Cleveland Clinic
Lutheran Hospital

Community Health Needs Assessment

2016



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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, to inform development of an Implementation Strategy to address current needs and to evaluate the impact of ongoing efforts to address previously identified community needs.

Lutheran is a 194-bed acute-care facility offering sophisticated technology and advanced medical care within an intimate and friendly environment. The hospital provides leading-edge treatments and advanced research and surgery, with specialties in orthopedics and spine, behavioral health and chronic wound care. Additional information on the hospital and its services is available at: https://my.clevelandclinic.org/locations_directions/Regional-Locations/lutheran-hospital.

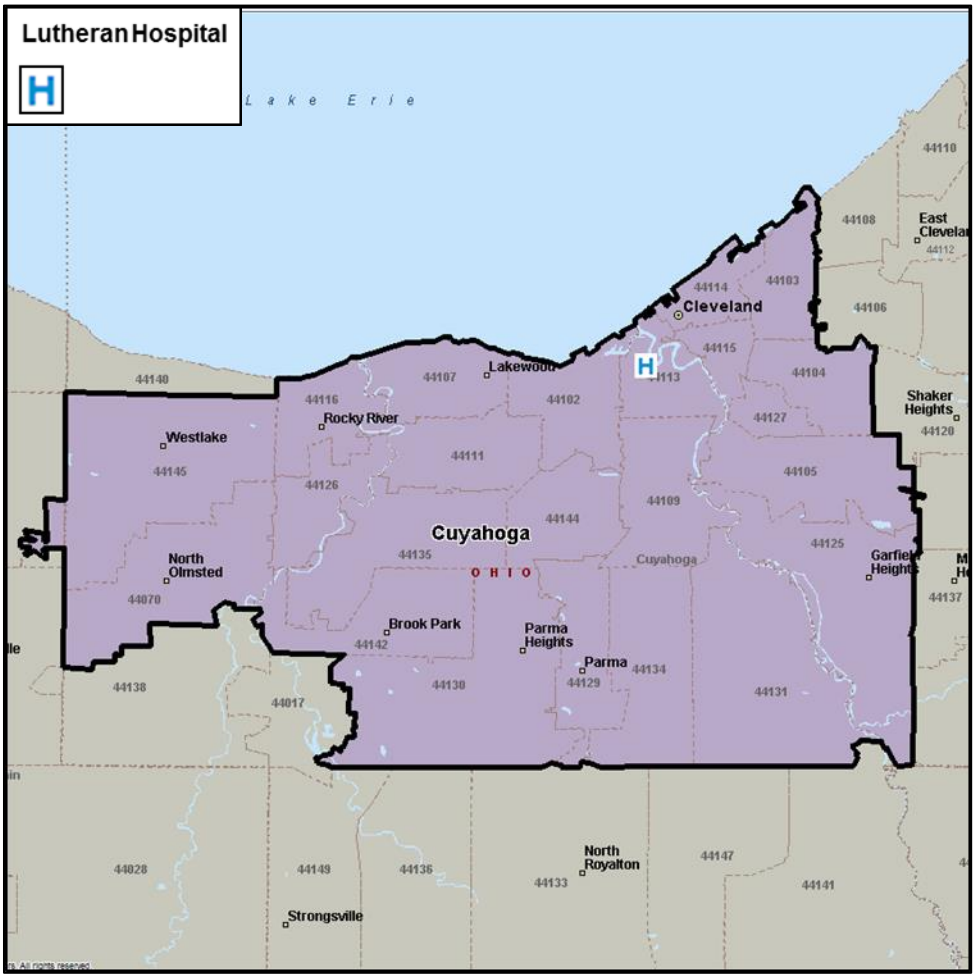
The hospital is part of the Cleveland Clinic health system, which includes an academic medical center, multiple regional hospitals, two children's hospitals, a rehabilitation hospital, a Florida hospital and a number of other facilities and services across Northeast Ohio and Florida. Additional information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

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

Community Definition

For purposes of this report, Lutheran's community is defined as 23 ZIP codes in Cuyahoga County, Ohio comprising over 59 percent of the hospital's inpatient volumes. This area has comparatively unfavorable health status and socioeconomic indicators, particularly for minority residents. The total population of Lutheran's community in 2015 was 621,594.

The following map portrays the community served by Lutheran.



Significant Community Health Needs

Six significant community health needs were identified through this assessment:

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

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

Access to Affordable Health Care

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

Chronic Diseases and Other Health Conditions

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

Economic Development and Community Conditions

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

Health Professions Education and Research

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

Healthcare for the Elderly

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

Wellness

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

OBJECTIVES AND METHODOLOGY

Regulatory Requirements

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

The regulations require that each hospital:

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

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

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

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

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

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

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

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

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

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

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

Methodology

Federal regulations that govern the CHNA process allow hospital facilities to define the community they serve based on "all of the relevant facts and circumstances," including the "geographic location" served by the hospital facility, "target populations served" (e.g., children, women, or the aged), and/or the hospital facility's principal functions (e.g., focus on a particular specialty area or targeted disease)."[3] The community defined by Lutheran accounts for over 59 percent of the hospital's 2014 inpatient discharges.

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

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

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

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

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

Collaborating Organizations

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

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

Data Sources

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

Input from 22 persons representing the broad interests of the community was taken into account through key informant interviews. Interviewees included: individuals with special knowledge of or expertise in public health; local public health departments; agencies with current data or information about the health and social needs of the community; representatives of social service organizations; and leaders, representatives, and members of medically underserved, low-income, and minority populations.

Information Gaps

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

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

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

DATA AND ANALYSIS

Definition of Community Assessed

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

On that basis, Lutheran's community is comprised of 23 ZIP codes in Cuyahoga County (**Exhibit 1**) which in 2014 accounted for just above 59 percent of its inpatient discharges.

Exhibit 1: Lutheran Inpatient Discharges by ZIP Code, 2014

City	ZIP Code	Inpatient Cases (2014)	Percent of Total
Cleveland	44102	1,066	13.7%
Cleveland	44109	453	5.8%
Lakewood	44107	415	5.3%
Cleveland	44113	410	5.3%
Cleveland	44111	407	5.2%
Cleveland	44135	233	3.0%
Cleveland	44103	147	1.9%
Cleveland	44144	135	1.7%
Cleveland	44105	134	1.7%
Cleveland	44114	134	1.7%
North Olmsted	44070	123	1.6%
Westlake	44145	119	1.5%
Cleveland	44130	111	1.4%
Cleveland	44134	109	1.4%
Independence	44131	104	1.3%
Rocky River	44116	96	1.2%
Cleveland	44126	83	1.1%
Cleveland	44104	82	1.1%
Cleveland	44129	72	0.9%
Cleveland	44125	54	0.7%
Cleveland	44115	51	0.7%
Brook Park	44142	42	0.5%
Cleveland	44127	31	0.4%
Subtotal		4,611	**59.2%**
Other Areas		3,175	40.8%
Total Discharges		7,786	100.0%

Source: Analysis of OHA Discharge Data, 2014.

The total population of this community in 2015 was approximately 622,000 persons (**Exhibit 2**).

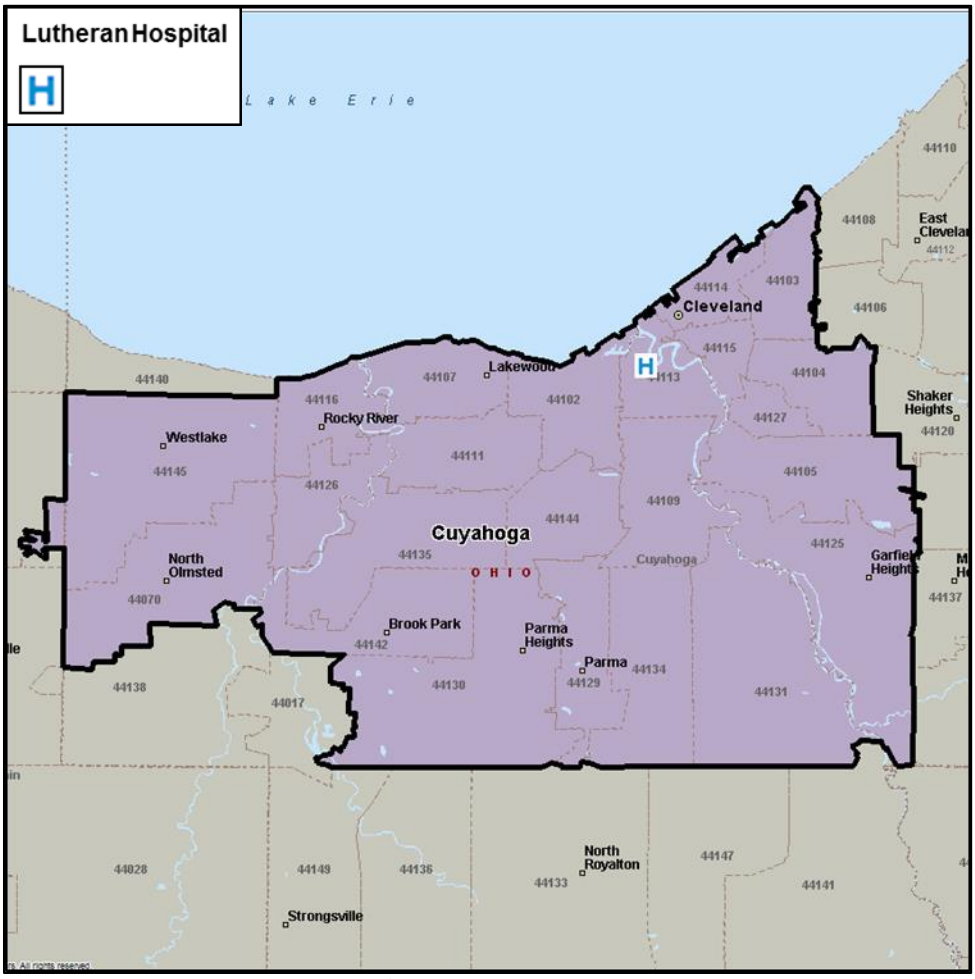
Exhibit 2: Community Population, 2015

City	ZIP Code	Total Population 2015	Percent of Total Population 2015
Brook Park	44142	18,583	3.0%
Cleveland	44102	42,983	6.9%
Cleveland	44103	16,978	2.7%
Cleveland	44104	22,327	3.6%
Cleveland	44105	37,633	6.1%
Cleveland	44109	39,023	6.3%
Cleveland	44111	38,798	6.2%
Cleveland	44113	19,659	3.2%
Cleveland	44114	6,256	1.0%
Cleveland	44115	8,962	1.4%
Cleveland	44125	27,551	4.4%
Cleveland	44126	16,203	2.6%
Cleveland	44127	5,215	0.8%
Cleveland	44129	28,606	4.6%
Cleveland	44130	49,773	8.0%
Cleveland	44134	38,190	6.1%
Cleveland	44135	26,440	4.3%
Cleveland	44144	20,932	3.4%
Independence	44131	20,110	3.2%
Lakewood	44107	51,892	8.3%
North Olmsted	44070	32,418	5.2%
Rocky River	44116	20,079	3.2%
Westlake	44145	32,983	5.3%
Community Total		**621,594**	**100.0%**

Source: Truven Market Expert, 2015.

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, 2015.

Secondary Data Summary

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

Demographics

Population characteristics and changes directly influence community health needs. The total population in the Lutheran community is expected to decrease 1.3 percent from 2015 to 2020. Between 2015 and 2020, 18 of the 23 ZIP codes in the Lutheran community are projected to lose population. The populations in two Cleveland ZIP codes (44105 and 44127) are expected to decrease by approximately five percent.

While the total population is expected to decrease, the number of persons aged 65 years and older is projected to increase by 12.2 percent between 2015 and 2020. The growth of older populations is likely to lead to growing need for health services, since on an overall per-capita basis, older individuals typically need and use more services than younger persons.

In 2015, over 70 percent of the population in four ZIP codes on the eastern side of the community (44013, 44014, 44105, and 44115) was Black. In seven western and southern ZIP codes, this percentage was under 5 percent.

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

Economic Indicators

Many health needs have been associated with poverty. According to the U.S. Census, in 2014 approximately 15.9 percent of people in Ohio were living in poverty. At 18.5 percent, Cuyahoga County's poverty rate was higher than Ohio's poverty rate during that year. In Cuyahoga County, poverty rates have been comparatively high for Black and Hispanic (or Latino) residents. Low income census tracts are prevalent in the northeastern portion of Lutheran's community. Poverty rates have been above 45 percent in ZIP codes 44103, 44104, 44115, and 44127.

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

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

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

2015, fourteen out of the 23 ZIP codes in the Lutheran community had uninsured rates below ten percent. By 2020, it is projected that this will increase to 21 of the 23 ZIP codes in the community.

Local Health Status and Access Indicators

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

- Air pollution
- Average number of physically unhealthy days
- Binge and heavy drinking
- Chlamydia rate
- Income inequality rate
- Percent of adults reporting fair or poor health
- Percent of children in poverty
- Percent of children living in a household headed by a single parent
- Percent of driving deaths with alcohol involvement
- Percent of households with severe housing problems
- Percent of live births with low birth weight
- Percent of the population unemployed
- Percent of the population without health insurance
- Percent of workers with a long commute who drive alone
- Social associations rate
- Teen birth rate
- Violent crime rate
- Years of potential life lost

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

- Annual average particulate matter concentration
- Morbidity associated with Alzheimer's disease, gonorrhea, adult asthma, and preterm births
- Mortality rates for cancer and coronary heart disease
- Rates of preventable hospitalizations for older adults
- The number of children living in single-parent households

According to the Ohio Department of Health, age-adjusted mortality rates for heart disease, homicide, HIV, and pedestrians killed in traffic collisions were all significantly higher in Cuyahoga County than the Ohio averages. Overall age-adjusted mortality and incidence rates for cancer have been slightly above average; prostate and uterine cancer mortality and incidence rates have been particularly problematic.

Ohio Department of Health data also indicate that:

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

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

Ambulatory Care Sensitive Conditions

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

We reviewed ACSC rates in the Lutheran community for 14 conditions and Lutheran community rates have exceeded the Ohio averages for all but one condition (perforated appendix). Rates for congestive heart failure, hypertension, angina without procedure, diabetes, and chronic obstructive pulmonary disease (COPD) were particularly problematic.

Community Need Index

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

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

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

- The percentage of the population renting houses

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

The CNI indicates that ten of the 23 ZIP codes in the Lutheran community scored in the "highest need category." Six Cleveland ZIP codes (44102, 44105, 44103, 44104, 44127, and 44115) each received a score of 5.0 – the highest score possible.

Food Deserts

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

Medically Underserved Areas and Populations

Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over. Areas with a score of 62 or less are considered "medically underserved." There are approximately 70 census tracts in the hospital's community that have been designated as medically underserved.

Health Professional Shortage Areas

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

Relevant Findings of Other CHNAs

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

- Obesity
- Mental/Behavioral health
- Access to basic/primary health care
- Diabetes
- Cardiovascular/heart disease
- Tobacco use/smoking

- Drug/substance abuse
- Alcohol abuse and excessive drinking
- Elderly care/aging population
- Cancer
- Infant mortality (disparities)
- Access to dental care
- Access/lack of health insurance coverage
- Cost of care
- Poverty
- Transportation

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

Primary Data Summary

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

Unhealthy Lifestyle and Related Conditions. Across all interviews the health behaviors of greatest concern were poor diet and nutrition and limited physical activity. Smoking, tobacco use, and unsafe sex were also mentioned. Unhealthy diets were attributed to limited access to healthy foods for many in lower socio-economic classes and certain cultural groups. Insufficient knowledge about nutrition was mentioned in many interviews as a contributing factor to health conditions, along with a misunderstanding of the perceived affordability of fast food. A lack of open spaces and areas for walking and playing were also cited as major concerns that contribute to an unhealthy, sedentary lifestyle. Interviewees indicated that unhealthy lifestyles are contributing to chronic disease in the community. Obesity, diabetes/pre-diabetes, heart disease, and hypertension were the most often cited conditions. Interviewees stressed the need for additional preventive and wellness services.

Access Issues. Interviewees cited the inability to access available resources as a barrier to improving community health outcomes. Lack of knowledge of available services, lack of health insurance or of knowledge on its use, transportation, and providers not accepting Medicaid are some of the main barriers to access. Many interviewees indicated that social determinants of health were also a large barrier and disproportionately affect the community's low socio-economic status groups, immigrant populations, those with language barriers, minority populations, elderly adults, and adolescents. Adolescents were mentioned frequently as a group in need, given comparatively high teen pregnancy rates and recent data regarding mental health concerns. The areas with access issues most cited were:

- **Access to Dental Care.** A majority of respondents believed that the dental care available in the community was not enough to serve the needs of the population, particularly for those without insurance. Others believed that oral health was an important concern that, without prevention, could lead to more severe health concerns.

- **Access to Primary Care.** Interviewees indicated that consistent primary care was still difficult to access. Respondents believed that segments of the population still used the emergency department for primary care. Several respondents expressed a desire that everyone in the region could find a consistent "medical home" for primary care and prevention. Clinics that serve low-income members of the community report challenges in recruiting and retaining health professionals.

- **Access to Transitional Care.** After medical discharge, people in the community found it difficult to find services that helped them transition and recover. Community members believed that investment in more community workers or in-home nurses could help alleviate this problem.

Conditions and Care of the Elderly. Aging well in the community was a top concern of many interviewees. With an aging population, many chronic conditions associated with elderly populations arose as areas of need, with dementia the most notable. The growth of this population means more resources will be needed. Respondents noted insufficient senior living facilities (especially for low-income seniors), lack of providers accepting Medicare, challenges with transportation for seniors and isolation among this population.

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

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

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

Environmental Issues. Several interviewees cited environmental issues including lead contamination and air pollution as significant issues in the community. A lack of affordable housing was said to have the greatest impact on low-income minority residents. A number of respondents stated that Cleveland's Housing Inspection Authority was currently not robust enough to address the issue of substandard living conditions.

Information Gaps. Interviewees indicated that many are unaware of the healthcare resources available in the community. Many attributed high disease rates and emergency department utilization to a failure to take advantage of community programs. Interviewees believed that resources should be publicized better and that a central healthcare information center would greatly improve awareness. Interviewees also expressed concern about the low healthcare literacy of many community members, particularly low income and minority residents. Challenges navigating the healthcare system have negatively affected access for these populations.

SIGNIFICANT COMMUNITY HEALTH NEEDS

Prioritization Process

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

Access to Affordable Health Care

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

- Federally-designated Medically Underserved Areas (MUAs) and Primary Care Health Professional Shortage Areas (HPSAs) are present in the community served by Lutheran **(Exhibits 33 and 34)**.
- Rates for ambulatory care sensitive conditions within the Lutheran community were significantly higher than the Ohio averages **(Exhibits 28 and 29)**. Disproportionately high rates indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes.
- In Community Health Status Indicators (CHSI), Cuyahoga County ranks poorly compared to peer counties for Older Adult Preventable Hospitalizations **(Exhibit 21)**.
- Access to basic medical care was identified by nearly all interviewees as problematic. It was often cited that segments of the population rely excessively on emergency departments for primary care.

Chronic Diseases and Other Health Conditions

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

- **Cancer**
  - According to the Ohio Department of Health, cancer was the second leading cause of death in Cuyahoga County **(Exhibit 23)**.

  - The mortality rate for stomach cancer in Cuyahoga County was more 50 percent higher than the Ohio average. Mortality rates for breast, prostate, pancreas, uterus, liver and intrahepatic bile duct, multiple myeloma, oral cavity and pharynx, cervix, larynx, and testis cancer were also higher than the state averages. **(Exhibit 23)**.

- **Chemical Dependency**
  - In County Health Rankings, Cuyahoga County ranked 52nd out of 88 Ohio counties for Drug Overdose Deaths and 64th for Excessive Drinking **(Exhibit 19)**.
  - According to the 2014 Ohio Department of Health Drug Overdose Report, fentanyl drug seizures in the United States increased by 300 percent between 2013 and 2014. In 2014, fentanyl-related overdoses accounted for 19.9 percent of accidental overdoses, a significant rise from 4.0 percent in 2013. Additionally, the rate of heroin poisoning in Cuyahoga County was significant higher than the Ohio average.
  - Abuse of opiates was cited as a significant health concern by nearly all interviewees. More than half of the recent health assessments analyzed in this report identified chemical dependency as a significant health need.
- **Communicable Diseases**
  - In County Health Rankings, Cuyahoga County ranked 87th out of the 88 counties in Ohio for Sexually Transmitted Infections **(Exhibit 19)**.
  - According to the Ohio Department of Health, the age-adjusted mortality rate for HIV in Cuyahoga County was more than twice as high as the state average. Incidence rates for chlamydia, HIV, gonorrhea, and viral meningitis in Cuyahoga County were all significantly higher than the Ohio averages **(Exhibits 22 and 25)**.
  - Several interviewees identified the incidence rate for HIV/AIDS as a significant health concern within the community. Cleveland was cited as one of only a few major cities in America with an increasing HIV incidence rate.
- **Diabetes, Heart Disease, and Hypertension**
  - The age-adjusted mortality rate for Heart Disease in Cuyahoga County was significantly higher than the Ohio average **(Exhibit 22)**.
  - ACSC rates for Congestive Heart Failure, Hypertension, Angina without Procedure, and Uncontrolled Diabetes were all significantly higher than the average ACSC rates in Ohio **(Exhibit 29)**.
- **Obesity**
  - Federally-designated Food Deserts are present in the community served by Lutheran **(Exhibit 32)**. Lack of access to affordable healthy food options and high concentrations of fast food restaurants, may lead individuals (particularly those in lower socio-economic classes) to consume calorie dense, nutrient poor foods that lead to obesity. Chronic conditions such as hypertension and diabetes are much more prevalent among individuals who are obese.
- **Poor Birth Outcomes**
  - In County Health Rankings, Cuyahoga County ranked 51st out of the 88 counties in Ohio for teen births **(Exhibit 19)**, and had a significantly higher percentage of low birth weight births compared to both the Ohio and national averages **(Exhibit 20)**.

  - Data from the Ohio Department of Health indicate that rates of infant mortality, low birth weights, and preterm births in Cuyahoga County have been significantly higher than the Ohio averages **(Exhibit 26)**.
  - ACSC rates for Low Birth Weight were significantly higher than the Ohio average in the Lutheran community **(Exhibit 28)**.
- **Poor Mental Health Status**
  - Behavioral Risk Factor Surveillance System data show that many of the ZIP codes in the Lutheran community have comparatively high rates for depression compared to the average of the 21 counties in Northeast Ohio **(Exhibit 27)**.
  - Many interviewees identified mental illness and a lack of mental health services as a significant concern for all age groups within the area served by Lutheran. Several interviewees cited the connection between poor mental health and negative outcomes for physical health.
- **Respiratory Diseases**
  - ACSC rates for Adult Asthma and Chronic Obstructive Pulmonary Disease were significantly higher than the average ACSC rates in Ohio **(Exhibit 29)**.
  - Other, recent health assessments identified respiratory diseases as a significant concern in Cuyahoga County.

Economic Development and Community Conditions

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

- Cuyahoga County has a higher poverty rate than both the Ohio and national averages **(Exhibit 12).**
  - Poverty rates among Black and Hispanic (or Latino) populations in Cuyahoga County are more than twice as high as the poverty rate of White residents **(Exhibit 12)**.
  - Federally-designated Low Income Areas are present in the community served by Lutheran **(Exhibit 14)**.
  - In County Health Rankings, Cuyahoga County ranked 79th out of the 88 counties in Ohio for Social and Economic Factors, 59th for Unemployment, and 78th for Inadequate Social Support **(Exhibit 19)**.
  - According to the Community Need Index, ten out of the 23 ZIP codes in Lutheran's community scored in the "highest need category" **(Exhibit 30)**.
  - A majority of interviewees identified economic and healthcare disparities among minority residents as significant community health issues.
- Crime rates in Cuyahoga County have been well above Ohio averages **(Exhibit 18)** and recent homicide rates have been nearly twice as high as the Ohio average **(Exhibit 22)**.
- In County Health Rankings, Cuyahoga County ranked 61st out of 88 counties, in Physical Environment, 63rd in Air Pollution, and 87th in Severe Housing Problems **(Exhibit 19)**.
- Other health assessments also identified transportation and environmental concerns as priorities.

- Interviewees identified a lack of transportation options as a significant barrier to good health in the community. This was especially true for low-income, elderly, and disabled residents.

Health Professions Education and Research

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

- Federally-designated Medically Underserved Areas and Primary Care and Dental Health Professional Shortage Areas are present in the community served by Lutheran **(Exhibits 33 and 34)**.
- A report conducted by the Robert Graham Center indicates that Ohio will need an additional 681 primary care physicians by 2030 (an eight percent increase) to maintain current levels of primary care access. Physicians nearing retirement age and increases in demand associated with increases in insurance coverage are expected to exacerbate this need.[6]
- Through research, Cleveland Clinic has advanced knowledge and improved community health for all its communities, from local to national, and across the world. Cleveland Clinic is involved in both basic research and clinical studies and seeks to translate discoveries into advanced treatments and cures for a variety of diseases and conditions. Cleveland Clinic's tripartite mission of patient care, research and education facilitates bringing new therapies and treatments to patients and their providers, because Cleveland Clinic physicians provide quality clinical care closely integrated with the latest research and educational developments. Research is conducted at and in collaboration with all Cleveland Clinic hospitals. This allows patients to access the latest techniques and to enroll in research trials no matter where they access care in the health system.

Healthcare for the Elderly

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

- While the population in Lutheran's community is projected to decrease by 1.3 percent between 2015 and 2020; the number of persons 65 years of age and older in the community is projected to increase by 12.2 percent over this period **(Exhibit 7)**.
- In Community Health Status Indicators (CHSI), Cuyahoga County ranks poorly compared to peer counties for Older Adult Preventable Hospitalizations **(Exhibit 21)**.
- Interviewees identified care of the elderly as a challenge in the community, including the need for additional in-home health care, services, and day care services. Concerns were

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

also raised about the ability of seniors to find affordable housing options and the number of seniors who live alone.

Wellness

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

- Behavioral Risk Factor Surveillance System data show that 13 of the 23 ZIP codes in the Lutheran community have significant percentages of residents who smoke compared to the average percent of the 21 counties in Northeast Ohio **(Exhibit 27)**.
- Federally-designated Food Deserts are present in the community served by Lutheran **(Exhibit 32)**. Lack of access to affordable healthy food options and high concentrations of fast food restaurants, may lead individuals (particularly those in lower socio-economic classes) to consume nutrient poor foods.
- The lack of access to healthy food and a lack of nutrition-based education were believed to be two of the main reasons individuals in the community had poor diets.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

This section identifies other facilities and resources available in the community served by 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 19 FQHC sites operating in the Lutheran community (**Exhibit 4**).

Exhibit 4: Federally Qualified Health Centers

Facility	County	ZIP Code
Asian Services in Action	Cuyahoga	44114
Care Alliance Health Center	Cuyahoga	44114
Care Alliance- The Centers Clinic	Cuyahoga	44103
Carl B. Stokes Clinic	Cuyahoga	44104
Centers Gordon Square Community Health Center	Cuyahoga	44102
Centers West Community Health Center	Cuyahoga	44111
Central Neighborhood Clinic	Cuyahoga	44115
Hough Health Center	Cuyahoga	44103
Miles Broadway Health Center	Cuyahoga	44105
Neighborhood Family Practice- Detroit Shoreway	Cuyahoga	44102
Neighborhood Family Practice- Main Office	Cuyahoga	44102
Neighborhood Family Practice- Puritas	Cuyahoga	44135
Neighborhood Family Practice- Tremont	Cuyahoga	44113
Norwood Health Center	Cuyahoga	44103
Ridge Community Health Center	Cuyahoga	44102
Riverview Towers Clinic	Cuyahoga	44113
Southeast Health Center	Cuyahoga	44105
St. Clair Clinic	Cuyahoga	44114
W. 117 Community Health Center	Cuyahoga	44111

Source: Health Resources and Services Administration, 2016.

Hospitals

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

Exhibit 5: Hospitals

Hospital Name	Type	Beds	ZIP Code	County
Cleveland Clinic Children's Hospital for Rehabilitation	Children's Rehabilitation	52	44104	Cuyahoga
Fairview Hospital	General Hospital	488	44111	Cuyahoga
Kindred Hospital- Cleveland- Gateway	Long-Term Acute Care	75	44115	Cuyahoga
Marymount Hospital	General Hospital	315	44125	Cuyahoga
MetroHealth Medical Center- Main Campus	General Hospital	731	44109	Cuyahoga
Southwest General Health Center	General Hospital	358	44130	Cuyahoga
St. Vincent Charity Medical Center	General Hospital	438	44115	Cuyahoga
University Hospitals Parma Medical Center	General Hospital	332	44129	Cuyahoga
University Hospitals St. John Medical Center	General Hospital	221	44145	Cuyahoga

Source: Ohio Hospital Association, 2016.

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 – CONSULTANT QUALIFICATIONS

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

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

APPENDIX B – SECONDARY DATA ASSESSMENT

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

Community Assessed

As mentioned previously and shown in **Exhibit 1**, Lutheran's community is comprised of 23 ZIP codes, all of which are located in Cuyahoga County, Ohio.

Demographics

Population characteristics and changes directly influence community health needs. The total population in the Lutheran community is expected to decrease 1.3 percent from 2015 to 2020 (**Exhibit 6**).

Exhibit 6: Percent Change in Community Population by ZIP Code

City	ZIP Code	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
Brook Park	44142	18,583	18,178	-2.2%
Cleveland	44102	42,983	41,674	-3.0%
Cleveland	44103	16,978	16,437	-3.2%
Cleveland	44104	22,327	22,180	-0.7%
Cleveland	44105	37,633	35,694	-5.2%
Cleveland	44109	39,023	38,011	-2.6%
Cleveland	44111	38,798	37,939	-2.2%
Cleveland	44113	19,659	20,035	1.9%
Cleveland	44114	6,256	6,547	4.7%
Cleveland	44115	8,962	9,251	3.2%
Cleveland	44125	27,551	26,881	-2.4%
Cleveland	44126	16,203	16,012	-1.2%
Cleveland	44127	5,215	4,957	-4.9%
Cleveland	44129	28,606	28,283	-1.1%
Cleveland	44130	49,773	49,334	-0.9%
Cleveland	44134	38,190	37,694	-1.3%
Cleveland	44135	26,440	26,444	0.0%
Cleveland	44144	20,932	20,809	-0.6%
Independence	44131	20,110	19,939	-0.9%
Lakewood	44107	51,892	51,785	-0.2%
North Olmsted	44070	32,418	32,052	-1.1%
Rocky River	44116	20,079	19,938	-0.7%
Westlake	44145	32,983	33,389	1.2%
Community Total		**621,594**	**613,463**	**-1.3%**

Source: Truven Market Expert, 2015.

Between 2015 and 2020, 18 of the 23 ZIP codes in the community are projected to decrease in population size. The populations in Cleveland ZIP codes 44105 and 44127 are expected to decrease by approximately five percent.

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

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

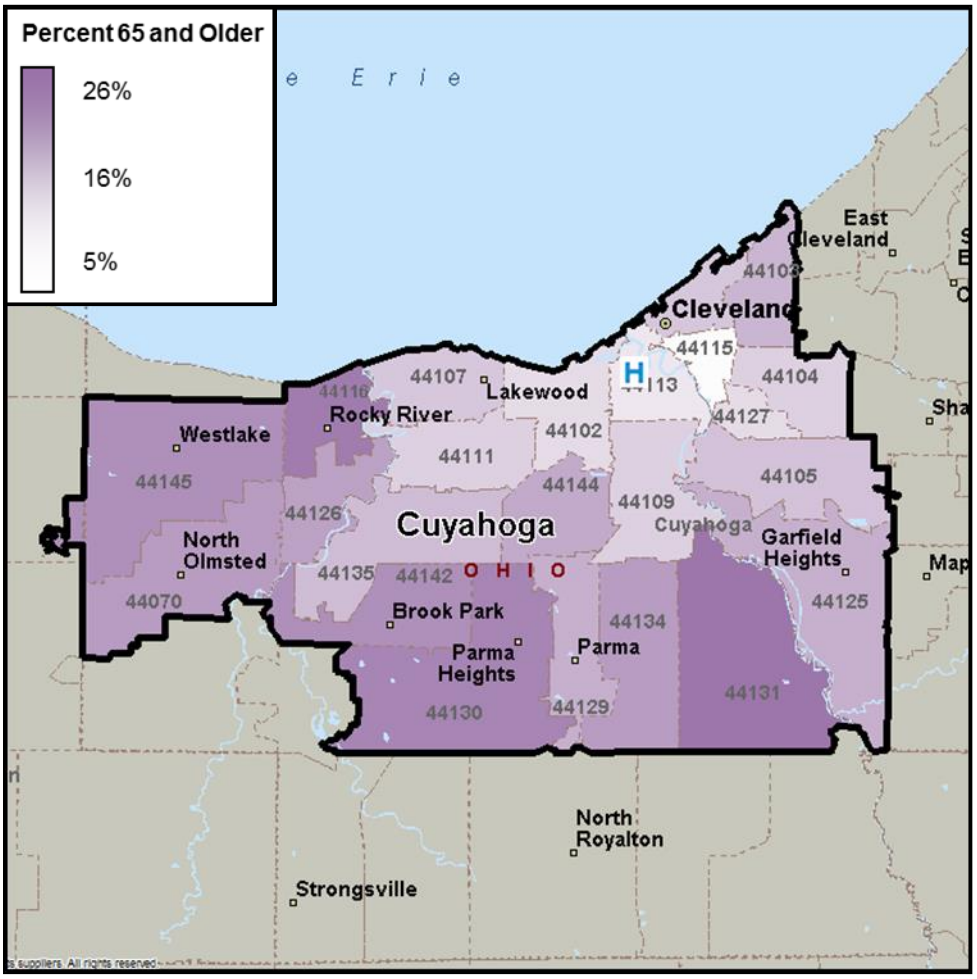
Age/Sex Cohort	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
0-17	136,071	131,205	-3.6%
Female 18-44	109,097	105,918	-2.9%
Male 18-44	107,773	105,171	-2.4%
45-64	170,032	160,554	-5.6%
65+	98,621	110,615	12.2%
Community Total	**621,594**	**613,463**	**-1.3%**

Source: Truven Market Expert, 2015.

The number of persons aged 65 years and older is projected to increase by 12.2 percent between 2015 and 2020. All other age groups are expected to decrease in population. The growth of older populations is likely to lead to growing need for health services, since on an overall per-capita basis, older individuals typically need and use more services than younger persons.

Exhibit 8 illustrates the percent of the population 65 years of age and older in the community by ZIP code.

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

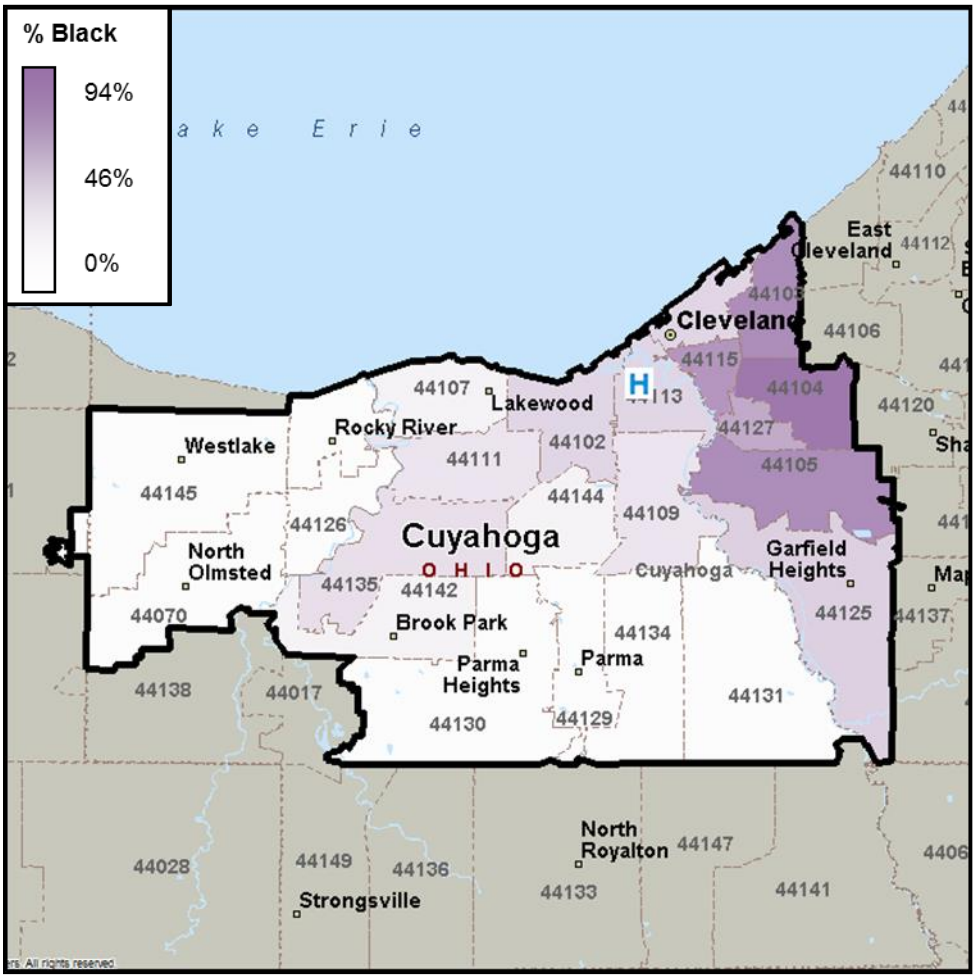


Source: Truven Market Expert, 2015.

In the community, ZIP codes 44131, 44116, and 44130 had the highest proportions of residents 65 years of age and older. ZIP code 44115 had the lowest.

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

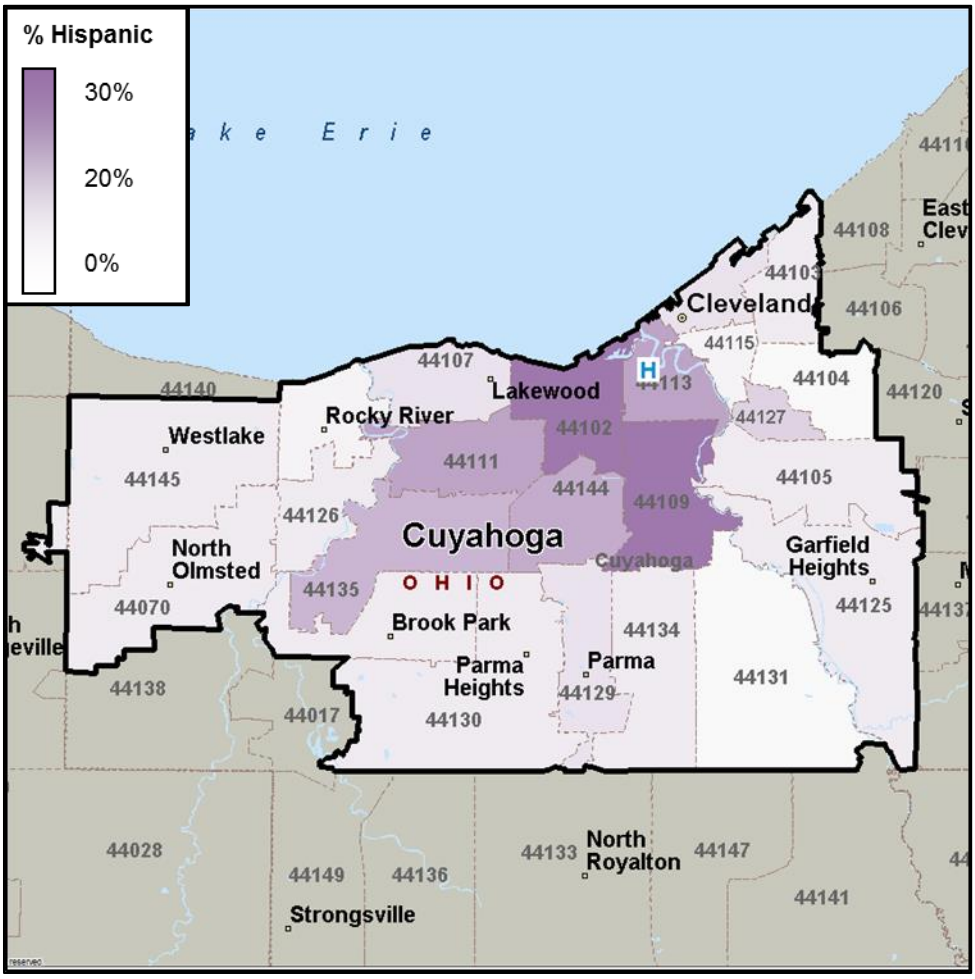
Exhibit 9: Percent of Population - Black, 2015



Source: Truven Market Expert, 2015.

Over seventy percent of residents of ZIP codes 44014, 44105, 44115, and 44013 (on the eastern side of the community) were Black. Fewer than five percent of residents were Black in seven of the community's ZIP codes (44070, 44126, 44129, 44130, 44131, 44142, and 44145).

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



Source: Truven Market Expert, 2015.

The percentage of residents that are Hispanic (or Latino) was highest in ZIP codes 44102 and 44109.

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

Exhibit 11: Other Socioeconomic Indicators, 2014

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

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

Exhibit 11 indicates that:

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

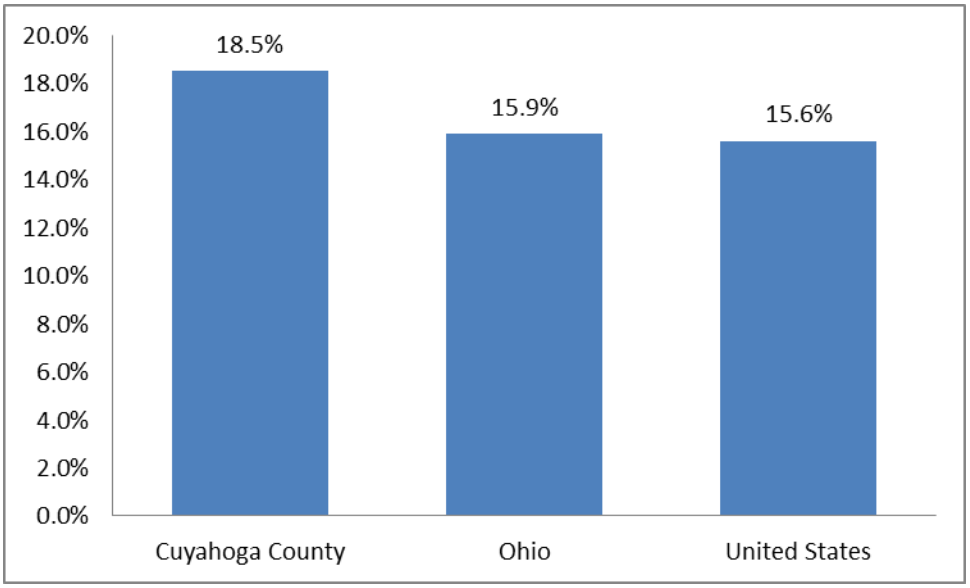
Economic indicators

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

People in Poverty

Many health needs have been associated with poverty. According to the U.S. Census, in 2014 approximately 15.9 percent of people in Ohio were living in poverty. Cuyahoga County's poverty rate was higher than Ohio's poverty rate during that year (**Exhibit 12**).

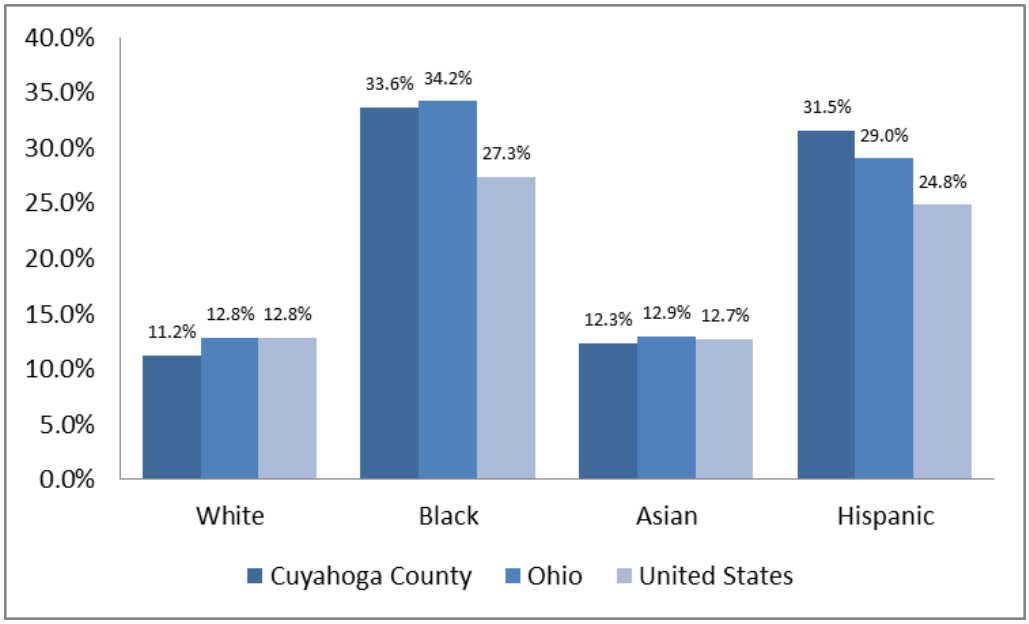
Exhibit 12: **Percent of People in Poverty, 2014**



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

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

Exhibit 13: Poverty Rates by Race and Ethnicity, 2014

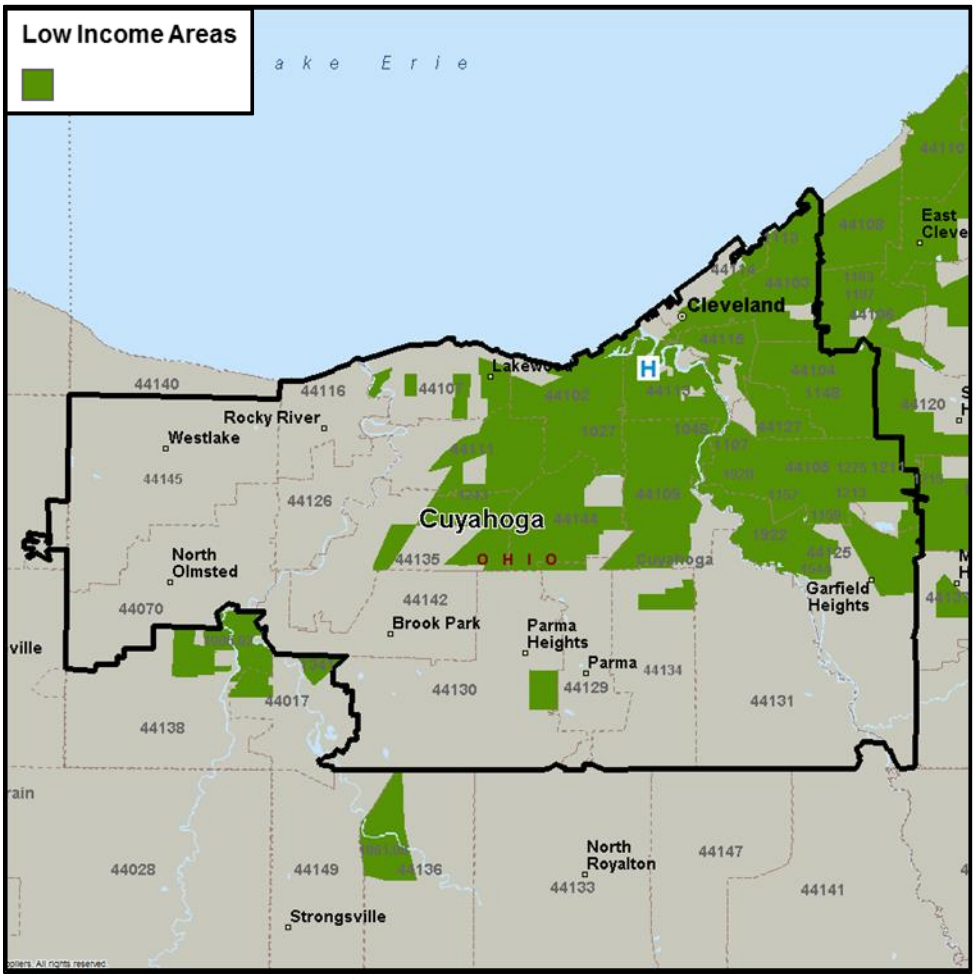


Source: U.S. Census, ACS 5-Year Estimates, 2010-2014.

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

Exhibit 14 portrays (in green shading) the locations of low income census tracts in the community. The U.S. Department of Agriculture defines "low income census tracts" as areas where poverty rates are 20 percent or higher or where median family incomes are 80 percent or lower than within the metropolitan area.

Exhibit 14: Low Income Census Tracts



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

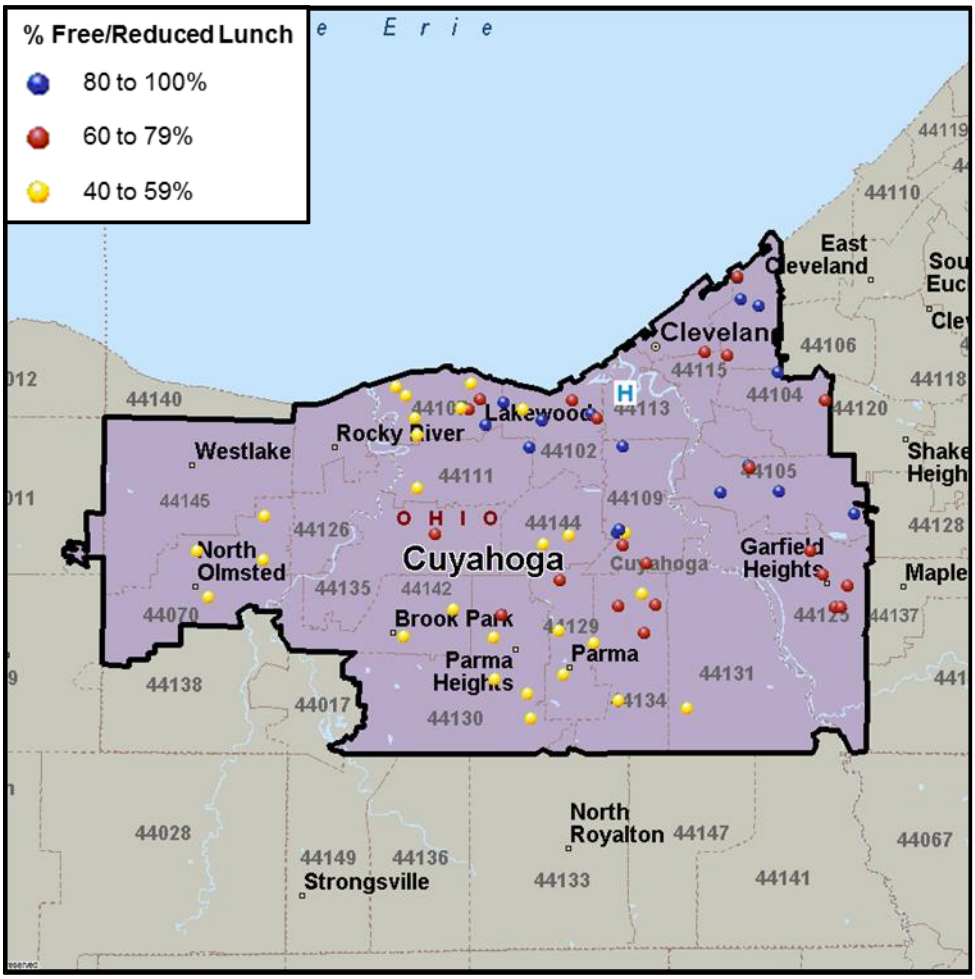
Low income census tracts have been prevalent in the northeastern portion of Lutheran's community. Poverty rates have been above 45 percent in ZIP codes 44103, 44104, 44115, and 44127.

Eligibility for the National School Lunch Program

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

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

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



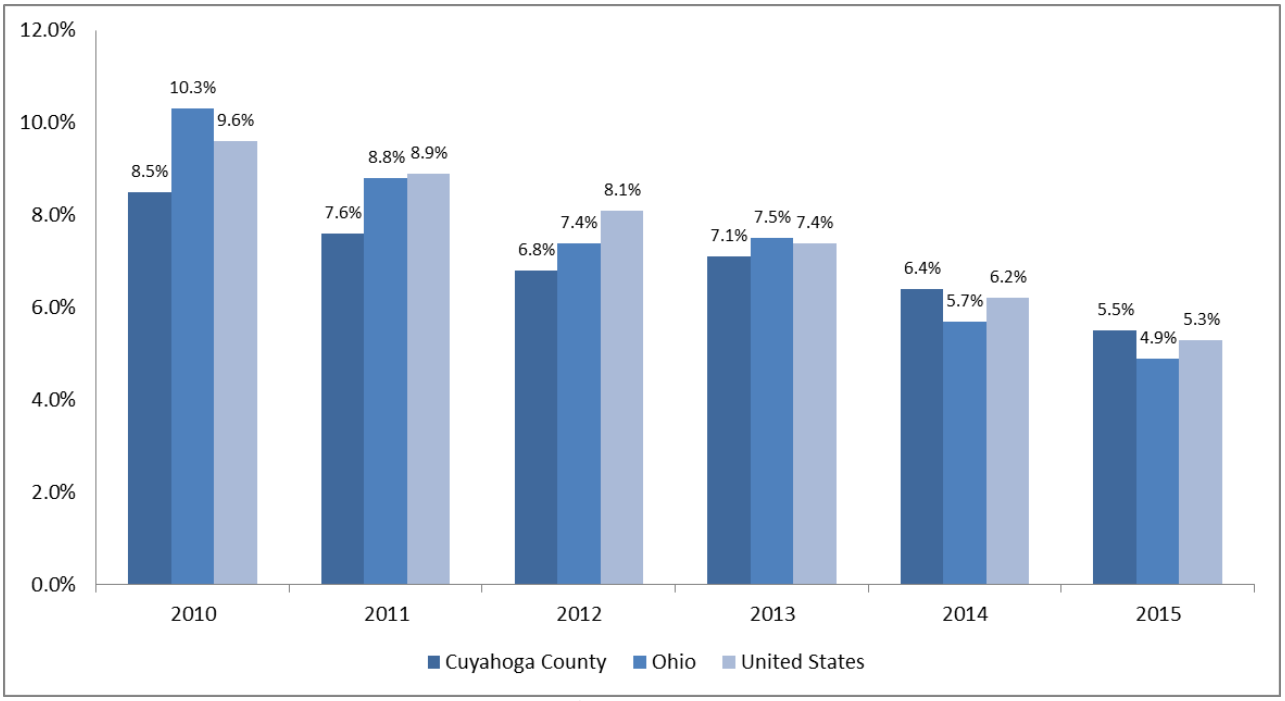
Source: Ohio Department of Education, 2014.

There are 68 schools within the Lutheran community where at least 40 percent of students are eligible for free or reduced price lunches.

Unemployment

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

Exhibit 16: Unemployment Rates, 2010-2015



Source: Bureau of Labor Statistics, 2010-2014.

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

Insurance Status

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

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

City	ZIP Code	Households	Total Population 2015	% Uninsured 2015	Total Population 2020	% Uninsured 2020
Brook Park	44142	7,680	18,583	4.9%	18,178	3.4%
Cleveland	44102	17,653	42,983	11.2%	41,674	7.3%
Cleveland	44103	7,377	16,978	13.0%	16,437	8.7%
Cleveland	44104	9,047	22,327	14.6%	22,180	10.1%
Cleveland	44105	15,248	37,633	10.9%	35,694	7.4%
Cleveland	44109	16,137	39,023	10.0%	38,011	6.5%
Cleveland	44111	16,824	38,798	7.4%	37,939	4.7%
Cleveland	44113	8,885	19,659	11.1%	20,035	7.1%
Cleveland	44114	3,237	6,256	12.2%	6,547	7.8%
Cleveland	44115	3,506	8,962	15.2%	9,251	10.9%
Cleveland	44125	11,231	27,551	6.6%	26,881	4.5%
Cleveland	44126	7,388	16,203	4.8%	16,012	3.2%
Cleveland	44127	2,109	5,215	13.1%	4,957	8.6%
Cleveland	44129	12,117	28,606	5.7%	28,283	3.7%
Cleveland	44130	22,642	49,773	5.2%	49,334	3.4%
Cleveland	44134	16,338	38,190	5.9%	37,694	3.9%
Cleveland	44135	11,253	26,440	7.6%	26,444	5.0%
Cleveland	44144	9,593	20,932	6.8%	20,809	4.4%
Independence	44131	8,269	20,110	4.1%	19,939	2.9%
Lakewood	44107	25,768	51,892	7.4%	51,785	4.6%
North Olmsted	44070	13,772	32,418	4.0%	32,052	2.7%
Rocky River	44116	9,356	20,079	4.5%	19,938	3.1%
Westlake	44145	14,101	32,983	3.4%	33,389	2.4%

Source: Truven Market Expert, 2015.

In 2015, nine out of the 23 ZIP codes in the Lutheran community had uninsured rates above ten percent. By 2020, it is projected that only two of the 23 ZIP codes in the community will have uninsured rates above ten percent, namely ZIP codes 44104 and 44115.

Ohio Medicaid Expansion

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

[7] http://watchdog.org/237980/75percent-ohio-obamacare/

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

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

Crime

Exhibit 18 provides certain crime statistics for Cuyahoga County and Ohio.

Exhibit 18: Crime Rates by Type and County, Per 100,000, 2014
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Crime	Cuyahoga County	Ohio
Violent Crime	613.3	**278.4**
Property Crime	3,141.8	**2,880.8**
Murder	6.4	**4.4**
Rape	48.8	**36.2**
Robbery	362.1	**129.2**
Aggravated Assault	196.1	**126.1**
Burglary	966.2	**786.5**
Larceny	1,720.5	**1,921.8**
Motor Vehicle Theft	455.1	**172.5**
Arson	32.5	**21.1**

Source: FBI, 2014.

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

Local Health Status and Access Indicators

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

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

Throughout this section, data and cells are highlighted if indicators are unfavorable – because they exceed benchmarks (typically, Ohio averages). Where confidence interval data are available, cells are highlighted only if variances are unfavorable and statistically significant.

County Health Rankings

County Health Rankings, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation, incorporates a variety of health status indicators into a system that ranks each county/city within each state in terms of "health factors" and "health outcomes." These health factors and outcomes are composite measures based on several variables grouped into the following categories: health behaviors, clinical care,[10] social and economic factors, and physical environment.[11] *County Health Rankings* is updated annually. *County Health Rankings 2016* relies on data from 2006 to 2015, with most data from 2010 to 2013.

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

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

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

Exhibit 19: County Health Rankings, 2013 and 2016
(Light grey shading indicates indicator in bottom half of Ohio counties; Dark grey shading indicates in bottom quartile of Ohio counties)

	Cuyahoga County		
	2013	2016	Rank Change
Health Outcomes	**67**	**64**	
Health Factors	**45**	**53**	↓
Length of Life	**58**	**54**	
Quality of Life	**76**	**73**	
Frequent Physical Distress	N/A	63	
Frequent Mental Distress	N/A	54	
Drug Overdose Deaths	N/A	52	
Health Behaviors	**15**	**39**	↓
Adult Smoking	16	18	↓
Adult Obesity	7	9	↓
Excessive Drinking	51	64	↓
Sexually Transmitted Infections	55	87	↓
Teen Births	3	51	↓
Clinical Care	**7**	**5**	
Primary Care Physicians	1	2	↓
Dentists	56	1	
Mental Health Providers	3	1	
Preventable Hospital Stays	36	34	
Diabetic Screening	69	62	
Social & Economic Factors	**76**	**79**	↓
Some College	10	9	
Unemployment	15	59	↓
Inadequate Social Support	39	78	↓
Injury Deaths	1	30	↓
Physical Environment	**36**	**61**	↓
Air Pollution	66	63	
Severe Housing Problems	N/A	87	

Source: County Health Rankings, 2016.

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

Exhibit 20 provides data for each underlying indicator of the composite categories in the County Health Rankings.[12] The exhibit also includes national averages.

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

Exhibit 20: County Health Rankings Data Compared to Ohio and U.S. Averages, 2016

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

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

Source: County Health Rankings, 2016.

Exhibit 20: County Health Rankings Data Compared to Ohio and U.S. Averages, 2016 (*continued*)

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

Indicator Category	Data	Cuyahoga County	Ohio	U.S.
Health Factors				
Social & Economic Factors				
High School Graduation	Percent of ninth-grade cohort that graduates in four years	75.8	**82.7**	86.0
Some College	Percent of adults aged 25-44 years with some post-secondary education	68.4	**63.4**	56.0
Unemployment	Percent of population age 16+ unemployed but seeking work	6.4	**5.7**	6.0
Children in poverty	Percent of children under age 18 in poverty	30.0	**22.7**	23.0
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	5.6	**4.8**	4.4
Children in single-parent households	Percent of children that live in a household headed by single parent	44.9	**35.4**	32.0
Social Associations	Number of associations per 10,000 population	9.2	**11.4**	13.0
Violent Crime	Number of reported violent crime offenses per 100,000 population	559.8	**307.2**	199.0
Injury Deaths	Injury mortality per 100,000	59.1	**62.7**	74.0
Physical Environment				
Air Pollution	The average daily measure of fine particulate matter in micrograms per cubic meter (PM2.5) in a county	13.6	**13.5**	11.9
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	18.9	**15.2**	14.0
Drive Alone to Work	Percent of the workforce that drives alone to work	80.1	**83.5**	80.0
Long Commute- Drive Alone	Among workers who commute in their car alone, the percent that commute more than 30 minutes	31.9	**29.4**	29.0

Source: County Health Rankings, 2016

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Exhibit 20 highlights the following comparatively unfavorable indicators:

- Years of potential life lost
- Percent of adults reporting fair or poor health
- Average number of physically unhealthy days
- Percent of live births with low birth weight
- Percent of driving deaths with alcohol involvement
- Binge and heavy drinking
- Chlamydia rate
- Teen birth rate
- Percent of the population without health insurance
- Percent of the population unemployed
- Percent of children in poverty
- Income inequality rate
- Percent of children living in a household headed by a single parent
- Social associations rate
- Violent crime rate
- Air pollution
- Percent of households with severe housing problems
- Percent of workers with a long commute who drive alone

Community Health Status Indicators

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

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

Exhibit 21 compares Cuyahoga County to its respective peer counties and cities and highlights community health issues found to rank in the bottom quartile of the counties included in the analysis.

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

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

Source: Community Health Status Indicators, 2015.

The CHSI data indicate that cancer and coronary heart disease mortality and morbidity rates associated with Alzheimer's disease, gonorrhea, adult asthma, and preterm births are comparatively high, as are older adult preventable hospitalizations. Indicators for children in single-parent households and air quality also benchmark unfavorably.

Ohio Department of Health

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

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

Exhibit 22: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2012
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Measure	Cuyahoga County	Ohio	Healthy People 2020
Heart Disease	213.9	**191.4**	-
Diabetes	23.3	**26.1**	-
Influenza and Pneomonia	12.0	**15.4**	-
Suicide	9.9	**12.0**	10.2
Motor Vehicle Collisions	3.4	**9.0**	12.4
Homicide	9.2	**5.4**	-
Motor Vehicle Collisions (Alcohol)	1.4	**3.8**	-
Aortic Aneurysm	3.8	**3.7**	-
HIV	2.7	**1.3**	-
Pedestrians Killed in Traffic Collisions	0.6	**0.5**	1.4

Source: Ohio Department of Health, 2012.

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

Exhibit 23: Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2013
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

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

Source: Ohio Department of Health, 2013.

The age-adjusted stomach cancer mortality rate in Cuyahoga County was significantly higher than the Ohio average. Cancer mortality rates for breast, prostate, pancreas, uterus, liver and intrahepatic bile duct, multiple myeloma, oral cavity and pharynx, cervix, larynx, and testis cancer were also higher than the state averages.

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

Exhibit 24: Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2008-2012
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

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

Source: Ohio Department of Health, 2012.

The incidence rates for prostate, breast, colon and rectum, uterus, Non-Hodgkin's Lymphoma, kidney and renal pelvis, thyroid, pancreas, leukemia, ovary, brain and other CNS, stomach, liver and intrahepatic bile duct, multiple myeloma, testis, esophagus, larynx, and Hodgkin's Lymphoma in Cuyahoga County were higher than the Ohio averages.

Exhibit 25: Communicable Disease Incidence Rates per 100,000 Population, 2012
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

Measure	Cuyahoga County	Ohio
Chlamydia	801.1	**462.0**
HIV	295.8	**154.3**
Gonorrhea	290.3	**143.5**
Syphilis	9.8	**9.9**
Varicella	4.3	**7.0**
Viral Meningitis	7.2	**6.1**
Hepatitis A, B, and C	0.8	**1.9**

Source: Ohio Department of Health, 2012.

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

Exhibit 26: Maternal and Child Health Indicators, 2012
(Light grey shading indicates indicator worse than Ohio average; Dark grey shading indicates more than 50 percent worse than Ohio average)

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

Source: Ohio Department of Health, 2012.

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

Behavioral Risk Factor Surveillance System

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

BRFSS data were assessed for each ZIP code in the Lutheran community and compared to the averages for the 21 counties in Northeast Ohio.[13]

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

Exhibit 27: Behavioral Risk Factor Surveillance System, Chronic Conditions, 2015

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

City	ZIP Code	Total Population 18+ 2015	% Obese	% Back Pain	% Diabetes	% Asthma	% Depresssion	% High Blood Pressure	% High Cholesterol	%COPD	% Smoking
Brook Park	44142	15,095	31.9%	28.9%	15.5%	11.1%	12.3%	35.7%	28.2%	5.6%	24.7%
Cleveland	44102	32,395	33.9%	22.5%	13.9%	12.6%	16.1%	25.1%	19.5%	3.9%	36.1%
Cleveland	44103	14,572	34.6%	23.4%	13.4%	11.4%	14.3%	31.9%	21.0%	6.5%	35.0%
Cleveland	44104	14,366	35.2%	26.9%	11.9%	10.9%	13.0%	29.6%	20.7%	4.7%	36.8%
Cleveland	44105	28,794	35.7%	23.2%	13.3%	10.1%	13.6%	34.3%	19.1%	4.8%	34.1%
Cleveland	44109	29,237	34.7%	20.3%	14.6%	10.0%	11.7%	28.7%	19.6%	4.5%	34.5%
Cleveland	44111	30,291	34.1%	20.8%	14.2%	8.9%	11.3%	29.7%	19.1%	4.7%	32.5%
Cleveland	44113	16,246	26.9%	23.3%	10.6%	12.9%	17.1%	22.3%	17.2%	3.6%	31.1%
Cleveland	44114	4,603	26.3%	15.5%	12.6%	22.1%	30.6%	21.8%	13.6%	8.3%	32.8%
Cleveland	44115	6,302	27.4%	21.1%	9.1%	14.6%	18.1%	17.6%	13.7%	4.3%	33.6%
Cleveland	44125	20,736	32.1%	24.5%	14.8%	11.0%	13.7%	32.6%	24.5%	4.7%	28.8%
Cleveland	44126	13,026	30.5%	23.5%	14.1%	12.0%	14.9%	33.2%	25.2%	4.2%	24.4%
Cleveland	44127	3,809	33.6%	21.7%	13.2%	11.5%	14.1%	25.3%	19.2%	4.6%	35.5%
Cleveland	44129	22,258	32.2%	27.2%	14.2%	11.4%	14.5%	33.9%	22.7%	5.2%	27.1%
Cleveland	44130	41,435	30.3%	24.4%	15.5%	12.4%	13.4%	35.4%	25.0%	4.8%	24.7%
Cleveland	44134	29,841	30.9%	23.4%	13.4%	10.8%	12.9%	34.6%	24.2%	5.0%	26.6%
Cleveland	44135	19,842	33.0%	25.3%	14.4%	11.7%	14.4%	36.3%	23.1%	5.3%	31.2%
Cleveland	44144	16,673	34.3%	21.2%	14.3%	13.2%	16.3%	38.6%	22.4%	5.6%	32.4%
Independence	44131	16,678	28.2%	23.1%	14.1%	8.6%	11.4%	30.7%	24.3%	3.6%	21.1%
Lakewood	44107	41,633	31.2%	23.6%	14.2%	11.9%	14.9%	24.7%	18.2%	4.7%	30.8%
North Olmsted	44070	25,796	28.6%	24.5%	13.3%	8.6%	11.9%	29.6%	23.0%	3.4%	23.5%
Rocky River	44116	15,879	28.1%	20.1%	12.6%	9.0%	11.0%	28.7%	24.9%	3.2%	21.0%
Westlake	44145	26,585	26.9%	21.2%	12.9%	7.1%	10.9%	28.1%	21.7%	2.9%	20.9%
Community Total		**486,092**	**31.6%**	**23.3%**	**13.8%**	**10.9%**	**13.7%**	**30.6%**	**21.7%**	**4.5%**	**29.2%**
21-County Average		**3,454,621**	**31.7%**	**25.6%**	**14.0%**	**11.6%**	**15.1%**	**30.6%**	**24.1%**	**4.7%**	**27.5%**

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

Compared to the 21-County averages, 14 ZIP codes in the Lutheran community had significantly higher rates of smoking, 12 ZIP codes had higher rates of obesity, and 11 ZIP codes had higher rates of high blood pressure. Rates for adult asthma, depression, and chronic obstructive pulmonary disease in Cleveland ZIP code 44114 were nearly twice as high as the 21-County averages.

Ambulatory Care Sensitive Conditions

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

ACSCs are health "conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease."[14] As such, rates of hospitalization for these conditions can "provide insight into the quality of the health care system outside of the hospital," including the accessibility and utilization of primary care, preventive care and health education. Among these conditions are: angina without procedure, diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

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

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

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

Exhibit 28: PQI (ACSC) Rates per 100,000, 2014

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

City	ZIP Code	Diabetes Short-Term Complications	Perforated Appendix	Diabetes Long-Term Complications	Chronic Obstructive Pulmonary Disease	Hypertension	Congestive Heart Failure	Low Birth Weight
North Olmsted	44070	73	32	146	707	107	554	57
Cleveland	44102	238	27	254	2,119	176	1,218	84
Cleveland	44103	205	42	425	2,143	262	1,643	111
Cleveland	44104	314	21	320	1,801	401	1,537	79
Cleveland	44105	244	18	405	1,961	228	1,552	119
Lakewood	44107	91	33	129	785	30	591	52
Cleveland	44109	215	44	277	1,298	135	1,038	88
Cleveland	44111	131	32	188	1,396	109	983	83
Cleveland	44113	73	42	141	1,331	88	791	68
Cleveland	44114	109	-	91	1,009	299	972	123
Cleveland	44115	323	31	371	1,941	295	1,477	187
Rocky River	44116	19	28	106	426	60	665	80
Cleveland	44125	75	56	189	1,139	37	1,007	89
Cleveland	44126	63	14	86	624	92	659	91
Cleveland	44127	213	42	720	2,940	190	1,565	125
Cleveland	44129	71	44	195	800	77	920	69
Cleveland	44130	52	49	125	761	61	758	52
Independence	44131	30	-	60	386	32	580	34
Cleveland	44134	52	44	144	668	49	717	66
Cleveland	44135	223	42	307	1,333	145	1,029	58
Brook Park	44142	86	21	239	845	96	758	63
Cleveland	44144	65	28	154	928	45	748	81
Westlake	44145	30	44	132	427	105	790	53
Lutheran Totals		**120**	**34**	**202**	**1,076**	**110**	**909**	**80**
Ohio Totals		**95**	**37**	**119**	**609**	**53**	**424**	**61**

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

Exhibit 28: PQI (ACSC) Rates per 100,000, 2014 (*continued*)

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

City	ZIP Code	Dehydration	Bacterial Pneumonia	Urinary Tract Infection	Angina without Procedure	Uncontrolled Diabetes	Adult Asthma	Lower-Extremity Amputation Among Patients with Diabetes
North Olmsted	44070	136	188	200	17	34	12	8
Cleveland	44102	150	342	244	57	28	36	10
Cleveland	44103	282	464	373	24	36	105	30
Cleveland	44104	320	358	315	34	57	91	13
Cleveland	44105	176	353	252	23	23	56	22
Lakewood	44107	117	206	149	21	25	11	7
Cleveland	44109	156	242	166	56	45	52	10
Cleveland	44111	63	244	160	27	60	35	10
Cleveland	44113	72	269	271	63	-	24	12
Cleveland	44114	123	364	146	-	-	71	36
Cleveland	44115	218	494	414	-	42	78	16
Rocky River	44116	74	233	217	17	-	24	-
Cleveland	44125	215	327	200	7	7	93	9
Cleveland	44126	119	203	204	-	12	24	8
Cleveland	44127	495	555	651	-	47	122	-
Cleveland	44129	127	301	261	-	7	24	18
Cleveland	44130	112	197	247	14	18	23	7
Independence	44131	112	298	158	16	8	48	12
Cleveland	44134	105	163	192	15	5	39	10
Cleveland	44135	184	461	179	23	46	28	35
Brook Park	44142	180	393	320	19	19	22	13
Cleveland	44144	120	299	141	18	18	52	6
Westlake	44145	70	277	227	21	16	40	15
Lutheran Totals		**141**	**280**	**220**	**23**	**24**	**41**	**12**
Ohio Totals		**107**	**196**	**131**	**12**	**13**	**36**	**9**

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

The rates of admissions for ACSC in the Lutheran community exceeded Ohio averages for all conditions except perforated appendix. Within the community, Cleveland ZIP codes 44103 and 44109 had significantly higher PQI rates for every condition, compared to the Ohio averages.

Exhibit 29 provides the ratio of PQI rates in the Lutheran community compared to the Ohio averages. Conditions where the ratios are highest (meaning that the PQI rates in the community are the most above average) are presented first.

Exhibit 29: Ratio of PQI Rates for Lutheran and Ohio, 2014

Indicator	Lutheran Hospital	Ohio	Ratio: Lutheran/ Ohio
Congestive Heart Failure	909.4	**423.8**	2.1
Hypertension	110.4	**52.6**	2.1
Angina without Procedure	22.8	**11.7**	2.0
Uncontrolled Diabetes	23.8	**13.2**	1.8
Chronic Obstructive Pulmonary Disease	1,075.6	**608.8**	1.8
Diabetes Long-Term Complications	202.1	**118.8**	1.7
Urinary Tract Infection	219.6	**131.5**	1.7
Bacterial Pneumonia	280.1	**196.2**	1.4
Lower-Extremity Amputation Among Patients with Diabetes	12.4	**8.9**	1.4
Dehydration	140.6	**107.2**	1.3
Low Birth Weight	79.6	**61.4**	1.3
Diabetes Short-Term Complications	120.5	**94.7**	1.3
Adult Asthma	40.9	**36.0**	1.1
Perforated Appendix	34.5	**36.9**	0.9

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

In the Lutheran community, ACSC rates for congestive heart failure, hypertension, and angina without procedure were more than twice as high as the Ohio averages.

Community Need Index™ and Food Deserts

Dignity Health Community Need Index

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

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

- The percentage of uninsured and unemployed residents; and
- The percentage of the population renting houses.

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

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

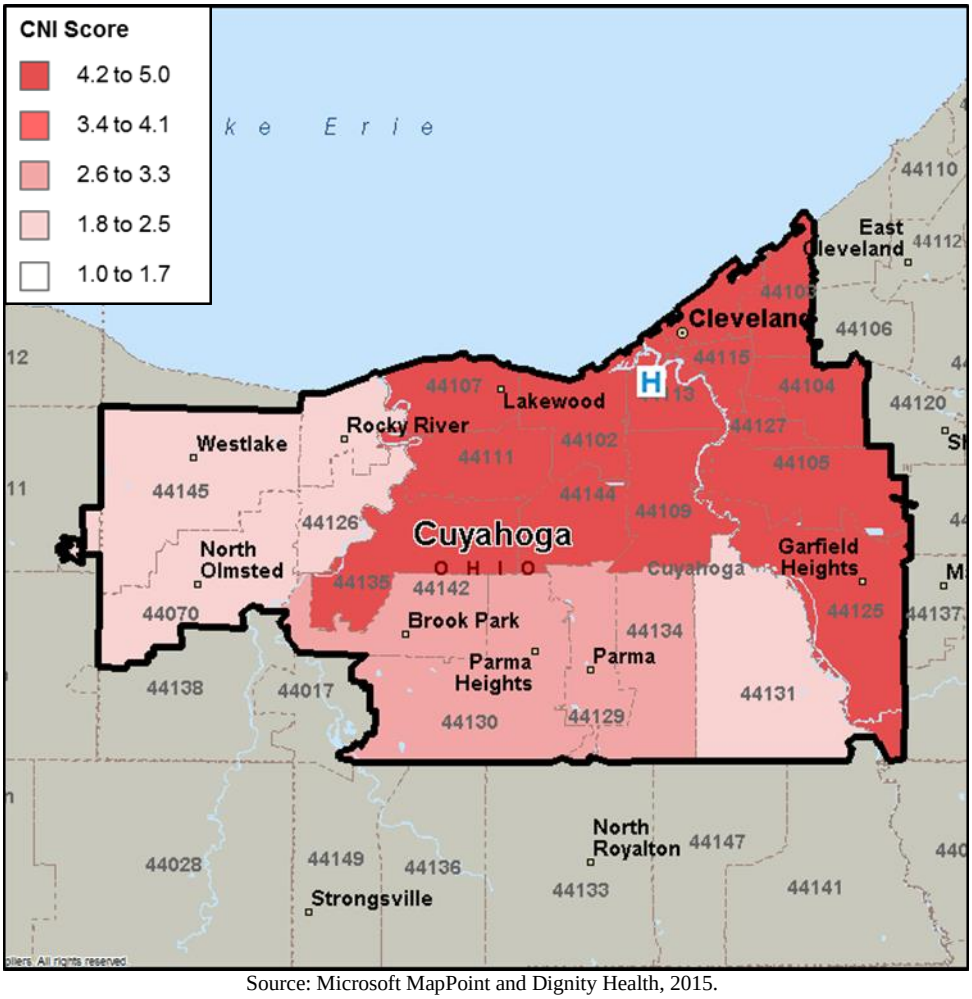
Exhibit 30: Community Need Index™ Score by ZIP Code, 2015

City	ZIP Code	CNI Score
Cleveland	44102	5.0
Cleveland	44103	5.0
Cleveland	44104	5.0
Cleveland	44105	5.0
Cleveland	44115	5.0
Cleveland	44127	5.0
Cleveland	44109	4.8
Cleveland	44113	4.8
Cleveland	44114	4.8
Cleveland	44135	4.4
Cleveland	44111	4.0
Cleveland	44144	4.0
Lakewood	44107	3.4
Cleveland	44125	3.4
Cleveland	44129	3.0
Cleveland	44130	3.0
Cleveland	44134	2.8
Brook Park	44142	2.6
North Olmsted	44070	2.4
Cleveland	44126	2.2
Westlake	44145	2.0
Rocky River	44116	1.8
Independence	44131	1.8
Lutheran Community Average		**3.6**
Cuyahoga County Average		**3.4**

Source: Dignity Health, 2015.

Exhibit 31 presents these data in a community map format.

Exhibit 31: Community Need Index, 2015



Source: Microsoft MapPoint and Dignity Health, 2015.

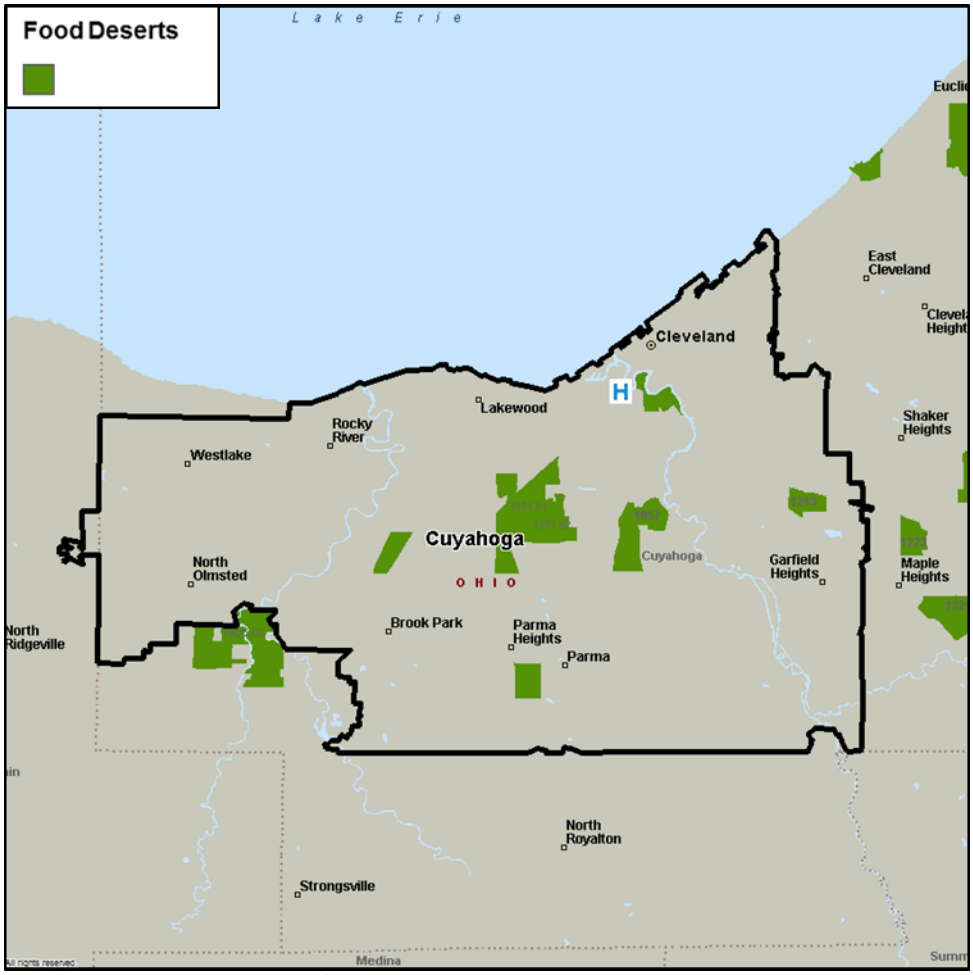
The CNI indicates that ten of the 23 ZIP codes in the Lutheran community scored in the "highest need category." Cleveland ZIP codes 44102, 44105, 44103, 44104, 44127, and 44115 each received a score of 5.0 – the highest score possible.

Food Deserts

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

Exhibit 32 illustrates the location of food deserts in the community.

Exhibit 32: Food Deserts



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

Several locations within the Lutheran community have been designated as food deserts.

Medically Underserved Areas and Populations

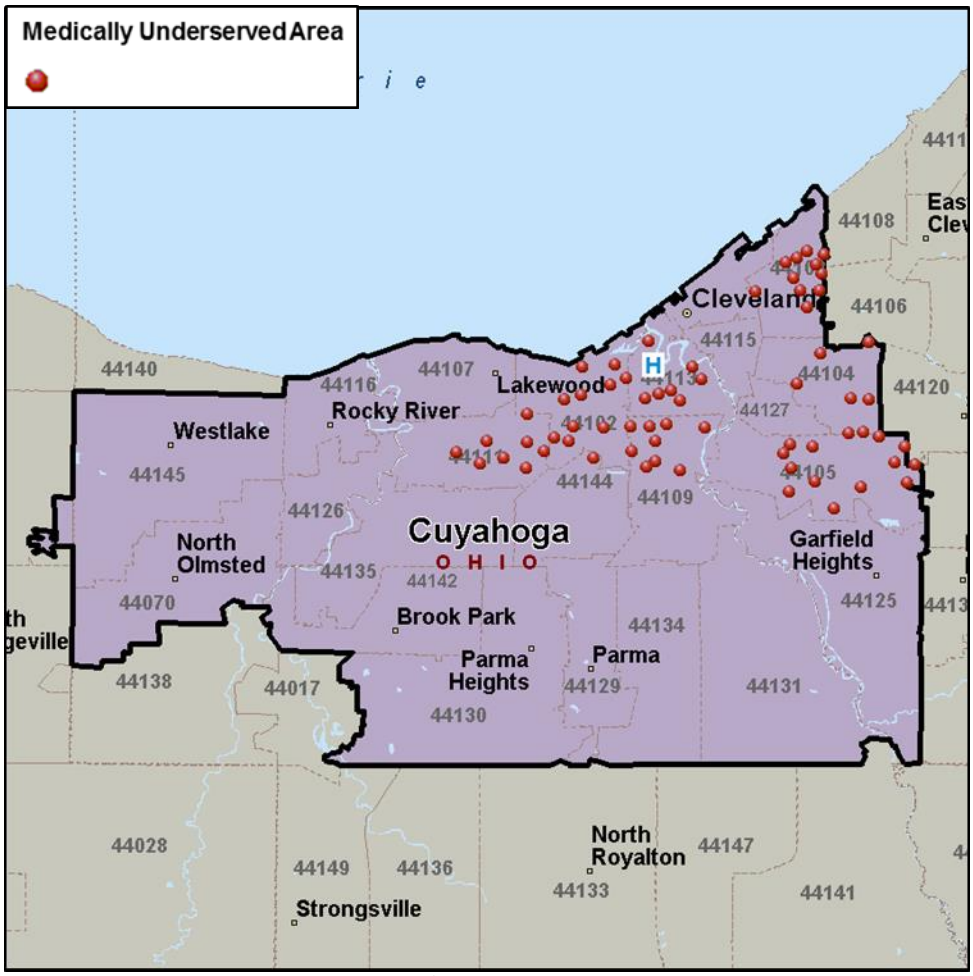
Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.[15] Areas with a score of 62 or less are considered "medically underserved."

Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides."[16]

There are approximately 70 census tracts within the hospital's community that have been designated as areas where Medically Underserved Areas are present (**Exhibit 33**).

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

Exhibit 33: Medically Underserved Areas



Source: Microsoft MapPoint and HRSA, 2015.

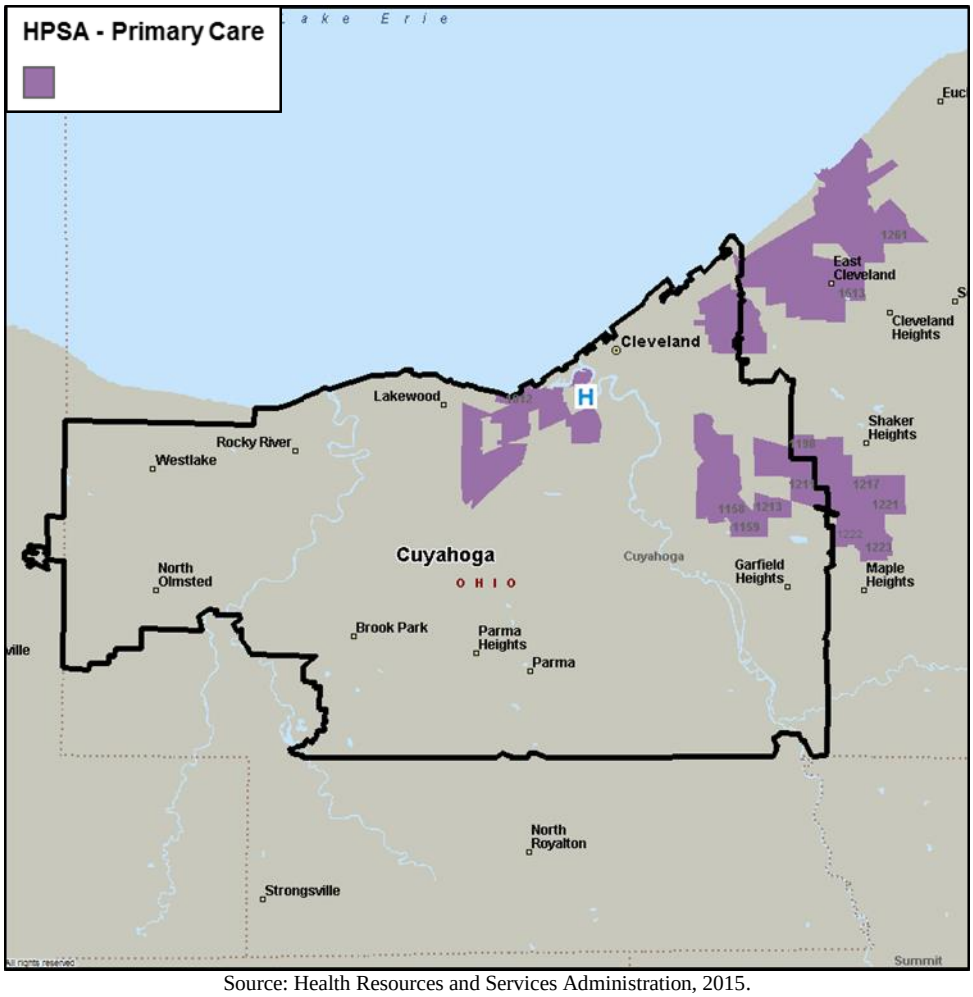
Health Professional Shortage Areas

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

HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility."[17] **Exhibit 34** illustrates the locations of the federally-designated HPSAs.

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

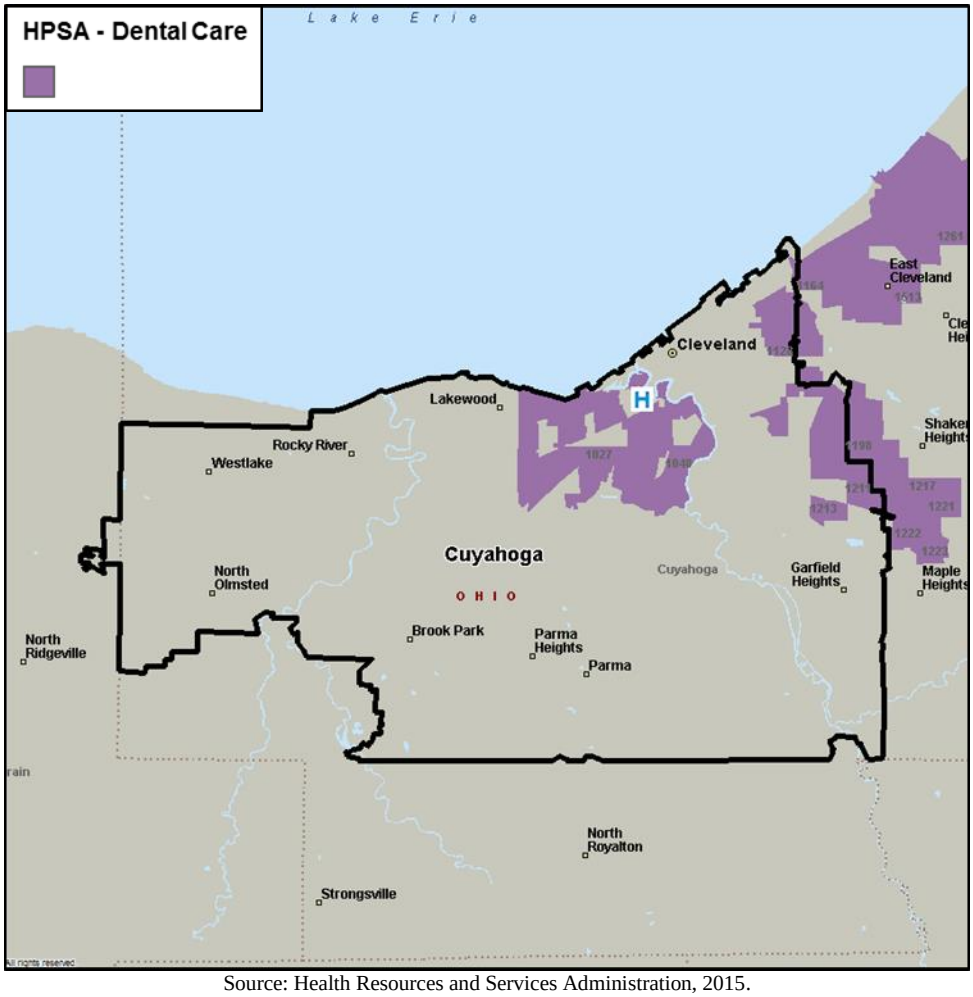
Exhibit 34A: Primary Care Health Professional Shortage Areas



Source: Health Resources and Services Administration, 2015.

Within the Lutheran community, primary care HPSA designated census tracts are located adjacent to the hospital as well as along the eastern side of the community.

Exhibit 34B: Dental Care Health Professional Shortage Areas



Source: Health Resources and Services Administration, 2015.

Dental care HPSA designated census tracts are located around Lutheran and along the eastern side of the community.

Findings of Other Community Health Needs Assessments

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

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

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

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

Exhibit 35: Significant Needs Identified in Other CHNAs

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

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

A State Health Assessment also recently was published by the Ohio Department of Health.[18] The State Health Assessment (SHA) is a comprehensive report directed by a steering committee comprised of directors of Ohio's health-related state agencies. The Ohio Department of Health contracted with the Health Policy Institute of Ohio to facilitate preparation of the assessment. The purpose of the SHA is both to provide a template for state agencies and local partners for analysis as well as inform the identification and prioritization of community health needs for the State Health Improvement Plan (SHIP).

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

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

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

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

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

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

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

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

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

APPENDIX C – COMMUNITY INPUT PARTICIPANTS

Individuals from a wide variety of organizations and communities participated in the interview process (shown in **Exhibit 36**). Organizations listed in italics indicate that the interviewee has public health expertise.

Exhibit 36: Interview Participants

Organization	Description	Populations Represented
ADAMHSCC	Alcohol, drug addiction, and mental health services	Mentally ill, substance abuse
American Heart and Stroke Association	National voluntary health agency	General population
Brooklyn City Schools	School district	Youth, adolescents, students
Care Alliance Health Center	Non-profit community health center	Homelessness, low-income
Cleveland City Hall	City council	General population
Cleveland Department of Public Health	City health department	General population
Cuyahoga County Board of Health	County board of health	General population
Cuyahoga County Office of Health and Human Services	County health office	General population
Cuyahoga County Office of Reentry	County re-entry services program	Formally incarcerated persons
El Barrio, Center for Families and Children	Workforce development center	Minority populations
Esperanza	Ohio's only nonprofit organization dedicated to the promotion and advancement of Hispanic educational achievement	Minority populations, youth
Greater Cleveland NAMI	Mental health agency	Mentally ill
Hispanic UMADAOP	Holistic prevention, education, intervention, treatment program	Minority populations, youth
May Dugan Center	Social services center	Aging population, uninsured
Merrick House	Neighborhood organization providing community services and programs	Youth, general population
Neighborhood Family Practice	Federally qualified health center	Low-income
Northeast Ohio Black Health Coalition	Non-profit addressing the health needs of the black community	Minority populations
Ohio Legislature	State government	General population
Stockyard, Clark-Fulton & Brooklyn Centre	Neighborhood development office	General population
The Legal Aid Society of Cleveland	Non-profit	Low-income
Tri-C College	Community college	General population, students

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

APPENDIX D – ACTIONS TAKEN SINCE THE PREVIOUS CHNA

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 2013 CHNA Implementation Strategy are described below with representative impacts.

1. **Identified Need: Chronic Diseases and Health Conditions, COPD and Adult Asthma**
   Action: Lutheran Hospital continues to provide acute inpatient care, outpatient care and preventive education to patients with COPD and Adult Asthma. Primary care physicians and pulmonologists continue to treat and manage COPD-related diseases, including chronic bronchitis and emphysema, with medication, surgery and/or behavior modification.
   Highlighted Impact:
   - The Cleveland Clinic health system reduced pneumonia 30 day readmission rates from 2013 through 2015.
   - The Lutheran Hospital Outreach department provided anti–tobacco programs to local schools.

2. **Identified Need: Chronic Disease and Health Conditions, Congestive Heart Failure**
   Action: Lutheran Hospital continues to treat chronic cardiovascular disease in its communities through its Congestive Heart Failure Clinic. The hospital explored expanding this clinic to treat COPD and pneumonia.
   Highlighted Impact:
   - The Cleveland Clinic health system reduced heart failure 30 day readmission rates from 2013 through 2015.
   - Lutheran Hospital provides the Chronic Care Clinic, replacing the Congestive Heart Failure Clinic, to broaden the spectrum of chronic cardiovascular disease services, reduce hospital heart failure readmissions and preventable emergency department visits, and increase community awareness of heart failure.

3. **Identified Need: Chronic Disease and Health Conditions, Diabetes**
   Action: Lutheran Hospital continues to treat acute diabetic conditions on an inpatient basis and provides dieticians to inpatient seeking diabetes care. The hospital's Wound Care program continues to provide any necessary comprehensive care to patients with diabetic complications.
   Highlighted Impact:

- Lutheran Hospital increased the number of wound care procedures in 2015 compared to 2014.
- Diabetes community education programs, nutrition classes, and glucose screenings were provided at various community locations.

4. **Identified Need: Chronic Disease and Health Conditions, Chemical Dependency and Behavior Medicine**

   Action: Lutheran Hospital continues to serve as an area leader in Adult Behavioral Health. A new Alcohol and Drug Recovery Center opened in October 2012 and offers inpatient care, outpatient services and supportive step-down care. This Center serves the Lutheran Hospital and other Cleveland Clinic hospital communities.

   Highlighted Impact:

   - Lutheran Hospital admissions for psychological/mental health services increased from 2013 to 2015.
   - Since opening in 2012, the Alcohol and Drug Recovery Center averages almost 4,000 patients per year.

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 smoking cessation to promote health and wellness, increase access to healthcare resources, and reduce disease burden. In addition, Lutheran Hospital collaborates with local public schools to implement programs to reduce childhood obesity.

   Highlighted Impact:

   - Lutheran Hospital implemented the Healthy Tremont Cornerstone Initiative in 2015, a community collaborative effort to increase healthy behavior.
   - Lutheran Hospital continues to host a free weekly community Healthy Stride walking and health discussion program, led by hospital physicians.

6. **Identified Need: Access to Health Services**

   Action: 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 Cleveland Clinic.

   Highlighted Impact:

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

   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.

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

Highlighted Impact:

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

In August 2012, Lutheran Hospital, in collaboration with the Neighborhood Family Practice, opened a health clinic in Cleveland serving several west side communities. This clinic improves access to primary care services and contributes to the overall health of the community. The staff members include physicians, nurse practitioners, medical assistants, nurses and mental health professionals. Many of the staff members are bilingual in English and Spanish.

The Lutheran Hospital community has a significantly larger Hispanic population than Cuyahoga County and Ohio; the CHNA identified a need for more bi-lingual services. Lutheran Hospital provides bi-lingual signage and interpretative services to help to improve access to health care for this population.

Highlighted Impact:

- Bilingual Caregivers provided health talks in Spanish at senior citizen apartment complexes and the Hispanic Senior Center.

7. **Identified Need: Research**

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

Action: Clinical trials and other clinical research activities continue to occur throughout the Cleveland Clinic health system including at the community hospitals.

Highlighted Impact:

- Lutheran Hospital participated in a Ketamine Infusion trial for alternative treatment for chronic behavioral health patients.

8. **Identified Need: Education**

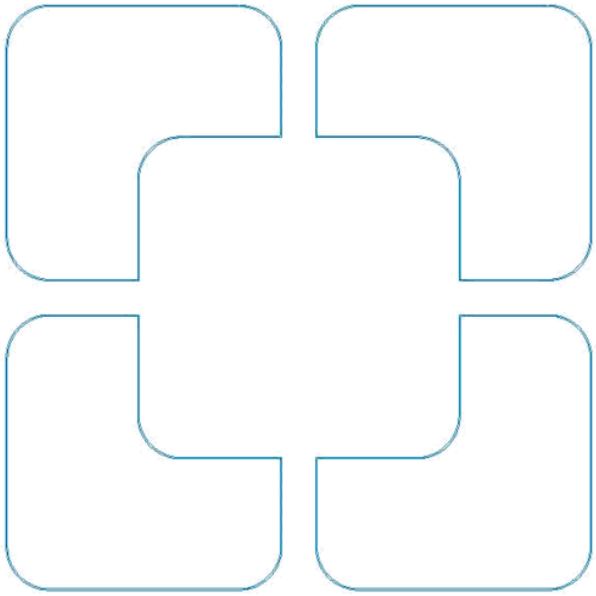
Cleveland Clinic and all regional hospitals provide education of medical professions. In 2015, Cleveland Clinic trained over 1,700 residents and fellows, and provided over 1,800 student rotations in 65 allied health education programs.

Action: Lutheran Hospital continues to provide work force development in the community through programs of Professional Education and student mentoring at primary and secondary schools. Lutheran Hospital continues to provide physician and nurse education opportunities.

Highlighted Impact:

- 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.



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