988	2.3%
44115	Cuyahoga	Cleveland	9,092	1.3%
44114	Cuyahoga	Cleveland	6,420	0.9%
44127	Cuyahoga	Cleveland	5,109	0.7%
Community Total			**702,116**	**100.0%**

Source: Truven Market Expert, 2018.

The hospital is located in Cleveland, Ohio (ZIP code 44113).

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

Exhibit 3: Lutheran Community



Source: Microsoft MapPoint and Cleveland Clinic, 2018.

Secondary Data Summary

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

Demographics

Population characteristics and trends directly influence community health needs. The total population in the Lutheran community is expected to decrease 1.2 percent from 2017 to 2022. However, the population 65 years of age and older is anticipated to grow by 12.0 percent during that time. This development should contribute to growing need for health services, since older individuals typically need and use more services than younger persons.

Lutheran serves a geographic area that includes 26 ZIP codes located within Cuyahoga County. Substantial variation in demographic characteristics (e.g., race/ethnicity and income levels) exists across this area.

In 2017, over 90 percent of the population in two ZIP codes was Black. These ZIP codes, located in eastern parts of the community, also are associated with comparatively high poverty rates and comparatively poor health status.

In three ZIP codes, the percent of the Black population was under four 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.

Across both Cuyahoga County and Ohio, 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 Lutheran's community, particularly in areas proximate to and east of the hospital. Most of these same areas are where over 50 percent of rented households are "rent burdened."

After several years of improvement, between 2015 and 2017, the unemployment rate in Cuyahoga County increased. As of 2017, the rate in Cuyahoga County was above Ohio and national averages.

Notably, crime rates in Cuyahoga County have been above Ohio averages. The rate of violent crime was particularly high.

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 four percent of those living in the community served by Lutheran 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).

Thirteen of the 19 ZIP codes in the Lutheran community scored in the "highest need" CNI category. Six ZIP codes scored at 5.0, the highest value possible. One ZIP code scored in the "lowest need" category.

As shown in **Exhibit 4**, ZIP codes found to be higher need are associated with higher rates of poverty, a higher proportion of the Black population, more problematic BRFSS indicators (e.g., rates of smoking and high blood pressure), and higher rates of admissions for ACSCs.

Exhibit 4: 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	13	3	4	5	1
Total Persons	309,467	86,209	166,820	119,701	19,919
Poverty Rate	38%	18%	11%	7%	4%
% African American	51%	18%	4%	2%	1%
BRFSS Indicators					
% Arthritis	26.5%	26.4%	23.8%	23.0%	21.8%
% Asthma	14.2%	12.8%	11.8%	10.6%	9.1%
% Depression	21.6%	21.1%	19.3%	17.3%	14.5%
% Diabetes	22.0%	19.2%	18.0%	15.8%	15.7%
% Heart Disease	9.5%	10.9%	11.8%	10.8%	11.5%
% Heart Failure	3.6%	3.8%	4.0%	4.1%	3.5%
PQI Rates					
COPD	1,569	1,080	741	794	387
Congestive Heart Failure	983	806	600	620	754
Diabetes long-term complications	225	163	156	108	84
Bacterial pneumonia	265	249	236	312	296
Dehydration	309	307	231	283	157
Diabetes short-term complications	148	110	59	54	72
Urinary tract infection	238	208	224	283	217
Hypertension	184	79	55	70	54
Low birth weight (per 1,000 births)	22	12	7	5	-
Young adult asthma	113	74	16	47	-
Lower-extremity amputation among patients with diabetes	65	42	47	33	30

Source: Verité Analysis.

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).

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.

The 2018 *County Health Rankings* shows that each county has unique community health issues. While several indicators compared unfavorably to the Ohio average, the rate of violent crime in Cuyahoga County compared particularly unfavorably.

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.

Cuyahoga County benchmarks most poorly for:

- Percent low birth weight births
- Percent of adults who smoke
- Percent of driving deaths alcohol-impaired
- Air pollution (average daily PM2.5)
- 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 of 36.8. Additionally, Cuyahoga County benchmarks unfavorably for a variety of conditions related to healthy lifestyles, including diabetes, cardiovascular disease, and hypertensive heart disease.

In Cuyahoga County, incidence rates for sexually transmitted diseases have been significantly higher than Ohio averages.

Cuyahoga County compares unfavorably to Ohio averages for most maternal and child health indicators. The infant mortality rate in Cuyahoga County has been above Ohio and U.S. averages. As documented by many, rates have been particularly high for Black infants across Ohio.

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, depression, diabetes, high blood pressure, high cholesterol, smoking, COPD, and back pain were more prevalent in ZIP codes served by Lutheran 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 Lutheran community ZIP codes have exceeded Ohio averages for nearly every condition, with particularly high rates for young adult asthma, hypertension, COPD, uncontrolled diabetes, and diabetes complications.

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, including in areas proximate to the hospital.

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 designated as medically underserved areas, particularly in areas proximate to the hospital and the northeast.

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 County have been designated as primary care HPSAs and as dental care HPSAs.

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

Relevant Findings of Other CHNAs

In recent years, the Ohio Department of Health and the local health department in Cuyahoga County conducted Community Health Assessments and developed Health Improvement Plans. 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 services
- Health disparities

The Lutheran 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 Lutheran CHNA places more emphasis on health needs of a growing senior population and includes more information on preventable hospital admissions.

Significant Indicators

Exhibit 5 presents many of the indicators discussed in the above secondary data summary. An indicator is considered *significant* if 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 a series of peer counties was 27 percent. The last column of the **Exhibit 5** 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, community counties' peers were selected because they are similar in terms of population density, household incomes, and related characteristics. Benchmarks were selected based on judgments regarding how best to assess each data source.

Exhibit 5: Significant Indicators

Indicator	Area	Value	Benchmark		Exhibit
			Value	Area	
65+ Population change, 2017-2022	Community ZIP codes	12.0%	-1.2%	Total Community Population	9
Poverty rate, 2012-2016	Cuyahoga County	18.5%	15.4%	Ohio	14
Poverty rate, 2012-2016	"Highest Need" ZIP codes	38.0%	3.8%	"Lowest Need" ZIP codes	4
% of Population Black, 2017	"Highest Need" ZIP codes	51.3%	0.7%	"Lowest Need" ZIP codes	4
Poverty rate, Black, 2012-2016	Cuyahoga County	33.3%	18.5%	Cuyahoga County, Total	15
Percent children in poverty	Cuyahoga County	26.4%	20.0%	United States	25
Unemployment rate	Cuyahoga County	5.9%	4.4%	United States	17
Percent ninth-grade cohort that graduates in four years	Cuyahoga County	74.8%	83.0%	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	50.1%	46.7%	Ohio	20
Violent Crimes per 100,000	Cuyahoga County	695	306	Ohio	19
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
Infant mortality rate	Cuyahoga County	9.3	7.4	Ohio	32
Infant mortality rate, Black	Cuyahoga County	16.3	5.2	Cuyahoga County, White	32
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
Chlamydia rate per 100,000	Cuyahoga County	720	479	United States	25
HIV rate per 100,000	Cuyahoga County	373	200	Ohio	30
Percent of adults that smoke	Cuyahoga County	20.6%	16.2%	Peer Counties	26
Cancer incidence rate per 100,000	Cuyahoga County	483	462	Ohio	29
Percent of adults obese	Cuyahoga County	29.9%	28.0%	United States	25
Preventable admissions (for ambulatory care sensitive conditions) per 1,000 Medicare enrollees	Cuyahoga County	53	49	Peer Counties	26
PQI: Young adult asthma rate per 100,000	Community ZIP codes	74	36	Ohio	36
PQI: Hypertension per 100,000	Community ZIP codes	116	72	Ohio	36
PQI: COPD per 100,000	Community ZIP codes	1,108	696	Ohio	36
PQI: Uncontrolled diabetes per 100,000	Community ZIP codes	76	50	Ohio	36
Average Daily PM 2.5 (Particulate Matter, a measure of air pollution)	Cuyahoga County	12.9	10.6	Peer Counties	26

Source: Verité Analysis.

Primary Data Summary

Primary data were gathered by conducting interviews with key stakeholders (*See* Appendix C for additional information on those providing input). Twenty-eight (28) interviews were conducted with individuals regarding significant community health needs in the community served by Lutheran 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.
- **Obesity** (and its contributions to chronic diseases including diabetes, hypertension, and cardiovascular diseases) 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 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.
- **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.
- **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.

- **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.

- **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.

- 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.

- Interviewees stated that the community needs more **health education** and better understanding of the health care system. Many 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. Many in the community demand prevention initiatives. Additionally, the need for **better referral mechanisms and a continuum of care** was discussed by several interviewees.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

This section identifies other facilities and resources available in the community served by Lutheran 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 24 FQHC sites operating in the Lutheran community (**Exhibit 6**).

Exhibit 6: Federally Qualified Health Centers, 2018

County	ZIP Code	Site Name	City	Address
Cuyahoga	44114	Asian Services In Action	Cleveland	3631 Perkins Ave Ste 2aw
Cuyahoga	44114	Asian Services In Action - International Community Health Center	Cleveland	3820 Superior Ave E Ste
Cuyahoga	44104	Carl B. Stokes Clinic	Cleveland	6001 Woodland Ave
Cuyahoga	44115	Central Neighborhood Clinic	Cleveland	2916 Central Ave
Cuyahoga	44102	Detroit Shoreway Community Health Center	Cleveland	6412 Franklin Blvd
Cuyahoga	44103	Health and Wellness East	Cleveland	4400 Euclid Ave
Cuyahoga	44103	Hough Health Center	Cleveland	8300 Hough Ave
Cuyahoga	44106	Magnolia Clubhouse	Cleveland	11101 Magnolia Dr
Cuyahoga	44105	Miles Broadway Health Center	Cleveland	9127 Miles Ave
Cuyahoga	44114	Mobile Clinic	Cleveland	1530 Saint Clair Ave NE
Cuyahoga	44102	Neighborhood Family Practice Administrative Annex	Cleveland	3600 Ridge Rd
Cuyahoga	44113	Neighborhood Family Practice Administrative Office	Cleveland	4115 Bridge Ave
Cuyahoga	44102	Neighborhood Family Practice Mobile Van 1	Cleveland	3569 Ridge Rd
Cuyahoga	44103	NEON Administration Center	Cleveland	4800 Payne Ave
Cuyahoga	44103	Norwood Health Center	Cleveland	1468 E 55th St
Cuyahoga	44135	Puritas Community Health Center (Relocation)	Cleveland	14625 Puritas Ave
Cuyahoga	44102	Ridge Community Health Center	Cleveland	3569 Ridge Rd
Cuyahoga	44113	Riverview Towers Clinic	Cleveland	1795 W 25th St
Cuyahoga	44105	Southeast Health Center	Cleveland	13301 Miles Ave
Cuyahoga	44114	St. Clair Clinic	Cleveland	1530 Saint Clair Ave NE
Cuyahoga	44106	Superior Health Center	Cleveland	12100 Superior Ave
Cuyahoga	44106	The Free Medical Clinic of Greater Cleveland	Cleveland	12201 Euclid Ave
Cuyahoga	44113	Tremont Community Health Center	Cleveland	2358 Professor Ave
Cuyahoga	44111	W. 117 Community Health Center	Cleveland	11709 Lorain Ave

Source: HRSA, 2018.

Data published by HRSA indicate that in 2017, FQHCs served approximately 23 percent of uninsured, Lutheran community residents and 17 percent of the community's Medicaid recipients.[6] In Ohio, FQHCs served about 15 percent of both population groups. Nationally,

[6] HRSA refers to these statistics as FQHC "penetration rates."

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 7 presents information on hospital facilities located in the Lutheran community.

Exhibit 7: 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
44111	Cuyahoga	Cleveland	Fairview Hospital	18101 Lorain Avenue
44113	Cuyahoga	Cleveland	Lutheran Hospital	1730 West 25th Street
44125	Cuyahoga	Cleveland	Marymount Hospital	12300 Mccracken Road
44109	Cuyahoga	Cleveland	MetroHealth System	2500 Metrohealth Drive
44129	Cuyahoga	Cleveland	Parma Community General Hospital	7007 Powers Boulevard
44106	Cuyahoga	Cleveland	Rainbow Babies And Childrens Hospital	11100 Euclid Avenue
44120	Cuyahoga	Cleveland	Select Specialty Hospital- Cleveland Fairhill	11900 Fairhill Road
44130	Cuyahoga	Cleveland	Southwest General Health Center	18697 Bagley Road
44145	Cuyahoga	Westlake	St John Medical Center	29000 Center Ridge Road
44115	Cuyahoga	Cleveland	St Vincent Charity Medical Center	2351 East 22nd Street
44106	Cuyahoga	Cleveland	UH Cleveland Medical Center	11100 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 Lutheran. United Way 2-1-1 Ohio maintains a large, online database to help refer individuals in need to health and human services in Ohio. This is a service of the Ohio Department of Social Services and is provided in partnership with the Council of Community Services, The Planning Council, and United Way chapters in Cleveland. United Way 2-1-1 Ohio contains information on organizations and resources in the following categories:

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

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

APPENDIX A – 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 law[8] 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

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 data[10] 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, Lutheran 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.

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 28 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 Lutheran includes portions of Cuyahoga County. County-wide data for Cuyahoga County 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.

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 Lutheran community. Lutheran's community is comprised of 26 ZIP codes in Cuyahoga County, Ohio.

Demographics

Exhibit 8: 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
Cuyahoga	Cleveland	44114	6,420	6,693	4.3%
Cuyahoga	Cleveland	44115	9,092	9,420	3.6%
Cuyahoga	Cleveland	44113	20,094	20,646	2.7%
Cuyahoga	Westlake	44145	33,048	33,292	0.7%
Cuyahoga	Cleveland	44106	26,981	27,017	0.1%
Cuyahoga	Rocky River	44116	20,273	20,292	0.1%
Cuyahoga	Cleveland	44104	22,061	21,971	-0.4%
Cuyahoga	Cleveland	44135	26,332	26,208	-0.5%
Cuyahoga	Lakewood	44107	51,600	51,348	-0.5%
Cuyahoga	Cleveland	44144	20,770	20,603	-0.8%
Cuyahoga	Cleveland	44130	49,176	48,643	-1.1%
Cuyahoga	Independence	44131	19,919	19,690	-1.1%
Cuyahoga	North Olmsted	44070	32,080	31,697	-1.2%
Cuyahoga	Cleveland	44129	28,222	27,857	-1.3%
Cuyahoga	Cleveland	44126	15,988	15,743	-1.5%
Cuyahoga	Cleveland	44134	37,822	37,206	-1.6%
Cuyahoga	Cleveland	44103	16,808	16,533	-1.6%
Cuyahoga	Cleveland	44111	38,260	37,542	-1.9%
Cuyahoga	Cleveland	44125	27,179	26,633	-2.0%
Cuyahoga	Brook Park	44142	18,312	17,939	-2.0%
Cuyahoga	Cleveland	44102	42,397	41,452	-2.2%
Cuyahoga	Cleveland	44109	38,259	37,399	-2.2%
Cuyahoga	Cleveland	44120	35,517	34,621	-2.5%
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			**702,116**	**693,741**	**-1.2%**

Source: Truven Market Expert, 2018.

Description

Exhibit 8 portrays the estimated population by ZIP code in 2017 and projected to 2022.

Observations

- Between 2017 and 2022, 20 of the 26 ZIP codes in the community are projected to decrease in population. In total, the community population is expected to decrease by 1.2 percent between 2017 and 2022.

- The population in ZIP code 44113 (where the hospital is located) is expected to increase by 2.7 percent.

Exhibit 9: 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	151,732	147,908	-2.5%
Female 18 - 34	81,847	75,021	-8.3%
Male 18 - 34	80,932	76,123	-5.9%
35 - 64	272,963	266,275	-2.5%
65+	114,642	128,414	12.0%
Community Total	**702,116**	**693,741**	**-1.2%**

Source: Truven Market Expert, 2018.

Description

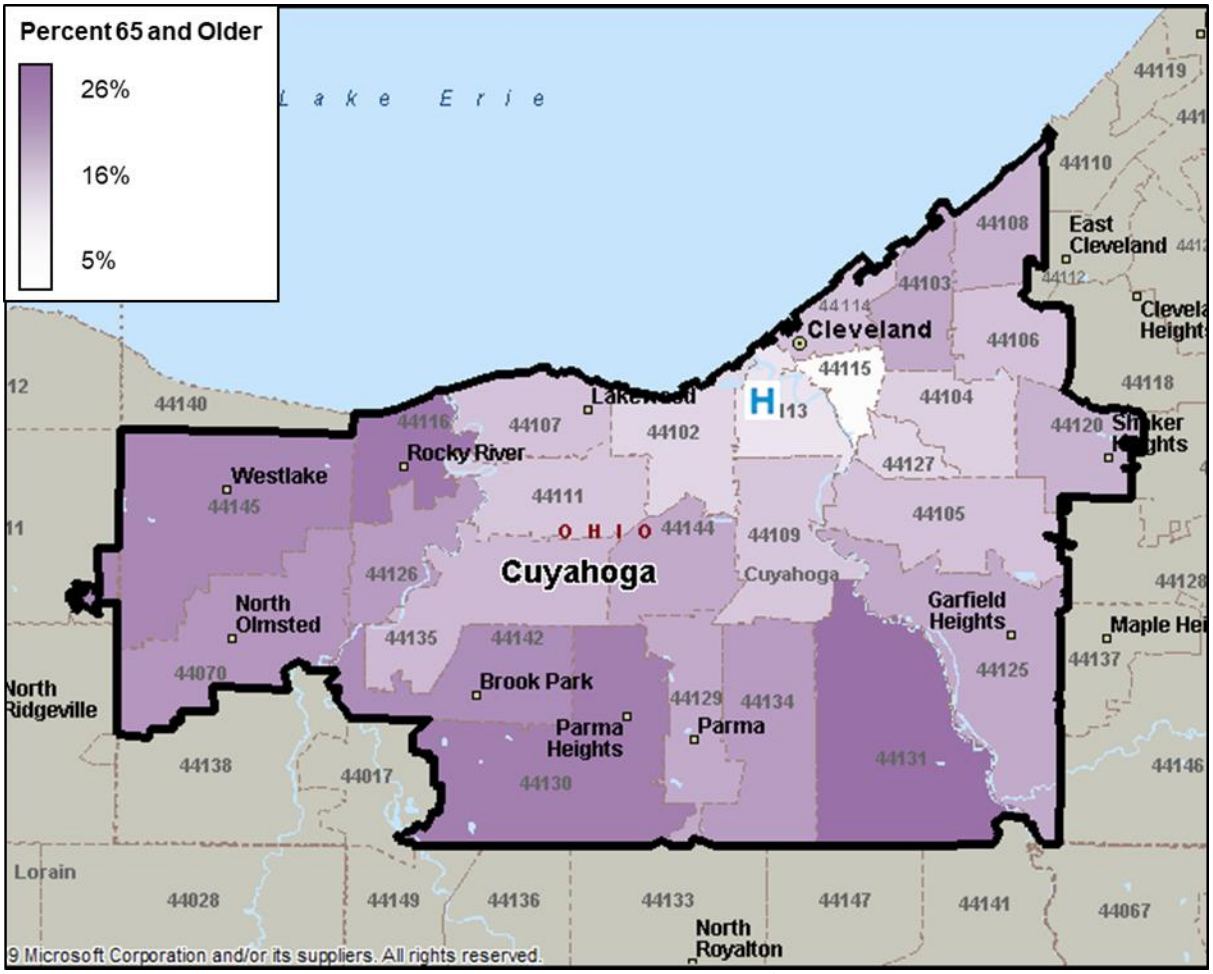
Exhibit 9 shows the community's population for certain age and sex cohorts in 2017, with projections to 2022.

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 12.0 percent.

- The growth of older populations is likely to lead to a growing need for health services, since on an overall per-capita basis, older individuals typically need and use more services than younger persons.

Exhibit 10: Percent of Population Aged 65+ by ZIP Code, 2017



Source: Truven Market Expert, 2018, and Microsoft MapPoint.

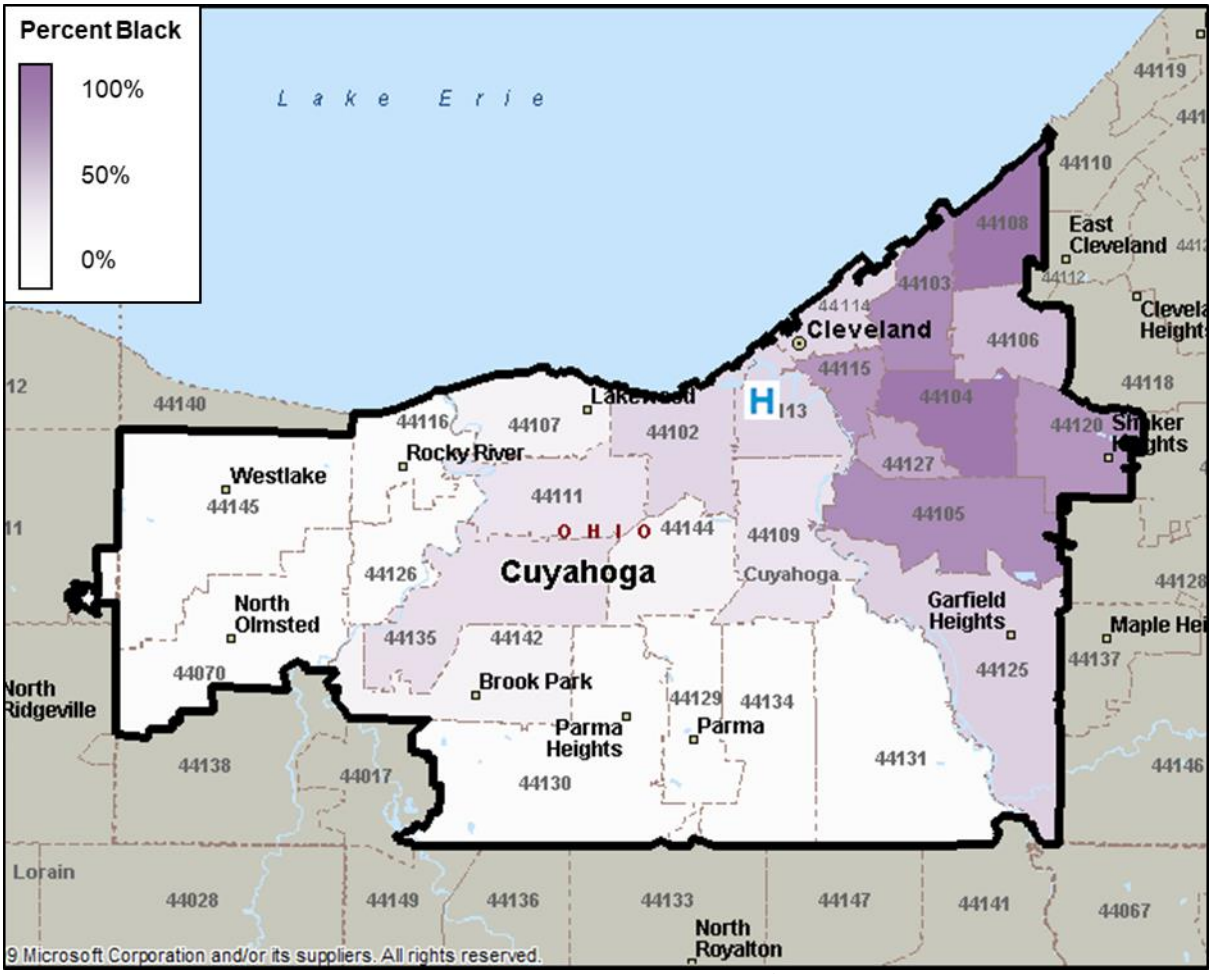
Description

Exhibit 10 portrays the percent of the population 65 years of age and older by ZIP code.

Observations

- ZIP codes 44131, 44116, 44130, and 44145 have the highest proportions of the population 65 years of age and older, each over 22 percent.

Exhibit 11: Percent of Population - Black, 2017



Source: Truven Market Expert, 2018, and Microsoft MapPoint.

Description

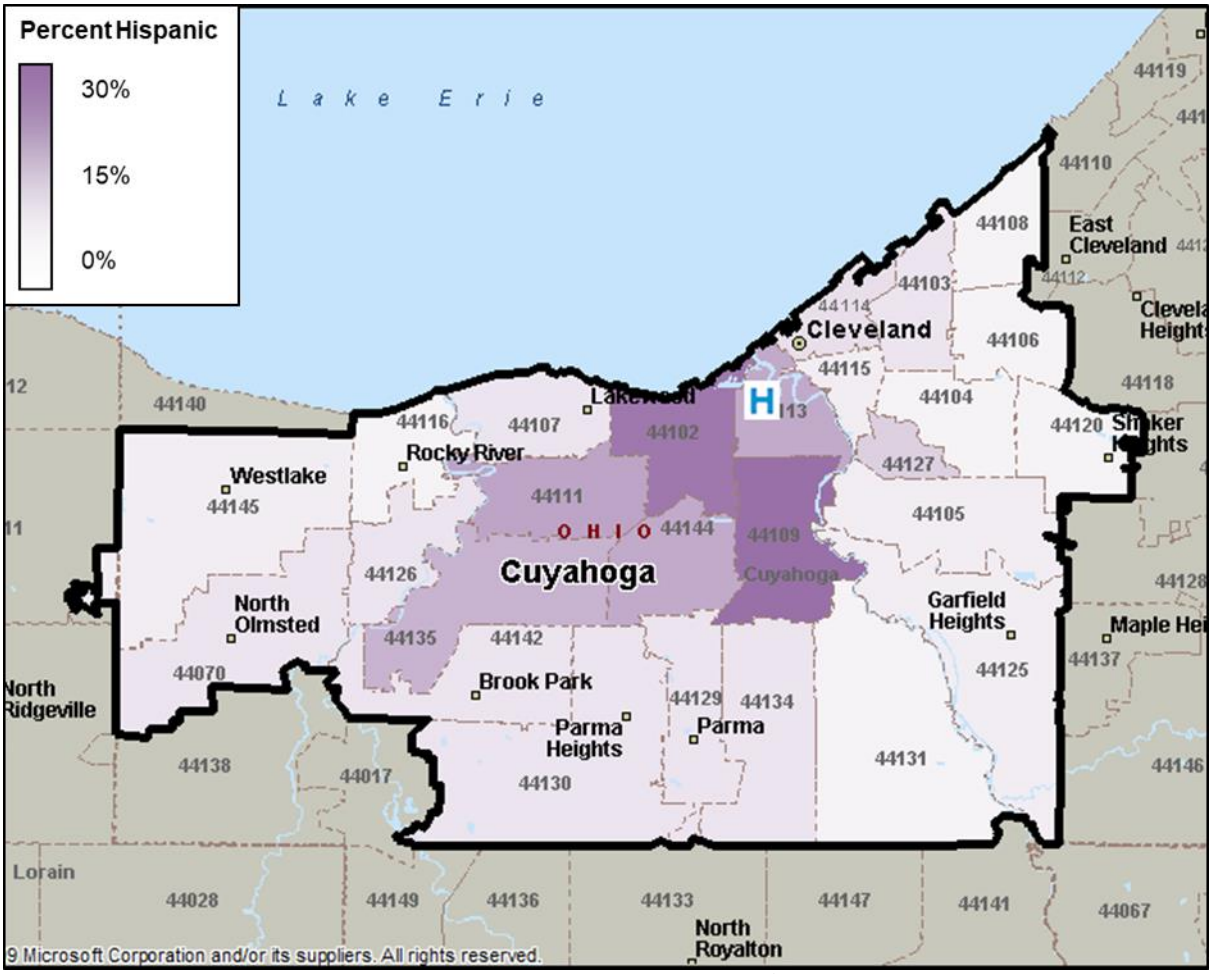
Exhibit 11 portrays locations where the percentages of the population that are Black were highest in 2017.

Observations

- In two ZIP codes, over 90 percent of residents were Black (44104 and 44108). ZIP codes with the highest proportion of Black residents are found in northeastern areas of the community.

- In 2017, the percentage of residents who are Black was under four percent in three ZIP codes (44145, 44116, and 44131).

Exhibit 12: Percent of Population – Hispanic (or Latino), (2017)



Source: Truven Market Expert, 2018, and Microsoft MapPoint.

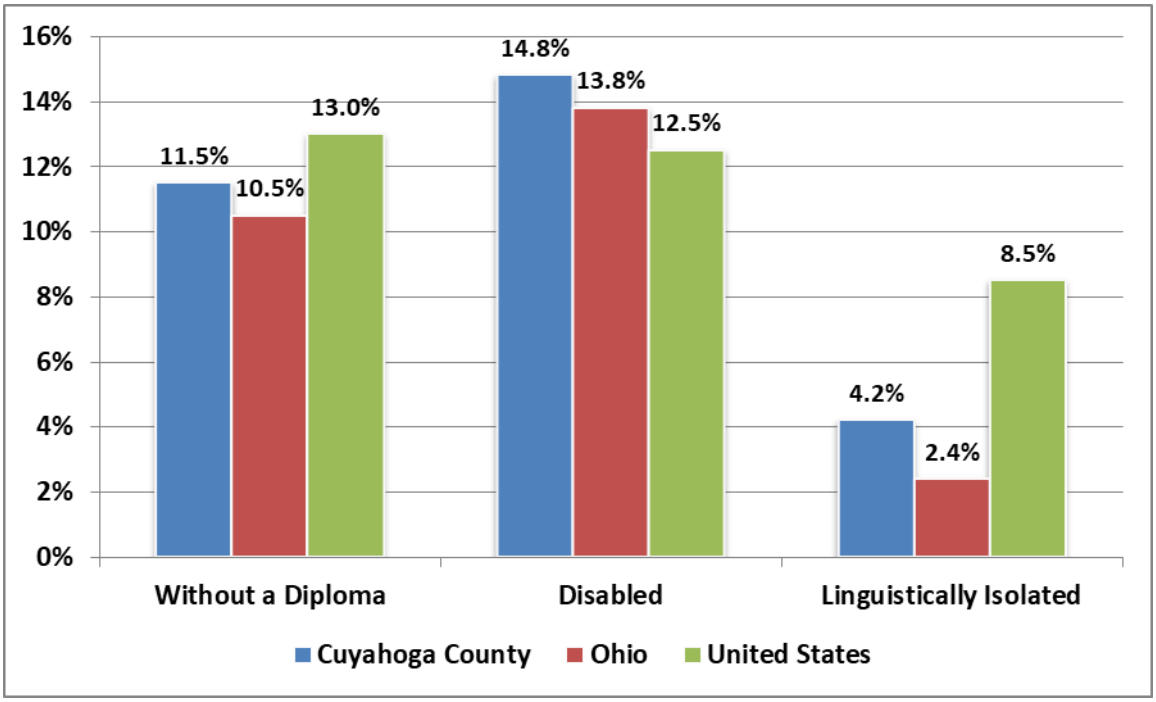
Description

Exhibit 12 portrays locations where the percentages of the population that are Hispanic (or Latino) were highest in 2017.

Observations

- The percentage of residents that are Hispanic (or Latino) was highest in ZIP codes 44109 and 44102, both over 28 percent. No other community ZIP code was over 20 percent.

Exhibit 13: Other Socioeconomic Indicators, 2012-2016



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

Description

Exhibit 13 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

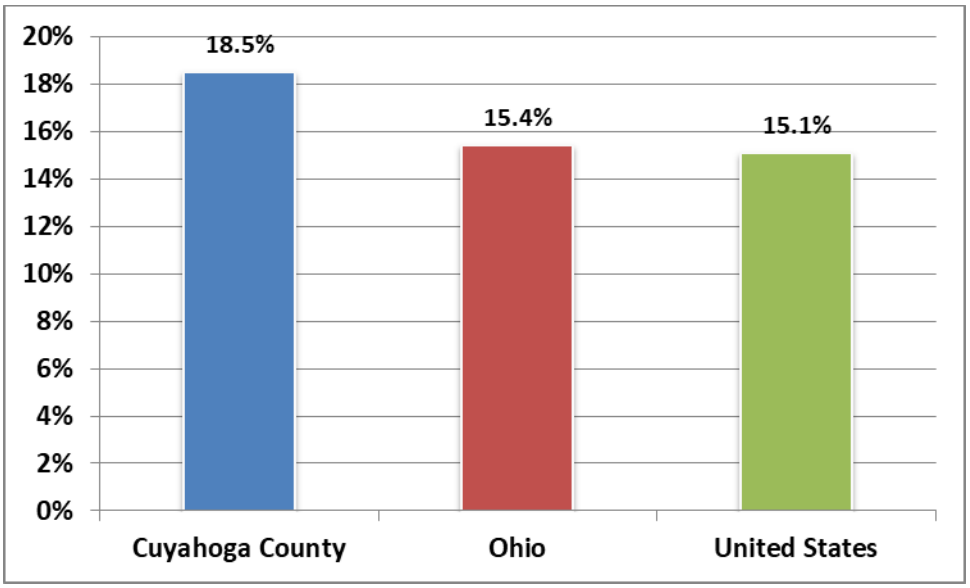
- Cuyahoga County's percentage of residents aged 25 years and older without a high school diploma has been higher than the Ohio average.
- Cuyahoga County had a higher percentage of the population with a disability than Ohio and the United States.
- Compared to Ohio (but not to the United States), Cuyahoga County 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 14: Percent of People in Poverty, 2012-2016



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

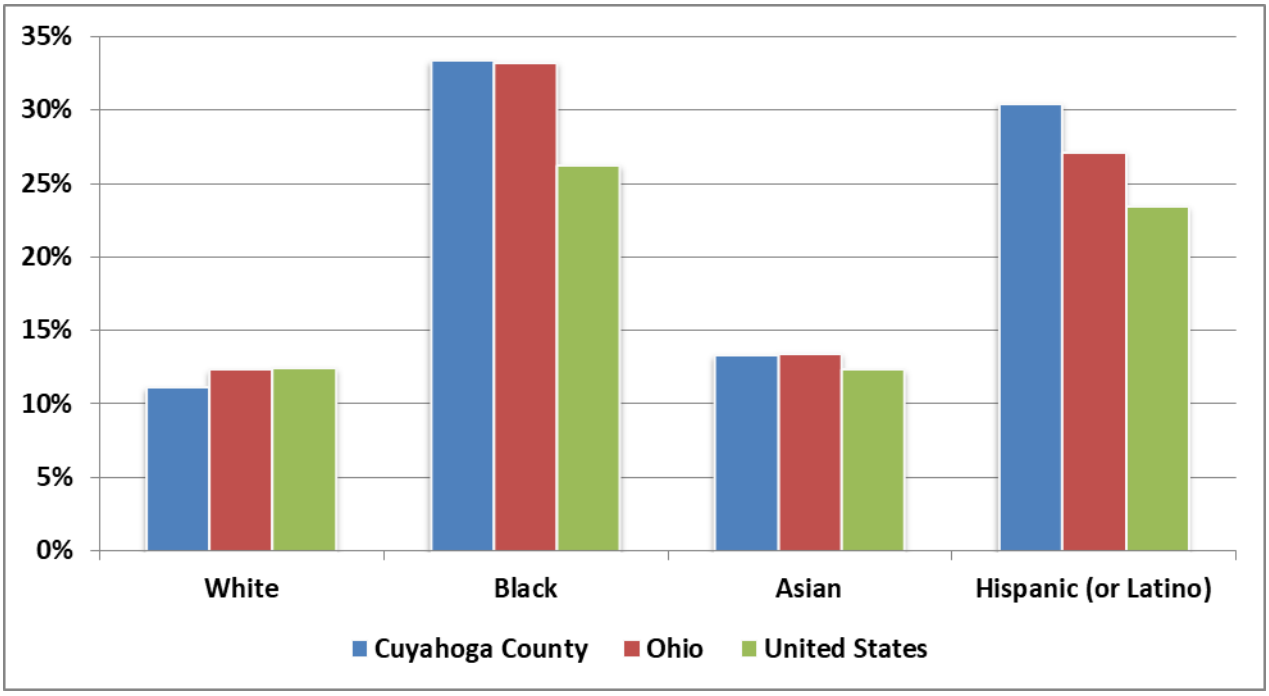
Description

Exhibit 14 portrays poverty rates by county.

Observations

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

Exhibit 15: Poverty Rates by Race and Ethnicity, 2012-2016



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

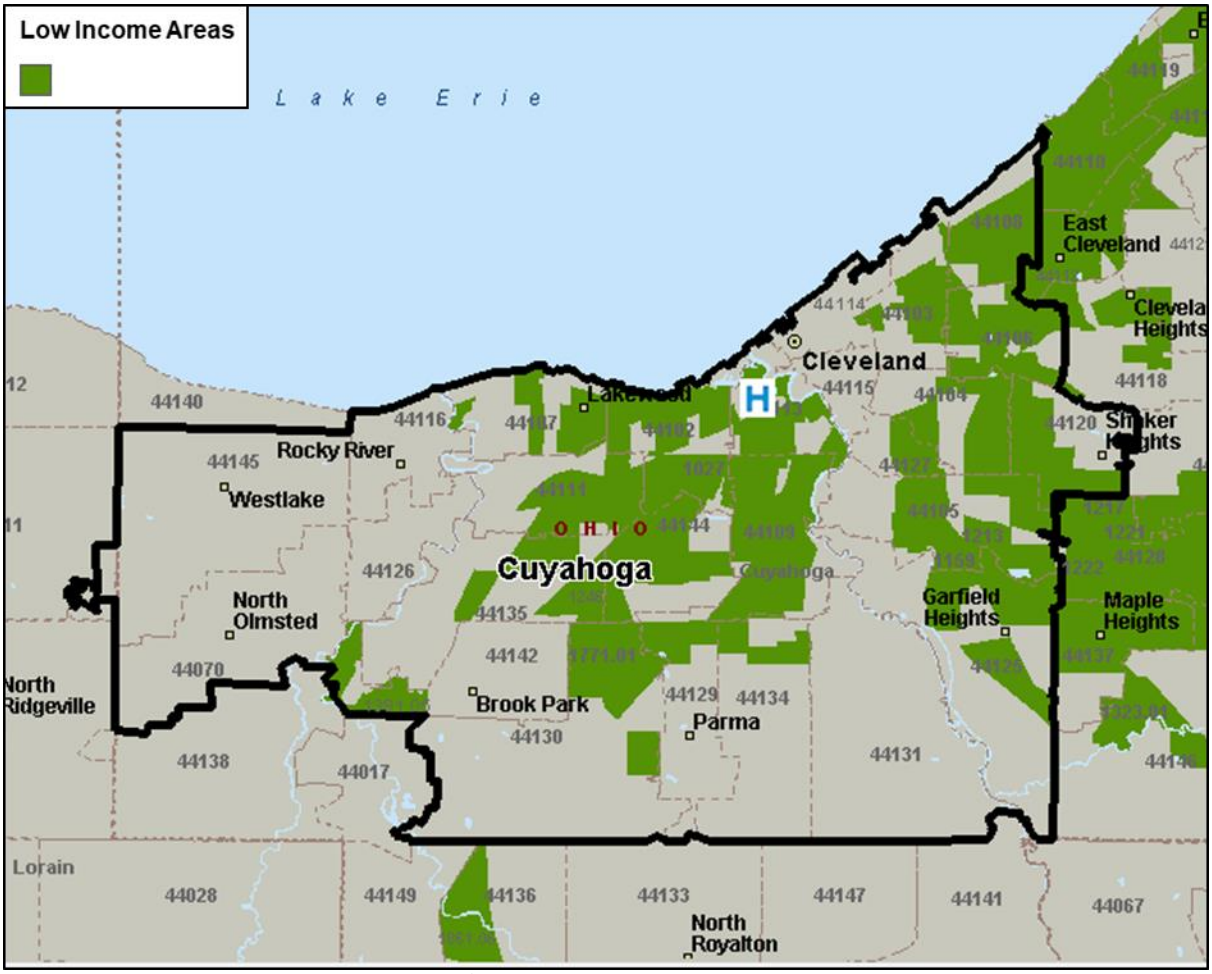
Description

Exhibit 15 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 (33.3 percent) has been higher than poverty rates for Black individuals across Ohio (33.2 percent) and the United States (26.2 percent).

Exhibit 16: Low Income Census Tracts, 2017



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

Description

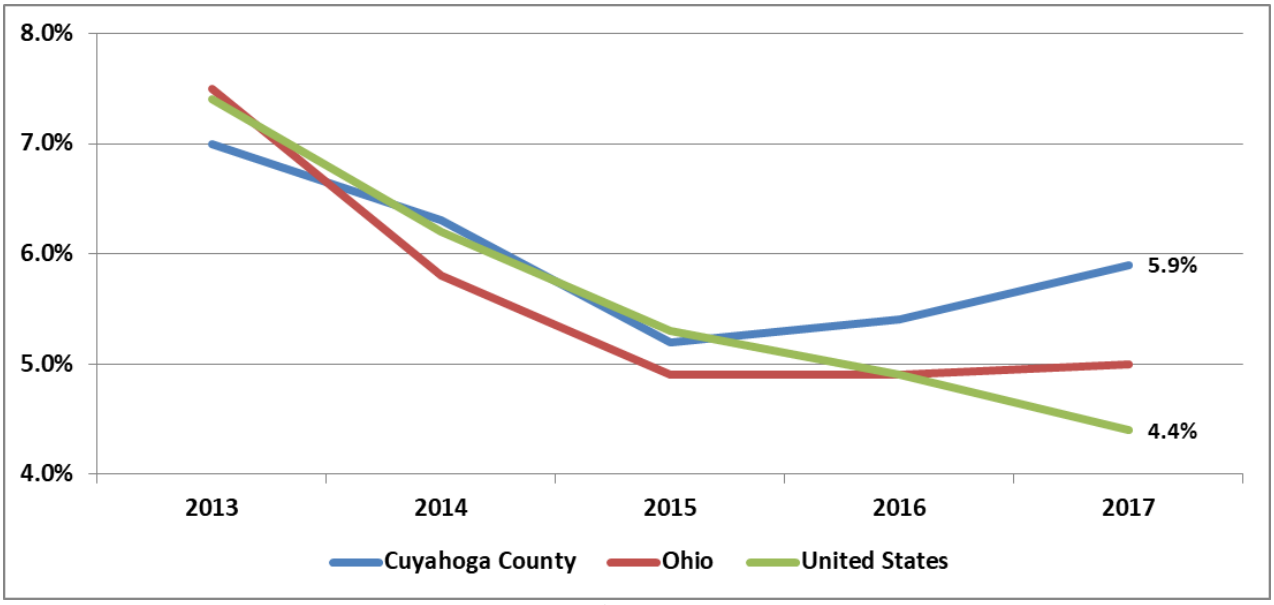
Exhibit 16 portrays the location of federally-designated low income census tracts.

Observations

- Low income census tracts have been present in the community, particularly in areas proximate to and east of the hospital.

Unemployment

Exhibit 17: Unemployment Rates, 2013-2017



Source: Bureau of Labor Statistics, 2018.

Description

Exhibit 17 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 Cuyahoga County.
- The rate in Cuyahoga County was above Ohio and U.S. averages in 2017.

Insurance Status

Exhibit 18: 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	44115	9,092	9.0%	9,420	8.3%
Cuyahoga	Cleveland	44104	22,061	8.1%	21,971	7.6%
Cuyahoga	Cleveland	44103	16,808	8.0%	16,533	7.1%
Cuyahoga	Cleveland	44114	6,420	7.8%	6,693	6.3%
Cuyahoga	Cleveland	44106	26,981	7.6%	27,017	6.5%
Cuyahoga	Cleveland	44127	5,109	7.4%	4,936	6.5%
Cuyahoga	Cleveland	44108	23,491	7.4%	22,738	6.5%
Cuyahoga	Cleveland	44105	36,906	7.0%	35,622	6.2%
Cuyahoga	Cleveland	44113	20,094	6.7%	20,646	5.5%
Cuyahoga	Cleveland	44102	42,397	6.7%	41,452	5.7%
Cuyahoga	Cleveland	44120	35,517	6.4%	34,621	5.6%
Cuyahoga	Cleveland	44109	38,259	6.3%	37,399	5.4%
Cuyahoga	Cleveland	44135	26,332	5.2%	26,208	4.5%
Cuyahoga	Cleveland	44111	38,260	5.1%	37,542	4.3%
Cuyahoga	Cleveland	44125	27,179	4.7%	26,633	4.1%
Cuyahoga	Lakewood	44107	51,600	4.5%	51,348	3.6%
Cuyahoga	Cleveland	44144	20,770	4.4%	20,603	3.6%
Cuyahoga	Cleveland	44134	37,822	3.9%	37,206	3.3%
Cuyahoga	Cleveland	44129	28,222	3.9%	27,857	3.2%
Cuyahoga	Cleveland	44130	49,176	3.6%	48,643	3.0%
Cuyahoga	Cleveland	44126	15,988	3.4%	15,743	2.9%
Cuyahoga	Brook Park	44142	18,312	3.3%	17,939	2.8%
Cuyahoga	Rocky River	44116	20,273	2.8%	20,292	2.5%
Cuyahoga	Westlake	44145	33,048	2.5%	33,292	2.1%
Cuyahoga	North Olmsted	44070	32,080	2.5%	31,697	2.1%
Cuyahoga	Independence	44131	19,919	2.3%	19,690	2.0%
Community Total			**702,116**	**5.1%**	**693,741**	**4.4%**

Source: Truven Market Expert, 2018.

Description

Exhibit 18 presents the estimated percent of population in community ZIP codes without health insurance (uninsured) – in 2017 and with projections to 2022.

Observations

- In 2017, the average "uninsurance rate" of community ZIP codes was 4.4 percent.

- 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

Crime Rates

Exhibit 19: Crime Rates by Type and Jurisdiction, Per 100,000, 2016

Crime	Cuyahoga County	Ohio
Violent Crime	694.9	**305.9**
Property Crime	2,977.7	**2,537.4**
Murder	15.1	**5.9**
Rape	57.6	**47.4**
Robbery	327.7	**111.1**
Aggravated Assault	294.5	**141.5**
Burglary	753.6	**573.5**
Larceny	1,742.1	**1,789.7**
Motor Vehicle Theft	482.0	**174.2**
Arson	33.6	**23.4**

Source: FBI, 2017.

Description

Exhibit 19 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.

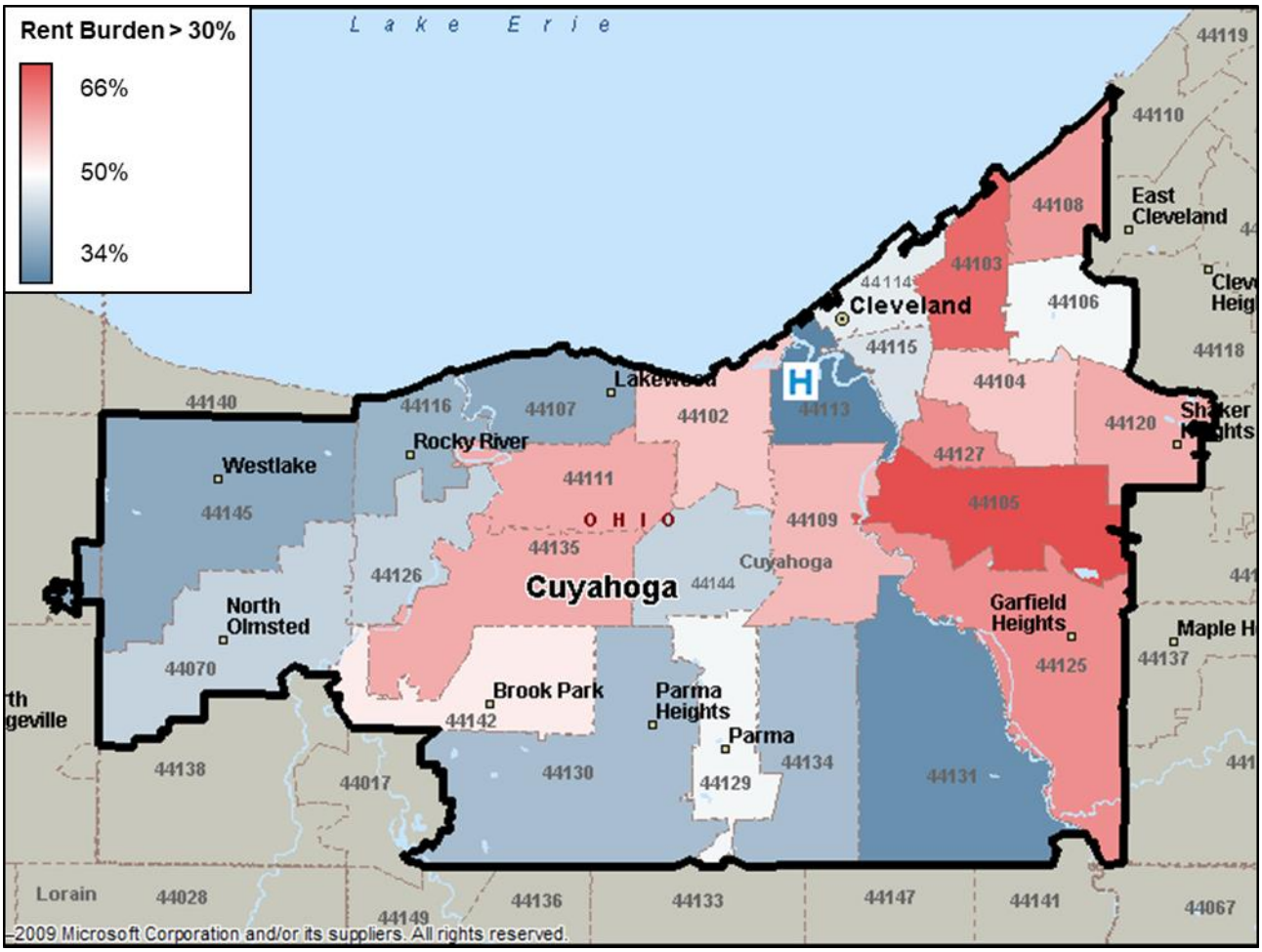
Housing Affordability

Exhibit 20: 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	Cleveland	44103	4,185	2,593	62.0%
Cuyahoga	Cleveland	44127	1,180	708	60.0%
Cuyahoga	Cleveland	44125	3,397	2,015	59.3%
Cuyahoga	Cleveland	44108	4,223	2,449	58.0%
Cuyahoga	Cleveland	44120	8,325	4,798	57.6%
Cuyahoga	Cleveland	44111	7,084	4,065	57.4%
Cuyahoga	Cleveland	44135	4,180	2,373	56.8%
Cuyahoga	Cleveland	44109	8,491	4,702	55.4%
Cuyahoga	Cleveland	44104	5,239	2,857	54.5%
Cuyahoga	Cleveland	44102	11,767	6,416	54.5%
Cuyahoga	Brook Park	44142	1,575	808	51.3%
Cuyahoga	Cleveland	44106	6,824	3,361	49.3%
Cuyahoga	Cleveland	44129	3,295	1,594	48.4%
Cuyahoga	Cleveland	44114	3,076	1,476	48.0%
Cuyahoga	Cleveland	44115	2,901	1,346	46.4%
Cuyahoga	Cleveland	44126	1,862	824	44.3%
Cuyahoga	North Olmsted	44070	3,349	1,475	44.0%
Cuyahoga	Cleveland	44144	3,741	1,642	43.9%
Cuyahoga	Cleveland	44134	3,309	1,394	42.1%
Cuyahoga	Cleveland	44130	7,773	3,263	42.0%
Cuyahoga	Rocky River	44116	2,408	953	39.6%
Cuyahoga	Westlake	44145	3,456	1,329	38.5%
Cuyahoga	Lakewood	44107	12,923	4,957	38.4%
Cuyahoga	Independence	44131	509	182	35.8%
Cuyahoga	Cleveland	44113	6,476	2,202	34.0%
Community Total			128,730	64,471	50.1%
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.

Exhibit 21: Map of Percent of Rented Households Rent Burdened, 2013-2017



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

Description

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 20 and 21 portray the percentage of rented households in each ZIP code that are rent burdened.

Observations

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]

[12] https://www.federalreserve.gov/econres/notes/feds-notes/assessing-the-severity-of-rent-burden-on-low-income-families-20171222.htm

[13] *Ibid.*

- More than 50 percent of households have been designated as "rent burdened," a level above the Ohio and United States averages.

- The percentage of rented households rent burdened was highest in ZIP codes where poverty rates and the Dignity Health Community Need Index™ (CNI) also are above average (see next section for information on the CNI).

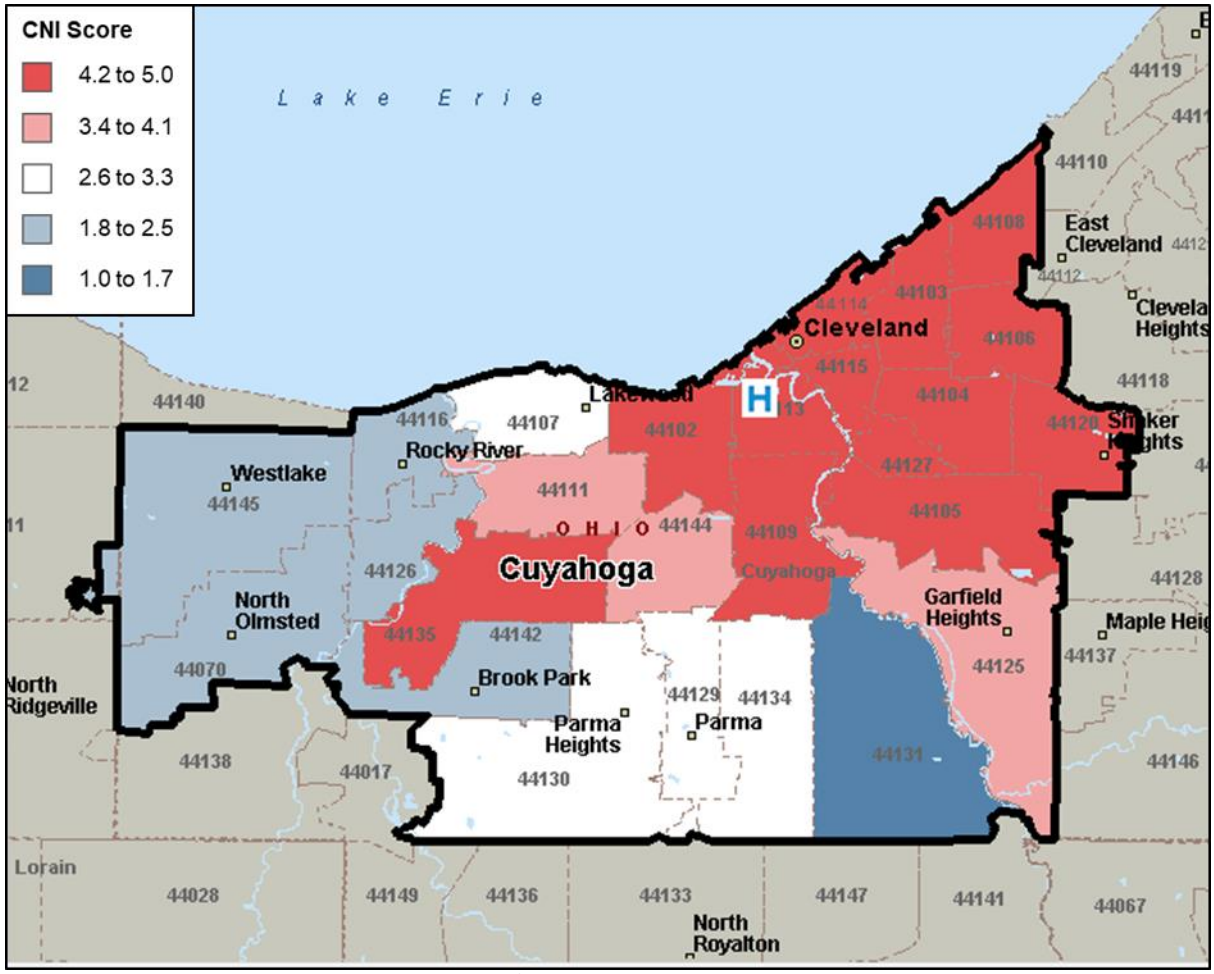
Dignity Health Community Need Index™

Exhibit 22: Community Need Index™ Score by ZIP Code, 2018

County	City/Town	ZIP Code	CNI Score
Cuyahoga	Cleveland	44103	5.0
Cuyahoga	Cleveland	44104	5.0
Cuyahoga	Cleveland	44105	5.0
Cuyahoga	Cleveland	44108	5.0
Cuyahoga	Cleveland	44115	5.0
Cuyahoga	Cleveland	44127	5.0
Cuyahoga	Cleveland	44102	4.8
Cuyahoga	Cleveland	44109	4.8
Cuyahoga	Cleveland	44113	4.8
Cuyahoga	Cleveland	44114	4.8
Cuyahoga	Cleveland	44106	4.6
Cuyahoga	Cleveland	44120	4.4
Cuyahoga	Cleveland	44135	4.4
Cuyahoga	Cleveland	44111	4.0
Cuyahoga	Cleveland	44144	3.6
Cuyahoga	Cleveland	44125	3.4
Cuyahoga	Lakewood	44107	3.2
Cuyahoga	Cleveland	44129	3.0
Cuyahoga	Cleveland	44130	2.8
Cuyahoga	Cleveland	44134	2.8
Cuyahoga	Brook Park	44142	2.4
Cuyahoga	Cleveland	44126	2.2
Cuyahoga	North Olmsted	44070	2.0
Cuyahoga	Westlake	44145	2.0
Cuyahoga	Rocky River	44116	1.8
Cuyahoga	Independence	44131	1.6
Hospital Community			**3.7**
Cuyahoga County Average			3.3

Source: Dignity Health, 2018.

Exhibit 23: Community Need Index, 2018



Source: Microsoft MapPoint and Dignity Health, 2018.

Description

Exhibits 22 and 23 present the *Community Need Index*™ (CNI) score for each ZIP code in the Lutheran 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.

Observations

- Thirteen of the 26 ZIP codes in the Lutheran community scored in the “highest need” category. Six ZIP codes scored 5.0, the highest possible value (ZIP codes 44103, 44104, 44105, 44108, 44115, and 44127).

- Highest need areas were concentrated in areas proximate to and east of the hospital.

- At 3.7, the weighted average CNI score for the Lutheran community is well above the U.S. median of 3.0.

Other Local Health Status and Access Indicators

This section assesses other health status and access indicators for the Lutheran 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.

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

Source: County Health Rankings, 2018.

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.

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

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

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

Source: County Health Rankings, 2018.

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	Ohio	United States
Health Factors				
Social & Economic Factors				
High School Graduation	Percent of ninth-grade cohort that graduates in four years	74.8%	**81.2%**	83.0%
Some College	Percent of adults aged 25-44 years with some post-secondary education	68.7%	**64.5%**	65.0%
Unemployment	Percent of population age 16+ unemployed but seeking work	5.4%	**4.9%**	4.9%
Children in Poverty	Percent of children under age 18 in poverty	26.4%	**20.4%**	20.0%
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	5.6	**4.8**	5.0
Children in Single-Parent Households	Percent of children that live in a household headed by single parent	45.0%	**35.7%**	34.0%
Social Associations	Number of associations per 10,000 population	9.3	**11.3**	9.3
Violent Crime	Number of reported violent crime offenses per 100,000 population	589	**290**	380
Injury Deaths	Injury mortality per 100,000	76.4	**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	**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%	**15.0%**	19.0%
Driving Alone to Work	Percent of the workforce that drives alone to work	79.8%	**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%	**30.0%**	35.0%

Source: County Health Rankings, 2018.

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

- Cuyahoga County's violent crime rate is more than 50 percent worse than the Ohio average.

- Additionally, the following indicators (presented alphabetically) compared unfavorably:

    - Air pollution (average daily PM2.5)
    - Chlamydia rate
    - High school graduation rate
    - Income inequality ratio
    - Injury mortality rate
    - Percent of births with low birth weight
    - Percent of children in poverty
    - Percent of children in single-parent households
    - Percent of driving deaths with alcohol involvement
    - Percent of households with severe housing problems
    - Percent of population without health insurance
    - Percent workers with long commute who drive alone
    - Social associations rate
    - Teen birth rate
    - Unemployment
    - Years of potential life lost rate

- 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

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)

Indicator	Cuyahoga County
Years of Potential Life Lost Rate	
% Fair/Poor Health	
Physically Unhealthy Days	
Mentally Unhealthy Days	
% Births - Low Birth Weight	
% Smokers	
% Obese	
Food Environment Index	
% Physically Inactive	
% With Access to Exercise Opportunities	
% Excessive Drinking	
% Driving Deaths Alcohol-Impaired	
Chlamydia Rate	
Teen Birth Rate	
% Uninsured	
Primary Care Physicians Rate	
Dentist Rate	
Mental Health Professionals Rate	
Preventable Hosp. Rate	
% Receiving HbA1c Screening	
% Mammography Screening	
High School Graduation Rate	
% Some College	
% Unemployed	
% Children in Poverty	
Income Ratio	
% Children in Single-Parent Households	
Social Association Rate	
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.

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 Lutheran 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 Cuyahoga County compared unfavorably to its peers for the following indicators:
    - Percent of births with low birthweight
    - Percent of adults who smoke
    - Percent of driving deaths with alcohol involvement
    - Air pollution (average daily PM2.5)
    - Percent of workforce who drives alone

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

- Cuyahoga County's atherosclerotic cardiovascular disease mortality rate is more than 50 percent worse than the Ohio average.

- Additionally, the following indicators compared unfavorably:
    - Organic dementia
    - Accidental poisoning by and exposure to drugs and other biological substances
    - Diabetes mellitus
    - Conduction disorders and cardiac dysrhythmias
    - Renal failure
    - Septicemia
    - Hypertensive heart disease
    - Alcohol liver disease

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	Ohio
All Cancer Types	180.0	**173.8**
Lung and Bronchus	44.7	**47.9**
Prostate	23.2	**19.8**
Other Sites/Types	21.5	**19.6**
Colon & Rectum	14.5	**15.5**
Breast	12.7	**12.0**
Pancreas	13.1	**11.5**
Ovary	8.9	**7.8**
Leukemia	7.9	**6.9**
Liver & Intrahepatic Bile Duct	7.6	**6.1**
Non-Hodgkins Lymphoma	5.7	**5.9**
Uterus	6.9	**5.2**
Esophagus	4.7	**5.1**
Bladder	6.2	**5.1**
Brain and Other CNS	4.1	**4.8**
Kidney & Renal Pelvis	3.4	**3.8**
Multiple Myeloma	3.3	**3.3**
Oral Cavity & Pharynx	3.1	**2.9**
Melanoma of Skin	1.4	**2.6**
Stomach	4.1	**2.5**
Cervix	3.3	**2.1**
Larynx	1.0	**1.2**
Thyroid	0.8	**0.4**

Source: Ohio Department of Health, 2017.

Description

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

Observations

- The overall cancer mortality rate in Cuyahoga County was higher than the Ohio average.
- Cuyahoga County's age-adjusted stomach, cervix, and thyroid cancer mortality rates were significantly higher than the Ohio average.

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	Ohio
All Cancer Types	483.2	**461.6**
Prostate	131.7	**108.0**
Lung and Bronchus	65.6	**69.3**
Breast	73.1	**68.0**
Colon & Rectum	43.4	**41.7**
Other Sites/Types	39.5	**36.4**
Uterus	32.5	**29.2**
Bladder	20.9	**21.9**
Melanoma of Skin	16.8	**21.7**
Non-Hodgkins Lymphoma	20.1	**19.0**
Kidney & Renal Pelvis	16.9	**16.8**
Thyroid	16.4	**14.8**
Pancreas	13.8	**12.7**
Leukemia	12.7	**12.2**
Oral Cavity & Pharynx	11.1	**11.7**
Ovary	12.2	**11.4**
Cervix	6.6	**7.6**
Brain and Other CNS	6.7	**6.9**
Liver & Intrahepatic Bile Duct	8.9	**6.7**
Stomach	7.9	**6.4**
Multiple Myeloma	7.4	**5.8**
Testis	6.8	**5.8**
Esophagus	5.1	**5.1**
Larynx	4.3	**4.1**
Hodgkins Lymphoma	3.3	**2.7**

Source: Ohio Department of Health, 2016.

Description

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

Observations

- The overall cancer incidence rate in Cuyahoga County was higher than the Ohio average.
- Incidence rates were also higher in Cuyahoga County for a variety of indicators, including prostate, breast, colon and rectum, and uterus cancers.

Exhibit 30: Communicable Disease Incidence Rates per 100,000 Population, 2017 (Light Grey Shading Denotes Indicators Worse than Ohio Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Ohio Average)

Indicator	Cuyahoga County	Ohio
Living with diagnosis of HIV infection (2016)	373.2	**199.5**
Gonorrhea	408.5	**206.6**
Chlamydia	884.8	**528.9**
Total Syphilis	29.8	**16.4**
Tuberculosis	2.2	**1.3**

Source: Ohio Department of Health, 2017.

Description

Exhibit 30 presents incidence rates for various communicable diseases in the community.

Observations

- Cuyahoga County rates for all indicators were more than 50 percent worse than Ohio averages.

Exhibit 31: Maternal and Child Health Indicators, 2014-2018
(Light Grey Shading Denotes Indicators Worse than Ohio Average)

Indicator	Cuyahoga County	Ohio
Low Birth Weight Percent	8.5%	**7.2%**
Very Low Birth Weight Percent	2.2%	**1.6%**
Births to Unmarried Mothers	51.7%	**43.2%**
Preterm Births Percent	9.5%	**8.7%**
Very Preterm Births Percent	2.5%	**1.8%**

Source: Ohio Department of Health, 2018.

Description

Exhibit 31 presents various maternal and infant health indicators.

Observations

- All Cuyahoga County indicators were worse than Ohio averages.

Exhibit 32: Infant Mortality Rates by County, 2010-2016 and for Ohio, 2016 (Light Grey Shading Denotes Indicators Worse than Ohio Average)

Indicator	Cuyahoga County	Ohio
Overall Infant Mortality Rate	9.3	**7.4**
Black Infant Mortality Rate	16.3	**15.2**
Hispanic Infant Mortality Rate	6.0	**7.3**
White Infant Mortality Rate	5.2	**5.8**

Source: County Health Rankings, 2018 and Ohio Department of Health, 2017 (for Ohio-wide averages).

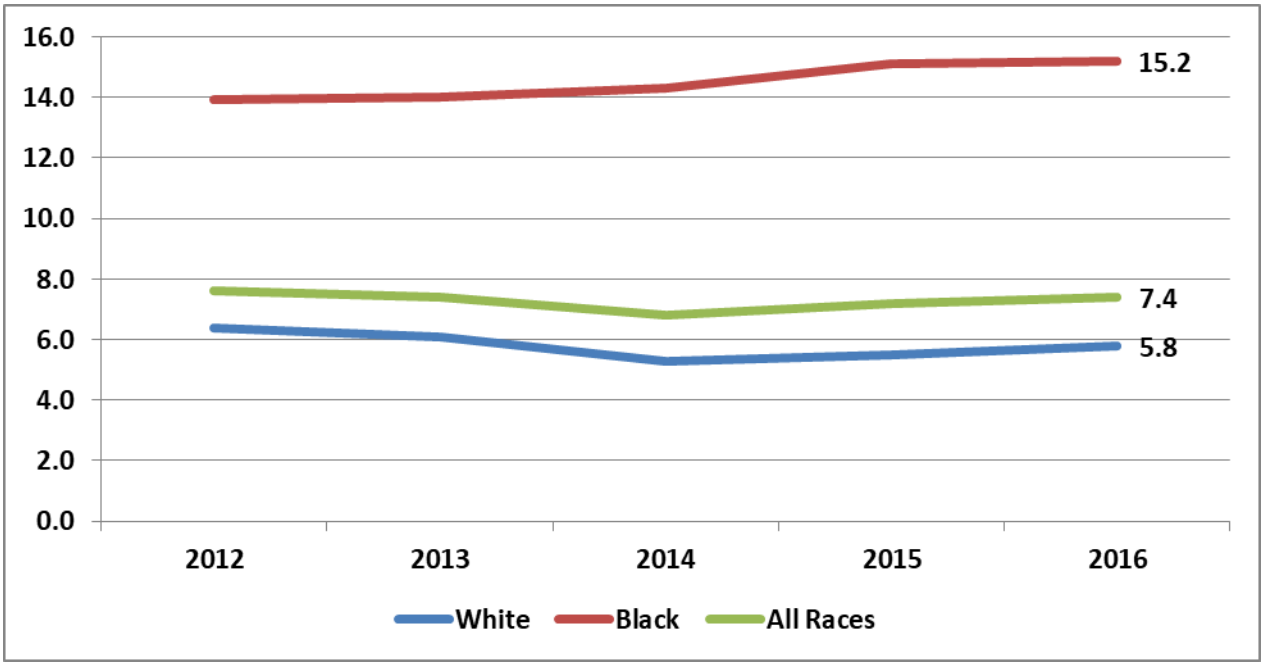
Description

Exhibit 32 presents infant mortality rates by race and ethnicity by county and for Ohio.

Observations

- The overall infant mortality rate and the Black infant mortality rate in Cuyahoga County were higher than the Ohio averages.
- As documented by many, infant mortality rates have been particularly high for Black infants across Ohio.

Exhibit 33: Infant Mortality Rates by Race, Ohio overall, 2012-2016



Source: Ohio Department of Health, 2018.

Description

Exhibit 33 presents infant mortality rates in Ohio by race for each year from 2012 to 2016.

Observations

- Infant mortality rates for Black infants in Ohio were consistently higher than rates for White infants and infants of all races.

Behavioral Risk Factor Surveillance System

Exhibit 34: 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	Cleveland	44102	31,962	27.1%	14.4%	22.3%	22.7%	8.6%	3.2%	37.3%	27.6%	36.9%	6.3%	34.2%
Cuyahoga	Cleveland	44109	28,800	27.4%	14.2%	23.5%	21.8%	9.8%	3.7%	36.7%	28.2%	33.7%	7.1%	33.8%
Cuyahoga	Lakewood	44107	41,528	20.5%	12.1%	17.9%	15.5%	9.8%	3.3%	31.3%	24.4%	28.9%	5.1%	31.5%
Cuyahoga	Cleveland	44113	16,615	20.1%	14.6%	17.3%	21.0%	11.6%	2.5%	30.6%	23.3%	30.3%	5.8%	30.1%
Cuyahoga	Cleveland	44111	30,098	25.2%	13.5%	22.1%	19.9%	8.9%	3.5%	36.5%	27.0%	33.3%	7.5%	32.2%
Cuyahoga	Cleveland	44135	19,726	26.0%	13.0%	21.4%	17.9%	10.9%	4.0%	34.7%	27.1%	32.0%	7.8%	33.2%
Cuyahoga	Cleveland	44103	14,146	30.7%	15.1%	23.0%	24.4%	9.2%	4.1%	42.5%	28.9%	34.4%	7.5%	35.3%
Cuyahoga	Independence	44131	16,637	21.8%	9.1%	14.5%	15.7%	11.5%	3.5%	31.8%	22.1%	20.2%	4.5%	24.9%
Cuyahoga	Cleveland	44144	16,608	28.2%	12.5%	21.4%	20.4%	12.8%	4.0%	34.7%	30.6%	29.8%	7.3%	32.6%
Cuyahoga	Cleveland	44114	4,626	20.8%	13.9%	15.4%	20.4%	11.6%	2.8%	32.5%	24.4%	29.9%	5.8%	28.5%
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	North Olmsted	44070	25,696	22.3%	10.3%	16.7%	15.3%	11.5%	3.7%	32.3%	22.9%	23.3%	4.8%	27.6%
Cuyahoga	Westlake	44145	26,850	22.2%	10.3%	15.9%	14.2%	9.5%	3.2%	32.5%	24.6%	19.2%	4.9%	25.9%
Cuyahoga	Cleveland	44130	41,083	24.8%	11.6%	18.4%	19.0%	10.6%	4.7%	34.1%	26.2%	25.9%	6.3%	29.1%
Cuyahoga	Cleveland	44126	12,877	24.5%	11.6%	18.8%	15.8%	9.4%	4.9%	32.4%	23.7%	24.3%	4.7%	28.4%
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	44134	29,459	25.0%	11.3%	20.3%	19.3%	13.8%	4.2%	32.0%	29.0%	26.3%	6.2%	29.4%
Cuyahoga	Rocky River	44116	16,136	20.9%	10.4%	17.9%	18.7%	12.2%	4.8%	31.6%	27.3%	20.9%	4.3%	26.0%
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	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	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	44129	22,129	26.7%	12.2%	21.8%	19.1%	15.1%	3.5%	30.4%	31.5%	26.3%	6.2%	30.8%
Cuyahoga	Cleveland	44115	6,344	20.8%	14.0%	19.6%	22.4%	11.2%	2.6%	25.5%	24.1%	28.6%	4.6%	34.6%
Cuyahoga	Brook Park	44142	14,996	26.8%	11.2%	18.6%	16.5%	11.7%	5.2%	34.3%	27.5%	27.3%	6.6%	31.1%
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%
Hospital Community			**552,128**	**25.1%**	**12.7%**	**19.9%**	**19.4%**	**10.5%**	**3.8%**	**34.4%**	**26.5%**	**29.3%**	**6.3%**	**31.2%**
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.

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 34 depicts BRFSS data for each ZIP code in the Lutheran community and compared to the averages for Ohio.

Observations

- Lutheran community averages for arthritis, asthma, depression, diabetes, high blood pressure, high cholesterol, smoking, COPD, and back pain were worse than the Ohio averages.

- ZIP codes 44135 and 44144 compared unfavorably for eleven of the twelve conditions presented.

Ambulatory Care Sensitive Conditions

Exhibit 35: PQI (ACSC) Rates per 100,000, 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	Diabetes Short-Term Complications	Perforated Appendix	Diabetes Long-Term Complications	Chronic Obstructive Pulmonary Disease	Hypertension	Congestive Heart Failure
Cuyahoga	Cleveland	44102	112	435	260	1,741	96	860
Cuyahoga	Cleveland	44109	132	600	406	1,350	97	750
Cuyahoga	Lakewood	44107	62	417	115	912	48	497
Cuyahoga	Cleveland	44113	66	600	204	1,370	60	498
Cuyahoga	Cleveland	44111	102	467	167	1,485	109	775
Cuyahoga	Cleveland	44135	297	571	243	1,770	109	961
Cuyahoga	Cleveland	44103	145	833	298	2,178	343	1,618
Cuyahoga	Independence	44131	72	667	84	387	54	754
Cuyahoga	Cleveland	44144	101	750	137	625	53	712
Cuyahoga	Cleveland	44114	71	333	89	1,271	231	462
Cuyahoga	Cleveland	44105	204	600	251	1,811	251	1,278
Cuyahoga	North Olmsted	44070	35	500	85	754	97	579
Cuyahoga	Westlake	44145	33	615	115	618	67	588
Cuyahoga	Cleveland	44130	52	688	171	688	74	588
Cuyahoga	Cleveland	44126	87	429	119	831	79	427
Cuyahoga	Cleveland	44120	102	286	73	1,179	227	1,018
Cuyahoga	Cleveland	44134	83	800	112	645	56	677
Cuyahoga	Rocky River	44116	37	750	86	731	62	635
Cuyahoga	Cleveland	44106	58	1,000	151	1,897	164	913
Cuyahoga	Cleveland	44108	169	429	153	1,137	311	1,271
Cuyahoga	Cleveland	44104	74	750	249	1,396	269	1,145
Cuyahoga	Cleveland	44125	128	667	180	902	57	924
Cuyahoga	Cleveland	44129	31	833	264	689	31	706
Cuyahoga	Cleveland	44115	246	-	148	1,764	230	820
Cuyahoga	Brook Park	44142	114	500	147	1,234	33	895
Cuyahoga	Cleveland	44127	754	-	215	1,974	188	915
Community Averages			**103**	**577**	**176**	**1,108**	**116**	**797**
Ohio Averages			**70**	**595**	**120**	**696**	**72**	**584**
United States Averages			69	351	102	481	49	322

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.

Exhibit 35: PQI (ACSC) Rates per 100,000, 2017 (*continued*)
(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	Low Birth Weight	Dehydration	Bacterial Pneumonia	Urinary Tract Infection	Uncontrolled Diabetes	Young Adult Asthma	Lower-Extremity Amputation Among Patients with Diabetes
Cuyahoga	Cleveland	44102	5	257	340	283	67	95	64
Cuyahoga	Cleveland	44109	10	233	278	219	104	114	83
Cuyahoga	Lakewood	44107	6	219	161	180	62	6	36
Cuyahoga	Cleveland	44113	5	204	198	96	60	-	60
Cuyahoga	Cleveland	44111	8	337	255	197	88	72	41
Cuyahoga	Cleveland	44135	3	327	297	282	99	-	50
Cuyahoga	Cleveland	44103	22	343	336	336	176	184	153
Cuyahoga	Independence	44131	-	157	296	217	30	-	30
Cuyahoga	Cleveland	44144	5	226	255	202	18	17	47
Cuyahoga	Cleveland	44114	14	249	195	160	89	70	89
Cuyahoga	Cleveland	44105	34	342	284	237	138	157	76
Cuyahoga	North Olmsted	44070	6	239	270	297	42	35	15
Cuyahoga	Westlake	44145	4	309	357	342	63	38	56
Cuyahoga	Cleveland	44130	10	265	280	275	55	31	40
Cuyahoga	Cleveland	44126	5	222	150	261	55	98	32
Cuyahoga	Cleveland	44120	32	395	220	216	84	130	22
Cuyahoga	Cleveland	44134	5	228	267	188	30	20	36
Cuyahoga	Rocky River	44116	5	308	327	222	25	22	6
Cuyahoga	Cleveland	44106	22	328	270	235	75	80	53
Cuyahoga	Cleveland	44108	53	390	203	299	198	164	40
Cuyahoga	Cleveland	44104	38	357	189	236	121	217	74
Cuyahoga	Cleveland	44125	22	332	237	228	52	119	38
Cuyahoga	Cleveland	44129	6	197	250	259	63	12	94
Cuyahoga	Cleveland	44115	26	164	279	197	98	106	82
Cuyahoga	Brook Park	44142	5	334	421	234	87	63	53
Cuyahoga	Cleveland	44127	13	323	269	188	108	427	81
Community Averages			**14**	**280**	**265**	**238**	**76**	**74**	**51**
Ohio Averages			**18**	**218**	**238**	**198**	**50**	**36**	**36**
United States Averages			-	130	250	156	13	41	17

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 35 provides 2017 PQI rates (per 100,000 persons) for ZIP codes in the Lutheran community – with comparisons to Ohio averages.

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:

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

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.

Observations

- The rates of admissions for ACSC in the Lutheran community exceeded Ohio averages for all conditions except perforated appendix and low birth weight, and were more than 50 percent higher for four conditions: chronic obstructive pulmonary disease, hypertension, uncontrolled diabetes, and young adult asthma.

- ZIP codes 44103 and 44105 had above average PQI rates for every condition. These ZIP codes also have above average poverty rates.

Exhibit 36: Ratio of PQI Rates for Lutheran Community and Ohio, 2017

Indicator	Community Averages	Ohio Averages	Ratio: Lutheran / Ohio
Young Adult Asthma	73.6	35.7	2.06
Hypertension	115.6	71.6	1.61
Chronic Obstructive Pulmonary Disease	1,107.8	695.6	1.59
Uncontrolled Diabetes	75.9	50.2	1.51
Diabetes Short-Term Complications	102.7	70.1	1.46
Diabetes Long-Term Complications	175.7	120.2	1.46
Lower-Extremity Amputation Among Patients with Diabetes	51.2	36.3	1.41
Congestive Heart Failure	797.1	584.2	1.36
Dehydration	280.3	218.3	1.28
Urinary Tract Infection	238.2	197.5	1.21
Bacterial Pneumonia	265.1	238.4	1.11
Perforated Appendix	577.2	594.7	0.97
Low Birth Weight	14.4	18.1	0.79

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

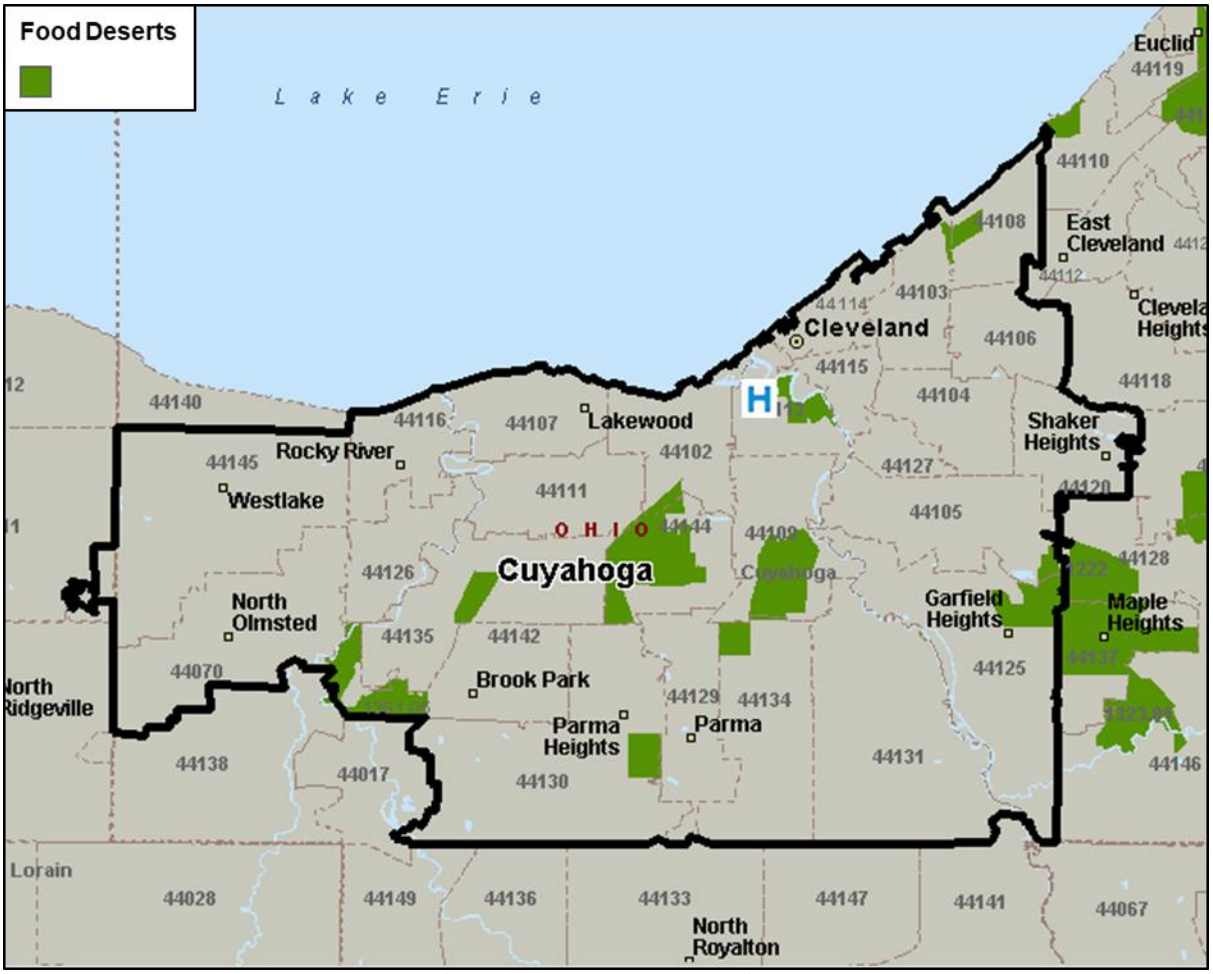
Exhibit 36 provides the ratio of PQI rates in the Lutheran community to rates for Ohio as a whole. Conditions where the ratios are highest (meaning that the PQI rates in the community are the most above average) are presented first.

Observations

- Community ACSC rates for young adult asthma were more than double the Ohio average.
- Rates for hypertension, COPD, and uncontrolled diabetes were above Ohio averages by 50 percent or more.

Food Deserts

Exhibit 37: Food Deserts, 2017



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

Description

Exhibit 37 shows the location of "food deserts" in the community.

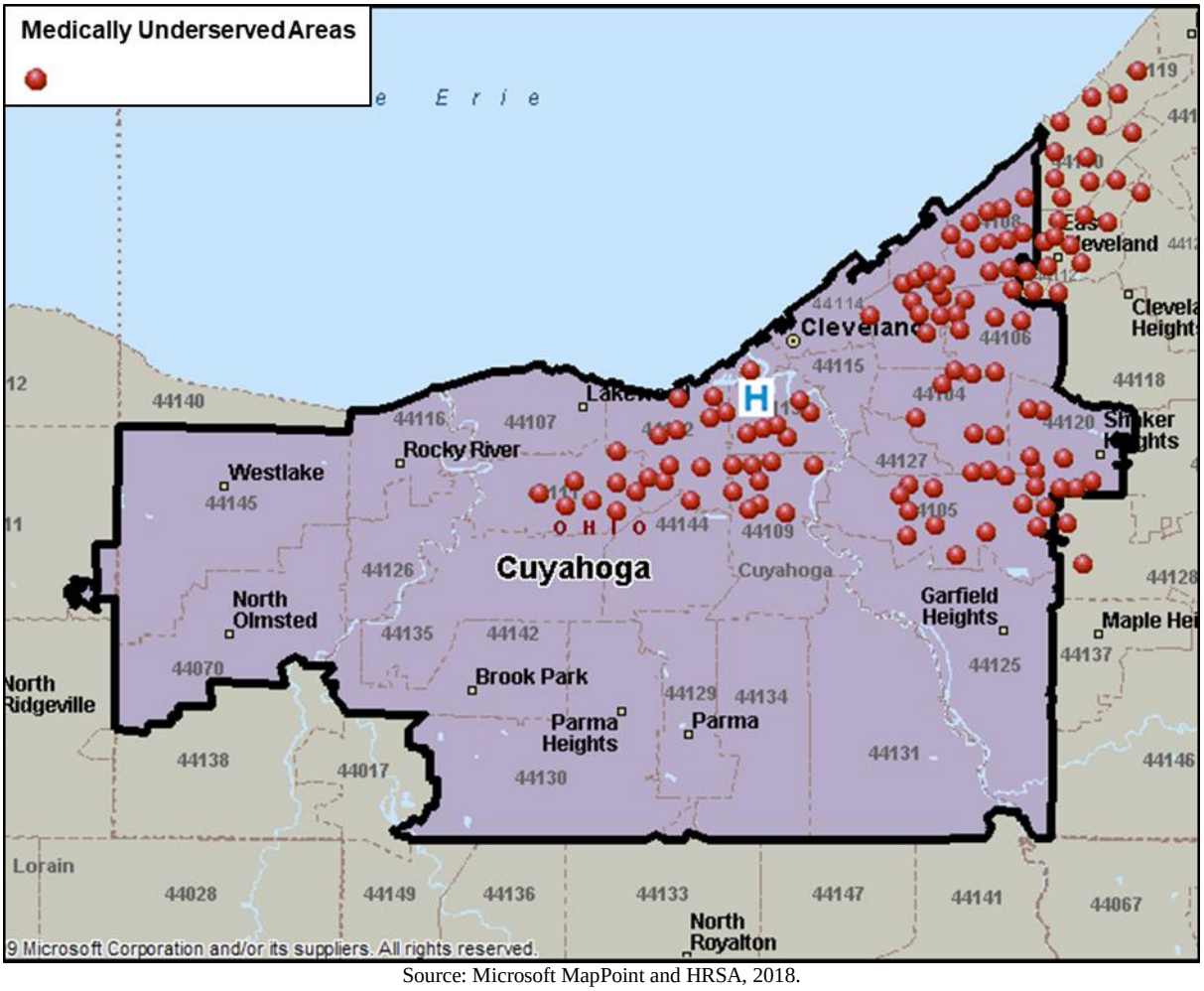
The U.S. Department of Agriculture's Economic Research Service defines urban food deserts as low-income areas more than one mile from a supermarket or large grocery store and rural food deserts as more than 10 miles from a supermarket or large grocery store. Many government-led initiatives aim to increase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

Observations

- Several census tracts in the community have been designated as food deserts, including areas proximate to the hospital.

Medically Underserved Areas and Populations

Exhibit 38: Medically Underserved Areas and Populations, 2018



Source: Microsoft MapPoint and HRSA, 2018.

Description

Exhibit 38 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

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

group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides."[19]

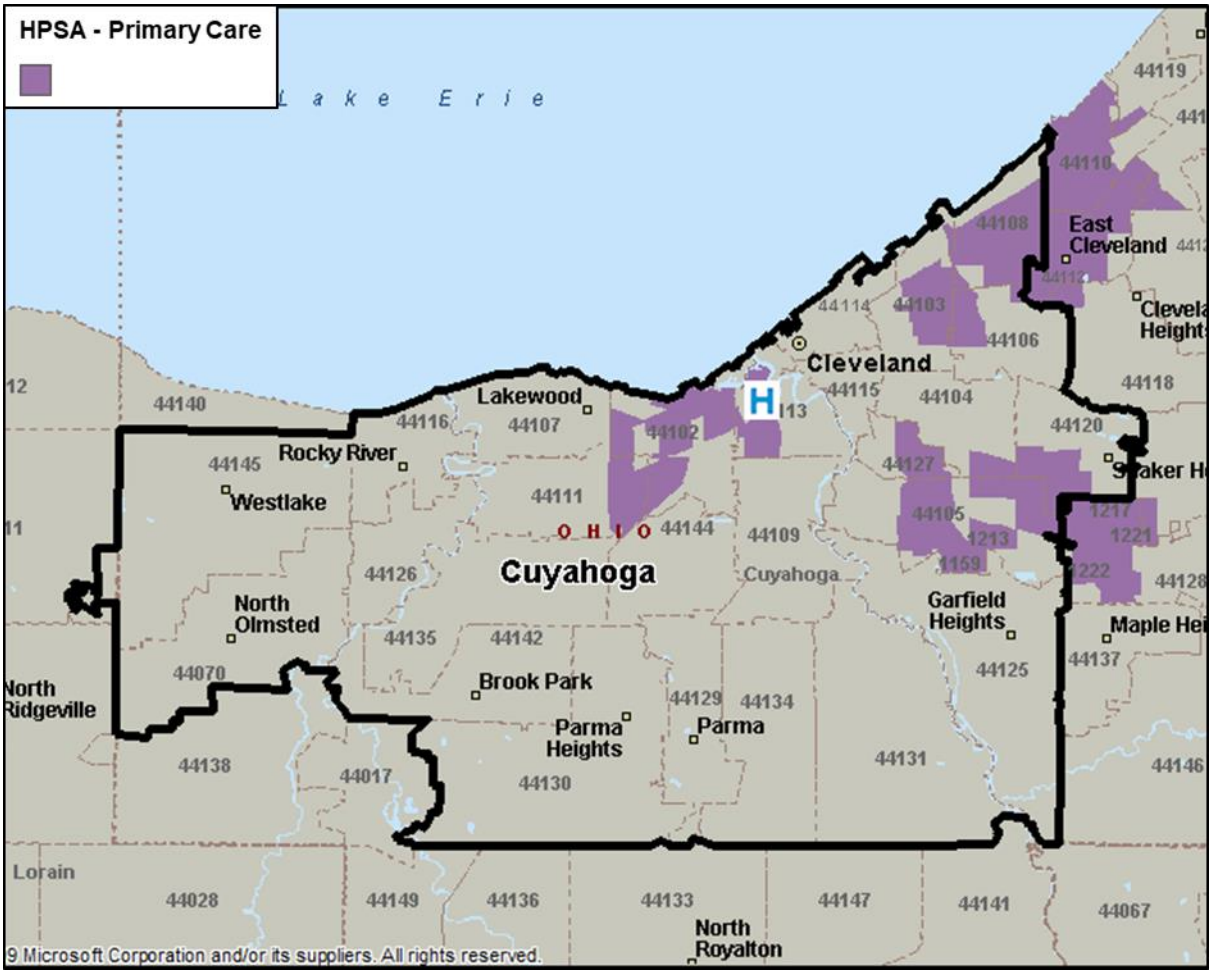
Observations

- Several census tracts have been designated as areas where Medically Underserved Areas, particularly in areas proximate to and east of the hospital.

[19] *Ibid.*

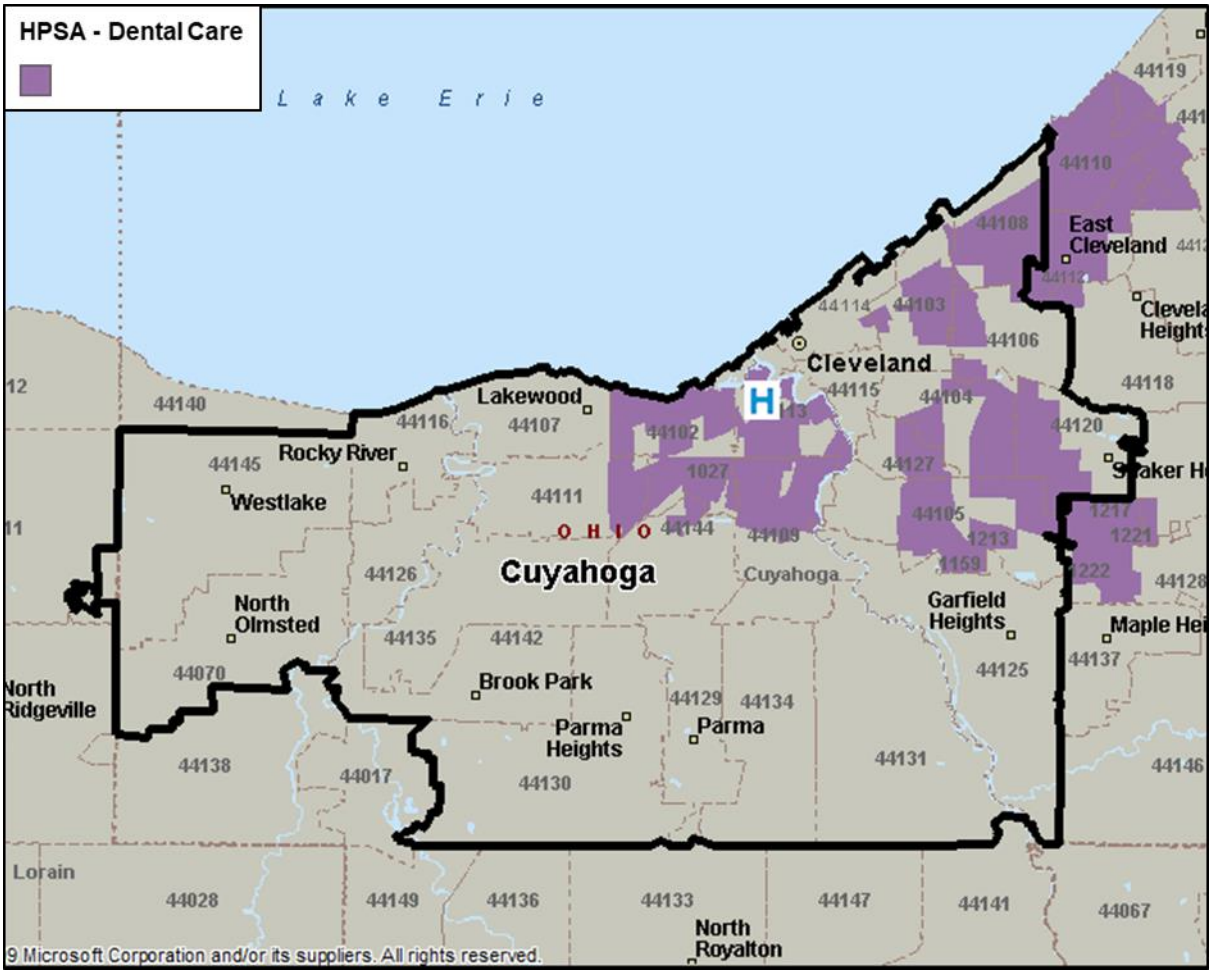
Health Professional Shortage Areas

Exhibit 39: Primary Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Exhibit 40: Dental Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Description

Exhibits 39 and 40 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.

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

- Several census tracts in Cuyahoga County have been designated as primary care and dental care HPSAs, including in areas proximate to the hospital.

[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 the local health department in Cuyahoga County 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

- 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

APPENDIX C – COMMUNITY INPUT PARTICIPANTS

Individuals from a wide variety of organizations and communities participated in the interview process (**Exhibit 41**).

Exhibit 41: Interviewee Organizational Affiliations

Organization	
American Heart Association	Fairhill Partners
Benjamin Rose Institute on Aging	Greater Cleveland Food Bank
Boys & Girls Clubs of Cleveland	Health Policy Institute of Ohio
Carmella Rose Health Foundation	Kent State School of Public 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	Western Reserve Area Agency on Aging

APPENDIX D – IMPACT EVALUATION

Impact of Actions Taken Since the Last CHNA – Lutheran Hospital

Cleveland Clinic Lutheran Hospital uses evidence-based approaches in the delivery of healthcare services and educational outreach with the aim of achieving healthy outcomes for the community it serves. It undertakes periodic monitoring of its programs to measure and determine their effectiveness and ensure that best practices continue to be applied.

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

Each identified health need and action items in our 2016 CHNA Implementation Strategy are described below with representative impacts.

1. **Identified Need: Access to Affordable Care**

   Actions:

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

   Cleveland Clinic provides telephone and internet access to patients seeking to make appointments for primary, specialty and diagnostic services. Representatives are available 24/7 and can assist patients in identifying the next available or closest location for an appointment at all facilities within the Cleveland Clinic health system.

   Lutheran Hospital has a significant Hispanic population in its community. Lutheran Hospital provides bilingual signage and interpretative services to help improve access to health care for this population.

   Highlighted Impacts:

   In 2016 – 2018, Cleveland Clinic health system provided over $286 million in financial assistance to its communities in Ohio, Florida, and Nevada.

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

   In 2018, Cleveland Clinic health system provided 43,125 virtual visits to patients seeking care, a 75% increase from 2017.

Lutheran Hospital, in conjunction with the Cleveland Clinic Medicine Institute and Cleveland Clinic Community Care, operates a Hispanic Clinic with bilingual caregivers to meet the unique needs of the Hispanic community. The Hispanic Clinic treats health issues and concerns, provides consultation, education, and prevention for the well-being and improved health of our Hispanic and Latino patients and their families. The Hispanic Clinic provides bilingual caregivers specializing in internal medicine, gastroenterology, hepatology, psychiatry, and general surgery. An additional primary care provider joined the internal medicine clinic in 2017 and 2018, increasing access to care by 200%. In 2018 shared medical appointments began to provide greater access to diabetes education and treatment.

2. Identified Need: Chronic Disease and Health Conditions

a. Cancer

Action:

Lutheran Hospital continues to provide mammogram and colonoscopy screening services to its community. In collaboration with the Cleveland Clinic Taussig Cancer Institute, Lutheran Hospital provides free mammograms to uninsured women in a program with the National Breast Cancer Foundation. Lutheran Hospital also collaborates with "THE WORD" Church and Cleveland Clinic to continue providing women with resources and information to increase awareness about breast health.

Highlighted Impact:

Lutheran provided health fair cancer screenings and community education classes for community residents from 2016 – 2018 including free breast cancer screening events twice a year. Community relations teammates provide education, FIT screenings, and cooking demos of healthy food choices each year during colon cancer awareness events.

b. Chemical Dependency

Action:

Cleveland Clinic hospitals continue to address community needs in the heroin and opioid epidemic by developing internal programs, educational modules, and treatment plans. We also continue to collaborate with external partners on strategies and policies that will positively impact this drug epidemic.

Based at Lutheran Hospital, Cleveland Clinic's Alcohol and Drug Recovery Center (ADRC) continues to offer evaluation and treatment for people with alcohol and/or drug dependency problems. Our interdisciplinary team of board-certified psychiatrists, specially trained and licensed registered nurses, and certified professional counselors all specialize in chemical dependency. Since 2012, the ADRC has offered inpatient care, outpatient services, and supportive step-down care to Lutheran Hospital and other Cleveland Clinic hospital communities.

Highlighted Impacts:

In 2018, Cleveland Clinic hosted an Opioid Summit, titled "Opioids: A Crisis Still Facing Our Community," for 300 community leaders, with the U.S. Attorney's Office.

An 8-week Integrative Recovery Shared Medical Appointment program was developed jointly by the Cleveland Clinic Wellness Institute and the Alcohol and Drug Recovery Center in 2018. The new program is open to adults with 3 months to 4 years of sobriety and active within a 12-step recovery program.

In May 2017, Cleveland Clinic announced Naloxone would be available without a prescription at all Cleveland Clinic pharmacies in NE Ohio.

Community town halls with local health districts, police departments, and fire departments discussed the "triple threat," of the epidemic: opiates, heroin, and fentanyl in Cleveland Clinic communities particularly hard-hit by the opiate epidemic. There were a total of 13 programs in 2017 and 2018, reaching over 865 attendees.

Lutheran Hospital admissions for psychological/mental health services increased from 2016 through 2018.

Since opening in 2012, the Alcohol and Drug Recovery Center averages almost 4,000 patients per year.

c. Diabetes

Action:

Lutheran Hospital continues to treats acute diabetic conditions on an inpatient basis and offers chronic wound care management in an outpatient setting, including care to those suffering from diabetic ulcers and other diabetic complications. Education continues to be provided to community members and to local schools through an outreach program called Diabetes 101.

Highlighted Impacts:

Community Outreach provided Food Fitness and Fun, a three week program addressing nutrition via interactive cooking demos, to local schools, serving 159 students in 2017 and 2018.

Community Outreach provided programming annually in November during Diabetes Awareness Month that includes diabetes education, cooking demos, and various diabetic topics.

d. Heart Disease

Action:

Lutheran Hospital continues to treats chronic cardiovascular disease in its communities through its Chronic Care Clinic, including support for anticoagulation care and heart failure. Patients needing inpatient heart care can be referred to other Cleveland Clinic specialty heart centers, such as Fairview Hospital's Heart Center or the Cleveland Clinic Miller Family Heart & Vascular Institute. Educational programs continue to be are offered to the community on heart health.

Highlighted Impacts:

Community educational programs on heart related topics, including Protect Your Heart: Know Your Numbers, Hypertension 101, and Stroke 101, reached over 150 community members from 2016 through 2018.

e. Obesity

Action:

Lutheran Hospital continues to provide Health Community Initiatives and fitness challenges in local neighborhoods, and offers a Healthy Strides walking program for the community.

Highlighted Impact:

Lutheran Hospital's Healthy Community Initiatives, *Come Cook With Us* nutrition education classes and fitness challenges in the community included over 80 community residents.

Lutheran Hospital collaborated with Esperanza, a local service organization serving the Hispanic Community, with their back to school efforts by coordinating pediatric screenings and providing school supplies and nutrition education.

The hospital sponsors Clark Elementary School's annual Bike-A-Thon by providing bike helmets and bicycle repairs along with bicycle reflectors and education for a large Hispanic community experiencing significant economic disparities.

f. Poor Birth Outcomes

Actions:

Cleveland Clinic hospitals continue to offer a wide range of clinical, wellness and education services relating to women's health. Cleveland Clinic's Infant Mortality Task Force continues its educational programming and work to strengthen and foster collaborative opportunities with other organizations in an effort to improve birth outcomes.

Our continued community educational efforts in schools and neighborhoods focus on addressing risk factors that would improve poor birth outcomes.

Highlighted Impacts:
In 2016 Cleveland Clinic's Infant Mortality Task Force became a founding partner of First Year Cleveland in Cuyahoga County and focused on priority areas of Racial Disparities, Prematurity, and Safe Sleep.

Cleveland Clinic's Centering Pregnancy programming, group pre-natal care for women, was started in four high-risk neighborhoods in 2017 and 2018, and provides Cleveland Clinic services for NE Ohio residents. Cleveland Clinic Centering locations include: Stephanie Tubbs Jones Health Center, Lakewood Family Health Center, Columbia Medical Office, and South Pointe Hospital.

Lutheran Hospital continues to work collaboratively with Fairview Hospital, the closest Cleveland Clinic health system hospital that provides the full spectrum of birthing services.

Cleveland Clinic's Outreach team hosted Community Baby Showers in high need neighborhoods to introduce resources and programs available to over 2500 high-risk patients and families 2016 - 2018.

g. Poor Mental Health Status

Action:
Lutheran Hospital continues to offer comprehensive behavioral health services and programs for patients of all ages. Lutheran Hospital is an area leader in adult behavioral health and operates the Lutheran Hospital Adult Behavioral Medicine Center including a Mood Disorder clinic, a special geriatric psychiatry unit, and acute behavioral health services. Lutheran Hospital also works collaboratively with Fairview Hospital to help pediatric patients and their families with behavioral medicine needs.

Lutheran Hospital outreach staff provides educational programming in the community on mental health.

Highlighted Impact:
Community Outreach provided programming on behavioral health that included drug abuse prevention, violence prevention, street safety, empowerment, stress management, cognitive behavioral therapy and impact of personal decisions and healthy behaviors in our Opioid, Streetwise Self Defense, Coffee with a Cop and Healthy Strides programming.

h. Respiratory Diseases

Action:
Lutheran Hospital continues to provide acute inpatient care, outpatient care, pulmonary rehabilitation, and preventive education to patients with COPD and Adult Asthma. Community health education programs continue to be offered to the community on numerous topics for lung health and tobacco cessation.

Highlighted Impacts:
Tobacco Cessation, Shared Medical Appointments, and individual counseling started in mid-2017 at Lutheran Hospital in the Chronic Care clinic.

Community relations provided Tobacco Cessation through the Healthy Community Initiatives.

3. Identified Need: Health Professions Education and Medical Research

Health Professions Education
Actions: Cleveland Clinic operates one of the largest graduate medical education programs in the Midwest and one of the largest programs in the country. Cleveland Clinic sponsors a wide range of high quality medical education training through its Education Institute including accredited training programs for nurses and allied health professionals. Cleveland Clinic's Education Institute oversees 202 residency and fellowship programs across the Cleveland Clinic Health System.

Lutheran Hospital is a location for Cleveland Clinic residency-training programs in psychiatry, orthopedic surgery, general surgery, and neurosurgery. Lutheran Hospital provides nursing clinical rotations and allied health internships, including for Anesthesiologist Assistant, Art Therapy, Counseling, Dietetics, EMT Paramedic, Medical Assisting, Occupational Therapy, Pharmacy, Phlebotomists, Physical Therapy, Physician Assistant, Social Work, Sonography, and Surgical Technologists.

Highlighted Impacts:
In 2018, Cleveland Clinic trained 1,517 residents and fellows, and 403 researchers as well as provided over 2,600 student rotations in 61 allied health education programs.

Lutheran Hospital continues to provide outreach programming for elementary schools, high schools, and senior centers (with a focus on the Hispanic community). Physicians and Caregivers with expertise in various specialties participated in a St. Ignatius High School service program to provide healthcare experience to Pre-Medicine Club students.

Research
Actions:
Clinical trials and other clinical research activities continue to occur throughout the Cleveland Clinic health system including at the community hospitals. For example, Lutheran Hospital physicians are currently involved in research on depression and drug abuse.

Highlighted Impacts:
Approximately 1,500 people work in 175 laboratories in 10 departments at Lerner Research Institute (LRI). In addition to basic discovery and translational research, Cleveland Clinic researchers and physicians had nearly 4,000 active projects involving human participants in 2017. At LRI, commercialization efforts led to 53 invention

disclosures, 20 new licenses, and 98 patents with the goal of accelerating advances in patient care.

The Cleveland Clinic Center for Populations Health Research was established in 2017 to help physicians and investigators leverage Cleveland Clinic's patient population to generate insights about why certain groups of people or communities are more or less likely to be healthy, and how this can be transformed into community interventions that improve health outcomes at the population level.

Lutheran Hospital is focused to develop a research program to address the opioid crisis.

4. **Identified Need: Healthcare for the Elderly**

Actions:

Cleveland Clinic joined the Medicare Shared Savings Program in 2015 to form an Accountable Care Organization (ACO) which serves a population of Medicare fee-for-service beneficiaries in Northeast Ohio.

Cleveland Clinic's Center for Geriatric Medicine assists elderly patients and their primary care physicians in the unique medical needs of aging patients. Geriatric services are designed to help preserve independence, maintain quality of life, and coordinate care among a multidisciplinary team of doctors, nurses, therapists, technicians, social workers, and other medical professionals to improve outcomes for older patients.

Cleveland Clinic's Center for Connected Care provides clinical programs designed to help patients with their post-hospital needs, including home care, hospice, mobile primary care physician services, home infusion pharmacy, and home respiratory therapy.

Highlighted Impacts:

Over the past three years our ACO managed 95,000 Medicare patients across Northeast Ohio and Florida.

In 2026 through 2018, Lutheran Community Outreach provided nutrition, exercise, and financial planning classes to elderly residents, as described in the Wellness section, below.

The hospital provided inpatient geriatric behavioral health services.

5. **Identified Need: Wellness**

Action:

Lutheran Hospital continues to offer outreach programs and community health talks focused on educating the community on healthy behavior choices, including exercise, healthcare navigation, stress management, nutrition, and tobacco cessation to promote health and wellness, increase access to healthcare resources, and reduce disease burden.

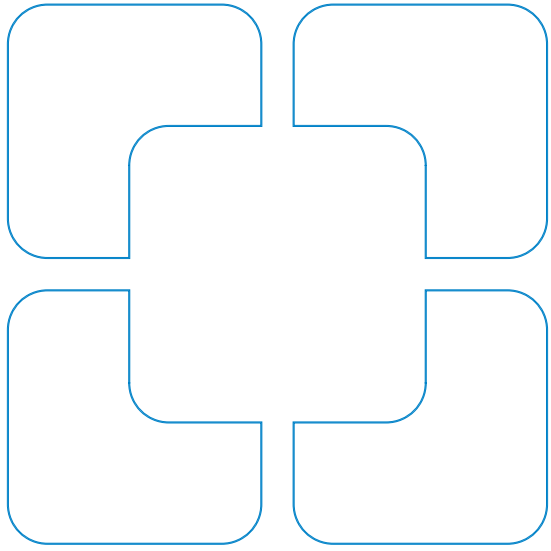
Some of these programs are held in nursing homes and/or focused on seniors or geriatric care.

Highlighted Impact:

In 2016 through 2018, Lutheran Hospital offered Healthy Strides Walking Program and Healthy Community Initiatives, community collaborative efforts to increase healthy behaviors for community residents.

Community Outreach provided Streetwise Self Defense programming to increase empowerment, safety, self-awareness and importance of exercise in supporting social and physical health.

Lutheran provided quarterly Community Advisory Council meetings inclusive of area social service providers and community members to address health disparities, share information about services and access, government updates addressing changes in medical care/ coverage, and shared community collaboration initiatives and programming.



clevelandclinic.org/**CHNAreports**

18-CCC-5594

Cleveland Clinic
Lutheran Hospital

Implementation Strategy Report

2019

Lutheran Hospital
1730 W. 25th Street
Cleveland, Ohio 44113

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

Name and EIN of Hospital Organization Operating Hospital Facility:	Lutheran Hospital #34-0714684
Date Approved by Authorized Governing Body:	April 9, 2020
Contact:	Cleveland Clinic chna@ccf.org

TABLE OF CONTENTS

Lutheran Hospital
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

Lutheran Hospital is a 194 staffed bed hospital located in Cleveland, Ohio. Lutheran offers quality medical care, cutting-edge technology, and advanced research and surgery. From primary care physicians to leading specialists, Lutheran Hospital offers expert care in areas such as Orthopedics, Spine, Pain Management, General Surgery, Behavioral Health, Alcohol, and Drug Recovery, Wound Care, Lab and Imaging Services, and Emergency Medicine. Additional information on the hospital and its services are available at https://my.clevelandclinic.org/locations/lutheran-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/ .

B. Hospital Mission

Lutheran Hospital was formed in 1896 to provide health care services to its community. Lutheran Hospital's mission statement is:

To provide better care for the sick, investigation of their problems and education of those who serve

II. COMMUNITY DEFINITION

For purposes of this report, Lutheran's community is defined as 26 ZIP codes in Cuyahoga County, Ohio, accounting for over 63 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. The total population of Lutheran's community in 2017 was 702,116.

Lutheran Hospital is located within 10 miles of Cleveland Clinic Fairview Hospital and 12 miles of Cleveland Clinic Avon Hospital. Because of this proximity, a portion of Lutheran's community overlaps with that of Fairview and Avon hospitals. These hospitals work together with Lakewood, Lorain, Amherst, North Ridgeville, North Olmsted, Avon Lake, Richard E Jacobs, and Avon Pointe Family Health Centers:

- Amherst FHC
- Avon Lake FHC
- Elyria- Chestnut Commons FHC
- Independence FHC
- Lakewood FHC
- Lorain FHC
- Richard E. Jacobs FHC
- Sheffield FHC
- Westown Physicians Center as a part of the Cleveland Clinic health system to serve residents in its western communities.

III. HOW IMPLEMENTATION STRATEGY WAS DEVELOPED

This Implementation Strategy was developed by a team of senior leaders from Lutheran Hospital and Cleveland Clinic; representing several departments including clinical administration, medical operations, nursing, finance, population health, and community relations. This team incorporated input from the hospital's community and local non-profit organizations to prioritize selected strategies and determine possible collaborations. Alignment with county Community Health Assessments (CHA) and Ohio's State Health Assessment (SHA) was also considered. Each year, senior leadership at the Cleveland Clinic 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

Lutheran Hospital's significant community health needs as determined by analyses of quantitative and qualitative data include:

Community Health Concerns

- Addiction and Mental Health
- Chronic Disease Prevention and Management
- Infant Mortality
- Socioeconomic Concerns

Other Identified Concerns

- Access to Affordable Health Care
- Medical Research and Health Professions Education

See the 2019 Lutheran Hospital CHNA for more information:
https://my.clevelandclinic.org/locations/lutheran-hospital/about/community

V. NEEDS HOSPITAL WILL ADDRESS

A. Cleveland Clinic Community Health Initiatives

Each Cleveland Clinic hospital provides numerous services and programs in efforts to address the health needs of the community. Implementation of our services focuses on addressing structural factors important for community health, strengthening trust with residents and stakeholders, ensuring community voice in developing strategies, and evaluating our strategies and programs.

Strategies within the ISRs are included according to the prioritized list of needs developed during the 2019 CHNA. These hospital's community health initiatives combine Cleveland Clinic and local non-profit organizations' resources in unified efforts to improve health and health equity for our community members, especially low-income, underserved, and vulnerable populations. Cleveland Clinic is currently undertaking a five-year community health strategy plan which may modify the initiatives in this report.

B. Lutheran Hospital Implementation Strategy 2020-2022

The Implementation Strategy Report includes the priority community health needs identified during the 2019 Lutheran Hospital CHNA and hospital-specific strategies to address those needs from 2020 through 2022.

Addiction and Mental Health

Lutheran Hospital's 2019 CHNA identified substance abuse disorders and mental health issues as needs in the community. This 2020 - 2022 Line of Effort will focus on the hospital's strategies to decrease the abuse of and overdose from opioids. Strategic initiatives include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Through Cleveland Clinic's Opioid Awareness Center, Cleveland Clinic will provide intervention and treatment for substance abuse disorders to Cleveland Clinic caregivers and their family members	Increase the number of individuals with opioid addiction and dependence who seek treatment
B	Through the Opioid Awareness Center, participation in the Northeast Ohio Hospital Opioid Consortium (led by a Lutheran Hospital physician) and Cuyahoga County Opiate Task Force, and community-based classes and presentations, Cleveland Clinic will provide preventative education and share evidence-based practices	Reduce the number of individuals with heroin or opioid addiction and dependence
C	The hospital's Alcohol and Drug Recovery Center (ADRC) will continue to provide evaluation, inpatient and outpatient treatment services, and supportive step-down care in partnership with other Cleveland Clinic hospitals The hospital will participate in *Project SOAR*, an outpatient treatment placement program for individuals with opioid addiction and dependence	Improve access to treatment services, improve access to recovery support, and reduce rates of relapse
D	Continue to develop, implement, and refine strategies for reducing post-operative opioid use. Through collaboration between the pain management, physical therapy, and psychiatry teams, and develop a multi-disciplinary approach for managing chronic pain and reducing the risk of addiction.	Reduce the prescription of opioids and reduce patient exposure to opioids
E	Cleveland Clinic will develop suicide and self-harm policies procedures and screening tools for patients in a variety of care settings	Reduce suicide rates

Chronic Disease Prevention and Management

Lutheran Hospital's 2019 CHNA identified chronic disease and other medically related health conditions as prevalent in the community (ex. heart disease, cancer, diabetes, respiratory diseases, obesity). Lutheran Hospital provides acute inpatient care, outpatient care and preventive education to its patients, and has a specialty focus in orthopedics and spine, behavioral health and chronic wound care. This Line of Effort is focused on strategies surrounding the prevention and management of chronic disease, with the goal to increase healthy behaviors in nutrition, physical activity, and tobacco cessation. Strategic initiatives include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Improve management of chronic conditions through Chronic Care Clinics employing a specialized model of care	Improve quality of life, decrease rates of complication, and improve treatment adherence for chronic disease patients
B	Engage community partners, local schools, and stakeholders to promote early cancer detection through community outreach and education, screening promotion, and patient navigation Provide free breast and skin cancer screenings through community events and partnerships	Increase cancer screening rates, improve screening follow-up rates, and reduce the number of patients who present with late-stage cancers
C	Engage community partners and stakeholders to implement health promotion messaging, health education, and outreach programs related to reducing behavioral risk factors, disease management, symptom management, and medication review Partner with the CMHA to upgrade the Riverview Welcome Center, a hub for community engagement and education	Decrease smoking, improve physical activity, improve nutrition, decrease stress levels, improve medication adherence, increase the number of individuals with a regular source of care, and increase the number of individuals who receive a regular well-check
D	Through the Healthy Communities Initiative (HCI), partner to fund programs like the *8 Week Health Challenge* designed to improve health outcomes in four core areas: physical activity, nutrition, smoking, and lifestyle management	Decrease smoking, improve physical activity, and improve nutrition

Chronic Disease Prevention and Management (continued)

Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
E In partnership with the Hispanic Center of Excellence, provide health education, improve access to care, and link community members to social services Continue to provide bilingual healthcare services at Lutheran Hospital Address health disparities through the *Minority Men's Health Fair* and other screening initiatives	Improve communication with providers, increase trust in providers, and improve health equity

Socioeconomic Concerns

Lutheran's Hospital's 2019 CHNA demonstrated that health needs are multifaceted, involving medical as well as socioeconomic concerns. The assessment identified poverty, health equity, trauma and other social determinants of health as significant concerns. In recent years, Lutheran Hospital has experienced increases in emergency room encounters by homeless patients. 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. The Centers for Disease Control and Prevention defines social determinants of health as the "circumstances in which people are born, grow up, live, work and age that affect their health outcome."

Lutheran Hospital is committed to promoting health equity and healthy behaviors in our communities. The hospital addresses socioeconomic concerns through a variety of services and initiatives including health and economic improvement collaborations among sectors, local hiring for hospital workforce, local supplies sourcing, mentoring of community residents, in-kind donation of time and sponsorships, anchor institution commitment, and caregiver training for inclusion and diversity. Lutheran Hospital's 2020-2022 strategic initiatives designed to address these concerns include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Implement a system-wide social determinants screening tool for patients to identify needs such as alcohol abuse, depression, financial strain, food insecurity, intimate partner violence, and stress Utilize EPIC to identify patients experiencing housing insecurity to coordinate resources for care	Connect patients with substance abuse treatment, mental health treatment, housing assistance and assistance with basic needs; reduce trauma and harm associated with violence
B	Explore a common community referral data platform to coordinate services and ensure optimal communication	Improve active referrals to community-based organizations, non-profits, and other healthcare facilities; track referral outcomes
C	Pilot patient navigation programming within a partnership pathway HUB model using community health workers and/or the co-location of community organizations with hospital facilities	Ensure connection to medical, social, and behavioral services; Improve health equity

Socioeconomic Concerns (continued)

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
D	Through partnerships with community organizations, develop health education events targeting socio-economically depressed populations	Improve health literacy; ensure connection to medical, social, and behavioral services
E	Participate in the Robert Wood Johnson Foundation (RWJF) *Cross-Sector Innovation Initiative Project* in Cuyahoga County which aims to impact structural racism across various sectors	Improve health equity, improve trust in providers
F	Sponsor and participate in *Say Yes to Education Cleveland*, a consortium focused on increasing education levels, fostering population growth, improving college access and spurring economic growth	Increase the number of individuals with a living wage, increase the number of individuals with employer-sponsored health insurance
G	Provide workforce development and training opportunities for youth K-12 in clinical and non-clinical areas, empowering Northeast Ohio's next generation of leaders	Increase diversity within the healthcare workforce, improve trust in providers, improve local provider shortages
H	Provide transportation on a space-available basis to 1) patients within 5 miles of the Stephanie Tubbs Jones Health Center and Marymount, Euclid, Lutheran, and South Pointe Hospitals and 2) radiation oncology patients within 25 miles of Cleveland Clinic Main Campus, Hillcrest, and Fairview Hospitals	Prevent missed appointments, increase preventative and well-visit attendance, improve treatment adherence

V. OTHER IDENTIFIED NEEDS

In addition to the community health needs identified in the CHNA, the hospital's 2019 CHNA also identified the needs of Access to Affordable Healthcare, and Medical Research and Professions Education.

Access to Affordable Health Care

Access to affordable health care is challenging for some residents, particularly access to primary care, mental health, dental care, and addiction treatment services. Access barriers are many and include cost, health insurance, geographical barriers, scheduling difficulties, a lack of awareness regarding available services, and an undersupply of providers. Cleveland Clinic continues to evaluate methods to improve patient access to care.

All Cleveland Clinic hospitals will continue to provide medically necessary services to all patients regardless of race, color, creed, gender, country of national origin, or ability to pay. Cleveland Clinic Financial Assistance. Initiatives include:

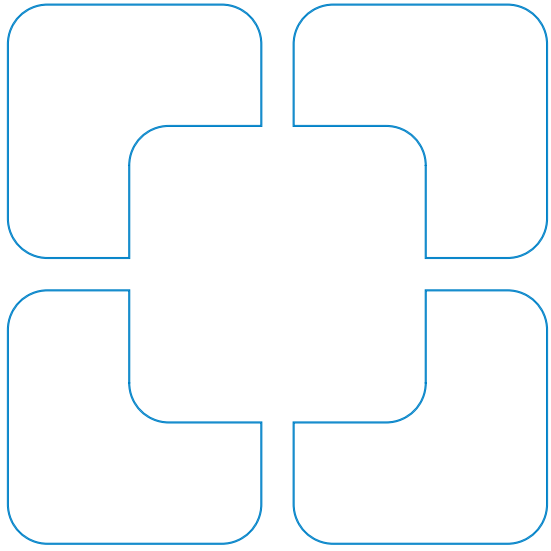
	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Bilingual Patient Financial Advocates assist patients in evaluating eligibility for financial assistance or public health insurance programs	Increase the proportion of eligible individuals who are enrolled in various assistance programs
B	Provide bilingual signage, interpretation, and employ bilingual caregivers specializing in internal medicine, gastroenterology, hepatology, general surgery, and psychiatry to meet the needs of the local Spanish-speaking population	Improve health literacy, improve communication with providers, increase trust in providers
C	Provide walk-in care at Express Care Clinics and offer evening and weekend hours	Improve the number of patients who receive the right level of care
D	Utilizing medically secure online and mobile platforms, connect patients with Cleveland Clinic providers for telehealth and virtual visits	Overcome geographical and transportation barriers, improve access to specialized care
E	Provide an outpatient pharmacy with proximity to Cuyahoga Metropolitan Housing Authority developments	Improve medication adherence

Medical Research and Health Professions Education

Cleveland Clinic cares for our communities by discovering tomorrow's treatments and educating future caregivers. Cures for disease and the provision of quality health care are part of Cleveland Clinic's mission. Cleveland Clinic has been named among America's best employers for diversity by *Forbes* magazine for three years running. The diversity of our caregivers is a key strength that helps us better serve patients, each other, and our communities. We are committed to enhancing the diversity of our teams to deepen these connections. Initiatives include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Through medical research, advance clinical techniques, devices, and treatment protocols in the areas of cancer, heart disease, diabetes, and others	Improve treatment efficacy, reduced morbidity and mortality
B	Through population health research, inform clinical interventions, healthcare policy, and community partnerships	Inform health policy at the local, state, and national levels, improve clinical protocols, create cost-savings, improve population health outcomes

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



clevelandclinic.org/**CHNAreports**

18-CCC-5594