



Cleveland Clinic Children's
Hospital for Rehabilitation

Community Health Needs Assessment

2022

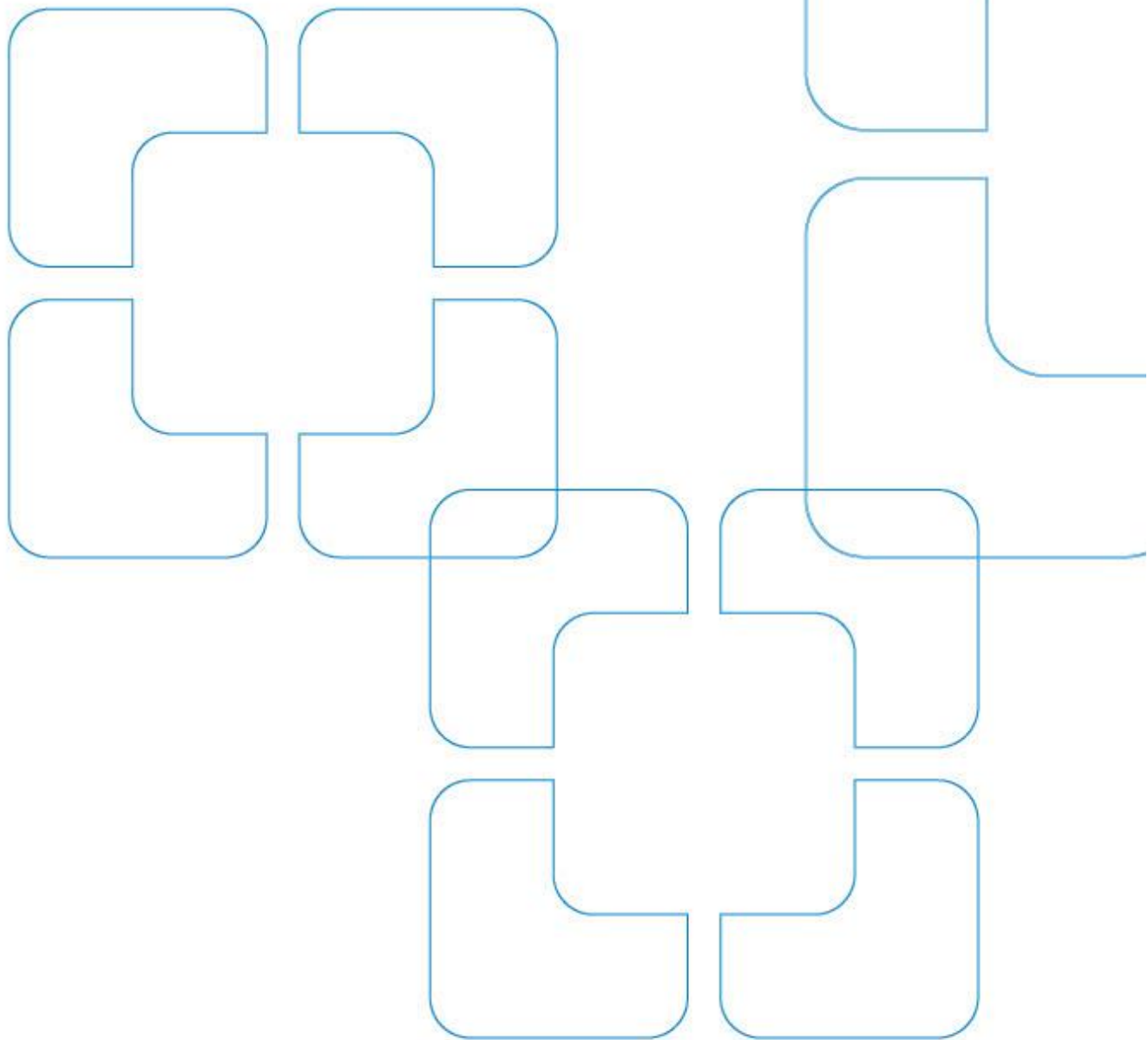


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Executive Summary

This Community Health Needs Assessment (CHNA) was conducted by Cleveland Clinic Children’s Hospital for Rehabilitation (the CCCHR or “the hospital”) to identify significant community health needs and to inform development of an Implementation Strategy to address current needs in accordance with the Affordable Care Act¹.

Cleveland Clinic Children’s Hospital for Rehabilitation is a 25 staffed bed² pediatric rehabilitation hospital located in Cleveland, Ohio. Cleveland Clinic Children’s Hospital for Rehabilitation is accredited by the Commission on Accreditation of Rehabilitation Facilities and is a CARF-accredited, freestanding pediatric rehabilitation hospital. Additional information on the hospital and its services is available at: <http://clevelandclinicchildrens.org/rehabhospital>. Cleveland Clinic Children’s Hospital for Rehabilitation offers facilities dedicated to the medical, surgical and rehabilitative care of infants, children and adolescents.

For more than 100 years, the nurses, therapists and physicians at Cleveland Clinic Children’s Hospital for Rehabilitation have had one goal: to teach children the skills they need to fully participate in the world when they leave. Our hospital serves infants, children and adolescents through age 21 who require ongoing care and acute rehabilitation because of complex treatment or medical needs. Staffed by a pediatrician 24 hours a day with nurses and therapists specially trained to care for children with chronic illnesses. Children who have less intensive needs but require specialized, focused medical and developmental care have the same access to services as our inpatients.

Cleveland Clinic Children’s Center for Autism, an innovative and unique education resource for children with autism spectrum disorders, offers community-based intervention and outreach services, trains medical and educational professionals and conducts ongoing autism research. The Lerner School for Autism, a state-of-the-art complex within the center, is one of the few schools of its kind in Ohio. The state-licensed school uses applied behavior analysis (ABA) in both the treatment and educational settings for students from diagnosis through age 22. The school operates year-round and offers a small staff-to-student ratio.

The hospital is part of the Cleveland Clinic health system, which includes an academic medical center near downtown Cleveland, fourteen regional hospitals in northeast Ohio, a children’s hospital, a children’s rehabilitation hospital, five southeast Florida hospitals, and several other facilities and services across Ohio, Florida, and Nevada.

Cleveland Clinic is a global leader and model of healthcare for the future. We work as a team with the patient at the center of care. As a truly integrated healthcare delivery system, we take on the most complex cases and provide collaborative, multidisciplinary care supported with cutting-edge research and technology. We treat patients and fellow caregivers as family and Cleveland Clinic as our home. Our vision is to become the best

¹ Internal Revenue Service, Community Health Needs Assessment for Charitable Hospital Organizations – Section 501 (c) (3), <https://www.irs.gov/charities-non-profits/charitable-organizations/requirements-for-501c3-hospitals-under-the-affordable-care-act-section-501r>

² For the purpose of this report and consistent methodology, the Cleveland Clinic MD&A (Q4-2022) interim financial statement is referenced for official bed count. We acknowledge that staffed bed count may fluctuate and may differ from registered or licensed bed counts reflected in other descriptions.

place to receive healthcare anywhere, and the best place to work in healthcare. Our goals for achieving that are bold, but reachable: To serve more patients, create more value and improve the well-being of all caregivers. As we grow and double the number of patients served by 2024, everything we do and every place we are located will bear the unmistakable stamp of One Cleveland Clinic –with the same quality, experience and Care Priorities at every location.

Cleveland Clinic’s ability to provide world-class patient care and best-in-class clinicians is the product of our commitment to research and education, which has also contributed significant advancements toward the diagnosis and treatment of complex medical challenges. Figure 1 shows Our Care Priorities, which are to:³

- Care for Patients as if they are our own family
- Treat fellow caregivers as if they are our own family
- Be committed to the communities we serve
- Treat the organization as our home

Figure 1: The Cleveland Clinic Care Priorities



Caring for the Community

Caring for the community is a long-standing priority at Cleveland Clinic. As an anchor institution –a major employer and provider of services in the community –our goal is to create the healthiest community for everyone. We do this through actions and programs to heal, hire and invest for the future.

³ The Cleveland Clinic Mission, Vision and Values <https://my.clevelandclinic.org/about/overview/who-we-are/mission-vision-values>

Cleveland Clinic is much more than a healthcare organization. We are part of the social fabric of the community, creating opportunities for those around us and making the communities we serve healthier. We are listening to our neighbors to understand their needs, now and in the future. The health of every individual affects the broader community.

According to the National Academy of Medicine, only 20% of a person's health is related to the medical care they receive. There are other factors that have a lifelong impact, accounting for 80% of a person's overall health.⁴ These social determinants of health are conditions in which people grow, work and live –including employment, education, food security, housing and several others.⁵

In order to address health disparities, we lead efforts in clinical and non-clinical programming, advocacy, partnerships, sponsorship and community investment. We are actively partnering with leaders to help strengthen community resources and mitigate the impact of disparities in social determinants of health. By engaging with partners who share our commitment, we can make a difference in creating a better, healthier community for everyone.⁶

Additional information about Cleveland Clinic is available at:
<https://my.clevelandclinic.org/>.

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

These assessments are conducted using widely accepted methodologies to identify the significant health needs of a specific community. The assessments also are conducted to comply with federal and state laws and regulations including IRS requirements for 501(c)(3) Hospitals under the Affordable Care Act⁷.

Community Definition

The community definition describes the zip codes where approximately 75% of Cleveland Clinic Children's Hospital for Rehabilitation patients reside. Figure 2 shows the service area for the Cleveland Clinic Children's Hospital for Rehabilitation Community. A table with zip codes and the associated postal names that comprise the community definition is located in [Appendix C](#).

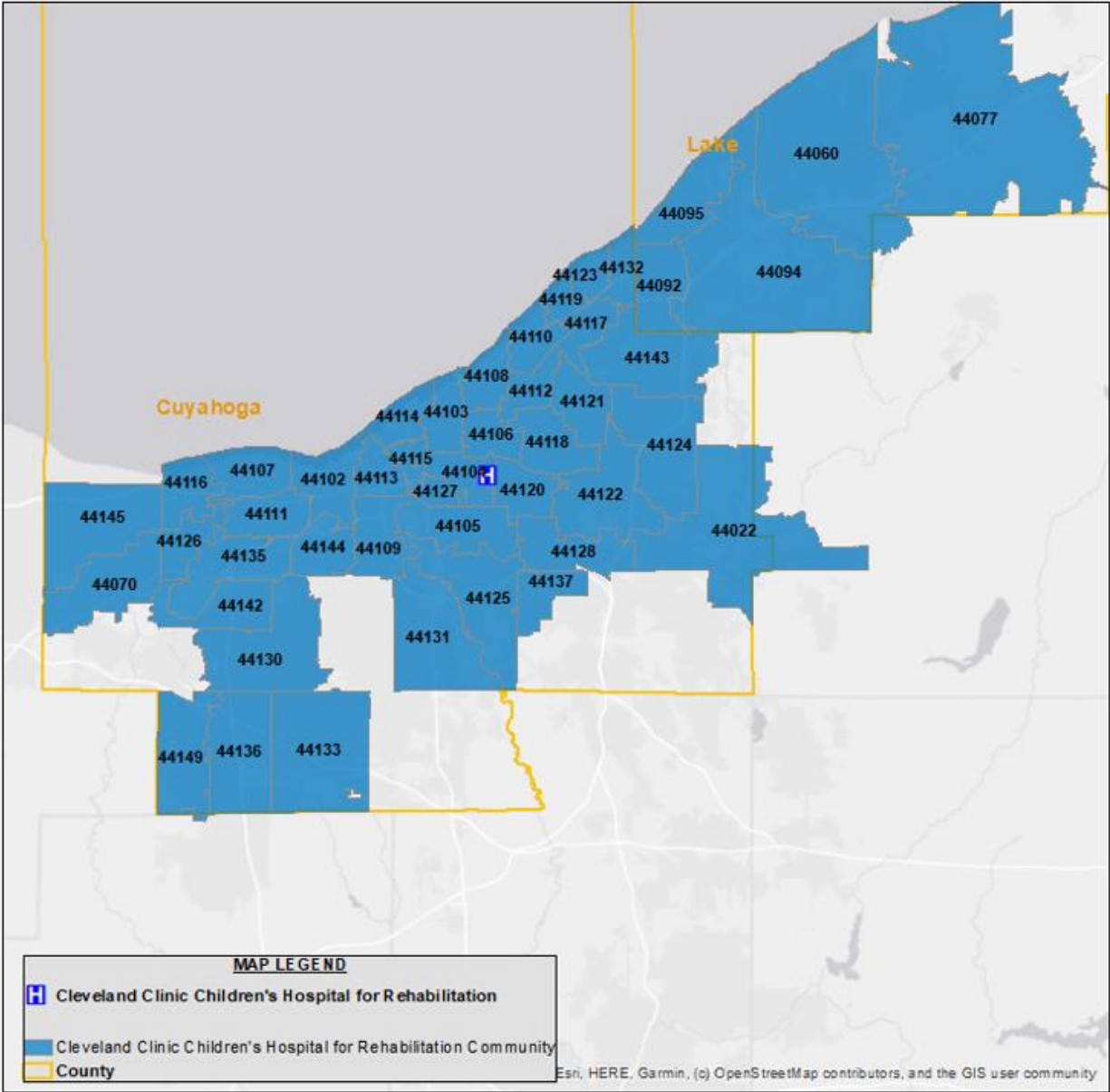
⁴ Magnan, S. Social Determinants of Health 101 for Healthcare: Five Plus Five, National Academy of Medicine. <https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/>

⁵ Social Determinants of Health, World Health Organization. https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1

⁶ Cleveland Clinic, Community Commitment, <https://my.clevelandclinic.org/about/community#:~:text=Caring%20for%20the%20community%20is,and%20invest%20for%20the%20future.>

⁷ Internal Revenue Service, Requirements for 501 (c) (3) Hospitals Under the Affordable Care Act – Section 501 (r), <https://www.irs.gov/charities-non-profits/charitable-organizations/requirements-for-501c3-hospitals-under-the-affordable-care-act-section-501r>

Figure 2: Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition



Secondary Data Summary

Secondary data used for this assessment were collected and analyzed from Conduent Healthy Communities Institute’s (HCI) community indicator database. The database, maintained by researchers and analysts at HCI, includes 300 community indicators covering at least 28 topics in the areas of health, social determinants of health, and quality of life. The data are primarily derived from state and national public secondary data sources. The value for each of these indicators is compared to other communities, nationally set targets and to previous time periods.

Due to variability in which public health data sets are available, data within this report may be presented at various geographic levels:

- The Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition—an aggregate of the 47 zip codes described in the Community Definition.
- Cuyahoga and Lake Counties—the two counties comprising the Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition

Primary Data Summary

Qualitative data collected from community members through key stakeholder interviews comprised the primary data component of the CHNA and helped to inform selection of the significant health needs. Conduent Healthy Communities Institute interviewed 20 key stakeholders from a diverse spectrum of community-based organizations and public health departments and analyzed data for pediatric-centric inputs to determine which health topics were of particular concern for the pediatric population.

Prioritized Health Needs

Following a comprehensive review of the significant community health needs throughout the Cleveland Clinic Health System, analysis of local county and state needs assessments and emerging trends, the following priority health needs were identified:

- Access to Healthcare
- Behavioral Health
- Chronic Disease Prevention and Management
- Maternal and Child Health (including Autism Spectrum Disorder)
- Socioeconomic Issues



Access to Healthcare

Access to Healthcare secondary data analysis results describe community needs related to consumer expenditures for insurance, medical expenses, medicines and other supplies. With more expansive parameters, primary data describes limitations to accessing healthcare described in terms of transportation challenges, resource limitations and availability of primary care and other prevention services in local neighborhoods.



Behavioral Health

Behavioral Health encompasses Mental Health and Substance Use Disorder—into a single health need. Mental health secondary data indicators define suicide, depression and self-reported poor mental health rates. Similarly, Substance Use Disorder data outline rates related to alcohol and drug use including mortality rates due to drug overdoses. Primary data links the two together as community members and key stakeholders describe mental health challenges in the community, exacerbated by COVID-19 related stressors, resulting in increased alcohol and drug use starting in adolescence as a means of coping.



Chronic Disease Prevention and Management

This health topic encompasses several subtopics where information is available including Nutrition and Healthy Eating; Cancer; Chronic Diseases; Diabetes; Heart Disease and Stroke; and COVID-19. By addressing these issues in concert, the Cleveland Clinic Foundation hopes to impact chronic disease rates including those described in the Synthesis and Prioritization section of this report (page 33).



Maternal and Child Health

Maternal and Child Health has been a continuing health need in the community with a focus on Children's Health, Women's Health and Maternal, Fetal and Infant health. Secondary data indicators include a range of children's health needs from babies with low birth weight to consumer expenditures on childcare. Primary data describes disparities among low-income and ethnic minority and refugee populations and link access to healthcare with pre-natal care. Other national level data suggests that the prevalence of Autism Spectrum Disorder is increasing in Cleveland Clinic Children's Hospital for Rehabilitation communities. Children with Autism Spectrum Disorder frequently suffer from other developmental, psychiatric, neurological, chromosomal, and genetic disorders and have higher annual medical costs than children without Autism Spectrum Disorder.



Socioeconomic Issues

Socioeconomic Issues for this report are defined as a subset of social determinants of health (SDOH). Prevention & Safety, Education (K-12), Affordable Housing, Violence and Environmental Issues were the prioritized health needs described by primary and secondary data.

Additional Community Health Themes

In addition to the Prioritized Health Needs, other themes were prevalent in considering community health. These themes are intertwined in all community health components and impact multiple areas of community health strategies and delivery.



Health Equity

Health Equity issues in our communities were illuminated by COVID-19. They focus on the fair distribution of health determinants, outcomes and resources across communities.⁸ Health Equity and reduction of health disparities are indicated as overarching themes in all our prioritized needs. It is described in detail and specifically as it relates to the Cleveland Clinic Children’s Hospital for Rehabilitation Community in both the Disparities and Health Equity section (page 26) of the report as well as in the Synthesis and Prioritization section (page 33). Special consideration will be given to addressing prioritized health needs through a health equity lens in the Cleveland Clinic Children’s Hospital for Rehabilitation implementation strategy report.



Social Determinants of Health

Social determinants of health (SDOH) are the conditions in the environment where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality of life outcomes and risks. Social determinants of health (SDOH) are major drivers of behaviors that impact individual and community health outcomes. For a full description of social determinants of health (SDOH) see the highlighted demographic section entitled Social & Economic Determinants of Health.



Medical Research and Health Professions Education

Cleveland Clinic has a tripartite mission to care for the sick and to improve patient care through research and education. Through research we discover cures and treatment of diseases affecting our communities. This cross-cutting issue was evident in addressing the emergent pandemic of COVID 19. Our education programs train qualified healthcare providers to support the needs of our patients and communities, reducing healthcare access issues. This has been of historical importance to the work, care and mission of Cleveland Clinic and will continue to be incorporated as Cleveland Clinic Children’s Hospital for Rehabilitation moves toward development of the implementation strategy report.

⁸ Klein R, Huang D. Defining and measuring disparities, inequities, and inequalities in the Healthy People initiative. National Center for Health Statistics. Center for Disease Control and Prevention. https://www.cdc.gov/nchs/ppt/nchs2010/41_klein.pdf

COMMUNITY HEALTH NEEDS ASSESSMENT

Cleveland Clinic Children's Rehabilitation Hospital

Prioritized Health Needs



Access to
Healthcare



Behavioral Health



Chronic Disease
Prevention &
Management



Maternal and
Child Health



Socioeconomic
Issues

Process



Additional Community Health Themes

Health Equity

Health Equity focuses on the fair and just distribution of health determinants, outcomes, and resources across communities.



Systemic racism
Poverty
Gender discrimination



Poorer health outcomes for groups such as Black persons, Hispanic or Latino persons, Indigenous communities, people experiencing poverty and LGBTQ+ communities.

Social Determinants of Health

Social determinants of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.



Source: Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health

Medical Research and Health Professions Education

Cleveland Clinic has a tripartite mission to care for the sick and to improve patient care through research and education.



Through research we discover cures and treatment of diseases affecting our communities.



Our education programs train qualified healthcare providers to support the needs of our patients and communities, reducing healthcare access issues.

Demographics of the Cleveland Clinic Children’s Hospital for Rehabilitation Community

The demographics of a community significantly impact its health profile.⁹ Different racial, ethnic, age, and socioeconomic groups may have unique needs and require varied approaches to health improvement efforts. The following section explores the demographic profile of the community residing in the Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition.

Geography and Data Sources

Data are presented in this section at the geographic level of the Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition. Comparisons to the county, state, and national value are also provided when available. All demographic estimates are sourced from Claritas Pop-Facts® (2022 population estimates) and American Community Survey¹⁰ one-year (2019) or five-year (2015-2019) estimates unless otherwise indicated.

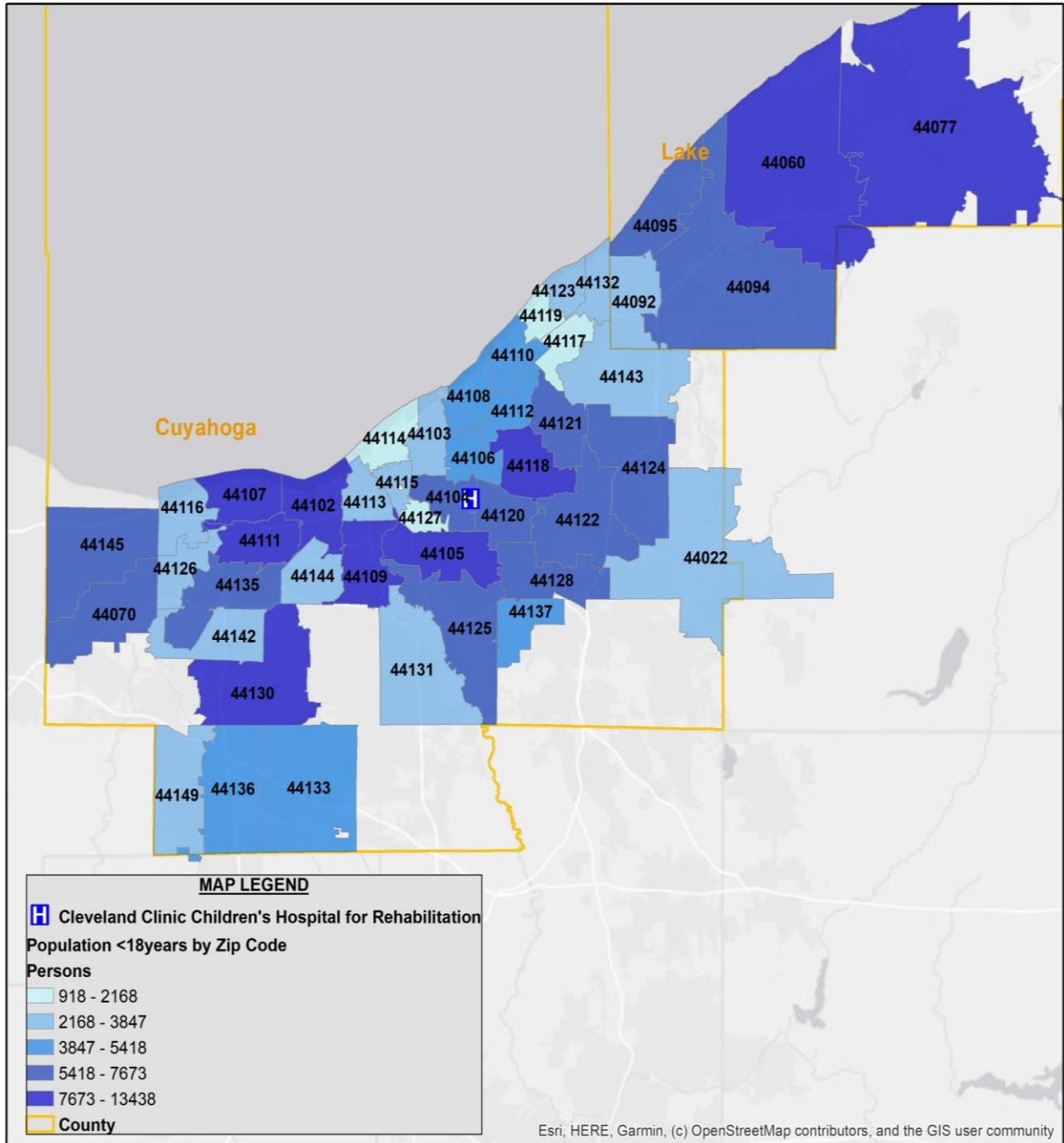
Population

According to the 2022 Claritas Pop-Facts® population estimates, the Cleveland Clinic Children’s Hospital for Rehabilitation community has an estimated population of 250,415 persons aged <18 years. Figure 3 shows the size of the population <18 years in age by each zip code, with the darkest blue representing the zip codes with the largest population. Appendix C provides the actual population estimates for each zip code. The zip code area 44077 (Lake) has highest number of persons aged <18 years at 13,438 in the Cleveland Clinic Children’s Hospital for Rehabilitation Community.

⁹ National Academies Press (US); 2002. 2, Understanding Population Health and Its Determinants. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK221225/>

¹⁰ American Community Survey. <https://www.census.gov/programs-surveys/acs>

Figure 3: Population <18 years by Zip Code

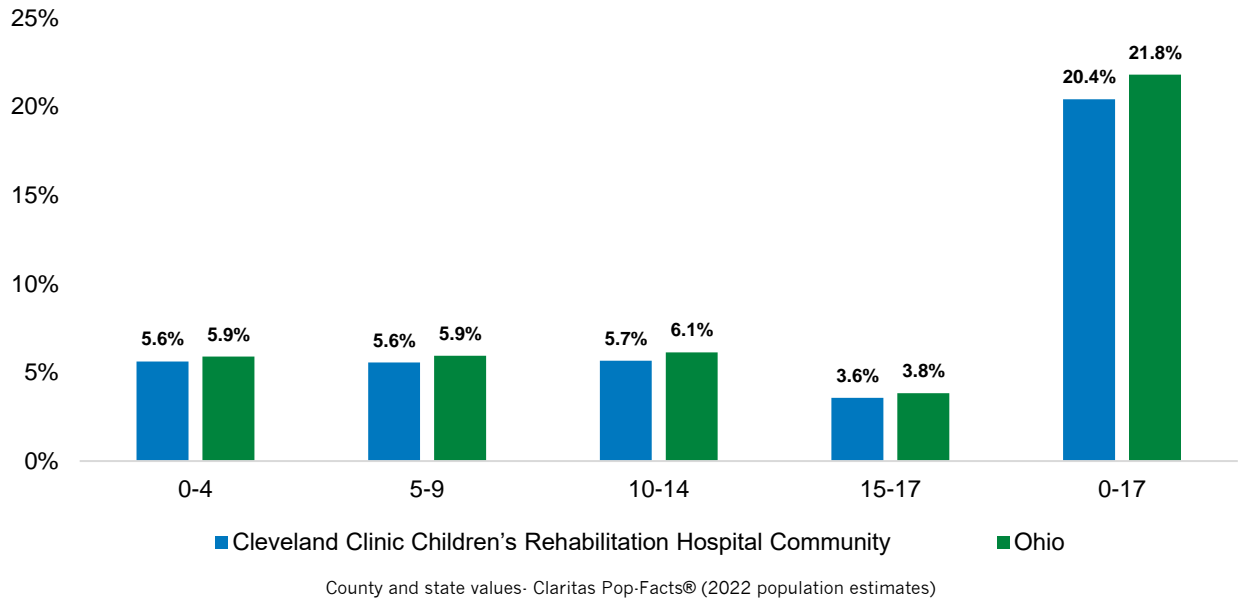


County values: Claritas Pop-Facts® (2022 population estimates)

Age

Children (0-17) comprised 20.4% of the population in the Cleveland Clinic Children's Hospital for Rehabilitation Community which is less when compared to the state of Ohio (21.8%). Figure 4 shows further breakdown of age categories.

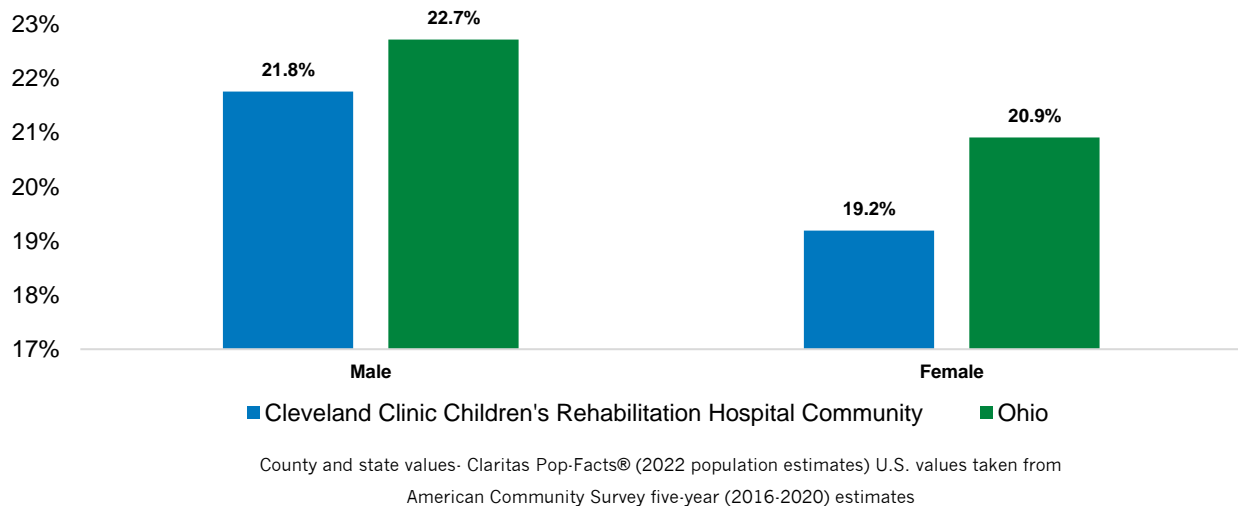
Figure 4: Population by Age: Hospital and State Comparisons



Sex

Figure 5 shows the population <18 years of the Cleveland Clinic Children's Hospital for Rehabilitation Community by sex. Males aged <18 years comprise 21.8% of the population in the Cleveland Clinic Children's Hospital for Rehabilitation Community, which is less than both the Ohio (22.7%). Whereas females aged <18 years comprise 19.2% of the population in the Cleveland Clinic Children's Hospital for Rehabilitation Community which is lesser than Ohio (20.9%).

Figure 5: Population <18 years by Sex: Hospital and State Comparisons

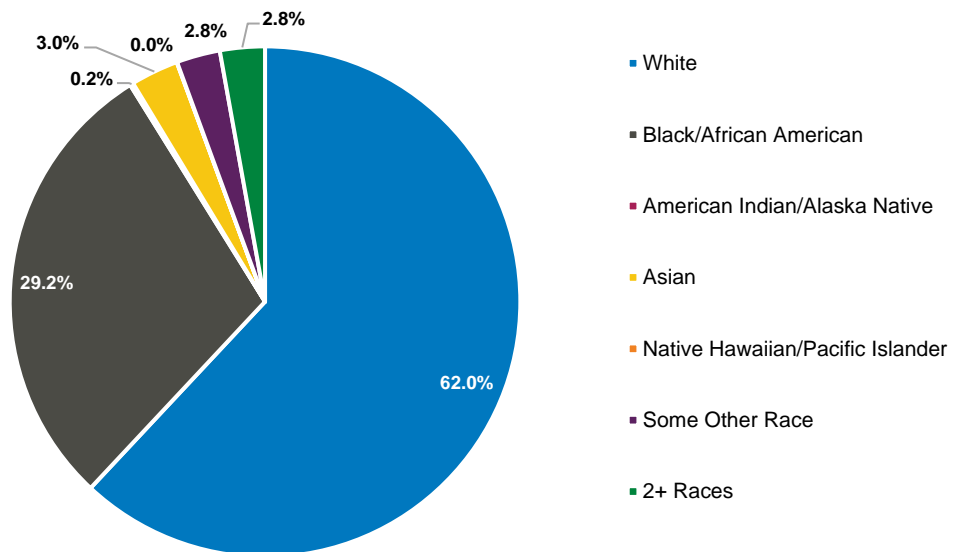


Race and Ethnicity

Race and ethnicity contribute to the opportunities individuals and communities have to be healthy. The racial and ethnic composition of a population is also important in planning for future community needs, particularly for schools, businesses, community centers, healthcare, and childcare.

The racial makeup of Cleveland Clinic Children’s Hospital for Rehabilitation area shows 62.0% of the population identifying as White, as indicated in Figure 6. The proportion of Black/African American community members is the second largest of all races in the Cleveland Clinic Children’s Hospital for Rehabilitation Community at 29.2%.

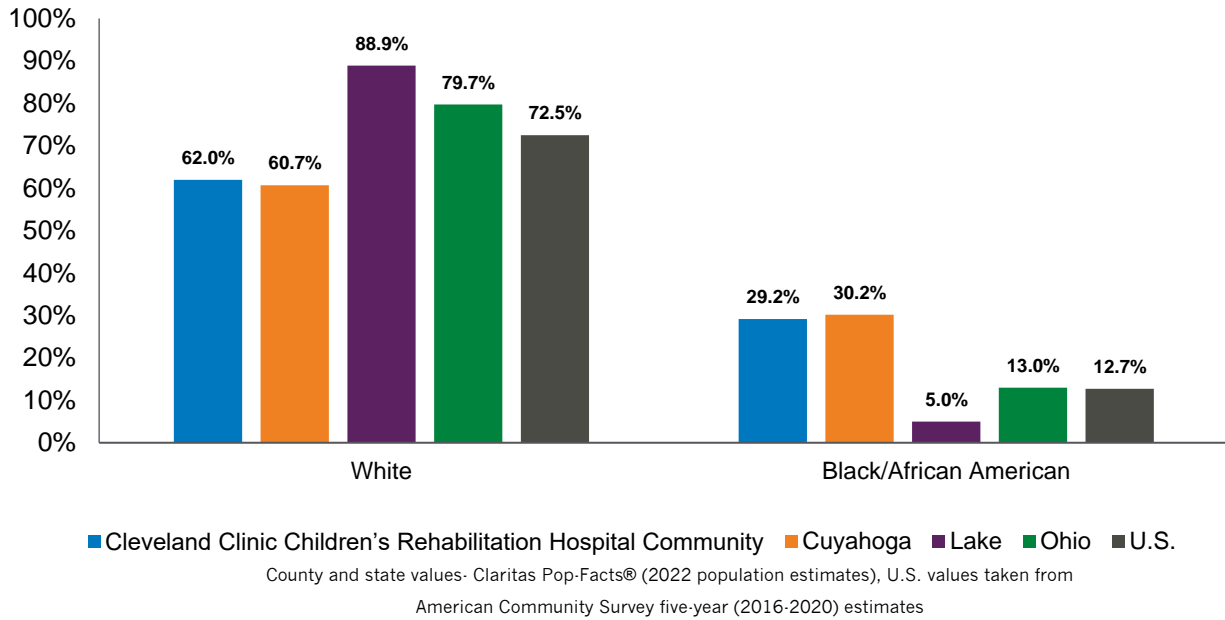
Figure 6: Population by Race: The Cleveland Clinic Children’s Hospital for Rehabilitation Community



County values- Claritas Pop-Facts® (2022 population estimates)

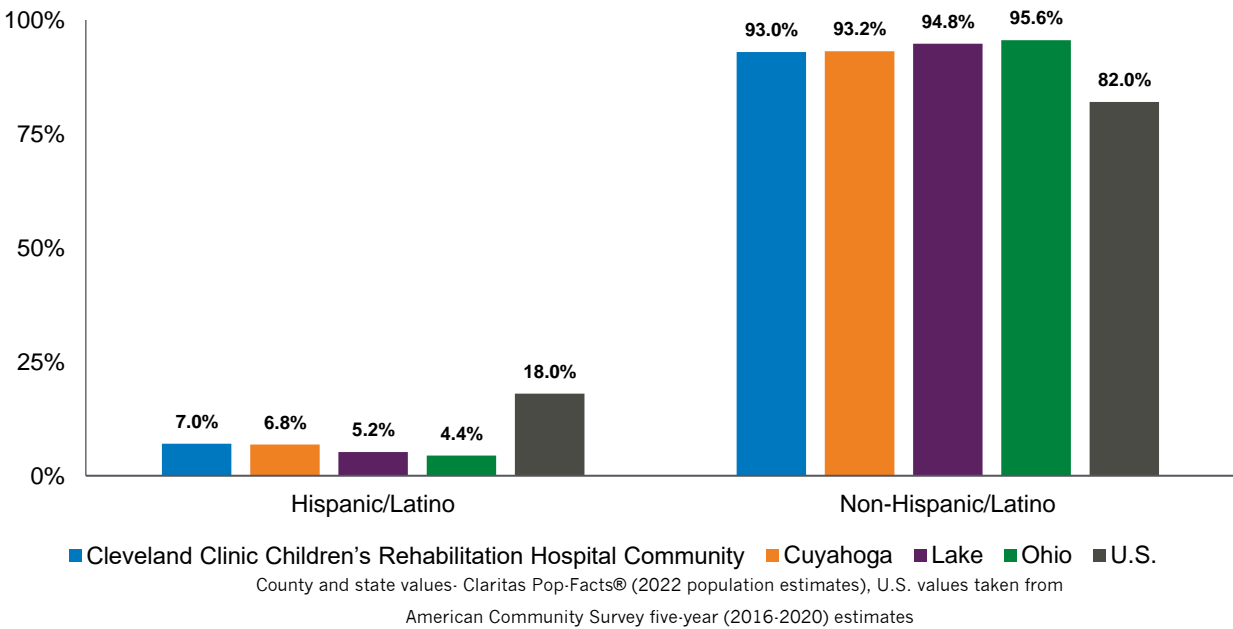
Those community members identifying as White represent a smaller proportion of the population in the Cleveland Clinic Children’s Hospital for Rehabilitation Community (62.0%) when compared to Ohio (79.7%) and the U.S. (72.5%), while Black/African American community members represent a higher proportion of population in the Cleveland Clinic Children’s Hospital for Rehabilitation Community (29.2%) when compared to Ohio (13.0%) and the U.S. (12.7%). Cuyahoga County has the largest percentage of community members identifying as Black/African American (30.2%) included in the Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition. (Figure 7)

Figure 7: Population by Race: Hospital, County, State, and U.S. Comparisons



As shown in Figure 8, 7.0% of the population in the Cleveland Clinic Children's Hospital for Rehabilitation Community identify as Hispanic/Latino. This is a larger percentage of the population when compared to Ohio (4.4%) but smaller when compared to the U.S. (18.0%). Cuyahoga County has the largest percentage of community members who identify as Hispanic/Latino (6.8%).

Figure 8: Population by Ethnicity: Hospital, County, State, and U.S. Comparisons

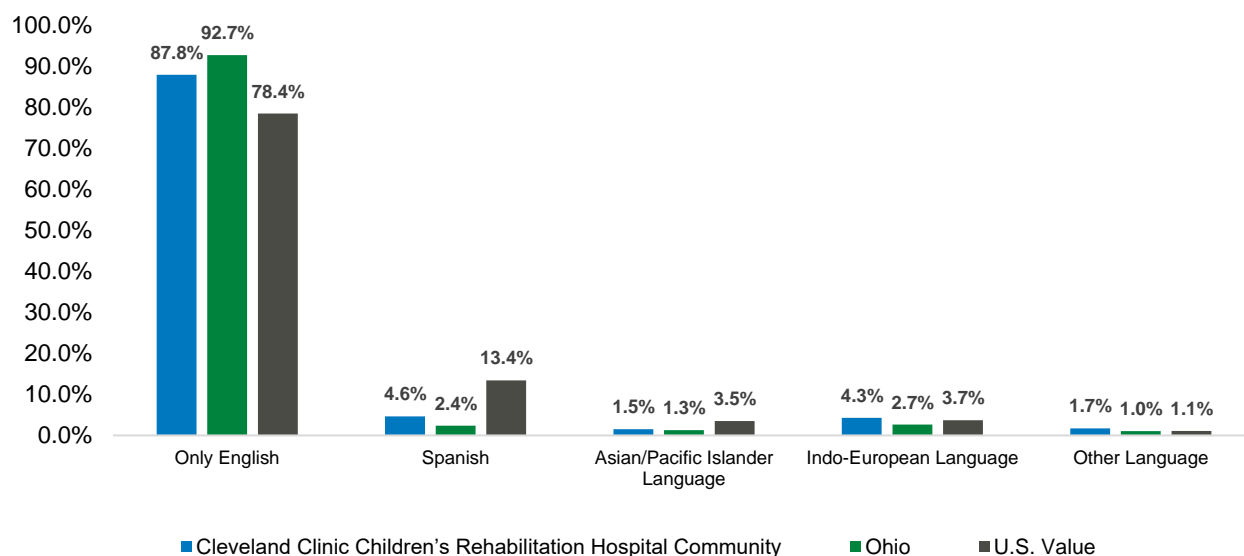


Language and Immigration

Understanding countries of origin and language spoken at home can help inform the cultural and linguistic context for the health and public health system.

In the Cleveland Clinic Children’s Hospital for Rehabilitation Community, 87.8% of the population age five and older speak only English at home, which is lower than the state value of 92.7% but higher than the national value of 78.4% (Figure 9). These data indicate that 4.6% of the population in the Cleveland Clinic Children’s Hospital for Rehabilitation Community speak Spanish, 1.5% speak an Asian/Pacific Islander language, 4.3% speak an Indo-European Language, and 1.7% speak Other Languages at home.

Figure 9: Population 5+ by Language Spoken at Home: Hospital, State and U.S. Comparisons



County and state values- Claritas Pop-Facts® (2022 population estimates), U.S. values taken from American Community Survey five-year (2016-2020) estimates

Highlighted Demographics: Social & Economic Determinants of Health

This section explores the economic, environmental, and social determinants of health impacting the Cleveland Clinic Children’s Hospital for Rehabilitation Community. The social determinants of health are the non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies, and political systems¹¹. The social determinants of health can be grouped into five domains. Figure 10 shows the Healthy People 2030 Social Determinants of Health domains¹².

Figure 10: Healthy People 2030 Social Determinants of Health Domains

¹¹ World Health Organization. Social Determinants of Health. https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1

¹² Healthy People 2030, 2022. Social Determinants of Health Domains. <https://health.gov/healthypeople/priority-areas/social-determinants-health>



Geography and Data Sources

Data in this section are presented at various geographic levels (zip code and/or county) and age groups depending on data availability. When available, comparisons to county, state, and/or national values are provided. It should be noted that county level data can sometimes mask what could be going on at the zip code level in many communities. While indicators may be strong when examined at a higher level, zip code level analysis can reveal disparities.

All demographic estimates are sourced from Claritas Pop-Facts® (2022 population estimates) and American Community Survey one-year (2019) or five-year (2015-2019) estimates unless otherwise indicated.

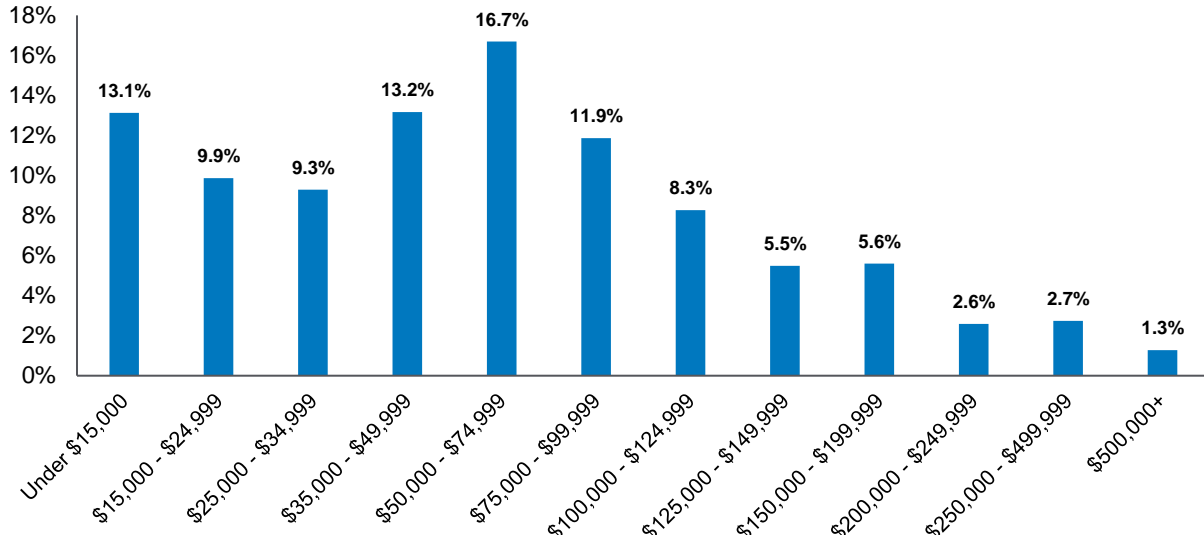
Income

Income has been shown to be strongly associated with morbidity and mortality, influencing health through various clinical, behavioral, social, and environmental factors. Those with greater wealth are more likely to have higher life expectancy and reduced risk of a range of health conditions including heart disease, diabetes, obesity, and stroke. Poor health can also contribute to reduced income by limiting one’s ability to work.¹³

Figure 11 provides a breakdown of households by income in the Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition. A household income of \$50,000 - \$74,999 is shared by the largest percentage of households in the Cleveland Clinic Children’s Hospital for Rehabilitation Community (16.7%). Households with an income of less than \$15,000 make up 13.1% of households in the Cleveland Clinic Children’s Hospital for Rehabilitation Community.

Figure 11: Households by Income: The Cleveland Clinic Children’s Hospital for Rehabilitation Community

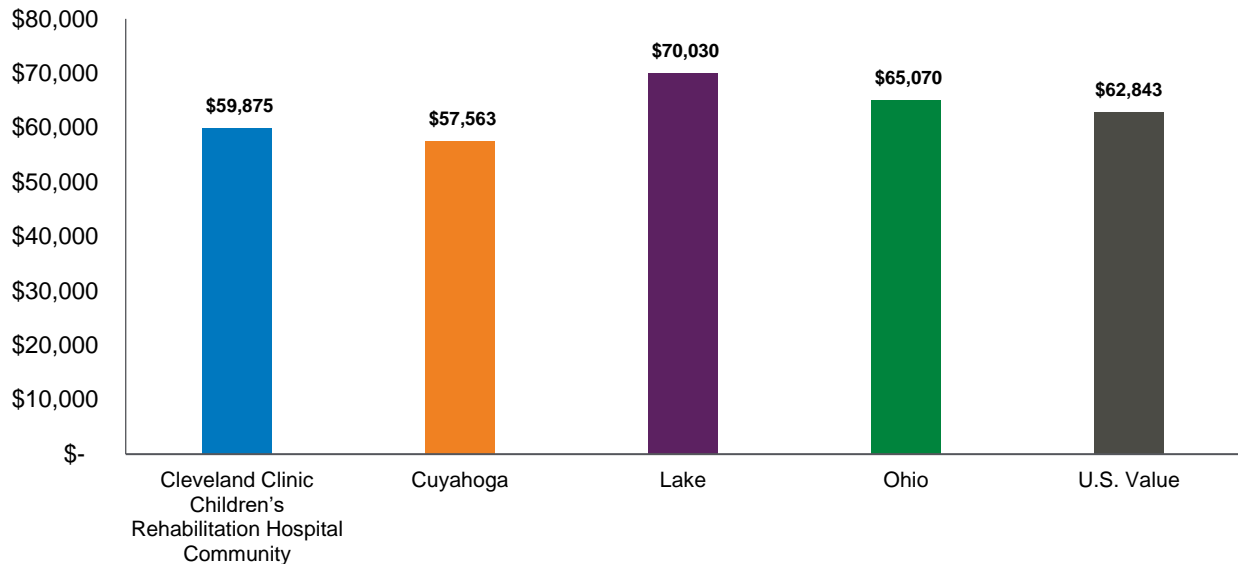
¹³ Robert Wood Johnson Foundation. Health, Income, and Poverty. <https://www.rwjf.org/en/library/research/2018/10/health--income-and-poverty-where-we-are-and-what-could-help.html>



County values- Claritas Pop-Facts® (2022 population estimates)

The median household income for the Cleveland Clinic Children’s Hospital for Rehabilitation Community is \$59,875, which is lower than the state value of \$65,070 and national value of \$62,843 (Figure 12).

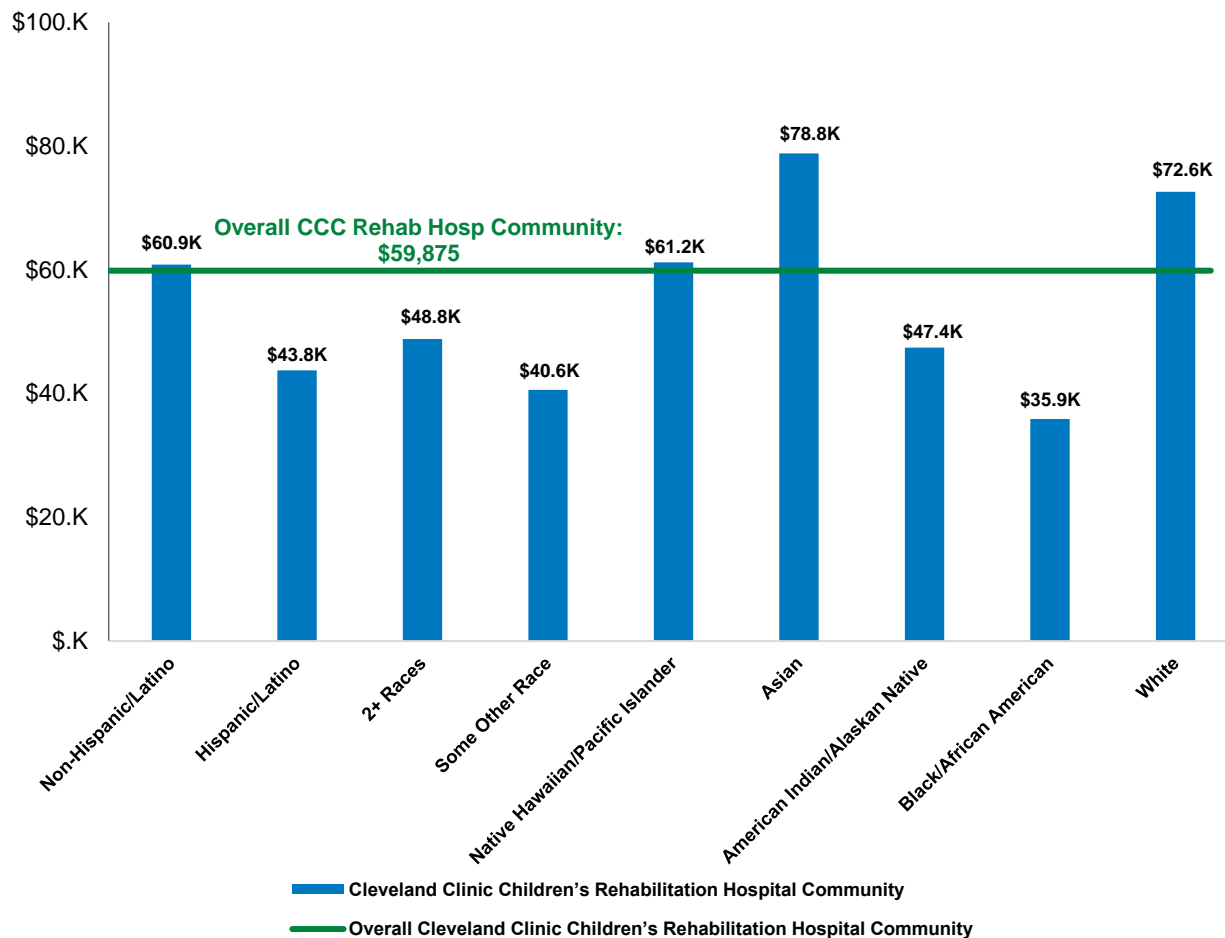
Figure 12: Household Income by: Hospital, County, State, and U.S. Comparisons



County and state values- Claritas Pop-Facts® (2022 population estimates), U.S. values taken from American Community Survey five-year (2016-2020) estimates

Figure 13 shows the median household income by race and ethnicity. Four racial/ethnic groups – White, Native Hawaiian/ Pacific Islander, Asian, and Non-Hispanic/Latino– have median household incomes above the overall median value. All other races have incomes below the overall value, with the Black/African American population having the lowest median household income at \$35,900.

Figure 13: Median Household Income by Race/Ethnicity: The Cleveland Clinic Children’s Hospital for Rehabilitation Community



County values- Claritas Pop-Facts® (2022 population estimates)

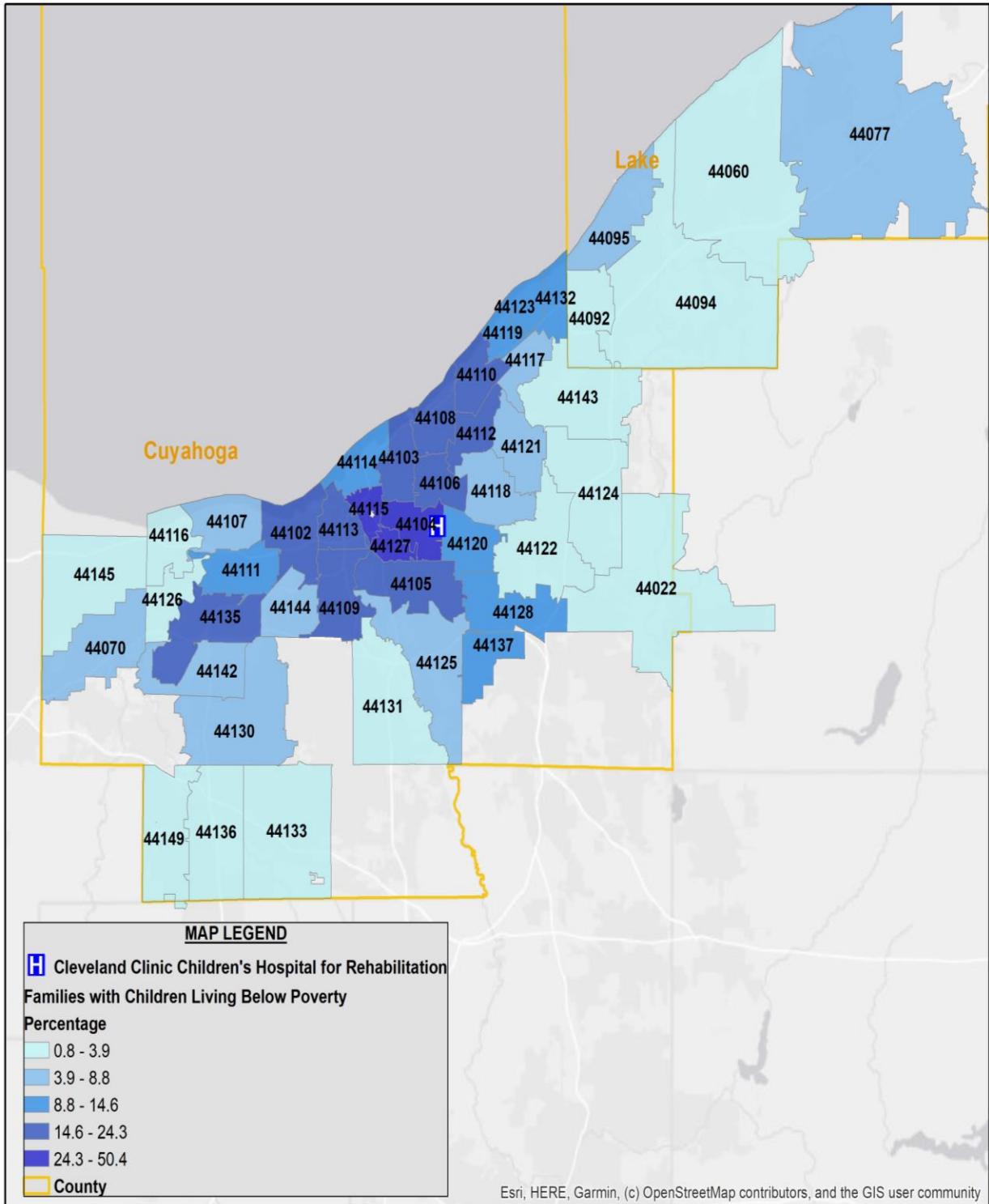
Poverty

Federal poverty thresholds are set every year by the Census Bureau and vary by size of family and ages of family members. People living in poverty are less likely to have access to healthcare, healthy food, stable housing, and opportunities for physical activity. These disparities mean people living in poverty are more likely to experience poorer health outcomes and premature death from preventable diseases.¹⁴

Figure 14 shows the percentage of families with children living below the poverty level by zip code. The darker blue colors represent a higher percentage of families living below the poverty level, with zip codes 44115 (Cleveland) and 44104 (Cleveland) having the highest percentages at 50.4% and 41.0%, respectively. Overall, 9.1% of families with children in the Cleveland Clinic Children’s Hospital for Rehabilitation Community live below the poverty level, which is higher than the state value of 7.3% but slightly lower than the national value of 9.5%. The percentage of families living below poverty for each zip code in the Cleveland Clinic Children’s Hospital for Rehabilitation Community is provided in Appendix C

¹⁴ U.S. Department of Health and Human Services, Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/economic-stability/reduce-proportion-people-living-poverty-sdoh-01>

Figure 14: Families with Children Living Below Poverty



County values- Claritas Pop-Facts® (2022 population estimates)

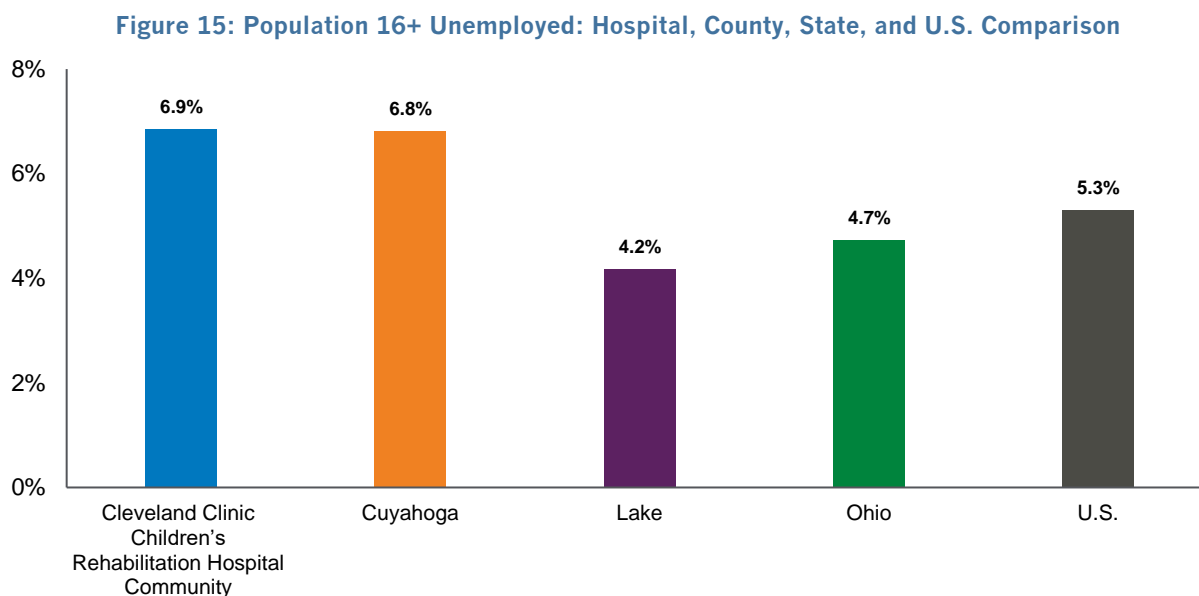
Employment

Though the data in this section is not specific to the pediatric population, a community's employment rate is a key indicator of the local economy. An individual's type and level of employment impacts access to healthcare, work environment, health behaviors, and health outcomes. Stable employment can help provide benefits and conditions for maintaining good health. In contrast, poor or unstable work and working conditions are linked to poor physical and mental health outcomes.¹⁵

Unemployment and underemployment can limit access to health insurance coverage and preventive care services. Underemployment is described as involuntary part-time employment, poverty-wage employment, and insecure employment.¹⁵

Type of employment and working conditions can also have significant impacts on health. Work-related stress, injury, and exposure to harmful chemicals are examples of ways employment can lead to poorer health.¹⁵

Figure 15 shows the population aged 16 and over who are unemployed. The unemployment rate for the Cleveland Clinic Children's Hospital for Rehabilitation Community is 6.9%, which is higher than the state value of 4.7% and the national value of 5.3%.



County and state values- Claritas Pop-Facts® (2022 population estimates), U.S. values taken from American Community Survey five-year (2016-2020) estimates

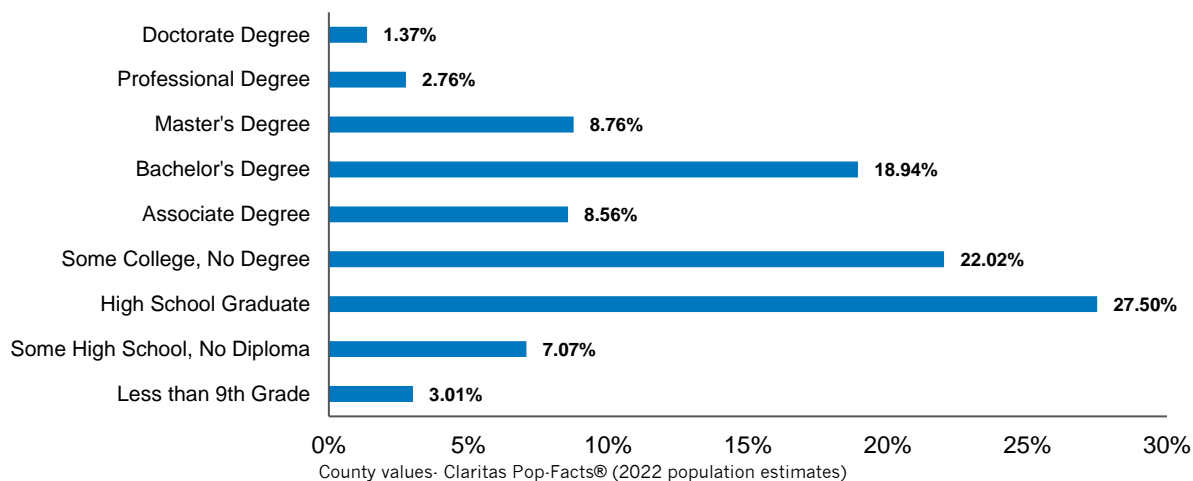
Education

Education is also an important indicator for health and wellbeing. Education can lead to improved health by increasing health knowledge, providing better job opportunities and higher income, and improving social and psychological factors linked to health. People with higher levels of education are likely to live longer, to experience better health

¹⁵ U.S. Department of Health and Human Services, Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/social-determinants-health/literature-summaries/employment>

outcomes, and practice health-promoting behaviors.¹⁶ These data, therefore, may be considered predictors of some later health outcomes. Figure 16 shows the percentage of the population 25 years or older by educational attainment.

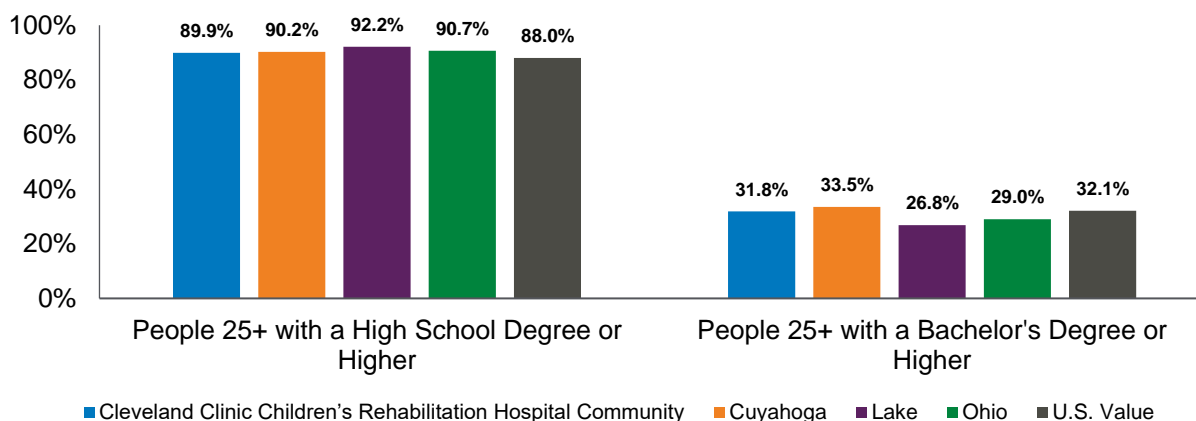
Figure 16: Population 25+ by Education Attainment: The Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition



Another indicator related to education is on-time high school graduation. A high school diploma is a requirement for many employment opportunities and for higher education. Not graduating high school is linked to a variety of negative health impacts, including limited employment prospects, low wages, and poverty.¹⁷

Figure 17 shows that the Cleveland Clinic Children’s Hospital for Rehabilitation Community has a smaller percentage of residents with a High School degree or higher (89.9%) when compared to Ohio value (90.7%) and higher than the U.S. value (88.0%). The community has a higher percentage of residents with a Bachelor’s degree or higher (31.8%) when compared to Ohio value (29.0%); and a lesser than the U.S. value (32.1%).

Figure 17: Population 25+ by Education Attainment: Hospital, County, State, and U.S. Comparisons



County and state values- Claritas Pop-Facts® (2022 population estimates), U.S. values taken from American Community Survey five-year (2016-2020) estimates

¹⁶ Robert Wood Johnson Foundation, Education and Health. <https://www.rwjf.org/en/library/research/2011/05/education-matters-for-health.html>

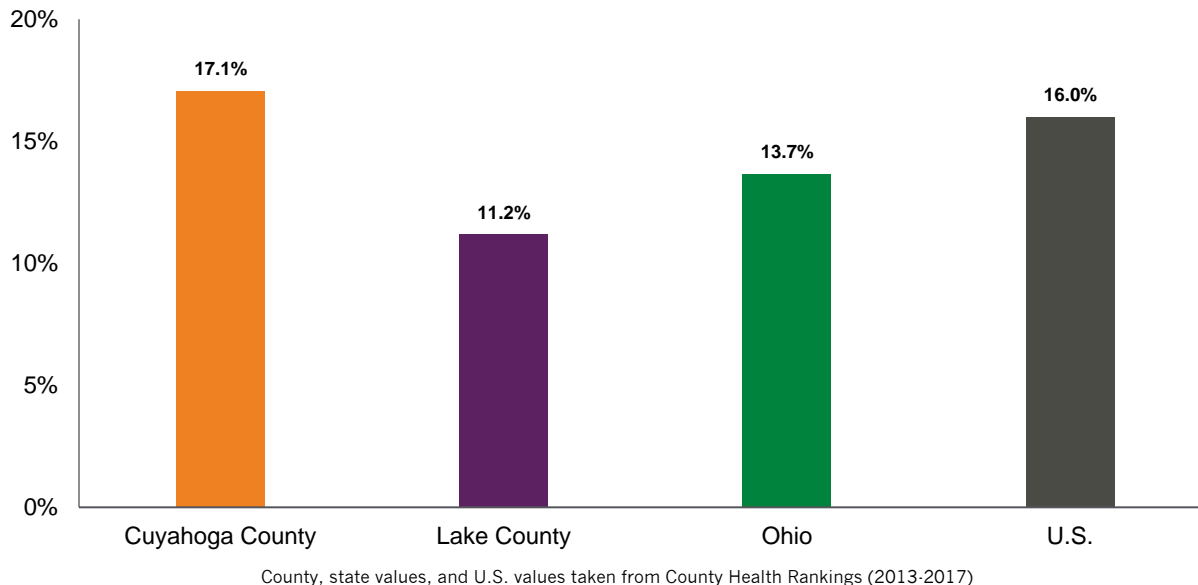
¹⁷ U.S. Department of Health and Human Services, Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/social-determinants-health/literature-summaries/high-school-graduation>

Housing

Safe, stable, and affordable housing provides a critical foundation for health and wellbeing. Exposure to health hazards and toxins in the home can cause significant damage to an individual or family's health.¹⁸

Figure 18 shows the percentage of houses with severe housing problems. This indicator measures the percentage of households with at least one of the following problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities. Cuyahoga County has the highest percentage of houses with severe housing problems.

Figure 18: Severe Housing Problems: County, State, And U.S. Comparisons



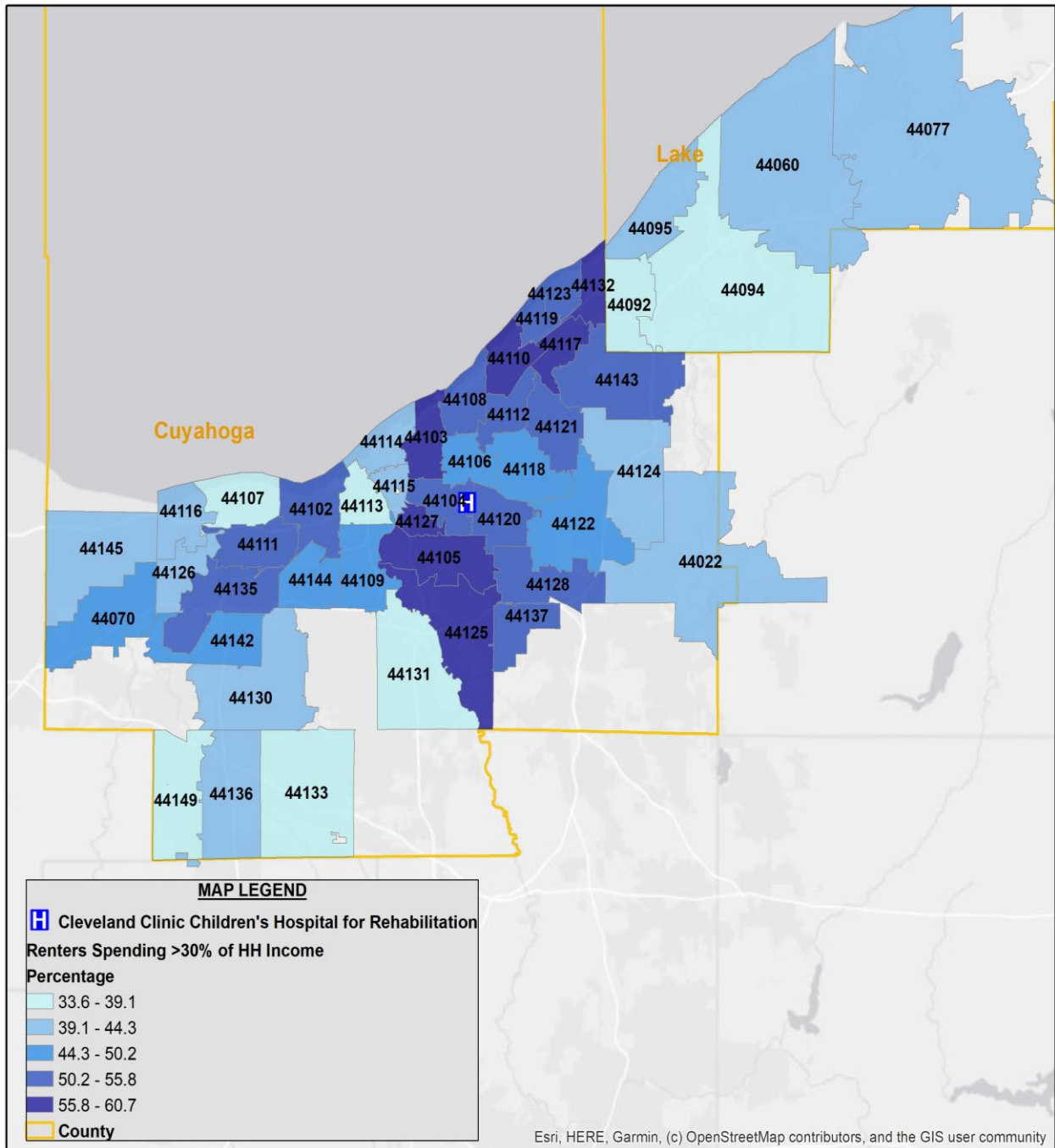
When families must spend a large portion of their income on housing, they may not have enough money to pay for things like healthy foods or healthcare. This is linked to increased stress, mental health problems, and an increased risk of disease.¹⁹

Figure 19 shows the percentage of renters who are spending 30% or more of their household income on rent.

¹⁸ County Health Rankings, Housing and Transit. <https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model/health-factors/physical-environment/housing-and-transit>

¹⁹ U.S. Department of Health and Human Services, Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/housing-and-homes/reduce-proportion-families-spend-more-30-percent-income-housing-sdoh-04>

Figure 19: Renters Spending 30% Or More Of Household Income on Rent



Neighborhood and Built Environment

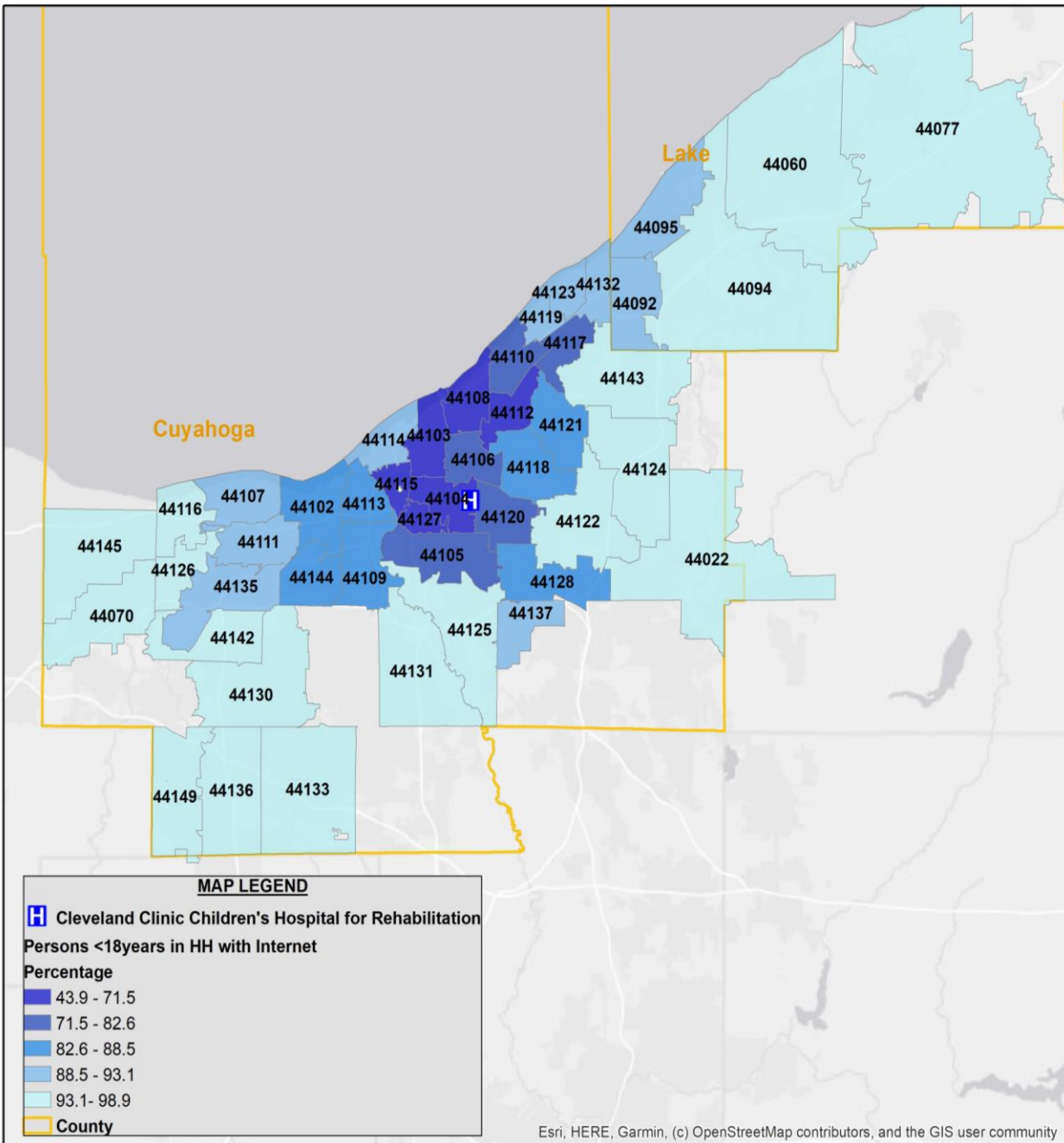
Internet access is essential for basic healthcare access, including making appointments with providers, getting test results, and accessing medical records. Access to the internet is also increasingly essential for obtaining home-based telemedicine services.²⁰

²⁰ U.S. Department of Health and Human Services, Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/neighborhood-and-built-environment/increase-proportion-adults-broadband-internet-hchit-05>

Internet access may also help individuals seek employment opportunities, conduct remote work, and participate in online educational activities.²⁰

Figure 20 shows the percentage of persons in households that have an internet subscription and are <18 years. 44115 (Cleveland) has the least percentage of households with internet connection, represented by darkest shade of blue on the map.

Figure 20: Persons <18years in Households with an Internet Subscription



County values- American Community Survey five-year (2015-2019) estimates

Highlighted Demographics: Disparities and Health Equity

Identifying disparities by population groups and geography helps to inform and focus priorities and strategies. Understanding disparities also helps us better understand root causes that impact health in a community and inform action towards health equity.

Health Equity

Health equity focuses on the fair distribution of health determinants, outcomes, and resources across communities.²¹ National trends have shown that systemic racism, poverty, and gender discrimination have led to poorer health outcomes for groups such as Black/African American, Hispanic/Latino, Indigenous, communities with incomes below the federal poverty level, and LGBTQ+ communities.²²

Race, Ethnicity, Age & Gender Disparities

Primary and secondary data revealed significant community health disparities by race, ethnicity, gender, and age. It is important to note that the data is presented to show differences and distinctions by population groups. And a data variation within each population group may be as great as that between different groups. For instance, Asian or Asian and Pacific Islander persons encompasses individuals from over 40 different countries with very different languages, cultures, and histories in the U.S. Information and themes captured through key informant interviews have been shared to provide a more comprehensive and nuanced understanding of each community's experiences.

Secondary Data

Community health disparities were assessed in the secondary data using the Index of Disparity²³ analysis, which identifies disparities based on how far each subgroup (by race, ethnicity, or gender) is from the overall county value. For more detailed methodology related to the Index of Disparity, see Appendix A.

Table 1 below identifies secondary data indicators with a statistically significant race or ethnic disparity for the Cleveland Clinic Children's Hospital for Rehabilitation Community, based on the Index of Disparity.

²¹ Klein R, Huang D. Defining and measuring disparities, inequities, and inequalities in the Healthy People initiative. National Center for Health Statistics. Center for Disease Control and Prevention. https://www.cdc.gov/nchs/ppt/nchs2010/41_klein.pdf

²² Baciu A, Negussie Y, Geller A, et al (2017). Communities in Action: Pathways to Health Equity. Washington (DC): National Academies Press (US); The State of Health Disparities in the United States. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK425844/>

²³ Percy, J. & Keppel, K. (2002). A Summary Measure of Health Disparity. Public Health Reports, 117, 273-280.

Table 1: Indicators with Significant Race or Ethnic Disparities

Health Indicator	Group(s) Negatively Impacted
Children Living Below Poverty Level	Black/African American, Hispanic/Latino, Other Race, Two or More Races
Families Living Below Poverty Level	American Indian/Alaska Native, Black/African American, Hispanic/Latino, Other Race, Two or More Races
People Living Below Poverty Level	American Indian/Alaska Native, Black/African American, Hispanic/Latino, Other Race, Two or More Races
Young Children Living Below Poverty Level	Black/African American, Hispanic/Latino, Native Hawaiian/Pacific Islander, Other Race
Babies with Very Low Birth Weight	Black/African American, Hispanic/Latino

The Index of Disparity analysis for Cuyahoga and Lake counties reveals that the Black/African American, Hispanic/Latino, American Indian/Alaska Native, Two or More Races, and Other Race group populations are disproportionately impacted by various measures of poverty, which is often associated with poorer health outcomes. These indicators include Families Living Below Poverty Level, Children Living Below Poverty Level, Young Children Living Below Poverty Level, and People Living Below Poverty Level. Furthermore, Black/African American, and Hispanic/Latino populations are disproportionately impacted in Babies with Very Low Birth Weight.

Geographic Disparities

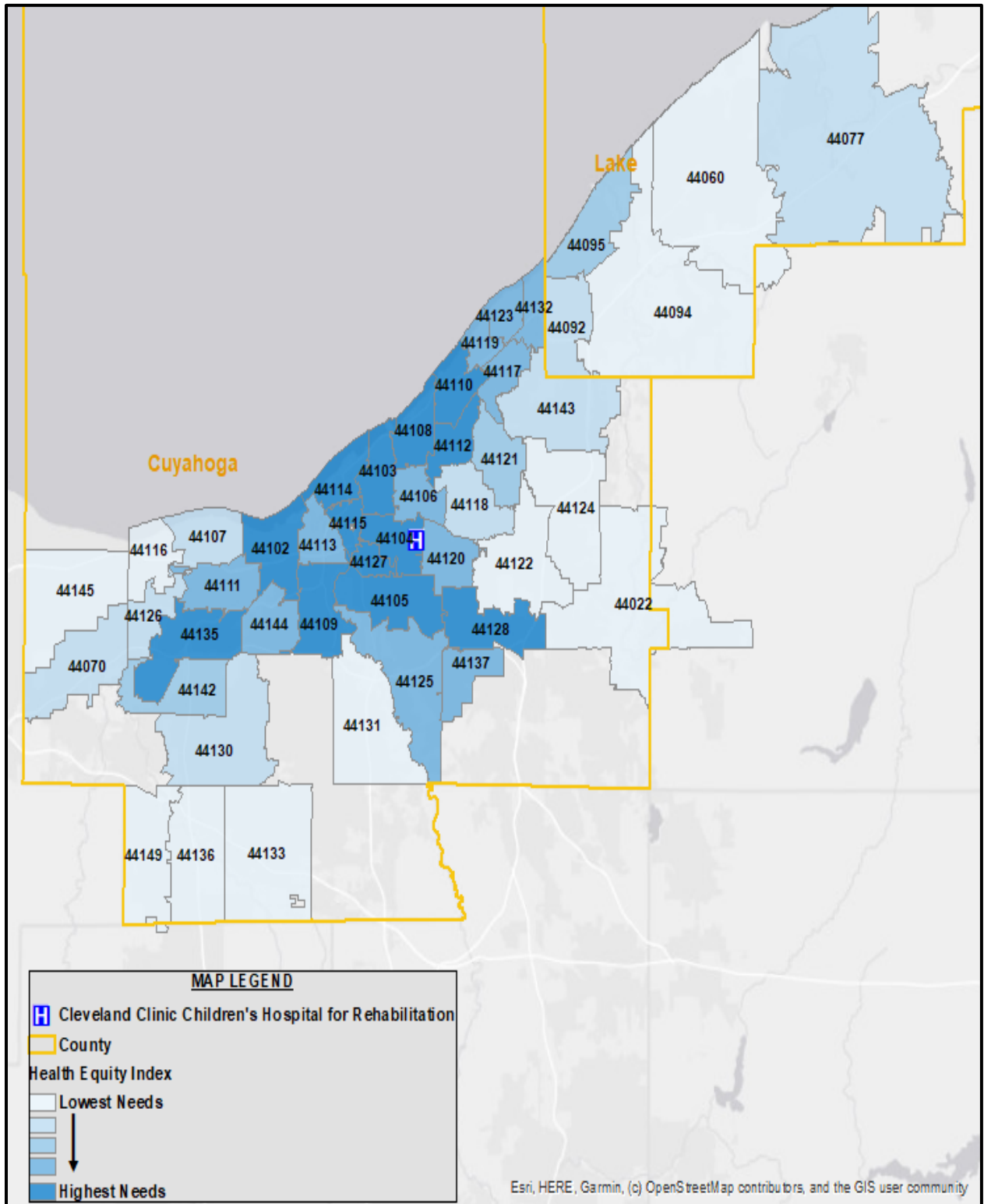
In addition to disparities by race, ethnicity, gender, and age, this assessment also identified specific zip codes/municipalities with differences in outcomes related to health and social determinants of health. Geographic disparities were identified using the Health Equity Index, Food Insecurity Index, and Mental Health Index. These indexes have been developed by Conduent Healthy Communities Institute to easily identify areas of high socioeconomic need, food insecurity and poor mental health. For all indexes, counties, zip codes, and census tracts with a population over 300 are assigned index values ranging from 0 to 100, with higher values indicating greater need. Understanding where there are communities with higher need is critical to targeting prevention and outreach activities.

Health Equity Index

Conduent’s Health Equity Index (HEI) estimates areas of high socioeconomic need, which are correlated with poor health outcomes. Zip codes are ranked based on their index value to identify relative levels of need, as illustrated by the map in Figure 21. The following zip codes in the Cleveland Clinic Children’s Hospital for Rehabilitation Community had the highest level of socioeconomic need (as indicated by the darkest shades of blue): 44102, 44135, 44109, 44105, 44128, 44127, 44115, 44114, 44103,

44108, 44104, 44112, and 44110 in Cuyahoga County. Appendix A provides the index values for each zip code.

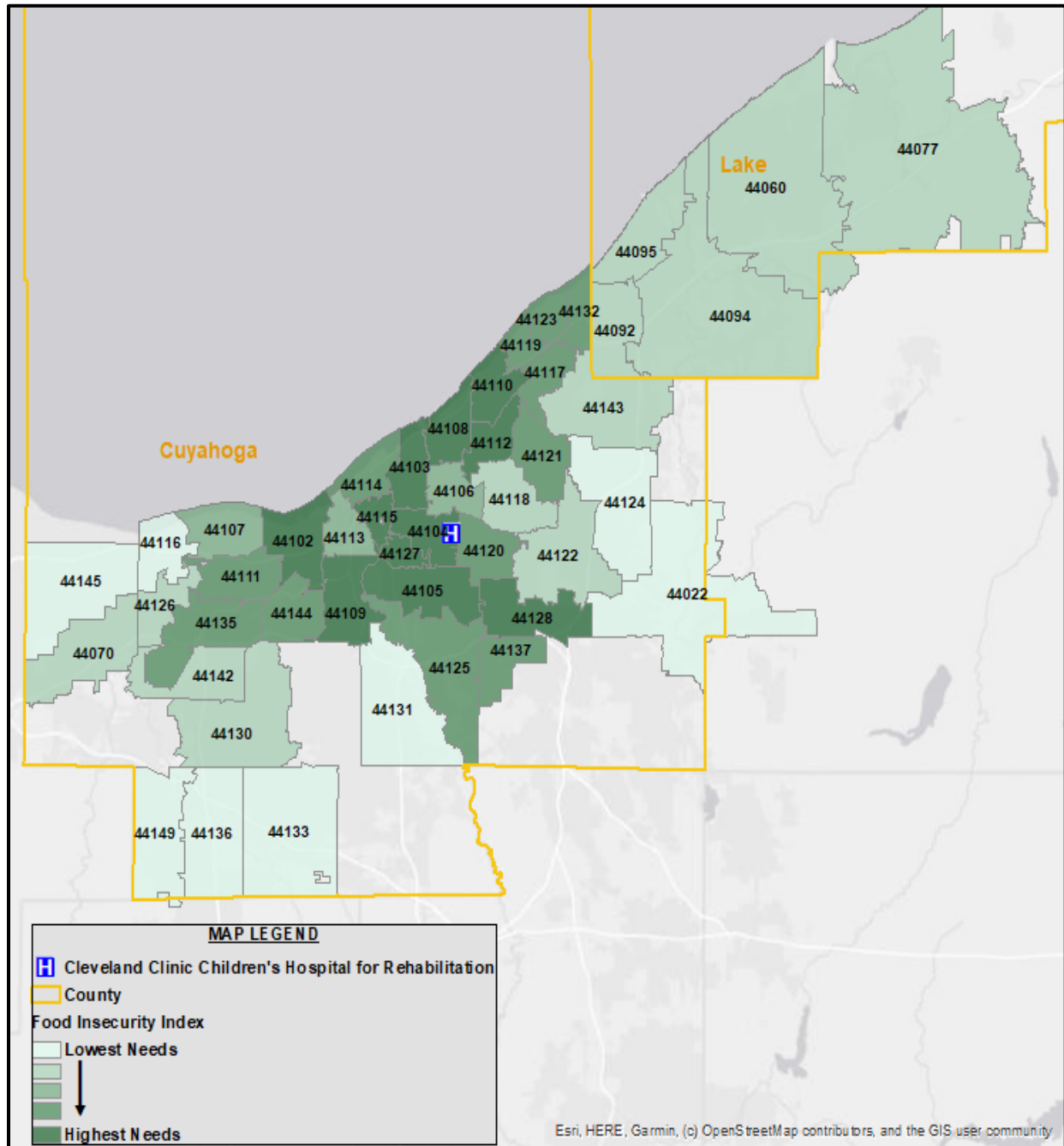
Figure 21: Health Equity Index



Food Insecurity Index

Conduent's Food Insecurity Index (FII) estimates areas of low food accessibility correlated with social and economic hardship. Zip codes are ranked based on their index value to identify relative levels of need, as illustrated by the map in Figure 22. The following zip codes had the highest level of food insecurity (as indicated by the darkest shades of green): 44102, 44109, 44105, 44127, 44128, 44104, 44115, 44103, 44108, 44112, and 44110. These high needs zip codes are all within Cuyahoga County. Appendix A provides the index values for each zip code.

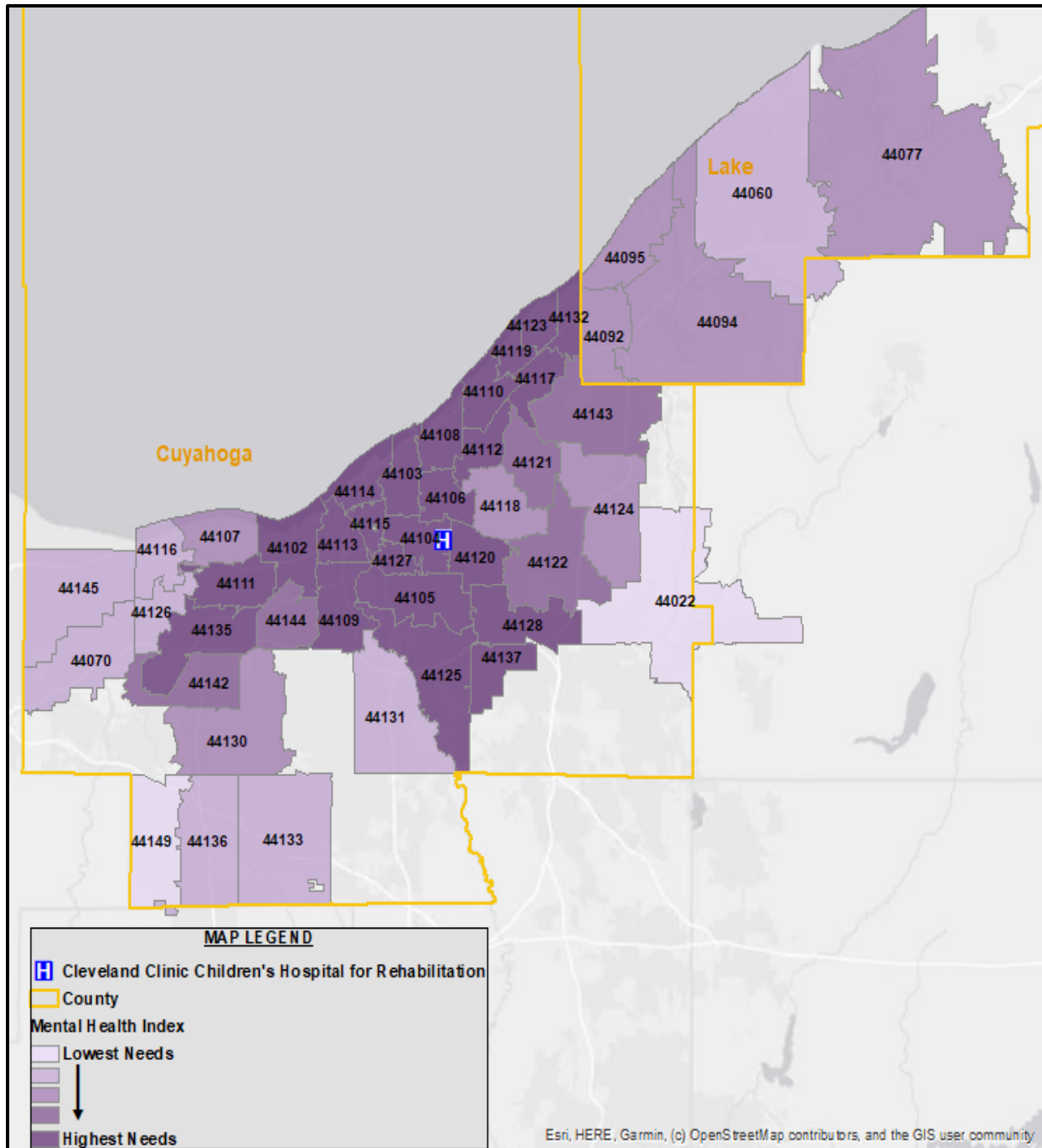
Figure 22: Food Insecurity Index



Mental Health Index

Conduent's Mental Health Index (MHI) is a measure of socioeconomic and health factors correlated with self-reported poor mental health. Zip codes were ranked based on their index value to identify the relative levels of need, as illustrated by the map in Figure 23. As shown, many zip codes within Cuyahoga County are identified as highest needs. Appendix A provides the index values for all zip codes within the Cleveland Clinic Children's Hospital for Rehabilitation Community.

Figure 23: Mental Health Index



Highlighted Demographics: COVID-19 Impacts Snapshot

On March 13, 2020, a U.S. national emergency was declared over the novel coronavirus outbreak first reported in the Wuhan Province of China in December 2019. Officially named COVID-19 by the World Health Organization (WHO) in February, WHO declared COVID-19 a pandemic on March 11, 2020. Later that month, stay-at-home orders were placed by the Ohio Governor and unemployment rates soared as companies were impacted and mass layoffs began.

At the time that the Cleveland Clinic Children’s Hospital for Rehabilitation Community began its collaborative CHNA process, the community and the state of Ohio were in a period of the pandemic that was hoped to be in its final phases. Primary data was collected virtually to ensure the health and safety of those participating.

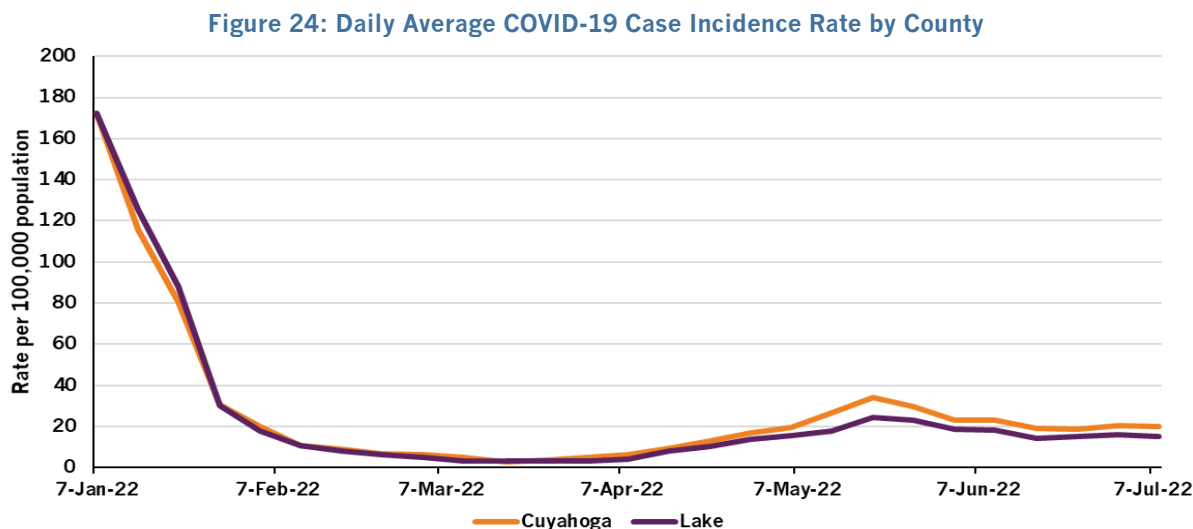
COVID-19 Pandemic

Community Input

Key stakeholders served to assess the impact of the COVID-19 pandemic by asking respondents to describe how the pandemic has impacted community health outputs. Top responses specific to children’s health focused on mental health, learning loss and increases in abuse and lead exposure positively correlated with time children spent indoors. Children’s mental health suffered as social isolation stunted social and emotional development. The transition from in-person learning to virtual classrooms resulted in education gaps and lost knowledge.

The COVID-19 Daily Average Case Incidence Rate by County

Figure 24 shows the daily average COVID-19 case incidence rate for Cuyahoga and Lake counties from January 2022 through early July 2022. As shown, the incidence rate has declined since the beginning of 2022, although some small spikes in incidence rates have occurred.



County values- Centers for Disease Control and Prevention (2022)

Vaccination Rates

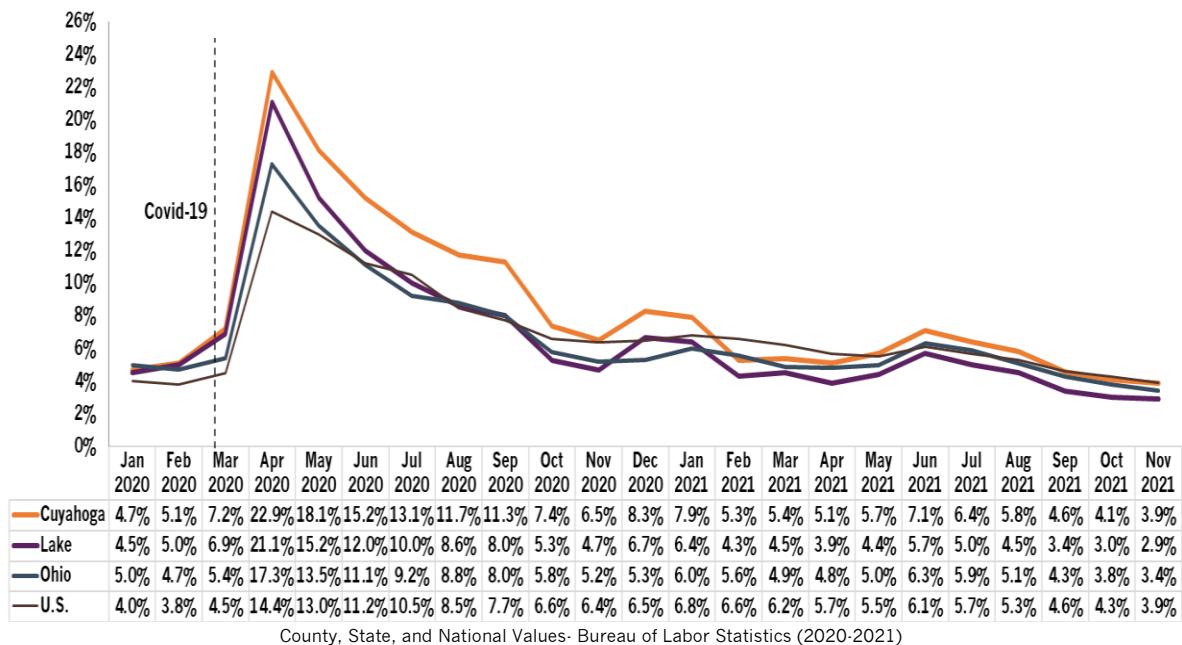
As of June 2022, at least 65% of the population residing in the counties within the Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition are fully vaccinated against COVID-19. Lake County has a higher vaccination rate (66.2%), than Cuyahoga County (65.5%). In Cuyahoga County, 73% of the population 12+ were fully vaccinated against COVID-19. In Lake County, 73.2% of the population 12+ were fully vaccinated against COVID-19.

Unemployment Rates

Unemployment rates rose between March and April 2020 for Cuyahoga and Lake counties when stay-at-home orders were first announced. Illustrated in Figure 25 below, as counties began slowly reopening some businesses in late-2020, the unemployment rate gradually began to go down. As of late 2021, unemployment rates have stabilized but still exceed pre-pandemic rates.

Data suggests that the percent of children with an unemployed parent reached historic highs during the pandemic²⁴. Reductions in family income, especially if the family’s income drops below poverty levels, can affect children’s development. Children in poverty may have more limited access to healthcare, nutritious meals, and safe childcare, especially if a family’s income remains under poverty thresholds for six months or longer²⁵.

Figure 25: Unemployment Rate After the Start of the COVID-19 Pandemic



Synthesis and Prioritization

²⁴ Parolin Z. Unemployment and child health during COVID-19 in the USA. *Lancet Public Health*. 2020 Oct;5(10):e521-e522. doi: 10.1016/S2468-2667(20)30207-3. PMID: 33007208; PMCID: PMC7524545.

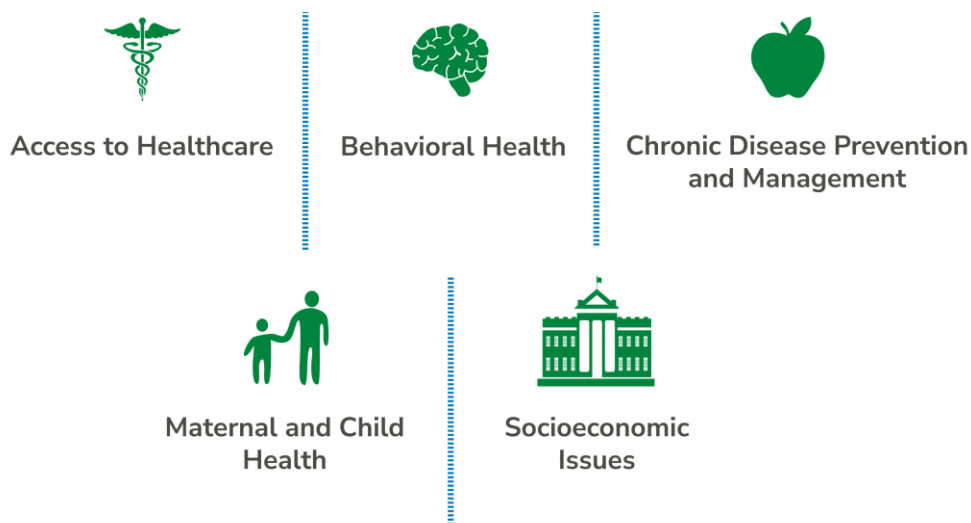
²⁵ Isaacs, J. Unemployment from a Child’s Perspective. Washington, DC: Urban Institute, 2013. <https://www.urban.org/sites/default/files/publication/23131/1001671-Unemployment-from-a-Child-s-Perspective.PDF>

All forms of data may present strengths and limitations. Each data source used in this CHNA process was evaluated based on strengths and limitations and should be kept in mind when reviewing this report. Each health topic presented a varying scope and depth of quantitative data indicators and qualitative findings. For both quantitative and qualitative data, immense efforts were made to include as wide a range of secondary data indicators and key stakeholders as possible. A full list of contributors can be found in the Primary Data Collection and Analysis description in [Appendix A](#).

To gain a comprehensive understanding of the significant health needs for the Cleveland Clinic Children’s Hospital for Rehabilitation Community, the findings from all three data sets were compared and studied simultaneously. The secondary data scores and key stakeholder responses were considered equally important in understanding the health issues of the community. The top health needs identified from each of these data sources were analyzed for areas of overlap. Five health issues were identified as significant health needs across both data sources and were used for further prioritization. To ensure alignment with state and local health department objectives, a working group analyzed these significant health needs alongside the [Ohio State Health Improvement Plan \(SHIP\)](#) as well as the [Cuyahoga](#), and [Lake](#) County Community Health Improvement Plans (CHIP) most recent findings. The prioritization process distilled the significant needs into five categories.

The five prioritized health needs are summarized in Figure 26. Each prioritized health topic includes the key findings from secondary data and key stakeholder interviews.

Figure 26: 2022 Prioritized Health Needs



Prioritized Health Topic #1: Access to Healthcare



Access to Healthcare

Key Themes from Community Input



- Barriers: transportation, health illiteracy, hours of operation
- Children's immunizations were delayed as a result of COVID-19
- Difficulties navigating health care system due to lack of broadband access/computer knowledge, no prior experience as a healthcare consumer/history of accessing the system
- Gentrification/Built Environment reduces accessibility to services
- Issues of discrimination/bias create mistrust in healthcare: having doctors that look like the people they're serving, building a sustainable presence in the community, mobile health units, easily available translators, culturally responsive health care providers to implement trauma-informed care/gender-affirming care
- Lack of investment in local public health/preventive care as hospitals are focused on revenue coming from speciality/surgical care
- Racial, economical, geographical, educational, environmental inequities all affect access to care, disproportionately impacting communities of color
- Red lined communities have decreased healthcare access
- Systemic inequities in payment structures: conditions that communities of color were experiencing are reimbursed at lower rates than the conditions that White people are reimbursed for

Primary Data: Key Stakeholder Interviews

Parental access to healthcare impacts children and key stakeholders spoke at lengths about the barriers they face in accessing health services. Key stakeholders noted a lack of investment in prevention practices including accessibility of primary services at a local level. Racial, economical, geographical, educational and environmental inequities all impact access to care and disproportionately affect communities of color and their children. Three key themes surfaced from community discussions including systemic inequities in healthcare, the need to focus on preventative care, and barriers to healthcare.

Systemic inequities in healthcare included issues of discrimination and bias from providers which ultimately creates mistrust from communities experiencing this discrimination. Key informants suggested hiring providers that look like the people they are caring for, building a sustainable presence in the community, and ensuring providers are trained in trauma-informed care and gender-affirming care.

Preventative care included high utilization rates of the ER for minor health issues due to lack of primary care physician, and the need to strengthen the public health infrastructure. Furthermore, COVID-19 allowed for the expansion of telehealth which increased access to healthcare for many. However, it also exposed the inequities in broadband support due to infrastructure issues leaving residents unable to access telehealth.

Barriers to healthcare included transportation, navigating the difficulties of a fragmented healthcare system, ability to pay for services/insurance (lack of insurance, high co-pays/deductibles), and health literacy for providers to communicate with patients.

Prioritized Health Topic #2: Behavioral Health

Behavioral Health: Mental Health



Key Themes from Community Input



- Cleveland Clinic needs to work alongside network of community behavioral health organizations to make meaningful community investment
- Housing insecurity especially for younger LGBT individuals leading to homelessness effects mental wellbeing
- Level of despair, trauma and mental illness for children in the community described as shocking
- Lack of meaningful investment in true community health programming i.e. school interventions utilizing mobile vans to provide care
- Lack of providers to meet the increasing mental health/behavioral health needs
- Resources needed to help develop coping strategies & resilience from trained/supportive professionals
- Second leading cause of death in kids 10-14 is suicide
- Social isolation worsened during pandemic leading to a spike in reports of depression, anxiety, suicide attempts or death by suicide
- Trauma resulting from COVID-19 has left children with mental health issues

Primary Data: Key Stakeholder Interviews

Key stakeholders focused on the high level of despair and mental illness for children in their communities, which has been exacerbated by the COVID-19 pandemic. This, coupled with trauma from social isolation has led to a spike in reports of depression, anxiety, suicides attempt, or death by suicide. Further, the lack of mental health providers exacerbated the challenges of meeting the increased demand for mental health needs. Stakeholders corroborated this description of the increasing mental health needs of children and adolescents citing state statistics showing that suicide is the second leading cause of death in children ages 10-14 years. Stakeholders recommended an increase in meaningful investment in community health programming, as well as working alongside the network of community behavioral health organizations.

“ The level of despair and mental illness in the kids in our community is just staggering. So what what's to be done there? There's just tremendous lack of meaningful, and I would underline meaningful investment in true community health programming. ”

- Key Stakeholder

Prioritized Health Topic #3: Chronic Disease Prevention and Management

Primary Data: Key Stakeholder Interviews

Nutrition & Healthy Eating



Key Themes from Community Input



- Access to healthy food limited by transportation, minimal grocery stores nearby, built environment, affordability
- Effects of redlining are still seen—these are the neighborhoods that do not always have grocery stores in a close mile radius
- COVID-19 impacted the need for food and levels of food insecurity: i.e. children reliant on school breakfast/lunch
- High incidence of chronic health conditions like heart disease, diabetes, obesity, cancer in communities without high quality food access as these conditions are all inherently tied to healthy food accessibility, built environment/walkability, safety, access to care
- Low-income children are disproportionately lacking stores with healthy fresh food and often don't have internet access to order food online

Key stakeholders revealed that access to healthy food was often limited by a lack of either public or private transportation. There are only a few grocery stores in the community and few community members can access those by walking. Conditions such as hypertension, asthma, diabetes, chronic obstructive pulmonary disease (COPD) and coronary heart disease are all related to the quality of food community members have access to²⁶. Ensuring children and families have access to healthy food, is a public health approach to preventing chronic diseases later in life. COVID-19 greatly impacted levels of food insecurity as many children are reliant on free and reduced-price school meals, including breakfast and lunches. With school shutdowns, this source of nutrition for children was virtually nonexistent. Key stakeholders emphasized the link between food and proper childhood development as well.



To this day, the effects of redlining are still seen—these are the neighborhoods that do not always have grocery stores in a close mile radius. These are the neighborhoods where you're going to see lots of dollar stores around, where people are being forced to get their fruits and veggies because there hasn't been a historical investment in them.



- Key Stakeholder

²⁶ Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/nutrition.htm>

Prioritized Health Topic #4: Maternal and Child Health

Maternal & Child Health



Key Themes from Community Input



- All issues are disproportionately impacting poor children
- Many AAPI (Asian American and Pacific Islander) families made the decision that their kids were safer at home, not necessarily from COVID-19, but from physical, anti-Asian hostilities. So, they kept their kids at home and that's devastating because engagement in learning is extremely difficult in that remote setting
- Opportunity for payer community to pay for food for pregnant people experiencing food insecurity to have better pregnancy outcomes
- Red lined communities are also most impacted by lead and infant mortality
- Rising behavioral health issues amongst children which was exacerbated by COVID-19
- Specialized resources need to be allocated to communities most impacted by infant mortality, prematurity, early pregnancy loss which in Cleveland, is African American families to promote true health equity
- There needs to be more intentional funding of maternal/infant health programs in the community from the hospital using an equity lens
- Top issues: lead poisoning, mental/behavioral health, infant mortality, food insecurity, delays in preventative care, learning loss

Warning Indicators



- Children with Low Access to a Grocery Store
- Consumer Expenditures: Childcare

Primary Data: Key Stakeholder Interviews

Key stakeholder interviews acknowledged the persistence of high infant mortality rates as well as the continuance of lead poisoning as a contributor to poor children's health outcomes. During the COVID-19 pandemic, long periods of time spent indoors increased exposures and worsened lead related incidents and outcomes. Stakeholders emphasized the relationship between poor quality housing and respiratory health, including asthma.

Children across the service area suffered some learning loss during the pandemic as classrooms went remote and parents were often unable to provide time away from work to attend to their child's educational needs. Parents identifying as Asian American and Pacific Islander (AAPI) reportedly opted to continue with remote options even after in-person learning resumed for fear of anti-Asian sentiment being expressed to their children by classmates.

Related to learning loss and pandemic associated isolation, mental and behavioral health, including substance abuse has challenged children at increasingly younger ages. Isolation also kept parents from seeking primary care services for their children, including

immunizations and well visits. Stakeholders considered nutrition for low-income families a key concern with risks to childhood obesity and juvenile diabetes as early life precursors to chronic diseases top of mind. Finally, key stakeholders expressed disparities among low-income children that exacerbated nearly all health outcomes discussed.



Many of our programs, like childhood immunizations, are way down because kids weren't getting their immunizations during COVID. And so a lot of preventive care services were delayed or ceased during COVID. A lot of our program activities around newborn home visiting stopped as well.



- Key Stakeholder

Secondary Data

Maternal and Child Health came up as areas of concern in the secondary data analysis. Further analysis was done to identify specific indicators of concern. Those indicators with high data scores (scoring at or above the threshold of 1.50) were categorized as indicators of concern and can be found in Appendix C and are discussed below. In addition, the appendices also contain a description of methodology (Appendix A) and a full list of indicators with data scoring categorized within this topic area (Appendix C).

Children with Low Access to a Grocery Store is the worst performing indicator in Lake County. In Lake County, eight percent of children live more than one mile from a supermarket or large grocery store.

Consumer Expenditures: Childcare came up as an indicator of concern in Lake County, where residents spend an average of \$315 per consumer unit. A consumer unit is defined as a household or any person living in a college dormitory. This data captures childcare, day care, nursery school, preschool, and non-institutional day camps. ²⁷Childcare is a major household expense for families with young children. Access to affordable and high-quality childcare is essential for parents to be able to provide sufficient income for their family while ensuring all their children's social and educational needs are met. In regions where childcare costs are high, family budgets are strained, and parents may be forced to sacrifice the quality of childcare arrangements they select for their children. ²⁸

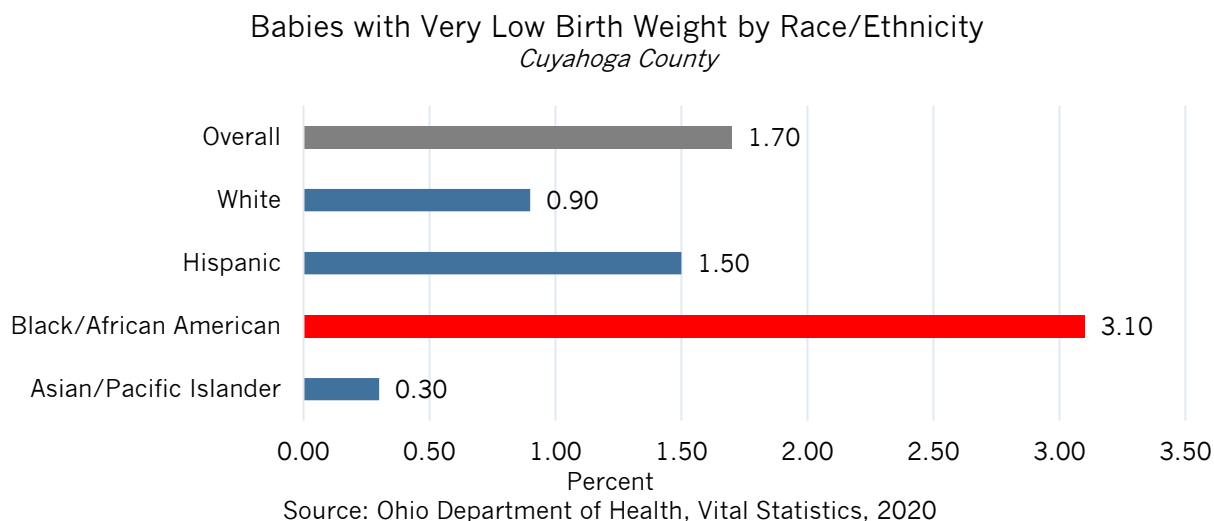
Babies with Low Birth Weight and Babies with Very Low Birth Weight are the worst performing indicators in Cuyahoga County. In Cuyahoga County, 10.8% of newborns weighed less than 2,500 grams (5 pounds, 8 ounces) and 1.7% of newborns weighed less than 1,500 grams (3 pounds, 5 ounces). In Cuyahoga, the county rates are higher than the state of Ohio where 8.5% of babies are categorized as having a low birth weight and 1.4% have a very low birth weight (1,500 grams or less).

²⁷ Claritas Consumer Buying Power

²⁸ Center for American Progress, 2021

Additionally, Black/African American residents in Cuyahoga County see a higher rate of Babies with Very Low Birth Weight, as shown in Figure 27 where 3.10% of babies weigh less than 1,500 grams (see red in figure below).

Figure 27. Babies with Very Low Birth Weight by Race/Ethnicity in Cuyahoga County



Autism Spectrum Disorder

The prevalence of Autism Spectrum Disorder is increasing in Cleveland Clinic Children’s Hospital for Rehabilitation communities. Children with Autism Spectrum Disorder frequently suffer from other developmental, psychiatric, neurological, chromosomal, and genetic disorders and have higher annual medical costs than children without ASD.

Data from the Centers for Disease Control and Prevention indicate that Autism Spectrum Disorder prevalence has increased from 1 in 150 children to 1 in 59 children between 2000 and 2014.²⁹ Children with Autism Spectrum Disorder experience higher rates of co-morbid conditions than children without developmental disabilities. Approximately 10 percent of children with Autism Spectrum Disorder also have Down syndrome, fragile X syndrome, tuberous sclerosis, or another other disorders. Children with Autism Spectrum Disorder are approximately 60 percent as likely to be overweight or obese as adolescents without developmental disabilities.³⁰ A small percentage of children who are born prematurely or with low birth weight are at greater risk for having Autism Spectrum Disorder.

²⁹ Center for Disease Control and Prevention, Autism Spectrum Disorder: Data and Statistics on Autism Spectrum Disorder, www.cdc.gov/ncbddd/autism/data.html

³⁰ Levy et al. February 2019, Journal of Pediatrics: Relationship of Weight Outcomes, Co-Occurring Conditions, and Severity of Autism Spectrum Disorder in the Study to Explore Early Development, <https://pubmed.ncbi.nlm.nih.gov/30314662>.

Prioritized Health Topic #5: Socioeconomic Issues



Education

Key Themes from Community Input



- Areas of segregation, high concentrations of poverty tend to have lower quality education opportunities
- Childhood literacy and people being able to ensure that their children are being read to is a big issue
- COVID-19 school closures opened up world of issues, all of which disproportionately effect low-income children:
 - Learning challenges
 - Connection challenges in terms of technology/internet (many students didn't have access to stable Wi-Fi with necessary bandwidth)
 - Children reliant on school meals not being fed
 - Learning loss and link between food and learning
 - Many children were lost to the system as the school didn't have "eyes" on them
- Many AAPI (Asian American and Pacific Islander) families made the decision that their kids were safer at home, not necessarily from COVID-19, but from physical, anti-Asian hostilities
- Need for universal free daycare/preschool at the same caliber for all children

Warning Indicators



- 4th Grade Students Proficient in Math
- 8th Grade Students Proficient in English/Language Arts
- 8th Grade Students Proficient in Math
- Consumer Expenditures: Childcare
- Consumer Expenditures: Education
- Student-to-Teacher Ratio

Primary Data: Key Stakeholder Interviews

Key stakeholders couched discussions around the impact of COVID-19 school closures on education, child development, and other issues, all of which are disproportionately affecting low-income children. Many children didn't have the ability to do their schoolwork remotely because they didn't have access to stable Wi-Fi with the necessary bandwidth to serve their needs. Of particular concern, was the fact that during these shutdowns and remote schooling many children were "lost to the system" as they did not have school counselors and teachers to ensure they were safe and had their needs met.

Children across the service area suffered some learning loss during the pandemic as classrooms went remote and parents were often unable to provide time away from work to attend to their child's educational needs. Parents identifying as Asian American and Pacific Islander reportedly opted to continue with remote options even after in-person learning resumed for fear of anti-Asian sentiment being expressed to their children by classmates. Related to learning loss and pandemic associated isolation, mental and behavioral health, including substance abuse has challenged children at increasingly younger ages.



A lot of AAPI families made the decision that their kids were safer at home, not necessarily from the virus, but from physical anti-Asian hostilities. So they kept their kids at home and that's devastating because engagement in learning is extremely difficult in that remote setting. The children that are remote are disadvantaged in terms of the access to asking a question to the teacher or asking for clarification. Or if they can't hear well enough, and especially for the young children who are learning how to read or pronounce words and things like that.



- Key Stakeholder

Secondary Data

Education is one of the top concerns among all quality-of-life topics. Further analysis was done to identify specific indicators of concern. Those indicators with high data scores (scoring at or above the threshold of 1.50) were categorized as indicators of concern and can be found in Appendix C and are discussed below. In addition, the appendices also contain a description of methodology (Appendix A) and a full list of indicators with data scoring categorized within this topic area (Appendix C).

8th Grade Students Proficient in Math and English/Language Arts scored poorly in both Cuyahoga and Lake counties. Both counties fall in the lowest quartile of all counties in Ohio. In Cuyahoga County, 4th Grade Students Proficient in Math and English/Language Arts also came up as areas of concern and similarly Cuyahoga County falls in the lowest quartile of all counties in Ohio for both indicators.

In Lake County, the student-to-teacher ratio of 18.5 is increasing and Lake County is in the lowest quartile of all counties in the United States.

2022 Cleveland Clinic Children’s Hospital for Rehabilitation CHNA Alignment

The final prioritized health needs from this 2022 Cleveland Clinic Children’s Hospital for Rehabilitation CHNA are in alignment with some of the top priorities and factors influencing health outcomes from the 2019 Ohio State Health Assessment/State Health Improvement Plan. They continue alignment with the 2019 Cleveland Clinic Children’s Rehabilitation CHNA priority areas. The check mark icon in Figure 28 indicates areas of alignment.

Cleveland Clinic Children’s Hospital for Rehabilitation will focus on addressing conditions related to its expertise and capabilities—including Autism Spectrum Disorder—as part of the Implementation Strategy. The Implementation Strategy will describe the strategies and activities that will be taken on by Cleveland Clinic Children’s Hospital for Rehabilitation to directly address the top prioritized needs areas identified in the CHNA process. Cleveland Clinic Children’s Hospital for Rehabilitation also connects patients through referrals and other supports to address these priorities within the vast support network provided by Cleveland Clinic hospitals.

Figure 28. Cleveland Clinic Children’s Hospital for Rehabilitation CHNA Alignment

2019 Ohio SHA/SHIP	2019 Cleveland Clinic Children’s Hospital for Rehabilitation CHNA	2022 Cleveland Clinic Children’s Hospital for Rehabilitation CHNA
<p>Top Health Priorities:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> • Mental Health & Addiction <input checked="" type="checkbox"/> • Chronic Disease <input checked="" type="checkbox"/> • Maternal and Infant Health <p>Top Priority Factors Influencing Health Outcomes:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> • Community Conditions <input checked="" type="checkbox"/> • Health Behaviors <input checked="" type="checkbox"/> • Access to Care 	<p>Priority Health Areas:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> • Access to Affordable Healthcare <input checked="" type="checkbox"/> • Addiction and Mental Health <input checked="" type="checkbox"/> • Chronic Disease Prevention and Management <input checked="" type="checkbox"/> • Infant Mortality <input checked="" type="checkbox"/> • Socioeconomic Concerns • Medical Research and Health Professions Education 	<p>Prioritized Health Needs:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> • Access to Healthcare <input checked="" type="checkbox"/> • Behavioral health (Mental health and Substance Use Disorder) <input checked="" type="checkbox"/> • Chronic disease prevention and management <input checked="" type="checkbox"/> • Maternal and child health <input checked="" type="checkbox"/> • Socioeconomic issues

Appendices Summary

A. Methodology

An overview of methods used to collect and analyze data from both secondary and primary sources.

B. Impact Evaluation

A detailed overview of progress made on the 2019 Implementation Strategy planning, development and roll-out as well as email and web contacts for more information on the 2022 CHNA.

C. Secondary Data Methodology and Scoring Tables

A detailed overview of the Conduent HCI data scoring methodology and indicator scoring results from the secondary data analysis.

D. Community Input Assessment Tools

Quantitative and qualitative community feedback data collection tools, stakeholders and organizations that were vital in capturing community feedback during this collaborative CHNA:

- Key Stakeholder Interview Questions
- Key Stakeholder and Community Organizations

E. Community Partners and Resources

The tables in this section acknowledge community partners and organizations who supported the CHNA process.

F. Acknowledgements

Appendix A: Methodology

Overview

Primary and secondary data were collected and analyzed to inform the 2022 CHNA. Primary data consisted of key stakeholder interviews. The secondary data included indicators of health outcomes, health behaviors and social determinants of health. The methods used to analyze each type of data are outlined below. This analysis was conducted at the county-level and included data for Cuyahoga and Lake counties. The findings from each data source were then synthesized and organized by health topic to present a comprehensive overview of health needs in the Cleveland Clinic Children's Hospital for Rehabilitation Community.

Secondary Data Sources & Analysis

The main source for the secondary data, or data that have been previously collected, is the community indicator database maintained by Conduent Healthy Communities Institute. The following is a list of both local and national sources used in the Cleveland Clinic Children's Hospital for Rehabilitation Community Health Needs Assessment:

- American Community Survey
- American Lung Association
- Annie E. Casey Foundation
- CDC - PLACES
- Centers for Disease Control and Prevention
- Centers for Medicare & Medicaid Services
- Claritas Consumer Buying Power
- Claritas Consumer Profiles
- County Health Rankings
- Feeding America
- Healthy Communities Institute
- National Cancer Institute
- National Center for Education Statistics
- National Environmental Public Health Tracking Network
- Ohio Department of Education
- Ohio Department of Health, Infectious Diseases
- Ohio Department of Health, Vital Statistics

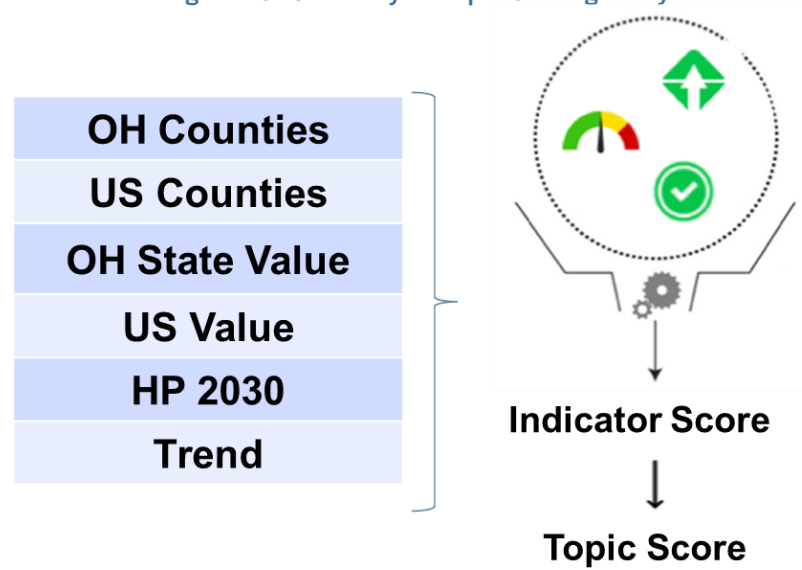
- Ohio Department of Public Safety, Office of Criminal Justice Services
- Ohio Public Health Information Warehouse
- Ohio Secretary of State
- U.S. Bureau of Labor Statistics
- U.S. Census - County Business Patterns
- U.S. Department of Agriculture - Food Environment Atlas
- U.S. Environmental Protection Agency
- United For ALICE

Secondary data used for this assessment were collected and analyzed from HCI's community indicator database. This database, maintained by researchers and analysts at HCI, includes 300 community indicators from at least 25 state and national data sources. HCI carefully evaluates sources based on the following three criteria: the source has a validated methodology for data collection and analysis; the source has scheduled, regular publication of findings; and the source has data values for small geographic areas or populations.

Secondary Data Scoring

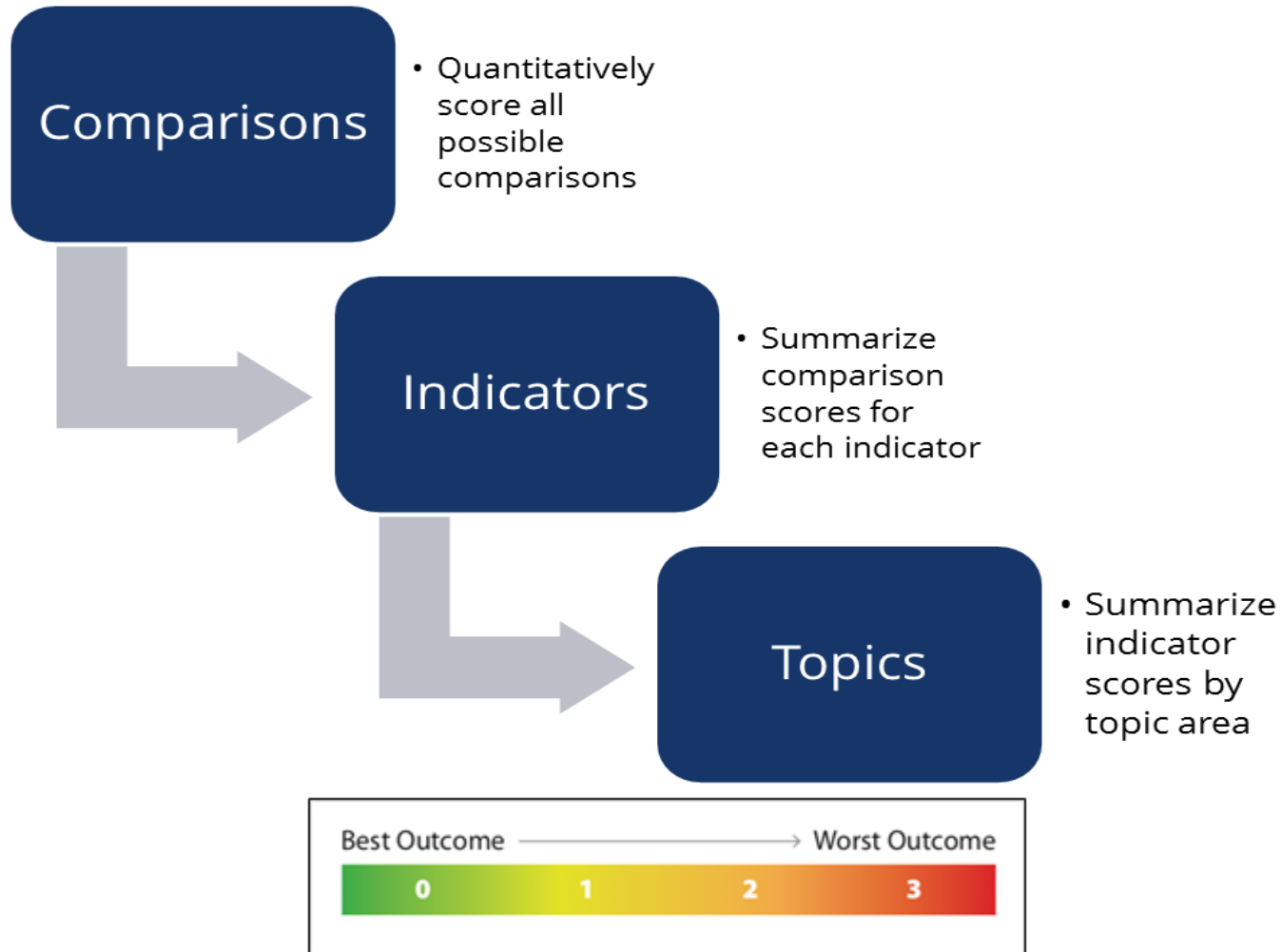
HCI's Data Scoring Tool (Figure 29) was used to systematically summarize multiple comparisons in order to rank indicators based on highest need. This analysis was completed at the county level. For each indicator, the community value was compared to a distribution of Ohio and US counties, state and national values, Healthy People 2030, and significant trends were noted. These comparison scores range from 0-3, where 0 indicates the best outcome and 3 the worst. Availability of each type of comparison varies by indicator and is dependent upon the data source, comparability with data collected for other communities and changes in methodology over time. The comparison scores were summarized for each indicator, and indicators were then grouped into topic areas for a systematic ranking of community health needs.

Figure 29: Summary of Topic Scoring Analysis



Secondary Data Scoring

Data scoring is done in three stages:



Each indicator available is assigned a score based on its comparison to other communities, whether health targets have been met, and the trend of the indicator value over time. These comparison scores range from 0-3, where 0 indicates the best

outcome and 3 the worst. Availability of each type of comparison varies by indicator and is dependent upon the data source, comparability with data collected for other communities and changes in methodology over time.

Indicators are categorized into topic areas and each topic area receives a score. Indicators may be categorized in more than one topic area. Topic scores are determined by the comparisons of all indicators within the topic.

This process was completed separately for the two counties within the Cleveland Clinic Children's Hospital for Rehabilitation Community: Cuyahoga and Lake counties. To calculate the overall highest needs topic area scores, an average was taken for each topic area across the two counties. Each county's values were weighted the same. For more details about topics scores and the average score for the Cleveland Clinic Children's Hospital for Rehabilitation Community, see Appendix C.

Comparison to a Distribution of County Values: Within State and Nation

For ease of interpretation and analysis, indicator data on the Community Dashboard is visually represented as a green-yellow-red gauge showing how the community is faring against a distribution of counties in the state or the United States. A distribution is created by taking all county values within the state or nation, ordering them from low to high, and dividing them into three groups (green, yellow, red) based on their order. Indicators with the poorest comparisons ("in the red") scored high, whereas indicators with good comparisons ("in the green") scored low.

Comparison to Values: State, National, and Targets

Each county is compared to the state value, the national value, and target values. Target values include the nation-wide Healthy People 2030 (HP2030) goals. Healthy People 2030 goals are national objectives for improving the health of the nation set by the Department of Health and Human Services' Healthy People Initiative. For all value comparisons, the scoring depends on whether the county value is better or worse than the comparison value, as well as how close the county value is to the target value.

Trend over Time

The Mann-Kendall statistical test for trend was used to assess whether the county value is increasing over time or decreasing over time, and whether the trend is statistically significant. The trend comparison uses the four most recent comparable values for the county, and statistical significance is determined at the 90% confidence level. For each indicator with values available for four time periods, scoring was determined by direction of the trend and statistical significance.

Missing Values

Indicator scores are calculated using the comparison scores, availability of which depends on the data source. If the comparison type is possible for an adequate proportion of indicators on the community dashboard, it will be included in the indicator score. After exclusion of comparison types with inadequate availability, all missing comparisons are substituted with a neutral score for the purposes of calculating the indicator's weighted average. When information is unknown due to lack of comparable data, the neutral value assumes that the missing comparison score is neither good nor bad.

Indicator Scoring

Indicator scores are calculated as a weighted average of all included comparison scores. If none of the included comparison types are possible for an indicator, no score is calculated, and the indicator is excluded from the data scoring results. A full list of indicators and their scores can be seen in Appendix C.

Topic Scoring

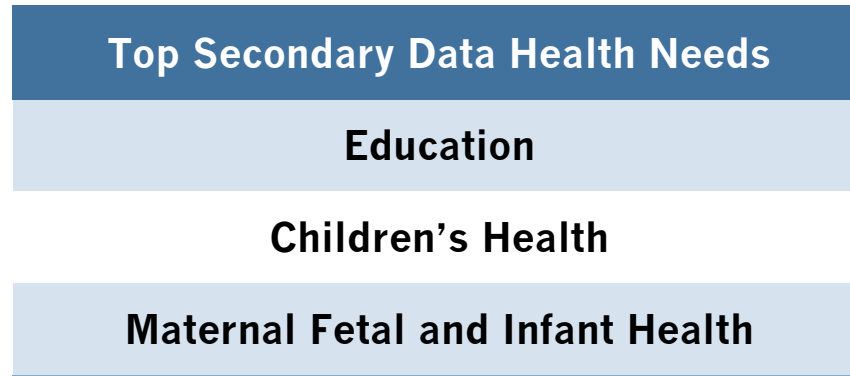
Indicator scores are averaged by topic area to calculate topic scores. Each indicator may be included in up to three topic areas if appropriate. Resulting scores range from 0-3, where a higher score indicates a greater level of need as evidenced by the data. A topic score is only calculated if it includes at least three indicators.

Examples of the health and quality of life topic areas available through this analysis are described as follows:

Quality of Life		Health
Community	Adolescent Health	Older Adults
Economy	Alcohol & Drug Use	Oral Health
Education	Cancer	Other Conditions
Environmental Health	Children’s Health	Prevention & Safety
	Diabetes	Physical Activity
	Health Care Access and Quality	Respiratory Diseases
	Heart Disease & Stroke	Sexually Transmitted Infections
	Immunization & Infectious Diseases	Tobacco Use
	Maternal, Fetal & Infant Health	Women’s Health
	Medications & Prescriptions	Wellness & Lifestyle
	Mental Health & Mental Disorders	Weight Status
	Nutrition & Healthy Eating	

Table 2 shows the health and quality of life topic scoring results for the Cleveland Clinic Children’s Hospital for Rehabilitation Community, ranked in order of highest need. Education scored as the poorest performing topic area with a score of 1.55, followed by Children’s Health with a score of 1.46. Topics that received a score of 1.50 or higher were considered a significant health need. One topic (Education) scored at or above the threshold. Topic areas with fewer than three indicators were considered a data gap.

Table 2: Top Secondary Data Health Needs



Index of Disparity

An important part of the CHNA process is to identify health disparities, the needs of vulnerable populations and unmet health needs or gaps in services. There were several ways in which subpopulation disparities were examined by county. For secondary data health indicators, the Index of Disparity tool was utilized to see if there were large, negative, and concerning differences in indicator values between each subgroup data value and the overall county value. The Index of Disparity was run for each county, and the indicators with the highest race or ethnicity index value were found.

Health Equity Index

Every community can be described by various social and economic factors that can contribute to disparities in health outcomes. Conduent HCI's Health Equity Index (formerly SocioNeeds Index) considers validated indicators related to income, employment, education, and household environment to identify areas at highest risk for experiencing health inequities.

How is the index value calculated?

The national index value (ranging from 0 to 100) is calculated for each zip code, census tract, and county in the U.S. Communities with the highest index values are estimated to have the highest socioeconomic needs correlated with preventable hospitalizations and premature death.

What do the ranks and colors mean?

Ranks and colors help to identify the relative level of need within a community or service area. The national index value for each location is compared to all other similar locations within the community area to assign a relative rank (from 1 to 5) locally. These ranks are used to color the map and chart for the Health Equity Index, with darker coloring associated with higher relative need.

Food Insecurity Index

Every community can be described by various health, social, and economic factors that can contribute to disparities in outcomes and opportunities to thrive. Conduent HCI's Food Insecurity Index considers validated indicators related to income, household environment and well-being to identify areas at highest risk for experiencing food insecurity.

How is the index value calculated?

The national index value (ranging from 0 to 100) is calculated for each zip code, census tract, and county in the U.S. Communities with the highest index values are estimated to have the highest food insecurity, which is correlated with household and community measures of food-related financial stress such as Medicaid and SNAP enrollment.

What do the ranks and colors mean?

Ranks and colors help to identify the relative level of need within a community or service area. The national index value for each location is compared to all other similar locations within the community area to assign a relative rank (from 1 to 5) locally. These ranks are used to color the map and chart for the Food Insecurity Index, with darker coloring associated with higher relative need.

Mental Health Index

Every community can be described by various health, social, and economic factors that can contribute to disparities in mental health outcomes. Conduent HCI's Mental Health Index considers validated indicators related to access to care, physical health status, transportation, employment and household environment to identify areas at highest risk for experiencing poor mental health.

How is the index value calculated?

The national index value (ranging from 0 to 100) is calculated for each zip code, census tract, and county in the U.S. Communities with the highest index values are estimated to have the highest socioeconomic and health needs correlated with self-reported poor mental health.

What do the ranks and colors mean?

Ranks and colors help to identify the relative level of need within a community or service area. The national index value for each location is compared to all other similar locations within the community area to assign a relative rank (from 1 to 5) locally. These ranks are used to color the map and chart for the Mental Health Index, with darker coloring associated with higher relative need.

Table 3 below lists each zip code within the Cleveland Clinic Children's Hospital for Rehabilitation Community and their respective HEI, FII, and MHI values.

Table 3: HEI, FII and MHI Values for Zip Codes within the Cleveland Clinic Children’s Hospital for Rehabilitation Community

Zip Code	HEI Value	FII Value	MHI Value
44022	1.1	2	38.9
44060	17.3	25	61.9
44070	25	25.1	64.7
44077	28.1	40.3	73.6
44092	32.1	45.4	75.2
44094	17	27.1	70.3
44095	42.7	43.5	75
44102	96.7	96.6	98.3
44103	99.3	98.3	100
44104	99.9	99.8	100
44105	98.1	98.2	99.8
44106	88.5	72.4	98.5
44107	35.3	50.8	77
44108	98.8	97.6	100
44109	95.6	95.7	97.4
44110	98.6	98.4	99.9
44111	85.6	88.1	95.6
44112	96.6	97.6	99.9
44113	85	65.8	95.8
44114	96.6	84.1	94
44115	99.8	99.4	99.6
44116	6.4	15.2	61.1
44117	80	88	99.2
44118	19.8	41.4	80.5
44119	85.3	86	97.2
44120	84	88.4	99.2
44121	49.6	77.5	92.2
44122	7.8	24.1	87.9
44123	79.4	89.4	98.3
44124	13	18.5	80.3
44125	70.2	81.3	94.5
44126	20.8	26.2	62
44127	99.8	99.2	99.5
44128	92.8	96.1	99.7

44130	36.6	45.8	81.6
44131	10.8	4.9	52.3
44132	81.2	91.6	98.2
44133	14.5	20.6	49.9
44135	92.7	91.1	97.4
44136	10.7	12.2	55.7
44137	82.8	86.2	97.7
44142	54	43	85.1
44143	20	25.4	89
44144	71	79.5	91.8
44145	7.8	10.8	62.8
44149	6.1	5.4	31.4

Data Considerations

Several limitations of data should be considered when reviewing the findings presented in this report. Although the topics by which data are organized cover a wide range of health and health-related areas, data availability varies by health topic. Some topics contain a robust set of secondary data indicators, while others may have a limited number of indicators or limited subpopulations covered by those specific indicators.

Data scores represent the relative community health need according to the secondary data for each topic and should not be considered a comprehensive result on their own. In addition, these scores reflect the secondary data results for the population as a whole and do not represent the health or socioeconomic need that is much greater for some subpopulations. Moreover, many of the secondary data indicators included in the findings are collected by survey, and though specific methods are used to best represent the population at large, these measures are subject to instability, especially for smaller populations. The Index of Disparity is also limited by data availability, where indicator data varies based on the population groups and service areas being analyzed.

Race or Ethnic and Special Population Groupings

The secondary data presented in this report derive from multiple sources, which may present race and ethnicity data using dissimilar nomenclature. For consistency with data sources throughout the report, subpopulation data may use different terms to describe the same or similar groups of community members.

Zip Codes and Zip Code Tabulation Areas

This report presents both Zip Code and Zip Code Tabulation Area (ZCTA) data. Zip Codes, which were created by the U.S. Postal Service to improve mail delivery service, are not reported in this assessment as they may change, include P.O. boxes or

cover large unpopulated areas. This assessment cover ZCTAs or Zip Code Tabulation Areas which were created by the U.S. Census Bureau and are generalized representations of Zip Codes that have been assigned to census blocks.

Demographics for this report are sourced from the United States Census Bureau, which presents ZCTA estimates. Tables and figures in the Demographics section of this report reference Zip Codes in title (for purposes of familiarity) but show values of ZCTAs. Data from other sources are labeled as such.

Primary Data Collection & Analysis

Primary data used in this assessment consisted of key stakeholder interviews. These findings expanded upon the information gathered from the secondary data analysis.

Key Stakeholder Interviews Methodology and Results

The project team also captured detailed transcripts of the key stakeholder interviews. Table 4 describes the key stakeholder organizations contributing to the primary data collection process.

Table 4: Cleveland Clinic Children’s Hospital for Rehabilitation Key Stakeholder Organizations

Key Stakeholder and Community Organizations	
<ul style="list-style-type: none"> • City of Cleveland Department of Public Health • Cuyahoga County Board of Health 	<ul style="list-style-type: none"> • Neighborhood Family Practice • Birthing Beautiful Communities • Lead Safe Cleveland Coalition • Better Health Partnerships • NAMI Greater Cleveland • Asian Services in Action (ASIA) • Greater Cleveland Food Bank • The Gathering Place

	<ul style="list-style-type: none"> • Cuyahoga Metropolitan Housing Authority • Esperanza • The Centers for Families and Children
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The transcripts were analyzed using the qualitative analysis program Dedoose 2®. Text was coded using a pre-designed codebook-organized by themes and analyzed for significant observations. Figure 30 shows key findings from community stakeholder interviews specific to the Cleveland Clinic Children’s Hospital for Rehabilitation Community.

Figure 30: Key Stakeholder Findings



Findings from key stakeholder interviews were combined with findings from secondary data and incorporated into the Data Synthesis and Prioritized Health Needs.

Appendix B: Impact Evaluation

The CHNA process should be viewed as a three-year cycle to evaluate the impact of actions taken to address priority areas. This step affirms organizations focus and target efforts during the next CHNA cycle. The top health priorities for the Cleveland Clinic Children's Hospital for Rehabilitation Community from the 2019 CHNA were:

- Access to Affordable Healthcare
- Addiction and Mental Health
- Chronic Disease Prevention and Management
- Infant Mortality
- Socioeconomic Concerns
- Medical Research and Health Professions Education

Implementation strategies for these health topics shifted in response to the COVID-19 pandemic. Innovative strategies were adopted to continue building capacity for addressing the community health needs.

Actions Taken Since Previous CHNA

Cleveland Clinic Children's Hospital for Rehabilitation's (CCCHR) previous Implementation Strategy Report (ISR) outlined a plan for addressing the following priorities identified in the 2019 CHNA: Addiction and Mental Health, Chronic Disease Prevention and Management, Infant Mortality, Socioeconomic Concerns, Specialty Care: Autism Spectrum Disorder, Access to Affordable Health Care, Medical Research and Health Professions Education.

The ISR was conducted before the onset of COVID 19, and therefore, does not reflect the pandemic's impact which dramatically affected community and hospital services. Many of our hospital services were paused or deferred as we navigated the emergent COVID 19 landscape. Caring for our community is essential, and part of that is sharing accurate, up-to-date information on health-related topics with our community. We provided COVID 19 education, vaccine distribution and collaborative services with government, health departments and community based organizations to keep our communities safe. As we continue to serve our communities we are committed to addressing the needs identified in the previous ISR.

Cleveland Clinic 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.

The table below describes the strategies, modifications made to the action plans, and highlighted impacts for each health priority area.

Addiction and Mental Health

Actions and Highlighted Impacts:

- a. In addition to direct patient care, Cleveland Clinic's Opioid Awareness Center, provided intervention and treatment for substance abuse disorders to Cleveland Clinic caregivers and their family members.
 - Opioid misuse continues to be a public health emergency, contributing to over 50,000 U.S. deaths a year. About 40% of those deaths involve prescription opioids. Our comprehensive efforts to improve opioid prescribing have yielded reductions in these prescriptions by our providers for two years running, including a large improvement in 2021.
- b. Through the Opioid Awareness Center, participated in the Northeast Ohio Hospital Opioid Consortium and Cuyahoga County Opiate Task Force, and community-based classes and presentations. Cleveland Clinic continues to provide preventative education and share evidence-based practices.
- c. Cleveland Clinic continues to provide education and resources to caregivers, patients, and their families in order to prevent and address mental health issues.
- d. Through a Pain Management program, the hospitals made recommendations to patients for alternative pain management strategies.
- e. Children's treated neonatal abstinence syndrome (NAS) in infants exposed to substances before birth.

Chronic Disease Prevention and Management

Actions and Highlighted Impacts:

- a. Through Cleveland Clinic's Children's we provided health promotion messaging, health education, and outreach related to developmental issues, rehabilitation and congenital conditions.
- b. Participated in Be Well Kids programs promoting healthy lifestyles.
- c. Continued to offer nutritional counseling, occupational therapy, physical therapy, psychology, recreational therapy, wheel chair clinics and speech/language therapy in outpatient settings to children who require focused medical and developmental attention.

Infant Mortality

Actions and Highlighted Impacts:

- a. Cleveland Clinic provided expanded evidence-based health education to expecting mothers and families
 - Cleveland Clinic provided community education in efforts to support pregnant persons with resources and best practices to reduce infant and maternal health and have a successful pregnancy.
 - Fairview Hospital, Hillcrest Hospital and Akron General Medical Center provided Childbirth Education and Lactation Services, in-person and virtually, to over 10,000 families in 2020 and over 12,000 families in 2021.
 - We established a Pregnancy Early Assessment Clinic (PEAC) to focus on early pregnancy complications. As one of the few clinics like it in the U.S., the PEAC ensures newly pregnant individuals access the care they need, when they need it.

Socioeconomic Concerns

Actions and Highlighted Impacts:

- a. Cleveland Clinic implemented a system-wide social determinants screening tool for adult patients (adult parent and guardians of CCCHR patients), to identify needs such as alcohol abuse, depression, financial strain, food insecurity, intimate partner violence, and stress.
- b. We implemented a common community referral data platform to coordinate services and ensure optimal communication.
 - Cleveland Clinic collaborated with Unite Ohio to build a coordinated care network of health and social service providers. Cleveland Clinic went live on the platform on July 2021 and has sent nearly 2,000 referrals with a gap closure of 44%.
- c. Cleveland Clinic piloted patient navigation programming within a partnership pathway HUB model using community health workers and/or the co-location of community organizations with hospital facilities.

Specialty Care: Autism Spectrum Disorder

Actions and Highlighted Impacts:

The prevalence of Autism Spectrum Disorder (ASD) is increasing in CCCHR communities. Children with ASD frequently suffer from other developmental, psychiatric, neurological, chromosomal, and genetic disorders

and have higher annual medical costs than children without ASD. Cleveland Clinic Children's Hospital for Rehabilitation Campus, is dedicated to treatment, education, and research for children, adolescents, young adults and families dealing with autism spectrum disorders. The Center for Autism continues to offer outpatient diagnostic services and treatment based on applied behavioral analysis. Initiatives included:

- a. Through the Center for Autism, offered a continuum of services including speech therapy to increase access to coordinated behavioral health services, increasing the percentage of children who achieve the highest level of functioning.
- b. Through the Lerner School for Autism, a chartered, non-public day school for students, diagnosis – 21 years of age, provided education and treatment for children with ASD, increasing the percentage of children who achieve the highest level of functioning, decreasing the level of specialized educational placement required by students.
- c. Provided technical assistance and consulting to Autism programs nationwide and expanded regional outpatient sites

Access to Affordable Health Care

Actions and Highlighted Impacts:

- a. Patient Financial Advocates assisted patients in evaluating eligibility for financial assistance or public health insurance programs.
 - Cleveland Clinic provided medically necessary services to all patients regardless of race, color, creed, gender, country of national origin, or ability to pay. The hospital has a financial assistance policy that is among the most generous in the region that covers both hospital services and physician services provided by physicians employed by the Cleveland Clinic. In 2021, Cleveland Clinic health system provided over \$178 million in financial assistance to its communities in Ohio, Florida, and Nevada.
- b. Provided financial assistance for Autism Center, Down Syndrome Clinic and Helping Hands services. Included tuition, transportation, parking vouchers eye glasses, stroller/wheelchair, ventilator, food, gas, utilities, housing and other economic issues.
- c. Utilizing medically secure online and mobile platforms, connect patients with Cleveland Clinic providers for telehealth and virtual visits
 - In 2021, Cleveland Clinic provided 841,000 virtual visits.

Medical Research and Health Professions Education

Actions and Highlighted Impacts:

- a. Through medical research, advanced clinical techniques, devices and treatment protocols in the areas of autism, cancer, heart disease, diabetes, and others.
 - Research into diseases and potential cures is an investment in people's long-term health.
 - In 2020, COVID-19 highlighted the significance of research in community health. Cleveland Clinic research findings increased knowledge about the virus and how best to respond to it. Our researchers developed the world's first COVID-19 risk-prediction model, enabling healthcare providers to calculate an individual patient's likelihood of testing positive for infection as well as their probable outcome from the disease.
 - For 2021, Cleveland Clinic's community benefit in support of research was \$101 million.
- b. Sponsored high-quality medical education training programs for physicians, nurses, and allied health professionals via Graduate Medical Education programs, and internships and residencies.
 - Cleveland Clinic provided a wide range of high-quality medical education that includes accredited training programs for residents, physicians, nurses and allied health professionals. By educating medical professionals, we ensure that the public receives the highest level of medical care and will have access to highly trained health professionals in the future. For 2021, Cleveland Clinic's community benefit in support of education was \$322 million.
- c. In partnership with Case Western Reserve University, provided over 2,200 students with interdisciplinary skills at the Health Education Campus.

Community Feedback

Community Health Needs Assessment reports from 2019 were published on the Cleveland Clinic Children's Hospital for Rehabilitation website. No community feedback has been received as of the drafting of this report. For more information regarding Cleveland Clinic Community Health Needs Assessments and Implementation Strategy reports, please visit www.clevelandclinic.org/CHNAreports or contact CHNA@ccf.org.

Appendix C: Secondary Data Scoring Tables

Table 5: Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition

Zip code	Postal Name
44022	Chagrin falls
44060	Mentor
44070	North Olmsted
44077	Painesville
44092	Wickliffe
44094	Willoughby
44095	Eastlake
44102	Cleveland
44103	Cleveland
44104	Cleveland
44105	Cleveland
44106	Cleveland
44107	Lakewood
44108	Cleveland
44109	Cleveland
44110	Cleveland
44111	Cleveland
44112	Cleveland
44113	Cleveland
44114	Cleveland
44115	Cleveland
44116	Rocky River
44117	Euclid
44118	Cleveland
44119	Cleveland
44120	Cleveland

44121	Cleveland
44122	Beachwood
44123	Euclid
44124	Cleveland
44125	Cleveland
44126	Cleveland
44127	Cleveland
44128	Cleveland
44130	Cleveland
44131	Independence
44132	Euclid
44133	North Royalton
44135	Cleveland
44136	Strongsville
44137	Maple Heights
44142	Brook Park
44143	Cleveland
44144	Cleveland
44145	Westlake
44149	Strongsville

Table 6: Population aged <18years Estimates for Each Zip Code

Zip code	City	Population <18 years
44022	Chagrin falls	2748
44060	Mentor	10323
44070	North Olmsted	5787
44077	Painesville	13438
44092	Wickliffe	3191
44094	Willoughby	6143

44095	Eastlake	6022
44102	Cleveland	10984
44103	Cleveland	3462
44104	Cleveland	7611
44105	Cleveland	8750
44106	Cleveland	4409
44107	Lakewood	9601
44108	Cleveland	5418
44109	Cleveland	8964
44110	Cleveland	4356
44111	Cleveland	8378
44112	Cleveland	4470
44113	Cleveland	3604
44114	Cleveland	918
44115	Cleveland	3323
44116	Rocky River	3754
44117	Euclid	1583
44118	Cleveland	9205
44119	Cleveland	2168
44120	Cleveland	7673
44121	Cleveland	6500
44122	Beachwood	6179
44123	Euclid	3532
44124	Cleveland	6782
44125	Cleveland	5658
44126	Cleveland	3258
44127	Cleveland	1329
44128	Cleveland	5741
44130	Cleveland	8617
44131	Independence	3141

44132	Euclid	3294
44133	North Royalton	4986
44135	Cleveland	5939
44136	Strongsville	4462
44137	Maple Heights	4548
44142	Brook Park	3019
44143	Cleveland	3847
44144	Cleveland	3742
44145	Westlake	5792
44149	Strongsville	3766

Table 7: Percentage of Families with Children Living Below Poverty Level for Each Zip Code

Zip Code	City	Families with Children Below Poverty Level (%)
44022	Chagrin falls	0.8%
44060	Mentor	2.7%
44070	North Olmsted	4.7%
44077	Painesville	5.4%
44092	Wickliffe	3.0%
44094	Willoughby	2.8%
44095	Eastlake	4.9%
44103	Cleveland	21.9%
44104	Cleveland	24.3%
44105	Cleveland	41.0%
44106	Cleveland	20.9%
44107	Lakewood	16.5%
44108	Cleveland	6.6%
44109	Cleveland	18.9%

44110	Cleveland	16.7%
44111	Cleveland	20.1%
44112	Cleveland	11.9%
44113	Cleveland	19.0%
44114	Cleveland	19.4%
44115	Cleveland	13.4%
44116	Rocky River	50.4%
44117	Euclid	1.7%
44118	Cleveland	7.7%
44119	Cleveland	6.1%
44120	Cleveland	10.9%
44121	Cleveland	11.8%
44122	Beachwood	8.1%
44123	Euclid	3.5%
44124	Cleveland	13.1%
44125	Cleveland	2.0%
44126	Cleveland	8.8%
44127	Cleveland	3.9%
44128	Cleveland	35.0%
44130	Cleveland	14.0%
44131	Independence	4.4%
44132	Euclid	0.8%
44133	North Royalton	14.6%
44135	Cleveland	1.4%
44136	Strongsville	17.3%
44137	Maple Heights	2.3%
44142	Brook Park	12.6%
44143	Cleveland	5.0%
44144	Cleveland	3.0%
44145	Westlake	7.9%

44149	Strongsville	2.3%
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Table 8: Secondary Data Results by Health Topic—Cuyahoga and Lake Counties

HEALTH TOPICS	CUYAHOGA	LAKE	AVG
Children's Health	1.72	1.21	1.46
Maternal, Fetal & Infant Health	1.56	1.06	1.31
QUALITY OF LIFE TOPICS	CUYAHOGA	LAKE	AVG
Education	1.55	1.55	1.55

Secondary Data Scoring Indicators of Concern

From the secondary data scoring results, Children’s Health came up as area of concern. Further analysis was done to identify specific indicators of concern. Those indicators with high data scores (scoring at or above the threshold of 1.50) were categorized as indicators of concern. For each indicator, there is an indicator score, county value, state value, and national value (where available). Additionally, there are state and national county distributions for comparison along with indicator trend information. The legend (Figure 31) on the right shows how to interpret the distribution gauges and trend icons used in the data scoring results for each health topic by county.

Figure 31. Indicators of Concern Legend










	If the needle is in the red, the county value is in the worst 25% (or worst quartile) of counties in the state or nation.
	If the needle is in the green, the county value is in the best 50% of counties in the state or nation.
	The indicator is trending down, significantly, and this is not the ideal direction.
	The indicator is trending down and this is not the ideal direction.
	The indicator is trending up, significantly, and this is not the ideal direction.
	The indicator is trending up and this is not the ideal direction.
	The indicator is trending down, significantly, and this is the ideal direction .
	The indicator is trending down and this is the ideal direction.
	The indicator is trending up, significantly, and this is the ideal direction.
	The indicator is trending up and this is the ideal direction.





Table 9. Data Scoring Results for Children’s Health for the Cleveland Clinic Children’s Hospital for Rehabilitation Community by County

Table 9a. Cuyahoga County

SCORE	CHILDREN’S HEALTH	Cuyahoga County	HP2030	Ohio	U.S.	Ohio Counties	U.S. Counties	Trend
2.17	Child Food Insecurity Rate	20.7		17.4	14.6			...
2.08	Projected Child Food Insecurity Rate	23.4		18.5				...
1.94	Substantiated Child Abuse Rate	10	8.7	6.8			...	
1.86	Blood Lead Levels in Children (>=10 micrograms per deciliter)	1.7		0.5			...	
1.58	Blood Lead Levels in Children (>=5 micrograms per deciliter)	5.8		1.9			...	
1.50	Children with Low Access to a Grocery Store	4.3						...

HP2030 - Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. HP2030 represents a Healthy People target to be met by 2030.

Table 9b. Lake County

SCORE	CHILDREN'S HEALTH	Lake County	HP2030	Ohio	U.S.	Ohio Counties	U.S. Counties	Trend
2.00	Children with Low Access to a Grocery Store	8						...
1.83	Consumer Expenditures: Childcare	315		301.6	368.2			...

HP2030 - Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. HP2030 represents a Healthy People target to be met by 2030.

Table 10: Secondary Data Scoring Indicators of Concern: Prioritized Health Topic #2: Maternal, Fetal and Infant Health by County



Maternal, Fetal and Infant Health topic indicators shows concerning health needs in Cuyahoga and Lake County. All topic areas in this group demonstrate need per as they each scored above 1.5. Further analysis was done to identify specific indicators of concern which include indicators with high data scores (scoring at or above the threshold of 1.50) and seen in Table 10.

Table 10a. Cuyahoga County

SCORE	MATERNAL, FETAL & INFANT HEALTH	Cuyahoga County	HP2030	Ohio	U.S.	Ohio Counties	U.S. Counties	Trend
2.11	Babies with Low Birth Weight	10.8		8.5	8.2		...	
2.11	Babies with Very Low Birth Weight	1.7		1.4	1.3		...	
1.78	Infant Mortality Rate	8.6	5	6.9		
1.67	Preterm Births	11.4	9.4	10.3			...	
1.58	Teen Pregnancy Rate	23.9		19.5			...	
1.53	Teen Birth Rate: 15-17	7.2		6.8			...	

HP2030 - Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. HP2030 represents a Healthy People target to be met by 2030.

Table 10b. Lake County









SCORE	MATERNAL, FETAL & INFANT HEALTH	Lake County	HP2030	Ohio	U.S.	Ohio Counties	U.S. Counties	Trend
1.83	Consumer Expenditures: Childcare	315		301.6	368.2			...

HP2030 - Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. HP2030 represents a Healthy People target to be met by 2030.

Table 11: Secondary Data Scoring Indicators of Concern: Prioritized Health Topic #3: Education

Education ranked as top concern all quality-of-life topic areas. All topic areas in this group demonstrate need per as they each scored above 1.5. Further analysis was done to identify specific indicators of concern which include indicators with high data scores (scoring at or above the threshold of 1.50) and seen in Table 11.

Table 11a. Cuyahoga County

SCORE	EDUCATION	Cuyahoga County	HP2030	Ohio	U.S.	Ohio Counties	U.S. Counties	Trend
1.86	4th Grade Students Proficient in English/Language Arts	46.6		63.3			...	
1.86	4th Grade Students Proficient in Math	52.5		74.3			...	
1.86	8th Grade Students Proficient in English/Language Arts	43.1		58.3			...	
1.86	8th Grade Students Proficient in Math	39.5		57.3			...	

HP2030 - Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. HP2030 represents a Healthy People target to be met by 2030.

Table 11b. Lake County

SCORE	EDUCATION	Lake County	HP2030	Ohio	U.S.	Ohio Counties	U.S. Counties	Trend
2.14	8th Grade Students Proficient in Math	26.8		57.3			...	
2.00	8th Grade Students Proficient in English/Language Arts	21.7		58.3		
1.86	Student-to-Teacher Ratio	18.5						
1.83	Consumer Expenditures: Childcare	315		301.6	368.2			...
1.83	Consumer Expenditures: Education	1212.2		1200.4	1492.4			...

Table 12: Secondary Data Scoring Results by Health Topic for The Cleveland Clinic Children’s Hospital for Rehabilitation Community

12a. Cuyahoga County

SCORE	CHILDREN'S HEALTH	UNITS	CUYAHOGA COUNTY	HP2030	Ohio	U.S.	MEASUREMENT PERIOD	Source
2.17	Child Food Insecurity Rate	<i>percent</i>	20.7		17.4	14.6	2019	10
2.08	Projected Child Food Insecurity Rate	<i>percent</i>	23.4		18.5		2021	10
1.94	Substantiated Child Abuse Rate	<i>cases/ 1,000 children</i>	10	8.7	6.8		2020	3
1.86	Blood Lead Levels in Children (>=10 micrograms per deciliter)	<i>percent</i>	1.7		0.5		2020	19
1.58	Blood Lead Levels in Children (>=5 micrograms per deciliter)	<i>percent</i>	5.8		1.9		2020	19
1.50	Children with Low Access to a Grocery Store	<i>percent</i>	4.3				2015	23
1.33	Children with Health Insurance	<i>percent</i>	97.1		95.2	94.3	2019	1
1.33	Consumer Expenditures: Childcare	<i>average dollar amount per consumer unit</i>	272.1		301.6	368.2	2021	7

SCORE	EDUCATION	UNITS	CUYAHOGA COUNTY	HP2030	Ohio	U.S.	MEASUREMENT PERIOD	Source
1.86	4th Grade Students Proficient in English/Language Arts	<i>percent</i>	46.6		63.3		2018-2019	15
1.86	4th Grade Students Proficient in Math	<i>percent</i>	52.5		74.3		2018-2019	15
1.86	8th Grade Students Proficient in English/Language Arts	<i>percent</i>	43.1		58.3		2018-2019	15
1.86	8th Grade Students Proficient in Math	<i>percent</i>	39.5		57.3		2018-2019	15
1.33	Consumer Expenditures: Childcare	<i>average dollar amount per consumer unit</i>	272.1		301.6	368.2	2021	7
1.67	Consumer Expenditures: Education	<i>average dollar amount per consumer unit</i>	1196.7		1200.4	1492.4	2021	7
1.44	High School Graduation	<i>percent</i>	89.5	90.7	92		2019-2020	15
1.81	Student-to-Teacher Ratio	<i>students/teacher</i>	16.5				2019-2020	13

SCORE	MATERNAL, FETAL & INFANT HEALTH	UNITS	CUYAHOGA COUNTY	HP2030	Ohio	U.S.	MEASUREMENT PERIOD	Source
2.11	Babies with Low Birth Weight	<i>percent</i>	10.8		8.5	8.2	2020	17
2.11	Babies with Very Low Birth Weight	<i>percent</i>	1.7		1.4	1.3	2020	17
1.33	Consumer Expenditures: Childcare	<i>average dollar amount per consumer unit</i>	272.1		301.6	368.2	2021	7
1.78	Infant Mortality Rate	<i>deaths/ 1,000 live births</i>	8.6	5	6.9		2019	17
1.00	Mothers who Received Early Prenatal Care	<i>percent</i>	72.4		68.9	76.1	2020	17
0.92	Mothers who Smoked During Pregnancy	<i>percent</i>	6.1	4.3	11.5	5.5	2020	17
1.67	Preterm Births	<i>percent</i>	11.4	9.4	10.3		2020	17
1.53	Teen Birth Rate: 15-17	<i>live births/ 1,000 females aged 15-17</i>	7.2		6.8		2020	17
1.58	Teen Pregnancy Rate	<i>pregnancies/ 1,000 females aged 15-17</i>	23.9		19.5		2016	17

Cuyahoga Data Sources

Key	Source Name
1	American Community Survey
2	American Lung Association
3	Annie E. Casey Foundation
4	CDC - PLACES
5	Centers for Disease Control and Prevention
6	Centers for Medicare & Medicaid Services
7	Claritas Consumer Buying Power
8	Claritas Consumer Profiles
9	County Health Rankings
10	Feeding America
11	Healthy Communities Institute
12	National Cancer Institute
13	National Center for Education Statistics
14	National Environmental Public Health Tracking Network
15	Ohio Department of Education
16	Ohio Department of Health, Infectious Diseases
17	Ohio Department of Health, Vital Statistics
18	Ohio Department of Public Safety, Office of Criminal Justice Services
19	Ohio Public Health Information Warehouse
20	Ohio Secretary of State
21	U.S. Bureau of Labor Statistics
22	U.S. Census - County Business Patterns
23	U.S. Department of Agriculture - Food Environment Atlas
24	U.S. Environmental Protection Agency
25	United For ALICE

12b. Lake County

SCORE	CHILDREN'S HEALTH	UNITS	LAKE COUNTY	HP2030	Ohio	U.S.	MEASUREMENT PERIOD	Source
2.00	Children with Low Access to a Grocery Store	<i>percent</i>	8				2015	23
1.83	Consumer Expenditures: Childcare	<i>average dollar amount per consumer unit</i>	315		301.6	368.2	2021	7
1.33	Children with Health Insurance	<i>percent</i>	95.7		95.2	94.3	2019	1
1.14	Blood Lead Levels in Children (>=5 micrograms per deciliter)	<i>percent</i>	0.8		1.9		2020	19
1.03	Blood Lead Levels in Children (>=10 micrograms per deciliter)	<i>percent</i>	0.2		0.5		2020	19
0.92	Substantiated Child Abuse Rate	<i>cases/ 1,000 children</i>	3.9	8.7	6.8		2020	3
0.75	Projected Child Food Insecurity Rate	<i>percent</i>	14.8		18.5		2021	10
0.67	Child Food Insecurity Rate	<i>percent</i>	13.4		17.4	14.6	2019	10

SCORE	EDUCATION	UNITS	LAKE COUNTY	HP2030	Ohio	U.S.	MEASUREMENT PERIOD	Source
2.14	8th Grade Students Proficient in Math	<i>percent</i>	26.8		57.3		2018-2019	15
2.00	8th Grade Students Proficient in English/Language Arts	<i>percent</i>	21.7		58.3		2018-2019	15
1.86	Student-to-Teacher Ratio	<i>students / teacher</i>	18.5				2019-2020	13
1.83	Consumer Expenditures: Childcare	<i>average dollar amount per consumer unit</i>	315		301.6	368.2	2021	7
1.83	Consumer Expenditures: Education	<i>average dollar amount per consumer unit</i>	1212.2		1200.4	1492.4	2021	7
1.36	4th Grade Students Proficient in Math	<i>percent</i>	75		74.3		2018-2019	15
1.19	People 25+ with a Bachelor's Degree or Higher	<i>percent</i>	27.4		28.3	32.1	2015-2019	1
1.17	High School Graduation	<i>percent</i>	93.7	90.7	92		2019-2020	15

0.58	4th Grade Students Proficient in English/Language Arts	<i>percent</i>	81.3		63.3		<i>2018-2019</i>	15
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SCORE	MATERNAL, FETAL & INFANT HEALTH	UNITS	LAKE COUNTY	HP2030	Ohio	U.S.	MEASUREMENT PERIOD	Source
1.83	Consumer Expenditures: Childcare	<i>average dollar amount per consumer unit</i>	315		301.6	368.2	<i>2021</i>	7
1.28	Mothers who Received Early Prenatal Care	<i>percent</i>	70.3		68.9	76.1	<i>2020</i>	17
1.19	Mothers who Smoked During Pregnancy	<i>percent</i>	9.6	4.3	11.5	5.5	<i>2020</i>	17
1.03	Teen Pregnancy Rate	<i>pregnancies/ 1,000 females aged 15-17</i>	16.9		19.5		<i>2016</i>	17
0.97	Preterm Births	<i>percent</i>	8.5	9.4	10.3		<i>2020</i>	17
0.86	Teen Birth Rate: 15-17	<i>live births/ 1,000 females aged 15-17</i>	1.4		6.8		<i>2020</i>	17
0.78	Babies with Low Birth Weight	<i>percent</i>	6.8		8.5	8.2	<i>2020</i>	17
0.78	Babies with Very Low Birth Weight	<i>percent</i>	1.1		1.4	1.3	<i>2020</i>	17
0.78	Infant Mortality Rate	<i>deaths/ 1,000 live births</i>	1.8	5	6.9		<i>2019</i>	17

Lake County Data Sources

Key	Data Source Name
1	American Community Survey
2	American Lung Association
3	Annie E. Casey Foundation
4	CDC - PLACES
5	Centers for Disease Control and Prevention
6	Centers for Medicare & Medicaid Services
7	Claritas Consumer Buying Power
8	Claritas Consumer Profiles
9	County Health Rankings
10	Feeding America
11	Healthy Communities Institute
12	National Cancer Institute
13	National Center for Education Statistics
14	National Environmental Public Health Tracking Network
15	Ohio Department of Education
16	Ohio Department of Health, Infectious Diseases
17	Ohio Department of Health, Vital Statistics
18	Ohio Department of Public Safety, Office of Criminal Justice Services
19	Ohio Public Health Information Warehouse
20	Ohio Secretary of State
21	U.S. Bureau of Labor Statistics
22	U.S. Census - County Business Patterns
23	U.S. Department of Agriculture - Food Environment Atlas
24	U.S. Environmental Protection Agency
25	United For ALICE

Appendix D: Community Input Assessment Tools

CCF identified key community stakeholders to provide vital perspectives and context around important community health issues. CCF and HCI worked to develop a questionnaire to determine what a community needs to be healthy, what barriers to health exist in the community, how COVID-19 has impacted health in the community and how the challenges identified might be addressed in the future. Below is the complete Key Stakeholder Interview Guide:

WELCOME: Cleveland Clinic *{hospital name}* is in the process of conducting our 2022 comprehensive Community Health Needs Assessment (CHNA) to understand and plan for the current and future health needs of our community. You have been invited to take part in this interview because of your experience working *{at organization}* in the community. During this interview, we will ask a series of questions related to health issues in your community. Our ultimate goal is to gain various perspectives on the major issues affecting the population that your organizations serves and how to improve health in your community. We hope to get through as many questions as possible and hear your perspective as much as time allows.

TRANSCRIPTION: For today's call we are using the transcription feature in MS Teams. This feature produces a live transcript and makes meetings more inclusive for those who are deaf, hard of hearing, or have different levels of language proficiency. Our primary purpose for using this feature is to assist with note taking.

CONFIDENTIALITY: For this conversation, I will invite you to share as much or little as you feel comfortable sharing. The results of this assessment will be made available to the public. Although we will take notes on your responses, your name will not be associated with any direct quotes. Your identity will be kept confidential, so please share your honest opinions.

FORMAT: We anticipate that this conversation will last ~45 minutes to an hour.

Section #1: Introduction

- What community, or geographic area, does your organization serve (or represent)?
 - How does your organization serve the community?

Section #2: Community Health and Well-being

- From your perspective, what does a community need to be healthy?
- What do you believe are the 2-3 most important issues that must be addressed to improve health and quality of life in your community?

Section #3: Barriers to Health

- What health disparities appear most prevalent in your community?
- What are the barriers or challenges to improving health in the community?
 - What makes some people healthy in the community while others experience poor health?
 - What particular parts of the community or geographic areas that are underserved or under-resourced?
 - What services are most difficult to access?
- What could be done to promote health equity?

Section #4: COVID-19

- How has COVID-19 impacted health in your community?
 - What were the most significant health concerns prior to the pandemic vs now?
 - What populations have been most affected by COVID-19?
- How has COVID-19 impacted access to care in the community?
 - What about access to mental health or substance use treatment in the community?
 - What about emergency and preventative care services?

Section #5: Addressing the Challenges & Solutions

- What are some possible solutions to the problems that we have discussed?
 - How can organizations such as hospitals, health departments, government, and community-based organizations work together to address some of the problems that have been mentioned?
- How can we make sure that community voices are heard when decisions are made that affect their community?
 - What would be the best way to communicate with community members about progress organizations are making to improve health and quality of life?
- What resources does your community have that can be used to improve community health?

Section #6: Conclusion

- Is there anything else that you think would be important for us to know as we conduct this community health needs assessment?

CLOSURE SCRIPT: Thank you again for taking time out of your busy day to share your experiences with us. We will include the key themes from today's discussion in our assessment. Please remember, your name will not be connected to any of the comments you made today. Please let us know if you have any questions or concerns about this.

Appendix E: Community Partners and Resources

This section identifies other facilities and resources available in the community served by Cleveland Clinic Children's Hospital for Rehabilitation that are available to address community health needs.

Federally Qualified Health Centers

Ohio's Association of Community Health Centers (OACHC) is a not-for-profit membership association representing Federally Qualified Health Centers (FQHCs).³¹ 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. OACHC represents Ohio's 57 Community Health Centers at 400 locations, including multiple mobile units. The following FQHC clinics and networks operate in the Cleveland Clinic Children's Hospital for Rehabilitation Community:

- Asian Services in Action, Inc.
- Care Alliance
- Health Source of Ohio
- MetroHealth Community Health Centers (MHCHC)
- Neighborhood Family Practice
- Northeast Ohio Neighborhood Health Services³²
- Signature Health, Inc.
- The Centers

Hospitals

In addition to several Cleveland Clinic hospitals in Northeast Ohio, the following is a list of other hospital facilities located in the Cleveland Clinic Children's Hospital for Rehabilitation Community:

- Grace Hospital
- MetroHealth Medical Centers (Multiple Locations)
- St. Vincent Charity Medical Center

³¹ Ohio Association of Community Health Centers, <https://www.ohiochc.org/page/178>

³² Data search August 15, 2022

- University Hospitals (Multiple Locations)

Other Community Resources

A wide range of agencies, coalitions, and organizations that provide health and social services is available in the region served by Cleveland Clinic Children's Rehabilitation. 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 F: Acknowledgements

Conduent Healthy Communities Institute (HCI) supported report preparation. HCI works with clients across the nation to drive community health outcomes by assessing needs, developing focused strategies, identifying appropriate intervention programs, establishing monitoring systems, and implementing performance evaluation processes. To learn more about Conduent HCI, please visit www.conduent.com/community-population-health.

HCI Authors for this report are listed below:

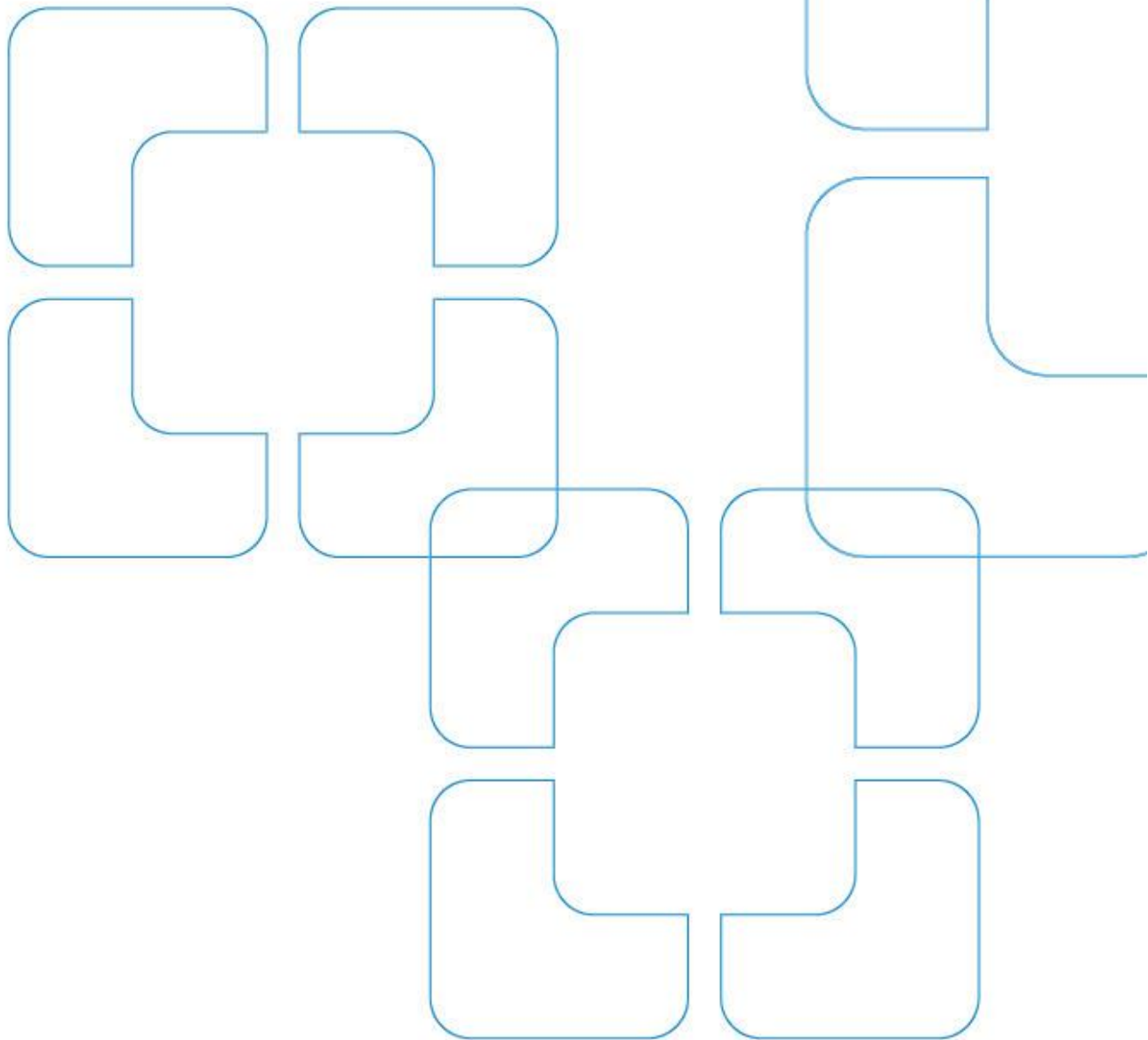
Sharri Morley, MPH, Public Health Consultant
Era Chaudry, MPH, MBA, Public Health Senior Analyst
Gautami Shikhare, MPH, Community Data Analyst II
Margaret Mysz, MPH, Community Data Analyst II
Dari Goldman, MPH, Public Health Analyst
Olivia Dunn, Community Data Analyst II
Garry Jacinto, Community Data Analyst



Cleveland Clinic Children's
Hospital for Rehabilitation

Implementation Strategy Report

2022



**CLEVELAND CLINIC CHILDREN’S HOSPITAL FOR REHABILITATION
2022 IMPLEMENTATION STRATEGY REPORT**

2022 Community Health Needs Assessment
Implementation Strategy Report for Years 2023 – 2025

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CLEVELAND CLINIC CHILDREN'S HOSPITAL FOR REHABILITATION 2022 IMPLEMENTATION STRATEGY REPORT

I. INTRODUCTION AND PURPOSE

This written plan is intended to satisfy the requirements set forth in the Internal Revenue Code Section 501(r)(3) regarding community health needs assessments and implementation strategies. The overall purpose of the Implementation Strategy is to align the hospital's limited resources, program services, and activities with the findings of the Cleveland Clinic Children's Hospital for Rehabilitation Community Health Needs Assessment ("CHNA"). The Implementation Strategy Report (ISR) includes the priority community health needs identified during the 2022 CHNA and hospital-specific strategies to address those needs from 2023 through 2025.

A. Description of Hospital

Cleveland Clinic Children's Hospital for Rehabilitation (CCCHR) is a 25 staffed bed³³ pediatric rehabilitation hospital located in Cleveland, Ohio. Cleveland Clinic Children's Hospital for Rehabilitation is accredited by the Commission on Accreditation of Rehabilitation Facilities and is a CARF-accredited, freestanding pediatric rehabilitation hospital. Additional information on the hospital and its services is available at: <http://clevelandclinicchildrens.org/rehabhospital>. Cleveland Clinic Children's Hospital for Rehabilitation offers facilities dedicated to the medical, surgical, and rehabilitative care of infants, children, and adolescents.

The hospital is part of the Cleveland Clinic health system, which includes an academic medical center near downtown Cleveland, fourteen regional hospitals in northeast Ohio, a children's hospital, five southeast Florida hospitals, and several other facilities and services across Ohio, Florida, and Nevada.

Cleveland Clinic Children's Hospital for Rehabilitation's mission is:

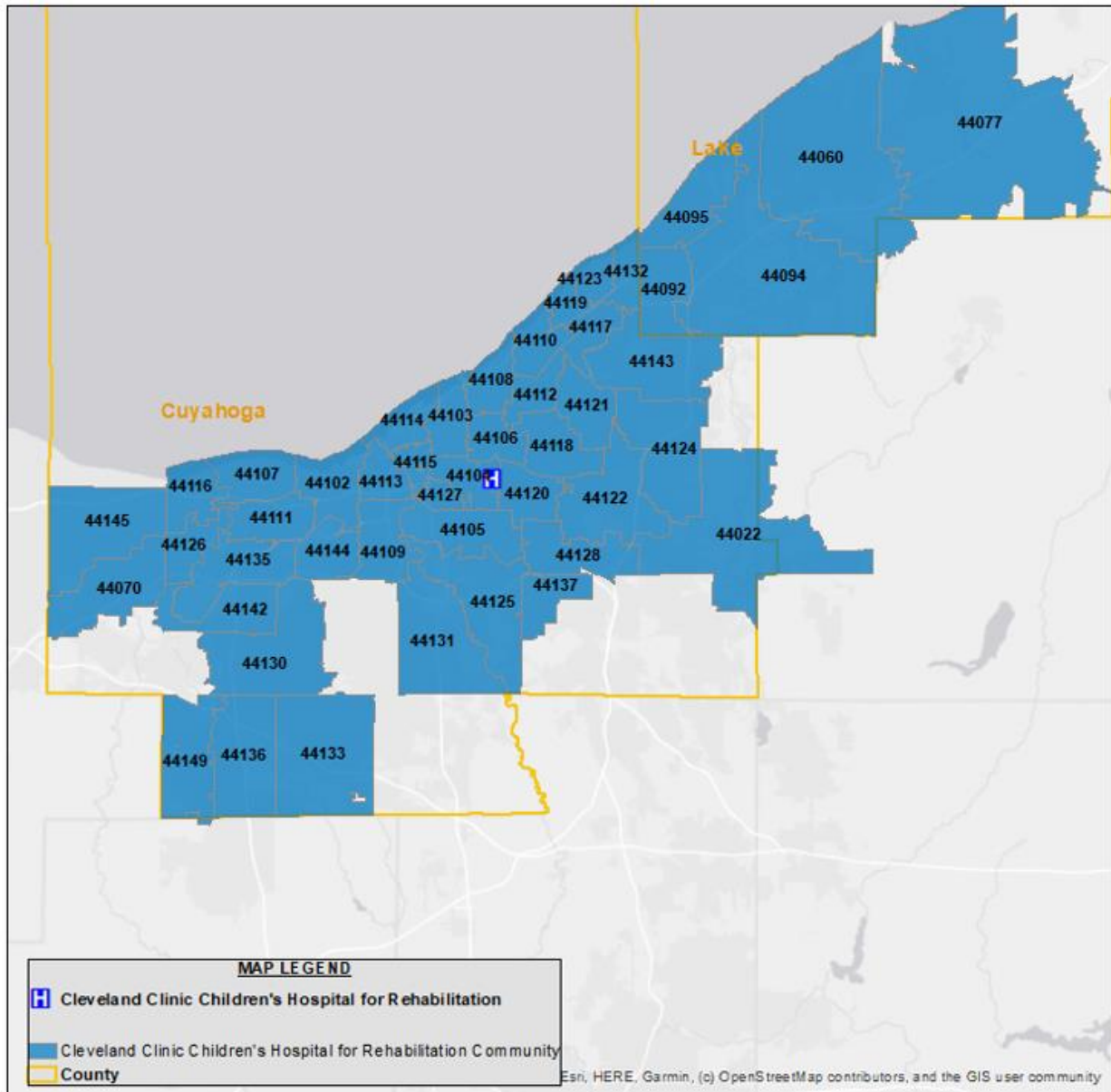
Caring for life, researching for health, and educating those who serve.

II. COMMUNITY DEFINITION

For purposes of this report, the Cleveland Clinic Children's Hospital for Rehabilitation community definition is an aggregate of 47 zip codes in Cuyahoga and Lake Counties comprising approximately 75% of inpatient and outpatient visits in 2021 (Figure 1).

³³ For the purpose of this report and consistent methodology, the Cleveland Clinic MD&A (Q4-2022) interim financial statement is referenced for official bed count. We acknowledge that staffed bed count may fluctuate and may differ from registered or licensed bed counts reflected in other descriptions.

Figure 1: Cleveland Clinic Children’s Hospital for Rehabilitation Community Definition



III. HOW IMPLEMENTATION STRATEGY WAS DEVELOPED

This Implementation Strategy was developed by members of leadership at Cleveland Clinic Children’s Hospital for Rehabilitation and Cleveland Clinic representing several departments of the organization, including clinical administration, medical operations, nursing, finance, population health, and community relations. This team incorporated input from the hospital’s community and local non-profit organizations to prioritize selected strategies and determine possible collaborations. Alignment with county Community Health Assessments (CHA), as well as the State Health Assessment (SHA), was also considered. Leadership at the Cleveland Clinic Children’s Hospital for Rehabilitation and Cleveland Clinic will review this Implementation

Strategy to determine whether changes should be made to better address the health needs of its communities.

IV. SUMMARY OF THE COMMUNITY HEALTH NEEDS IDENTIFIED

Cleveland Clinic Children's Hospital for Rehabilitation prioritized community health needs as determined by analyses of quantitative and qualitative data include:

- Access to Healthcare
- Behavioral Health
- Chronic Disease Prevention and Management
- Maternal and Child Health (including Autism Spectrum Disorder)
- Socioeconomic Issues

In addition to the prioritized community health needs, themes of health equity, social determinants of health, and medical research and education are intertwined in all community health components and impact multiple areas of community health strategies and delivery. Cleveland Clinic is committed to promoting health equity and healthy behaviors in our communities. The hospital addresses these overarching themes through a variety of services and initiatives including cross-sector health and economic improvement collaborations, local hiring for hospital workforce, mentoring of community residents, in-kind donation of time and sponsorships, anchor institution commitment, and caregiver training for inclusion and diversity.

COVID-19 Considerations

The COVID-19 global pandemic declared in early 2020 has caused extraordinary challenges for healthcare systems across the world including Cleveland Clinic Children's Hospital for Rehabilitation. Keeping front line workers and patients safe, securing protective equipment, developing testing protocols, and helping patients and families deal with the isolation needed to stop the spread of the virus all took priority as the pandemic took hold.

Many of the community benefit strategies noted in the previous 2019 implementation strategy were temporarily paused or adjusted to comply with current public health guidelines to ensure the health and safety of patients, staff, and other participants. Many of the strategies included in the 2023-2025 implementation strategy are a continuation or renewal of those that were paused during the pandemic as the community needs identified in the 2022 CHNA did not change greatly from those identified in the 2019 CHNA.

See the 2022 CCCHR and other Cleveland Clinic CHNAs for more information:
www.clevelandclinic.org/CHNARports

V. NEEDS HOSPITAL WILL ADDRESS

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

Strategies within the ISRs are included according to the prioritized list of needs developed during the 2022 CHNA. These hospitals’ community health initiatives combine Cleveland Clinic and local non-profit organizations’ resources in unified efforts to improve health and health equity for our community members, especially low-income, underserved, and vulnerable populations.

It should be noted that no one organization can address all the health needs identified in its community. Cleveland Clinic Children’s Hospital for Rehabilitation is committed to serving the community by adhering to its mission, and using its skills, expertise and resources to provide a range of community benefit programs to address specialized needs of the pediatric population requiring rehabilitation, autism services and/or specialty care.

A. Access to Healthcare

Access to Healthcare data analysis results describe community needs related to consumer expenditures for insurance, medical expenses, medicines, and other supplies. More expansive parameters include limitations to accessing healthcare described in terms of transportation challenges, resource limitations and availability of primary care, and other prevention services in local neighborhoods.

Cleveland Clinic continues to evaluate methods to improve patient access to care. All Cleveland Clinic hospitals will continue to provide medically necessary services to all patients regardless of race, color, creed, gender, country of national origin, or ability to pay. The financial assistance policy can be accessed here: [Cleveland Clinic Financial Assistance](#).

The Access to Healthcare initiatives for 2023 to 2025 include:

<i>Initiatives Including Collaborations and Resources Allocated</i>	<i>Anticipated Impacts</i>
A Patient Financial Advocates assist patients in evaluating eligibility for financial assistance or public health insurance programs	Increase the proportion of eligible individuals who are enrolled in various assistance programs
B Address digital equity, utilize medically secure online and mobile platforms, and connect patients with Cleveland Clinic providers for telehealth and virtual visits	Overcome geographical and transportation barriers, improve access to specialized care
C Through funding sources, provides transportation for families to assist securing medical appointments	Overcome geographical and transportation barriers

B. Behavioral Health

Cleveland Clinic Children’s Hospital for Rehabilitation’s 2022 CHNA also identified Behavioral Health as a prioritized need area. Behavioral Health encompasses Mental Health and Substance Use Disorders. Mental Health includes suicide, depression, and self-reported poor mental health rates. Substance Use Disorder relates to alcohol and drug use including drug overdoses. Community members described mental health challenges in the community, exacerbated by COVID-19 related stressors, resulting in increased alcohol and drug use starting in adolescence as a means of coping.

The Behavioral Health initiatives for 2023 to 2025 include:

<i>Initiatives Including Collaborations and Resources Allocated</i>	<i>Anticipated Impacts</i>
<i>A</i> Through a chronic pain management program, make recommendations to patients for alternative pain management strategies	Reduce the prescription of opioids, reduce patient exposure to opioids
<i>B</i> Treat neonatal abstinence syndrome (NAS) in infants exposed to substances before birth	Reduce side effects and negative health outcomes associated with NAS

C. Chronic Disease Prevention & Management

Cleveland Clinic Children’s Hospital for Rehabilitation CHNA identified chronic disease and other health conditions as prevalent in the community (ex. heart disease, stroke, diabetes, respiratory diseases, hypertension, obesity, cancer, COVID 19). Prevention and management of chronic disease initiatives seek to increase healthy behaviors in nutrition, physical activity, and tobacco cessation.

The Chronic Disease Prevention & Management initiatives for 2023-2025 include:

<i>Initiatives Including Collaborations and Resources Allocated</i>	<i>Anticipated Impacts</i>
<i>A</i> Provide health promotion messaging, health education, and community outreach events related to development disabilities and congenital conditions	Improve early detection of long-term outcome of pediatric development disabilities and congenital conditions
<i>B</i> Through Cleveland Clinic’s Children’s Wellness Center, educate children and families through the <i>Be Well Kids</i> programs	Improve physical activity, improve nutrition, decrease stress levels, decrease smoking and vaping,

Chronic Disease Prevention & Management (continued)

<i>Initiatives Including Collaborations and Resources Allocated</i>	Anticipated Impacts
<p>C Continue to offer nutritional counseling, occupational therapy, physical therapy, psychology, recreational therapy, and speech/language therapy in outpatient settings to children who require focused medical and developmental attention, including Down syndrome clinic, and neurodevelopmental clinic for children with chronic disease</p>	<p>Improve outpatient access to needed therapies</p>

D. Maternal & Child Health

Cleveland Clinic Children’s Hospital for Rehabilitation’s 2022 CHNA continued to identify Maternal and Child Health as a prioritized health need in the community. Secondary data indicators include a range of children’s health needs from babies with low birth weight to consumer expenditures on childcare. Primary data describes disparities among low-income and ethnic minority populations and link access to healthcare with prenatal care. Infant mortality rates at the local, state, and national levels have been particularly high for Black infants.

The Maternal & Child Health initiatives for 2023-2025 include:

<i>Initiatives Including Collaborations and Resources Allocated</i>	Anticipated Impacts
<p>A Treat neonatal abstinence syndrome (NAS) in infants exposed to substances before birth (see Behavioral Health)</p>	<p>Improve the number of mothers who receive adequate prenatal care</p>
<p>B Provide infant safe sleep education and support, and feeding issues education for families</p>	<p>Reduce infant mortality inequity, improve the preterm birth rate, decrease sleep related infant deaths</p>

E. Specialty Care – Autism Spectrum Disorder

The prevalence of Autism Spectrum Disorder (ASD) is increasing in CCCHR communities. Children with ASD frequently suffer from other developmental, psychiatric, neurological, chromosomal, and genetic disorders and have higher annual medical costs than children without ASD. Interviewees identified increasing rates of autism and developmental disabilities as a significant health concern. These were described as widespread problems, with few resources available to treat them.

Cleveland Clinic’s state-of-the-art autism facility, housed at Cleveland Clinic Children’s Hospital for Rehabilitation Campus, is dedicated to treatment, education, and research for children, adolescents, young adults, and families dealing with autism spectrum disorders. The Center for Autism offers outpatient diagnostic services and treatment based on applied behavioral analysis.

The Specialty Care – Autism Spectrum Disorder initiatives highlighted for 2023 – 2025 include:

<i>Initiatives Including Collaborations and Resources Allocated</i>	<i>Anticipated Impacts</i>
<i>A</i> Through the Center for Autism, offer a continuum of services including speech therapy and outpatient behavioral therapy	Increase access to coordinated behavioral health services, increase the percentage of children who achieve the highest level of functioning
<i>B</i> Through the Lerner School for Autism, a chartered, non-public day school for students from the age of first diagnosis until 21 years, provide education and treatment for children with ASD	Increase the percentage of children who achieve the highest level of functioning, decrease the level of specialized educational placement required by students
<i>C</i> Provide technical assistance and consulting to Autism programs nationwide	Improve health outcomes for children with ASD nationwide

F. Socioeconomic Issues

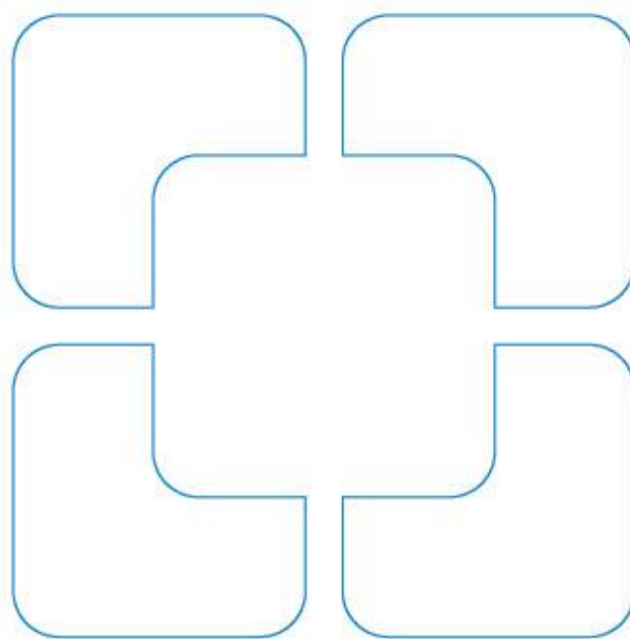
Cleveland Clinic Children’s Hospital for Rehabilitation 2022 CHNA demonstrated that health needs are multifaceted, involving medical as well as socioeconomic concerns. The assessment identified food security, affordable housing, employment, transportation, health literacy, structural racism, poverty, and environmental risk factors as significant concerns. Further, the primary and secondary impacts of COVID-19 have exacerbated many health disparities and barriers that were present before the pandemic. Socioeconomic Issues for this report are defined as a subset of social determinants of health (SDOH). Prevention & Safety, Affordable Housing, Violence, and Environmental Issues were prioritized socioeconomic issues described by primary and secondary data.

The Socioeconomic Issues initiatives highlighted for 2023 – 2025 include:

<i>Initiatives Including Collaborations and Resources Allocated</i>	<i>Anticipated Impacts</i>
A Continue a Cleveland Clinic common community referral data platform to coordinate services and ensure optimal communication	Improve active referrals to community-based organizations, non-profits, and other healthcare facilities; track referral outcomes
B Continue Cleveland Clinic RN Care Coordinators and Social worker Community Health Workers and/or the co-location of community organizations	Ensure connection to medical, social, and behavioral services; improve health equity
C Explore trauma informed care training for nurses and staff	Decrease trauma related issues for children
D Through funding sources, provide families with medical equipment, eyeglasses, and payment of utilities and rent.	Ensure provision of community resources and safety, improve health equity
E Continue discussions between public schools and CCCHR for continuum of care, therapy, and clinical services	Ensure connection to medical, social, and behavioral services

While this ISR outlines specific strategies and programs identified to address the 2022 CHNA prioritized areas of: Access to Healthcare, Behavioral Health, Chronic Disease Prevention and Management, Maternal and Child Health (including Autism Spectrum Disorder), and Socioeconomic Issues, it does not reflect all the work being done by Cleveland Clinic Children’s Hospital for Rehabilitation to improve community health. Through this iterative process, opportunities are identified to grow and expand existing work in prioritized areas as well as implementing additional programming in new areas. These ongoing strategic conversations will allow Cleveland Clinic Children’s Hospital for Rehabilitation to build stronger community collaborations and make smarter, more targeted investments to improve the health of the people in the communities they serve.

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



clevelandclinic.org/CHNAreports