Cleveland Clinic Children's
Hospital for Rehabilitation

Community Health Needs Assessment

2019

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EXECUTIVE SUMMARY

Introduction

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

Cleveland Clinic Children's Hospital for Rehabilitation is a 25-bed 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.

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

Each Cleveland Clinic hospital also is dedicated to the communities it serves. Each Cleveland Clinic hospital conducts a CHNA in order to understand and plan for the current and future health needs of residents and patients in the communities it serves. The CHNAs inform the development of strategies designed to improve community health, including initiatives designed to address social determinants of health. These assessments are conducted using widely accepted methodologies to identify the significant health needs of a specific community. The assessments also are conducted to comply with federal and state laws and regulations.

This CHNA was prepared for Cleveland Clinic Children's Hospital for Rehabilitation. A separate CHNA has been prepared for Cleveland Clinic Children's.

CCCHR offers both inpatient and Day Therapy Program services for children recovering from trauma, surgery, or a complex, acute hospital stay. The hospital's inpatient, outpatient rehabilitation, and therapy services allow infants and children (through age 18) to receive the right treatment mix to overcome chronic medical challenges.

CCCHR provides the following services:

- Aquatic Therapy Program
- Community Programs
- Day Therapy Program: Regular, intensive therapy without requiring overnight hospitalization

- Dialysis Unit (Judith M. Powers): Treatment for young patients with chronic renal disease. Also serves as a training center for parents whose children are on peritoneal dialysis.
- Feeding Disorders Program
- Outpatient Therapy Services
- Pediatric Pain Rehabilitation Program: The first pediatric specialty pain rehabilitation program in the world to be accredited by CARF. Staffed by an interdisciplinary team of experts in behavioral health, medical sciences and rehabilitation. The CCCHR Pediatric Pain Rehabilitation Program is specifically designed for children and teens whose chronic pain interferes with their normal activities.
- Seating & Wheelchair Clinic
- Six satellite programs, including five therapy services and one outpatient autism program
- Technology Resource Center: Customized alternative/augmentative communication systems for children and adults who have never spoken or who have lost their ability to speak due to accidents, injuries or other medical conditions.
- The Cleveland Clinic Children's Hospital Center for Autism: Offers diagnostic services and treatment based on applied behavioral analysis in an educational setting. The state-of-the-art facility is dedicated to treatment, education, and research for children, adolescents, young adults and families dealing with autism spectrum disorders.

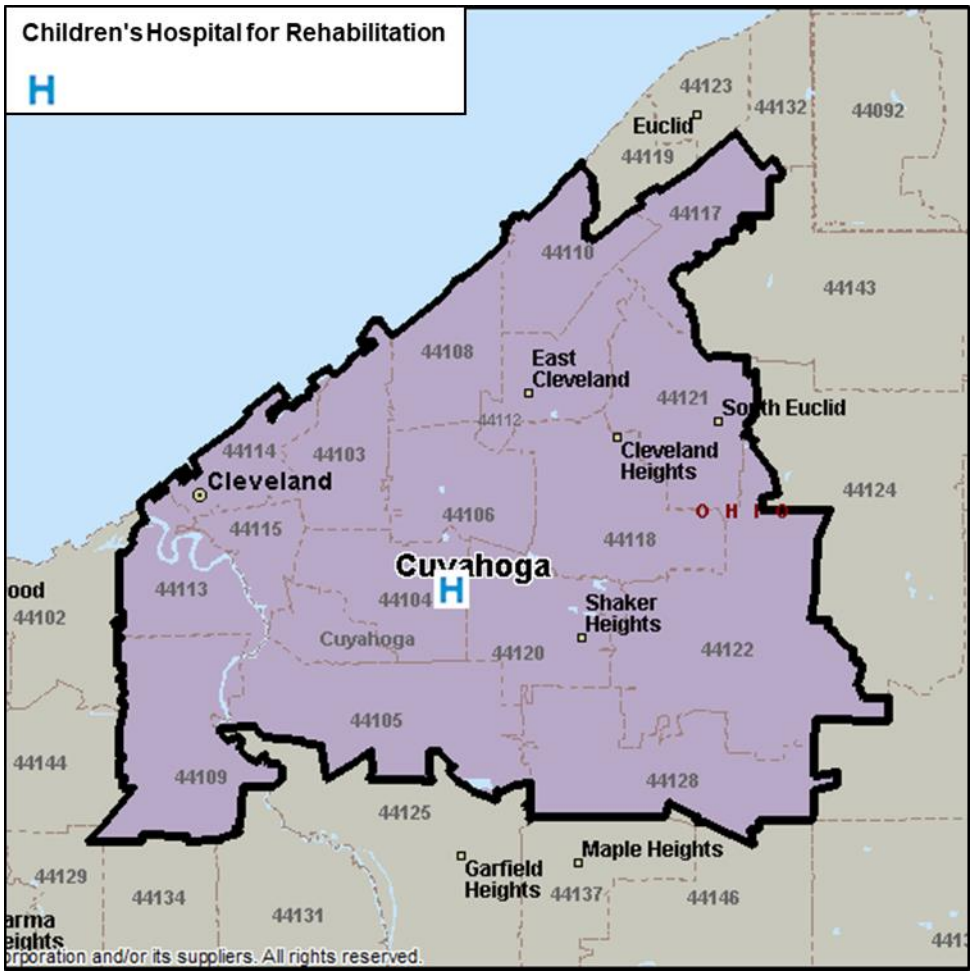
Community Definition

Cleveland Clinic Children's Hospital for Rehabilitation provides highly specialized care to children in its local communities, across the nation, and around the world. Cleveland Clinic treats some of the most diverse and clinically complex cases providing care in more than 120 medical specialties and subspecialties. Cleveland Clinic provides complex specialty care to patients residing in a geographic area encompassing one quarter of the State of Ohio and to patients transferred from nearly every state and twenty countries.

The communities the CCCHR services in its United States patient care activities are: (1) Local[1] Neighborhoods; (2) the 7-County Community; (3) the 21-County (Northeast Ohio) Community; (4) the state; and (5) the nation.

The following map portrays the Local Neighborhoods community. See p. 18-19 for the maps of the 7-County and 21-County communities.

[1] The local community is comprised of 18 ZIP codes surrounding CCCHR.



Significant Community Health Needs

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

- Access to Affordable Health Care
- Addiction and Mental Health
- Chronic Disease Prevention and Management
- Infant Mortality
- Medical Research and Health Professions Education
- Socioeconomic Concerns
- Specialty Care: Autism Spectrum Disorder

Significant Community Health Needs: Discussion

Access to Affordable Health Care

Access to affordable health care is challenging for some children and adolescents who live in the communities served by CCCHR, particularly to primary care, dental care, and adolescent mental health services. Access barriers include cost, poverty, a lack of awareness regarding available services, an undersupply of providers, a lack of dental services, and inadequate transportation.

The percentage of children who are uninsured has declined in recent years due to declining unemployment rates and the continued effects of expanded Medicaid eligibility in Ohio. A comparatively high proportion of children in Geauga County have been uninsured (15.7 percent compared to 5 percent nationally). National data indicate that uninsured children are much more likely to lack a "usual source of care" than children with private insurance or Medicaid.

Federally-designated Medically Underserved Areas (MUAs), Primary Care Health Professional Shortage Areas (HPSAs), Mental Health HPSAs, and Dental Care HPSAs are present in each CCCHR community. The per-capita supply of primary care physicians, dentists, and mental health providers is comparatively low in communities across Northeast Ohio. More health care professionals are needed to meet current and future access needs (Source: Exhibits 25, 35, 36, 37, 53, 59, 60, 61, 83, 84, 85).

YRBS data indicate that in Cuyahoga County, approximately 30 percent of adolescents have not seen a doctor or nurse for a checkup in the past year. In Ohio, 66 percent of adolescents have had a wellness check up in the past year, well below the CDC goal of 76 percent. Additionally, Ohio ranks 48th among U.S. states for publicly-funded women's health services (Source: Exhibits 29, 31, 87, 89).

Access to care was identified as a top-five priority area in community health assessments prepared by local health departments in Northeast Ohio. Access also represents a "cross-cutting factor" in the most recent Ohio Department of Health State Health Improvement Plan (Ohio SHIP) (Source: other assessments).

Addiction and Mental Health

Drug abuse, particularly the abuse of opioids, is a primary concern of many key stakeholders interviewed for this CHNA. Perceived over-prescribing of prescription drugs, poverty, and mental health problems were cited as contributing factors. Interviewees indicated that youth substance abuse is increasing and that substance abuse by parents has large ramifications for children (Source: key stakeholder interviews).

Ohio YRBS indicates that 20 percent of all Ohio students have been offered, sold, or given illegal drugs on school property. Cuyahoga County YRBS data indicates that Black and Hispanic students are higher risk of using alcohol, marijuana, and other substances than other cohorts (Source: Exhibits 29, 31, 89).

The Ohio SHIP and assessments prepared by 18 local health departments emphasize the need to address the growing opioid epidemic and to reduce drug overdose deaths. Many of these assessments included youth substance abuse and described the need for early intervention programs (Source: other assessments).

Child and adolescent mental health also was identified by interviewees as a significant concern. Depression, suicide, bullying, and hopelessness are perceived to be increasing in severity. Access to mental health care is challenging due to cost, insurance benefit limits, and an undersupply of child psychiatrists and other mental health providers.

Interviewees indicated that many children in the Local Neighborhoods community and Cuyahoga County are exposed to community violence and trauma at a young age, resulting in mental health issues later in life (Source: key stakeholder interviews). National assessments of child health cite research that shows that exposure to violence can have adverse consequences for normal and healthy development.

In *America's Health Rankings (2018),* Ohio ranked 43rd for adverse childhood experiences (Source: Exhibit 87).

Ohio YRBS data indicate that 26 percent of Ohio adolescents aged 12 to 17 years experienced a major depressive episode, well above the CDC goal of 7 percent. Additionally, 1.4 percent of Ohio youth respondents had attempted suicide. (Source: Exhibit 89).

The Ohio SHIP and local health department assessments for 17 Northeast Ohio counties identify mental health as a priority issue. These assessments cite the need for additional services, early identification of mental health risks, and greater awareness of existing programs (Source: other assessments).

Nationally, mortality rates (from 2006 through 2016) for most leading causes of death for children 1 to 14 and adolescents 15 to 24 (including unintentional injury, cancer, heart disease, and congenital malformations) have declined or remained stable. Rates for suicide and for drug overdoses, however, increased significantly (Source: other assessments).

Chronic Disease Prevention and Management

Chronic diseases, including child obesity, diabetes, and others are prevalent in the communities served by CCCHR.

YRBS data indicates that 13 percent of Ohio youth and 16 percent of Cuyahoga County high school students are obese. Twenty-six percent of Ohio youth meet the federal physical activity guidelines, lower than the national average. In *America's Health Rankings (2018),* Ohio ranked 28th overall for child health (Source: Exhibits 31, 87, 89). YRBS data for Cuyahoga County indicate that Hispanic (or Latino) and Black students have had a higher prevalence of "risk behaviors" than White students, including risks associated with: unintentional injury, violence, depressive symptoms and suicide, tobacco use, alcohol use, drug use, sexual behavior, obesity and weight control, and positive youth development.

Key stakeholders also identified child and adult obesity as a persistent and growing problem, driven by physical inactivity and poor nutrition. Poor nutrition results from the higher cost of fresh and healthy food, the presence of food deserts, and a lack of time and knowledge about how to prepare healthy meals. Physical inactivity is worsened by a lack of safe places to exercise, time, and education regarding the importance of remaining active. Additionally, Ohio ranks 36th among the nation for overweight or obese youth (Source: Exhibit 88, key stakeholder interviews).

The Ohio SHIP and local health department assessments consistently identify obesity and diabetes (and reducing physical inactivity and enhancing nutrition) as priorities (Source: other assessments).

Key stakeholders emphasized the importance of changing unhealthy behaviors. Exercise, nutrition, and tobacco cessation programs are needed. Health education and literacy programs also are needed (Source: key stakeholder interviews).

Childhood asthma is a recurring theme in key stakeholder interviews, local health department assessments, and the Ohio SHIP. Ohio counties benchmark comparatively poorly for air pollution levels, and interviewees expressed concerns about the exposure of children to household smoking.

Key stakeholders also discussed issues surrounding lead-based paint throughout local homes, and the health effects (including lead poisoning) it may present to children throughout Northeast Ohio. Over 8 percent of Cuyahoga County children under age 6 had dangerous lead levels in 2016. This rate was even higher for the City of Cleveland at 12.4 percent. Both of these rates greatly exceed Ohio and national averages (Source: other assessments).

Smoking rates have been comparatively high. The Ohio YRBS indicates that 21.7 percent of Ohio youth have used a tobacco product in the past month, comparing unfavorably to CDC goals. Ohio also ranks 40th for tobacco use during pregnancy and 31st for tobacco use among youth among U.S. states. Key stakeholders also stressed the increasing usage of electronic cigarettes and vapor products among youth populations and were concerned about its long-term effects. The Ohio State SHIP emphasizes the need for Ohioans to consume healthy food, reduce physical inactivity, reduce adult smoking, and reduce youth all-tobacco use (Source: Exhibits 87, 89, key stakeholder interviews, other assessments).

Infant Mortality

Ohio ranks in the bottom third of U.S. states for infant mortality. In Northeast Ohio, Cuyahoga and Summit counties compare unfavorably to Ohio averages for most maternal and child health indicators, including low birth weight births and preterm births. The infant mortality rate in Cuyahoga County has been well above Ohio and U.S. averages. Rates across Northeast Ohio, the state, and the United States have been persistently higher for Black infants than for White infants. Nationally, infant mortality rates have been decreasing, but differences by race and

ethnicity have remained. Key stakeholders frequently mentioned this and other racial disparities as important concerns (Source: Exhibits 79, 80, 87, 88, key stakeholder interviews).

In *America's Health Rankings (2018),* Ohio ranked 46th in neonatal mortality, 40th in infant mortality, and 40th in preterm births (Source: Exhibit 87).

The Ohio SHIP established ten "priority outcomes," three of which are addressing: preterm births, low birth weight, and infant mortality. Assessments by several local health departments (including those in Cuyahoga and Summit counties) have established reducing infant mortality as a priority (Source: other assessments).

Medical Research and Health Professions Education

More trained health professionals are needed locally, regionally and nationally. Research conducted by Cleveland Clinic, has improved health for community members through advancements in new clinical techniques, devices and treatment protocols in such areas as cancer, heart disease and diabetes. There is a need for more research to address these and other community health needs (Source: Exhibits 35, 36, 37, 59, 60, 61, 83, 84, 85).

Socioeconomic Concerns

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

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

Child poverty is a significant issue across the CCCHR communities. In the Local Neighborhoods community, 44.4 percent of children have been living in poverty, more than double Ohio and United States averages. Rates in Cuyahoga County and Ohio also exceed the national average. Low income census tracts are prevalent across Northeast Ohio. Across all communities served by CCCHR, poverty rates for Black and Hispanic (or Latino) populations

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

have been well above rates for Whites. Substantial variation in poverty and crime rates is present (Source: Exhibits 13, 14, 18, 45, 48, key stakeholders).

In the 2018 *County Health Rankings*, Cuyahoga County ranked last (or close to last) for high school graduation rates, income inequality, children in single-parent households, violent crime, and severe housing problems (Source: Exhibit 24).

In a number of communties (e.g., Local Communities, Cuyahoga County, Ashtabula County, Lorain County, and Portage County), over 50 percent of rented households have been designated as "rent burdened." As stated by the Federal Reserve, "households that have little income left after paying rent may not be able to afford other necessities, such as food, clothes, health care, and transportation." (Source: Exhibits 19, 49, 73).

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

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.

- Data from the Centers for Disease Control and Prevention indicate that ASD prevalence has increased from 1 in 150 children to 1 in 59 children between 2000 and 2014.[4] Children with ASD experience higher rates of co-morbid conditions than children without developmental disabilities.
    - Approximately 10 percent of children with ASD also have Down syndrome, fragile X syndrome, tuberous sclerosis, or another other disorders.
    - Children with ASD are approximately 60 percent as likely to be overweight or obese as adolescents without developmental disabilities.[5]
    - A small percentage of children who are born prematurely or with low birth weight are at greater risk for having 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.

[4] https://www.cdc.gov/ncbddd/autism/data.html
[5] https://www.ncbi.nlm.nih.gov/pubmed/30314662

DATA AND ANALYSIS

Definition of Community Assessed

This section identifies the communities assessed by CCCHR. The communities were defined by considering the geographic origins of the hospital's discharges in calendar year 2017. The definitions also considered the hospital's mission, target populations, principal functions, and strategies.

On these bases, the Local Neighborhoods community is comprised of 18 ZIP codes in Cuyahoga County, Ohio. These ZIP codes accounted for 23 percent of the hospital's recent inpatient volumes (**Exhibit 1**). The 7-County community accounts for nearly 57 percent of the hospital's discharges and is comprised of the seven counties proximate to the hospital. The 21-County community is comprised of counties in Northeast Ohio and accounts for over 65 percent of the hospital's inpatient discharges. CCCHR also serves the state of Ohio and the entirety of the United States.

Exhibit 1: CCCHR Inpatient Discharges by ZIP Code, 2017

ZIP Code	County	City/Town	Discharges	Percent of Discharges
44110	Cuyahoga	Cleveland	7	3.7%
44109	Cuyahoga	Cleveland	5	2.6%
44115	Cuyahoga	Cleveland	5	2.6%
44118	Cuyahoga	Cleveland	5	2.6%
44104	Cuyahoga	Cleveland	4	2.1%
44120	Cuyahoga	Cleveland	4	2.1%
44113	Cuyahoga	Cleveland	3	1.6%
44103	Cuyahoga	Cleveland	2	1.1%
44105	Cuyahoga	Cleveland	2	1.1%
44112	Cuyahoga	Cleveland	2	1.1%
44121	Cuyahoga	Cleveland	2	1.1%
44106	Cuyahoga	Cleveland	1	0.5%
44122	Cuyahoga	Beachwood	1	0.5%
44128	Cuyahoga	Cleveland	1	0.5%
44108	Cuyahoga	Cleveland	-	0.0%
44114	Cuyahoga	Cleveland	-	0.0%
44117	Cuyahoga	Euclid	-	0.0%
44127	Cuyahoga	Cleveland	-	0.0%
Community ZIP Codes			**44**	**23.3%**
7-County Subtotal			108	57.1%
21-County Subtotal			123	65.1%
Other Areas			66	34.9%
Total Discharges			189	100.0%

Source: Analysis of Cleveland Clinic Discharge Data, 2018.

The total population of the Local Neighborhoods community in 2017 was approximately 425,000 persons, including approximately 97,000 children, or 23 percent of the total community population (**Exhibit 2**).

Exhibit 2: Community Population – Total and Children, 2017

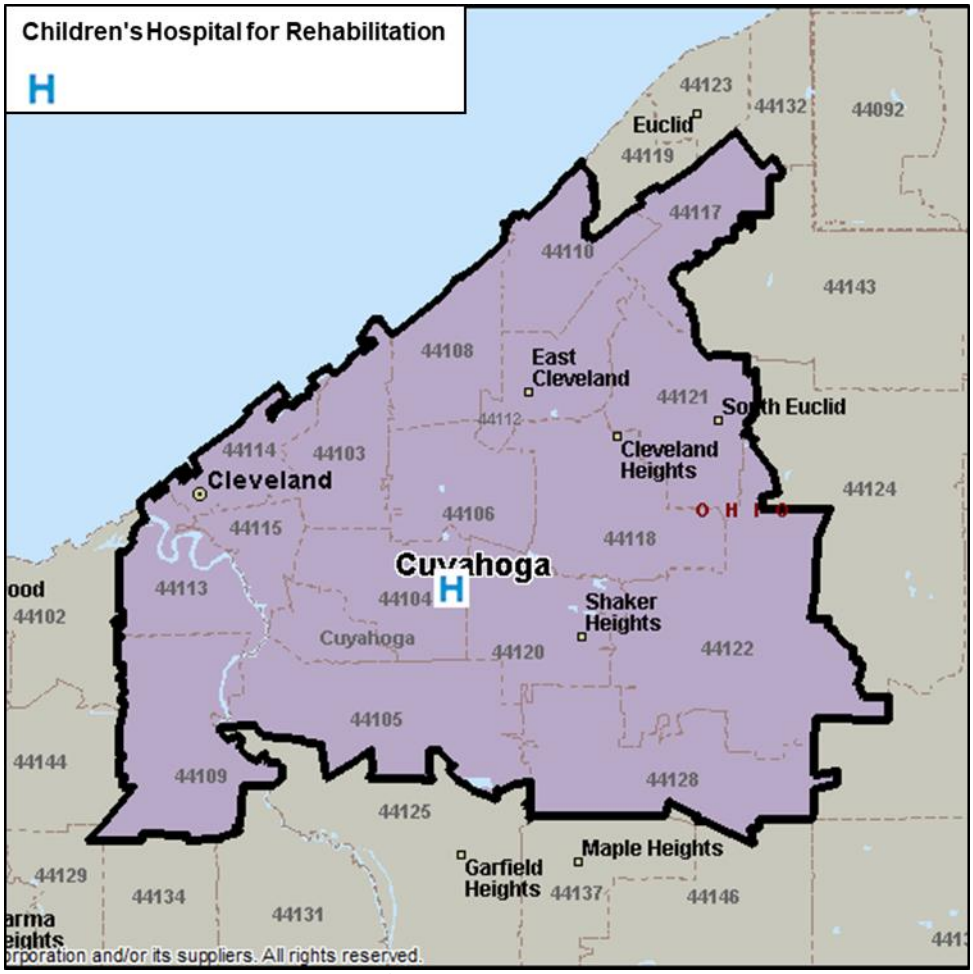
ZIP Code	County	City/Town	Total Population 2017	Percent of Total Population 2017	Population 17 and Younger 2017	Percent of Total ZIP Code Population
44118	Cuyahoga	Cleveland	39,364	9.3%	9,318	23.7%
44109	Cuyahoga	Cleveland	38,259	9.0%	9,470	24.8%
44105	Cuyahoga	Cleveland	36,906	8.7%	9,435	25.6%
44120	Cuyahoga	Cleveland	35,517	8.4%	8,197	23.1%
44122	Cuyahoga	Beachwood	34,331	8.1%	6,704	19.5%
44121	Cuyahoga	Cleveland	32,090	7.6%	7,000	21.8%
44128	Cuyahoga	Cleveland	28,023	6.6%	6,115	21.8%
44106	Cuyahoga	Cleveland	26,981	6.3%	4,407	16.3%
44108	Cuyahoga	Cleveland	23,491	5.5%	5,787	24.6%
44104	Cuyahoga	Cleveland	22,061	5.2%	7,213	32.7%
44112	Cuyahoga	Cleveland	21,671	5.1%	4,728	21.8%
44113	Cuyahoga	Cleveland	20,094	4.7%	3,420	17.0%
44110	Cuyahoga	Cleveland	18,683	4.4%	4,548	24.3%
44103	Cuyahoga	Cleveland	16,808	4.0%	3,704	22.0%
44117	Cuyahoga	Euclid	10,099	2.4%	1,700	16.8%
44115	Cuyahoga	Cleveland	9,092	2.1%	2,998	33.0%
44114	Cuyahoga	Cleveland	6,420	1.5%	790	12.3%
44127	Cuyahoga	Cleveland	5,109	1.2%	1,394	27.3%
Community Total			**424,999**	**100.0%**	**96,928**	**22.8%**

Source: Truven Market Expert, 2018.

The hospital is located in Cleveland, Ohio (ZIP code 44104).

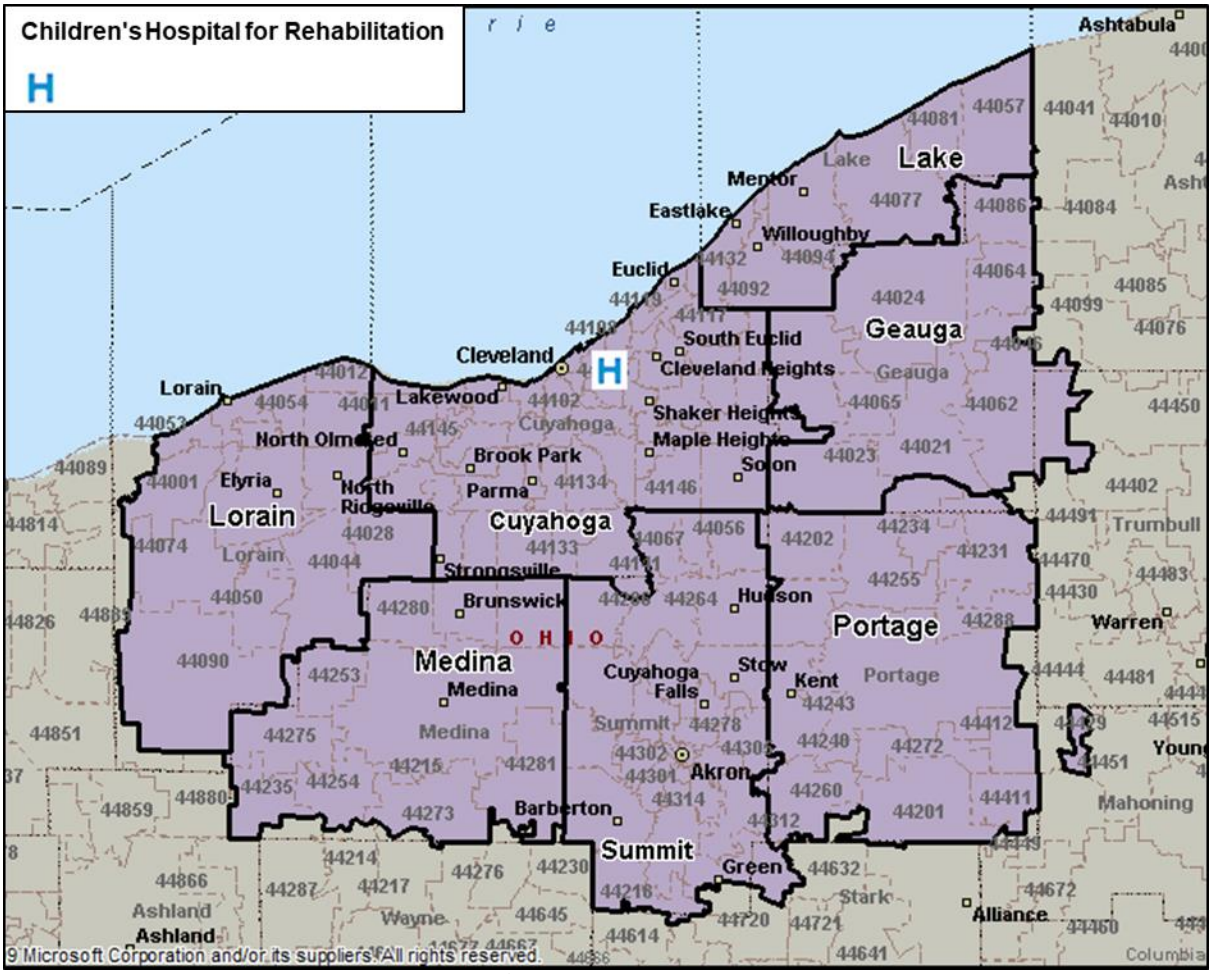
Exhibit 3 portrays the ZIP codes and counties that comprise the CCCHR communities.

Exhibit 3A: Local Neighborhoods Community



Source: Microsoft MapPoint and Cleveland Clinic, 2018.

Exhibit 3B: 7-County Community



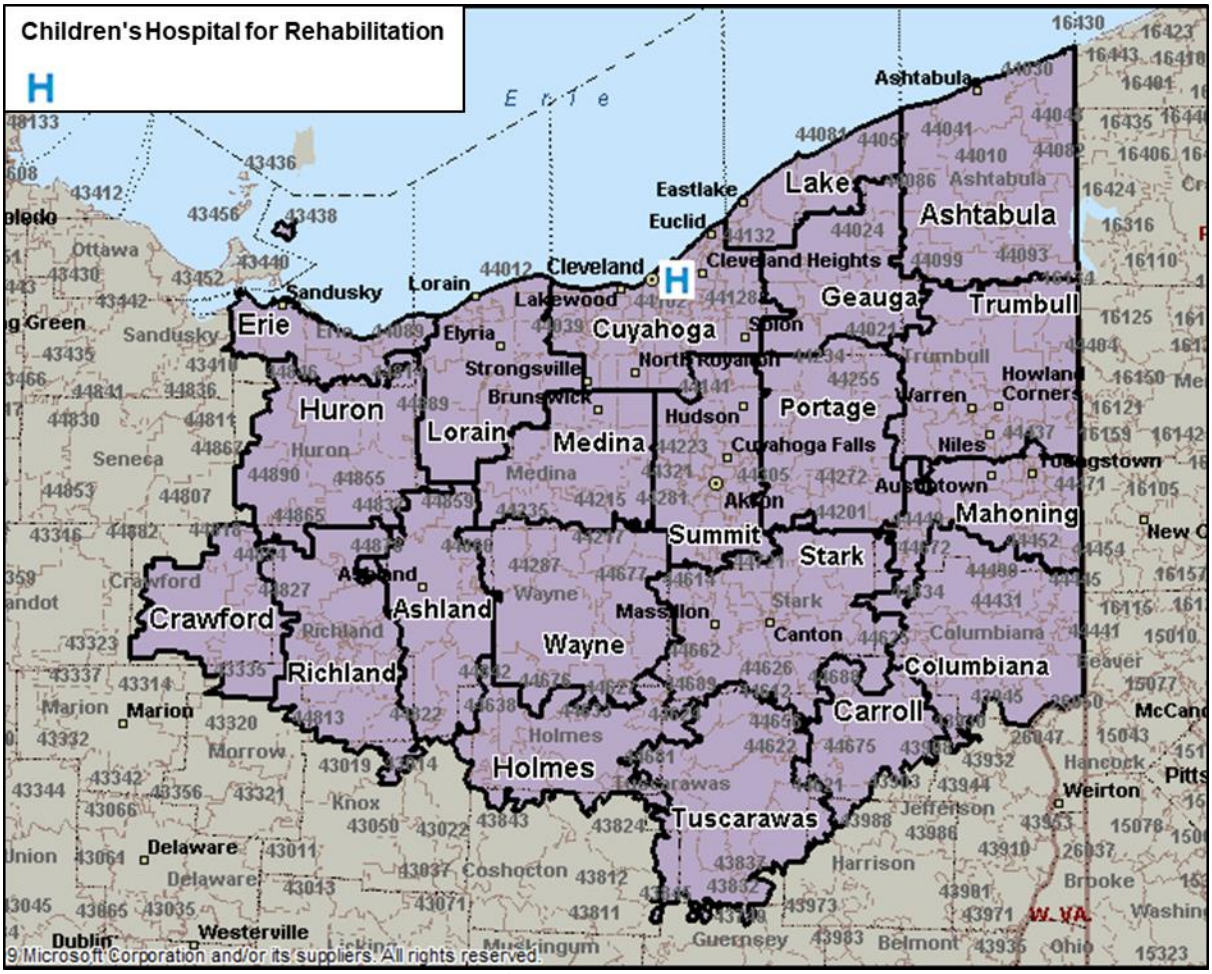
Source: Microsoft MapPoint and Cleveland Clinic, 2018.

In 2017, approximately 2,765,000 people lived in the 7-County community, including approximately 587,000 children.

County	Total Population 2017	Population 17 and Younger 2017
Cuyahoga County	1,255,781	265,841
Geauga County	89,096	20,770
Lake County	228,823	46,228
Lorain County	298,039	66,334
Medina County	176,170	39,336
Portage County	169,560	31,877
Summit County	547,767	117,050
7-County Community Total	**2,765,236**	**587,436**

Source: Truven Market Expert, 2018.

Exhibit 3C: 21-County Community



Source: Microsoft MapPoint and Cleveland Clinic, 2018.

In 2017, approximately 4,403,000 million people lived in the 21-County community, including 941,000 children.

County	Population 17 and Younger 2017	County	Population 17 and Younger 2017	County	Population 17 and Younger 2017
Ashland County	11,536	Geauga County	20,770	Portage County	31,877
Ashtabula County	21,524	Holmes County	13,696	Richland County	25,932
Carroll County	4,174	Huron County	14,285	Stark County	79,553
Columbiana County	22,116	Lake County	46,228	Summit County	117,050
Crawford County	9,176	Lorain County	66,334	Trumbull County	39,047
Cuyahoga County	265,841	Mahoning County	45,287	Tuscarawas County	20,782
Erie County	15,956	Medina County	39,336	Wayne County	30,052

Source: Truven Market Expert, 2018.

Secondary Data Summary

The following section summarizes principal findings from the secondary data analysis. Appendices B-G provide more detailed information. For detailed information related to adults, see the CHNA for Cleveland Clinic Main Campus.

Demographics

Population characteristics and changes directly influence community health needs. Demographic characteristics of communities served by CCCHR are summarized below.

Local Neighborhoods

The 0-17 population in the Local Neighborhoods community is expected to decrease 2.6 percent from 2017 to 2022. Declines in this age group are projected for 14 of 18 ZIP codes.

In 2017, over 90 percent of the population in four ZIP codes (all age groups) was Black (44104, 44108, 44112, and 44128). The percentage was over 50 percent in 12 of the 18 ZIP codes.

7-County Community

The 0-17 population in the 7-County community is expected to decrease 3.8 percent from 2017 to 2022. Population declines are expected in each of the community's seven counties.

In 2017, Cuyahoga County had the highest proportion of Black residents (29.4 percent for all age groups) and Geauga County had the lowest (1.3 percent).

Cuyahoga County had a higher percentage of residents aged 25 years and older without a high school diploma than the Ohio average. Cuyahoga, Geauga, Lake, and Lorain counties also had above average proportions of the population that are linguistically isolated.[6]

21-County Community

The 0-17 Population in the 21-County community is expected to decrease 4.0 percent from 2017 to 2022. Population declines are expected in each of the community's 21 counties.

In 2017, Cuyahoga, Mahoning, and Summit counties had the greatest proportions of Black residents (all age groups). Lorain County had the greatest proportion of residents Hispanic (or Latino).

Compared to Ohio, thirteen counties had a higher percentage of residents aged 25 years and older without a high school diploma. Eight had an above average percentage of the population that is linguistically isolated.

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

Economic Indicators

Local Neighborhoods

Many health needs have been associated with poverty. In 2012-2016, approximately 15.4 percent of people in Ohio were living in poverty.

At 31.2 percent, the overall poverty rate in the Local Neighborhoods community was significantly higher than the Ohio average. Over 40 percent of children in the Local Neighborhoods community were in poverty (44.4 percent), double the rates for Ohio and the United States. Low income census tracts are prevalent throughout this community. The highest poverty rates are observed for Black and for Hispanic (or Latino) residents.

According to the U.S. Census, approximately 54 percent of rented households in the Local Neighborhoods community are "rent burdened" because they spend more than 30 percent of income on housing. These households may be unable to afford other necessities such as child care, food, clothes, health care, and transportation.

The percentage of people and children uninsured has declined in recent years due to declining unemployment rates and the continued effects of expanded Medicaid eligibility in Ohio. At 3.3 percent, the 2016 estimated "uninsurance rate" of children in the Local Neighborhoods community was below Ohio and national averages.

7-County Community

In 2012-2016, approximately 27 percent of Cuyahoga County's children were living in poverty, and 27.0 percent of children were living in poverty. Poverty rates across the 7-County community and Ohio consistently have been highest for Black and Hispanic (or Latino) residents. Low income census tracts exist in Cuyahoga, Lorain, Portage, and Summit counties.

Both Cuyahoga and Summit counties have experienced above average rates of crime. About 50 percent of 7-County community households are considered rent burdened – with the highest percentages in Portage, Lorain, and Cuyahoga counties.

At 15.7 percent, the child uninsurance rate in Geauga County was significantly above the Ohio and United States averages in 2016.

21-County Community

In 2012-2016, 8 of 21 counties experienced above average child poverty rates: Ashland, Ashtabula, Columbiana, Crawford, Cuyahoga, Mahoning, Richland, and Trumbull. As elsewhere, rates have been comparatively high for Black and Hispanic (or Latino) residents.

In 2017, Ohio's unemployment rate was above the U.S. average; in that year, rates in 14 of 21-County community counties were above the state average.

Community Need Index™

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

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

A CNI score is calculated for each ZIP code. Scores range from "Lowest Need" (1.0-1.7) to "Highest Need" (4.2-5.0). The CNI is constructed such that the national median score is 3.0.

Local Neighborhoods

The weighted average CNI score for the Local Neighborhoods community was 4.3 – in the "highest need" category. Fifteen of 18 ZIP codes scored in this category. Six ZIP codes received a score of 5.0 – the highest score possible.

7-County Community

The average CNI score in the 7-County community (weighted by population) was 2.9. At 3.3, Cuyahoga County had the highest average CNI score in this region.

21-County Community

The average CNI score in the 21-County community was 2.9. Ashtabula and Cuyahoga counties had the highest scores.

Other Local Health Status and Access Indicators

Local Neighborhoods

In the 2018 *County Health Rankings*, Cuyahoga County ranked in the bottom 50th percentile among Ohio counties for 20 of the 27 indicators associated with child and adolescent health. Of those, 13 were in the bottom quartile, including low birthweight births, children in poverty, children in single-parent households, teen births, and others. Cuyahoga County ranked last (or close to last) for:

- Low birthweight births,
- High school graduation rates,
- Income inequality,
- Children in single-parent households,
- Violent crime,
- Air pollution, and
- Severe housing problems.

In the 2018 *Community Health Status Indicators*, which compares community health indicators for each county with those for peers across the United States, the following child and adolescent health needs appear to be most significant in Cuyahoga County:

- Percent of births with low birthweight, and
- Air pollution (average daily PM2.5).

Ohio Department of Health data also indicate that virtually all maternal and child health indicators (infant mortality rates, low birth weights, preterm births, and teen pregnancies) are problematic in the Local Neighborhoods community. Infant mortality rates for Black infants exceed those of White infants.

Youth Risk Behavior Survey (YRBS) data for Cuyahoga County indicate that Hispanic (or Latino) and Black students have had a higher prevalence of "risk behaviors" than White students. Risk Behavior categories include:

- Unintentional injury risks,
- Violence,
- Depressive symptoms and suicide,
- Tobacco use,
- Alcohol use,
- Marijuana use,
- Other drug use,
- Sexual behavior,
- Obesity and weight control,
- Dietary behavior,
- Physical activity,
- Positive youth development,
- Preventive health, and
- Other health behaviors.

7-County Community

In the 2018 *County Health Rankings*, the following indicators associated with child and adolescent health contributed to low rankings for multiple counties in the 7-County community:

- Low birthweight births,
- Food environment index,
- High school graduation rates,
- Violent crime rates,
- Physical environemnt,
- Air pollution, and
- Severe housing problems.

Community Health Status Indicators data indicate that the following indicators compare unfavorably in at least three of the seven counties:

- Years of potential life lost rate
- Percent of births with low birthweight
- Food environment index
- Primary care physicians rate
- Dentists rate
- Mental health professionals rate
- High school graduation rate
- Unemployment
- Income ratio
- Air pollution (average daily PM2.5)

The two most populous counties in the 7-County community (Cuyahoga and Summit counties) have comparatively poor maternal and child health indicators. Infant mortality rates have been particularly high for Black infants.

21-County Community

In the 2018 *County Health Rankings*, Ashtabula, Columbiana, and Trumbull counties ranked in the bottom half of Ohio counties for all indicators. Eight counties ranked in the bottom quartile of Ohio counties for Physical Environment index.

Community Health Status Indicators data indicate that at least one third of the counties in the 21-County community compared unfavorably to peer counties for:

- Food environment index
- Primary care physicians rate
- Dentists rate
- Unemployment
- Air pollution (average daily PM2.5)

Ohio Department of Health data also indicate that several counties in the 21-County community had unfavorable infant mortality rates. Rates for Black infants consistently have been above those for White infants.

Ohio

2018 CHSI data indicate that at least a two-thirds of Ohio counties rank in the bottom half of their peers for the following child and adolescent health-related indicators:

- Air pollution (average daily PM2.5)
- Unemployment
- Average mentally unhealthy days
- Food environment index

America's Health Rankings compares state-level health data to develop national health benchmarks and state rankings. This source has a separate report for women and children. In that report:

- Ohio ranked 28th overall for child health and 42nd for infants.

- Ohio ranked in the bottom ten states for the following indicators:

    - Health behaviors – infants (a composite measure that includes indicators for alcohol consumption during pregnancy, percentage of infants breastfed, sleep position, and tobacco use during pregnancy)
    - Publicly-funded women's health services (percentage of need met)
    - Percentage of infants breastfed
    - Neonatal mortality (deaths per 1,000 live births)
    - Adverse childhood experiences
    - Community and environment – infants (a composite measure that includes household smoke and a measure of infant child care cost)
    - Protective family routines and habits (ages 0-17)
    - Household smoking
    - All determinants – infants
    - Infant mortality
    - Outcomes – infants (a composite measure that includes infant mortality, low birthweight, neonatal mortality, and preterm birth rates)
    - Preterm births
    - Tobacco use during pregnancy

Ohio also ranked in the bottom third of states for children in poverty and for child immunization rates.

National

Several national studies and reports with indicators for child and adolescent health were reviewed for this assessment, including:

- Health, United States, 2017 – With Special Feature on Mortality
- America's Children in Brief: Key National Indicators of Well-Being, 2018
- National Center for Health Statistics

Key national statistics from these sources are summarized below.

- Nationally, infant mortality rates decreased between 2005 and 2015; however, difference by race and ethnicity have remained. In 2015, the infant mortality for Black mothers was 2.8 times as high as rates for Asian or Pacific Islander mothers.
- Unintentional injury has been the leading cause of death for children aged 1 to 14 years. Between 2006 and 2016, mortality rates for children (1 to 14) declined for most leading causes of death. The suicide rate, however, doubled over this time period.
- For persons 15 to 24 years of age, leading causes of death in 2016 were: unintentional injury, suicide, homicide, cancer, heart disease, and congenital malformations. Suicide rates also increased for this age group between 2006 and 2016.

- The age-adjusted death rate from drug overdoses increased from 11.5 to 19.8 deaths per 100,000. Recent increases were especially pronounced among men aged 25-34 and women 15-24.
- Between 2006 and 2016 the teen birth rate declined by nearly 50 percent. The 2016 rate represented a record low.
- In 2016, about 8 percent of infants were low birthweight. Low birthweight was most common for infants of non-Hispanic Black mothers (13.5 percent). Preterm births were also more prevalent for Black mothers.
- Between 2011 and 2016, the percent of high school students smoking fell from about 16 percent to 8 percent; however, the percent of students using electronic cigarettes increased from 1.5 percent to 11 percent.
- Between 2006 and 2016, about 8 percent of children were reported to have asthma. Rates consistently have been higher for Black children than for White children.
- Diagnoses of attention-deficit/hyperactivity disorder (ADHD) also have been increasing – from 6.5 percent of children and adolescents aged 5 to 17 years in 1999 to 10.6 percent in 2016.
- In 2016, about 71 percent of children aged 19 to 35 months completed the "combined 7-vaccine series of vaccinations."
- Between 2006 and 2017, the percentage of children who were uninsured decreased from 9.5 percent to 5.0 percent. Almost 28 percent of uninsured children were likely to lack a "usual source of care" compared to children with private coverage (2.6 percent) or with Medicaid (4.6 percent).
- The percent of children living in poverty decreased from 22 percent to 18 percent between 2010 and 2016.
- More than one-third of all children experienced a physical assault in the past year. Five percent had been sexually victimized. Fifteen percent experienced child maltreatment (including physical abuse, emotional abuse, neglect, custodial interference, or family abduction).
- One quarter of children witnessed family or community violence in the past year. Research shows that exposure to violence can have adverse consequences for normal and healthy development.
- Drug abuse is an increasing issue; 3.5 percent of youth aged 12 to 17 misused prescription opioids in 2016.
- 18.4 percent of children aged 6 to 11 years (and 20.6 percent of adolescents 12 to 19) were obese in 2015-2016.

Ambulatory Care Sensitive Conditions

Ambulatory Care Sensitive Conditions (ACSCs) are fourteen health "conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease."[7] Low Birth Weight Births is considered to be an ACSC.

Across Ohio, the ACSC rate for Low Birth Weight Births was 18 per 1,000 live births in 2017.

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

Local Neighborhoods

The overall ACSC rate for Low Birth Weight Births in 2017 was 25 per 1,000 live births. Rates for low birth weight were over 50 per 1,000 in ZIP codes 44117, 44110, and 44108.

7-County Community

Summit and Portage counties had the highest rates of admissions for low birthweight births in the 7-County community.

21-County Community

Summit, Mahoning, and Trumbull counties had the highest rates of admissions for low birthweight births in the 21-County community.

Food Deserts

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

Food Deserts are present in each of the communities assessed by CCCHR. For example, six counties in the 7-County community include one or more such census tracts.

Medically Underserved Areas and Populations

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

MUAs and/or MUPs also are present throughout the communities. Many such areas and populations can be found in Cleveland, Lorain, Summit, Lake, and Ashtabula counties.

Health Professional Shortage Areas

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

Primary care, dental, and mental health HPSAs are present in each of the communities assessed by CCCHR.

Relevant Findings of Other CHNAs

Twenty (20) community health assessments have been conducted in recent years by local health departments (LHDs) in Northeast Ohio. The following table identifies the priority areas most frequently found in those assessments. *See* Appendix G for a comprehensive list of each assessment that was analyzed.

Priority Area	Total
Addiction and substance use disorders (including opioids) - all populations	18
Mental health - all populations	17
Obesity - all populations	11
Obesity - youth	10
Chronic disease	8
Access to care - all populations	7
Mental health - youth	6
Tobacco use - all populations	6
Addiction and substance use disorders - youth	5
Alcohol abuse - youth	5
Infant mortality	5
Suicide - all populations	5
Maternal and child health	4
Tobacco use - youth	4
Suicide - youth	3
Alcohol abuse	2
Bullying - youth	2
Cardiovascular disease - all populations	2
Diabetes - all populations	2
Lack of physical activity - all populations	2

The most commonly identified issues include:

- Addiction and substance use disorders,
- Mental health,
- Obesity,
- Chronic diseases, and
- Tobacco use.

A Community Health Assessment ("CHA") for Cuyahoga County was developed through a collaboration between Case Western Reserve University School of Medicine, the Cleveland Department of Public Health, the Cuyahoga County Board of Health, the Health Improvement Partnership- Cuyahoga, The Center for Health Affairs, and University Hospitals.

Many of the issues identified in that CHA relate specifically to child and adolescent health, including:

- Lead poisoning is particularly problematic among children in Cuyahoga County. Over 8 percent (8.2 percent) of Cuyahoga County children under age 6 had dangerous lead levels in 2016. This rate was even higher for the City of Cleveland at 12.4 percent. Both of these rates greatly exceed Ohio (2.0 percent) and national (3.0 percent) averages.

- Childhood asthma was the most common ambulatory care sensitive condition for hospitalized children in 2016. Rates were particularly high for Black and Hispanic children.

- Mental health, suicide, and community violence and safety were identified as significant concerns for children in Cuyahoga County. The CHA states: "Children raised in safe and nurturing families and neighborhoods, free from maltreatment and other social adversities, are more likely to have better outcomes as adults." Child abuse is more prevalent in the City of Cleveland than in the nation as a whole. Community violence contributes to negative health outcomes among children.

- Infant and child health, particularly infant mortality, is also mentioned as a significant concern. Infant mortality, neonatal mortality, and post-neonatal mortality rates for Cuyahoga County exceed state averages and Healthy People 2020 goals. The City of Cleveland compares unfavorably to the county as a whole.

- Infant mortality rates are significantly higher for Black residents than for White residents.

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

1. Mental Health and Addiction
2. Chronic Disease
3. Maternal and infant health

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

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

1. Social Determinants of Health, e.g.,
2. Public Health System, prevention and health behaviors, e.g.,
3. Healthcare system and access, e.g.,
4. Equity strategies likely to decrease disparities for priority populations.

The SHIP establishes maternal and infant health as one of three major topics. Specific child and adolescent health indicators are highlighted across the plan. For example:

- Under Mental Health and Addiction, the percent of adolescents aged 12-17 who experienced a major depressive episode and the percent of persons age 12 and older with past-year illicit drug dependence are highlighted.

- Under Chronic Disease, childhood asthma is one of three key indicators.

- Maternal and Infant Health indicators are focused on problematic indicators for preterm births, low birth weight births, and infant mortality.

Cross-cutting factors across all SHIP priorities also include indicators specific to children and adolescents, including third-grade reading proficiency, absenteeism in school, secondhand smoke exposure, and youth tobacco use.

Significant Indicators

Exhibit 4 highlights many of the indicators and issues discussed in the above secondary data summary. The exhibit identifies indicators that appear problematic in the Local Neighborhoods, 7-County, 21-County, and Ohio communities assessed by CCCHR. Verité Healthcare Consulting identified indicators as *significant* if they varied materially from a benchmark statistic (e.g., an average value for peer counties, the State of Ohio, or the United States).

Exhibit 4: Significant Indicators

Indicator	Local Neighborhoods	7-County	21-County	Ohio
Poverty rate - all children	•			•
Poverty rate - Black	•	•	•	•
Unemployment rate	•	•	•	•
Percent of households rent burdened	•	•	•	
Educational achievement	•		•	•
Violent crimes per 100,000	•			
Food environment index	•	•	•	
Percent births with low birth weight	•	•	•	•
Percent births preterm	•			
Teen birth rate per 1,000 females ages 15-19	•		•	•
Infant mortality rate	•			•
Infant mortality rate, Black	•	•	•	•
Adolescents aged 12-17 with major depressive episodes				•
Child immunizations				•
Ratio of population to primary care physicians		•	•	•
Ratio of population to dentists		•	•	•
Ratio of population to mental health providers		•		•
Average Daily PM 2.5 (Particulate Matter, a measure of air pollution)	•	•	•	•

Source: Verité Analysis.

A number of secondary data indicators (e.g., infant mortality rate – Black, unemployment rate, and a measure of air pollution) appear to be problematic in each of the communities assessed.

Primary Data Summary

Primary data were gathered by conducting interviews with key stakeholders (*See* Appendix C for additional information on those providing input). Forty-two (42) interviews were conducted with individuals regarding significant community health needs in the community served by CCCHR and why such needs are present.

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

- **Poverty and other social determinants of health** were identified as significant concerns, particularly the effects of poverty on children. Interviewees stated that poverty has significant implications for health, including the ability for households to access health services, afford basic needs, and benefit from prevention initiatives.
    - **Housing** is an issue, with many community residents unable to find housing that is both affordable and safe. Low income populations were identified as especially vulnerable. Poor housing contributes to lead exposure and other environmental concerns, impacting child health with increased risks for conditions such as asthma.
- **Childhood Obesity** (and its contributions to chronic diseases including diabetes, hypertension, and cardiovascular diseases) was identified as growing problem, driven by ongoing difficulties with physical inactivity and poor nutrition.
    - Many are not eating healthy foods due to the higher costs of fresh and healthy options, food deserts that create access problems, a lack of knowledge about healthy cooking, and a lack of time (particularly for people working several jobs) to prepare meals for families.
    - Contributors to physical inactivity include a lack of safe places to exercise, a lack of education regarding the importance of remaining active, and the increasing popularity of computer activity and videogames.
- **Youth Mental health** was identified by many as a significant concern. Depression, suicide, and hopelessness for the future are perceived to be increasing in severity. Trauma was cited as a common occurrence for Cleveland youth, particularly due to violence in local communities. Bullying, both in-person at schools and online, is increasingly thought to be problematic and contributing to mental health concerns among youth.
    - Access to mental health care is challenging due to cost (and limited benefits) and an undersupply of childhood psychiatrists and other providers.
- **Substance abuse and addiction**, particularly the abuse of opioids and the increasing use of marijuana, was a primary concern of many interviewees. Ease of access among local

youth to substances was cited as a contributing factor. Increasing alcohol use among youth was also thought to be a significant issue.

- **Health disparities** are present – particularly for infant mortality rates and the prevalence of chronic conditions. Low-income, Black, and Hispanic (or Latino) residents were specifically identified as groups with disproportionately poor health outcomes.

    - Health care services need to be more culturally competent. Language and cultural barriers make it challenging for providers to improve the health of many residents.

- Many identified a need for more **localized, community-based health clinics and programs**. While the region has many hospitals and physician groups, these entities "do not have a great connection with the community." Health systems need to improve their local presence, building up connections with local stakeholders and communities.

- **Smoking and tobacco usage** is a concern, increasing the risk of addiction and development of chronic diseases in the future. Vaping and electronic cigarettes have also emerged as a concern, particularly among high school students.

- **Dental and oral health** is a significant concern, particularly affecting low-income and uninsured children. Stakeholders indicated that untreated dental health problems contribute to many other physical health concerns. They also stated that an undersupply of dentists exists in certain areas of the community.

OTHER FACILITIES AND RESOURCES IN THE COMMUNITY

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

Federally Qualified Health Centers

Federally Qualified Health Centers (FQHCs) are established to promote access to ambulatory care in areas designated as "medically underserved." These clinics provide primary care, mental health, and dental services for lower-income members of the community. FQHCs receive enhanced reimbursement for Medicaid and Medicare services and most also receive federal grant funds under Section 330 of the Public Health Service Act. There currently are 22 FQHC sites operating in the CCCHR Local Neighborhoods community (**Exhibit 5**).

Exhibit 5: Federally Qualified Health Centers, 2018

County	ZIP Code	Site Name	City	Address
Cuyahoga	44105	Miles Broadway Health Center	Cleveland	9127 Miles Ave
Cuyahoga	44112	East Cleveland Health Center	Cleveland	15201 Euclid Ave
Cuyahoga	44114	Asian Services In Action	Cleveland	3631 Perkins Ave Ste 2aw
Cuyahoga	44115	Central Neighborhood Clinic	Cleveland	2916 Central Ave
Cuyahoga	44114	St. Clair Clinic	Cleveland	1530 Saint Clair Ave NE
Cuyahoga	44112	NEON Dental Mobile Unit	East Cleveland	15320 Euclid Ave
Cuyahoga	44104	Carl B. Stokes Clinic	Cleveland	6001 Woodland Ave
Cuyahoga	44122	Signature Health, Inc. Connections Location	Beachwood	24200 Chagrin Blvd
Cuyahoga	44103	Hough Health Center	Cleveland	8300 Hough Ave
Cuyahoga	44113	Tremont Community Health Center	Cleveland	2358 Professor Ave
Cuyahoga	44103	Norwood Health Center	Cleveland	1468 E 55th St
Cuyahoga	44114	Mobile Clinic	Cleveland	1530 Saint Clair Ave NE
Cuyahoga	44106	Superior Health Center	Cleveland	12100 Superior Ave
Cuyahoga	44106	The Free Medical Clinic of Greater Cleveland	Cleveland	12201 Euclid Ave
Cuyahoga	44113	Riverview Towers Clinic	Cleveland	1795 W 25th St
Cuyahoga	44103	NEON Administration Center	Cleveland	4800 Payne Ave
Cuyahoga	44110	Collinwood Health Center	Cleveland	15322 Saint Clair Ave
Cuyahoga	44114	Asian Services In Action - International Community Health Center	Cleveland	3820 Superior Ave E Ste
Cuyahoga	44113	Neighborhood Family Practice Administrative Office	Cleveland	4115 Bridge Ave
Cuyahoga	44106	Magnolia Clubhouse	Cleveland	11101 Magnolia Dr
Cuyahoga	44105	Southeast Health Center	Cleveland	13301 Miles Ave
Cuyahoga	44103	Health and Wellness East	Cleveland	4400 Euclid Ave

Source: HRSA, 2018.

Data published by HRSA indicate that in 2017, FQHCs served approximately 38 percent of uninsured, Local Neighborhoods community residents and 22 percent of the community's Medicaid recipients.[8] In Ohio, FQHCs served about 15 percent of both population groups. Nationally, FQHCs served 22 percent of uninsured individuals and 18 percent of Medicaid recipients. These percentages ranged from 6 percent (Nevada) to 40 percent (Washington State).

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

Hospitals

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

Exhibit 6: Hospitals, 2018

ZIP Code	County	City/Town	Hospital Name	Address
44104	Cuyahoga	Cleveland	Cleveland Clinic Children's Hospital For Rehab	2801 Martin Luther King, Jr Drive
44122	Cuyahoga	Beachwood	Grace Hospital	20000 Harvard Road
44122	Cuyahoga	Beachwood	Highland Springs	4199 Mill Pond Drive
44122	Cuyahoga	Beachwood	Lake Health Beachwood Medical Center	25501 Chagrin Blvd
44113	Cuyahoga	Cleveland	Lutheran Hospital	1730 West 25th Street
44109	Cuyahoga	Cleveland	MetroHealth System	2500 Metrohealth Drive
44106	Cuyahoga	Cleveland	Rainbow Babies And Childrens Hospital	11100 Euclid Avenue
44128	Cuyahoga	Cleveland	Regency Hospital Of Cleveland East	4200 Interchange Corporate Center Road
44120	Cuyahoga	Cleveland	Select Specialty Hospital- Cleveland Fairhill	11900 Fairhill Road
44122	Cuyahoga	Beachwood	South Pointe Hospital	20000 Harvard Road
44115	Cuyahoga	Cleveland	St Vincent Charity Medical Center	2351 East 22Nd Street
44106	Cuyahoga	Cleveland	UH Cleveland Medical Center	11100 Euclid Avenue
44122	Cuyahoga	Beachwood	University Hospitals Ahuja Medical Center	3999 Richmond Road
44122	Cuyahoga	Beachwood	University Hospitals Rehabilitation Hospital	23333 Harvard Road

Source: Ohio Department of Health, 2019.

Other Community Resources

A wide range of agencies, coalitions, and organizations that provide health and social services is available in the region served by CCCHR. United Way 2-1-1 Ohio maintains a large, online database to help refer individuals in need to health and human services in Ohio. This is a service of the Ohio Department of Social Services and is provided in partnership with the Council of Community Services, The Planning Council, and United Way chapters in Cleveland. United Way 2-1-1 Ohio contains information on organizations and resources in the following categories:

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

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

APPENDIX A – OBJECTIVES AND METHODOLOGY

Regulatory Requirements

Federal law requires that tax-exempt hospital facilities conduct a CHNA every three years and adopt an Implementation Strategy that addresses significant community health needs.[9] In conducting a CHNA, each tax-exempt hospital facility must:

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

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

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

Ohio law[10] requires local health departments (LHDs) and tax-exempt hospitals to submit their Community Health Improvement Plans and Implementation Strategy reports to the Ohio Department of Health (the department). Beginning January 1, 2020, Ohio law also requires LHDs and tax-exempt hospitals to complete assessments and plans "in alignment on a three-year interval established by the department." Specific methods and approaches for achieving "alignment" are evolving.

Methodology

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

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

[9] Internal Revenue Code, Section 501(r).
[10] ORC 3701.981

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

Federal regulations allow hospital facilities to define the community they serve based on "all of the relevant facts and circumstances," including the "geographic location" served by the hospital facility, "target populations served" (e.g., children, women, or the aged), and/or the hospital facility's principal functions (e.g., focus on a particular specialty area or targeted disease)."[11] Accordingly, the community definition considered the geographic origins of the hospital's patients and also the hospital's mission, target populations, principal functions, and strategies.

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

Data from multiple sources were gathered and assessed, including secondary data[12] published by others and primary data obtained through community input. *See* Appendix B. Input from the community was received through key informant interviews. These informants represented the broad interests of the community and included individuals with special knowledge of or expertise in public health. *See* Appendix C. Considering a wide array of information is important when assessing community health needs to ensure the assessment captures a wide range of facts and perspectives and to increase confidence that significant community health needs have been identified accurately and objectively.

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

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

Collaborating Organizations

For this assessment, CCCHR collaborated with the following Cleveland Clinic and Cleveland Clinic – Select Medical hospitals: Main Campus, Cleveland Clinic Children's Hospital for Rehabilitation , Cleveland Clinic Children's Hospital for Rehabilitation Hospital for Rehabilitation, Avon, Akron General, , Euclid, Fairview, Hillcrest, Lodi, Lutheran, Marymount, Medina, South Pointe, Union, Cleveland Clinic Florida, Select Specialty Hospital – Cleveland Fairhill, Select Specialty Hospital – Cleveland Gateway, Regency Hospital of Cleveland East,

[11] 501(r) Final Rule, 2014.
[12] "Secondary data" refers to data published by others, for example the U.S. Census and the Ohio Department of Health. "Primary data" refers to data observed or collected from first-hand experience, for example by conducting interviews.

and Regency Hospital of Cleveland West. These facilities collaborated by gathering and assessing community health data together and relying on shared methodologies, report formats, and staff to manage the CHNA process.

Data Sources

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

Input from 42 persons representing the broad interests of the community was taken into account through key informant interviews. Interviewees included: individuals with special knowledge of or expertise in public health; local public health departments; agencies with current data or information about the health and social needs of the community; representatives of social service organizations; and leaders, representatives, and members of medically underserved, low-income, and minority populations.

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

Information Gaps

This CHNA relies on multiple data sources and community input gathered between July 2018 and January 2019. A number of data limitations should be recognized when interpreting results. For example, some data (e.g., County Health Rankings, Community Health Status Indicators, and others) exist only at a county-wide level of detail. Those data sources do not allow assessing health needs at a more granular level of detail, such as by ZIP code or census tract.

The Local Neighborhoods community assessed by CCCHR includes portions of Cuyahoga County. County-wide data for this county should be assessed accordingly.

Secondary data upon which this assessment relies measure community health in prior years and may not reflect current conditions. The impacts of recent public policy developments, changes in the economy, and other community developments are not yet reflected in those data sets.

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

Consultant Qualifications

Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Arlington, Virginia. The firm serves clients throughout the United States as a resource that helps hospitals conduct Community Health Needs Assessments and develop Implementation Strategies to address significant health needs. Verité has conducted more than 60 needs assessments for hospitals, health systems, and community partnerships nationally since 2010.

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

APPENDIX B – LOCAL NEIGHBORHOODS COMMUNITY SECONDARY DATA ASSESSMENT

This section presents an assessment of secondary data regarding child and adolescent health needs in the Local Neighborhoods community. The Local Neighborhoods community is comprised of 18 ZIP codes in Cuyahoga County, Ohio. For maps in this section, the designated hospital symbol is the location of Cleveland Clinic Children's instead of CCCHR, with both facilities sharing the same communities.

Demographics

Exhibit 7: Percent Change in 0-17 Population by ZIP Code, 2017-2022

County	City/Town	ZIP Code	Population 17 and Younger 2017	Projected Population 17 and Younger 2022	Percent Change 2017 - 2022
Cuyahoga	Cleveland	44114	790	889	12.5%
Cuyahoga	Cleveland	44113	3,420	3,545	3.7%
Cuyahoga	Cleveland	44106	4,407	4,459	1.2%
Cuyahoga	Cleveland	44115	2,998	3,022	0.8%
Cuyahoga	Cleveland	44112	4,728	4,725	-0.1%
Cuyahoga	Cleveland	44104	7,213	7,097	-1.6%
Cuyahoga	Cleveland	44118	9,318	9,156	-1.7%
Cuyahoga	Cleveland	44109	9,470	9,210	-2.7%
Cuyahoga	Euclid	44117	1,700	1,646	-3.2%
Cuyahoga	Cleveland	44128	6,115	5,918	-3.2%
Cuyahoga	Cleveland	44103	3,704	3,573	-3.5%
Cuyahoga	Cleveland	44110	4,548	4,382	-3.6%
Cuyahoga	Cleveland	44120	8,197	7,894	-3.7%
Cuyahoga	Cleveland	44108	5,787	5,543	-4.2%
Cuyahoga	Cleveland	44105	9,435	9,013	-4.5%
Cuyahoga	Cleveland	44121	7,000	6,679	-4.6%
Cuyahoga	Beachwood	44122	6,704	6,335	-5.5%
Cuyahoga	Cleveland	44127	1,394	1,313	-5.8%
Community Total			**96,928**	**94,399**	**-2.6%**

Source: Truven Market Expert, 2018.

Description

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

Observations

- Between 2017 and 2022, the 0-17 population in 14 of 18 ZIP codes is projected to decrease. In total, the 0-17 population is expected to decrease by 2.6 percent between 2017 and 2022. For reference, the 0-17 population across Northeast Ohio (21-County community) is projected to decrease 4.0 percent over this time.

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

Age/Sex Cohort	Estimated Population 2017	Projected Population 2022	Percent Change 2017 - 2022
0 - 17	96,928	94,399	-2.6%
Female 18 - 34	53,491	49,752	-7.0%
Male 18 - 34	51,531	49,856	-3.3%
35 - 64	155,123	149,810	-3.4%
65+	67,926	75,421	11.0%
Community Total	**424,999**	**419,238**	**-1.4%**

Source: Truven Market Expert, 2018.

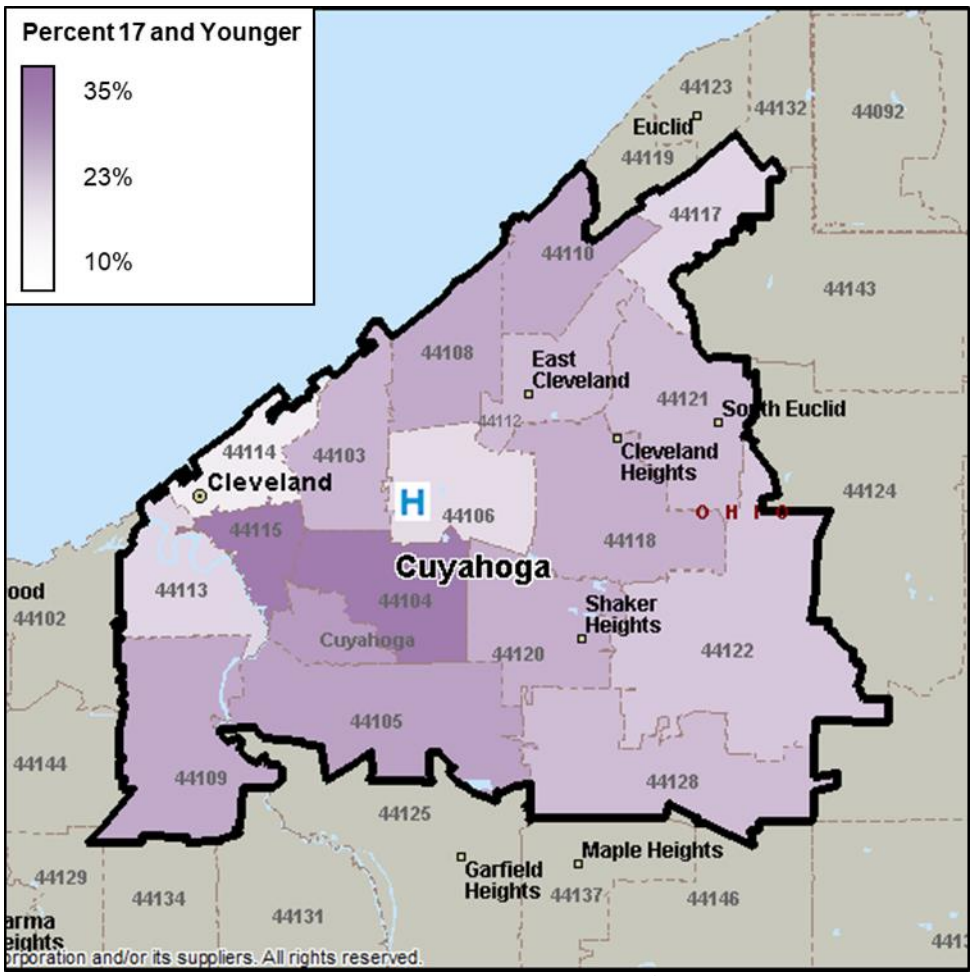
Description

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

Observations

- The total community population is expected to decrease by 1.4 percent between 2017 and 2022. The number of persons aged 0-17 is expected to decrease by 2.6 percent.

Exhibit 9: Percent of Population Aged 0-17 by ZIP Code, 2017



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

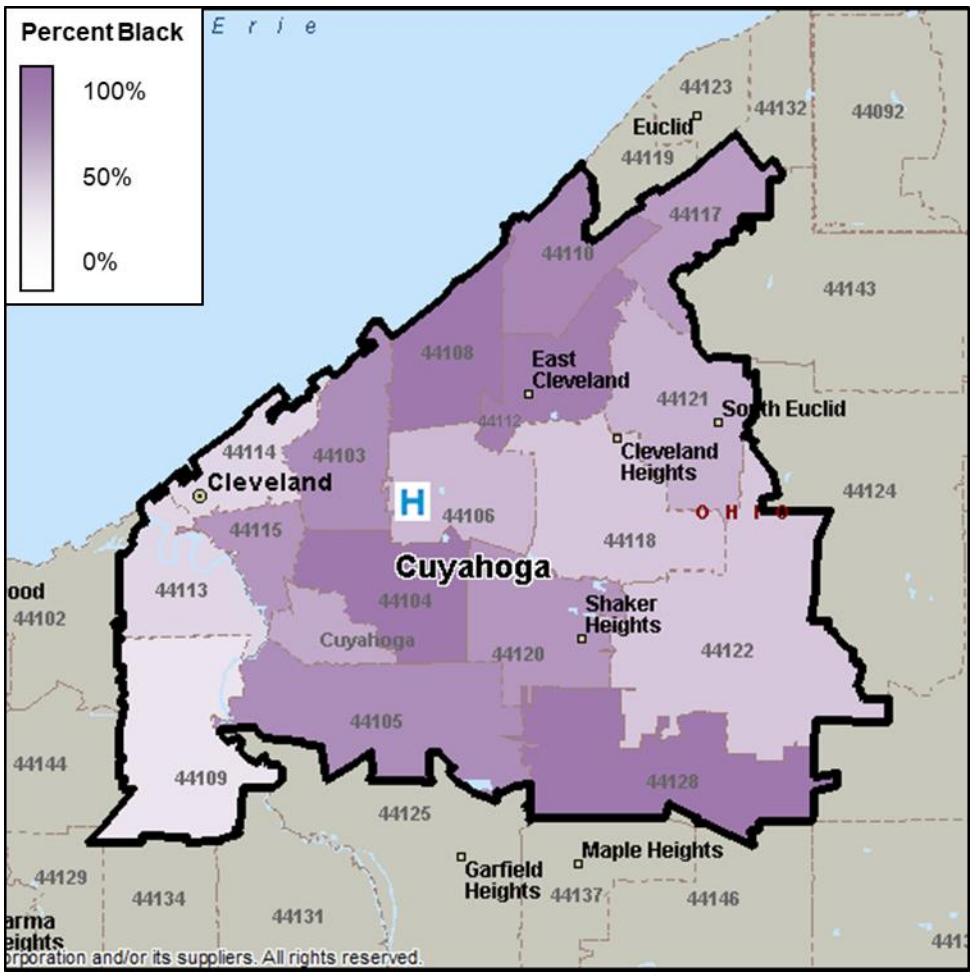
Description

Exhibit 9 portrays the percent of the population 0-17 by ZIP code.

Observations

- ZIP codes 44115 and 44104 have the highest proportions of the population 0-17, each over 30 percent.

Exhibit 10: Percent of Population - Black, 2017



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

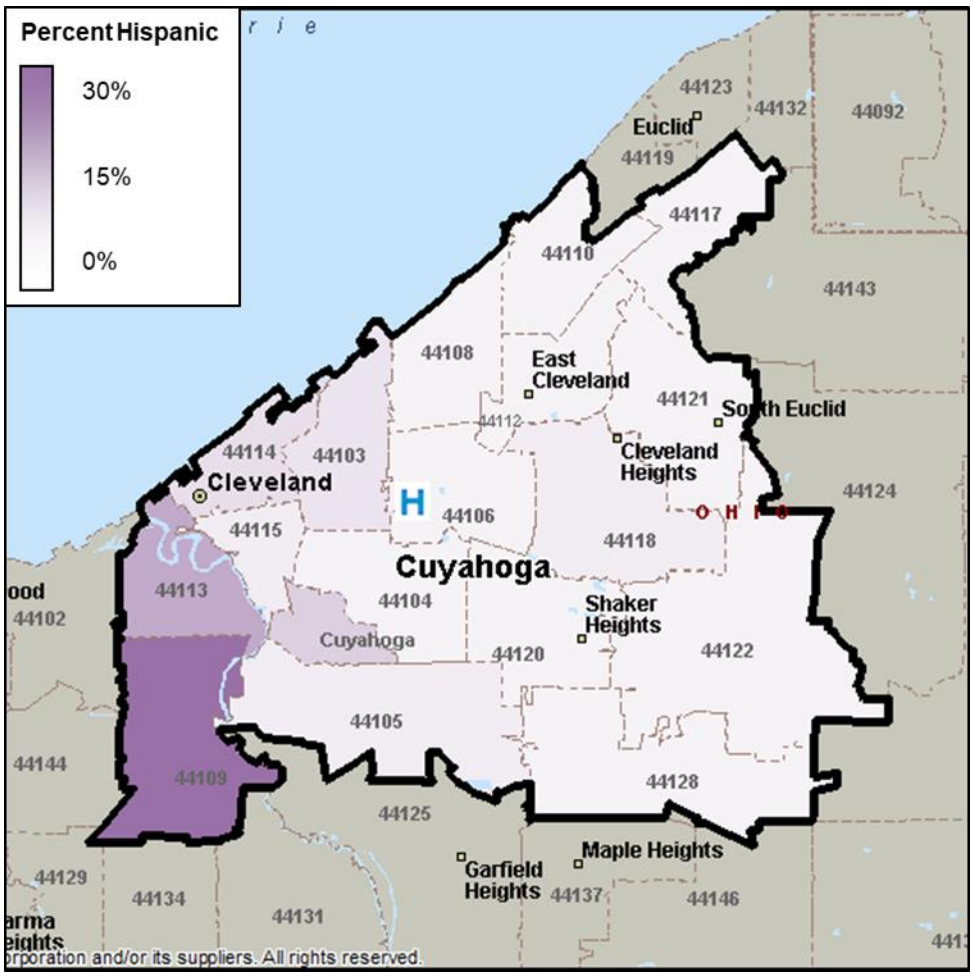
Description

Exhibit 10 portrays locations where the percentages of the population that are Black were highest in 2017.

Observations

- In four ZIP codes, over 90 percent of residents were Black (44104, 44128, 44108, and 44112).
- In 2017, the percentage of residents who are Black was above 50 percent in 12 of 18 ZIP codes.

Exhibit 11: Percent of Population – Hispanic (or Latino), 2017



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

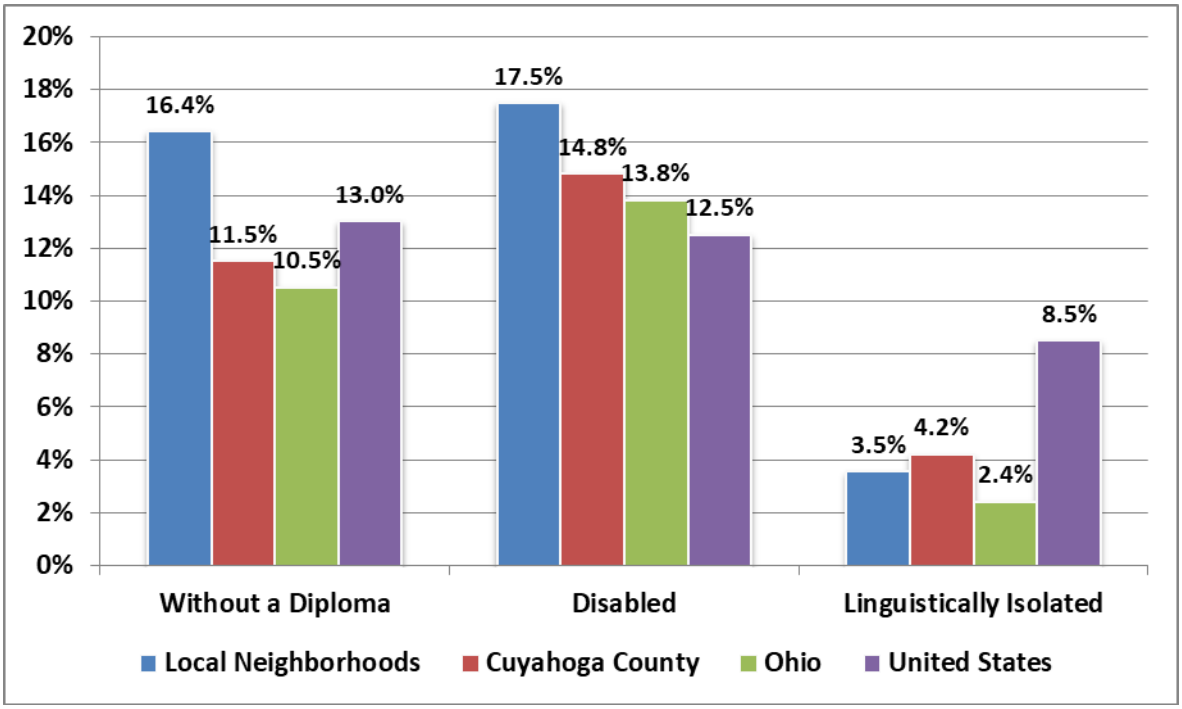
Description

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

Observations

- The percentage of residents that are Hispanic (or Latino) was highest in ZIP codes 44109 (29 percent) and 44113 (18percent).
- All other Local Neighborhoods community ZIP codes were below ten percent.

Exhibit 12: Other Socioeconomic Indicators, 2012-2016



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

Description

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

Observations

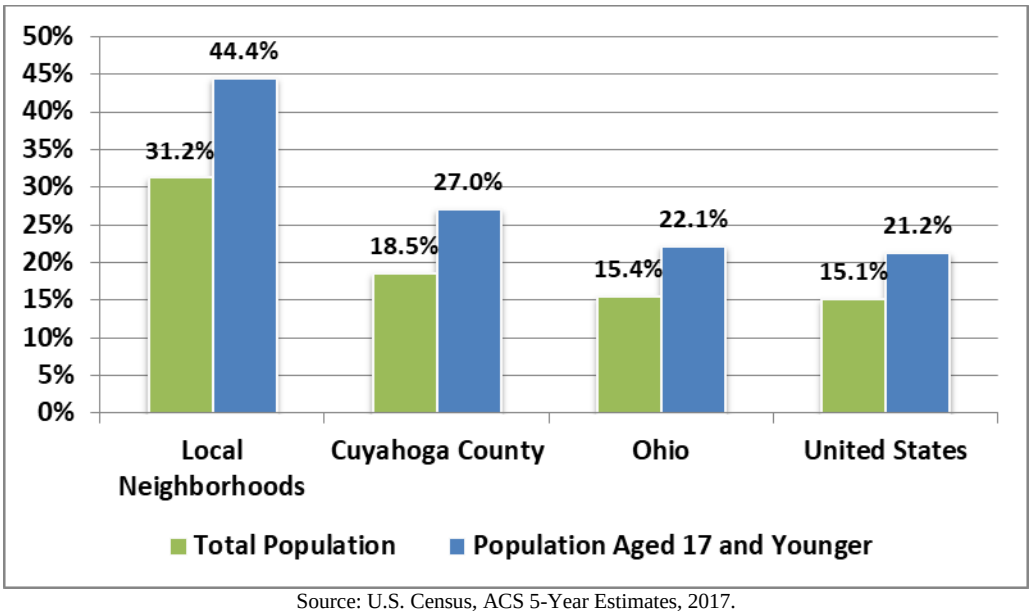
- About 16 percent of Local Neighborhoods community residents (aged 25 years and above) are without a high school diploma, a level well above average.
- Rates of disability also have been above average in the Local Neighborhoods community and in Cuyahoga County.
- Compared to Ohio (but not to the United States), Cuyahoga County had a slightly higher proportion of the population that is linguistically isolated. Linguistic isolation is defined as residents who speak a language other than English and speak English less than "very well."

Economic indicators

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

People in Poverty

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



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

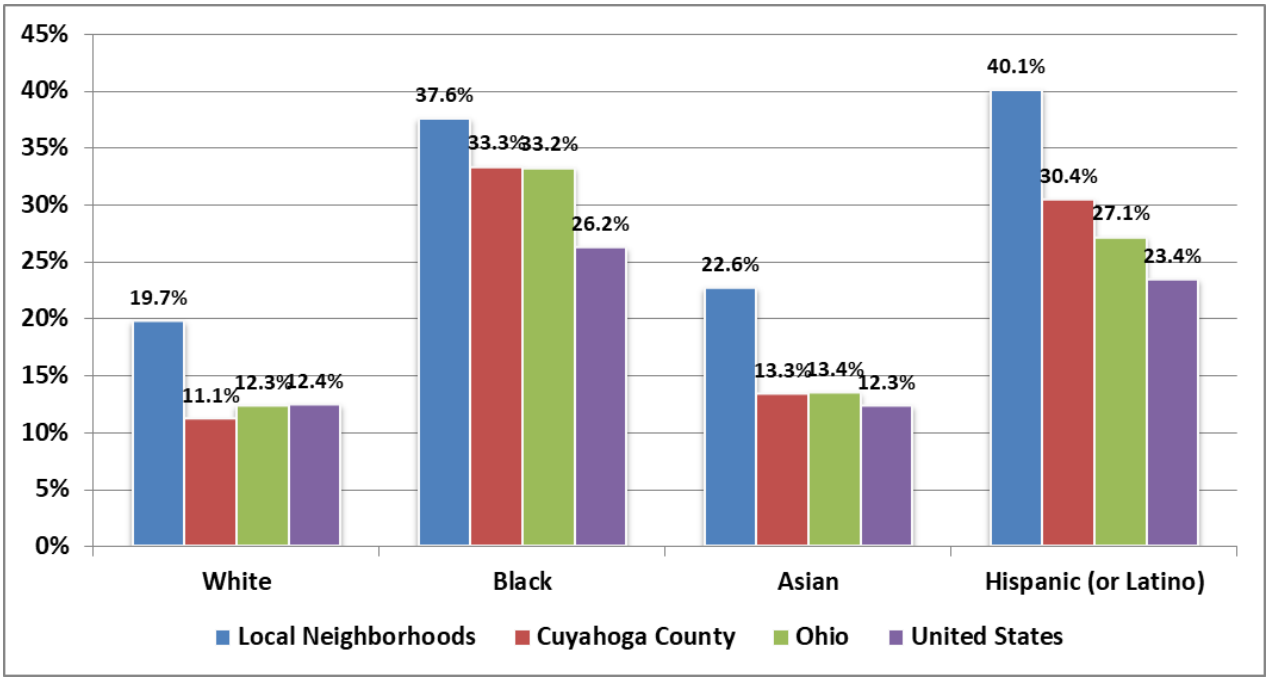
Description

Exhibit 13 portrays poverty rates by county for the 0-17 and total populations.

Observations

- Local Neighborhoods community poverty rates were higher than Cuyahoga County, Ohio, and national averages throughout 2012-2016.

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



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

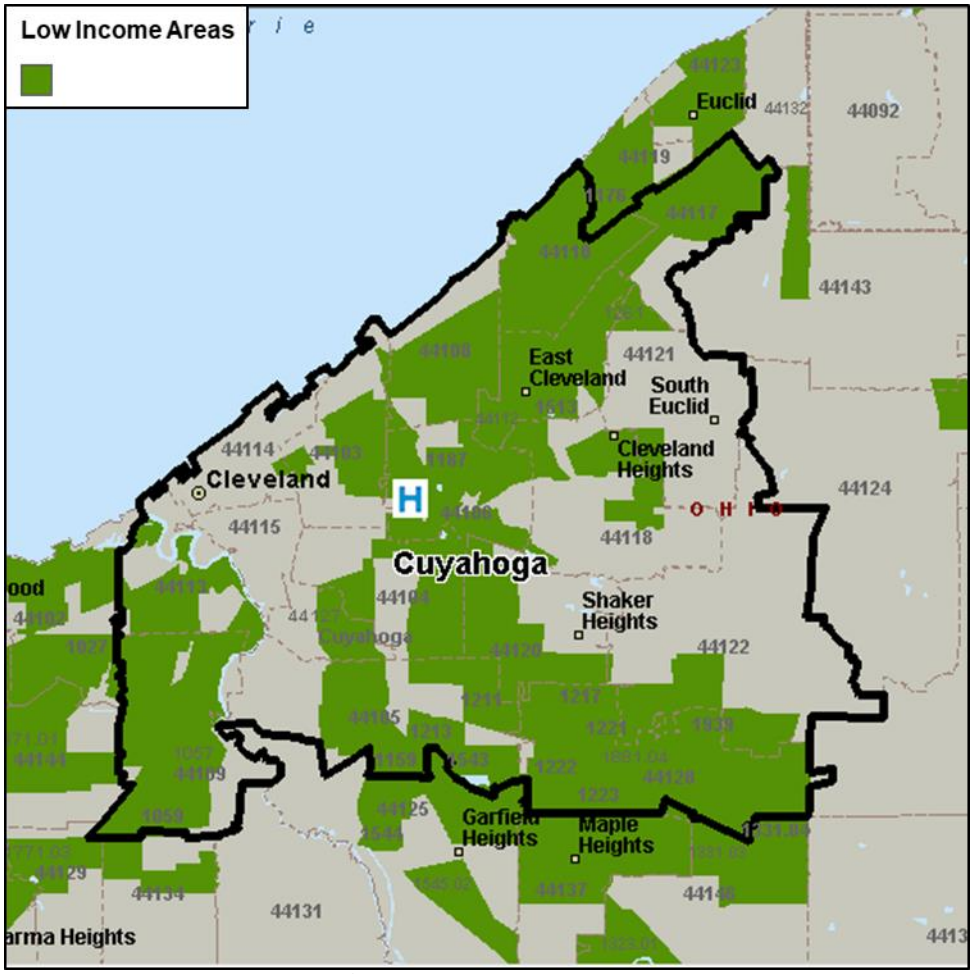
Description

Exhibit 14 portrays poverty rates by race and ethnicity.

Observations

- Poverty rates have been higher for Black and Hispanic (or Latino) residents than for Whites.
- The poverty rate for Black residents in Cuyahoga County (33.3 percent) has been higher than poverty rates for Black individuals across Ohio (33.2 percent) and the United States (26.2 percent).

Exhibit 15: Low Income Census Tracts, 2017



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

Description

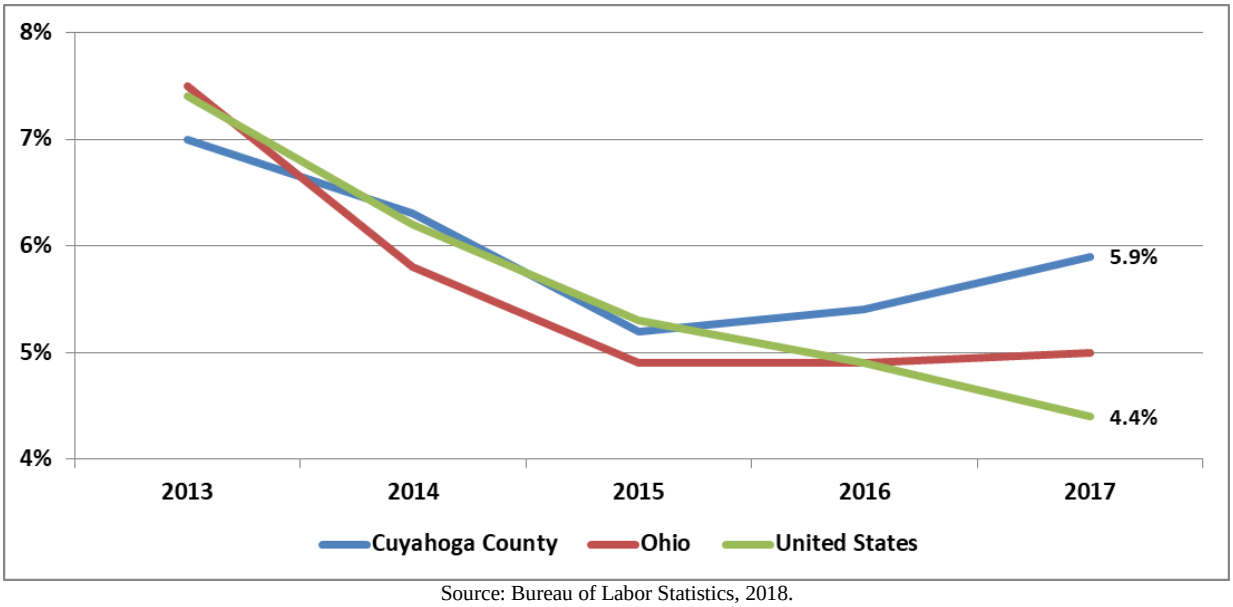
Exhibit 15 portrays the location of federally-designated low income census tracts.

Observations

- Low income census tracts have been present throughout the Local Neighborhoods community.

Unemployment

Exhibit 16: Unemployment Rates, 2013-2017



Source: Bureau of Labor Statistics, 2018.

Description

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

Observations

- Between 2012 and 2015, unemployment rates at the local, state, and national levels declined significantly. Between 2015 and 2017, unemployment rates increased slightly in Cuyahoga County.

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

Insurance Status

Exhibit 17: Percent without Health Insurance, 2012-2016

County	City/Town	ZIP Code	Total Population	Uninsured Percent	Children	Children Uninsured Percent
Cuyahoga	Cleveland	44115	7,641	9.4%	2,390	0.5%
Cuyahoga	Cleveland	44104	21,351	12.7%	7,180	3.3%
Cuyahoga	Cleveland	44103	16,005	14.7%	4,039	4.5%
Cuyahoga	Cleveland	44114	6,434	17.1%	334	2.1%
Cuyahoga	Cleveland	44106	24,757	7.7%	3,620	2.8%
Cuyahoga	Cleveland	44110	19,369	13.8%	4,325	7.5%
Cuyahoga	Cleveland	44127	5,076	13.3%	1,446	5.8%
Cuyahoga	Cleveland	44108	22,441	10.7%	5,306	2.5%
Cuyahoga	Cleveland	44112	21,789	10.7%	4,977	7.0%
Cuyahoga	Euclid	44117	9,557	10.9%	1,747	4.8%
Cuyahoga	Cleveland	44105	37,741	13.5%	10,131	2.5%
Cuyahoga	Cleveland	44113	17,533	8.9%	2,910	0.6%
Cuyahoga	Cleveland	44120	34,105	9.4%	7,439	2.6%
Cuyahoga	Cleveland	44109	41,630	12.1%	10,432	2.9%
Cuyahoga	Cleveland	44128	28,244	9.3%	6,114	3.4%
Cuyahoga	Cleveland	44118	39,722	5.9%	9,028	2.9%
Cuyahoga	Cleveland	44121	32,541	8.0%	7,158	4.6%
Cuyahoga	Beachwood	44122	32,695	3.7%	7,657	1.6%
Community Total			**418,631**	**10.0%**	**96,233**	**3.3%**

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

Description

Exhibit 17 presents the estimated percent of total and child populations without health insurance (uninsured) in 2016.

Observations

- In 2016, the average "uninsurance rate" for all age groups was 10.0 percent in the Local Neighborhoods community. The child uninsurance rate was 3.3 percent.

- Subsequent to the ACA's passage, a June 2012 Supreme Court ruling provided states with discretion regarding whether or not to expand Medicaid eligibility. Ohio was one of the states that expanded Medicaid. Across the United States, uninsurance rates have fallen most in states that decided to expand Medicaid.[13]

[13] See: http://hrms.urban.org/briefs/Increase-in-Medicaid-under-the-ACA-reduces-uninsurance.html

Crime Rates

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

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

Source: FBI, 2017.

Description

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

Observations

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

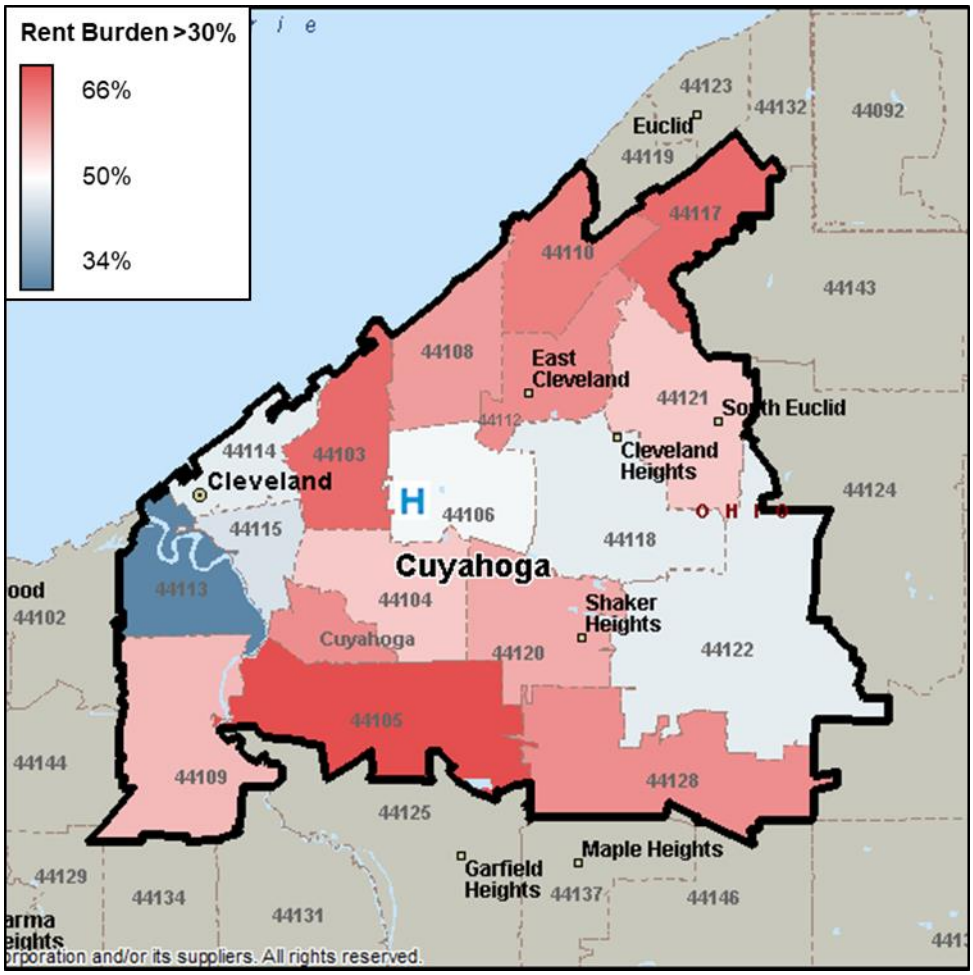
Housing Affordability

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

County	City/Town	ZIP Code	Occupied Units Paying Rent	Households Paying >30%	Rent Burden > 30% of Income
Cuyahoga	Cleveland	44105	7,182	4,689	65.3%
Cuyahoga	Euclid	44117	2,597	1,636	63.0%
Cuyahoga	Cleveland	44103	4,185	2,593	62.0%
Cuyahoga	Cleveland	44110	5,142	3,141	61.1%
Cuyahoga	Cleveland	44127	1,180	708	60.0%
Cuyahoga	Cleveland	44128	5,469	3,246	59.4%
Cuyahoga	Cleveland	44112	5,346	3,171	59.3%
Cuyahoga	Cleveland	44108	4,223	2,449	58.0%
Cuyahoga	Cleveland	44120	8,325	4,798	57.6%
Cuyahoga	Cleveland	44109	8,491	4,702	55.4%
Cuyahoga	Cleveland	44121	4,362	2,401	55.0%
Cuyahoga	Cleveland	44104	5,239	2,857	54.5%
Cuyahoga	Cleveland	44106	6,824	3,361	49.3%
Cuyahoga	Cleveland	44114	3,076	1,476	48.0%
Cuyahoga	Cleveland	44118	5,793	2,752	47.5%
Cuyahoga	Beachwood	44122	4,529	2,143	47.3%
Cuyahoga	Cleveland	44115	2,901	1,346	46.4%
Cuyahoga	Cleveland	44113	6,476	2,202	34.0%
Community Total			91,340	49,671	54.4%
Ohio			1,453,379	678,101	46.7%
United States			39,799,272	20,138,321	50.6%

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

Exhibit 20: Map of Percent of Rented Households Rent Burdened, 2013-2017



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

Description

The U.S. Department of Housing and Urban Development ("HUD") has defined households that are "rent burdened" as those spending more than 30 percent of income on housing.[14] On that basis and based on data from the U.S. Census, Exhibits 19 and 20 portray the percentage of rented households in each ZIP code that are rent burdened.

Observations

As stated by the Federal Reserve, "households that have little income left after paying rent may not be able to afford other necessities, such as food, clothes, health care, and transportation."[15]

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

[15] *Ibid.*

- Over 54 percent of households have been designated as "rent burdened," a level above the Ohio average.

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

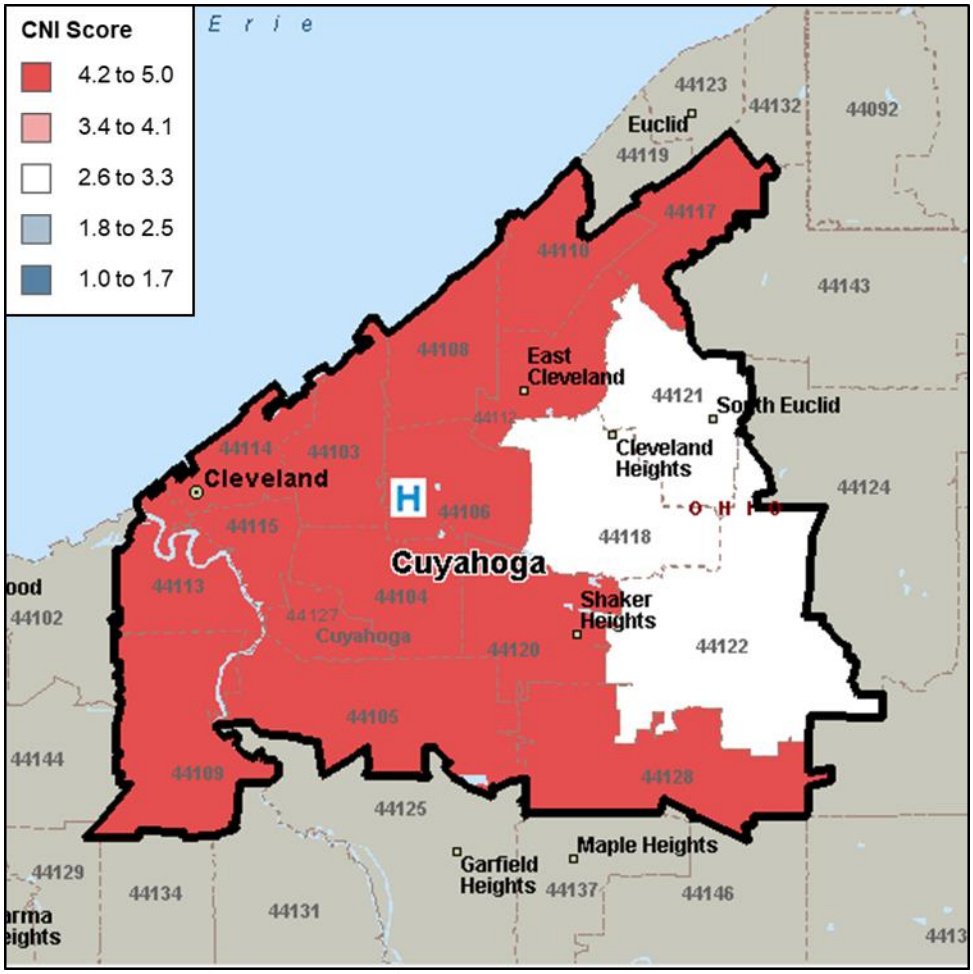
Dignity Health Community Need Index

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

County	City/Town	ZIP Code	CNI Score
Cuyahoga	Cleveland	44103	5.0
Cuyahoga	Cleveland	44104	5.0
Cuyahoga	Cleveland	44105	5.0
Cuyahoga	Cleveland	44108	5.0
Cuyahoga	Cleveland	44115	5.0
Cuyahoga	Cleveland	44127	5.0
Cuyahoga	Cleveland	44109	4.8
Cuyahoga	Cleveland	44110	4.8
Cuyahoga	Cleveland	44113	4.8
Cuyahoga	Cleveland	44114	4.8
Cuyahoga	Cleveland	44106	4.6
Cuyahoga	Cleveland	44112	4.6
Cuyahoga	Euclid	44117	4.6
Cuyahoga	Cleveland	44120	4.4
Cuyahoga	Cleveland	44128	4.2
Cuyahoga	Cleveland	44118	3.2
Cuyahoga	Cleveland	44121	3.0
Cuyahoga	Beachwood	44122	3.0
Community Average			**4.3**
Cuyahoga County Average			3.3

Source: Dignity Health, 2018.

Exhibit 22: Community Need Index, 2018



Source: Microsoft MapPoint and Dignity Health, 2018.

Description

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

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

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

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

Observations

- Fifteen (15) of the 18 ZIP codes in the Local Neighborhoods community scored in the “highest need” category. Six ZIP codes scored 5.0, the highest possible value.

- At 4.3, the weighted average CNI score for the Local Neighborhoods community is significantly above the U.S. median of 3.0.

Exhibit 23: Statistics Arrayed by CNI Range, Cuyahoga County

Indicators	Highest Need	<== CNI Range ==>			Lowest Need
	4.2-5.0	3.4-4.1	2.6-3.3	1.8-2.5	1.0-1.7
Demographic Characteristics					
ZIP Codes	17	8	8	10	8
Total Persons	387,943	181,185	291,614	262,222	132,817
Poverty Rate	37%	18%	12%	6%	4%
Total Children	88,795	39,548	58,927	51,309	30,455
Child Poverty Rate	53%	27%	16%	7%	4%
Percent Population Children	23%	22%	20%	20%	23%
% African American	59%	40%	17%	5%	4%
Low birth weight (per 1,000 births)	196	114	76	65	47

Source: Verité Analysis.
Note: Data not available for 4 Cuyahoga County ZIP codes

Description

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

Observations

- ZIP codes found to be higher need are associated with higher rates of poverty, higher rates of child poverty, a higher proportion of the population Black, and higher rates of admissions for hospital admissions for Low Birth Weight Births.

Other Local Health Status and Access Indicators

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

(1) County Health Rankings
(2) Community Health Status Indicators, published by County Health Rankings
(3) Ohio Department of Health
(4) Youth Risk Behavior Survey.

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

County Health Rankings

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

Measure	Cuyahoga County	
	2015	2018
Health Outcomes	65	60
Health Factors	50	62
Length of Life	51	48
Quality of Life	72	67
Poor physical health days	24	24
Poor mental health days	49	12
Low birthweight	87	88
Health Behaviors	36	49
Food environment index	75	71
Access to exercise opportunities	3	2
Teen births	51	47
Clinical Care	6	4
Primary care physicians	2	2
Dentists	1	1
Mental health providers	2	3
Social & Economic Factors	78	79
High school graduation	85	83
Unemployment	51	52
Children in poverty	68	72
Income inequality	86	85
Children in single-parent households	88	86
Social associations	79	77
Violent crime	85	85
Injury deaths	31	47
Physical Environment	68	86
Air pollution	63	87
Severe housing problems	87	87

Source: County Health Rankings, 2018.

Description

Exhibit 24 presents *County Health Rankings*, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation that incorporates a variety of health status indicators into a system that ranks each county/city within each state in terms of "health factors" and "health outcomes." These health factors and outcomes are composite measures based on several variables grouped into the following categories: health behaviors,

clinical care,[16] social and economic factors, and physical environment.[17] *County Health Rankings* is updated annually. *County Health Rankings 2018* relies on data from 2006 to 2017, with most data from 2011 to 2016.

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

Observations

- In 2018, Cuyahoga County ranked in the bottom 50th percentile among Ohio counties for 20 of the 27 indicators presented. Of those, 13 were in the bottom quartile, including low birthweight births, children in poverty, children in single-parent households, teen births, and others.

- Cuyahoga County ranked last (or close to last) for:

    - Low birthweight births,
    - High school graduation rates,
    - Income inequality,
    - Children in single-parent households,
    - Violent crime,
    - Air pollution, and
    - Severe housing problems.

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

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

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

Indicator Category	Data	Cuyahoga County	Ohio	United States
Health Outcomes				
Length of Life	Years of potential life lost before age 75 per 100,000 population	8,037	**7,734**	6,700
Quality of Life	Average number of physically unhealthy days reported in past 30 days	3.7	**4.0**	3.7
	Average number of mentally unhealthy days reported in past 30 days	3.7	**4.3**	3.8
	Percent of live births with low birthweight (<2500 grams)	10.6%	**8.6%**	8.0%
Health Factors				
Health Behaviors				
Food Environment Index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	7.0	**6.6**	7.7
Access to Exercise Opportunities	Percent of population with adequate access to locations for physical activity	96.1%	**84.7%**	83.0%
Teen Births	Teen birth rate per 1,000 female population, ages 15-19	30.3	**27.6**	27.0
Clinical Care				
Primary Care Physicians	Ratio of population to primary care physicians	898:1	**1,307:1**	1,320:1
Dentists	Ratio of population to dentists	979:1	**1,656:1**	1,480:1
Mental Health Providers	Ratio of population to mental health providers	356:1	**561:1**	470:1
Social & Economic Factors				
High School Graduation	Percent of ninth-grade cohort that graduates in four years	74.8%	**81.2%**	83.0%
Unemployment	Percent of population age 16+ unemployed but seeking work	5.4%	**4.9%**	4.9%
Children in Poverty	Percent of children under age 18 in poverty	26.4%	**20.4%**	20.0%
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	5.6	**4.8**	5.0
Children in Single-Parent Households	Percent of children that live in a household headed by single parent	45.0%	**35.7%**	34.0%
Social Associations	Number of associations per 10,000 population	9.3	**11.3**	9.3
Violent Crime	Number of reported violent crime offenses per 100,000 population	589	**290**	380
Injury Deaths	Injury mortality per 100,000	76.4	**75.5**	65.0
Physical Environment				
Air Pollution	The average daily measure of fine particulate matter in micrograms per cubic meter (PM2.5) in a county	12.9	**11.3**	8.7
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	18.5%	**15.0%**	19.0%

Source: County Health Rankings, 2018.

Description

Exhibit 25 provides data that underlie the County Health Rankings.[18] The exhibit also includes Ohio and national averages. Light grey shading highlights indicators found to be worse than the Ohio average; dark grey shading highlights indicators more than 50 percent worse than the Ohio average.

Observations

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

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

    - Air pollution (average daily PM2.5)
    - High school graduation rate
    - Income inequality ratio
    - Injury mortality rate
    - Percent of births with low birthweight
    - Percent of children in poverty
    - Percent of children in single-parent households
    - Percent of households with severe housing problems
    - Social associations rate
    - Teen birth rate
    - Unemployment
    - Years of potential life lost rate

- Ohio-wide indicators are worse than U.S. averages for virtually all of the indicators presented.

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

Community Health Status Indicators

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

Indicator	Cuyahoga County
Years of Potential Life Lost Rate	
Physically Unhealthy Days	
Mentally Unhealthy Days	
% Births - Low Birth Weight	
Food Environment Index	
% With Access to Exercise Opportunities	
Teen Birth Rate	
Primary Care Physicians Rate	
Dentist Rate	
Mental Health Professionals Rate	
High School Graduation Rate	
% Unemployed	
% Children in Poverty	
Income Ratio	
% Children in Single-Parent Households	
Social Association Rate	
Violent Crime Rate	
Injury Death Rate	
Average Daily PM2.5	
% Severe Housing Problems	

Source: Community Health Status Indicators, 2018.

Description

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

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

Exhibit 26 compares Cuyahoga County to its respective peer counties and highlights community health issues found to rank in the bottom half and bottom quartile of the counties included in the

analysis. Light grey shading indicates rankings in the bottom half of peer counties; dark grey shading indicates rankings in the bottom quartile of peer counties.

Observations

- The CHSI data indicate that Cuyahoga County compared unfavorably to its peers for the following indicators:
    - Percent of births with low birthweight
    - Air pollution (average daily PM2.5)

Ohio Department of Health

Exhibit 27: Maternal and Child Health Indicators, 2014-2018
(Light Grey Shading Denotes Indicators Worse than Ohio Average)

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

Source: Ohio Department of Health, 2018.

Description

Exhibit 27 presents various maternal and infant health indicators.

Observations

- All Cuyahoga County indicators were worse than Ohio averages.

Exhibit 28: Infant Mortality Rates by County, 2010-2016 and for Ohio, 2016 (Light Grey Shading Denotes Indicators Worse than Ohio Average)

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

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

Description

Exhibit 28 presents infant mortality rates by race and ethnicity by county and for Ohio.

Observations

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

Youth Risk Behavior Survey

Exhibit 29: Cuyahoga County Youth Risk Behavior Survey, Middle School Students, 2016 (Light Grey Shading Denotes Indicators Worse than Cuyahoga Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Cuyahoga Average)

Category	Risk Behavior	Female	Male	White	Black	Hispanic	Cuyahoga County
Unintentional Injury Risks	Rarely or never wore a bicycle helmet	70.2%	74.3%	60.8%	88.9%	90.6%	72.4%
	Rarely or never wore a seatbelt	5.6%	7.9%	2.3%	12.1%	13.6%	6.8%
Violence	Carried a weapon	5.7%	15.6%	11.6%	8.5%	14.2%	10.8%
	Carried a weapon on school property	0.8%	1.6%	0.5%	1.7%	4.3%	1.2%
	In a physical fight	24.9%	41.7%	23.6%	47.1%	40.8%	33.6%
	Did not go to school because of safety concerns	9.5%	6.2%	5.8%	9.8%	14.5%	7.8%
	Harassed or picked on at school	28.5%	21.7%	27.1%	21.8%	25.3%	25.0%
	Electronically bullied	27.5%	14.3%	21.6%	19.5%	20.9%	20.7%
Depressive Symptoms and Suicide	Felt sad or hopeless	30.8%	14.4%	21.2%	22.3%	33.8%	22.3%
	Seriously considered attempting suicide	18.4%	7.5%	11.1%	14.1%	21.1%	12.6%
Tobacco Use	Ever smoked cigarettes	8.8%	6.9%	5.3%	10.2%	16.7%	7.8%
	Current cigarette use	2.3%	1.9%	1.4%	2.4%	6.8%	2.1%
	Tried to quit smoking cigarettes	24.9%	20.3%	21.7%	21.3%	27.8%	22.4%
	Current cigar use	5.1%	4.0%	1.4%	8.5%	9.9%	4.5%
	Current hookah use	3.2%	2.6%	1.5%	3.8%	9.6%	2.9%
	Used first tobacco product before age 11 years	3.0%	4.4%	1.8%	5.8%	7.6%	3.7%
	Current electronic vapor product use	5.2%	5.5%	4.2%	5.7%	12.9%	5.4%
Alcohol Use	Ever used alcohol	22.1%	20.7%	14.0%	31.0%	38.4%	21.4%
	Drank alcohol before age 11 years	5.8%	6.4%	3.4%	9.6%	11.9%	6.1%
	Current alcohol use	8.9%	6.6%	5.3%	10.2%	16.2%	7.8%
Other Drug Use	Ever used marijuana	8.0%	9.4%	3.8%	15.2%	16.3%	8.7%
	Tried marijuana before age 11 years	0.9%	2.4%	0.6%	2.6%	5.0%	1.7%
	Current marijuana use	5.0%	5.2%	2.2%	8.5%	10.9%	5.1%
	Ever used inhalants	5.8%	5.1%	3.1%	7.5%	12.5%	5.4%
	Ever used unauthorized prescription drugs	6.3%	7.4%	5.8%	7.5%	11.9%	6.9%
Sexual Behavior	Ever had sexual intercourse	4.4%	14.1%	3.4%	18.1%	13.7%	9.3%
	Currently sexually active	2.9%	7.6%	2.2%	9.6%	8.3%	5.3%
	Used a condom during last sexual intercourse	46.8%	64.4%	59.6%	63.4%	32.0%	59.3%
	Ever taught in school about AIDS or HIV infection	55.8%	60.5%	54.9%	66.1%	42.2%	58.2%

Source: Prevention Research Center at Case Western Reserve University, 2017.

Exhibit 29: Cuyahoga County Youth Risk Behavior Survey, Middle School Students, 2016 (*continued*)
(Light Grey Shading Denotes Indicators Worse than Cuyahoga Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Cuyahoga Average)

Category	Risk Behavior	Female	Male	White	Black	Hispanic	Cuyahoga County
Obesity and Weight Control	Obese	12.1%	14.2%	9.5%	18.4%	19.4%	13.2%
	Overweight	16.1%	15.6%	13.3%	19.6%	19.5%	15.9%
	Describes self as slightly or very overweight	28.1%	21.9%	25.3%	23.3%	28.7%	24.9%
	Trying to lose weight	49.3%	32.1%	38.3%	42.5%	47.8%	40.4%
Dietary Behavior	Ate fruits and vegetables five or more times	30.0%	29.3%	33.6%	23.8%	22.9%	29.6%
	Had a can, bottle, or glass of soda or pop one or more times	44.6%	52.5%	38.8%	62.2%	61.5%	48.7%
	Drank water at school every day	53.8%	59.5%	64.6%	47.0%	39.3%	56.6%
	Did not eat breakfast every day	64.3%	55.3%	51.6%	70.6%	70.4%	59.8%
	Ate fast food on one or more days	68.9%	69.2%	62.7%	78.8%	72.7%	69.1%
	Went hungry because there was not enough food in their home	14.6%	14.8%	12.8%	16.5%	19.7%	14.7%
	Took a multivitamin every day	11.6%	10.8%	14.2%	7.3%	7.2%	11.2%
Physical Activity	Participated in 60 or more minutes of physical activity on 5 or more days	45.2%	57.6%	61.2%	40.0%	28.3%	51.5%
	Did not participate in 60 or more minutes of physical activity on any day	13.8%	11.4%	6.7%	19.6%	24.6%	12.6%
	Watched television 3 or more hours per day	29.5%	26.8%	16.1%	45.9%	33.1%	28.1%
	Used computers 3 or more hours per day	45.7%	47.3%	39.9%	55.7%	54.5%	46.5%
	Played on one or more sports teams	68.0%	74.4%	76.8%	66.0%	52.0%	71.2%
	Walked or ride bike to or from school 3 or more days	30.0%	33.8%	30.1%	35.3%	30.3%	31.9%
Positive Youth Development	Spent at least one day in clubs or organizations outside of school	59.8%	52.5%	61.0%	50.8%	40.9%	56.1%
	Parents talk with student about school almost every day	57.4%	54.8%	59.3%	53.5%	43.7%	56.0%
	Students help decide what goes on in school	43.7%	43.8%	47.9%	38.5%	39.7%	43.8%
	Students feel like they matter to people in their community	40.9%	52.7%	48.8%	45.3%	41.2%	46.9%
	Supportive adult	84.5%	83.0%	85.0%	83.2%	77.7%	83.7%
	Obtained eight or more hours of sleep	46.6%	50.9%	52.8%	43.3%	43.7%	48.7%
	Described their grades in school as mostly A's and B's	79.3%	71.7%	86.1%	60.2%	62.2%	75.4%
Preventive Health	Saw a doctor or nurse for check-up	68.9%	68.4%	75.7%	60.2%	51.7%	68.6%
	Saw a doctor, nurse, therapist, social worker, or counselor for a mental health issue	32.4%	28.5%	26.9%	35.4%	34.4%	30.5%
	Saw a dentist for check-up, exam, teeth cleaning or other routine dental work	73.5%	71.1%	84.5%	56.5%	53.5%	72.3%
Other Health Behaviors	Changed homes one or more times	23.3%	26.0%	14.5%	39.2%	36.3%	24.7%
	Parent(s) or guardian(s) have been in prison or jail	8.5%	8.0%	3.4%	15.0%	14.9%	8.3%

Source: Prevention Research Center at Case Western Reserve University, 2017.

Exhibit 30: Cuyahoga County Youth Risk Behavior Survey, Middle School Students, Risk Behaviors by Demographic Cohort

Category	Number of Risk Behaviors	Female	Male	White	Black	Hispanic
Unintentional Injury Risks	2 Risk Behaviors	0%	100%	0%	100%	100%
Violence	6 Risk Behaviors	50%	50%	50%	50%	100%
Depressive Symptoms and Suicide	2 Risk Behaviors	100%	0%	0%	50%	100%
Tobacco Use	7 Risk Behaviors	57%	43%	14%	100%	86%
Alcohol Use	3 Risk Behaviors	67%	33%	0%	100%	100%
Other Drug Use	5 Risk Behaviors	20%	80%	0%	100%	100%
Sexual Behavior	4 Risk Behaviors	50%	50%	25%	50%	100%
Obesity and Weight Control	4 Risk Behaviors	75%	25%	25%	75%	100%
Dietary Behavior	7 Risk Behaviors	29%	71%	0%	100%	100%
Physical Activity	6 Risk Behaviors	83%	17%	17%	83%	100%
Positive Youth Development	7 Risk Behaviors	43%	57%	0%	100%	100%
Preventive Health	3 Risk Behaviors	0%	100%	33%	67%	67%
Other Health Behaviors	2 Risk Behaviors	50%	50%	0%	100%	100%

Description

Exhibit 29 depicts Youth Risk Behavior Survey (YRBS) data for Cuyahoga County middle school students and by demographic cohort. Exhibit 30 aggregates the different risk behaviors presented in Exhibit 30 by demographic cohort.

Observations

- The YRBS data indicate that in Cuyahoga County, Hispanic middle school students have had the most "risk behaviors."
- Black middle school students also have been more likely to experience risks associated with unintentional injury, tobacco use, alcohol use, obesity, and other behaviors.

Exhibit 31: Cuyahoga County Youth Risk Behavior Survey, High School Students, 2017
(Light Grey Shading Denotes Indicators Worse than Cuyahoga Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Cuyahoga Average)

Category	Risk Behavior	Female	Male	White	Black	Hispanic	Cuyahoga County
Unintentional Injury Risks	Rarely or never wore a bicycle helmet	85.1%	88.1%	81.1%	94.9%	93.4%	86.8%
	Rarely or never wore a seatbelt	9.4%	12.6%	5.2%	17.5%	15.5%	11.1%
	Rode with a driver who had been drinking alcohol	23.4%	20.1%	17.8%	25.5%	29.4%	21.7%
	Drove a car or vehicle when student had been drinking alcohol	6.6%	9.0%	6.6%	8.7%	13.7%	7.9%
	Texted or e-mailed while driving	38.1%	36.9%	43.3%	29.3%	32.0%	37.5%
Violence	Carried a weapon	8.4%	18.4%	11.8%	14.8%	19.3%	13.7%
	Could get and be ready to fire a loaded gun	31.3%	50.5%	41.4%	40.7%	46.0%	41.4%
	Did not go to school because of safety concerns	12.1%	9.0%	6.5%	14.7%	13.8%	10.6%
	Threatened or injured with a weapon, on school property	7.3%	10.4%	7.0%	10.3%	13.2%	9.0%
	In a physical fight	20.9%	31.4%	17.7%	36.2%	30.1%	26.4%
	Forced to have sexual intercourse	9.2%	5.2%	6.0%	7.7%	13.0%	7.2%
	Forced to do sexual things by someone they were dating or going out with	16.3%	8.9%	12.6%	11.6%	15.2%	12.6%
	Physically injured by someone they were dating or going out with	11.3%	9.2%	8.4%	12.1%	11.7%	10.3%
	Bullied on school property	19.7%	15.3%	21.0%	12.4%	19.5%	17.4%
	Electronically bullied	18.0%	11.5%	18.1%	9.7%	17.2%	14.7%
Depressive Symptoms and Suicide	Purposely hurt self without wanting to die	24.1%	13.0%	19.7%	15.5%	26.1%	18.4%
	Felt sad or hopeless	41.1%	21.3%	30.7%	29.8%	42.7%	30.9%
	Seriously considered attempting suicide	22.7%	12.4%	17.0%	17.4%	21.7%	17.4%
	Attempted suicide	13.1%	10.1%	8.1%	14.4%	20.4%	11.6%
	Knew someone who completed suicide	37.2%	26.6%	36.9%	23.9%	36.4%	31.6%
Tobacco Use	Ever smoked cigarettes	20.5%	20.2%	23.5%	15.7%	26.2%	20.4%
	Current cigarette use	5.7%	6.7%	8.7%	2.8%	7.4%	6.2%
	Smoked more than 10 cigarettes	5.8%	13.5%	6.1%	14.7%	16.6%	10.3%
	Current cigar use	12.3%	13.7%	10.3%	16.5%	14.7%	13.1%
	Smoked more than 10 cigars, cigarillos, little cigars, or flavored cigars per day	4.1%	8.2%	3.8%	7.4%	15.7%	6.5%
	Current use of tobacco in a waterpipe	6.9%	7.7%	6.1%	8.0%	12.1%	7.4%
	Tried first tobacco product before age 13 years	9.5%	12.2%	7.5%	15.1%	18.2%	10.9%
	Ever tried to quit using all tobacco products	45.7%	40.3%	40.8%	44.5%	48.3%	42.8%
	Ever used an electronic vapor product	35.1%	35.9%	39.4%	29.1%	47.4%	37.8%
	Current electronic vapor product use	15.0%	16.3%	19.6%	9.9%	19.4%	15.7%

Source: Prevention Research Center at Case Western Reserve University, 2018.

Exhibit 31: Cuyahoga County Youth Risk Behavior Survey, High School Students, 2017 (*continued*)
(Light Grey Shading Denotes Indicators Worse than Cuyahoga Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Cuyahoga Average)

Category	Risk Behavior	Female	Male	White	Black	Hispanic	Cuyahoga County
Alcohol Use	Ever used alcohol	64.4%	52.4%	61.1%	54.0%	64.8%	58.3%
	Drank alcohol before age 13 years	14.5%	16.0%	12.6%	18.2%	23.0%	15.3%
	Current alcohol use	36.1%	25.6%	35.6%	24.0%	36.4%	30.7%
	Had 4 or more drinks in a row (female) or 5 or more drinks (male) within a couple of hours	18.0%	14.9%	19.7%	11.5%	20.2%	16.4%
Marijuana Use	Ever used marijuana	42.4%	38.3%	35.4%	47.5%	42.9%	40.3%
	Tried marijuana before age 11 years	6.5%	10.3%	4.7%	12.7%	13.3%	8.5%
	Current marijuana use	26.7%	22.8%	21.4%	29.6%	24.3%	24.7%
	Usually smoked marijuana in a blunt	63.5%	55.2%	39.1%	77.3%	64.8%	59.6%
Other Drug Use	Ever used prescription pain medicine without a doctor's prescription or differently than how a doctor prescribed	14.1%	13.0%	11.2%	15.5%	20.4%	13.6%
	Ever used synthetic drugs	6.5%	7.9%	5.3%	9.0%	11.4%	7.3%
	Ever used an illicit drug	5.0%	8.5%	6.3%	7.0%	9.8%	6.9%
	Offered, sold, or given illegal drugs on school property	15.8%	19.2%	15.1%	20.1%	20.3%	17.6%
Sexual Behavior	Ever had sexual intercourse	37.1%	43.0%	32.2%	51.4%	45.9%	40.0%
	Had sexual intercourse before age 13 years	1.7%	8.1%	1.5%	9.6%	6.6%	4.9%
	Had sexual intercourse with 4 or more people	6.6%	12.9%	5.9%	15.4%	9.2%	9.8%
	Currently sexually active	27.0%	29.4%	23.6%	35.1%	32.7%	28.2%
	Drank alcohol or used drugs before having sexual intercourse	19.0%	17.6%	19.4%	16.7%	20.2%	18.3%
	Used a condom during last sexual intercourse	48.9%	62.0%	60.4%	51.8%	53.3%	55.7%
	Been pregnant or gotten someone pregnant	2.9%	2.8%	1.2%	4.9%	4.3%	2.9%
	Ever been taught about AIDS or HIV infection in school	82.5%	79.9%	86.4%	76.0%	69.6%	81.1%
	Ever been tested for HIV, the virus that causes AIDS	13.5%	14.2%	9.9%	18.7%	19.0%	13.9%
	Adults in family have talked about expectations with students about sex	63.5%	56.6%	55.6%	67.1%	61.1%	60.0%
Obesity and Weight Control	Obese	12.4%	18.2%	12.4%	19.0%	20.9%	15.5%
	Overweight	18.4%	17.2%	15.7%	20.5%	18.4%	17.8%
	Describes self as slightly or very overweight	37.7%	24.9%	31.9%	30.0%	32.6%	31.1%
	Trying to lose weight	57.9%	31.2%	45.0%	42.4%	48.5%	44.1%

Source: Prevention Research Center at Case Western Reserve University, 2018.

Exhibit 31: Cuyahoga County Youth Risk Behavior Survey, High School Students, 2017 (*continued*)
(Light Grey Shading Denotes Indicators Worse than Cuyahoga Average; Dark Grey Denotes Any Indicators More than 50 Percent Worse than Cuyahoga Average)

Category	Risk Behavior	Female	Male	White	Black	Hispanic	Cuyahoga County
Dietary Behavior	Ate fruits and vegetables 5 or more times per day	18.6%	20.3%	19.0%	19.4%	19.9%	19.5%
	Drank water at school every day	58.9%	56.8%	66.0%	48.1%	46.1%	57.7%
	Did not eat breakfast every day	72.8%	70.6%	63.9%	82.0%	78.6%	71.7%
	Ate fast food meal or snack on 1 or more days	69.0%	73.4%	66.0%	78.1%	77.1%	71.2%
	Went hungry because there was not enough food in their home	17.7%	19.0%	14.8%	22.3%	24.9%	18.4%
Physical Activity	Participated in 60 or more minutes of physical activity on 5 or more days	33.8%	47.7%	47.0%	33.5%	32.4%	40.9%
	Did not participate in 60 or more minutes of physical activity on any day	20.8%	15.0%	12.6%	24.4%	24.4%	17.9%
	Watched television 3 or more hours per day	25.1%	22.7%	15.7%	34.7%	26.8%	23.9%
	Played video or computer games or used a computer 3 or more hours per day	45.7%	44.0%	43.2%	47.0%	47.6%	44.8%
	Played on one or more sports teams	55.5%	64.6%	63.5%	56.2%	51.0%	60.0%
	Walked or ride bike to or from school 3 or more days	23.1%	26.4%	21.0%	30.0%	27.8%	24.8%
Positive Youth Development	Spent at least 1 day in clubs or organizations outside of school	52.8%	46.9%	52.6%	46.6%	42.7%	49.8%
	Spent at least 1 hour helping other people without getting paid to make one's community a better place for people to live	38.4%	39.9%	39.7%	38.2%	38.7%	39.1%
	Parents talk with student about school almost every day	51.2%	50.2%	54.6%	46.2%	43.1%	50.6%
	Students help decide what goes on in school	48.5%	51.1%	50.7%	49.5%	44.4%	49.8%
	Students feel like they matter to people in their community	37.5%	49.5%	46.6%	40.1%	39.3%	43.6%
	Obtained eight or more hours of sleep	19.3%	20.9%	21.3%	18.3%	19.6%	20.1%
	Had a supportive adult	79.0%	75.7%	78.2%	77.0%	71.6%	77.2%
	Described their grades in school as mostly A's and B's	80.7%	72.1%	81.5%	69.7%	64.3%	76.3%
Preventive Health	Described health in general as fair or poor	23.3%	15.4%	17.4%	21.0%	25.6%	19.3%
	Saw a doctor or nurse for check-up or physical exam	71.7%	69.0%	75.1%	64.6%	63.5%	70.3%
	Saw a doctor, nurse, or counselor about stress, depression, or problems with emotions	27.9%	17.3%	23.4%	21.5%	25.7%	22.7%
Other Health Behaviors	Lives with 2 parents (Biological or step- parent)	59.3%	59.7%	73.5%	40.0%	52.8%	59.4%
	Never or rarely feels safe and secure in the neighborhood	9.3%	12.6%	5.4%	18.1%	19.1%	11.1%
	Parent(s) or guardian(s) have been in prison or jail	8.0%	10.5%	5.2%	14.3%	14.3%	9.4%
	Had been stopped, questioned, or searched by police	17.2%	29.7%	21.5%	26.2%	24.7%	23.5%
	Described encounters with police as negative or mostly negative	24.3%	27.6%	20.4%	34.6%	30.3%	26.2%

Source: Prevention Research Center at Case Western Reserve University, 2018.

Exhibit 32: Cuyahoga County Youth Risk Behavior Survey, High School Students, Risk Behaviors by Demographic Cohort

Category	Number of Risk Behaviors	Female	Male	White	Black	Hispanic
Unintentional Injury Risks	5 Risk Behaviors	40%	60%	20%	80%	80%
Violence	10 Risk Behaviors	60%	40%	20%	60%	100%
Depressive Symptoms and Suicide	5 Risk Behaviors	100%	0%	40%	20%	100%
Tobacco Use	10 Risk Behaviors	10%	80%	50%	50%	90%
Alcohol Use	4 Risk Behaviors	75%	25%	75%	25%	100%
Marijuana Use	4 Risk Behaviors	75%	25%	0%	100%	75%
Other Drug Use	4 Risk Behaviors	25%	75%	0%	100%	100%
Sexual Behavior	10 Risk Behaviors	30%	60%	30%	70%	70%
Obesity and Weight Control	4 Risk Behaviors	75%	25%	50%	50%	100%
Dietary Behavior	5 Risk Behaviors	40%	60%	20%	100%	80%
Physical Activity	6 Risk Behaviors	100%	0%	17%	83%	83%
Positive Youth Development	8 Risk Behaviors	50%	50%	0%	100%	100%
Preventive Health	3 Risk Behaviors	33%	67%	0%	100%	67%
Other Health Behaviors	5 Risk Behaviors	20%	80%	0%	100%	100%

Description

Exhibit 31 depicts Youth Risk Behavior Survey (YRBS) data for Cuyahoga County high school students and by demographic cohort. Exhibit 33 aggregates the different risk behaviors presented in Exhibit 32 by demographic cohort.

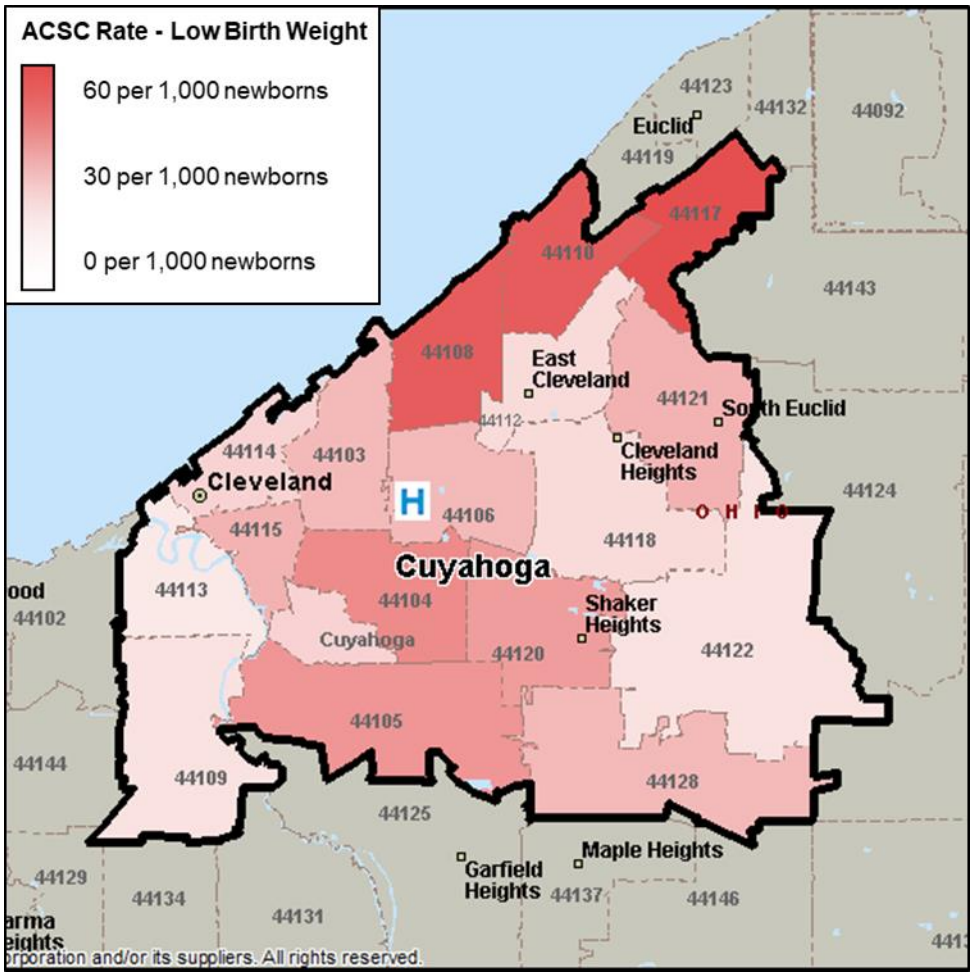
Observations

- The YRBS data indicate that in Cuyahoga County, Hispanic high school students have had the most "risk behaviors."

- Black high school students also have been more likely to experience risks associated with unintentional injury, violence, mental health problems, drug use, behaviors that contribute to obesity, and other behaviors.

Ambulatory Care Sensitive Conditions

Exhibit 33: ACSC Rate for Low Birth Weight, by ZIP Code, 2017



Source: Cleveland Clinic, 2018.
Note: Rates are not age-sex adjusted.

Description

Exhibit 33 maps 2017 low birth weight births PQI rates (per 1,000 newborns) for ZIP codes in the Local Neighborhoods community.

ACSCs are health "conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease."[19] As such, rates of hospitalization for these conditions can "provide insight into the quality of the health care system outside of the hospital," including the accessibility and utilization of primary care, preventive care and health education. Among these conditions are: angina without procedure, diabetes, perforated appendixes, chronic obstructive pulmonary

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

disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

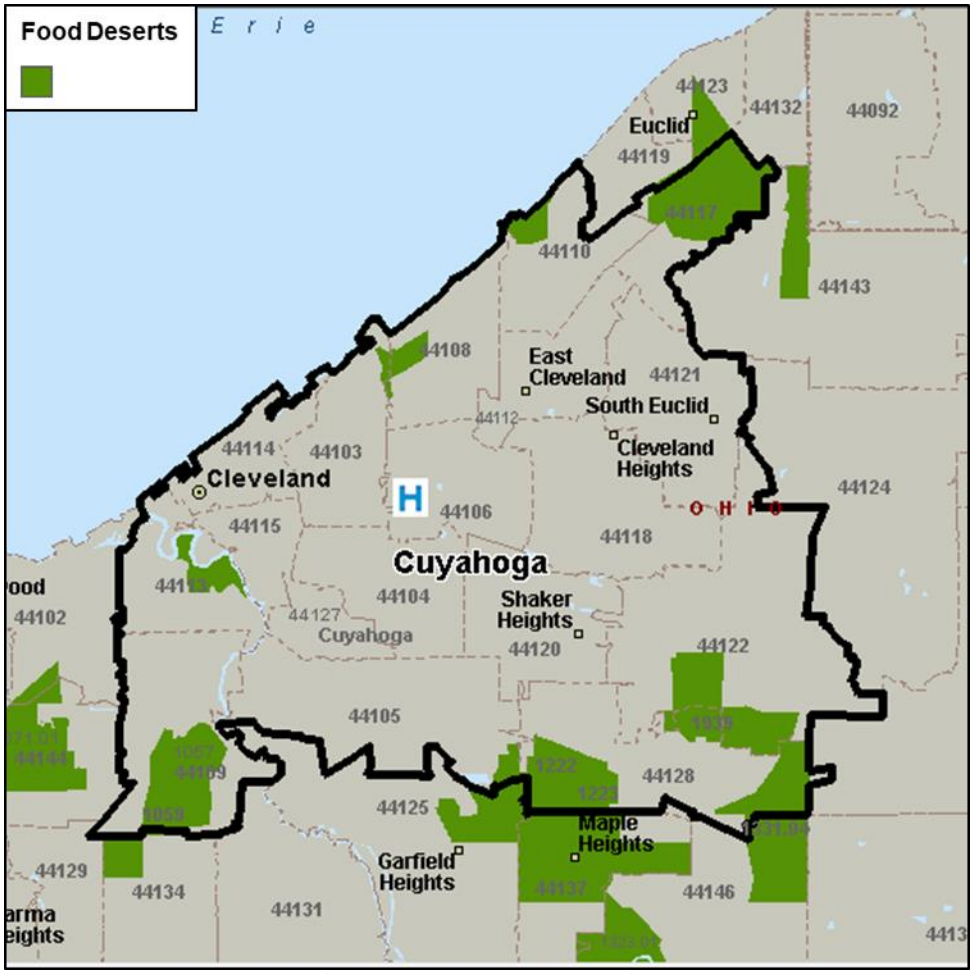
Disproportionately high rates of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes.

Observations

- ZIP codes 44117, 44110, and 44108 had comparatively high PQI rates for low birth weight births.

Food Deserts

Exhibit 34: Food Deserts, 2017



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

Description

Exhibit 34 shows the location of "food deserts" in the community.

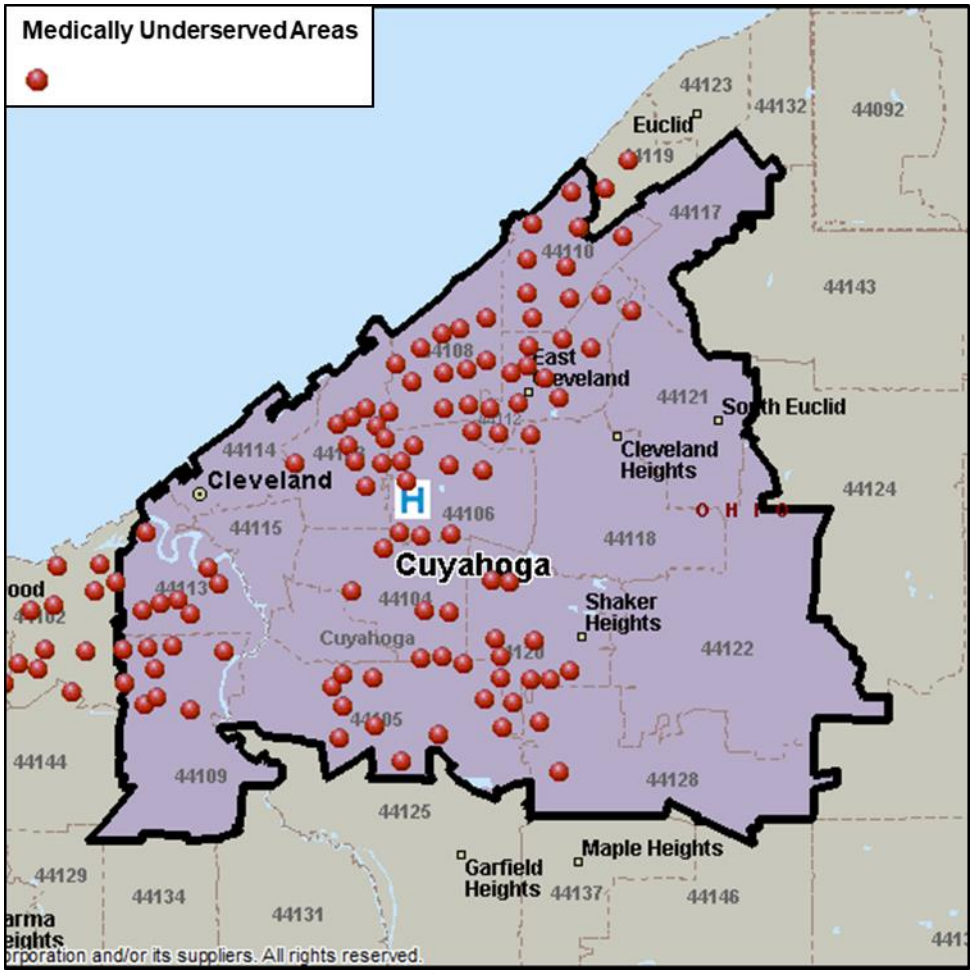
The U.S. Department of Agriculture's Economic Research Service defines urban food deserts as low-income areas more than one mile from a supermarket or large grocery store and rural food deserts as more than 10 miles from a supermarket or large grocery store. Many government-led initiatives aim to increase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

Observations

- Several census tracts have been designated as food deserts.

Medically Underserved Areas and Populations

Exhibit 35: Medically Underserved Areas and Populations, 2018



Source: Microsoft MapPoint and HRSA, 2018.

Description

Exhibit 35 illustrates the location of Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) in the community.

Medically Underserved Areas and Populations (MUA/Ps) are designated by HRSA based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.[20] Areas with a score of 62 or less are considered "medically underserved."

Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population

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

group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides."[21]

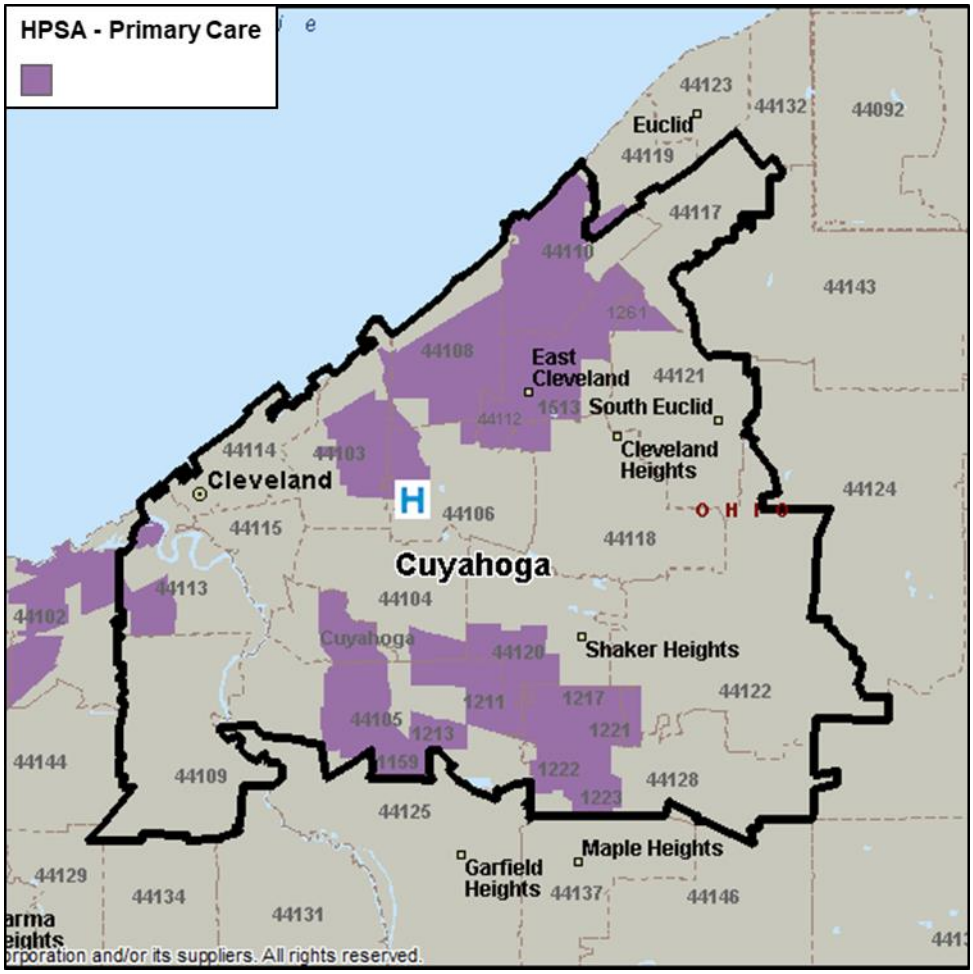
Observations

- Many census tracts in the Local Neighborhoods community have been designated as Medically Underserved Areas.

[21] *Ibid.*

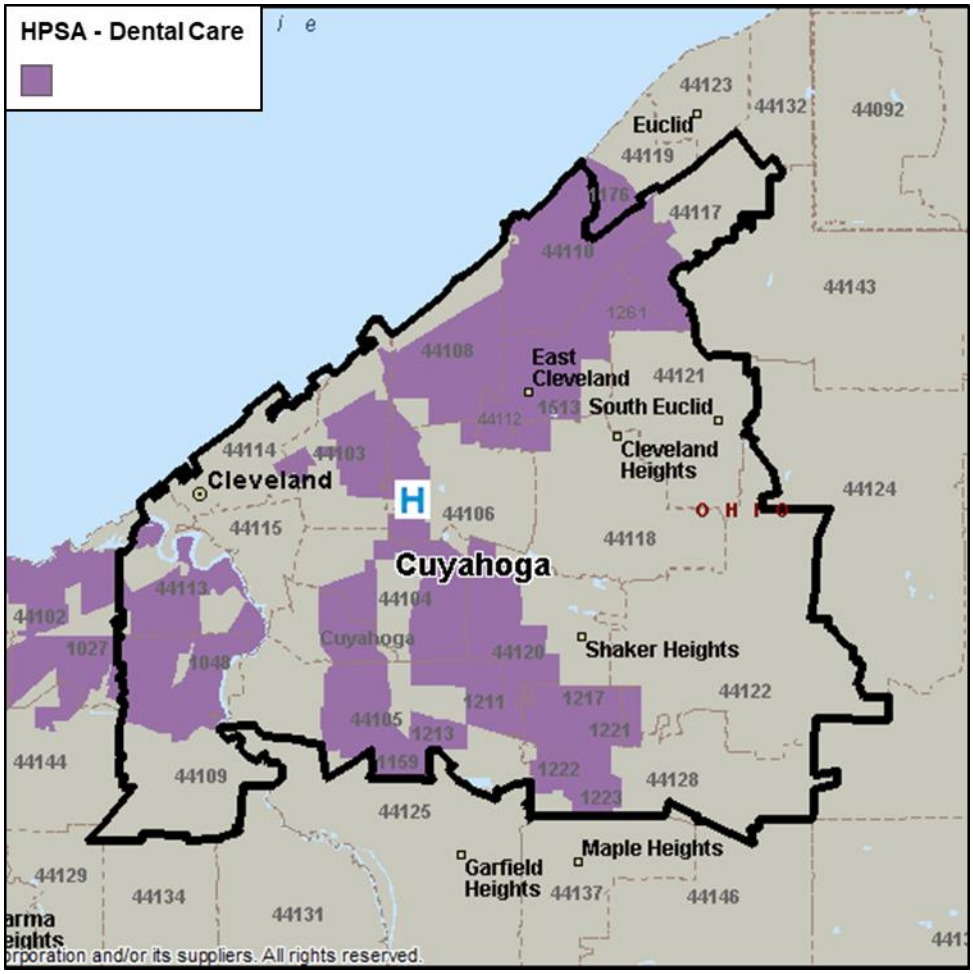
Health Professional Shortage Areas

Exhibit 36: Primary Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Exhibit 37: Dental Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Description

Exhibits 36 and 37 show the locations of federally-designated primary care and dental care HPSA Census Tracts.

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

HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility."[22]

Observations

- Many census tracts in the Local Neighborhoods Community have been designated as primary care and dental care HPSAs.
- HRSA also has designated five facilities in Cuyahoga County as mental health HPSAs.

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

APPENDIX C – 7-COUNTY COMMUNITY SECONDARY DATA ASSESSMENT

This section presents an assessment of secondary data regarding child and adolescent health needs in the 7-County community. The 7-County community is comprised of Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit counties in Ohio.

Demographics

Exhibit 38: Percent Change in 0-17 Population by County, 2017-2022

County	Population 17 and Younger 2017	Projected Population 17 and Younger 2022	Percent Change 2017 - 2022
Cuyahoga County	265,841	257,312	-3.2%
Geauga County	20,770	19,112	-8.0%
Lake County	46,228	43,783	-5.3%
Lorain County	66,334	64,201	-3.2%
Medina County	39,336	36,898	-6.2%
Portage County	31,877	29,799	-6.5%
Summit County	117,050	113,994	-2.6%
7-County Community Total	**587,436**	**565,099**	**-3.8%**

Source: Truven Market Expert, 2018.

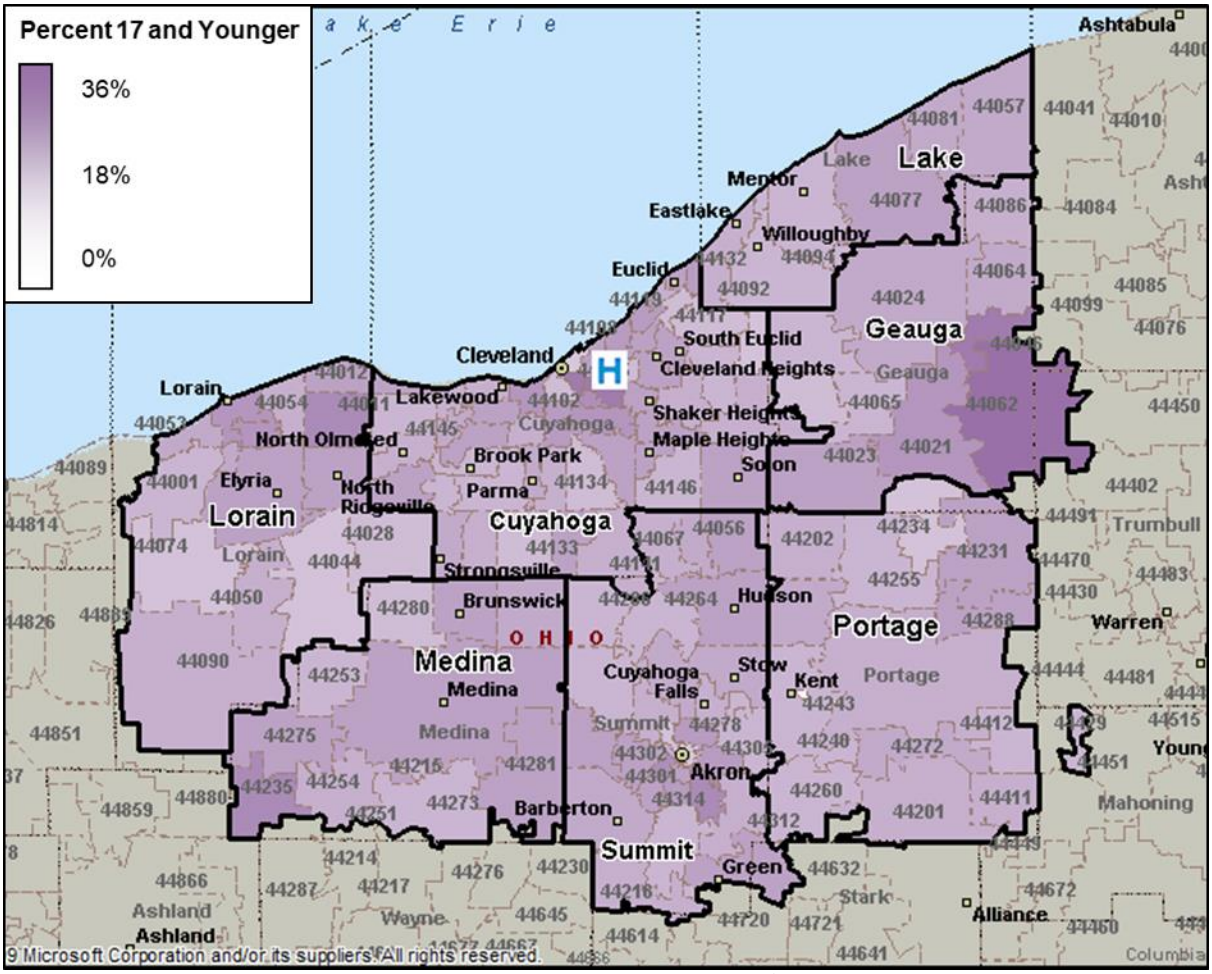
Description

Exhibit 38 portrays the estimated 0-17 Population by county in 2017 and projected to 2022.

Observations

- Between 2017 and 2022, the 7-County community is expected to decrease in 0-17 Population by 3.8 percent. The 0-17 population is expected to decrease in every county.

Exhibit 39: Percent of Population Aged 0-17 by ZIP Code, 2017



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

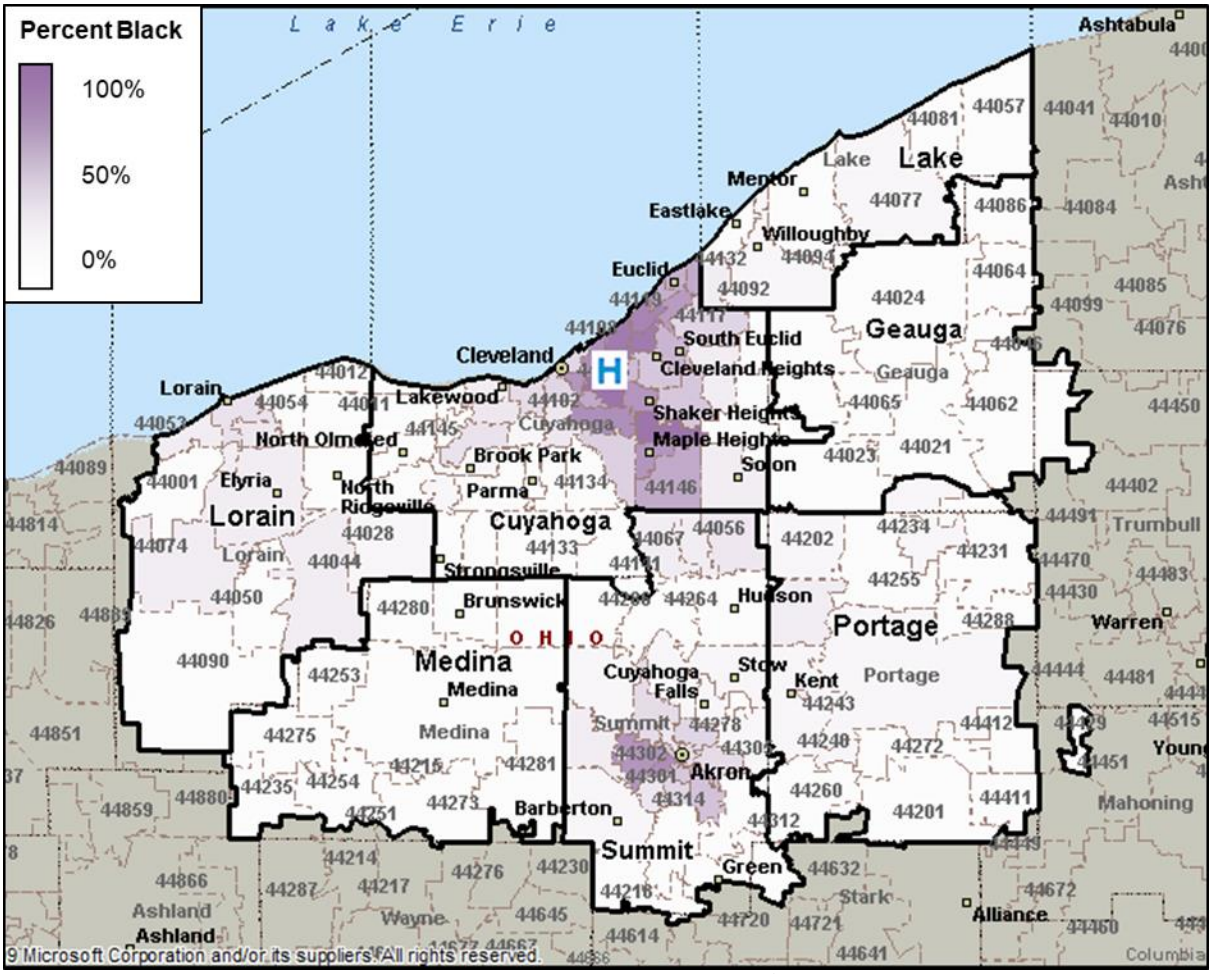
Description

Exhibit 39 portrays the percent of the population 17 years of age and younger by ZIP code.

Observations

- In the 7-County community, 21.2 percent of the population was aged 17 and younger.
- Geauga County had the highest proportion of the population 17 years of age and younger (23.3 percent), while Portage County had the lowest proportion (18.8 percent).

Exhibit 40: Percent of Population - Black, 2017



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

Description

Exhibit 40 portrays locations where the percentages of the population that are Black were highest in 2017.

Observations

- Cuyahoga County (29.4 percent) and Summit County (14.4 percent) had the highest proportion of Black residents.
- Geauga County (1.3 percent) and Medina County (1.5 percent) had the lowest proportion of Black residents.

Exhibit 41: Percent of Population – Hispanic (or Latino), 2017

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

Description

Exhibit 41 portrays locations where the percentages of the population that are Hispanic (or Latino) were highest in 2017.

Observations

- Lorain County (10.0 percent) and Cuyahoga County (5.8percent) had the highest proportion of Hispanic (or Latino) residents.

- Geauga County (1.6 percent) and Portage County (1.9 percent) had the lowest proportion of Hispanic (or Latino) residents.

Exhibit 42: Other Socioeconomic Indicators, 2012-2016

Region	Population 25+ without High School Diploma	Population with a Disability	Population Linguistically Isolated
Cuyahoga County	11.5%	14.8%	4.2%
Geauga County	9.0%	10.5%	3.7%
Lake County	8.1%	12.2%	2.8%
Lorain County	10.9%	15.4%	2.6%
Medina County	6.4%	10.5%	1.2%
Portage County	8.1%	12.8%	1.8%
Summit County	9.0%	12.6%	2.4%
Ohio	**10.5%**	**13.8%**	**2.4%**
United States	**13.0%**	**12.5%**	**8.5%**

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

Description

Exhibit 42 portrays the percent of the population (aged 25 years and above) without a high school diploma, with a disability, and linguistically isolated, by county.

Observations

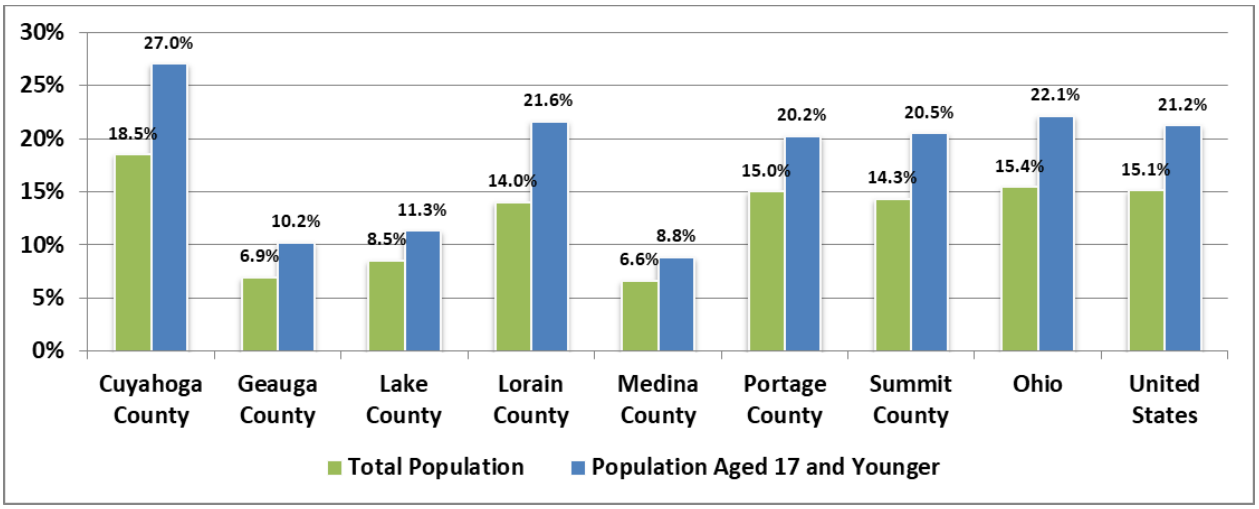
- Cuyahoga and Lorain counties had a higher percentage of residents aged 25 years and older without a high school diploma than the Ohio average.
- Cuyahoga and Lorain counties also had a higher percentage of the population with a disability compared to Ohio and United States averages.
- Compared to Ohio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

Economic indicators

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

People in Poverty

Exhibit 43: Percent of People and Children in Poverty, 2012-2016



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

Description

Exhibit 43 portrays poverty rates by county for total population and children.

Observations

- The poverty rate and child poverty rate in Cuyahoga County were higher than Ohio and national averages throughout 2012-2016.
- Child poverty rates in Cuyahoga and Lorain counties were higher than the United States average.

Exhibit 44: Poverty Rates by Race and Ethnicity, 2012-2016

Measure	Total	White	Black	Asian	Hispanic (or Latino)
Cuyahoga County	18.5%	11.1%	33.3%	13.3%	30.4%
Geauga County	6.9%	6.5%	25.8%	5.2%	9.0%
Lake County	8.5%	7.6%	27.1%	8.2%	18.8%
Lorain County	14.0%	11.0%	36.5%	29.9%	25.4%
Medina County	6.6%	6.0%	32.7%	11.9%	10.6%
Portage County	15.0%	13.2%	37.9%	30.2%	28.0%
Summit County	14.3%	10.2%	32.9%	15.6%	18.3%
Ohio	**15.4%**	**12.3%**	**33.2%**	**13.4%**	**27.1%**
United States	**15.1%**	**12.4%**	**26.2%**	**12.3%**	**23.4%**

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

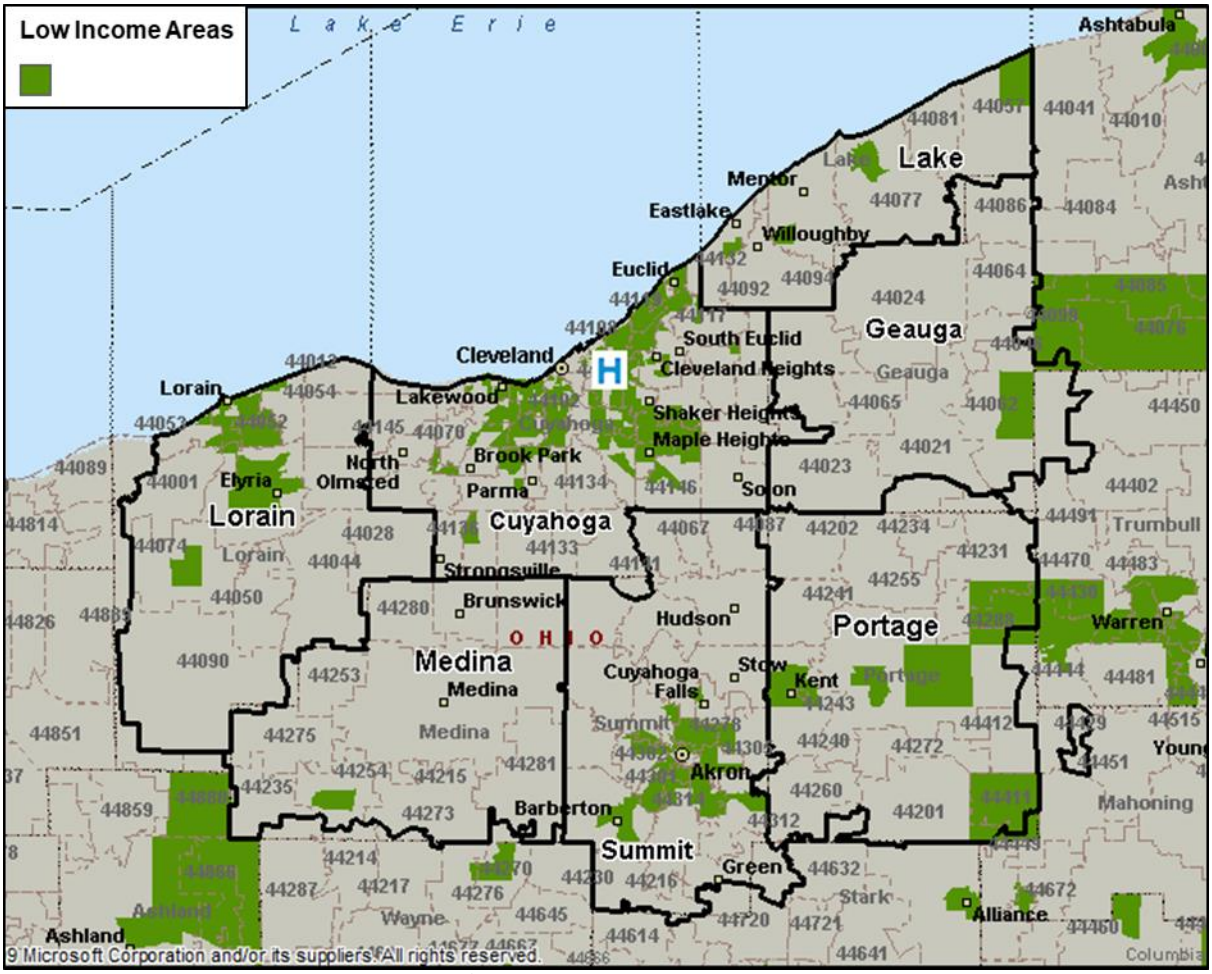
Description

Exhibit 44 portrays poverty rates by race and ethnicity.

Observations

- Poverty rates have been higher for Black and Hispanic (or Latino) residents than for Whites.

Exhibit 45: Low Income Census Tracts, 2017



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

Description

Exhibit 45 portrays the location of federally-designated low income census tracts.

Observations

- Low income census tracts have been most prevalent in Cuyahoga, Lorain, Portage, and Summit counties.

Unemployment

Exhibit 46: Unemployment Rates, 2013-2017

Area	2013	2014	2015	2016	2017
Cuyahoga County	7.0%	6.3%	5.2%	5.4%	5.9%
Geauga County	5.7%	5.0%	4.2%	4.4%	4.8%
Lake County	6.3%	5.5%	4.5%	4.8%	5.2%
Lorain County	7.4%	6.4%	5.6%	5.9%	6.2%
Medina County	5.8%	5.1%	4.1%	4.3%	4.7%
Portage County	7.7%	5.9%	4.9%	5.0%	5.0%
Summit County	7.6%	5.9%	5.0%	5.0%	5.1%
Ohio	**7.5%**	**5.8%**	**4.9%**	**4.9%**	**5.0%**
United States	**7.4%**	**6.2%**	**5.3%**	**4.9%**	**4.4%**

Source: Bureau of Labor Statistics, 2018.

Description

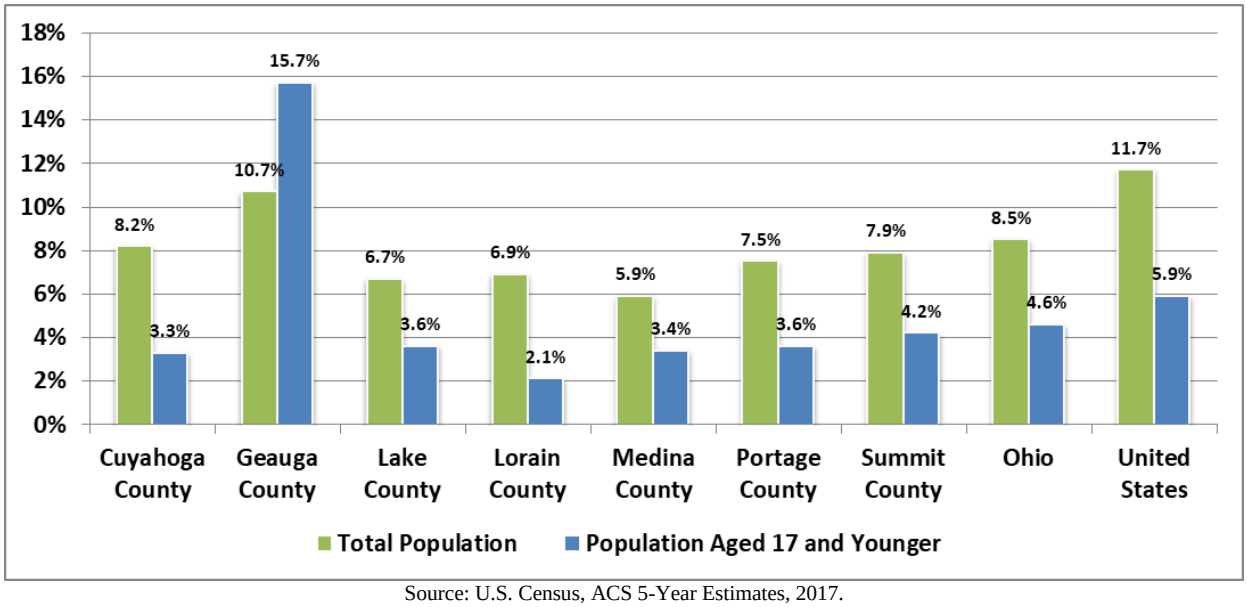
Exhibit 46 shows unemployment rates for 2013 through 2017 by county, with Ohio and national rates for comparison.

Observations

- Between 2012 and 2015, unemployment rates at the county, state, and national levels declined significantly. Between 2015 and 2017, unemployment rates increased slightly in each county.
- The rates in Cuyahoga, Lake, Lorain, and Summit counties were above Ohio and U.S. averages in 2017.
- Rates in Cuyahoga and Summit counties have been comparatively high from every year between 2013 and 2017.

Insurance Status

Exhibit 47: Percent without Health Insurance, 2012-2016



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

Description

Exhibit 47 presents the estimated percent of total population and children in community counties without health insurance (uninsured) in 2016.

Observations

- In 2016, the child uninsurance rate in Geauga County was significantly higher than the rates in Ohio and the United States.

Crime Rates

Exhibit 48: Crime Rates by Type and Jurisdiction, Per 100,000, 2016

Crime	Cuyahoga County	Geauga County	Lake County	Lorain County	Medina County	Portage County	Summit County	Ohio
Violent Crime	694.9	36.4	214.1	150.9	47.0	101.6	300.0	**305.9**
Property Crime	2,977.7	436.6	1,514.8	1,369.6	682.1	1,649.7	2,825.9	**2,537.4**
Murder	15.1	2.4	1.1	4.5	1.7	3.3	6.8	**5.9**
Rape	57.6	9.7	19.6	33.4	9.2	12.6	59.7	**47.4**
Robbery	327.7	3.6	31.6	50.3	1.7	25.2	93.0	**111.1**
Aggravated Assault	294.5	20.6	161.8	62.7	34.4	60.4	140.4	**141.5**
Burglary	753.6	69.1	217.9	373.4	93.4	304.1	644.5	**573.5**
Larceny	1,742.1	346.9	1,244.7	930.8	577.9	1,298.5	2,008.0	**1,789.7**
Motor Vehicle Theft	482.0	20.6	52.3	65.3	10.9	47.1	173.4	**174.2**
Arson	33.6	2.4	5.4	9.0	2.9	7.3	22.7	**23.4**

Source: FBI, 2017.

Description

Exhibit 48 provides crime statistics. Light grey shading indicates rates that were higher (worse) than the Ohio average; dark grey shading indicates rates that were more than 50 percent higher than the Ohio average.

Observations

- 2016 crime rates in Cuyahoga County were comparitively high for nearly all types presented, and were more than 50 percent higher than the Ohio averages for violent crime, murder, robbery, aggravated assault, and motor vehicle theft.
- Rates for property crime, murder, rape, burglary, and larceny were comparitively high in Summit County, and the rate for aggravated assault was comparitively high in Lake County.
- Crime rates in Geauga, Lorain, Medina, and Portage counties were below Ohio averages for all types.

Housing Affordability

Exhibit 49: Percent of Rented Households Rent Burdened, 2013-2017

County	Occupied Units Paying Rent	Households Paying >30%	Rent Burden > 30% of Income
Cuyahoga County	203,368	102,500	50.4%
Geauga County	4,390	1,782	40.6%
Lake County	22,801	9,917	43.5%
Lorain County	31,076	16,092	51.8%
Medina County	12,793	5,175	40.5%
Portage County	17,986	9,513	52.9%
Summit County	71,639	34,333	47.9%
7-County Community Total	**364,053**	**179,312**	**49.3%**
Ohio	**1,453,379**	**678,101**	**46.7%**
United States	**39,799,272**	**20,138,321**	**50.6%**

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

Description

The U.S. Department of Housing and Urban Development ("HUD") has defined households that are "rent burdened" as those spending more than 30 percent of income on housing.[23] On that basis and based on data from the U.S. Census, Exhibit 49 portrays the percentage of rented households in each county that are rent burdened.

Observations

As stated by the Federal Reserve, "households that have little income left after paying rent may not be able to afford other necessities, such as food, clothes, health care, and transportation."[24]

- Across the 7-County community, over 49 percent of households have been designated as "rent burdened," a level above the Ohio average.
- The percentage of rented households rent burdened was highest in Portage, Lorain, and Cuyahoga counties.

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

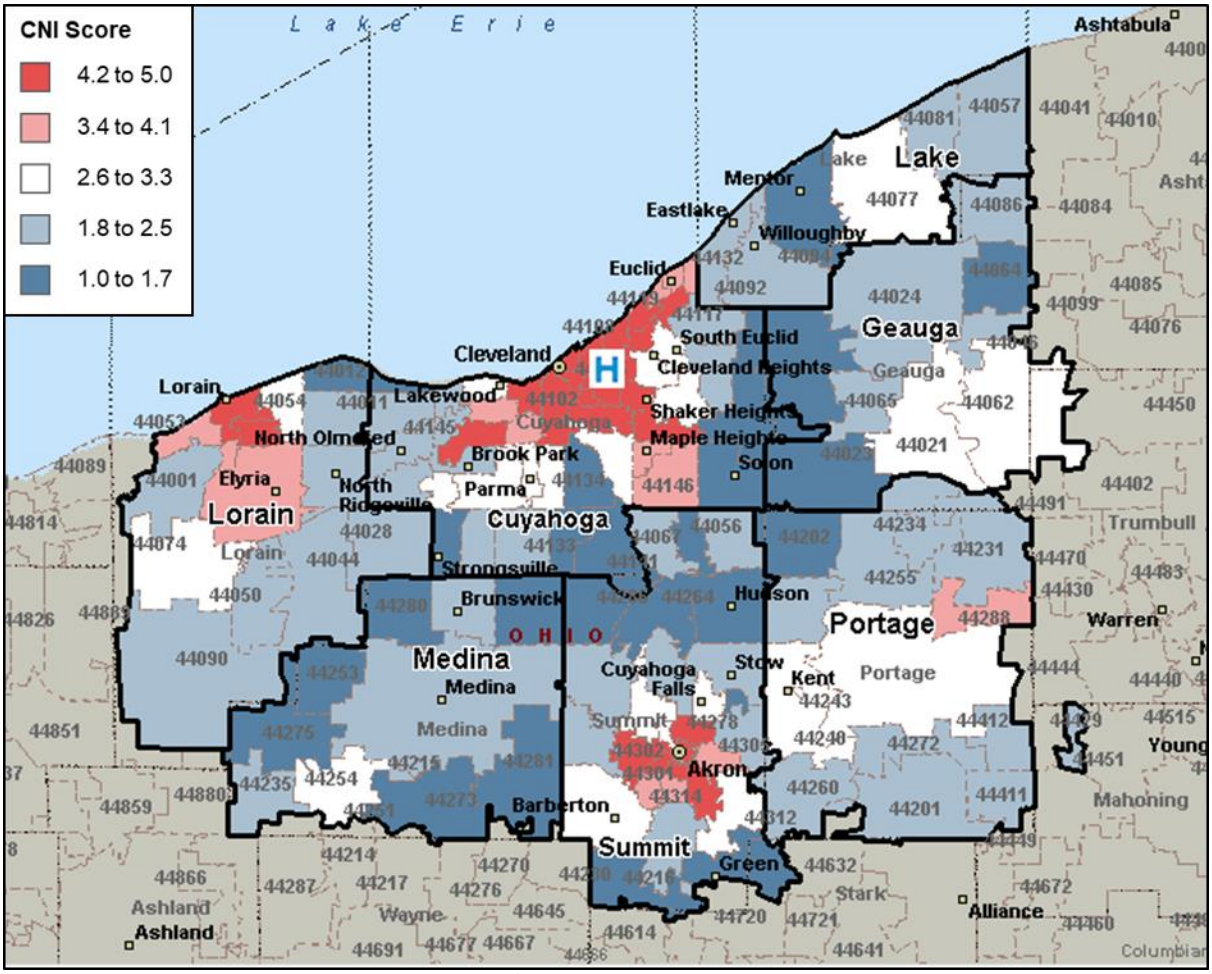
Dignity Health Community Need Index

Exhibit 50: Weighted Average Community Need Index™ Score by County, 2018

County	CNI Score
Cuyahoga County	3.3
Geauga County	1.9
Lake County	2.3
Lorain County	3.0
Medina County	1.7
Portage County	2.6
Summit County	2.7
7-County Average	**2.9**
Ohio Average	**2.9**

Source: Dignity Health, 2018.

Exhibit 51: Community Need Index, 2018



Source: Microsoft MapPoint and Dignity Health, 2018.

Description

Exhibits 50 and 51 present the *Community Need Index*™ (CNI) score for each county and ZIP code in the 7-County community. Higher scores (e.g., 4.2 to 5.0) indicate the highest levels of community need. The index is calibrated such that 3.0 represents a U.S.-wide median score.

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

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

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

Observations

- At 2.9, the weighted average CNI score for the 7-County community is slightly below the U.S. median of 3.0.
- Cuyahoga County (3.3) and Lorain County (3.0) had the highest CNI scores.

Other Local Health Status and Access Indicators

This section assesses other health status and access indicators for the 7-County community. Data sources include:

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

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

County Health Rankings

Exhibit 52: County Health Rankings, 2015 and 2018
(Light Grey Shading Denotes Bottom Half of Ohio Counties; Dark Grey Denotes Bottom Quartile)

Measure	Cuyahoga County		Geauga County		Lake County		Lorain County		Medina County		Portage County		Summit County	
	2015	2018	2015	2018	2015	2018	2015	2018	2015	2018	2015	2018	2015	2018
Health Outcomes	65	60	3	2	19	13	28	38	4	4	17	31	42	46
Health Factors	50	62	4	4	14	9	43	37	3	5	33	24	36	44
Length of Life	51	48	3	2	15	20	31	33	4	5	16	21	40	44
Quality of Life	72	67	2	2	29	11	30	47	5	4	22	41	53	52
Poor physical health days	24	24	12	5	20	7	22	59	7	2	22	32	32	39
Poor mental health days	49	12	13	4	22	5	20	45	13	2	10	32	26	22
Low birthweight	87	88	5	6	36	37	41	48	16	23	31	59	71	79
Health Behaviors	36	49	3	2	9	6	37	27	4	9	28	16	21	43
Food environment index	75	71	3	4	28	27	50	47	7	8	46	56	73	66
Access to exercise opportunities	3	2	11	13	9	12	14	9	8	8	25	23	1	5
Teen births	51	47	1	1	10	12	29	31	7	6	5	4	25	24
Clinical Care	6	4	9	32	25	16	31	18	5	5	37	45	24	14
Primary care physicians	2	2	22	21	47	41	25	27	29	24	58	57	6	7
Dentists	1	1	32	35	8	7	29	30	20	21	42	36	12	13
Mental health providers	2	3	19	18	26	24	37	28	24	37	21	21	11	12
Social & Economic Factors	78	79	8	7	15	25	51	47	7	5	28	29	48	50
High school graduation	85	83	26	16	50	60	73	64	23	4	42	52	78	73
Unemployment	51	52	13	26	25	36	59	59	15	23	36	43	32	46
Children in poverty	68	72	6	5	9	14	47	42	3	4	26	23	38	50
Income inequality	86	85	41	28	30	30	59	60	8	11	64	61	80	78
Children in single-parent households	88	86	3	3	31	27	73	69	11	6	44	34	66	61
Social associations	79	77	77	73	83	80	70	69	75	76	78	79	60	59
Violent crime	85	85	7	5	69	63	70	66	47	6	39	46	80	81
Injury deaths	31	47	14	17	17	39	9	49	3	5	4	15	24	54
Physical Environment	68	86	61	72	58	11	63	40	70	62	81	50	82	81
Air pollution	63	87	70	51	65	4	57	42	67	64	79	51	75	84
Severe housing problems	87	87	59	53	34	41	69	68	33	31	77	78	71	72

Source: County Health Rankings, 2018.

Description

Exhibit 52 presents *County Health Rankings*, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation that incorporates a variety of health status indicators into a system that ranks each county/city within each state in terms of "health factors" and "health outcomes." These health factors and outcomes are composite measures based on several variables grouped into the following categories: health behaviors, clinical care,[25] social and economic factors, and physical environment.[26] *County Health Rankings* is updated annually. *County Health Rankings 2018* relies on data from 2006 to 2017, with most data from 2011 to 2016.

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

Observations

- Throughout the 7-County community, rankings for the following issues were unfavorable:
    - low birthweight births,
    - food environment index,
    - high school graduation rates,
    - social associations,
    - violent crime rates,
    - physical environment,
    - air pollution, and
    - severe housing problems.

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

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

Exhibit 53: County Health Rankings Data Compared to Ohio and U.S. Averages, 2018
(Light Grey Shading Denotes Bottom Half of Ohio Counties; Dark Grey Denotes Bottom Quartile)

Indicator Category	Data	Cuyahoga County	Geauga County	Lake County	Lorain County	Medina County	Portage County	Summit County	Ohio	United States
Health Outcomes										
Length of Life	Years of potential life lost before age 75 per 100,000 population	8,037	4,243	6,569	7,137	5,438	6,579	7,691	**7,734**	6,700
Quality of Life	Average number of physically unhealthy days reported in past 30 days	3.7	3.3	3.4	4.0	3.0	3.7	3.8	**4.0**	3.7
	Average number of mentally unhealthy days reported in past 30 days	3.7	3.6	3.6	4.0	3.5	3.9	3.9	**4.3**	3.8
	Percent of live births with low birthweight (<2500 grams)	10.6%	5.8%	7.4%	7.8%	7.0%	8.2%	9.3%	**8.6%**	8.0%
Health Factors										
Health Behaviors										
Food Environment Index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	7.0	8.7	8.0	7.6	8.5	7.4	7.2	**6.6**	7.7
Access to Exercise Opportunities	Percent of population with adequate access to locations for physical activity	96.1%	87.6%	88.7%	92.2%	93.2%	83.6%	95.0%	**84.7%**	83.0%
Teen Births	Teen birth rate per 1,000 female population, ages 15-19	30.3	8.1	17.9	27.8	12.4	11.4	24.9	**27.6**	27.0
Clinical Care										
Primary Care Physicians	Ratio of population to primary care physicians	898:1	1,448:1	2,142:1	1,744:1	1,633:1	2,459:1	1,025:1	**1,307:1**	1,320:1
Dentists	Ratio of population to dentists	979:1	2,294:1	1,465:1	2,142:1	1,947:1	2,313:1	1,642:1	**1,656:1**	1,480:1
Mental Health Providers	Ratio of population to mental health providers	356:1	547:1	676:1	772:1	900:1	645:1	472:1	**561:1**	470:1
Social & Economic Factors										
High School Graduation	Percent of ninth-grade cohort that graduates in four years	74.8%	94.2%	87.3%	86.6%	95.8%	88.2%	82.8%	**81.2%**	83.0%
Unemployment	Percent of population age 16+ unemployed but seeking work	5.4%	4.4%	4.8%	5.9%	4.3%	5.0%	5.0%	**4.9%**	4.9%
Children in Poverty	Percent of children under age 18 in poverty	26.4%	8.3%	12.5%	17.9%	8.1%	15.0%	19.7%	**20.4%**	20.0%
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	5.6	4.0	4.0	4.5	3.7	4.5	4.9	**4.8**	5.0
Children in Single-Parent Households	Percent of children that live in a household headed by single parent	45.0%	15.4%	28.5%	37.4%	20.5%	30.6%	36.1%	**35.7%**	34.0%
Social Associations	Number of associations per 10,000 population	9.3	9.8	9.1	10.2	9.5	9.1	11.5	**11.3**	9.3
Violent Crime	Number of reported violent crime offenses per 100,000 population	589	43	174	180	50	105	378	**290**	380
Injury Deaths	Injury mortality per 100,000	76.4	59.8	71.8	77.0	53.1	59.7	78.7	**75.5**	65.0
Physical Environment										
Air Pollution	The average daily measure of fine particulate matter in micrograms per cubic meter (PM2.5) in a county	12.9	11.4	10.7	11.3	11.7	11.4	12.3	**11.3**	8.7
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	18.5%	13.4%	12.6%	14.6%	11.9%	15.5%	14.9%	**15.0%**	19.0%

Source: County Health Rankings, 2018.

Description

Exhibit 53 provides data that underlie the County Health Rankings.[27] The exhibit also includes Ohio and national averages. Light grey shading highlights indicators found to be worse than the Ohio average; dark grey shading highlights indicators more than 50 percent worse than the Ohio average.

Observations

- The following indicators are comparatively unfavorable in at least three of the counties:
    - Air pollution (average daily PM2.5)
    - Injury mortality rate
    - Percent of children in single-parent households
    - Ratio of population to dentists
    - Ratio of population to mental health professionals
    - Ratio of population to primary care physicians
    - Social associations rate
    - Unemployment

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

Community Health Status Indicators

Exhibit 54: Community Health Status Indicators, 2018
(Light Grey Shading Denotes Bottom Half of Peer Counties; Dark Grey Denotes Bottom Quartile)

Category	Indicator	Cuyahoga County	Geauga County	Lake County	Lorain County	Medina County	Portage County	Summit County
Length of Life	Years of Potential Life Lost Rate							
Quality of Life	Physically Unhealthy Days							
	Mentally Unhealthy Days							
	% Births - Low Birth Weight							
Health Behaviors	Food Environment Index							
	% With Access to Exercise Opportunities							
	Teen Birth Rate							
Clinical Care	Primary Care Physicians Rate							
	Dentist Rate							
	Mental Health Professionals Rate							
Social & Economic Factors	High School Graduation Rate							
	% Unemployed							
	% Children in Poverty							
	Income Ratio							
	% Children in Single-Parent Households							
	Social Association Rate							
	Violent Crime Rate							
	Injury Death Rate							
Physical Environment	Average Daily PM2.5							
	% Severe Housing Problems							

Source: Community Health Status Indicators, 2018.

Description

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

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

Exhibit 54 compares 7-County community counties to their respective peer counties and highlights community health issues found to rank in the bottom half and bottom quartile of the counties included in the analysis. Light grey shading indicates rankings in the bottom half of peer counties; dark grey shading indicates rankings in the bottom quartile of peer counties.

Observations

- The CHSI data indicate that the following indicators compare unfavorably in at least three community counties:
    - Years of potential life lost rate
    - Percent of births with low birthweight
    - Food environment index
    - Primary care physicians rate
    - Dentists rate
    - Mental health professionals rate
    - High school graduation rate
    - Unemployment
    - Income ratio
    - Social associations rate
    - Air pollution (average daily PM2.5)

Ohio Department of Health

Exhibit 55: Maternal and Child Health Indicators, 2014-2018
(Light Grey Shading Denotes Indicators Worse than Ohio Average)

Indicator	Cuyahoga County	Geauga County	Lake County	Lorain County	Medina County	Portage County	Summit County	Ohio
Low Birth Weight Percent	8.5%	5.2%	6.0%	7.0%	5.9%	6.8%	7.6%	**7.2%**
Very Low Birth Weight Percent	2.2%	0.9%	1.3%	1.4%	0.9%	1.5%	1.6%	**1.6%**
Births to Unmarried Mothers	51.7%	16.2%	35.9%	48.4%	24.9%	36.5%	42.9%	**43.2%**
Preterm Births Percent	9.5%	6.6%	7.7%	8.3%	7.6%	8.1%	8.7%	**8.7%**
Very Preterm Births Percent	2.5%	1.2%	1.5%	1.6%	1.1%	1.8%	1.9%	**1.8%**

Source: Ohio Department of Health, 2018.

Description

Exhibit 55 presents various maternal and infant health indicators.

Observations

- All Cuyahoga County indicators were worse than Ohio averages.
- Summit County compared unfavorably for all indicators except births to unmarried mothers.
- Lorain County compared unfavorably for births to unmarried mothers, and Portage County compared unfavorably for very preterm births.

Exhibit 56: Infant Mortality Rates by County, 2010-2016 and for Ohio, 2016 (Light Grey Shading Denotes Indicators Worse than Ohio Average)

Indicator	Cuyahoga County	Geauga County	Lake County	Lorain County	Medina County	Portage County	Summit County	Ohio
Overall Infant Mortality Rate	9.3	4.5	4.3	5.9	3.8	5.7	7.4	**7.4**
Black Infant Mortality Rate	16.3	N/A	N/A	10.9	N/A	N/A	13.4	**15.2**
Hispanic Infant Mortality Rate	6.0	N/A	N/A	6.0	N/A	N/A	N/A	**7.3**
White Infant Mortality Rate	5.2	N/A	N/A	5.1	N/A	N/A	5.6	**5.8**

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

Description

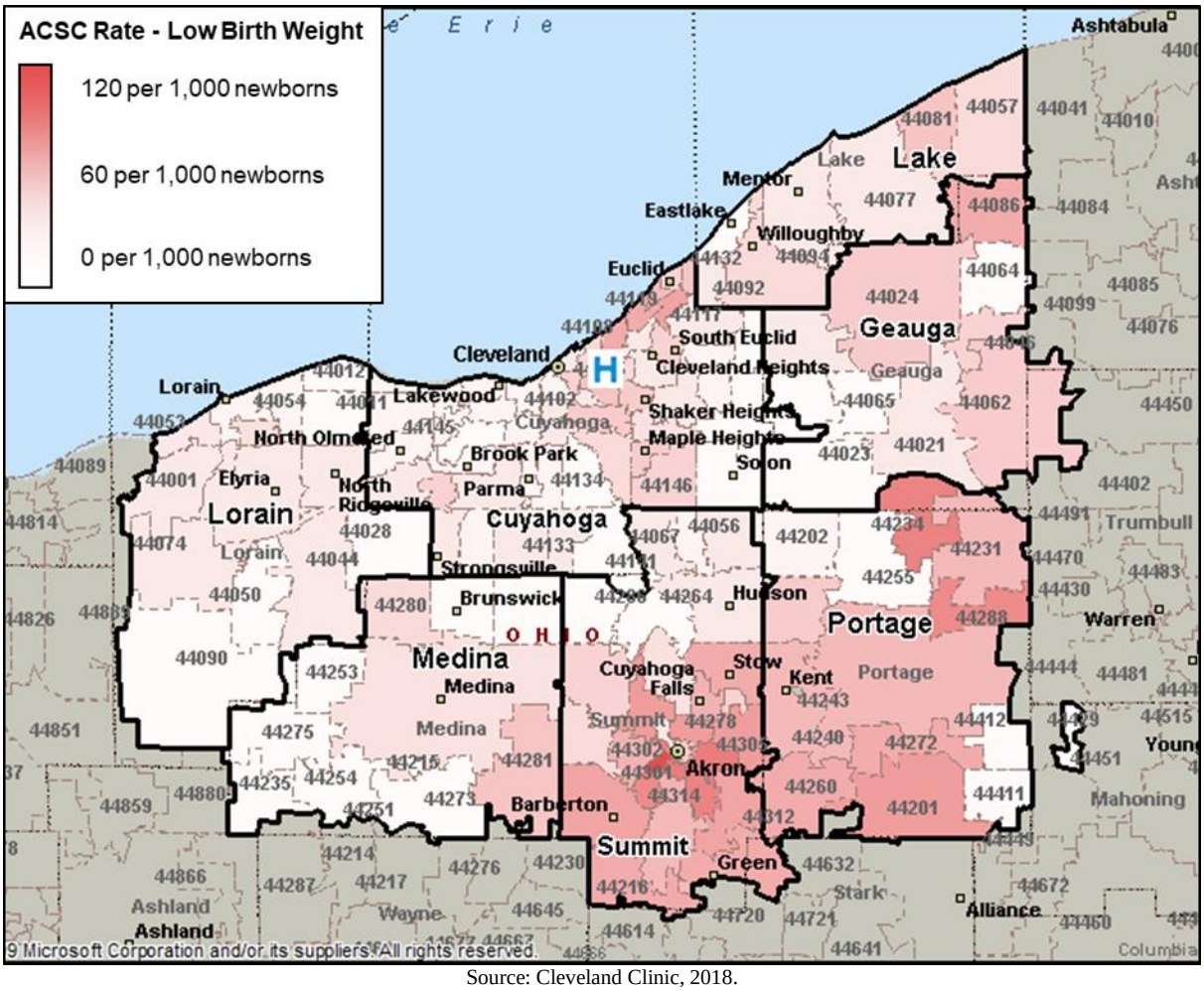
Exhibit 56 presents infant mortality rates by race and ethnicity by county and for Ohio.

Observations

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

Ambulatory Care Sensitive Conditions

Exhibit 57: ACSC Rate for Low Birth Weight, by ZIP Code, 2017



Source: Cleveland Clinic, 2018.
Note: Rates are not age-sex adjusted. ZIP Code 44308 (Summit County) excluded as rate of 400 due to low amount of births.

Description

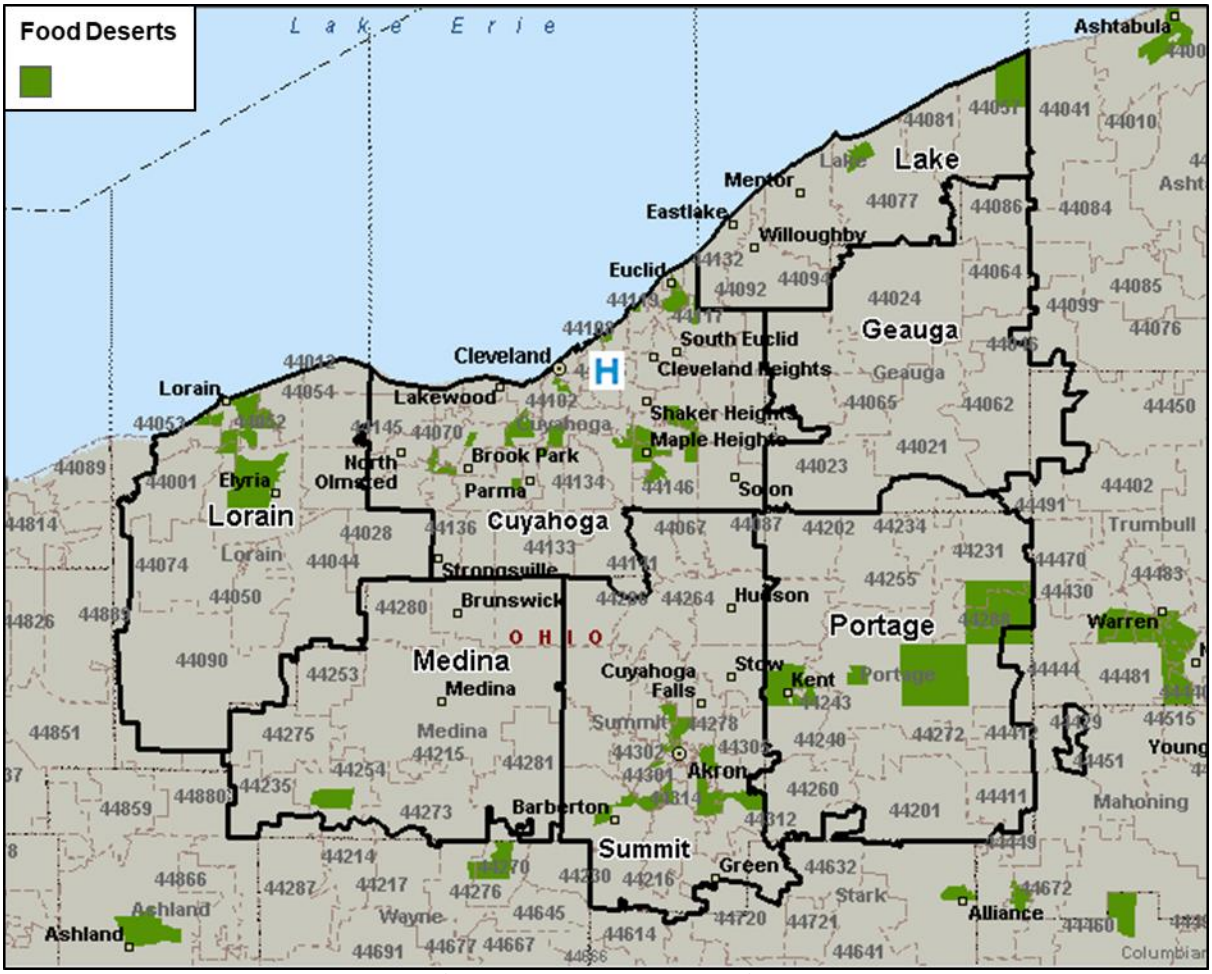
Exhibit 57 maps 2017 low birth weight births PQI rates (per 1,000 newborns) for ZIP codes in the 7-County community.

Observations

- Summit and Portage counties had the highest rates of admissions for low birthweight births in the 7-County community.

Food Deserts

Exhibit 58: Food Deserts, 2017



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

Description

Exhibit 58 shows the location of "food deserts" in the community.

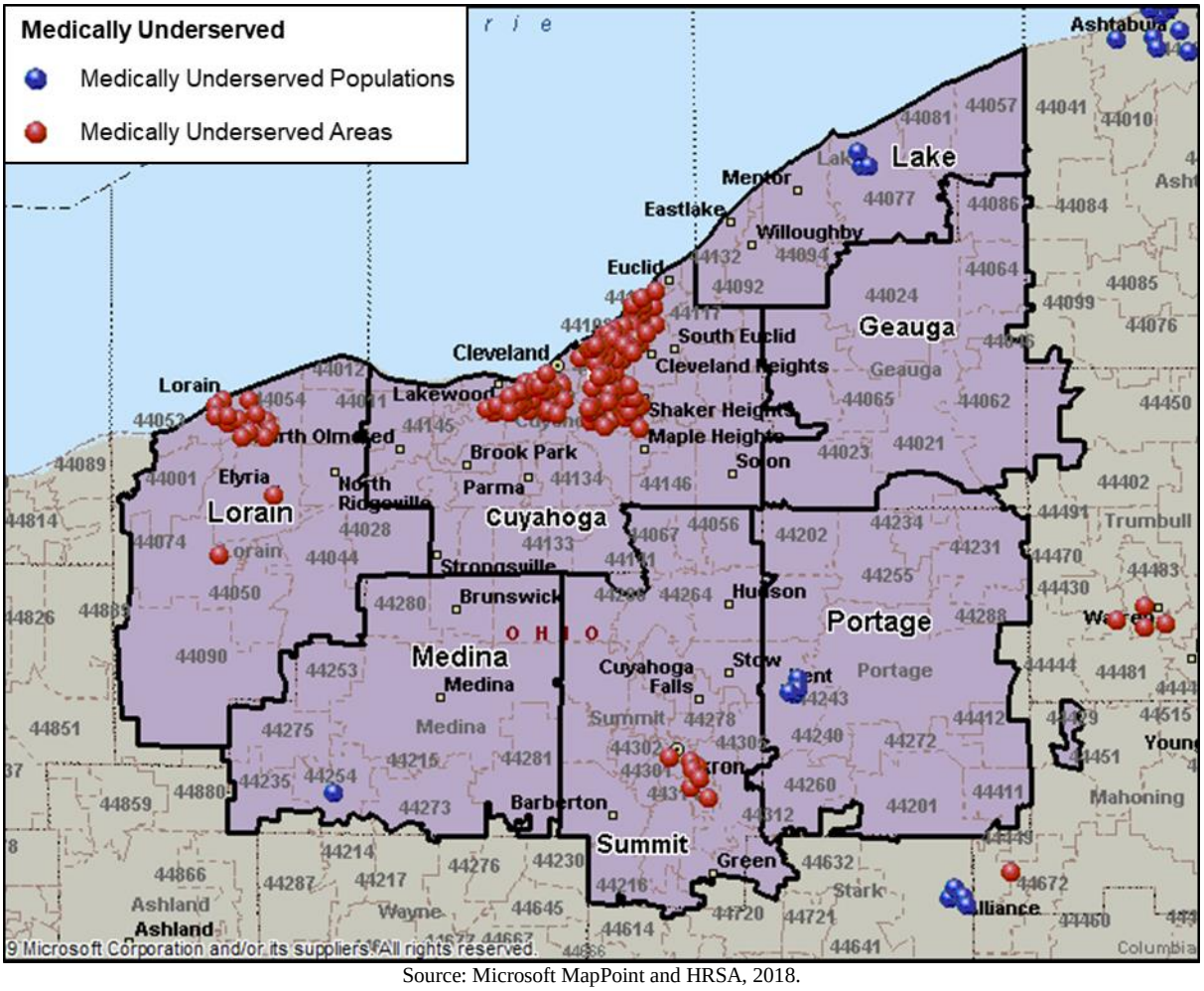
The U.S. Department of Agriculture's Economic Research Service defines urban food deserts as low-income areas more than one mile from a supermarket or large grocery store and rural food deserts as more than 10 miles from a supermarket or large grocery store. Many government-led initiatives aim to increase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

Observations

- All counties except Geauga contain one or more food deserts.

Medically Underserved Areas and Populations

Exhibit 59: Medically Underserved Areas and Populations, 2018



Source: Microsoft MapPoint and HRSA, 2018.

Description

Exhibit 59 illustrates the location of Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) in the community.

Medically Underserved Areas and Populations (MUA/Ps) are designated by HRSA based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.[28] Areas with a score of 62 or less are considered "medically underserved."

Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population

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

group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides."[29]

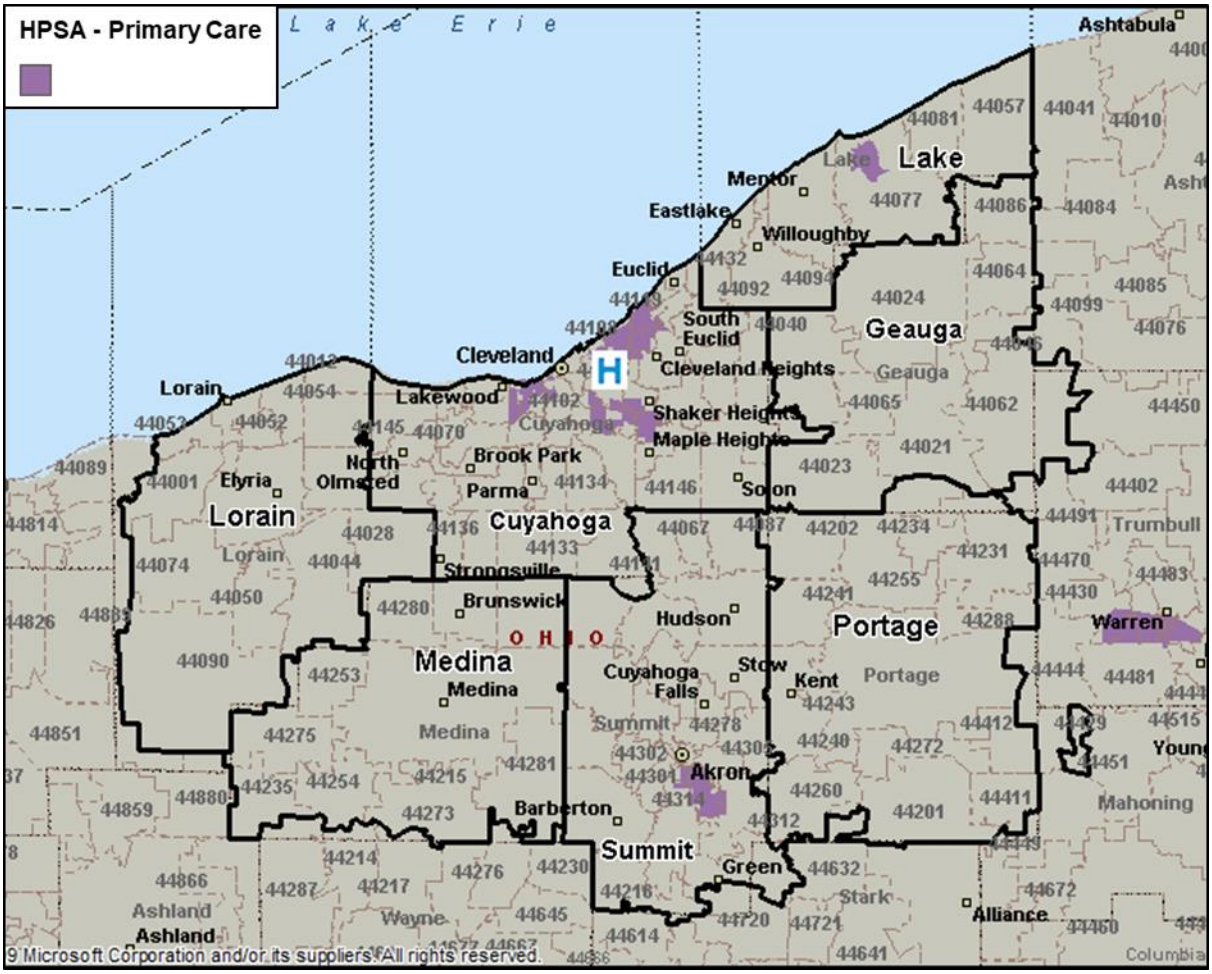
Observations

- Medically Underserved Areas are present in Cuyahoga, Lorain, and Summit counties.
- Medically Underserved Populations are present in Lake, Medina, and Portage counties.

[29] *Ibid.*

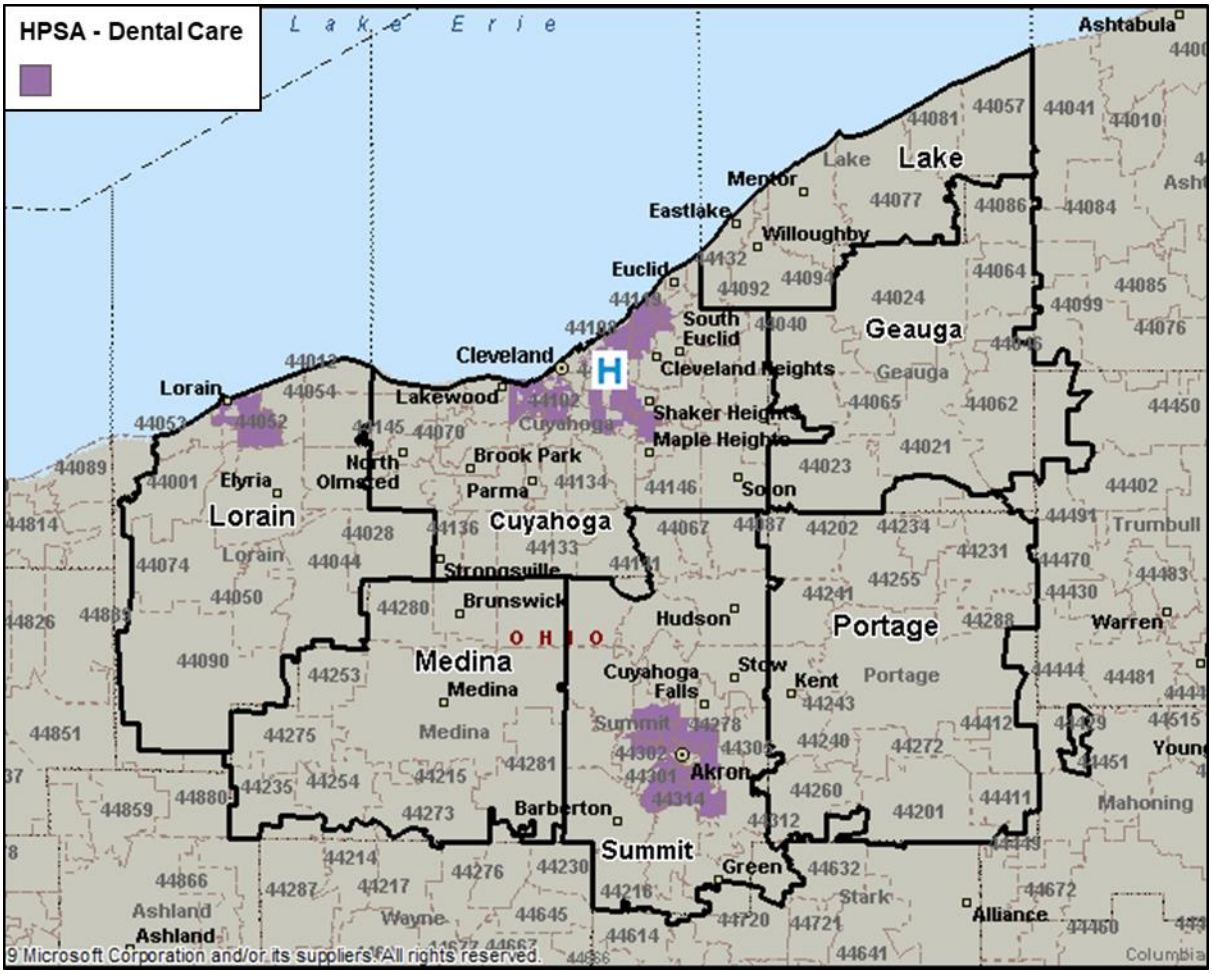
Health Professional Shortage Areas

Exhibit 60: Primary Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Exhibit 61: Dental Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Description

Exhibits 60 and 61 show the locations of federally-designated primary care and dental care HPSA Census Tracts.

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

HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility."[30]

Observations

- Census tracts in Cuyahoga, Lake, and Summit counties have been designated as primary care HPSAs.
- Census tracts in Cuyahoga, Lorain, and Summit counties have been designated as dental care HPSAs.
- HRSA also has designated 13 facilities in four of the 7 counties as mental health HPSAs.

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

APPENDIX D – 21-COUNTY COMMUNITY SECONDARY DATA ASSESSMENT

This section presents an assessment of secondary data regarding child and adolescent health needs in the 21-County (Northeast Ohio) community.

Demographics

Exhibit 62: Percent Change in 0-17 Population by County, 2017-2022

County	Population 17 and Younger 2017	Projected Population 17 and Younger 2022	Percent Change 2017 - 2022
Ashland County	11,536	11,231	-2.6%
Ashtabula County	21,524	20,360	-5.4%
Carroll County	4,174	3,753	-10.1%
Columbiana County	22,116	20,959	-5.2%
Crawford County	9,176	8,643	-5.8%
Cuyahoga County	265,841	257,312	-3.2%
Erie County	15,956	15,147	-5.1%
Geauga County	20,770	19,112	-8.0%
Holmes County	13,696	13,589	-0.8%
Huron County	14,285	13,510	-5.4%
Lake County	46,228	43,783	-5.3%
Lorain County	66,334	64,201	-3.2%
Mahoning County	45,287	42,674	-5.8%
Medina County	39,336	36,898	-6.2%
Portage County	31,877	29,799	-6.5%
Richland County	25,932	25,056	-3.4%
Stark County	79,553	76,637	-3.7%
Summit County	117,050	113,994	-2.6%
Trumbull County	39,047	36,456	-6.6%
Tuscarawas County	20,782	20,259	-2.5%
Wayne County	30,052	29,668	-1.3%
21-County Community Total	**940,552**	**903,041**	**-4.0%**

Source: Truven Market Expert, 2018.

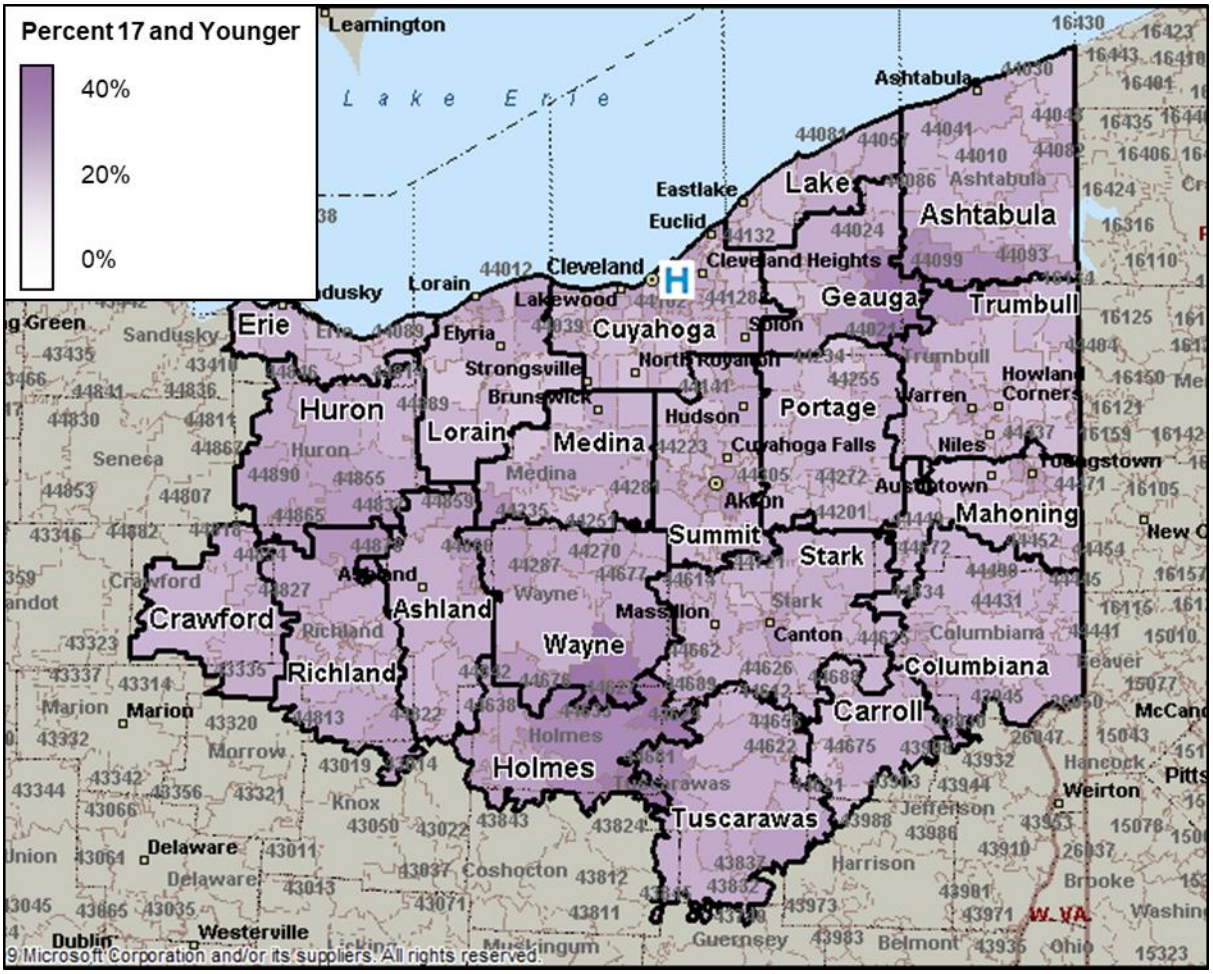
Description

Exhibit 62 portrays the estimated 0-17 Population by county in 2017 and projected to 2022.

Observations

- Between 2017 and 2022, the community is expected to decrease in 0-17 Population by 4.0 percent. The 0-17 population is expected to decrease in every county.

Exhibit 63: Percent of Population Aged 0-17 by ZIP Code, 2017



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

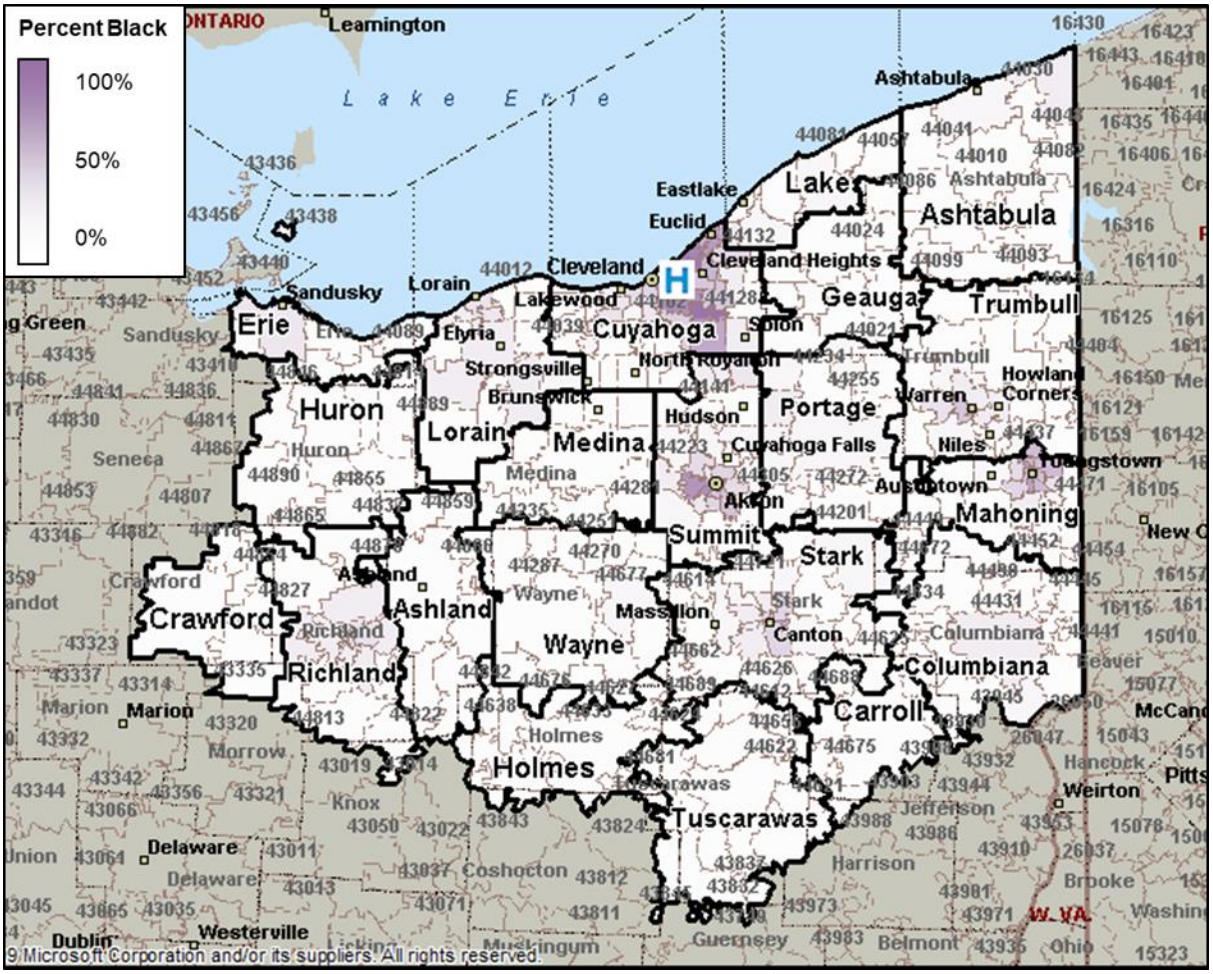
Description

Exhibit 63 portrays the percent of the population 17 years of age and younger by ZIP code.

Observations

- In the 21-County community, 21.4 percent of the population was aged 17 and younger.
- Holmes County had the highest proportion of the population 17 years of age and younger (31.6 percent). Portage County had the lowest proportion (18.8 percent).

Exhibit 64: Percent of Population - Black, 2017



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

Description

Exhibit 64 portrays locations where the percentages of the population that are Black were highest in 2017.

Observations

- Cuyahoga County (29.4 percent), Mahoning (15.9 percent), and Summit County (14.4 percent) had the highest proportion of Black residents. No other county was above ten percent.

- Holmes County (0.5 percent), Carroll County (0.6 percent), Tuscarawas (0.8 percent), and Ashland County (0.9 percent) had the lowest proportion of Black residents, all under one percent.

Exhibit 65: Percent of Population – Hispanic (or Latino), 2017

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

Description

Exhibit 65 portrays locations where the percentages of the population that are Hispanic (or Latino) were highest in 2017.

Observations

- Lorain County (10.0 percent) had the highest proportion of Hispanic (or Latino) residents.
- Holmes County (1.0 percent) had the lowest proportion of Hispanic (or Latino) residents.

Exhibit 66: Other Socioeconomic Indicators, 2012-2016

Region	Population 25+ without High School Diploma	Population with a Disability	Population Linguistically Isolated
Ashland County	12.6%	14.5%	3.9%
Ashtabula County	14.6%	16.0%	1.9%
Carroll County	12.9%	14.0%	1.1%
Columbiana County	12.4%	15.9%	0.8%
Crawford County	11.6%	17.1%	0.7%
Cuyahoga County	11.5%	14.8%	4.2%
Erie County	9.4%	14.1%	0.8%
Geauga County	9.0%	10.5%	3.7%
Holmes County	41.6%	8.8%	20.2%
Huron County	12.3%	13.6%	2.6%
Lake County	8.1%	12.2%	2.8%
Lorain County	10.9%	15.4%	2.6%
Mahoning County	9.9%	15.6%	2.3%
Medina County	6.4%	10.5%	1.2%
Portage County	8.1%	12.8%	1.8%
Richland County	12.8%	15.4%	0.9%
Stark County	9.6%	13.3%	1.0%
Summit County	9.0%	12.6%	2.4%
Trumbull County	11.1%	14.6%	1.2%
Tuscarawas County	14.1%	14.1%	2.4%
Wayne County	14.6%	11.0%	4.5%
Ohio	**10.5%**	**13.8%**	**2.4%**
United States	**13.0%**	**12.5%**	**8.5%**

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

Description

Exhibit 66 portrays the percent of the population (aged 25 years and above) without a high school diploma, with a disability, and linguistically isolated, by county.

Observations

- Thirteen (13) counties had a higher percentage of residents aged 25 years and older without a high school diploma than the Ohio average.

- Twelve (12) counties also had a higher percentage of the population with a disability compared to Ohio and United States averages.

- Compared to Ohio (but not to the United States), eight counties all had a higher proportion of the population that is linguistically isolated. Linguistic isolation is defined

as residents who speak a language other than English and speak English less than "very well."

Economic indicators

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

People in Poverty

Exhibit 67: Percent of People in Poverty, 2012-2016

Measure	Total Population	Population Aged 17 and Younger
Ashland County	15.4%	24.5%
Ashtabula County	19.6%	29.5%
Carroll County	14.0%	20.1%
Columbiana County	15.8%	25.0%
Crawford County	15.7%	23.2%
Cuyahoga County	18.5%	27.0%
Erie County	12.8%	18.9%
Geauga County	6.9%	10.2%
Holmes County	12.9%	18.1%
Huron County	12.9%	18.4%
Lake County	8.5%	11.3%
Lorain County	14.0%	21.6%
Mahoning County	18.1%	29.2%
Medina County	6.6%	8.8%
Portage County	15.0%	20.2%
Richland County	16.5%	25.8%
Stark County	14.1%	21.4%
Summit County	14.3%	20.5%
Trumbull County	17.5%	30.3%
Tuscarawas County	13.6%	19.2%
Wayne County	12.7%	18.5%
Ohio	**15.4%**	**22.1%**
United States	**15.1%**	**21.2%**

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

Description

Exhibit 67 portrays poverty rates by county for the total and 0-17 populations.

Observations

- Child poverty rates have been comparatively high in Ashland, Ashtabula, Columbiana, Crawford, Cuyahoga, Mahoning, Richland, and Trumbull counties.

Exhibit 68: Poverty Rates by Race and Ethnicity, 2012-2016

Measure	Total	White	Black	Asian	Hispanic (or Latino)
Ashland County	15.4%	15.4%	16.1%	22.8%	12.1%
Ashtabula County	19.6%	18.7%	31.8%	0.0%	43.4%
Carroll County	14.0%	14.0%	37.3%	8.7%	20.1%
Columbiana County	15.8%	15.0%	45.8%	0.0%	26.0%
Crawford County	15.7%	15.0%	45.0%	34.1%	7.8%
Cuyahoga County	18.5%	11.1%	33.3%	13.3%	30.4%
Erie County	12.8%	10.4%	26.9%	6.7%	37.7%
Geauga County	6.9%	6.5%	25.8%	5.2%	9.0%
Holmes County	12.9%	12.7%	25.0%	25.0%	27.8%
Huron County	12.9%	12.6%	25.0%	2.4%	21.1%
Lake County	8.5%	7.6%	27.1%	8.2%	18.8%
Lorain County	14.0%	11.0%	36.5%	29.9%	25.4%
Mahoning County	18.1%	13.0%	41.4%	16.8%	38.3%
Medina County	6.6%	6.0%	32.7%	11.9%	10.6%
Portage County	15.0%	13.2%	37.9%	30.2%	28.0%
Richland County	16.5%	14.4%	37.5%	5.5%	33.5%
Stark County	14.1%	11.6%	36.8%	7.5%	26.7%
Summit County	14.3%	10.2%	32.9%	15.6%	18.3%
Trumbull County	17.5%	14.6%	41.5%	26.2%	31.2%
Tuscarawas County	13.6%	12.8%	51.9%	23.2%	28.2%
Wayne County	12.7%	12.2%	34.2%	6.4%	28.7%
Ohio	**15.4%**	**12.3%**	**33.2%**	**13.4%**	**27.1%**
United States	**15.1%**	**12.4%**	**26.2%**	**12.3%**	**23.4%**

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

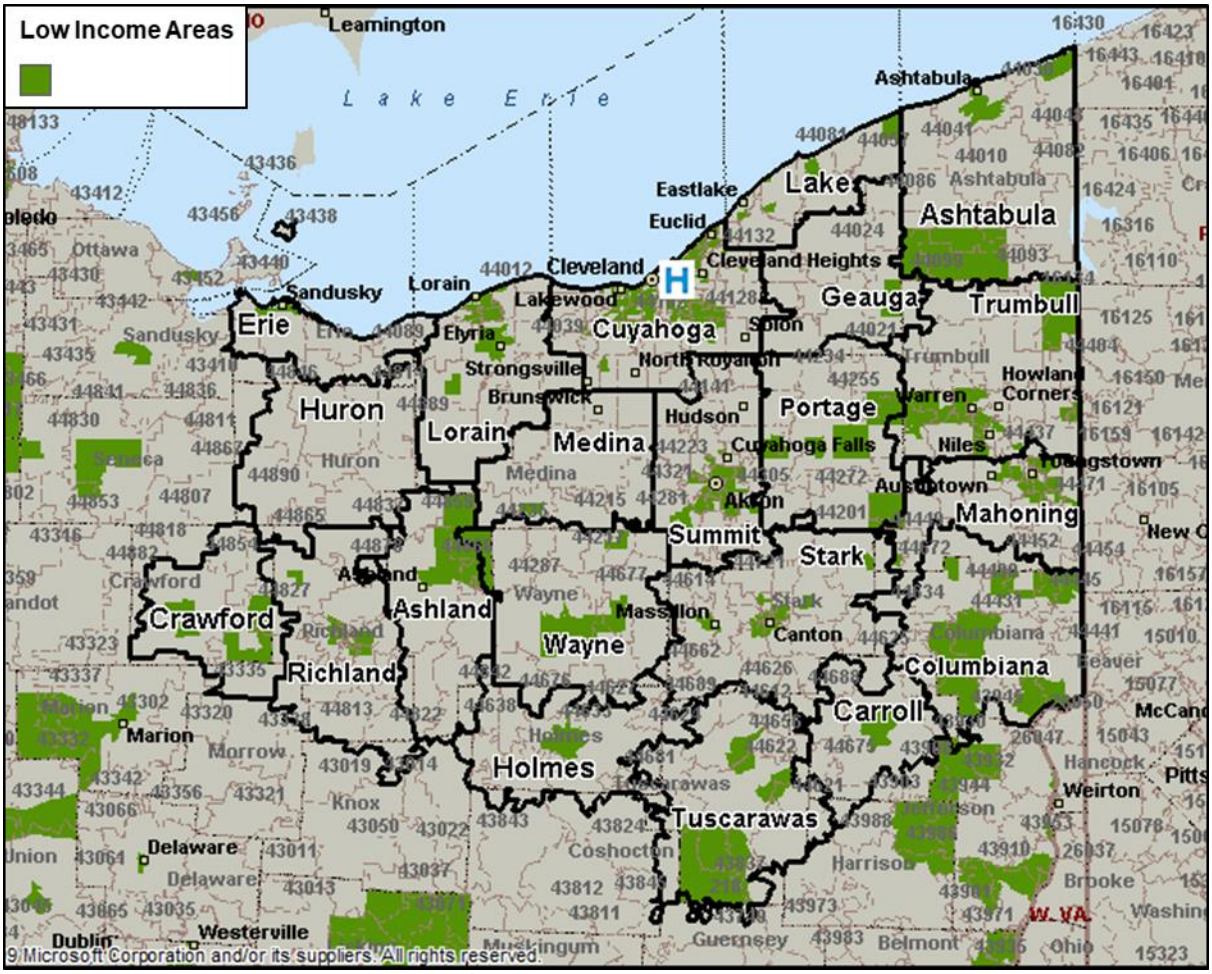
Description

Exhibit 68 portrays poverty rates by county and by race and ethnicity.

Observations

- Poverty rates have been higher for Black and Hispanic (or Latino) residents than for Whites.

Exhibit 69: Low Income Census Tracts, 2017



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

Description

Exhibit 69 portrays the location of federally-designated low income census tracts.

Observations

- Low income census tracts have been present throughout Northeast Ohio.

Unemployment

Exhibit 70: Unemployment Rates, 2013-2017

Area	2013	2014	2015	2016	2017
Ashland County	8.1%	6.0%	5.0%	5.0%	4.9%
Ashtabula County	9.5%	7.2%	6.0%	6.0%	5.9%
Carroll County	7.9%	6.1%	6.0%	6.8%	5.9%
Columbiana County	8.3%	6.5%	5.9%	6.6%	6.0%
Crawford County	9.2%	6.7%	5.8%	6.0%	5.7%
Cuyahoga County	7.0%	6.3%	5.2%	5.4%	5.9%
Erie County	8.1%	6.4%	5.5%	5.5%	6.2%
Geauga County	5.7%	5.0%	4.2%	4.4%	4.8%
Holmes County	5.2%	4.0%	3.4%	3.5%	3.6%
Huron County	10.2%	8.0%	6.6%	6.5%	6.5%
Lake County	6.3%	5.5%	4.5%	4.8%	5.2%
Lorain County	7.4%	6.4%	5.6%	5.9%	6.2%
Mahoning County	8.5%	6.7%	6.1%	6.3%	6.9%
Medina County	5.8%	5.1%	4.1%	4.3%	4.7%
Portage County	7.7%	5.9%	4.9%	5.0%	5.0%
Richland County	8.6%	6.5%	5.6%	5.5%	5.5%
Stark County	7.6%	5.8%	5.3%	5.4%	5.2%
Summit County	7.6%	5.9%	5.0%	5.0%	5.1%
Trumbull County	9.4%	7.3%	6.4%	6.7%	7.2%
Tuscarawas County	7.3%	5.5%	5.4%	5.7%	5.0%
Wayne County	6.2%	4.6%	3.9%	3.9%	3.9%
Ohio	**7.5%**	**5.8%**	**4.9%**	**4.9%**	**5.0%**
United States	**7.4%**	**6.2%**	**5.3%**	**4.9%**	**4.4%**

Source: Bureau of Labor Statistics, 2018.

Description

Exhibit 70 shows unemployment rates for 2013 through 2017 by county, with Ohio and national rates for comparison.

Observations

- Between 2012 and 2015, unemployment rates at the county, state, and national levels declined significantly. Between 2015 and 2017, unemployment rates increased slightly in most counties.

- Rates in 14 counties have been above average (compared to the Ohio). Rates in 19 counties have been above the United States average.

Insurance Status

Exhibit 71: Percent without Health Insurance, 2012-2016

County	Total Population	Population Aged 17 and Younger
Ashland County	11.1%	13.7%
Ashtabula County	11.0%	8.6%
Carroll County	11.6%	11.4%
Columbiana County	9.8%	5.6%
Crawford County	8.3%	3.6%
Cuyahoga County	8.2%	3.3%
Erie County	8.2%	3.9%
Geauga County	10.7%	15.7%
Holmes County	40.7%	48.5%
Huron County	9.3%	6.6%
Lake County	6.7%	3.6%
Lorain County	6.9%	2.1%
Mahoning County	7.8%	3.6%
Medina County	5.9%	3.4%
Portage County	7.5%	3.6%
Richland County	10.0%	5.9%
Stark County	7.4%	4.1%
Summit County	7.9%	4.2%
Trumbull County	10.1%	7.0%
Tuscarawas County	11.0%	9.8%
Wayne County	13.0%	15.7%
Ohio	**8.5%**	**4.6%**
United States	**11.7%**	**5.9%**

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

Description

Exhibit 71 presents the estimated percent of total population and children in community counties without health insurance (uninsured) in 2016.

Observations

- In 2016, the child uninsurance rates in Ashland, Ashtabula, Carroll, Geauga, Holmes, Trumbull, Tuscarawas, and Wayne were significantly higher than Ohio and United States averages.

Crime Rates

Exhibit 72: Crime Rates by Type and Jurisdiction, Per 100,000, 2016

County	Violent Crime	Property Crime	Murder	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Motor Vehicle Theft	Arson
Ashland County	132.0	1,226.5	5.7	68.9	9.6	47.8	267.9	922.2	36.4	1.9
Ashtabula County	116.3	1,275.2	3.8	22.9	26.7	62.9	345.0	871.1	59.1	7.6
Carroll County	151.4	1,665.0	-	-	-	151.4	151.4	1,412.7	100.9	-
Columbiana County	48.9	723.6	1.3	16.7	3.9	27.0	88.8	623.1	11.6	5.1
Crawford County	136.5	2,602.6	-	41.4	36.6	58.5	631.2	1,910.5	60.9	12.2
Cuyahoga County	694.9	2,977.7	15.1	57.6	327.7	294.5	753.6	1,742.1	482.0	33.6
Erie County	98.3	2,504.3	1.5	10.4	40.2	46.2	446.7	2,001.0	56.6	4.5
Geauga County	36.4	436.6	2.4	9.7	3.6	20.6	69.1	346.9	20.6	2.4
Holmes County	18.2	674.9	2.3	9.1	6.8	-	123.1	515.3	36.5	2.3
Huron County	48.3	2,622.6	-	13.8	13.8	20.7	479.7	2,077.4	65.6	3.5
Lake County	214.1	1,514.8	1.1	19.6	31.6	161.8	217.9	1,244.7	52.3	5.4
Lorain County	150.9	1,369.6	4.5	33.4	50.3	62.7	373.4	930.8	65.3	9.0
Mahoning County	258.8	2,496.1	7.1	23.9	86.7	141.1	666.7	1,674.1	155.3	63.3
Medina County	47.0	682.1	1.7	9.2	1.7	34.4	93.4	577.9	10.9	2.9
Portage County	101.6	1,649.7	3.3	12.6	25.2	60.4	304.1	1,298.5	47.1	7.3
Richland County	241.4	3,692.7	5.0	74.9	60.8	100.7	1,002.9	2,566.6	123.2	25.8
Stark County	314.8	2,580.3	3.5	47.0	76.9	187.3	562.6	1,881.1	136.5	15.0
Summit County	300.0	2,825.9	6.8	59.7	93.0	140.4	644.5	2,008.0	173.4	22.7
Trumbull County	237.1	2,242.2	3.0	30.0	77.4	126.7	596.7	1,528.4	117.1	6.0
Tuscarawas County	43.4	944.6	2.2	12.2	2.2	26.7	173.6	729.8	41.2	3.3
Wayne County	119.3	1,436.8	2.8	39.1	16.8	60.6	372.7	1,009.1	55.0	12.1
Ohio	**305.9**	**2,537.4**	**5.9**	**47.4**	**111.1**	**141.5**	**573.5**	**1,789.7**	**174.2**	**23.4**

Source: FBI, 2017.

Description

Exhibit 72 provides crime statistics. Light grey shading indicates rates that were higher (worse) than the Ohio average; dark grey shading indicates rates that were more than 50 percent higher than the Ohio average.

Observations

- 2016 crime rates in Cuyahoga County were comparitively high for nearly all types.

Housing Affordability

Exhibit 73: Percent of Rented Households Rent Burdened, 2013-2017

County	Occupied Units Paying Rent	Households Paying >30%	Rent Burden > 30% of Income
Ashland County	5,038	1,764	35.0%
Ashtabula County	10,002	5,234	52.3%
Carroll County	1,707	636	37.3%
Columbiana County	9,536	4,341	45.5%
Crawford County	5,016	1,964	39.2%
Cuyahoga County	203,368	102,500	50.4%
Erie County	8,993	3,896	43.3%
Geauga County	4,390	1,782	40.6%
Holmes County	2,249	806	35.8%
Huron County	6,369	2,688	42.2%
Lake County	22,801	9,917	43.5%
Lorain County	31,076	16,092	51.8%
Mahoning County	27,924	14,161	50.7%
Medina County	12,793	5,175	40.5%
Portage County	17,986	9,513	52.9%
Richland County	14,612	6,606	45.2%
Stark County	45,388	19,878	43.8%
Summit County	71,639	34,333	47.9%
Trumbull County	23,016	11,115	48.3%
Tuscarawas County	9,779	4,250	43.5%
Wayne County	10,675	4,459	41.8%
21-County Community Total	**544,357**	**261,110**	**48.0%**
Ohio	**1,453,379**	**678,101**	**46.7%**
United States	**39,799,272**	**20,138,321**	**50.6%**

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

Description

The U.S. Department of Housing and Urban Development ("HUD") has defined households that are "rent burdened" as those spending more than 30 percent of income on housing.[31] On that basis and based on data from the U.S. Census, Exhibit 73 portrays the percentage of rented households in each county that are rent burdened.

Observations

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

As stated by the Federal Reserve, "households that have little income left after paying rent may not be able to afford other necessities, such as food, clothes, health care, and transportation."[32]

- In total in the 21-County community, 48 percent of households have been designated as "rent burdened," a level above the Ohio average.

- The percentage of rented households rent burdened was above the state average in a third of community counties. Rates in Ashtabula, Lorain, Mahoning, and Portage counties exceeded both the Ohio and national averages.

[32] *Ibid.*

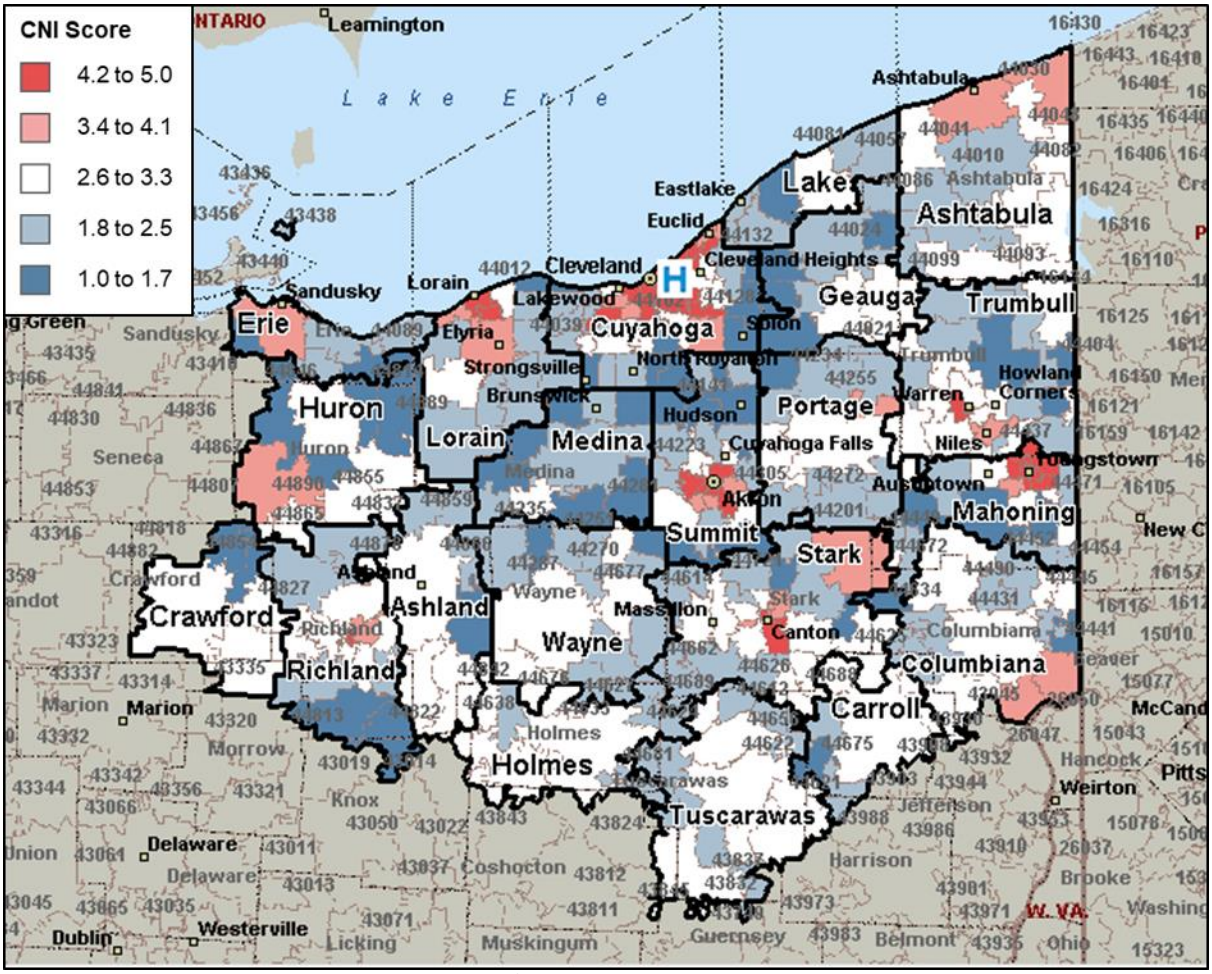
Dignity Health Community Need Index

Exhibit 74: Weighted Average Community Need Index™ Score by County, 2018

County	CNI Score
Ashland County	2.7
Ashtabula County	3.2
Carroll County	2.6
Columbiana County	2.9
Crawford County	3.0
Cuyahoga County	3.3
Erie County	2.8
Geauga County	1.9
Holmes County	2.7
Huron County	2.8
Lake County	2.3
Lorain County	3.0
Mahoning County	3.1
Medina County	1.7
Portage County	2.6
Richland County	3.0
Stark County	2.8
Summit County	2.7
Trumbull County	2.9
Tuscarawas County	2.8
Wayne County	2.6
21-County Average	**2.9**
Ohio Average	**2.9**

Source: Dignity Health, 2018.

Exhibit 75: Community Need Index, 2018



Source: Microsoft MapPoint and Dignity Health, 2018.

Description

Exhibits 74 and 75 present the *Community Need Index*™ (CNI) score for each county and ZIP code in the 21-County community. Higher scores (e.g., 4.2 to 5.0) indicate the highest levels of community need. The index is calibrated such that 3.0 represents a U.S.-wide median score.

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

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

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

Observations

- At 2.9, the weighted average CNI score for the 21-County community is slightly below the U.S. median of 3.0.
- Cuyahoga County (3.3), Ashtabula County (3.2), and Mahoning County (3.1) had the highest CNI scores, each above the U.S. median.

Other Local Health Status and Access Indicators

This section assesses other health status and access indicators for the 21-County community. Data sources include:

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

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

County Health Rankings

Exhibit 76: County Health Rankings – Select Indicators, 2018
(Light Grey Shading Denotes Bottom Half of Ohio Counties; Dark Grey Denotes Bottom Quartile)

County	Health Outcomes	Health Factors	Length of Life	Quality of Life	Health Behaviors	Clinical Care	Social & Economic Factors	Physical Environment
Ashland County	18	27	13	26	18	43	26	79
Ashtabula County	69	77	71	68	75	81	71	60
Carroll County	39	54	36	44	28	73	52	53
Columbiana County	63	70	60	65	63	64	65	85
Crawford County	54	46	56	51	31	54	43	59
Cuyahoga County	60	62	48	67	49	4	79	86
Erie County	58	35	63	50	54	8	45	3
Geauga County	2	4	2	2	2	32	7	72
Holmes County	7	45	8	10	24	88	22	1
Huron County	34	41	52	21	26	55	46	8
Lake County	13	9	20	11	6	16	25	11
Lorain County	38	37	33	47	27	18	47	40
Mahoning County	68	61	64	72	48	15	75	83
Medina County	4	5	5	4	9	5	5	62
Portage County	31	24	21	41	16	45	29	50
Richland County	57	55	58	54	66	50	55	10
Stark County	42	39	30	55	36	9	44	84
Summit County	46	44	44	52	43	14	50	81
Trumbull County	64	74	65	59	59	58	81	73
Tuscarawas County	28	49	19	38	52	69	38	43
Wayne County	15	13	15	15	7	36	18	49

Source: County Health Rankings, 2018.

Description

Exhibit 76 presents *County Health Rankings*, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation that incorporates a variety of health status indicators into a system that ranks each county/city within each state in terms of "health factors" and "health outcomes." These health factors and outcomes are composite measures based on several variables grouped into the following categories: health behaviors, clinical care,[33] social and economic factors, and physical environment.[34] *County Health Rankings* is updated annually. *County Health Rankings 2018* relies on data from 2006 to 2017, with most data from 2011 to 2016.

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

Observations

- Ashtabula, Columbiana, and Trumbull counties ranked in the bottom half of Ohio counties for all indicators.

- Eight counties ranked in the bottom quartile of Ohio counties for Physical Environment index.

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

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

Community Health Status Indicators

Exhibit 77: Community Health Status Indicators, 2018
(Light Grey Shading Denotes Bottom Half of Peer Counties; Dark Grey Denotes Bottom Quartile)

Category	Indicator	Ashland County	Ashtabula County	Carroll County	Columbiana County	Crawford County	Cuyahoga County	Erie County
Length of Life	Years of Potential Life Lost Rate							
Quality of Life	Physically Unhealthy Days							
	Mentally Unhealthy Days							
	% Births - Low Birth Weight							
Health Behaviors	Food Environment Index							
	% With Access to Exercise Opportunities							
	Teen Birth Rate							
Clinical Care	Primary Care Physicians Rate							
	Dentist Rate							
	Mental Health Professionals Rate							
Social & Economic Factors	High School Graduation Rate							
	% Unemployed							
	% Children in Poverty							
	Income Ratio							
	% Children in Single-Parent Households							
	Social Association Rate							
	Violent Crime Rate							
	Injury Death Rate							
Physical Environment	Average Daily PM2.5							
	% Severe Housing Problems							

Source: Community Health Status Indicators, 2018.

Exhibit 77: Community Health Status Indicators, 2018 (*continued*)
(Light Grey Shading Denotes Bottom Half of Peer Counties; Dark Grey Denotes Bottom Quartile)

Category	Indicator	Geauga County	Holmes County	Huron County	Lake County	Lorain County	Mahoning County	Medina County
Length of Life	Years of Potential Life Lost Rate							
Quality of Life	Physically Unhealthy Days							
	Mentally Unhealthy Days							
	% Births - Low Birth Weight							
Health Behaviors	Food Environment Index							
	% With Access to Exercise Opportunities							
	Teen Birth Rate							
Clinical Care	Primary Care Physicians Rate							
	Dentist Rate							
	Mental Health Professionals Rate							
Social & Economic Factors	High School Graduation Rate							
	% Unemployed							
	% Children in Poverty							
	Income Ratio							
	% Children in Single-Parent Households							
	Social Association Rate							
	Violent Crime Rate							
	Injury Death Rate							
Physical Environment	Average Daily PM2.5							
	% Severe Housing Problems							

Source: Community Health Status Indicators, 2018.

Exhibit 77: Community Health Status Indicators, 2018 (*continued*)
(Light Grey Shading Denotes Bottom Half of Peer Counties; Dark Grey Denotes Bottom Quartile)

Category	Indicator	Portage County	Richland County	Stark County	Summit County	Trumbull County	Tuscarawas County	Wayne County
Length of Life	Years of Potential Life Lost Rate							
Quality of Life	Physically Unhealthy Days							
	Mentally Unhealthy Days							
	% Births - Low Birth Weight							
Health Behaviors	Food Environment Index							
	% With Access to Exercise Opportunities							
	Teen Birth Rate							
Clinical Care	Primary Care Physicians Rate							
	Dentist Rate							
	Mental Health Professionals Rate							
Social & Economic Factors	High School Graduation Rate							
	% Unemployed							
	% Children in Poverty							
	Income Ratio							
	% Children in Single-Parent Households							
	Social Association Rate							
	Violent Crime Rate							
	Injury Death Rate							
Physical Environment	Average Daily PM2.5							
	% Severe Housing Problems							

Source: Community Health Status Indicators, 2018.

Exhibit 78: Community Health Status Indicators Frequency, 2018

Category	Indicator	Frequency
Length of Life	Years of Potential Life Lost Rate	4
Quality of Life	Physically Unhealthy Days	5
	Mentally Unhealthy Days	3
	% Births - Low Birth Weight	4
Health Behaviors	Food Environment Index	9
	% With Access to Exercise Opportunities	2
	Teen Birth Rate	1
Clinical Care	Primary Care Physicians Rate	9
	Dentist Rate	7
	Mental Health Professionals Rate	4
Social & Economic Factors	High School Graduation Rate	2
	% Unemployed	9
	% Children in Poverty	6
	Income Ratio	1
	% Children in Single-Parent Households	4
	Social Association Rate	2
	Violent Crime Rate	1
	Injury Death Rate	4
Physical Environment	Average Daily PM2.5	18
	% Severe Housing Problems	5

Source: Community Health Status Indicators, 2018.

Description

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

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

Exhibits 77 and 78 compare 21-County community counties to their respective peer counties and highlights community health issues found to rank in the bottom half and bottom quartile of the counties included in the analysis. Light grey shading indicates rankings in the bottom half of peer counties; dark grey shading indicates rankings in the bottom quartile of peer counties.

Observations

- The CHSI data indicate that at least a third of community counties rank in the bottom quartile among peers for the following indicators:
    - Food environment index
    - Primary care physicians rate
    - Dentists rate
    - Unemployment
    - Air pollution (average daily PM2.5)

Ohio Department of Health

Exhibit 79: Maternal and Child Health Indicators, 2014-2018
(Light Grey Shading Denotes Indicators Worse than Ohio Average)

County	Low Birth Weight Percent	Very Low Birth Weight Percent	Births to Unmarried Mothers	Preterm Births Percent	Very Preterm Births Percent
Ashland County	5.2%	0.7%	31.1%	5.9%	1.0%
Ashtabula County	7.3%	1.2%	50.2%	8.2%	1.5%
Carroll County	6.6%	1.4%	40.5%	7.7%	1.8%
Columbiana County	6.2%	1.1%	50.3%	8.2%	1.4%
Crawford County	5.9%	1.4%	50.3%	7.8%	1.6%
Cuyahoga County	8.5%	2.2%	51.7%	9.5%	2.5%
Erie County	6.2%	1.6%	50.2%	8.0%	1.7%
Geauga County	5.2%	0.9%	16.2%	6.6%	1.2%
Holmes County	3.6%	0.9%	11.5%	5.6%	1.2%
Huron County	5.8%	1.0%	46.1%	8.1%	1.3%
Lake County	6.0%	1.3%	35.9%	7.7%	1.5%
Lorain County	7.0%	1.4%	48.4%	8.3%	1.6%
Mahoning County	8.9%	1.6%	54.1%	10.1%	2.0%
Medina County	5.9%	0.9%	24.9%	7.6%	1.1%
Portage County	6.8%	1.5%	36.5%	8.1%	1.8%
Richland County	6.9%	1.5%	46.9%	8.5%	1.9%
Stark County	6.8%	1.6%	46.4%	8.0%	1.8%
Summit County	7.6%	1.6%	42.9%	8.7%	1.9%
Trumbull County	7.3%	1.6%	50.7%	8.6%	2.0%
Tuscarawas County	5.8%	1.1%	39.0%	8.1%	1.3%
Wayne County	5.1%	0.9%	25.4%	6.5%	1.1%
Ohio	**7.2%**	**1.6%**	**43.2%**	**8.7%**	**1.8%**

Source: Ohio Department of Health, 2018.

Description

Exhibit 79 presents various maternal and infant health indicators.

Observations

- All indicators for Cuyahoga and Mahoning counties were worse than Ohio averages.
- Births to unmarried mothers were particularly prevalent in community counties compared to the Ohio average.

Exhibit 80: Infant Mortality Rates by County, 2010-2016 and for Ohio, 2016 (Light Grey Shading Denotes Indicators Worse than Ohio Average)

County	Overall Infant Mortality Rate	Black Infant Mortality Rate	Hispanic Infant Mortality Rate	White Infant Mortality Rate
Ashland County	6.1	N/A	N/A	N/A
Ashtabula County	7.1	N/A	N/A	N/A
Carroll County	N/A	N/A	N/A	N/A
Columbiana County	5.7	N/A	N/A	N/A
Crawford County	N/A	N/A	N/A	N/A
Cuyahoga County	9.3	16.3	6.0	5.2
Erie County	9.2	N/A	N/A	N/A
Geauga County	4.5	N/A	N/A	N/A
Holmes County	6.4	N/A	N/A	N/A
Huron County	6.1	N/A	N/A	N/A
Lake County	4.3	N/A	N/A	N/A
Lorain County	5.9	10.9	6.0	5.1
Mahoning County	9.1	18.9	N/A	6.4
Medina County	3.8	N/A	N/A	N/A
Portage County	5.7	N/A	N/A	N/A
Richland County	7.0	N/A	N/A	N/A
Stark County	8.1	15.0	N/A	7.1
Summit County	7.4	13.4	N/A	5.6
Trumbull County	7.8	15.2	N/A	6.7
Tuscarawas County	5.1	N/A	N/A	N/A
Wayne County	5.6	N/A	N/A	N/A
Ohio	**7.4**	**15.2**	**7.3**	**5.8**

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

Description

Exhibit 80 presents infant mortality rates by race and ethnicity by county and for Ohio.

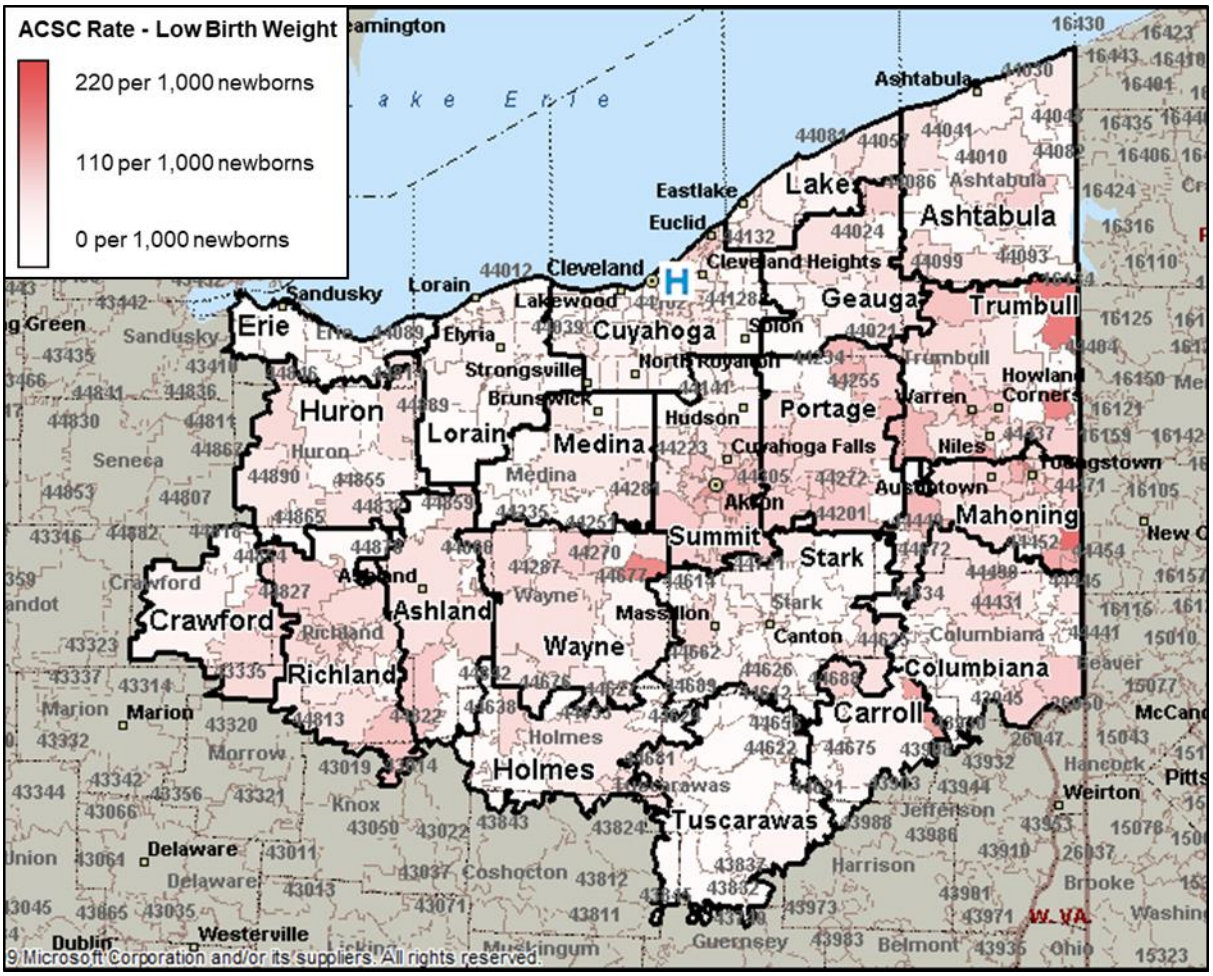
Observations

- The overall infant mortality rates and the Black infant mortality rates in Cuyahoga, Mahoning, and Trumbull counties were higher than the Ohio averages.

- As documented by many, infant mortality rates have been particularly high for Black infants across Ohio.

Ambulatory Care Sensitive Conditions

Exhibit 81: ACSC Rate for Low Birth Weight, by ZIP Code, 2017



Source: Cleveland Clinic, 2018.
Note: Rates are not age-sex adjusted. ZIP Code 44308 (Summit County) and 44503 (Mahoning County) excluded.

Description

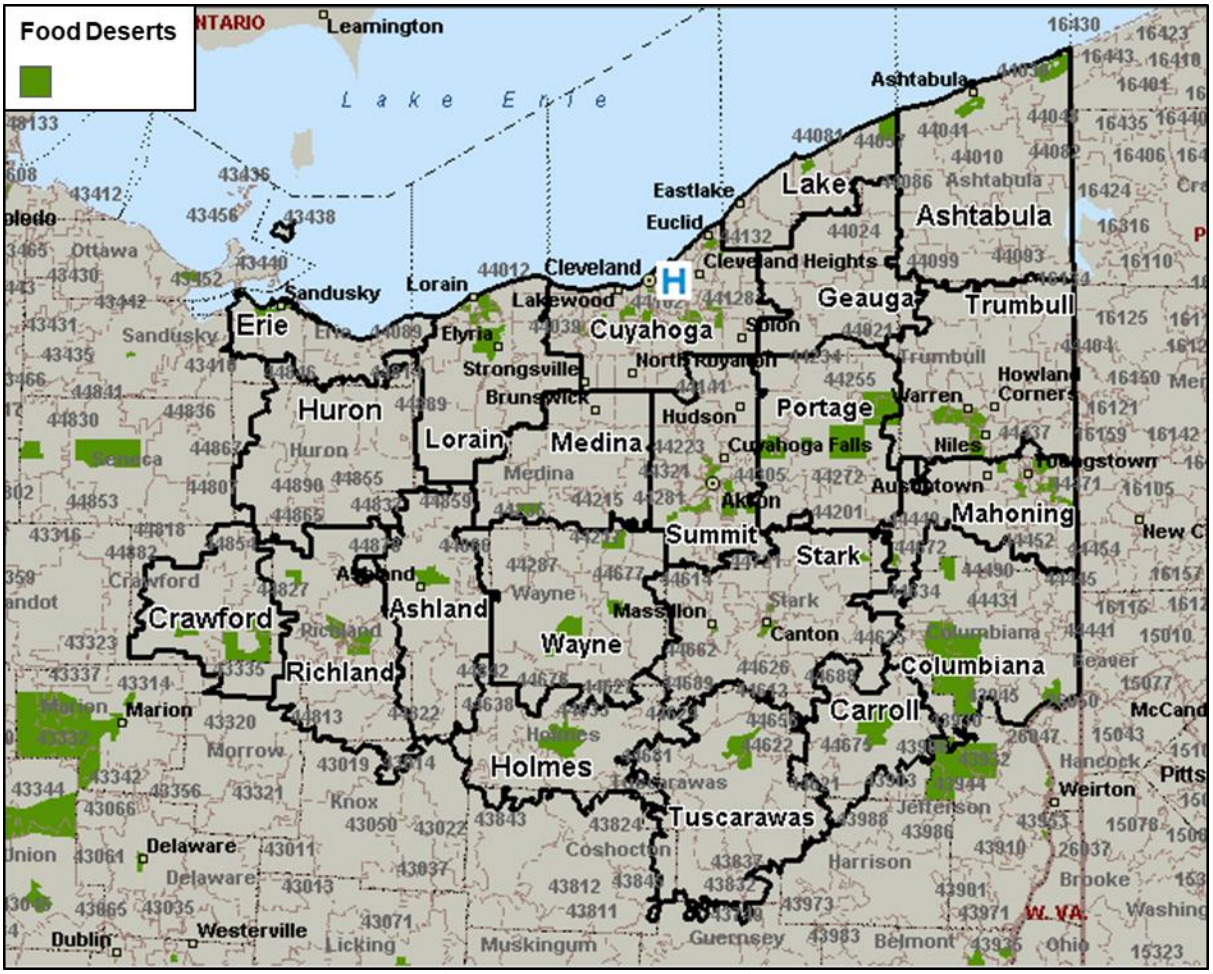
Exhibit 81 maps 2017 low birth weight births PQI rates (per 1,000 newborns) for ZIP codes in the 21-County community.

Observations

- Summit, Mahoning, and Trumbull counties had the highest rates of admissions for low birthweight births in the 21-County community.

Food Deserts

Exhibit 82: Food Deserts, 2017



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

Description

Exhibit 82 shows the location of "food deserts" in the community.

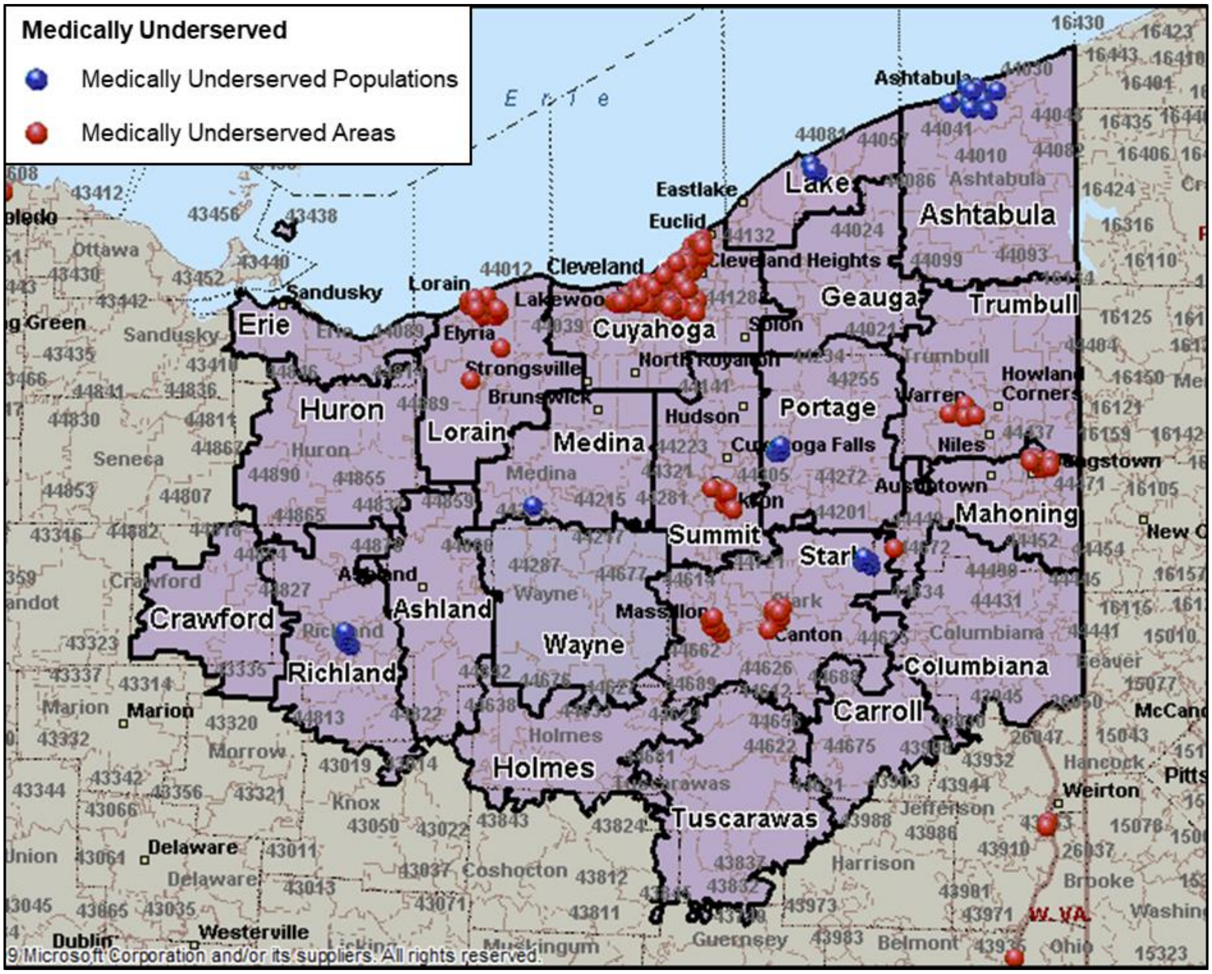
The U.S. Department of Agriculture's Economic Research Service defines urban food deserts as low-income areas more than one mile from a supermarket or large grocery store and rural food deserts as more than 10 miles from a supermarket or large grocery store. Many government-led initiatives aim to increase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

Observations

- Food deserts are present in many of the community counties.

Medically Underserved Areas and Populations

Exhibit 83: Medically Underserved Areas and Populations, 2018



Source: Microsoft MapPoint and HRSA, 2018.

Description

Exhibit 83 illustrates the location of Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) in the community.

Medically Underserved Areas and Populations (MUA/Ps) are designated by HRSA based on an "Index of Medical Underservice." The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.[35] Areas with a score of 62 or less are considered "medically underserved."

Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population

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

group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the state where the requested population resides."[36]

Observations

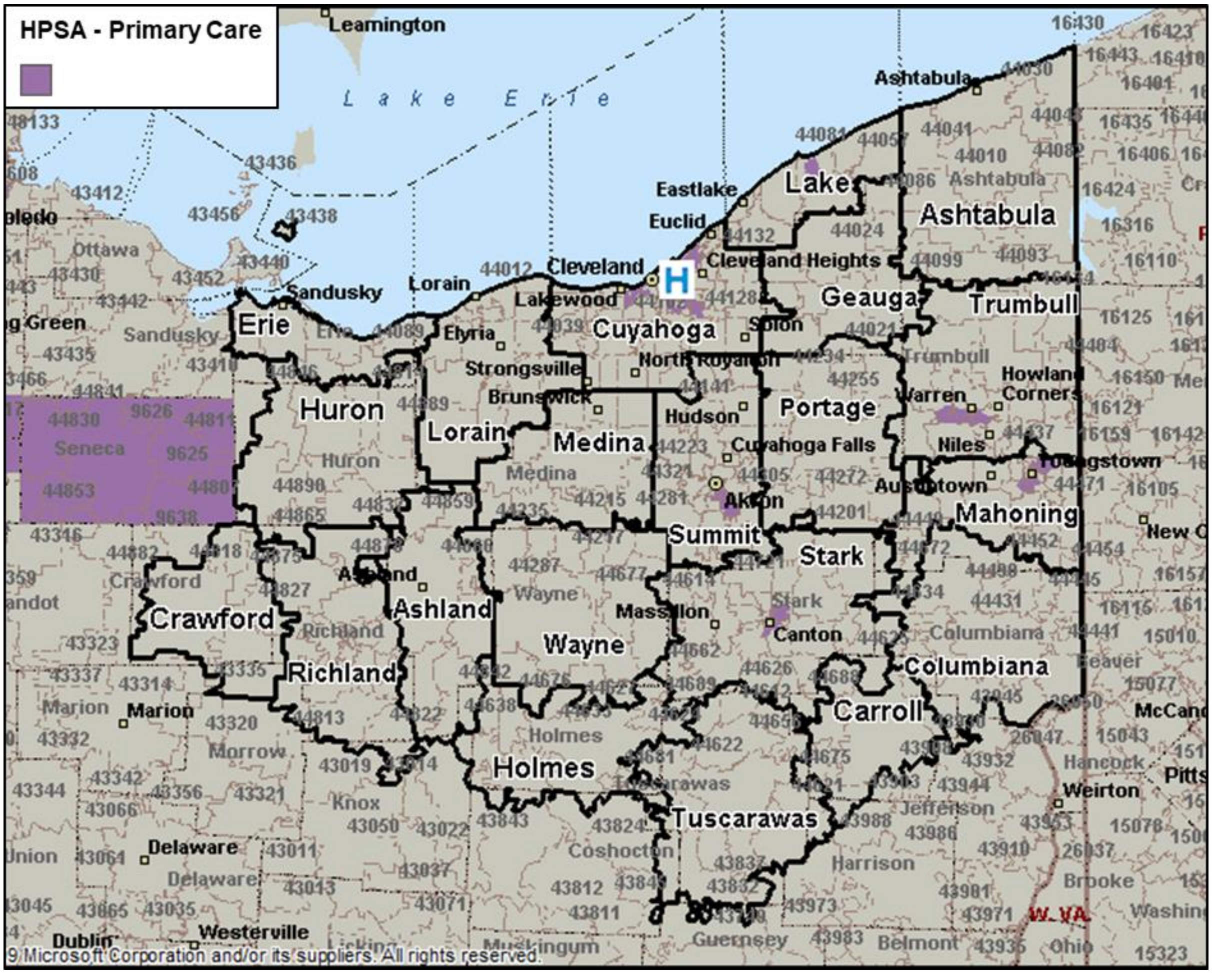
- Medically Underserved Areas are present in Cuyahoga, Lorain, Mahoning, Stark, Summit, and Trumbull counties.

- Medically Underserved Populations are present in Ashtabula, Lake, Medina, Portage, Richland, and Stark counties.

[36] *Ibid.*

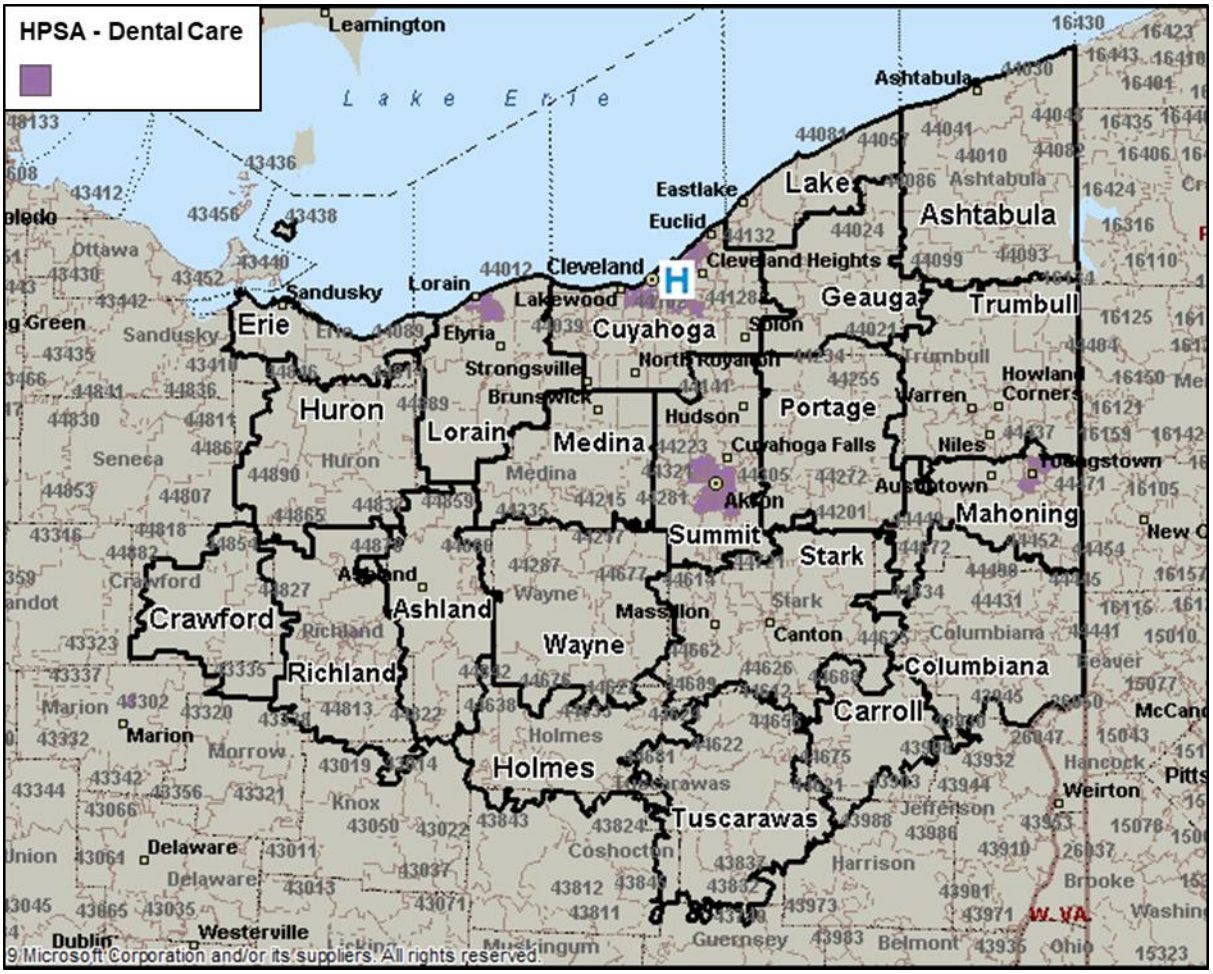
Health Professional Shortage Areas

Exhibit 84: Primary Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Exhibit 85: Dental Care Health Professional Shortage Areas, 2018



Source: Health Resources and Services Administration, 2018.

Description

Exhibits 84 and 85 show the locations of federally-designated primary care and dental care HPSA Census Tracts.

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

HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility."[37]

Observations

- Census tracts in a number of counties have been designated as primary care and dental care HPSA Census Tracts.

- HRSA also has designated 27 facilities in 11 of the 21 counties as mental health HPSAs. Nine geographic areas (full counties) also have been designated as mental health HPSAs: Ashtabula, Carroll, Columbiana, Crawford, Erie, Holmes, Huron, Tuscarawas, and Wayne counties.

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

APPENDIX E – OHIO SECONDARY DATA ASSESSMENT

This section presents an assessment of secondary data regarding child health needs in the state of Ohio.

Exhibit 86: Community Health Status Indicators, 2018

Indicator	Number of Ohio Counties	
	In Bottom Half of Peers	In Bottom Quartile of Peers
Average Daily PM2.5	88	83
% Unemployed	59	33
Mentally Unhealthy Days	59	17
Food Environment Index	57	26
Dentist Rate	55	26
Primary Care Physicians Rate	54	25
Years of Potential Life Lost Rate	54	22
Teen Birth Rate	52	11
Mental Health Providers Rate	50	16
% Births - Low Birth Weight	46	16
Social Association Rate	46	15
% Children in Single-Parent Households	45	22
Physically Unhealthy Days	45	17
Income Inequality Ratio	45	17
Injury Death Rate	41	18
% Children in Poverty	37	20
% Severe Housing Problems	36	19
% With Access to Exercise Opportunities	36	14
High School Graduation Rate	35	11
Violent Crime Rate	17	6

Source: Community Health Status Indicators, 2018.

Description

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

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

Exhibit 86 compares Ohio counties to their respective peer counties and highlights community health issues (relevant to children and adolescents) found to rank in the bottom half and bottom quartile of the counties included in the analysis. Light grey shading indicates that the number of Ohio counties ranked in the bottom half or quartile is at least two thirds of Ohio counties.

Observations

- The CHSI data indicate that at least a two-thirds of Ohio counties rank in the bottom half of their peers for the following indicators:
    - Air pollution (average daily PM2.5)
    - Unemployment
    - Average mentally unhealthy days
    - Food environment index
- Other indicators relevant to child and adolescent health for which Ohio counties benchmark poorly include the supply of dentists, primary care physicians, and mental health providers; teen birth rates; percent of children living in single parent households and in poverty; and injury mortality rates.

Exhibit 87: America's Health Rankings, Women and Children, 2018

Measure Name	2018 Rank	Measure Name	2018 Rank
Behaviors-Infants	48	High School Graduation	29
Publicly-Funded Women's Health Services	48	Maternal Mortality	29
Breastfed Children	46	Missed School Days	29
Neonatal Mortality	46	Adolescent Well-Visit	28
Adverse Childhood Experiences	43	Overall-Children	28
Community & Environment-Infants	42	Teen Births	28
Overall-Infants	42	Adequate Health Insurance	25
Protective Family Routines and Habits (Ages 0-17)	42	Low-Risk Cesarean Delivery	25
Household Smoke	41	Policy-Infants	24
All Determinants-Infants	40	Clinical Care-Children	23
Infant Mortality	40	Outcomes-Children	22
Outcomes-Infants	40	Supportive Neighborhoods	22
Preterm Birth	40	Child Mortality	21
Tobacco Use During Pregnancy	40	Infant Child Care Cost	19
Food Insecurity - Household	39	Medical Home for Child with Special Health Care Needs	18
Overweight or Obese-Youth	36	Baby-Friendly Facility	17
Community & Environment-Children	35	Policy-Children	15
Concentrated Disadvantage	33	Developmental Screening	14
Low Birthweight	32	Substance Use Disorder-Youth	14
Prenatal Care Before 3rd Trimester	32	Clinical Care-Infants	13
Behaviors-Children	31	Teen Suicide	13
Tobacco Use-Youth	31	Homeless Family Households	12
Children with Health Insurance	30	Water Fluoridation	11
All Determinants-Children	29	Well-Baby Check	1

Source: America's Health Rankings, 2019.

Description

America's Health Rankings compares state-level health data to develop national health benchmarks and state rankings. This source has separate reports for the total population in each state (and nationally), for seniors, and for women and children.

Exhibit 87 shows how Ohio ranked in the 2018 Women and Children Report. Light grey shading indicates rankings in the bottom half of states; dark grey shading indicates rankings in bottom quartile of states.

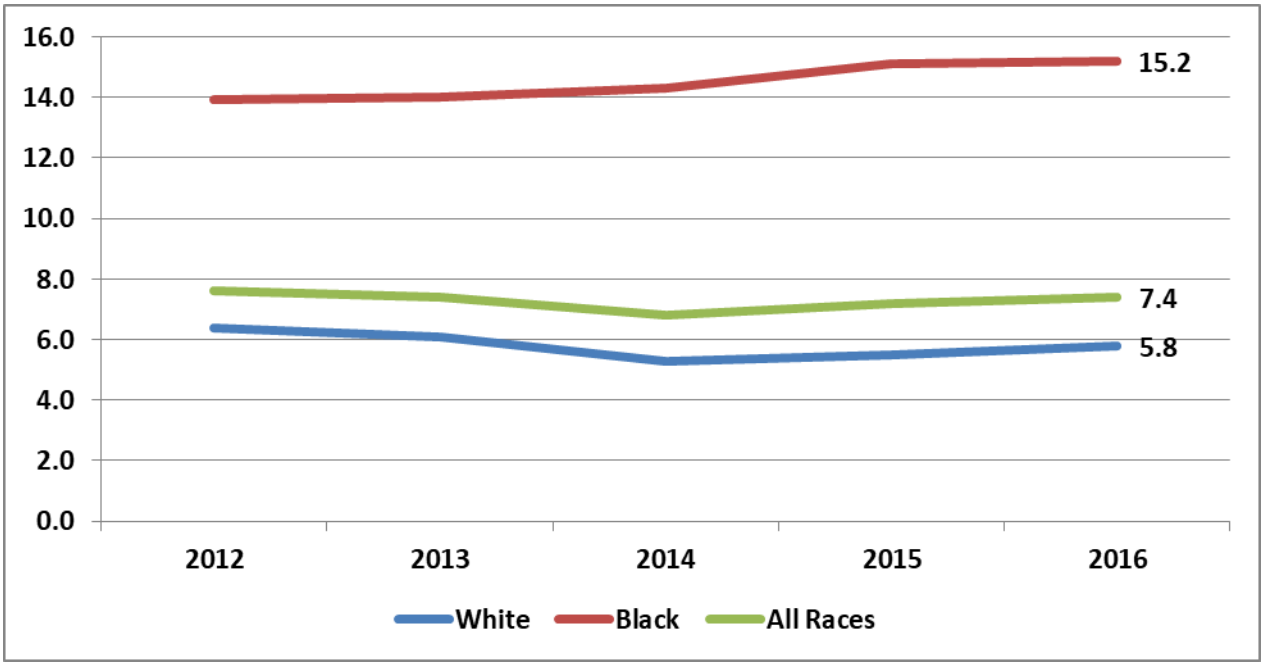
Observations

- Ohio ranked 28th overall for child health, 42nd for infants, and 32nd for women. All three overall rankings were in the bottom half of all states.

- Ohio ranked in the bottom ten states for the following indicators:

    - Health behaviors – infants (a composite measure that includes indicators for alcohol consumption during pregnancy, percentage of infants breastfed, sleep position, and tobacco use during pregnancy)
    - Publicly-funded women's health services (percentage of need met)
    - Percentage of infants breastfed
    - Neonatal mortality (deaths per 1,000 live births)
    - Adverse childhood experiences
    - Community and environment – infants (a composite measure that includes household smoke and a measure of infant child care cost)
    - Protective family routines and habits (ages 0-17)
    - Household smoking
    - All determinants – infants
    - Infant mortality
    - Outcomes – infants (a composite measure that includes infant mortality, low birthweight, neonatal mortality, and preterm birth rates)
    - Preterm births
    - Tobacco use during pregnancy

Exhibit 88: Infant Mortality Rates by Race, Ohio overall, 2012-2016



Source: Ohio Department of Health, 2018.

Description

Exhibit 88 presents infant mortality rates in Ohio by race for each year from 2012 to 2016.

Observations

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

Exhibit 89: Ohio YRBS, 2013
(Light Grey Shading Denotes Indicators Worse than CDC Goal; Dark Grey Denotes Any Indicators More than 50 Percent Worse than CDC Goal)

Indicator	Ohio	United States	Goal
Increase use of safety belts	91.6	92.3	**92.4**
Reduce physical fighting among adolescents	19.8	32.8	**28.4**
Reduce bullying among adolescents	20.8	20.1	**17.9**
Reduce weapon carrying by adolescents on school property	14.2	16.6	**4.6**
Reduce suicide attempts by adolescents	1.4	2.4	**1.7**
Reduce the proportion of adolescents aged 12 to 17 years who experience a major depressive episode (MDE)	25.8	28.5	**7.4**
Reduce the proportion of adolescents who have been offered, sold or given an illegal drug on school property	19.9	25.6	**20.4**
Reduce use of tobacco products by adolescents in the past thirty days	21.7	23.4	**21.0**
Reduce use of cigarettes by adolescents in the past thirty days	15.1	18.1	**16.0**
Reduce the proportion of children and adolescents who are considered obese	13.0	13.0	**16.1**
Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity	25.9	28.7	**20.2**
Increase the proportion of adolescents who had a wellness checkup in the past 12 months	65.7	-	**75.6**
Increase the proportion of children and adolescents aged two years through 12th grade who view television videos or play video games for no more than two hours a day	62.3	67.6	**86.8**
Increase the proportion of students grades 9 through 12 that get sufficient sleep (defined as 8 or more hours of sleep on anaverage school night)	26.4	31.4	**33.2**

Source: Centers for Disease Control and Prevention, 2013.

Description

Exhibit 89 depicts YRBS data for Ohio, the United States, and goal metrics set by the Centers for Disease Control and Prevention.

Observations

- Ohio compared particularly unfavorably for carrying a weapon on school property and adolescents aged 12-17 who experience major depressive episodes compared to CDC goal metrics.

APPENDIX F – UNITED STATES SECONDARY DATA ASSESSMENT

This section presents certain secondary data regarding child and adolescent health for the United States.

Health, United States, 2017 – With Special Feature on Mortality

Health, United States, 2017 is the 41st report compiled by the CDC's National Center for Health Statistics (NCHS) on the health status of the U.S. The report presents an annual overview of trends in health statistics.

The following are key takeaways regarding trends in child and adolescent mortality.

- Between 2005 and 2015, the infant mortality rate decreased 14 percent, from 6.86 to 5.90 deaths per 1,000 live births; however, differences by race and ethnicity remained.
    - In 2015, the infant mortality rate was 2.8 times as high among infants of non-Hispanic Black mothers (11.25 deaths per 1,000 live births) as among infants of non-Hispanic Asian or Pacific Islander mothers (4.08 deaths per 1,000 live births).
- From 2006 through 2010, the mortality rate for unintentional injury among children aged 1 to 14 years (the leading cause of death for this group) decreased at an annual rate of 6.8 percent. The rate remained stable from 2010 to 2016.
- Mortality rates for most other leading causes of death for children aged 1 to 14 years declined from 2006 to 2016, including cancer, congenital malformations, homicide, and heart disease. The suicide rate, however, doubled over this time period.
- For persons aged 15 to 24 years of age, the leading causes of death in 2016 were: unintentional injury, suicide, homicide, cancer, heart disease, and congenital malformations. Suicide rates increased between 2006 and 2016.
- In 2016, there were 63,632 deaths from drug overdoses (for all age groups). Two-thirds (66.4 percent percent) of these deaths involved an opioid.
    - Between 2006 and 2016, the age-adjusted death rate for drug overdose increased from 11.5 to 19.8 deaths per 100,000.
    - Drug overdose death rates were higher among males than females. Trends varied by sex and age. Recent increases in drug overdose death rates were especially pronounced among men aged 25–34 and women aged 15–24.

Other key findings regarding child and adolescent health are summarized below.

- Between 2006 and 2016, the teen birth rate declined by nearly 50 percent, from 41.1 to 20.3 (live births per 1,000 females). The 2016 rate represented a record low.

- In 2016, 8.17 percent of infants were low birthweight. Low birthweight was more common among infants of non-Hispanic Black mothers (13.53 percent) and infants of Puerto Rican mothers (9.50 percent) than among infants of mothers in other racial and ethnic groups.

- Preterm births ranged from 7.1 percent among non-Hispanic White mothers to 11.5 percent among non-Hispanic Black mothers.

- While the percent of high school students smoking cigarettes fell from 15.8 percent to 8.0 percent between 2011 and 2016, the percent of students using electronic cigarettes increased from 1.5 percent to 11.3 percent.

- About 8 percent of children (8.3 percent in 2006 and 2016) had asthma. The prevalence of asthma in non-Hispanic Black children was higher than for Hispanic and non-Hispanic White children during this period.

- The percentage of children and adolescents aged 5 to 17 years diagnosed with attention-deficit/hyperactivity disorder (ADHD) increased from 6.5 percent in 1999 to 10.6 percent in 2016.

- 70.7 percent of children aged 19 to 35 months had completed the combined 7-vaccine series of vaccinations (including diphtheria, tetanus, pertussis, poliovirus, and measles, among others) in 2016.

- Between 2006 and 2017, the percentage of children under age 18 years with Medicaid coverage increased from 28.8 percent to 36.3 percent, and the percentage of children who were uninsured decreased from 9.5 percent to 5.0 percent.

    - Uninsured children under 18 were more likely to lack a usual source of care (27.9 percent) than children with private coverage (2.6 percent) or Medicaid (4.6 percent).

America's Children in Brief: Key National Indicators of Well-Being, 2018

Each year, the Federal Interagency Forum on Child and Family Statistics (a collaboration among 23 Federal agencies) produces a *America's Children* report to track the well-being of children in the United States.[38]

[38] https://www.childstats.gov/pdf/ac2018/ac_18.pdf

Key findings from the 2018 report include the following:

- Children have steadily decreased as a percentage of the total population from a peak of 36 percent in 1964 to 23 percent in 2017. This decline is expected to continue through 2050.

- The percent of children living in poverty decreased from 22 percent to 18 percent between 2010 and 2016. The percent of children living in extreme poverty (below 50 percent of Federal Poverty Guidelines) declined as well.

- The percent of children chronically uninsured declined from 5 percent in 2006 to 2 percent in 2016. Other child insurance coverage indicators also improved over the same time period.

- 1.4 million students (about 3 percent of all students in public schools) were reported as homeless children or youth in 2016, with particularly high numbers and rates in city school districts.

- More than a third (37 percent) of all children experienced a physical assault in the past year, and 5 percent had been sexually victimized.

- Fifteen (15) percent of children experienced child maltreatment during the past year (including physical abuse, emotional abuse, neglect, and custodial interference or family abduction).

- One-quarter of children had witnessed family or community violence in the past year.

- Research shows that children's exposure to violence, whether as victims or witnesses, can have adverse consequences for normal and healthy development, including physical and mental health problems, poor academic performance, and delinquent and antisocial behavior.

- Drug abuse is an increasing issue, as 3.5 percent of youth aged 12 to 17 misused prescription opioids in the preceding year. The rate of abuse did not vary by race or ethnicity, but it was higher among females than males.

National Center for Health Statistics

The National Center for Health Statistics, a division of the Centers for Disease Control and Prevention, provides health overviews and statistics for infant, adolescent, and child health.[39] Indicators for each age group include the following:

Infant Health

[39] https://www.cdc.gov/nchs/fastats/adolescent-health.htm

- In 2017, 8.3 percent of births were low birthweight (less than 5.5 pounds) and 9.9 percent were preterm (less than 37 weeks gestation).
- The leading causes of infant deaths were as follows:
    - Congenital malformations, deformations and chromosomal abnormalities.
    - Disorders related to short gestation and low birthweight.
    - Newborn affected by maternal complications of pregnancy.

Child Health

- In 2017, the percent of children aged 5 to 11 years who are in excellent or very good health was 85.3 percent, and the percent who missed 11 or more days of school in the past year due to injury or illness is 3.5 percent.
- 18.4 percent of children aged 6 to 11 years were obese in 2015-2016.
- The percent of children (under 18) without health insurance was 5.2 percent in 2018, and 3.9 percent of those under 18 did not have a usual source of health care.
- The leading causes of death for children aged 1 to 4 years were accidents (unintentional injuries), congenital malformations, deformations, and chromosomal abnormalities, and assault (homicide).
- The leading causes of death for children aged 5 to 14 years were accidents (unintentional injuries), cancer, and suicide (intentional self-harm).

Adolescent Health

- The percent of adolescents aged 12 to 17 years who are in excellent or very good health is 82.8 percent, and the percent who missed 11 or more days of school in the past year due to injury or illness is 5.6 percent.
- 20.6 percent of adolescents aged 12 to 19 years were obese in 2015-2016.
- 3.4 percent of adolescents aged 12 to 17 years smoked cigarettes in the past month in 2016, and 9.2 percent used alcohol.
- The percent of adolescents (12-17 years) without health insurance was 5.8 percent in 2017, and 4.8 percent of those under 18 did not have a usual source of health care.
- The leading causes of death for adolescents aged 15 to 19 years were accidents (unintentional injuries), suicide, and homicide.

APPENDIX G – FINDINGS OF OTHER ASSESSMENTS

Findings of Other Assessments

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

Local Neighborhoods Community Assessments

Local Health Departments Assessments Summary

The following exhibit summarizes the most common priority areas identified by Community Health Assessments and Community Health Improvement Plans recently developed by Local Health Departments in the 21-County community. Issues are identified if they apply specifically to child and adolescent health or to all age groups including younger persons.

Exhibit 90: Summary of Prioritized Needs from Local Assessments

Priority Area	Total
Addiction and substance use disorders (including opioids) - all populations	18
Mental health - all populations	17
Obesity - all populations	11
Obesity - youth	10
Chronic disease	8
Access to care - all populations	7
Mental health - youth	6
Tobacco use - all populations	6
Addiction and substance use disorders - youth	5
Alcohol abuse - youth	5
Infant mortality	5
Suicide - all populations	5
Maternal and child health	4
Tobacco use - youth	4
Suicide - youth	3
Alcohol abuse	2
Bullying - youth	2
Cardiovascular disease - all populations	2
Diabetes - all populations	2
Lack of physical activity - all populations	2

Source: Verité Analysis, 2019.

The most commonly identified issues include:

- Addiction and substance use disorders,
- Mental health,
- Obesity,
- Chronic diseases, and
- Tobacco use.

Cuyahoga County Community Health Assessment 2018

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

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

Quality of Life
1. Poverty
2. Food insecurity

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

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

Mental Health and Addiction
10. Suicide/mental health
11. Homicide/violence/safety
12. Opioids/substance use disorders

Maternal/Child Health
13. Infant mortality

Many of the issues identified by Cuyahoga County relate specifically to child and adolescent health. Key findings in the Cuyahoga County CHA are as follows:

- Lead poisoning is particularly problematic among children in Cuyahoga County. Over 8 percent (8.2 percent) of Cuyahoga County children under age 6 had dangerous lead levels in 2016. This rate was even higher for the City of Cleveland at 12.4 percent. Both of these rates greatly exceed Ohio (2.0 percent) and national (3.0 percent) averages.

- Childhood asthma was the most common ambulatory care sensitive condition for hospitalized children in 2016. Rates were particularly high for Black and Hispanic children.

- Mental health, suicide, and community violence and safety were all significant concerns for children in Cuyahoga County. The CHA states: "Children raised in safe and nurturing families and neighborhoods, free from maltreatment and other social adversities, are more likely to have better outcomes as adults." Child abuse is more prevalent in the City of Cleveland than in the nation as a whole. Community violence contributes to negative health outcomes among children.

- Infant and child health, particularly infant mortality, is also a significant concern. Infant mortality, neonatal mortality, and post-neonatal mortality rates for Cuyahoga County exceed state averages and Healthy People 2020 goals. The City of Cleveland compares unfavorably to the county overall for all three measures.

- Infant mortality rates are significantly higher in both Cuyahoga County and Cleveland for Black residents than for White residents.

Ohio Assessments

State Health Improvement Plan, 2017-2019

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

4. Mental Health and Addiction
    a. Depression
    b. Suicide
    c. Drug dependency/abuse
    d. Drug overdose deaths

5. Chronic Disease
    a. Heart disease
    b. Diabetes
    c. Child asthma

6. Maternal and infant health
    a. Preterm births
    b. Low birth weight
    c. Infant mortality

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

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

5. Social Determinants of Health, e.g.,
    a. Increase third grade reading proficiency,
    b. Reduce school absenteeism,
    c. Address high housing cost burden, and
    d. Reduce secondhand smoke exposure for children.

6. Public Health System, prevention and health behaviors, e.g.,
    a. Consume healthy food,
    b. Reduce physical inactivity,
    c. Reduce adult smoking, and
    d. Reduce youth all-tobacco use.

7. Healthcare system and access, e.g.,
    a. Reduce percent of adults who are uninsured,
    b. Reduce percent of adults unable to see a doctor due to cost, and
    c. Reduce primary care health professional shortage areas.

8. Equity strategies likely to decrease disparities for priority populations.

The SHIP establishes maternal and infant health as one of three major topics. Specific child and adolescent health indicators are highlighted across the plan. For example:

- Under Mental Health and Addiction, the percent of adolescents aged 12-17 who experienced a major depressive episode and the percent of persons age 12 and older with past-year illicit drug dependence are highlighted.

- Under Chronic Disease, childhood asthma is one of three key indicators.

- Maternal and Infant Health indicators are focused on problematic indicators for preterm births, low birth weight births, and infant mortality.

Cross-cutting factors across all SHIP priorities also include indicators specific to children and adolescents, including third-grade reading proficiency, absenteeism in school, secondhand smoke exposure, and youth tobacco use.

APPENDIX H – COMMUNITY INPUT PARTICIPANTS

Individuals from a wide variety of organizations and communities participated in the interview process (**Exhibit 91**).

Exhibit 91: Interviewee Organizational Affiliations

Organization	
Alcohol and Drug Addiction Services Board of Lorain County	Lake County Department of Health
American Heart Association	Lorain County Board of Mental Health
Benjamin Rose Institute on Aging	Lorain County Dept Health
Boys & Girls Clubs of Cleveland	Lorain County Free Clinic
Carmella Rose Health Foundation	Medina County ADAMH
Center for Community Solutions	Medina County Department of Health
Center for Health Affairs	NAMI
City of Cleveland	Ohio Department of Health
City of Cleveland - Department of Public Health	Summit County ADAMS
Cleveland Foundation	Summit County Department of Health
Cuyahoga County Board of Health	The Catholic Health Association
Cuyahoga Metropolitan Housing Authority	The Centers (for families and children)
El Centro	The Gathering Place
Esperanza	The LCADA Way
Fairhill Partners	United Cerebral Palsy
Greater Cleveland Food Bank	United Way of Greater Cleveland
Health Policy Institute of Ohio	United Way of Greater Lorain County
Kent State School of Public Health	United Way of Lake County
Lake County ADAMS	Western Reserve Area Agency on Aging

APPENDIX I – IMPACT EVALUATION

Impact of Actions Taken Since the Last CHNA – Cleveland Clinic Children's Hospital for Rehabilitation

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

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

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

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

   Actions:

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

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

   Highlighted Impacts:

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

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

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

2. Identified Need: Chronic Disease and Health Conditions

a. Adolescent Chemical Dependency

Action:

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

Highlighted Impacts:

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

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

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

Cleveland Clinic Children's continues to be has been involved in training and education of Cleveland Metropolitan School District on chemical dependency prevention and warning signs.

b. Childhood Obesity

Action:

CCCHR and Cleveland Clinic Children's continues to provide nutritional counseling, physical therapy and family centered education on matters relating to childhood obesity. The hospital also conducts community health talks, seminars and collaborative school programs that target childhood obesity issues.

Highlighted Impacts:

Cleveland Clinic Children's provided health education talks in various community locations, covering topics of healthy lifestyles, nutrition and exercise.

The FitYouth program, designed for family participation, provided long term health and wellness education.

Cleveland Clinic Children's BeWell program provided medical management of childhood obesity.

c. Diabetes

Action:

CCCHR through Cleveland Clinic Children's continues to offer expertise in all areas of Pediatric Endocrinology including juvenile diabetes. Cleveland Clinic Children's continues to offer inpatient, outpatient and education services, including nutrition counseling focused on diabetes, its long term complications and disease management.

Highlighted Impacts:

Cleveland Clinic Children's school health program provided education sessions in 2016 -2018 to juvenile diabetic students in local schools.

Cleveland Clinic Children's provided a juvenile diabetes support group at Cleveland Heights/University Heights high school.

d. Heart Disease

Action:

CCCHR and Cleveland Clinic Children's continues to offer comprehensive pediatric patient care and outreach services relating to heart related diseases and congenital conditions. Cleveland Clinic Children's continues to offer pediatric cardiology services at our Main Campus and at several regional outreach locations across Northeast Ohio.

Highlighted Impacts:

Cleveland Clinic Children's serves as a worldwide referral and second opinion center for patients of all ages with pediatric congenital heart disease (CHD). CCCHR, through inpatient program, outpatient rehabilitation, and a range of therapy services, infants through children age 21 receive the right treatment mix to overcome chronic medical challenges.

As a specialty hospital, CCCHR's Day Treatment Program offers children who require focused medical and developmental attention full access to the same services as inpatients, including: nutritional counseling, occupational therapy, physical therapy, psychology, recreational therapy and speech/language therapy.

e. Poor Birth Outcomes

Actions:

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

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

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

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

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

f. Poor Mental Health Status

Action:
CCCHR and Cleveland Clinic Children's continues to offer specialized psychological services for children, adolescents and their families. Consultation may be helpful for children who are having difficulty adjusting to hospitalization or illness, or where psychological, behavioral, or emotional factors may play a part in a child's illness or actions. .

Highlighted Impact:
CCCHR continues to provide psychological and social work services to children and families dealing with chronic medical conditions.

g. Respiratory Diseases

Action:
CCCHR continues to provide treatment of chronic and acute lung diseases in children and adolescents.

Highlighted Impacts:
CCCHR through Cleveland Clinic Children's screens school-aged children for asthma at its School-Based Health Center visits to local schools.

Tobacco education programs were provided to students in local schools from 2016 – 2018.

3. Health Professions Education and Medical Research

a. Health Professions Education

Actions: Cleveland Clinic operates one of the largest graduate medical education programs in the Midwest and one of the largest programs in the country. Cleveland Clinic sponsors a wide range of high quality medical education training through its Education Institute including accredited training programs for nurses and allied health

professionals. Cleveland Clinic Education Institute oversees 247 residency and fellowship programs across the Cleveland Clinic Health System.

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

CCCHR and Cleveland Clinic Children's Hospital is a location for Cleveland Clinic residency-training programs in pediatric medicine and specialties. In addition, the hospital provided allied health internships including, Cardiac Ultrasound, Child Life, Counseling, Dietetics, Occupational Therapy, Physical Therapy, Psychology, Recreational Therapy, Respiratory Therapy, Social Work and Speech-Language Pathology.

b. Research

Actions:
Clinical trials and other clinical research activities occur throughout the Cleveland Clinic health system.

Highlighted Impacts:
Approximately 1,500 people work in 175 laboratories in 10 departments at Lerner Research Institute (LRI). In addition to basic discovery and translational research, Cleveland Clinic researchers and physicians had nearly 4,000 active projects involving human participants in 2017. At LRI, commercialization efforts led to 53 invention disclosures, 20 new licenses, and 98 patents with the goal of accelerating advances in patient care.

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

4. Specialty Care – Autism Spectrum Disorder

Actions:
CCCHR continues to provide a continuum of services through the Cleveland Clinic Center for Autism and offers diagnostic services and treatment based on applied behavioral analysis in an educational setting.

Highlighted Impacts:
Cleveland Clinic Children's through Cleveland Clinic Children's Hospital for Rehabilitation continues to grow Autism Services serving as a national resource and consulting program in addition to delivering autism services and ABA therapy in the Cleveland area.

The percentage of children able to return to their home districts or less specialized educational placements following experiences at the Lerner School in our Autism Center continues to increase. .

5. **Identified Need: Wellness**

Action:

CCCHR through Cleveland Clinic Children's Wellness Center continues to offer outreach programs and community health talks focused on educating children and their families in the communities it serves on healthy behavior choices including exercise, disease management, nutrition, and smoking cessation to promote health and wellness, increase access to healthcare resources, and reduce disease burden.

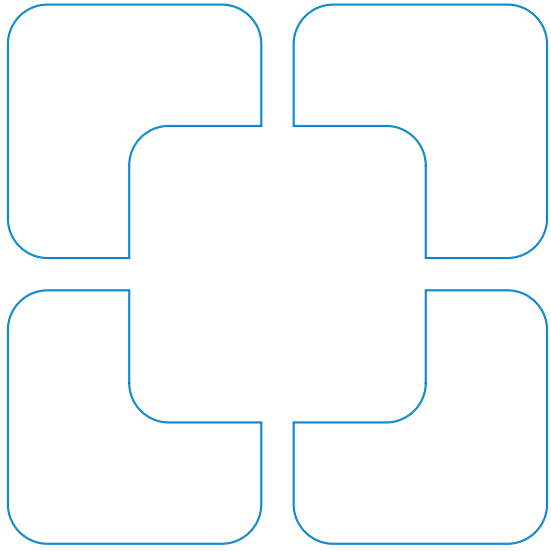
Highlighted Impacts:

In addition to the Wellness Center programs, mentioned in the Obesity section, CCCHR through Cleveland Clinic Children's provided the following services.

Cleveland Clinic Children’s School-Based Health Center, a mobile, full-service pediatric office staffed with our healthcare professionals, visited area schools to provide care regularly throughout the school year. Cleveland Clinic Children’s mobile health center provided voluntary, comprehensive healthcare services to students in kindergarten through 12th grade.

Cleveland Clinic Children’s provided a program with YMCA, Wellness Avengers, which focused on healthy lifestyle classes to children in the community.

The Healthy Strides for Kids running program was provided in elementary public schools.



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18-CCC-5588

Cleveland Clinic Children's
Hospital for Rehabilitation

Implementation Strategy Report

2019

Cleveland Clinic Children's Hospital for Rehabilitation
2801 Martin Luther King Jr Dr.
Cleveland, Ohio 44104

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

Name and EIN of Hospital Organization Operating Hospital Facility:	Cleveland Clinic Children's Hospital for Rehabilitation - #34-0714570
Date Approved by Authorized Governing Body:	April 9. 2020
Contact:	Cleveland Clinic chna@ccf.org

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Cleveland Clinic Children's Hospital for Rehabilitation
2019 IMPLEMENTATION STRATEGY

I. INTRODUCTION AND PURPOSE

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

A. Description of Hospital

Cleveland Clinic Children's Hospital for Rehabilitation (CCCHR) is a 25-bed pediatric rehabilitation hospital located in Cleveland, Ohio. Cleveland Clinic Children's Hospital for Rehabilitation is accredited by the Commission on Accreditation of Rehabilitation Facilities, freestanding pediatric rehabilitation hospital. Additional information on the hospital and its services are available at http://clevelandclinicchildrens.org/rehabhospital.

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

B. Hospital Mission

Cleveland Clinic Children's Hospital for Rehabilitation was founded in 1895 as Children's Fresh Air Camp of Cleveland. It was renamed Health Hill Hospital in 1963 and became part of Cleveland Clinic in 1998. Cleveland Clinic Children's Hospital for Rehabilitation's mission statement is:

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

II. COMMUNITY DEFINITION

Cleveland Clinic and CCCHR provide a wide range of services from traditional, primary care to highly specialized care to patients in their local communities, across the nation, and around the world. Cleveland Clinic provides complex specialty care to patients residing in a geographic area encompassing one-quarter of the State of Ohio and to patients transferred from nearly every state and twenty countries.

The communities Cleveland Clinic and CCCHR serve are (1) Local[1] neighborhoods; (2) a 7-County Region; (3) a 21-County Region; (4) the state and (5) nation.

III. HOW IMPLEMENTATION STRATEGY WAS DEVELOPED

This Implementation Strategy was developed by a team of members of senior 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) and Ohio's State Health Assessment (SHA) was also considered.

Each year, senior leadership at 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

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

Community Health Initiatives

- Addiction and Mental Health
- Chronic Disease Prevention and Management
- Infant Mortality
- Socioeconomic Concerns
- Specialty Care: Autism Spectrum Disorder

Other Identified Needs

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

[1] The local neighborhoods community is comprised of 18 ZIP codes surrounding CCCHR.

See the 2019 Cleveland Clinic Children's Hospital for Rehabilitation CHNA for more information: http://my.clevelandclinic.org/pediatrics/about/community

V. NEEDS HOSPITAL WILL ADDRESS

A. Cleveland Clinic Community Health Initiatives

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

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

B. CCCHR Implementation Strategy 2020-2022

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

Addiction and Mental Health

The CCCHR 2019 CHNA identified substance use disorders, mental health issues, and intimate partner violence as needs in the community. The 2020 - 2022 priority strategy will focus on Cleveland Clinic's efforts to decrease the abuse of and overdose from opioids. Initiatives include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Through Cleveland Clinic's Opioid Awareness Center, provide intervention and treatment for substance abuse disorders to Cleveland Clinic caregivers and their family members	Increase the number of individuals with opioid addiction and dependence who seek treatment
B	Through the Opioid Awareness Center, participation in the Northeast Ohio Hospital Opioid Consortium and Cuyahoga County Opiate Task Force, and community-based classes and presentations, Cleveland Clinic will provide preventative education and share evidence-based practices	Reduce the number of individuals with opioid addiction and dependence
C	Through a Pain Management program, make recommendations to patients for alternative pain management strategies	Reduce the prescription of opioids, reduce patient exposure to opioids
D	Treat neonatal abstinence syndrome (NAS) in infants exposed to substances before birth	Reduce side effects and negative health outcomes associated with NAS
E	Cleveland Clinic will develop suicide and self-harm policies procedures and screening tools for patients in a variety of care settings	Reduce suicide rates

Chronic Disease Prevention and Management

CCCHR's 2019 CHNA identified chronic disease and other health conditions as prevalent in the community (ex. heart disease, cancer, diabetes, respiratory diseases, obesity). Prevention and management of chronic disease were selected with the goal to increase healthy behaviors in nutrition, physical activity, and tobacco cessation. Initiatives include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Provide health promotion messaging, health education, and outreach related to heart disease and congenital conditions	Improve early detection of pediatric heart conditions
B	In partnership with the YWCA, provide *The Wellness Avengers* healthy lifestyle classes for children	Improve physical activity, improve nutrition, decrease stress levels
C	Through Cleveland Clinic's Children's Wellness Center, educate children and families through the *Fit Youth* and *Be Well Kids* programs	Improve physical activity, improve nutrition, decrease stress levels, decrease smoking and vaping
D	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	Improve outpatient access to needed therapies

Infant Mortality

CCCHR's 2019 CHNA identified the infant mortality rate in Cuyahoga County as well above Ohio and U.S. averages. Infant mortality rates at the local, state, and national levels have been particularly high for Black infants. Addressing the causes of infant mortality and decreasing infant mortality rates were selected as priority strategies. CCCHR, through Cleveland Clinic, will implement the following initiatives:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Provide expanded evidence-based health education to expecting mothers and families	Improve the number of mothers who receive adequate prenatal care, improve breastfeeding rates
B	Participate in *First Year Cleveland*, the Cuyahoga County Infant Mortality Task Force to gather data, align programs, and coordinate a systemic approach to improving infant mortality	Reduce infant mortality inequity, improve the preterm birth rate, decrease sleep-related infant deaths
C	Expand capacity to offer the *Centering Pregnancy* group prenatal care model to expecting mothers and market the program to community members	Improve the preterm birth rate, increase pregnancy spacing, reduce preterm birth inequity

Socioeconomic Concerns

CCCHR's 2019 CHNA demonstrated that health needs are multifaceted, involving medical as well as socioeconomic concerns. The assessment identified poverty, health equity, trauma, and other social determinants of health as significant concerns. Poverty has substantial implications for health, including the ability for households to access health services, afford basic needs, and benefit from prevention initiatives. Problems with housing, educational achievement, and access to workforce training opportunities also contribute to poor health. The Centers for Disease Control and Prevention define social determinants of health as the "circumstances in which people are born, grow up, live, work and age that affect their health outcome."

CCCHR is committed to promoting health equity and healthy behaviors in our communities. The hospital addresses socioeconomic concerns through a variety of services and initiatives including cross-sector health and economic improvement collaborations, local hiring for hospital workforce, local supplies sourcing, mentoring of community residents, in-kind donation of time and sponsorships, anchor institution commitment, and caregiver training for inclusion and diversity. The socioeconomic initiatives highlighted for 2020 – 2022 include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Implement a system-wide social determinants screening tool for patients to identify needs such as alcohol abuse, depression, financial strain, food insecurity, intimate partner violence, and stress	Connect patients with substance abuse treatment, mental health treatment, and assistance with basic needs; reduce trauma and harm associated with violence
B	Explore a common community referral data platform to coordinate services and ensure optimal communication	Improve active referrals to community-based organizations, non-profits, and other healthcare facilities; track referral outcomes
C	Pilot patient navigation programming within a partnership pathway HUB model using community health workers and/or the co-location of community organizations with hospital facilities	Ensure connection to medical, social, and behavioral services; Improve health equity
D	Participate in the Robert Wood Johnson Foundation (RWJF) *Cross-Sector Innovation Initiative Project* in Cuyahoga County which aims to impact structural racism across various sectors	Improve health equity, improve trust in providers
E	Sponsor the Canopy Child Advocacy Center to coordinate sexual abuse investigations and support children throughout Cuyahoga County	Minimize the impact of trauma and violence on overall health and wellbeing

Socioeconomic Concerns (continued)

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
F	Sponsor and participate in *Say Yes to Education Cleveland*, a consortium focused on increasing education levels, fostering population growth, improving college access and spurring economic growth	Increase the number of individuals with a living wage, increase the number of individuals with employer-sponsored health insurance

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. Initiatives include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Through the Center for Autism, offer a continuum of services including and speech therapy	Increase access to coordinated behavioral health services, increase 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 aged 5-21, 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
C	Provide technical assistance and consulting to Autism programs nationwide	Improve health outcomes for children with ASD nationwide

V. OTHER IDENTIFIED NEEDS

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

Access to Affordable Health Care

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

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

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
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	Provide walk-in care at Express Care Clinics and offer evening and weekend hours	Improve the number of patients who receive the right level of care
C	Utilizing medically secure online and mobile platforms, connect patients with Cleveland Clinic providers for telehealth and virtual visits	Overcome geographical and transportation barriers, improve access to specialized care

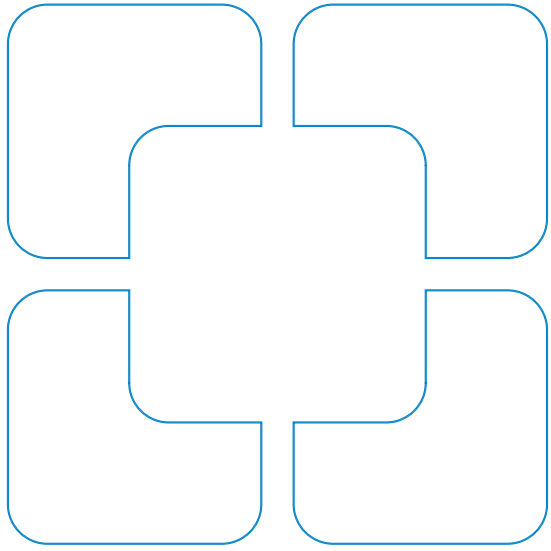
Medical Research and Health Professions Education

Cleveland Clinic cares for our communities by discovering tomorrow's treatments and educating future caregivers. Cures for disease and provision of quality health care are part of Cleveland Clinic's mission.

Cleveland Clinic has been named among America's best employers for diversity by *Forbes* magazine for three years running. The diversity of our caregivers is a key strength that helps us better serve patients, each other, and our communities. We are committed to enhancing the diversity of our teams to deepen these connections. Initiatives include:

	Initiatives Including Collaborations and Resources Allocated	Anticipated Impacts
A	Advance clinical techniques, devices, and treatment protocols through research in the areas of autism, plant-based diets for heart patients, research on respiratory diseases, and a methodology to diagnose respiratory issues via smartphones	Improve treatment efficacy, reduced morbidity and mortality
B	Through population health research, inform clinical interventions, healthcare policy, and community partnerships	Inform health policy at the local, state, and national levels, improve clinical protocols, create cost-savings, improve population health outcomes
C	Sponsor high-quality medical education training programs for physicians, nurses, and allied health professionals via Graduate Medical Education programs and internships	Reduce provider shortages

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



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