2022
Community Health Needs Assessment Report

Advocate Condell Medical Center

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Libertyville, IL 60048

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Thank you for taking the time to learn more about the Advocate Condell Medical Center (Advocate Condell) Community Health Needs Assessment (CHNA). This CHNA provides a comprehensive picture of the health status of the communities served by Advocate Condell. As a health care provider serving all of Lake County, we are not only committed to providing the safest and highest quality patient care, but also to improving the health of our community through partnerships and collaboration.

Every three years the hospital works with community partners and stakeholders to complete a comprehensive CHNA. The Advocate Community Health department pulls data from a variety of public health sources and collects input from community residents to gain an in-depth understanding of the health needs. Community Health also works closely with the Lake County Health Department to ensure alignment with their community health assessment process. In addition, the medical center has established a Community Health Council that provides valuable input for the CHNA process and selects the priority health needs.

The Advocate Condell Community Health Council selected two health priorities for the 2022 CHNA - **Obesity** and **Behavioral Health** (Mental Health and Substance Use). Advocate Condell will move forward to implement culturally appropriate interventions that address the root causes of these issues, using research and evidence-based or evidence-informed programs as our guide.

We welcome and encourage community feedback regarding the health needs of our community and the CHNA process. A link at the end of the CHNA report will provide you with an opportunity to leave any feedback, comments or ideas. We also encourage you to review the report and provide recommendations regarding community programs or strategies to address the hospital's priority health needs. Advocate Condell is honored to work with community partners and leaders to improve the health and wellness of diverse communities across Lake County.

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President
Advocate Condell Medical Center

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I. Executive Summary

Advocate Condell Medical Center (Advocate Condell) completed a comprehensive hospital community health needs assessment (CHNA) process in 2022. For purposes of this CHNA report, Advocate Condell's "community" was defined as Lake County and data has been collected and analyzed accordingly. This report describes the assessment process and includes demographic, socioeconomic and health status data along with community resident perspectives from a 2022 community survey. The goal of this report is to obtain a comprehensive picture of the health and social needs of Lake County residents.

Demographic data shows that the Lake County population is 61.6 percent non-Hispanic White, 7.7 percent Asian or Pacific Islander, 6.8 percent non-Hispanic Black, 0.1 percent Native American and 2.1 percent of two or more races. Seventy-eight percent of residents are non-Hispanic and 21.7 percent of residents are of Hispanic ethnicity. In addition, Lake County residents are 50.0 percent female and 50.0 percent male. The median household income in Lake County is $94,857.

As part of the CHNA process, Advocate Condell established a Community Health Council (CHC) comprised of hospital and community stakeholders, who were essential to completing the CHNA process. The CHC provided insight and perspective on key issues affecting health in Lake County during the 2022 CHNA process. CHC members reviewed data presented by the medical center's community health department. Under the leadership of the hospital's Director of Community Health and Community Health Coordinator, the CHC worked through a prioritization process to determine the key health needs in the county and data was presented on these issues:

- Obesity
- Cardiovascular Disease
- Diabetes
- Behavioral Health (Mental Health and Substance Use)
- Maternal, Child and Reproductive Health
- Respiratory Diseases (Asthma, COPD, Pneumonia/Flu)
- Sexually Transmitted Infections
- Unintentional Falls
- Dental Health (Oral Health)
- Cancer
- COVID-19.

CHC members were guided through a cumulative voting exercise to select the top two priority health issues, taking into consideration prevalence, incidence and mortality rates, LCHD Community Health Assessment findings and the availability of resources to address the issue. The CHC selected the issues of obesity and behavioral health (which includes mental health and substance use) as the priority health needs to address in 2023-2025. The CHC also recognized the importance of addressing root causes of health and urged the Advocate Condell community health team to integrate SDOH into strategies developed to address the identified needs. To ensure the hospital develops an effective 2022 CHNA Implementation Strategy, the hospital's CHC and community health department will collaborate with the LCHD, other health systems in the county and additional community partners to create strategies that address the priority health needs using a collective impact model. Healthy People 2030 goals will serve as a critical benchmark and guide for the development of goals, objectives and metrics to track community impact and effectiveness of strategies developed to address the identified health issues.

II. Description of Advocate Aurora Health and Advocate Condell Medical Center

Advocate Aurora Health

Advocate Aurora Health (Advocate Aurora) is one of the 12th largest not-for-profit, integrated health systems in the United States and a leading employer in the Midwest with more than 75,000 employees, including more than 22,000 nurses and the region's largest employed medical staff and home health organization. A national leader in clinical innovation, health outcomes, consumer experience and value-based care, the system serves nearly 3 million patients annually in Illinois and Wisconsin across more than 500 sites of care. Advocate Aurora is engaged in hundreds of clinical trials and research studies and is nationally recognized for its expertise in cardiology, neurosciences, oncology and pediatrics. To learn more about Advocate Aurora's contributions to the community and how we help people live well, visit Serving Our Community | Advocate Health Care.

Advocate Condell Medical Center

Advocate Condell has been providing high quality, acute care to residents in the northern Chicago suburbs for 90 years. The medical center is the largest health care provider, and the only Level I trauma center in Lake County, Illinois, with 257 beds. Advocate Condell is a non-profit medical center that offers a full spectrum of medical services. Included in the *U.S. News & World Report* Best Hospitals list, the medical center offers comprehensive cardiac care and Lake County's most comprehensive cardiovascular program. A wide-range of orthopedic services from diagnostics to treatment and rehabilitation are offered. Advocate Condell also offers a full range of women's services, comprehensive cancer care, home health services, pediatric alternatives in creative rehabilitation therapy, state-of-the-art neurosurgical technologies and it is the only Sexual Assault Nurse Examiner (SANE) site in Lake County. The SANE team provides 24/7 care and support for victims of sexual assault. Exhibit 1 provides a summary of the services provided in 2021 by Advocate Condell.

Exhibit 1: Advocate Condell Statistics 2021

Category	Number
Admissions	13,277
Outpatient Visits	223,415
Births	1,004
Emergency Department Visits	43,892
Surgeries	9,742
Medical Staff Physicians	858

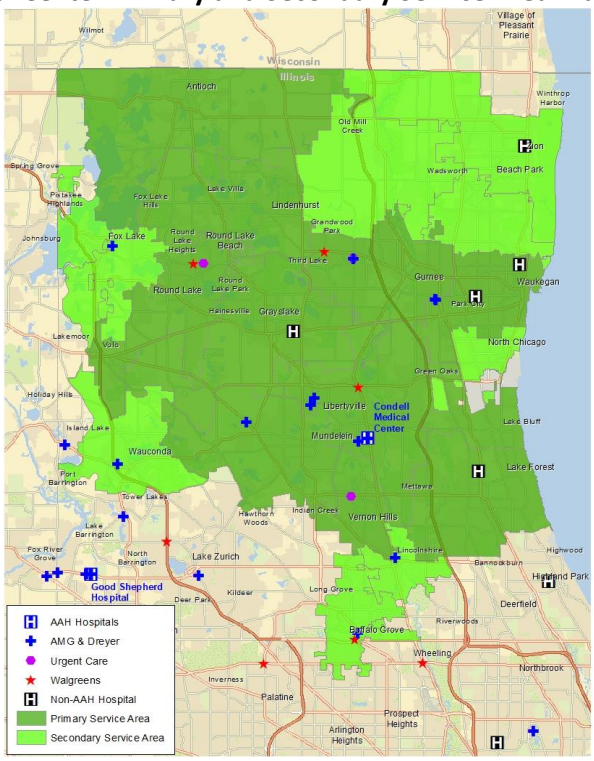
Source: Advocate Condell Finance Department, 2021

III. 2022 Community Health Needs Assessment

Community Definition

For the purposes of the 2020-2022 Community Health Needs Assessment, "community" is defined as the medical center's primary service area (PSA). Because Advocate Condell serves all of Lake County, the PSA used is all of Lake County and data was gathered representing all Lake County residents.

Exhibit 2: Advocate Condell Medical Center Primary and Secondary Service Area Map 2021



Source: Advocate Aurora Health, Business Development Analytics, 2022

1. Population

As of 2020, the population of Lake County was 714,342. The population increased 1.6 percent from 2010 to 2020. The three largest communities within the county are Waukegan (zip code 60085) with a population of 71,609, Round Lake (60073) with 61,721 residents and Long Grove (60047) with a population of 43,944 (Metopio, American Community Survey, 2020).

2. Social Drivers of Health

To support the Advocate hospitals in conducting CHNA's, Advocate Aurora purchased access to Metopio, a CHNA data tool. Metopio is a software and services company that is grounded in the philosophy that communities are connected through places and people. Metopio's tools and visualizations use data to reveal valuable, interconnected factors that influence health outcomes in different locations. Metopio offers data tailored to support all Advocate Aurora hospitals with identifying health inequities in communities. Metopio uses the most current data sources and creates tools and indices that focus on the communities within the Advocate Aurora service areas. The data can be used to focus on specific regions, communities and hospital service areas. Below is a description of two important indices found in Metopio.

Social Vulnerability Index

The Social Vulnerability Index (SVI) was developed by the Centers for Disease Control and Prevention (CDC) to help public health officials and emergency response planners identify and map the communities that will most likely need support before, during and after a hazardous event, such as a natural disaster, disease outbreak or chemical spill. SVI indicates relative vulnerability by ranking places on 15 social factors that can be divided into four categories:

- Socioeconomic
- Household Composition & Disability
- Minority Status & Language
- Housing Type & Transportation.

The original score is on a scale from 0-1, but it is multiplied by 100 for readability on Metopio. A higher score represents a community more vulnerable to a hazardous event. Detailed documentation is available from the CDC here .

The Lake County SVI is 35.1 percent, which is lower than the rating for Illinois (48.7 percent) but much higher than the McHenry County SVI of 7.0 percent. Zip codes with the highest SVI ratings in the PSA are Waukegan (60085) at 86.8 percent, North Chicago (60064) at 85.3 percent and Zion (60099) at 75.4 percent (Metopio, Centers for Disease Control and Prevention, 2018).

Hardship Index

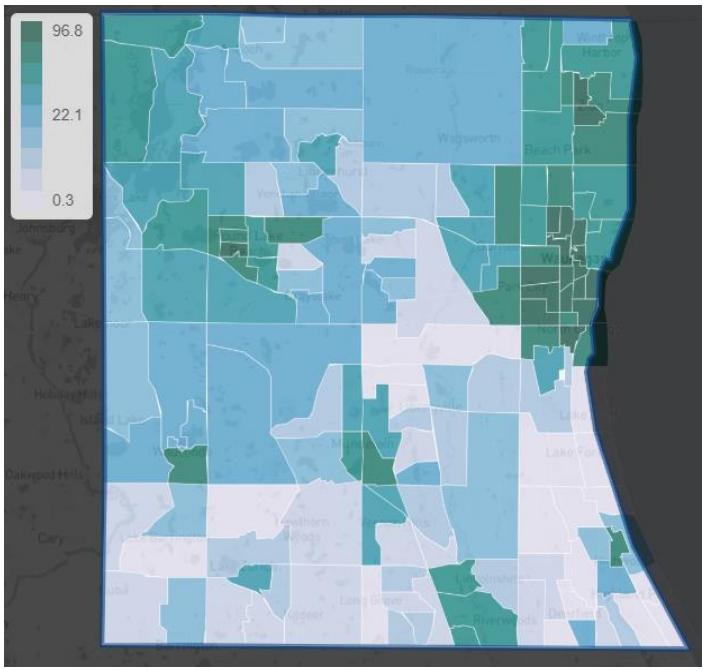
The Hardship Index was originally developed by Richard P. Nathan and Charles F. Adams, Jr. in 1976 to compare socioeconomic conditions between communities. It is highly correlated with other measures of economic hardship, such as labor force statistics and with poor health outcomes. The index combines the following topics into a single composite value on a scale of 0-100:

- Crowded housing (more than one person per room)
- Poverty rate for households
- Unemployment rate
- Adults with a high school degree or equivalent
- Age dependency ratio (% of residents who are <18 or >65 years old, compared to those of working age)
- Per-capita income.

Higher values indicate greater hardship and correlate higher with poor health outcomes. The index does not preserve the ratio between two places, so if one place has twice the hardship index of another, one cannot say that it experiences "twice as much hardship" as another place. Instead, comparisons of different places should be done using the constituent topics.

Lake County has a hardship index of 33.4 which is lower than the score for Illinois (45.0), but higher than the McHenry County score of 26.9. In Lake County, the zip codes with the highest hardship index scores are North Chicago (60064) at 82.2, Waukegan (60085) at 82.1 and Zion (60099) at 65.9 as shown in Exhibit 3 below (Metopio, American Community Survey, 2015-2019).

Exhibit 3: Hardship Index Map of Advocate Condell PSA 2015-2019



Source: Metopio, American Community Survey, 2022

ALICE Index

ALICE stands for: Asset Limited, Income Constrained, Employed. ALICE represents households who may be above the poverty-line but are still unable to afford the necessities of housing, food, child-care, health care and transportation due to the lack of jobs that can support necessities and increases in the basic cost of living.

In Lake County, 31.6 percent of households are below the ALICE threshold, which is lower than Illinois at 35 percent. The same three communities that have the highest Hardship Index scores also have the highest percent of households below the ALICE threshold - North Chicago (60064) at 68.6 percent, Waukegan (60085) at 62.5 percent and Zion (60099) at 52.1percent (Metopio, United Way ALICE Data, 2018).

3. Demographics

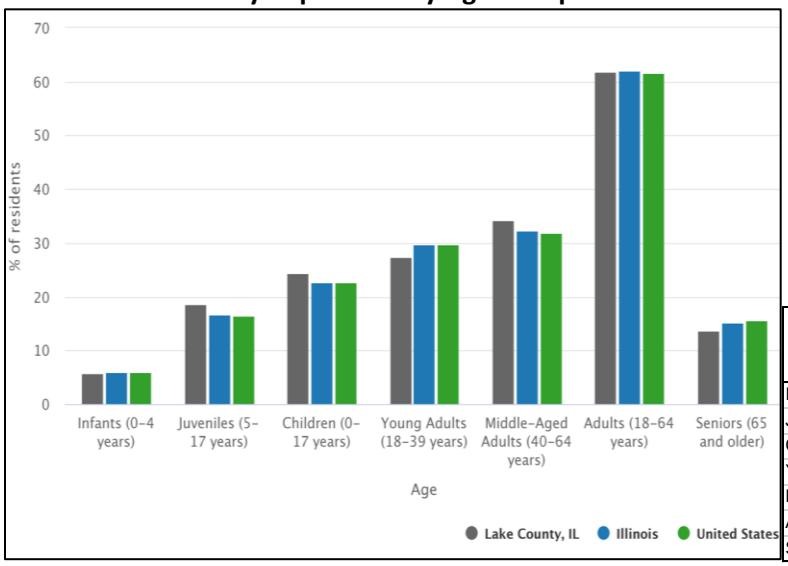
Age and Gender

Lake County has 714,342 residents. A total of 50.0 percent of the residents are male and 50.0 percent are female. The median age of all residents in Lake County is 38.4 years; the median age for females is 40.0 years and 36.8 years for males. The median age has generally remained unchanged from the median age of 38.5 years in the previous CHNA. The community with the youngest median age is North Chicago (60088) at 21.1 years, which is likely a reflection of the Great Lakes Naval Base being located within this zip code. The next communities with the youngest median ages are North Chicago (60064) at 29.9 years and Waukegan (60085) at 30.7 years. Lincolnshire (60069) has the oldest median age in the county (53.4 years), followed by Lake Forest (60045) at 47.2 years and Highland Park (60035) at 47.1 years (Metopio, American Community Survey, 2015-2019). The Lake County age group distribution in comparison to Illinois and the U.S. is shown in Exhibit 4.

Key findings: Community Definition

- The three largest communities within the county are Waukegan (zip code 60085), Round Lake (60073) and Long Grove (60047).
- The communities with the highest percent of individuals living in deep poverty are North Chicago (60064), Zion (60099) and Waukegan (60085). These three communities also have the highest ALICE index and Hardship Index scores.
- Asian or Pacific Islander households have the highest median household income in the county at $127,329; African American households have the lowest median household income in Lake County at $49,825.
- Forty-six percent of Lake County residents ages 25 and older have a four-year college degree or higher - higher than the Illinois and U.S. rates.
- Winthrop Harbor (60096) has the highest percentage of households with children living with grandparents in Lake County.

Exhibit 4: Lake County Population by Age Group 2015-2019



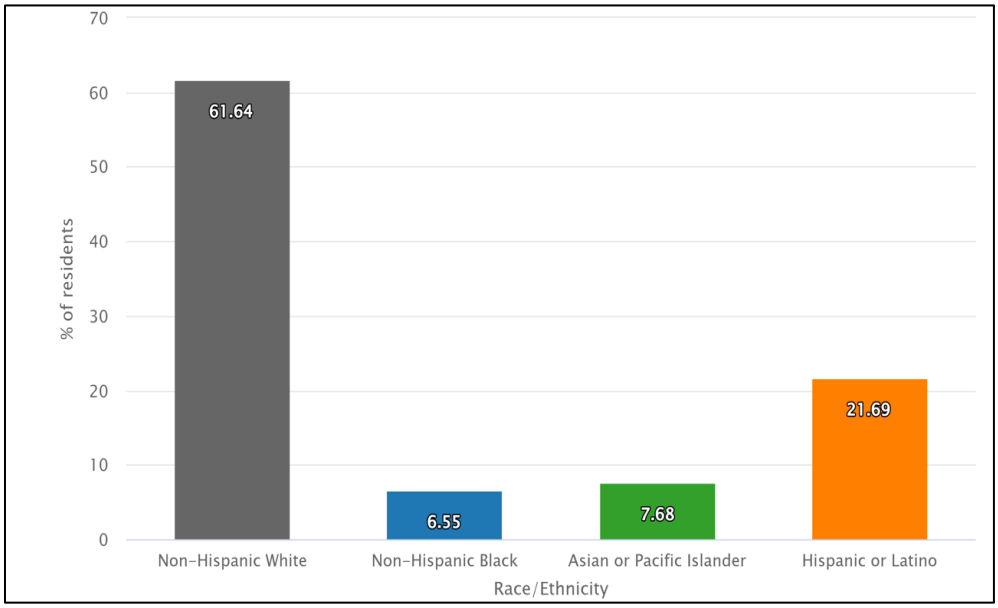
Age Group	Percent of Population		
	Lake County, IL	Illinois	United States
Infants (0-4 years)	5.8	6.0	6.1
Juveniles (5-17 years)	18.7	16.6	16.5
Children (0-17 years)	24.5	22.6	22.6
Young Adults (18-39 years)	27.5	29.8	29.8
Middle-Aged Adults (40-64 year	34.3	32.3	31.9
Adults (18-64 years)	61.8	62.1	61.7
Seniors (65 and older)	13.7	15.2	15.6

Source: Metopio, American Community Survey, 2022

Race and Ethnicity

The racial makeup of the population of Lake County is 61.6 percent non-Hispanic White, 7.7 percent Asian or Pacific Islander, 6.8 percent non-Hispanic Black, 0.1 percent Native American and 2.1 percent of two or more races. Seventy-eight percent of residents are non-Hispanic and 21.7 percent are of Hispanic ethnicity as shown in Exhibit 5 (Metopio, American Community Survey, 2015-2019).

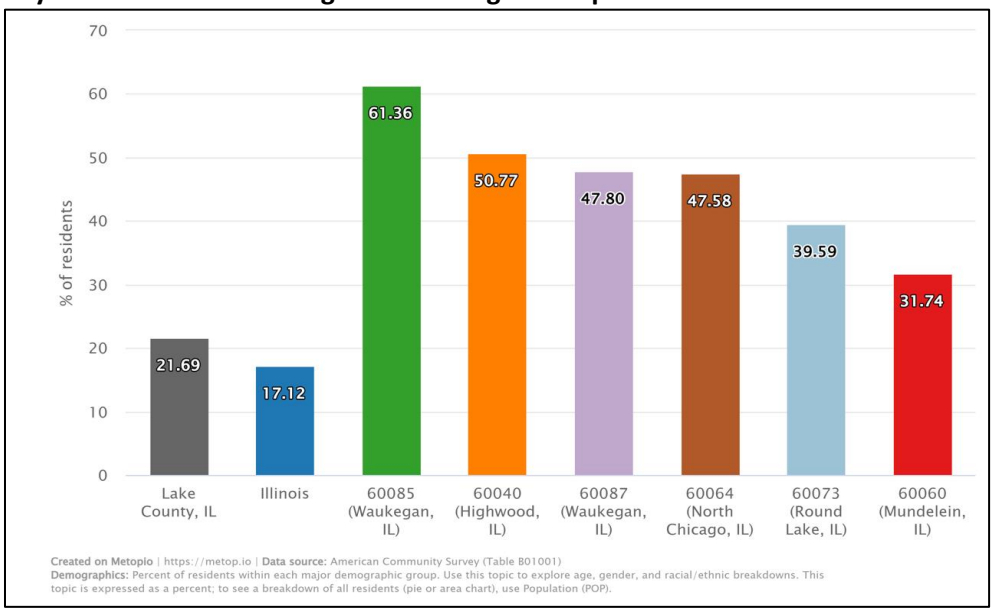
Exhibit 5: Lake County Population by Race and Ethnicity 2015-2019



Source: Metopio, American Community Survey, 2022

North Chicago (60064), Zion (60099) and Waukegan (60085) are the communities with the highest percentage of African American residents; Vernon Hills (60061), Buffalo Grove and Lincolnshire have the largest percentage of residents who are Asian or Pacific Islander. Waukegan (60085 and 60087) and Highwood (60040) are the communities with the largest percentage of Hispanic residents (Metopio, American Community Survey, 2015-2019) as shown in Exhibit 6.

Exhibit 6: Lake County Communities with Largest Percentage of Hispanic Residents 2015-2019



Source: Metopio, American Community Survey, 2022

Limited English Proficiency

A total of 4.8 percent of Lake County households, ages five years and older, has limited English proficiency (LEP), which means that no member aged 14 years old and over speaks English "very well." The zip codes with the highest LEP households in the county are Waukegan (60085) at 13.0 percent, Highwood (60040) at 12.6 percent and Vernon Hills (60061) at 8.5 percent. In Waukegan (60085) 46.2 percent of households speak Spanish as the primary language. The other zip codes with the highest percentage of Spanish-speaking households are North Chicago (60064) at 35.4 percent and Highwood at 32.3 percent. The top zip codes with households speaking an Asian language such as Chinese, Japanese or Tagalog as the primary language are Vernon Hills (60061) at 14.6 percent, Buffalo Grove (60089) at 13.4 percent and Lincolnshire (60069) at 12.3 percent (Metopio, American Community Survey, 2015-2019).

Household/Family

In Lake County, 24.5 percent of the population is children under the age of 18. Six percent of households are headed by a single parent (mother or father), with no partner present, which is slightly lower than the Illinois rate of 6.5 percent and U.S. rate of 6.6 percent. A total of 26.6 percent of households are married couples with children, higher than both Illinois and the U.S. Nearly five percent of all Lake County households are children living with grandparents. Winthrop Harbor (60096) has the highest percentage of households with children living with grandparents in the county - nearly three times the county rate at 13.7 percent. Twenty-five percent of Lake County households have seniors aged 65 and older living alone; the community with the highest percent is Fox Lake (60020) at 42 percent (Metopio, American Community Survey, 2015-2019).

Exhibit 7: Lake County Households 2015-2019

Single-Father Households:
- Lake County = 1.1 %
- Highest = Highwood (60040) at 3.6%
- Lowest = Wauconda (60084) at 0.2%

Single-Mother Households:
- Lake County = 4.9%
- Highest = Waukegan (60085) at 10.3%
- Lowest = Lake Forest (60045) at 1.5%

Single-Parent Households:
- Lake County = 6.0%
- Highest = Zion (60099) at 12.0%
- Lowest = Lake Forest (60045) at 2.2%

Married-couple Households with Children:
- Lake County = 26.6%
- Highest = North Chicago (60088) at 38.75%
- Lowest = Fox Lake (60020) at 13.2%

Children Living with Grandparents:
- Lake County = 4.8%
- Highest = Winthrop Harbor (60096) at 13.7%
- Lowest = Island Lake (60042) at 0.4%

Seniors Living Alone:
- Lake County = 24.9%
- Highest = Fox Lake (60020) at 41.9%
- Lowest = Long Grove (60047) at 10.5%

Source: Metopio, American Community Survey, 2022

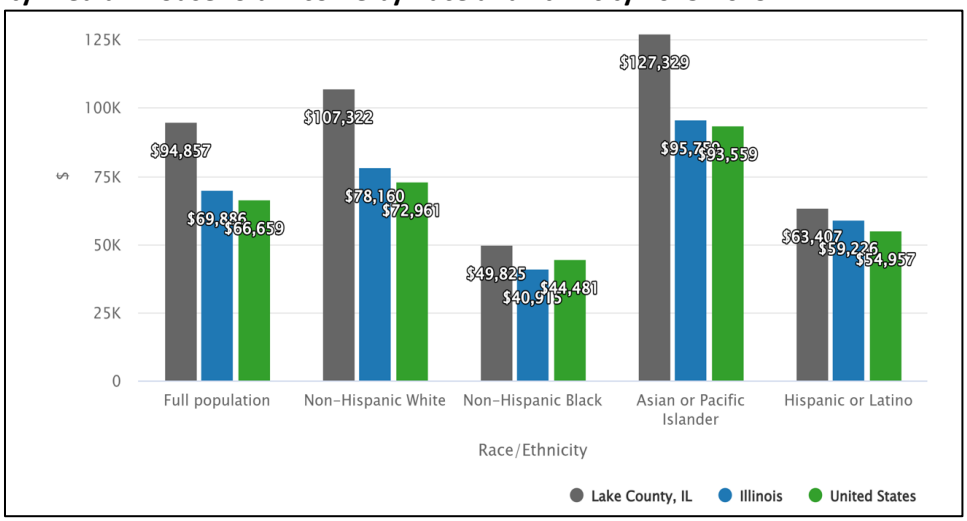
4. Economics

Income

The median household income for Lake County is $94,857, which is higher than McHenry County ($92,069), Illinois ($69,886) and the U.S. ($66,659). The zip code with the highest median household income is Lake Forest (60045) at $190,465 which is more than four and one-half times the lowest median household income in North Chicago (60064) at $38,651 (Metopio, American Community Survey, 2015-2019).

The household type with the highest median household income in the county is Asian or Pacific Islander at $127,329 and the lowest income household is African American at a median income of $49,825 (Metopio, American Community Survey, 2015-2019). Exhibit 8 breaks down the median household income by race and ethnicity.

Exhibit 8: Lake County Median Household Income by Race and Ethnicity 2015-2019



Source: Metopio, American Community Survey, 2022

In Lake County, 7.9 percent of the residents in families are living below the Federal Poverty Level (FPL) which is an annual income of $25,750 for a family of four in 2019. The Lake County poverty rate is much lower than Illinois (12.5 percent) and the U.S. (13.2 percent). A total of 9.9 percent of infants (ages 0-4 years), 10.3 percent of children (ages 5-17 years) and 6.1 percent of seniors (ages 65 and older) are living below the FPL in the county (Metopio, American Community Survey, 2015-2019).

North Chicago (60064) has the highest poverty rate in the county - more than three times the county rate, with 24.2 percent of residents living below the FPL. Winthrop Harbor (60096) has the lowest poverty rate at only 2.0 percent. Additionally, African Americans have the highest poverty rate by race and ethnicity, at 20.2 percent; the rate is 13.8 percent for those of Hispanic ethnicity, 5.0 percent for Asian and Pacific Islander residents and 4.8 percent for non-Hispanic White residents.

It should be noted that 3.6 percent of Lake County individuals live in families whose income is less than half of the FPL in the past twelve months (deep poverty). The top four communities with the highest deep poverty rates are North Chicago (60064) at 10.7 percent; Zion (60099) at 8.2 percent, Waukegan (60085) at 7.8 percent and Highwood (60040) at 7.4 percent (Metopio, American Community Survey, 2015-2019).

Exhibit 9: Lake County Communities with Highest and Lowest Poverty Levels 2015-2019

	Highest Poverty Level Communities		Lowest Poverty Level Communities	
Population Category	**Community**	**Percent Living Below FPL**	**Community**	**Percent Living Below FPL**
Full Population	North Chicago (60064)	24.2	Winthrop Harbor (60096)	2.0
	Waukegan (60085)	19.8	Lake Forest (60045)	2.6
	Zion (60099)	17.3	Lake Zurich (60047)	2.9
	Highwood (60040)	16.8	Buffalo Grove (60089)	3.4
Infants (0-4 years	Highwood (60040)	42.2	Winthrop Harbor (60096)	0.0
	North Chicago (60064)	33.9	Lincolnshire (60069)	0.0
	Waukegan (60085)	30.3	Lake Zurich (60047)	0.3
	Zion (60099)	30.1	Highland Park (60035)	0.4
Children (5-17 years)	North Chicago (60064)	31.9	Winthrop Harbor (60096)	1.1
	Waukegan (60085)	27.4	Lake Forest (60045)	1.2
	Highwood (60040)	24.0	Libertyville (60048)	1.3
	Zion (60099)	23.9	Lake Bluff (60044)	1.4
Seniors (65 and older)	Vernon Hills (60061)	15.2	Lake Bluff (60044)	2.3
	Waukegan (60085)	13.5	Winthrop Harbor (60096)	2.3
	North Chicago (60064)	10.6	Lake Zurich (60047)	2.6
	Fox Lake (60020)	8.3	Lake Forest (60045)	2.9

Source: Metopio, American Community Survey, 2022

Employment
As of April 2022, the unemployment rate for Lake County residents, age 16 and older, is 4.7 percent - higher than the state rate of 4.4 percent. The unemployment rate in March 2020 was 4.2 percent; the rate peaked to 14.9 percent in April 2020 at the start of the COVID-19 pandemic when stay-at-home orders were implemented (Metopio, Bureau of Labor Statistics, 2022). The highest unemployment rates in the county are in Waukegan (60085) at 9.4 percent and North Chicago (60064) and Ingleside (60041) both at 9.0 percent (Metopio, American Community Survey, 2015-2019).

As of May 2020, data indicated that 13.7 percent of low-income jobs in Lake County were lost to COVID-19. The communities with the highest percentage of low-income jobs lost were Lake Bluff (60044) 14.2 percent and Highland Park (60035) and Deerfield (60015), both at 14.1 percent (Metopio, Bureau of Labor Statistics, 2020).

5. Education

Educational Level
In Lake County, 90.6 percent of the population age 25 or older has a high school degree or higher, including GED and any higher education - higher than the Illinois and U.S. rates of 89.2 and 88.0 percent, respectively. The high school graduation rate of Lake County has been rising consistently over time. The communities with the lowest percentage of their population with a high school diploma are North Chicago (60064) at 69.9 percent, Waukegan (60085) at 72.0 percent and Waukegan (60087) at 80.3 percent. Lake Forest (60045) (99.2 percent), Deerfield (60015) (98.8 percent), Buffalo Grove (60089) and Libertyville (60048) (both at 97.7 percent) have the highest high school graduation rates in the county (Metopio, American Community Survey, 2015-2019).

Additionally, 45.3 percent of residents ages 25 and older have a four-year college degree or higher, which is higher than the Illinois (34.7 percent) and U.S. (32.2 percent) rate. The zip codes with the lowest college graduation rates are North Chicago (60064) at 11.6 percent and Waukegan (60085) at 14.0 percent. Residents who are Asian or Pacific Islander have the highest college graduation rates at 72.1 percent, followed by non-Hispanic White residents at 52.6 percent. Hispanic residents in Lake County have the lowest college graduation rate at 12.3 percent, followed by non-Hispanic Black residents at 23.4 percent (Metopio, American Community Survey, 2015-2019).

6. Health Care Resources in Lake County

In addition to Advocate Condell, below are the other key health resources within Lake County.

Name of Facility	Type of Facility	Location
Northwestern Medicine Lake Forest	Hospital/Standalone ER	Lake Forest/Grayslake
Vista Health System	Hospital/Standalone ER	Waukegan/Lindenhurst
NorthShore University Health System	Hospital	Highland Park
Lake Behavioral Hospital	Inpatient Mental Health Treatment	Waukegan
Fenix Clinic	Non-profit Free Clinic	Highwood
Lake County Health Department	Federally Qualified Health Center	County-wide locations
Erie HealthReach Waukegan	Federally Qualified Health Center	Waukegan
Oak Street Health	For-profit Outpatient Clinic for Medicare population	Waukegan

How the CHNA was Conducted

1. Purpose and Process

Every three years, Advocate Condell completes a CHNA by collecting and analyzing a variety of primary and secondary data available since the hospital's previous CHNA. The Advocate Condell community health staff presented extensive data to the Community Health Council (CHC) in a series of six meetings from November 2021 through May 2022. Indicators presented included demographic, economic, education, employment, social drivers of health and health status and behaviors. Subject matter experts gave presentations on selected health topics to expand the CHC members' knowledge on key issues in Lake County. In the May 2022 meeting, council members selected the top two health priorities for 2023-2025 implementation plan—obesity and behavioral health (mental health and substance use). These priorities and the 2022 CHNA report were approved by the Advocate Condell Governing Council on October 18, 2022.

2. Partnership

Advocate Condell worked closely with the Lake County Health Department (LCHD) throughout the CHNA process. The community health staff participated in the health department's ongoing Community Health Assessment process (CHA) and often consulted the LCHD staff for interpretation of data, as it was released. Additionally, Advocate Condell collaborated with Northwestern Lake Forest Hospital to contract an outside consultant, PRC, a nationally recognized health care consulting firm with extensive experience conducting CHNA studies in communities across the U.S., to conduct a random sample community survey of Lake County residents and an online key informant survey.

The LCHD's community health improvement process, named Live Well Lake County, was developed within the Mobilizing for Action through Planning and Partnerships (MAPP) framework. MAPP is a community-driven strategic planning framework utilized in community health improvement which assists communities not only in the prioritization of public health issues, but also in creating a platform to develop and implement efforts to address them, leading to action. In 2021, the county-wide community health assessment process was guided by the Live Well Lake County Steering Committee, a diverse group of stakeholders from multiple sectors of Lake County that influence the health of the county residents. Advocate Aurora's Director of Community Health for the north region is an active member of this steering committee.

For the 2020-2022 CHNA, Advocate Condell collaborated with numerous stakeholders. The key stakeholders included:

- Advocate Condell Community Health Council (CHC)
- Advocate Condell Governing Council
- Lake County Health Department and Community Health Center
- Erie Health Reach Waukegan
- Live Well Lake County Steering Committee
- Advocate Aurora Health system and medical center leadership.

3. Data Collection and Analysis

To begin the CHNA, Advocate Condell convened its long standing CHC to review primary and secondary health data. The CHC was co-chaired by a former medical center Governing Council member. Other members of the CHC included community leaders representing and serving low-income and at-risk populations. Seventy-nine percent of the CHC is comprised of community members and remaining members represent various medical center departments and community health staff. In 2021, the council reviewed an updated charter, outlining its authority, purpose and scope.

Advocate Condell community health staff presented demographic, economic, education, employment, social drivers of health and health status data to the council in a series of six meetings over a seven-month period. These indicators were

coupled with key hospitalization and emergency department (ED) rates pulled from Metopio. Advocate Condell consulted with several additional community organizations to inform the medical center of key issues for the CHNA. These included the two Federally Qualified Health Centers in Lake County —Erie HealthReach Waukegan and the Lake County Health Department and Community Health Center. Additionally, a key informant survey was conducted by PRC with a variety of community-based organizations and coalition representatives working in social support services, health care, mental health, substance use disorder treatment and recovery and immigrant services. Many of the organizations have a focus on medically underserved, low-income and minority populations.

4. Data Sources

Advocate Condell collaborated with many partners to collect a variety of county-level data, as indicated above. Data was pulled from national, state, regional Chicago and local community source documents. Some of the primary sources included the National State of Obesity Report, Mental Health America report, Protecting Youth Mental Health: U.S. Surgeon General's Advisory Report, World Health Organization, Centers for Disease Control and Prevention, America's Health Rankings, County Health Rankings, Illinois State Department of Public Health, Illinois Hospital Association, Illinois Youth Survey, Lake County Health Department Tableau website and Metopio. Additionally, primary data was included from the PRC 2022 Community Health Needs Assessment report.

Summary of CHNA Findings

1. Overall Health Status

Mortality – Leading Causes of Death

As shown in Exhibit 10, the top 10 leading causes of death for Illinois residents of all ages in 2021 were heart disease, cancer, COVID-19, accidents (unintentional injuries), stroke, chronic lower respiratory diseases, Alzheimer disease, diabetes, kidney disease and chronic liver disease and cirrhosis (Illinois Department of Public Health, Website Data– Deaths 2021 Website data - Deaths 2021.xlsx (illinois.gov), 2021).

Exhibit 10: Leading Causes of Death for Illinois Residents All Ages 2021

Rank	Underlying Cause of Death -- All Ages	Deaths
	All causes	**125,102**
1	Diseases of heart (heart disease)	26,282
2	Malignant neoplasms (cancer)	23,613
3	COVID-19	11,297
4	Accidents (unintentional injuries)	7,616
5	Cerebrovascular diseases (stroke)	6,768
6	Chronic lower respiratory diseases	4,927
7	Alzheimer disease	4,028
8	Diabetes mellitus (diabetes)	3,388
9	Nephritis, nephrotic syndrome and nephrosis (kidney disease)	2,648
10	Chronic liver disease and cirrhosis	1,779

Source: Illinois Department of Public Health, Website Data - Deaths 2021, 2022

In 2021, the top 10 leading causes of death for Lake County residents (from highest to lowest) were quite similar:

- Cancer
- Heart Disease
- COVID-19
- Accidents (Unintentional Injuries)
- Stroke
- Alzheimer Disease

- Chronic lower respiratory diseases
- Diabetes
- Kidney Disease and
- Chronic Liver Disease and Cirrhosis

(Illinois Department of Public Health, Website Data– Death-Causes by County 2021, *Website data - Deaths 2021.xlsx (illinois.gov), 2021).

Life Expectancy
The life expectancy at birth for individuals born in Lake County is 80.3 years, which is slightly older than the Illinois and U.S. life expectancy of 78.7 years (Metopio, Centers for Disease Control and Prevention: National Center for Health Statistics, U.S. Small-Area Life Expectancy Estimates Project, 2010-2015).

Top Health Concerns in Lake County
For the CHNA, primary and secondary data was gathered and analyzed for the following top health concerns in Lake County:

- Obesity
- Cardiovascular Disease
- Diabetes
- Behavioral Health (Mental Health and Substance Use)
- Maternal, Child and Reproductive Health
- Respiratory Diseases (Asthma, COPD, Pneumonia/Flu)
- Sexually Transmitted Infections
- Unintentional Falls
- Dental Health (Oral Health)
- Cancer
- COVID-19.

The two top health concerns identified by the Community Health Council as priority areas for 2023-2025 are behavioral health (mental health and substance use) and obesity.

2. Access to Care and Health Care Coverage

Why is this important?

According to the Agency for Healthcare Research and Quality (AHRQ), access to care means having "the timely use of personal health services to achieve the best health outcomes." Access to care consists of four components:

- Coverage: Facilitates entry into the health care system. Uninsured people are less likely to receive medical care and more likely to have poor health status.
- Services: Having a usual source of care is associated with adults receiving recommended screening and prevention services.
- Timeliness: Ability to provide health care when the need is recognized.
- Workforce: Capable, qualified, culturally competent providers

(Agency for Healthcare Research and Quality, Topic: Access to Care, Access to Care | Agency for Healthcare Research and Quality (ahrq.gov), 2022).

Health Care Coverage

Key findings: Access to Care and Health Care Coverage

- Seventeen percent of Lake County adults (18-64 years) have no current health care coverage; in the Waukegan zip code 60085, 31.4 percent of residents have no current coverage (2019).
- Forty-nine percent of Lake County adults in the 2022 community survey reported some difficulty or delay in obtaining health care services in the year and the rate was even higher for Hispanic adults (56.3 percent), low-income adults (67.1 percent) and those ages 18 to 39 years (58.6 percent).
- A total of 8.8 percent of adults in Lake County (18-64 years) are covered by Medicaid and 28 percent of children (ages 0 -17) in Lake County are covered by Medicaid.

Adults with No Health Insurance
In Lake County, 17.3 percent of adults ages 18 to 64 report having no current health care coverage in 2019. The Lake County rate is only slightly lower than the state and U.S. rates, both at 18.2 percent. The rate increased from 13.4 percent in 2018. Adults living in the following communities reported much higher rates of having no health insurance - Waukegan (60085) (31.4 percent), North Chicago (60064) (29.4 percent), Highwood (60040) (23.7 percent), Waukegan (60087) (22.8 percent) and Round Lake (60073) at 21.6 percent (Metopio, PLACES, Behavioral Risk Factor Surveillance System (BRFSS), 2019).

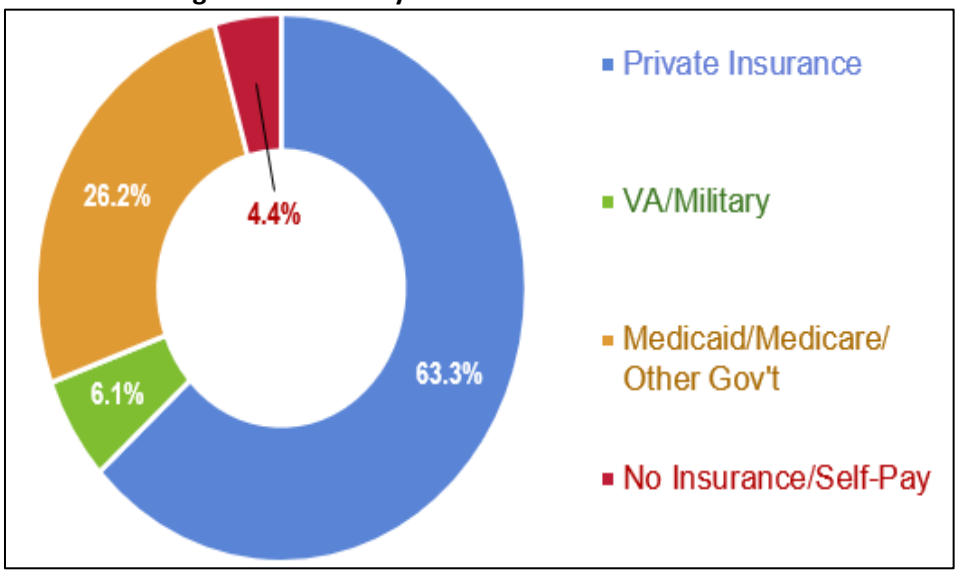
In the 2022 community survey conducted as part of the CHNA, only 4.4 percent of adult respondents, ages 18 to 64 years, reported having no insurance coverage, compared to 15.6 percent for Illinois and 8.7 percent for the U.S. at this point in time. However, in the community survey, 9.5 percent of individuals living in low-income households reported no health insurance coverage (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Children with No Health Insurance
U.S. Census data shows that 2.6 percent of infants, ages 0-4, and 3.4 percent of children, ages 5-17, are without health insurance in Lake County (Metopio, American Community Survey, 2015-2019).

Persons with Private Health Insurance Only
A total of 75.8 percent of Lake County residents are covered by private health insurance, such as employer-provided, direct-purchase insurance or TriCare. The county rate is higher than both the state (70.3 percent) and U.S. rate (68.1 percent) and has been gradually increasing since 2011 (Metopio, American Community Survey, 2015-2019). The 2022 community survey results indicate that 63.3 percent of adults (ages 18-64 years) have health care coverage through private insurance (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Persons with Public Health Insurance and Medicaid Coverage
In Lake County, 27.2 percent of residents have public health insurance, such as Medicare, Medicaid, VA Health Care or means-tested public health insurance, which is lower than the rate for Illinois (33.8 percent) and the U.S. (35.1 percent) (Metopio, American Community Survey, 2015-2019). The 2022 community survey found that 32.3 percent of adults have health coverage through a government-sponsored program (e.g., Medicaid, Medicare or military benefits) (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 11: Health Insurance Coverage in Lake County 2022



Source: PRC Inc., Community Health Survey, 2022

The communities with the highest rates of public insurance are North Chicago (60064), Zion (60099) and Waukegan (60085) and these same three communities have the highest percent of residents with Medicaid coverage in the county (Metopio, American Community Survey, 2015-2019).

Highest Rates of Public Health Insurance		Highest Rates of Medicaid Coverage	
60064 North Chicago	45.66%	60064 North Chicago	35.19%
60099 Zion	43.95%	60085 Waukegan	33.59%
60085 Waukegan	42.62%	60099 Zion	30.37%

Adults and Children with Medicaid

A total of 8.8 percent of adults in Lake County, ages 18-64 years, are covered by Medicaid, much lower than the state (14.6 percent) and U.S. (14.7 percent) rates. The Medicaid coverage rate for children (ages 0 -17) in Lake County is much higher at 28 percent, but again lower than the state and U.S. rates (Metopio American Community Survey, 2015-2019).

Health Insurance Coverage of Advocate Condell Patients

The 2021 payer mix for Advocate Condell patients cared for in the hospital and in outpatient facilities was:

Commercial Insurance	47.2 %
Medicaid	19.2%
Medicare	23.9%
Other	2.4%
Self-Pay (Uninsured)	7.1%

(Advocate Aurora Health, EpicHB, 2021).

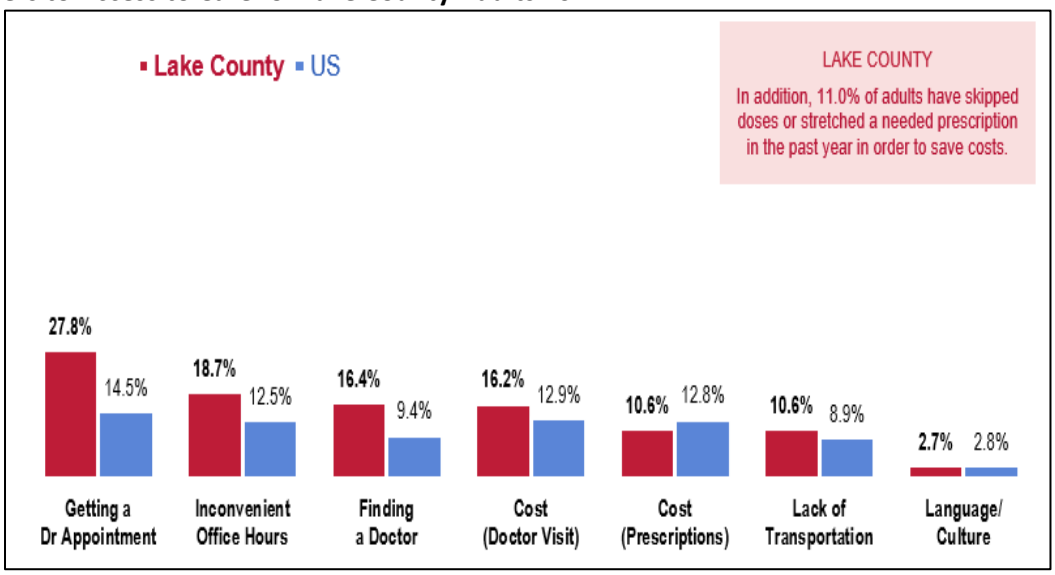
Persons with Medicare Coverage

In Lake County, 14.3 percent of residents are covered by Medicare for their health insurance and the rate has been rising steadily over time. The county rate is lower than both the state (16.2 percent) and national rate (17.3 percent). The communities with the highest percent of Medicare beneficiaries are Lincolnshire (60069) at 33.2 percent, Highland Park (60035) at 22 percent and Fox Lake (60020) at 21.3 percent (Metopio, American Community Survey, 2015-2019). As of 2018, a total of 10 percent of Medicare beneficiaries in the county were eligible for Medicaid, based on their income; this rate has remained steady since 2014 (Metopio, Centers for Medicare and Medicaid Services, 2018).

Access to Care

More than half (57 percent) of the key informants who took part in the online survey administered by PRC, most often characterized “access to health care services” as a moderate problem. Forty-nine percent of Lake County adults in the 2022 community survey reported some difficulty or delay in obtaining health care services in the year and the rate was even higher for Hispanic adults (56.3 percent), low-income adults (67.1 percent) and those ages 18 to 39 (58.6 percent). To better understand health care access barriers, community survey participants were asked whether any of seven types of barriers to access prevented them from seeing a physician or obtaining a needed prescription in the past year. Of these barriers, appointment availability impacted the greatest share of Lake County adults (27.8 percent), followed by inconvenient office hours (18.7 percent) and ability to find a doctor (16.4 percent). Additionally, 11 percent of parents who were surveyed said there was a time in the past year when they needed medical care for their child but were unable to get it (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 12: Barriers to Access to Care for Lake County Adults 2022



Source: PRC Community Health Needs Assessment - Lake County, Illinois, 2022

Primary Care Provider Rate

Primary care providers (PCP) include practicing physicians specializing in general practice, internal medicine, obstetrics and gynecology, or pediatrics and excludes federal physicians and physicians ages 75 years or older. Lake County has 121.3 providers per 100,000 residents, which is an increase from the previous CHNA of 110 per 100,000 residents. The amount of primary care providers has been increasing over time. The Illinois and U.S. primary care provider rates are both lower than Lake County at 92.4 providers per 100,000 population and 89.1 per 100,000 population, respectively (Metopio, Health Resources & Services Administration (HRSA), 2018).

Nurse Practitioner Provider Rate

Nurse practitioner specialists include family nurse practitioners, gerontological, obstetric-gynecological and school nurse practitioners. The Lake County nurse practitioner rate is 47.5 nurses per 100,000 residents, lower than both the Illinois (67.8 per 100,000) and U.S. (80.4 per 100,000) rates. However, the rate has been steadily increasing since 2010 (Metopio, Health Resources & Services Administration (HRSA), 2018).

Mental Health Provider Rate

Mental health providers include psychiatrists, psychologists and specialists in addiction medicine, counseling, therapy, and behavioral health as well as advanced practice nurses and nurse practitioners. The mental health provider rate in Lake County is 347.9 providers per 100,000 residents. The mental health provider rate for Lake County is above the Illinois rate (334.4 providers per 100,000 residents) and the U.S. rate (381.9 providers per 100,000 residents) (Metopio, CMS National Provider Identifier (NPI), 2021). However, capacity of available providers does seem to be an issue in providing timely access to mental health care. One physician stated in the PRC key informant survey,

> "It's been a real struggle getting patients the mental healthcare they need in a timely fashion. The most difficult is when we have someone who needs urgent referral, we often have to send these folks to the ER because we have no other choice."

A community leader shared,

> "My entire family has been on a waitlist for mental health providers for over 18 months"

(PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

3. Health Risk Behaviors

Substance Use and Abuse

Tobacco Use

Adults Who Smoke

The rate of adults, ages 18 and older, who report having smoked at least 100 cigarettes in their lifetime and currently smoke daily or some days is 12.8 percent, lower than the rates for the state (17.4 percent) and U.S. (15.9 percent). The Lake County rate has been trending downward since a high of 22.4 percent in 2002 (Metopio, Behavioral Risk Factor Surveillance System (BRFSS), PLACES, 2019). In the 2022 PRC community survey, 12.7 percent of adult respondents indicated they are a current smoker, which is far above the Healthy People 2030 goal of 5.0 percent. Additionally, 15.1 percent of the respondents who live in households with children answered that someone smokes in the home. Nine percent of adults surveyed indicated they currently use vaping products. In the key informant online survey, 55.2 percent rated tobacco use as a moderate problem and 18.4 percent said it was a major problem in the community (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Teens Who Smoke

In the 2022 Illinois Youth Survey (IYS) for Lake County, no 8th grade or 10th grade students indicated they smoke cigarettes and only one percent of 12th grade students said they smoke cigarettes. However, the rates were higher for use of e-cigarettes or vaping products, at three percent for 8th grade students, seven percent for 10th graders and 12 percent for 12th graders. In the 2018, 2020 and 2022 IYS data, teen use of both cigarettes and vaping increased with age. When compared to 2018 and 2020 IYS results, the 2022 data does show a decrease in vaping in all grades; however, these results should be viewed with caution, given that many students were in remote or hybrid learning environments during the COVID-19 pandemic, impacting the ability to ensure a representative sample in the survey. Information from local Drug-Free Community coalitions should be consulted for additional input and qualitative data (Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2018, 2020, 2022).

Key findings: Health Risk Behaviors

- In Lake County, 20.6 percent of adults (18 years and older) report binge drinking in the past 30 days.
- The communities with the highest ED visit rates due to alcohol and substance use are Waukegan (60085), Fox Lake (60020) and North Chicago (60064).
- The drug overdose mortality rate in Lake County (15.0 deaths per 100,000 residents) has been increasing over time as have the state and national overdose death rates. In 2021, the Lake County Coroner's Office investigated 127 drug overdose deaths.
- The 2022 PRC community survey found that 29 percent of adults in Lake County indicated they have no exercise outside of their work in the past month.
- Thirty-two percent of Lake County adults are obese.

Exhibit 13: Lake County Illinois Youth Survey Results for Cigarette Use and Vaping 2018-2022

	Lake County Illinois Youth Survey								
	2018			2020			2022		
Used in Past 30 days	8th Grade	10th Grade	12th Grade	8th Grade	10th Grade	12th Grade	8th Grade	10th Grade	12th Grade
Cigarettes	0%	1%	4%	0%	1%	1%	0%	0%	1%
E-cigarettes or other vaping products	7%	21%	31%	5%	10%	18%	3%	7%	12%

Source: Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2022

Alcohol Use

Adults Who Drink Excessively

In Lake County, 20.6 percent of adults, ages 18 years and older, report having five or more drinks (men) or four or more drinks (women) on an occasion in the past 30 days (binge drinking). North Chicago (60088), where Great Lakes Naval

Base is located, has the highest binge drinking percentage at 31.2 percent. Lake Villa (60046) has the next highest rate at 22.9 percent and Island Lake (60042) and Round Lake (60073) are both at 22.4 percent.

The county rate has consistently increased year-over-year since 2010, when the rate was 9.3 percent. The Lake County rate is slightly lower than the state rate (21.2 percent) but higher than the U.S. rate of 17.9 percent (Metopio, BRFSS, PLACES, 2019).

Age-Adjusted Emergency Department (ED) Rate Due to Alcohol use

The age-adjusted alcohol use ED rate for Lake County is 338.0 visits per 100,000 residents. The county rate is below the Illinois rate of 417.47 ED visits per 100,000 residents. The ED rate due to alcohol use is highest for those that are non-Hispanic Black (634.5 ED visits per 100,000 residents), ages 18- 39 years (502.1 ED visits per 100,000 residents) and males (452.5 ED visits per 100,000 residents). The rate for males is nearly twice the rate for females (227.1 visits per 100,000 residents) (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

The zip codes with the highest ED rates in the PSA are:

- Waukegan (60085) 679.6 ED visits per 100,000 residents
- Fox Lake (60020) 678.2 ED visits per 100,000 residents
- North Chicago (60064) 650.16 ED visits per 100,000 residents

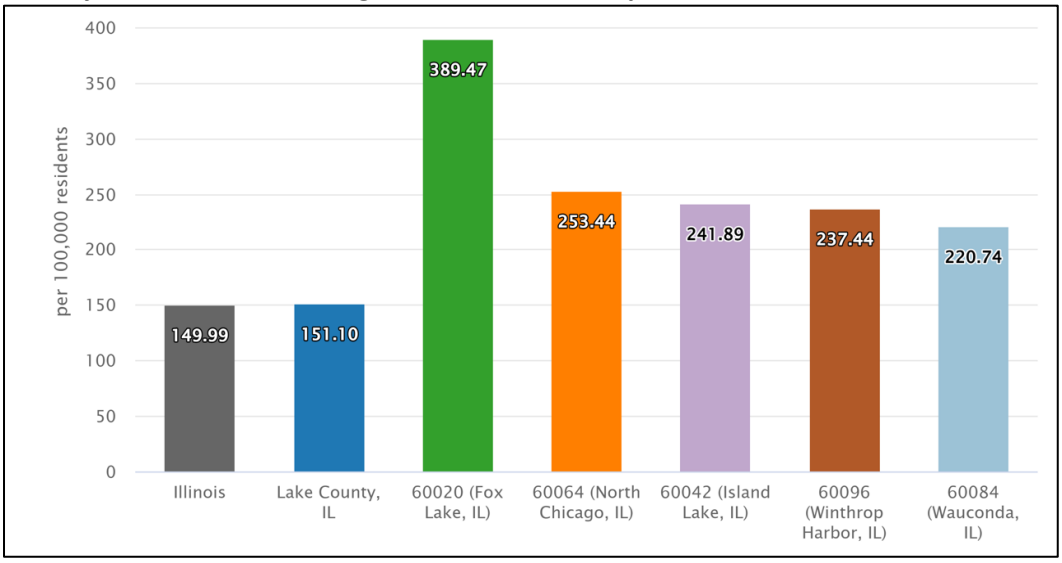
(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Age-adjusted Hospitalization Rate Due to Alcohol Use

In Lake County, non-Hispanic White residents experience higher alcohol use hospitalization rate (187.7 hospitalizations per 100,000 residents) when compared to those the other race or ethnicity groups and this rate is higher than the county rate (151.1 hospitalizations per 100,000 residents) and state rate (150 hospitalizations per 100,000 residents). When examining the rates by age, the rates are highest among adults ages 40-64 years (154.5 hospitalizations per 100,000 residents).

The communities with the highest hospitalization rates for alcohol use are Fox Lake (60020), North Chicago (60064), Island Lake (60042), Winthrop Harbor (60096) and Wauconda (60084) and as shown in Exhibit 14 (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 14: Lake County Communities with Highest Alcohol Use Hospitalization Rates 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Teens Who use Alcohol and Marijuana

In the Illinois Youth Survey (IYS) data for Lake County, the rate of students who reported binge drinking (drinking five or more alcoholic drinks in a row) in the past two weeks or using marijuana in the past 30 days did show a decline from 2018 to 2022 in all three grade levels – 8th, 10th and 12 grades, with the largest change occurring in 12th grade student rates. Despite the overall rates being lower in 2022, binge drinking and marijuana use percentages increased with age in all three survey years (Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2018, 2020, 2022). However, as mentioned earlier, due to the COVID-19 pandemic occurring within this period, local Drug Free Communities coalition agencies and other sources should be consulted for additional quantitative and qualitative data.

Exhibit 15: Lake County Illinois Youth Survey Results for Alcohol and Marijuana use 2018-2022

	Lake County Illinois Youth Survey								
	2018			2020			2022		
	8th Grade	10th Grade	12th Grade	8th Grade	10th Grade	12th Grade	8th Grade	10th Grade	12th Grade
Binge Drinking in Past 2 Weeks	3%	7%	19%	4%	6%	15%	2%	4%	10%
Marijuana Use in Past 30 Days	4%	12%	26%	4%	10%	19%	2%	7%	14%

Source: Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2022

A June 2021 study of adolescent drug use during COVID-19 social distancing, published in *Drug and Alcohol Dependence,* found that adolescent binge drinking and marijuana use did not significantly change during the pandemic, despite record decreases in the substances' perceived availability, as measured by the Monitoring the Future (MTF) survey of 12th graders in the U.S. Analysis of the survey responses revealed that students perceived a sharp decrease in availability of marijuana and alcohol in the months after the onset of the pandemic. These were the largest year-to-year decreases in perceived availability of alcohol and marijuana ever recorded since the MTF survey began in 1975. The study authors cite the wide availability of alcohol and marijuana, even during the pandemic, as a factor in the continued use of these substances. While pandemic-related restrictions limited social interactions, and even with record-breaking decreases in perceived availability among participants, most students said they still had access to marijuana and alcohol *(*National Institutes of Health, Adolescent marijuana, alcohol use held steady during COVID-19 pandemic, 2021).

Alcohol Impaired Driving Deaths

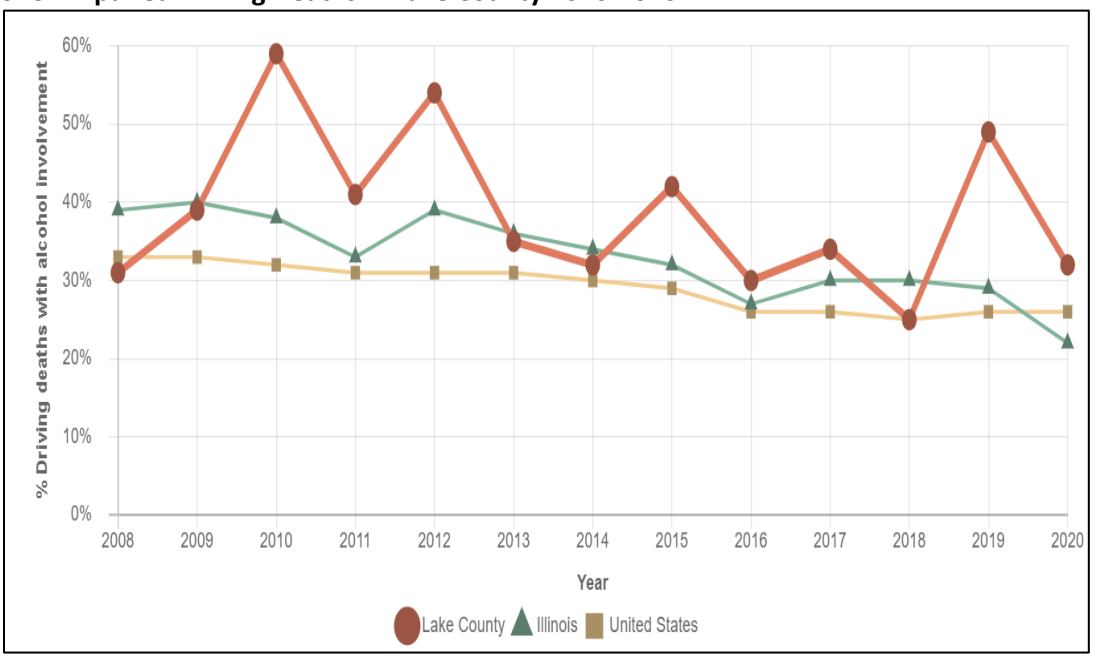
According to the 2022 Illinois Driving Under the Influence Fact Book, in 2020 in Illinois:

- 254 people were killed in alcohol-related crashes, which was approximately 21 percent of the 1,195 total crash fatalities
- 20,131 DUI arrests were recorded by the Secretary of State's office
- 25 percent of those arrested for DUI were women, who represented 50 percent of all licensed drivers and males ages 21-24 years had the highest DUI arrest rate (about 7 arrests per 1,000 licensed drivers)
- 86 percent of all drivers arrested for DUI are first offenders

(Office of the Illinois Secretary of State, Illinois DUI Fact Book, 2022).

2022 County Health Rankings indicates there were an estimated 78 alcohol-impaired driving deaths in Lake County; 34 percent of driving deaths in the county involve alcohol, slightly higher than the state (29 percent) and U.S. rate (26 percent) (County Health Rankings, Fatality Analysis Reporting System, 2016-2020).

Exhibit 16: Alcohol-impaired Driving Deaths in Lake County 2016-2020



Source: County Health Rankings, Fatality Analysis Reporting System, 2022

Other Substances

Age-adjusted ED Visit Rate due to Substance Use

The ED rate due to substance use for Lake County is 552.1 ED visits per 100,000 residents for adults ages 18 and older. The county rate is lower than Illinois rate of 741.4 ED visits per 100,000 residents. The rate is highest for non-Hispanic Black residents (1,083.7 per 100,000 residents), young adults ages 18-39 years (841.3 per 100,000 residents) and in the following communities:

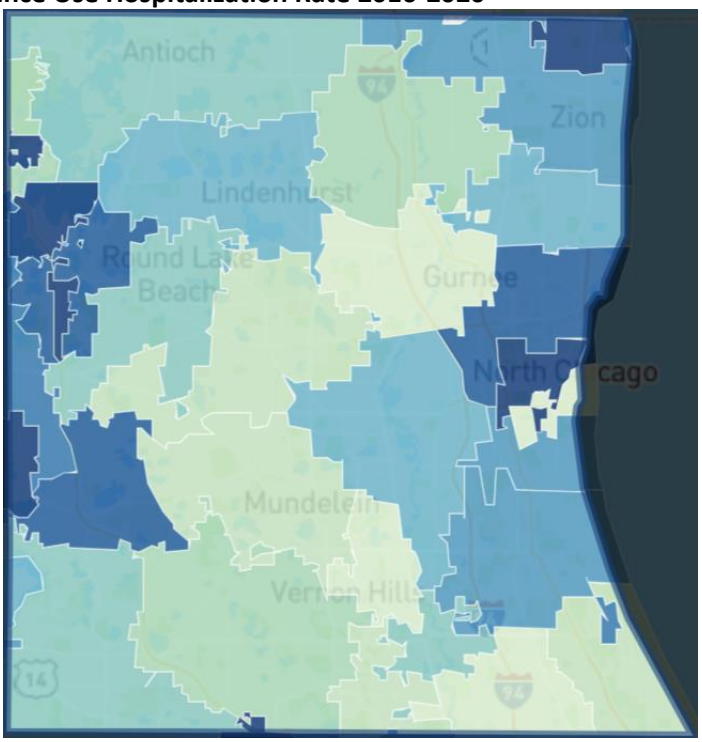
- Fox Lake (60020) 1,029.9 ED visits per 100,000 residents
- North Chicago (60064) 1,027.4 ED visits per 100,000 residents
- Waukegan (60085) 1,009.9 ED visits per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Age-adjusted Hospitalization Rate due to Substance Use

In Lake County, the hospitalization rate for substance use for adults, age 18 and older, is highest in Fox Lake (60020) (476.8 hospitalizations per 100,000 residents), North Chicago (60064) (357.3 hospitalizations per 100,000 residents), Island Lake (60042) (342.4 hospitalizations per 100,000 residents) and Winthrop Harbor (60096) at 333.6 hospitalizations per 100,000 residents. The North Chicago substance use hospitalization rate is more than twice the county rate of 208.3 hospitalizations per 100,000 residents. Adults ages 40-64 years and non-Hispanic Black residents have the highest rates by age and race or ethnicity, at 364.0 hospitalizations per 100,000 residents and 307.1 per 100,000 residents, respectively (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 17: Lake County Substance Use Hospitalization Rate 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Drug Overdose Mortality

The drug overdose mortality rate is the number of deaths per 100,000 residents due to drug poisoning (such as overdose), whether accidental or intentional. The drug overdose mortality rate in Lake County (15.0 deaths per 100,000 residents) has been increasing over time as have the state and national overdose death rates of 22.3 deaths per 100,000 residents and 22.4 deaths per 100,000 residents, respectively. Increases during the 2010 decade were largely due to the opioid epidemic (Metopio, National Vital Statistics System-Mortality (NVSS-M) (CDC WONDER), 2016-2020). Key informants in the 2020 PRC study rated alcohol and heroin or other opioids as the most problematic substances in the community (PRC Community Health Needs Assessment, 2022).

Exhibit 18: Substances Viewed as a "Major Problem" in the Community by Lake County Key Informants 2022

ALCOHOL	47.1%
HEROIN OR OTHER OPIOIDS	29.4%
PRESCRIPTION MEDICATIONS	11.8%
OVER-THE-COUNTER MEDICATIONS	5.9%
CLUB DRUGS (E.G. MDMA, GHB, ECSTASY, MOLLY)	5.9%

Source: PRC Community Health Needs Assessment - Lake County, Illinois, 2022

Age-adjusted Emergency Department Rate for Opioid use

In Lake County, young adults ages 18-39 years have the highest rate of ED visits for opioid use by age, at 248.8 visits per 100,000 residents. The highest rate by race and ethnicity is for non-Hispanic Black residents (352.6 ED visits per 100,000 residents), more than two times the non-Hispanic White population (158.8 visits per 100,000 residents). The rate for Lake County is 135.5 visits per 100,000 population, much lower than the state rate of 236.2 visits per 100,000 residents). The communities in Lake County with the highest ED visit rates for opioid use are:

- Fox Lake (60020): 390.0 visits per 100,000 population

- Ingleside (60041): 340.2 visits per 100,000 population
- North Chicago (60064): 322.9 visits per 100,000 population
- Waukegan (60085): 269.5 visits per 100,000 population
- Zion (60099): 246.4 visits per 100,000 population

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020)

Opioid Fatality Data

In 2021, Lake County had 118 fatal opioid overdoses (up from 65 in 2020) and 402 non-fatal opioid overdoses, a decrease from 423 in 2020 (Illinois Department of Public Health, Opioid Data Dashboard, https://idph.illinois.gov/OpioidDataDashboard/, 2021). In 2021, the Lake County Coroner's Office investigated 127 drug overdose deaths which included a combination of suicides, homicides and accidental deaths. The table below outlines the drugs identified in each drug overdose death (Lake County, Illinois Coroner's Office, 2021 Annual Report, 2021).

Exhibit 19: Drug Statistics for Drug Overdose Deaths in Lake County 2021

TOTAL	
Count	**Description**
7	Fentanyl
43	Fentanyl + Non OPI
4	Fentanyl + Heroin
16	Fentanyl + Heroin + Non OPI
2	Fentanyl + Hydrocodone + Non OPI
1	Fentanyl + Methadone
1	Fentanyl + Methadone + Non OPI
1	Fentanyl + Methadone + Heroin + Non OPI
1	Fentanyl + Oxycodone + Non OPI
2	Heroin + Hydrocodone
1	Heroin + Methadone
1	Heroin + Oxycodone
1	Heroin + Non OPI
3	Hydrocodone + Non OPI
1	Methadone
1	Methadone + Non OPI
3	Opiate Non-Specific + Non OPI
1	Oxycodone
3	Oxycodone + Non OPI
34	Non OPI
127	**TOTAL OVERDOSE DEATHS**

Source: Lake County, Illinois Coroner's Office, 2021 Annual Report, 2022

There have been 63 overdose deaths in 2022 from January through the end of June, which is a 9 percent increase from the number of deaths at the same point in time in 2021 (Lake County, Illinois Coroner's Office, 2022).

Nutrition

Adult Fruit and Vegetable Consumption

In Lake County, 29.1 percent of Lake County adults report eating five or more serving of fruits and/or vegetables per day; this rate is lower than the Illinois rate of 32.7 percent. Women consume fruits and vegetables at a higher rate (35.7 percent) than men (21.4 percent) and those ages 65 years and older had the highest rate by age (33.5 percent). Consumption was relatively low among men and Hispanic residents (15.3 percent) and relatively high among those identifying as either Black, Asian/Pacific Islander or American Native (identified as "Other Race" in the community survey) at 54.2 percent. Differences did exist by income levels as well, as the consumption rate for those living below 200% of the FPL (identified as "low-income" in the community survey) (22.3 percent) was lower than those of a middle or high-income resident (29.6 percent) (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Most Lake County adults report little or no difficulty buying fresh produce at a price they can afford, but 17.9 percent report affording fresh produce as "somewhat" or "very" difficult. This percent increases to 35.3 percent for those living below 200% of the FPL. Rates are highest for those ages 18-39 years (23.8 percent), Hispanic and White residents at 21.5 percent and 19.7 percent, respectively (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Physical Activity and Inactivity

Adults with No Exercise

A total of 21.8 percent of Lake County adults ages 18 years and older answered "no" to participating in any physical activity or exercise during the past month other than their regular job. The county rate is better than both the state (25.9 percent) and national rate (27.0 percent). However, the following communities all had rates of adults indicating "no exercise" higher than the county rate (Metopio, Diabetes Atlas, BRFSS, PLACES, 2019).

Exhibit 20: Lake County Communities with High Rates of Adults Who Indicate No Exercise During Past Month 2019

Community	Zip Code	Percent of Adults Indicating No Exercise
North Chicago	60064	34.5%
Waukegan	60085	33.9%
Zion	60099	28.3%
Waukegan	60087	27.4%
Highwood	60040	26.3%
Round Lake	60073	25.3%

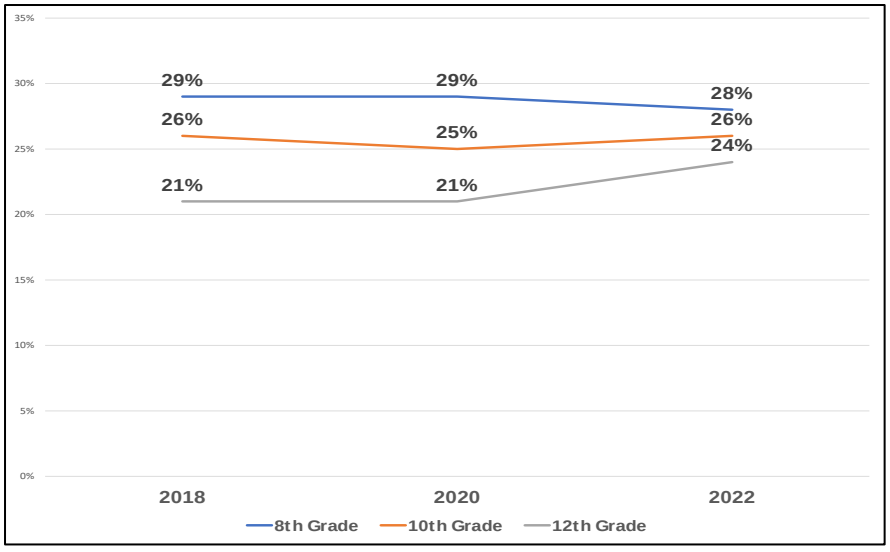
Source: Metopio, Diabetes Atlas, BRFSS, PLACES, 2022

This same physical activity survey question was asked in the 2022 PRC community survey and 29.0 percent of adults indicated no exercise outside of one's line of work in the past month, which is not meeting the Healthy People 2030 goal of 21.2 percent of lower (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Teen Physical Activity

In the 2022 IYS, 28 percent of 8th grade students, 26 percent of 10th graders and 24 percent of 12th graders were physically active for a total of at least 60 minutes per day for the past seven days. There was very little variation in the rates from the 2018 to 2022 IYS survey. The only change was a slight increase in the rate for 12th grade students from 21 percent in 2018 to 24 percent in 2022 (Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2018, 2020, 2022).

Exhibit 21: Lake County Percent of Teens That are Physically Active for Past Seven Days 2018-2022



Source: Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2022

In the PRC 2022 community survey, parent interviews showed 35.2 percent of Lake County children ages 2 to 17 years had one or more hours of physical activity on each of the seven days preceding the interview; the county rate is slightly higher than the national rate of 33 percent. Results showed Lake County girls had a higher rate of being physically active

(46.2 percent) than boys (26.6 percent. Physical activity seems to decrease with age, with children ages 0-9 years at 49.2 percent and those ages 10-17 years only at 18.4 percent) (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Weight Status

"Obesity" means that an individual's body fat and body-fat distribution exceed the level considered healthy. There are many methods of measuring body fat. Body mass index (BMI) is an inexpensive method often used as an approximate measure, although it has its limitations and is not accurate for all individuals (e.g., muscular individuals often have lower body fat than their BMI would suggest) (Trust for America's Health, The State of Obesity: Better Policies for a Healthier America, 2021). Overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. Obesity is the leading cause for mortality, morbidity, disability, healthcare utilization and healthcare costs in the us. Obesity is a disease that affects more than one-third of the us adult population. Medical costs for an obese person are $1,429 higher per year than costs for a person in the normal weight range (The Obesity Society, Professionals Collaborating to Overcome Obesity, obesity.org), 2022.

Adults Who are Obese

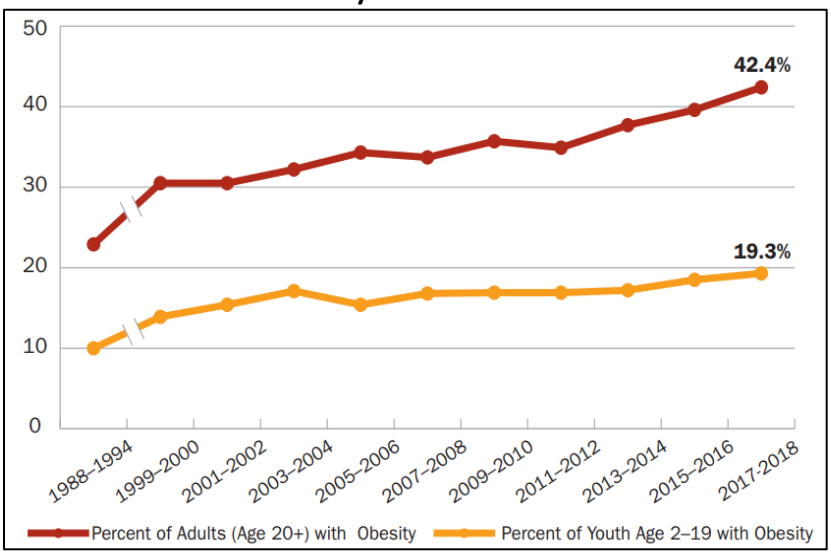
The COVID-19 pandemic added new obstacles and exacerbated existing barriers to healthy eating and physical activity in 2020 and 2021, and deepened longstanding racial and economic inequities in the U.S. Emerging data suggests eating habits shifted, physical activity declined, stress and anxiety increased, food insecurity worsened and many Americans gained weight throughout the pandemic. These more recent changes are on top of a decades-long rise in obesity rates across the U.S., with the adult rate passing 40 percent nationally for the first time in 2017-2018, according to the National Health and Nutrition Examination Survey (NHANES). Since 1999-2000, the adult obesity rate in the U.S. has increased 39 percent.

As with adults, obesity has been rising among children for decades. Between the 1976–1980 NHANES survey and the 2017–2018 survey, obesity rates for children ages 2 to 19 years more than tripled, from 5.5 to 19.3 percent. The most recent national data, the 2017–2018 NHANES survey, found that 19.3 percent of youth ages 2 through 19 years had obesity. Additionally, the demographic data shows important variation:

- Black and Latino youth have substantially higher rates of obesity than their Asian and White peers
- Boys are slightly more likely to have obesity than girls
- The prevalence of obesity increases with age

(Trust for America's Health, The State of Obesity: Better Policies for A Healthier America, 2021).

Exhibit 22: Percent of us Adults and Youth with Obesity 1988-2018

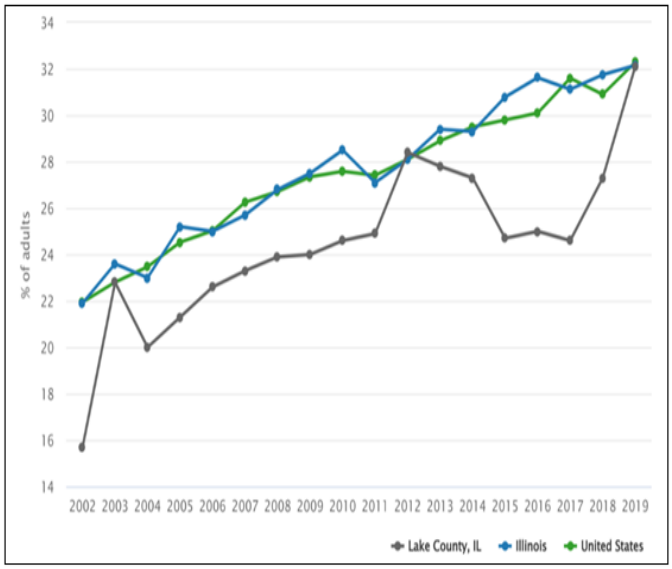


Source: Trust for America's Health, The State of Obesity: Better Policies for a Healthier America, 2022

Between 2015 and 2020, half of states (26) had statistically significant increases in the obesity rate of adults, ages 20 years and older. In 2020, the adult obesity rate was at or above 35 percent in 16 states. Between 2019 and 2020, three states (Alabama, California and Iowa) had statistically significant increases in their obesity rate and no states had statistically significant decreases. In Illinois, the adult obesity rate increased between 5 and 10 percent in the period 2015-2020 (Trust for America's Health, The State of Obesity: Better Policies for A Healthier America, 2021).

As of 2019, in Illinois 32.2 percent of adults ages 18 years and older were obese, which is similar to the Lake County rate of 32.1 percent (calculated from self-reported weight and height). The national obesity rate of adults ages 18 years and older was at 32.3 percent in 2019. The Lake County rate did decrease between 2012 to 2015, remained steady until 2017, but then began increasing again from 2017 to 2019. The graph below shows this change over time through 2019 (Metopio, Diabetes Atlas, BRFSS, PLACES, 2019).

Exhibit 23: Lake County, State and National Adult Obesity Rates and Communities with Highest and Lowest Adult Obesity Rates in Lake County 2019



Highest Obesity Rates in Lake County:	
North Chicago (60064):	42.8%
Waukegan (60085):	40.5%
Zion (60099):	38.3%
Waukegan (60087):	36.9%
Highwood (60040):	35.2%
Lowest Obesity Rates in Lake County:	
Lake Forest (60045):	27.4%
Lincolnshire (60069):	26.9%
Buffalo Grove (60089):	25.8%

Source: Metopio, Diabetes Atlas, Behavioral Risk Factor Surveillance System (BRFSS), PLACES, 2022

The top four communities in Lake County with the highest adult obesity rates - North Chicago (42.8 percent), Waukegan (both zip codes 60085 and 60087) (40.5 percent and 36.9 percent, respectively) and Zion (38.3 percent) are the same communities with the highest percent of adults indicating "no exercise" (Metopio, Diabetes Atlas, BRFSS, PLACES, 2019).

The 2022 PRC community survey results show that 34.3 percent of Lake County adults are obese, again calculated from self-reported weight and height of respondents. Obesity rates for Hispanic Lake County residents are even higher at 57.4 percent and 43.3 percent of those living below 200 percent of the FPL also have higher obesity rates than residents with middle or high incomes (33.4 percent). Of all age groups, those ages 40 to 64 years have the highest obesity rates (39 percent) and the rates for men (34.5 percent) and women (34.3 percent) are very similar (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Teen Body Mass Index

Body mass index (BMI), as calculated by self-reported height and weight, is included in the Illinois IYS. In 2022, Lake County IYS results show 14 percent of 8th graders are overweight and 9 percent obese, 13 percent of 10th grade students are overweight and 8 percent obese and 14 percent of 12th graders are overweight and 7 percent obese. Over time, between 2018 and 2022, there has been very little fluctuation in the overweight and obesity rates at each grade level (Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2018, 2020, 2022).

4. Disease and Chronic Conditions

Key findings: Disease and Chronic Conditions

- The Lake County diagnosis rate for invasive breast cancer (females 15 years and older) is higher than the Illinois and U.S. rates and the rates have been consistently increasing.
- In the 2022 PRC community survey, 35 percent of adults indicated they have been told by a health professional that their blood pressure was high.
- Non-Hispanic Black residents in Lake County have the highest ED visit rates due to hypertension, heart failure and diabetes. Non-Hispanic Black Lake County residents also have the highest coronary heart disease and stroke mortality when compared to other racial/ethnic groups.
- Thirty-two percent of Lake County adults are obese.
- In the PRC key informant survey, 84.1 percent of respondents rated mental health as a major problem. Mental health was identified as the top problem by key informants in Lake County.

Cancer

According to the American Cancer Society, cancer is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells that can result in death if not treated. Although the causes of cancer development are not completely understood, numerous factors are known to increase risk, including many that are potentially modifiable (e.g., tobacco use and excess body weight) and others that are not (e.g., inherited genetic mutations). These risk factors may act simultaneously or in sequence to initiate and/or promote cancer growth (American Cancer Society, Cancer Facts & Figures, 2022).

PRC 2022 community survey findings show that the cancer prevalence rate in Lake County is 9.7 percent. The most common types of cancers cited by survey respondents were skin cancer (19.8 percent), breast cancer (13.9 percent and prostate cancer (10.1 percent). Twenty percent of online key informants in the PRC study perceived cancer as a "major" problem in the community and an additional 65.7 percent identified it as a moderate problem (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

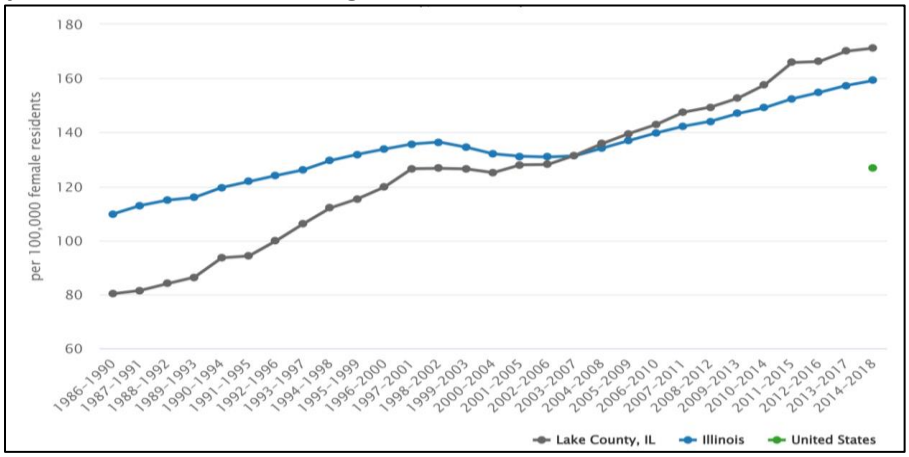
Breast Cancer

Invasive Breast Cancer Diagnosis Rate

Breast cancer is the most common cancer in American women, except for skin cancers. Currently, the average risk of a woman in the U.S. developing breast cancer sometime in her life is about 13 percent. This means there is a 1 in 8 chance she will develop breast cancer (American Cancer Society, 2022).

The 2014-2018 diagnosis rate for invasive breast cancer for females over 15 years of age in Lake County is 171.2 cases per 100,000 females, which is higher than the Illinois rate of 160.3 cases and U.S. rate of 126.8 cases per 100,000 females; the rates do not consider males. The rates have been consistently increasing over time (Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018).

Exhibit 24: Lake County Invasive Breast Cancer Diagnosis Rate 2014-2018



Source: Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2022

In the county, invasive breast cancer rates are highest for females ages 65 years and over (471.7 cases per 100,000 females), followed by females ages 40-64 years (282.7 cases per 100,000 females). The communities with the highest invasive breast cancer rates are:

- Highland Park (60035) 289.2 cases per 100,000 females
- Deerfield (60015) 272.8 cases per 100,000 females
- Buffalo Grove (60089) 269.0 cases per 100,000 females
- Highwood (60040) 254.0 cases per 100,000 females

(Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018)

Mammography Use

Mammography is an x-ray imaging method used to examine the breast for the early detection of cancer and other breast diseases. It is used as both a diagnostic and screening tool. (U.S. Department of Health and Human Services, 2022). Of female adults aged 50-74 years in Lake County, 71.8 percent report having had a mammogram within the previous two years. The rate for mammography screening has decreased in the county since 2008 when it was at 86.3 percent. The Lake County mammography use rate is lower than both the state (73.2 percent) and national rate (77.8 percent) (Metopio, Behavioral Risk Factor Surveillance System (BRFSS), PLACES, 2018). Lake County PRC community survey results showed that among women ages 50-74 years, 79.5 percent have had a mammogram within the past two years (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

As show in Exhibit 25, some communities with higher mammography use have higher invasive breast cancer diagnosis rates; conversely, some communities with lower mammography use show lower invasive breast cancer diagnosis rates.

Exhibit 25: Lake County Mammography Use and Invasive Breast Cancer Diagnosis Rates 2014-2018

Mammography Use *Invasive Breast Cancer Rate*

Source: Metopio, Behavioral Risk Factor Surveillance System (BRFSS), PLACES, 2022 and Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2022

Breast Cancer Mortality Rate

Breast cancer is the second leading cause of cancer death in women (only lung cancer kills more women each year) (American Cancer Society, 2022). The full population mortality rate due to breast cancer in Lake County is 11.0 deaths per 100,000 residents and has been declining consistently over time (this rate includes males). When examining the breast cancer death rates by race and ethnicity, the rate for non-Hispanic Black Lake County residents is highest at 14.0 deaths per 100,000 residents, followed by non-Hispanic White residents with a rate of 11.8 deaths per 100,000 residents, both higher than the county rate. Stratifying by age, seniors (ages 65 and older) have the highest breast cancer death rate in the county at 39.6 deaths per 100,000 residents (Metopio, National Vital Statistics System-Mortality, 2016-2020).

The breast cancer death rate for females only is 20.0 deaths per 100,000 females, which is slightly lower than both the Illinois (20.6 deaths per 100,000 females) and the U.S. death rate for females (19.6 deaths per 100,000 females). (Metopio, National Vital Statistics System-Mortality, 2016-2020). There were an estimated 51,945 invasive breast cancer cases in Lake County for the time period of 2014-2018 for females ages 15 and older (Metopio, Illinois Department of Public Health, Illinois Cancer Registry, 2014-2018).

Colorectal Cancer

Colorectal Cancer Screening

A total of 66.7 percent of adults ages 50-75 years and older in Lake County report having colorectal cancer screening through one of the following means:

1) a fecal occult blood test (FOBT) with the past year
2) a sigmoidoscopy within the past 5 years and a FOBT within the past 3 years
3) a colonoscopy within the past 10 years.

The colorectal screening rate for Lake County is higher than Illinois (63.3 percent) and the U.S. rate (63.2 percent) (Metopio, PLACES, Behavioral Risk Factor Surveillance System (BRFSS), 2018). In the 2022 PRC community survey, among all adults ages 50-75 years, 75.6 percent indicated they have had appropriate colorectal cancer screening (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

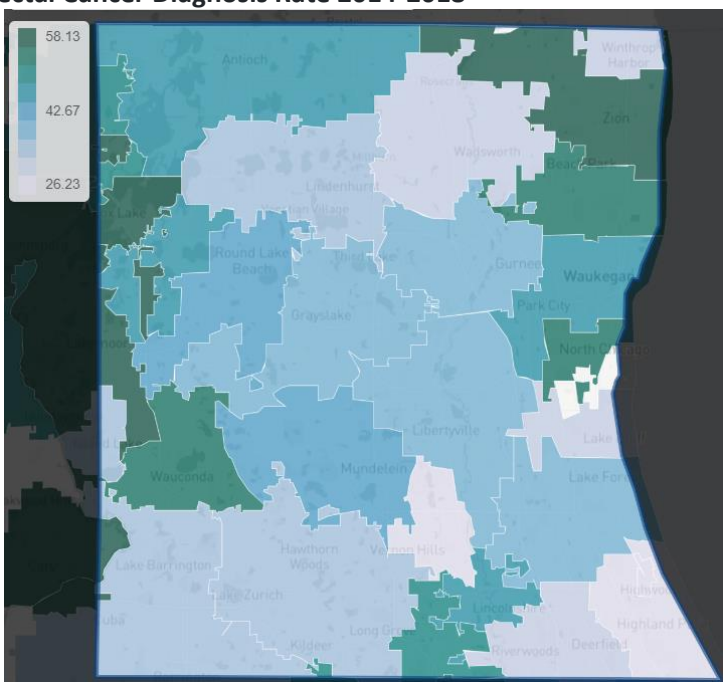
Colorectal Cancer Diagnosis Rate

According to the American Cancer Society, colorectal cancer is a cancer that starts in the colon or the rectum. These cancers can also be named colon cancer or rectal cancer, depending on where they start. Colon and rectal cancer are often grouped together because they have many features in common (American Cancer Society, 2022).

The colorectal cancer diagnosis rate for Lake County is 41.8 cases per 100,000 residents over 15 years of age and these rates have generally remained steady for the past decade. Males in the county have higher colorectal cancer diagnosis rates than females at 44.4 cases per 100,000 residents and 39.3 cases per 100,000 residents, respectively. Seniors ages 65 years and older have a significantly higher diagnosis rate (154.1 cases per 100,000 residents) compared to other age groups.

The zip codes within the county with the highest diagnosis rates of colorectal cancer are Zion (60099) at 56.8 cases per 100,000 residents, Fox Lake (60020) at 53.1 cases per 100,000 residents) and Wauconda (60084) at 52.8 cases per 100,000 residents (Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018).

Exhibit 26: Lake County Colorectal Cancer Diagnosis Rate 2014-2018



Source: Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2022

The county colorectal diagnosis rate is higher than the national rate of 38.0 cases per 100,000 residents, but lower than the Illinois rate (48.7 cases per 100,000 residents) (Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018). In 2018, an estimated 1,400 cases of colorectal cancer were diagnosed in Lake County for individuals ages 15 and older (Metopio, Illinois Department of Public Health, Illinois Cancer Registry, 2018).

Colorectal Cancer Mortality Rate

The Lake County mortality rate due to colorectal cancer is 12.2 deaths per 100,000 residents, slightly lower than the state (14.2 deaths per 100,000 residents) and national rate (13.4 deaths 18.5 deaths per 100,000 residents) per 100,000 residents). The death rate for males (14.2 deaths per 100,000 residents) is higher than the rate for females (10.6 deaths per 100,000 residents) and the rate for non-Hispanic Black residents is higher than residents of any other race or ethnicity, at 22.1 deaths per 100,000 residents (Metopio, National Vital Statistics System-Mortality, 2016-2020).

Cervical Cancer

Pap Test in Previous Three Years

As of 2018, 84.3 percent of Lake County women ages 21-65 years report having had a Papanicolaou (Pap) smear within the previous 3 years; the county rate is slightly higher than the Illinois rate (83.6 percent) (Metopio, BRFSS, PLACES, 2018). The 2022 Lake County community survey conducted by PRC, found that 79.0 percent of women ages 21- 65 years have had appropriate cervical cancer screening which is below the Healthy People 2030 goal of 84.3 percent or higher (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

The communities with the lowest pap smear use rates in the county are:

- North Chicago (60088) 72.1 percent
- Waukegan (60085) 79.5 percent
- North Chicago (60064) 79.9 percent
- Zion (60099) 82.7 percent
- Round Lake (60073) 82.8 percent

(Metopio, BRFSS, PLACES, 2018).

Cervical Cancer Diagnosis Rate
The annual diagnosis rate for cervical cancer, for women ages 15 years and older in Lake County is 6.2 cases per 100,000 females which is lower than the Illinois and national rates of 8.1 cases per 100,000 females and 7.7 cases per 100,000 females, respectively. The highest cervical cancer diagnosis rates in the county are in the communities of Waukegan, Wauconda, Zion and Highland Park. The diagnosis rates for cervical cancer for both Waukegan zip codes are nearly three times the cervical cancer diagnosis rate for the county.

- Waukegan (60087) 18.3 cases per 100,000 females
- Waukegan (60085) 17.9 cases per 100,000 females
- Wauconda (60084) 15.3 cases per 100,000 females
- Zion (60099) 12.0 cases per 100,000 females
- Highland Park 9.0 cases per 100,000 females

(Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018).

Some of the communities with the lowest pap smear use rates also have the highest cervical cancer diagnosis rates.

Lung Cancer

Lung Cancer Diagnosis Rate
The lung cancer diagnosis rate for Lake County (63.6 cases per 100,000 residents) has been consistently increasing over time. The Illinois rate (74.4 cases per 100,000 residents) has also been trending upward over time and is higher than the county rate. The U.S. rate (57.3 cases per 100,000 residents) is lower than the Lake County rate (Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018).

Specific communities in the county have lung cancer diagnosis rates much higher than the county rate - the lung cancer diagnosis rate for North Chicago is more than twice the county rate.

- North Chicago (60064) 106.5 cases per 100,000 residents
- Ingleside (60041) 86.5 cases per 100,000 residents
- Fox Lake (60020) 85.5 cases per 100,000 residents
- Zion (60099) 83.3 cases per 100,000 residents.

Seniors have the highest lung cancer diagnosis rate in Lake County at 314.0 per 100,000 residents, nearly five times higher than the rate for the full population (Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018).

Lung, Trachea and Bronchus Cancer Mortality Rate
The mortality rate for lung, trachea and bronchus cancer in Lake County is 31.8 deaths per 100,000 residents, which is lower than the Illinois rate (37.4 deaths per 100,000 residents). Stratifying by race and ethnicity, the death rate is highest among non-Hispanic Black residents, at a rate of 44.7 deaths per 100,000 residents, followed by Whites (34.2 deaths per 100,000), both higher than the full population rate. Females (29.1 deaths per 100,000 residents) have a lower mortality rate than males (35.1 deaths per 100,000 residents). As is the case with other cancer types, seniors ages 65 years and older have the highest rate (177.0 deaths per 100,000) when compared to other age groups (Metopio, National Vital Statistics System-Mortality, 2016-2020).

Oral Cancer

Oral Cancer Diagnosis Rate
In Illinois, the diagnosis rate of cancer in the oral cavity and pharynx has been rising steadily since the 1989-1993 time period. This same trend has occurred for oral cancer diagnosis rates in Lake County; however, since the 2012-2016 period, the rate has decreased very slightly to 11.99 cases per 100,000 residents (2014-2018). Females have much lower

rates of oral cancer (7.7 cases per 100,000 residents) than males (16.4 cases per 100,000 residents) in Lake County. The two age groups with the highest diagnosis rates in the county are adults ages 40-64 years (23.1 cases per 100,000 residents) and seniors ages 65 years and older – with the highest rate at 35.0 cases per 100,000 residents (Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018).

Prostate Cancer

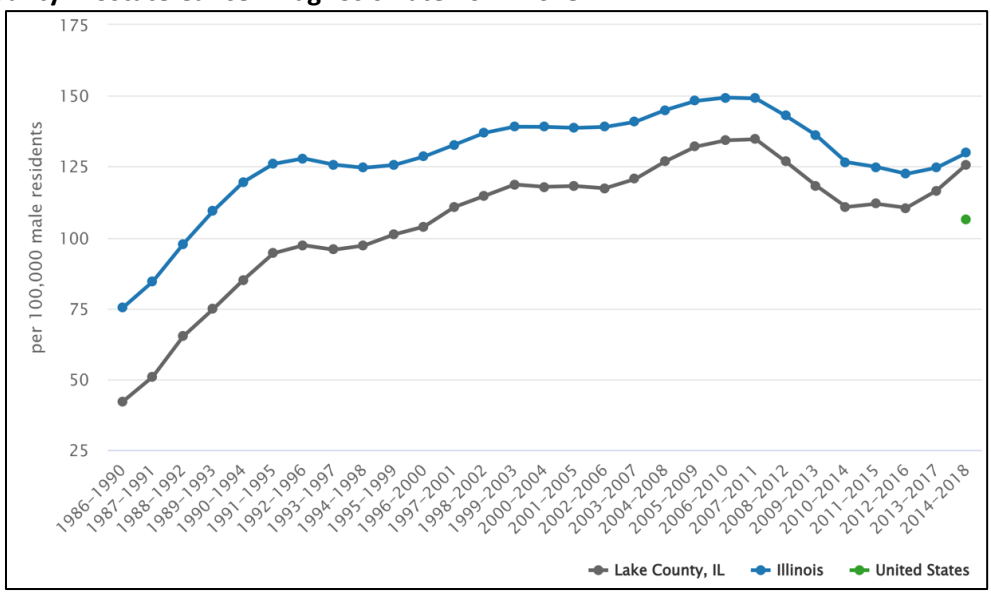
Prostate Cancer Diagnosis Rate

In Illinois, there are 129.9 cases of prostate cancer per 100,000 males ages 15 years and older. In Lake County, the rate is slightly lower at 125.8 cases per 100,000 males and both these rates are higher than the U.S. rate of 106.2 cases per 100,000 males. Lake County seniors ages 65 years and older have the highest diagnosis rate for prostate cancer (554.6 cases per 100,000 males) when compared to other age groups. There were approximately 2,097 cases of prostate cancer in Lake County in the 2014-2018 period. The communities with the highest rates of prostate cancer in Lake County are:

- Lake Bluff (60044) 188.7 cases per 100,000 males
- Lake Forest (60045) 155.1 cases per 100,000 males
- Highland Park (60035) 152.7 cases per 100,000 males
- Lake Zurich (60047) 148.2 cases per 100,000 males
- Waukegan (60087) 147.6 cases per 100,000 males.

(Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2014-2018).

Exhibit 27: Lake County Prostate Cancer Diagnosis Rate 2014-2018



Source: Metopio, Illinois Department of Public Health, Illinois State Cancer Registry, 2022

Cardiovascular Disease

Heart disease is the leading cause of death in the U.S. and stroke is fifth leading cause. Heart disease and stroke can result in poor quality of life, disability and death. Though both diseases are common, they can often be prevented by controlling risk factors like high blood pressure and high cholesterol through treatment (Healthy People 2030, Heart Disease and Stroke, health.gov/healthypeople, 2022).

High Blood Pressure Prevalence

According to the American Heart Association, nearly half of American adults have high blood pressure and many don't even know they have it. For an adult, a blood pressure reading of less than 120/80 mm Hg are considered within the normal range. Elevated blood pressure or high blood pressure (hypertension) is when readings consistently range from 120-129 systolic and more than 80 mm Hg diastolic (American Heart Association, 2022).

This indicator includes the percent of resident adults ages 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they have high blood pressure (hypertension). Women who were told high blood pressure only during pregnancy and those who were told they had borderline hypertension were not included. In Lake County, the percent of residents with high blood pressure increased consistently from 23.4 percent in 2007 to 29.1 percent in 2017. In 2019, the high blood pressure prevalence rate dropped slightly to 27.3 percent, which is lower than both the Illinois (29.4 percent) and U.S. (30.4 percent) 2019 rate (Metopio, Behavioral Risk Factor Surveillance System (BRFSS), PLACES, 2019). In the 2022 PRC community survey, 35 percent of adults indicated they have been told by a health professional that their blood pressure was high (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

High Cholesterol Prevalence

According to the America's Health Rankings 2021 Report, high cholesterol is a major and modifiable risk factor for heart disease and stroke, which is the fifth-leading cause of death in the United States. A high total cholesterol level (≥ 240 mg/dL) doubles the risk of heart disease, including heart attack. In the U.S. as of 2019, 33.3 percent of adults reported being told by a health professional that their cholesterol level is high (Behavioral Risk Factor Surveillance System (BRFSS), America's Health Rankings, United Health Foundation, americashealthrankings.org, 2019).

In Lake County, 27.4 percent of adults ages 18 years and older have high cholesterol. The county rate is just below the Illinois rate of 28 percent of residents (Metopio, PLACES, Behavioral Risk Factor Surveillance System (BRFSS), 2019). The 2022 PRC community survey results indicate 32.3 percent of adults with high blood cholesterol. Additionally, in the survey a majority (84.3 percent) of Lake County adults reported one or more cardiovascular risk factors, such as being overweight, smoking cigarettes, being physically inactive or having high blood pressure or cholesterol. The survey results showed even higher rates of cardiovascular risks or behaviors among residents of Hispanic origin (95.5 percent), those with income levels below 200% of the FPL (91.3 percent) and individuals ages 65 years and older (90.9 percent); a higher percent of men (87.6 percent) than women (81.2 percent) had one or more cardiovascular risks or behaviors (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

The greatest share of key informants taking part in the online PRC survey characterized heart disease and stroke as a "moderate problem" (50 percent) and an additional 39.5 percent rated heart disease and stroke as a "major problem." A key informant who is a community leader shared, "Within our lower income communities in Lake County, there is a lack of access to education to prevent heart disease and stroke. There is also significant lack of resources to support sustaining a healthy lifestyle. When people don't have access to education, proper nutrition and exercise and regular/preventative care, there is a greater prevalence" (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Coronary Heart Disease

In Lake County, 4.7 percent of resident adults ages 18 years and older report ever having been told by a doctor, nurse, or other health professional that they have angina or coronary heart disease. The Lake County rate is lower than the Illinois rate of 5.2 percent and 5.5 percent for the U.S. The communities with the highest rates of coronary heart disease are Lincolnshire (60069) (7.4 percent), Fox Lake (60020) and North Chicago, both at 5.9 percent and Zion (60099) at 5.8 percent (Metopio, Behavioral Risk Factor Surveillance System (BRFSS), PLACES, 2019).

The 2022 PRC community survey findings indicate 7.1 percent of Lake County adults report having coronary heart disease. Survey results also found that prevalence of heart disease increased to 17 percent for seniors ages 65 years and older (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Emergency Department Visit Rate Due to Hypertension

Hypertension (high blood pressure) is a common condition in which the long-term force of the blood against the artery walls is high enough that it may eventually cause health problems, such as heart disease. The ED rate due to hypertension in Lake County is 271.6 ED visits per 100,000 residents age 18 years and older, which is lower than the

Illinois rate (378.6 ED visits per 100,000 residents). By gender, females (325.2 ED visits per 100,000 residents) have higher ED rates due to hypertension than males (218.1 ED visits per 100,000 residents).

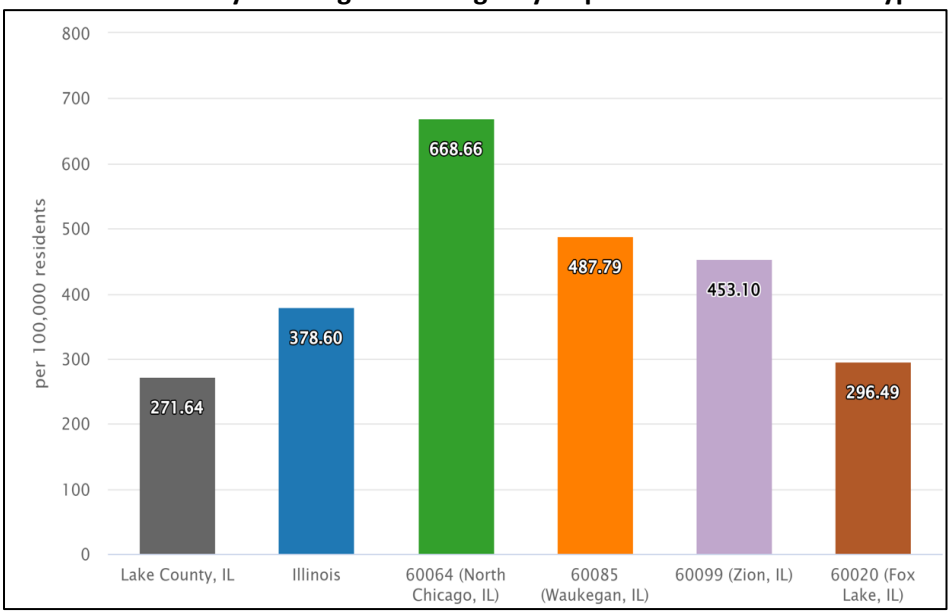
Non-Hispanic Black residents have disproportionately higher ED visit rates due to hypertension (835.4 ED visits per 100,000 residents); seniors ages 65 years and older (648.3 ED visits per 100,000 residents) have the highest rate by age.

North Chicago (60064) is the community with the highest ED visit rate due to hypertension in the county (686.7 ED visits per 100,000 residents), more than 2.5 times higher than the rate for the full population. Other communities with the highest ED visit rates are:

- Waukegan (60085) 487.8 ED visits per 100,000 residents
- Zion (60099) 453.1 ED visits per 100,000 residents
- Fox Lake (60020) 296.5 ED visits per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 28: Communities in Lake County with Highest Emergency Department Visits due to Hypertension 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Hospitalization Rate Due to Hypertension

The hospitalization rate due to hypertension tracks the annual hospital admissions for hypertension per 100,000 residents. The Illinois hospitalization rate (54.1 hospitalizations per 100,000 residents) is higher than the Lake County rate of 49.4 hospitalizations per 100,000 residents ages 18 years and older. For hypertension hospitalization, seniors ages 65 years and older (134.1 hospitalizations per 100,000 residents) and non-Hispanic Black residents (205.5 hospitalizations per 100,000 residents) have hospitalization rates that are significantly higher than the county rate. Like the ED rates due to hypertension, females in Lake County have higher hospitalization rates due to hypertension than males. The same four communities that have the highest ED visit rates due to hypertension in the county also have the highest hospitalization rates due to hypertension – North Chicago, Waukegan (60085), Zion and Fox Lake (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Emergency Department Visit Rate Due to Heart Failure

According to the American Heart Association, heart failure is a chronic, progressive condition in which the heart muscle is unable to pump enough blood to meet the body's needs for blood and oxygen. The Lake County ED rate due to heart failure is 40.1 ED visits per 100,000 residents. Non-Hispanic Black residents have the highest ED visit rate of all racial and ethnic groups - 95.2 ED visits per 100,000 residents, more than double the full population rate. Seniors 65 years and

older (151.8 ED visits per 100,000 residents) have higher ED rates due to heart failure compared to other age groups. The Illinois rate (100.9 ED visits per 100,000 residents) is much higher than the Lake County rate.

The following communities have the highest ED visit rates due to heart failure in the PSA:

- North Chicago (60064) 103.5 ED visits per 100,000 residents
- Fox Lake (60020) 86.9 ED visits per 100,000 residents
- Waukegan (60085) 60.6 ED visits per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to Heart Failure

In Lake County, the hospitalization rate due to heart failure is 386.3 hospitalizations per 100,000 residents age 18 and older. The county rate is lower than the Illinois hospitalization rate of 449.3 hospitalizations per 100,000 residents ages 18 years and older. Seniors 65 years and older have higher hospitalization rates due to heart failure compared to other age groups and non-Hispanic Black residents have much higher hospitalization rates (841.2 hospitalizations per 100,000 residents) than any other group, nearly twice the rate for non-Hispanic White residents (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

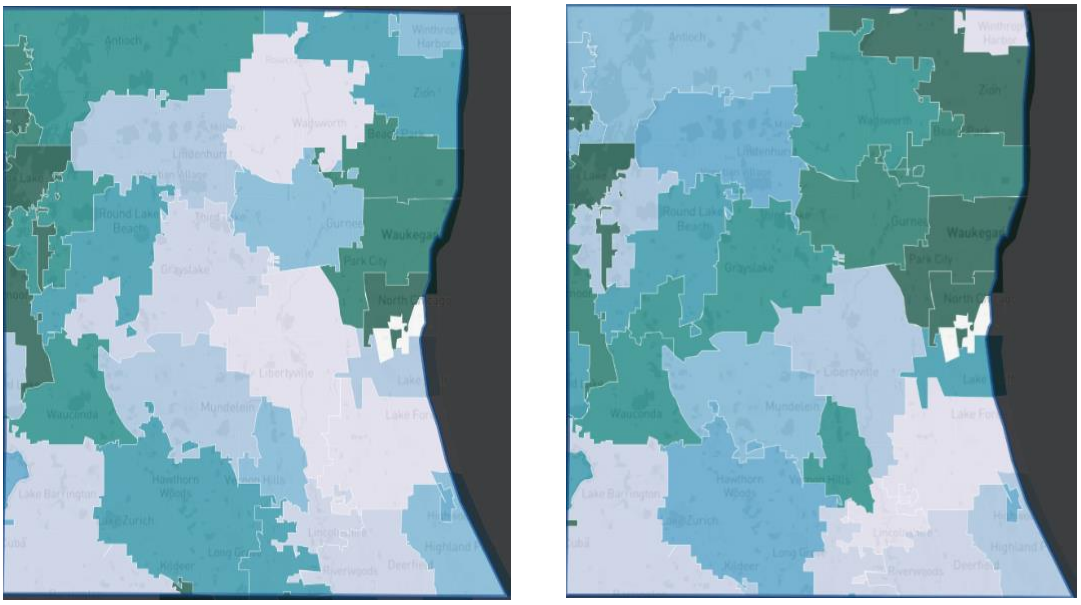
The communities with the highest ED visit rates for heart failure also have some of the highest hospitalization rates due to heart failure in the county:

- North Chicago (60064) 772.2hospitalizations per 100,000 residents
- Waukegan (60085) 629.3 hospitalizations per 100,000 residents
- Zion (60099) 557.0 hospitalizations per 100,000 residents
- Fox Lake (60020) 494.8 hospitalizations per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 29: Lake County Emergency Department and Hospitalization Visit Rates due to Heart Failure 2016-2020

ED Visit Rate due to Heart Failure *Hospitalization Rate due to Heart Failure*



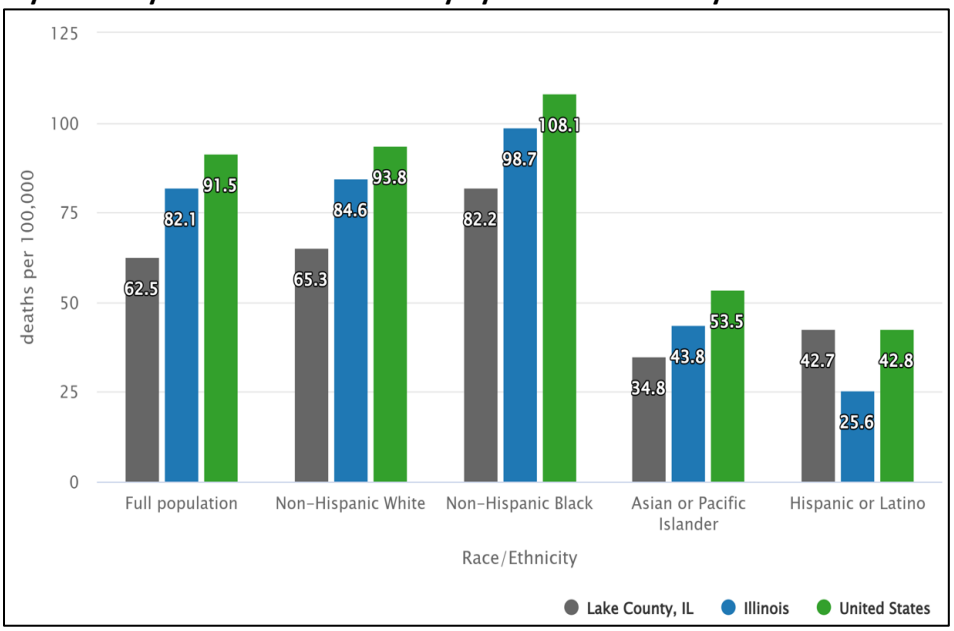
Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Coronary Heart Disease Mortality

Heart disease includes ischemic heart diseases (acute myocardial infarction, other acute ischemic heart diseases and other forms of chronic ischemic heart disease). The mortality rate from coronary heart disease is 62.5 deaths per

100,000 residents in Lake County; the county rate is lower than both the U.S. rate (91.5 deaths per 100,000 residents) and the Illinois rate (82.1 deaths per 100,000 residents). The mortality rate from coronary heart disease in Lake County has been declining since 2012. The mortality rate due to coronary heart disease for males in Lake County is double that for females - 85.8 deaths and 44.2 deaths per 100,000 residents, respectively. The mortality rate for seniors ages 65 years and older (240.8 deaths per 100,000 residents) is disproportionately higher than the mortality rate due to coronary heart disease for the full population. Stratified by race and ethnicity, non-Hispanic Black residents have the highest coronary heart disease mortality (82.2 deaths per 100,000 population) in Lake County (Metopio, National Vital Statistics System Mortality, 2016-2020).

Exhibit 30: Lake County Coronary Heart Disease Mortality by Race and Ethnicity 2016-2020



Source: Metopio, National Vital Statistics System Mortality, 2022

Stroke Mortality

In Lake County, the age-adjusted death rate due to cerebrovascular disease and stroke is 29.5 deaths per 100,000 residents. In Lake County, the stroke mortality rate has decreased over time and the county death rate is lower than the Illinois (39.1 deaths per 100,000 residents) and U.S. death rate (37.6 deaths per 100,000 residents) due to stroke. As is the case with the coronary heart disease mortality rate, non-Hispanic Black residents also have the highest stroke mortality rate in the county at 43.0 deaths per 100,000 residents (Metopio, National Vital Statistics System Mortality, 2016-2020).

Diabetes

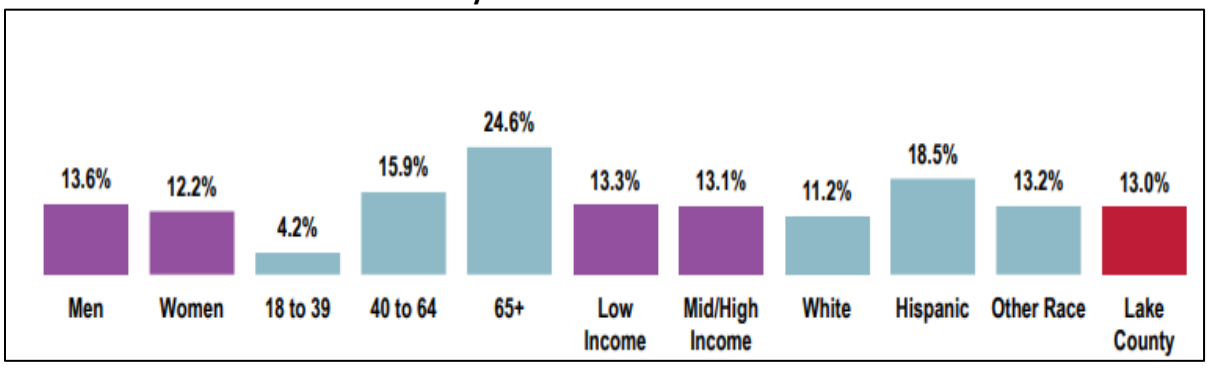
Approximately 993,082 people (10 percent of the adult residents) in Illinois have diagnosed diabetes and there are 3,393,000 people (34 percent of the adult residents) in Illinois, who have prediabetes. Diagnosed diabetes costs an estimated $12 billion in Illinois each year. The serious complications include heart disease, stroke, amputation, end-stage kidney disease, blindness and death (American Diabetes Association, 2021).

Diagnosed Diabetes

The percent of adults ages 18 years and older diagnosed with diabetes by a health professional in Illinois and the U.S. has been increasing over time. The same trend is occurring in Lake County, where 9.1 percent of adults were diagnosed with diabetes as of 2019, slightly lower than the Illinois (10.1 percent) and U.S. (10.5 percent) rates (Metopio, Diabetes Atlas, PLACES, 2019).

In the PRC 2022 community survey, 13.0 percent of Lake County adults reported having been diagnosed with diabetes, impacting approximately one quarter of residents ages 65 and older. A total of 18.5 percent of Hispanic residents reported having been diagnosed with diabetes and the rate was slightly higher for men than women (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 31: Prevalence of Diabetes in Lake County Adults 2022



Source: PRC Community Health Needs Assessment - Lake County, Illinois, 2022

Emergency Department Visit Rate Due to Diabetes

The ED rate due to diabetes in Lake County is 132.4 ED visits per 100,000 residents. The county rate is lower than the Illinois rate at 239.7 ED visits per 100,000 residents. Stratifying by race and ethnicity, non-Hispanic Black residents have a significantly higher rate of ED visits due to diabetes at 474.2 ED visits per 100,000 residents. Males and females have similar ED visit rates due to diabetes, at 133.0 and 131.8 ED visits per 100,000 residents, respectively. Seniors ages 65 years and older have the highest rate (251.4 ED visits per 100,000 residents) followed by adults ages 40-64 years at 163 ED visits per 100,000 residents. The following communities have the highest ED visit rates due to diabetes in the county:

- North Chicago (60064) 422.1 ED visits per 100,000 residents
- Waukegan (60085) 339.1 ED visits per 100,000 residents
- Zion (60099) 308.6 ED visits per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to Diabetes

For every 100,000 residents in Lake County, 151.0 individuals are hospitalized for diabetes. The county rate is lower than the Illinois rate (176.9 hospitalizations per 100,000 residents). Again, those that are 65 years and older (358.5 hospitalizations per 100,000 residents) and non-Hispanic Black residents (459.4 hospitalizations per 100,000 residents) have the highest hospitalization rates. Men have higher hospitalization rates due to diabetes than women. The same communities with the highest ED visit rates for diabetes have the highest hospitalization rates due to diabetes:

- North Chicago (60064) 378.0 hospitalizations per 100,000 residents
- Zion (60099) 354.1 hospitalizations per 100,000 residents
- Waukegan (60085) 306.4 hospitalizations per 100,000 residents
- Waukegan (60087) 281.0 hospitalizations per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

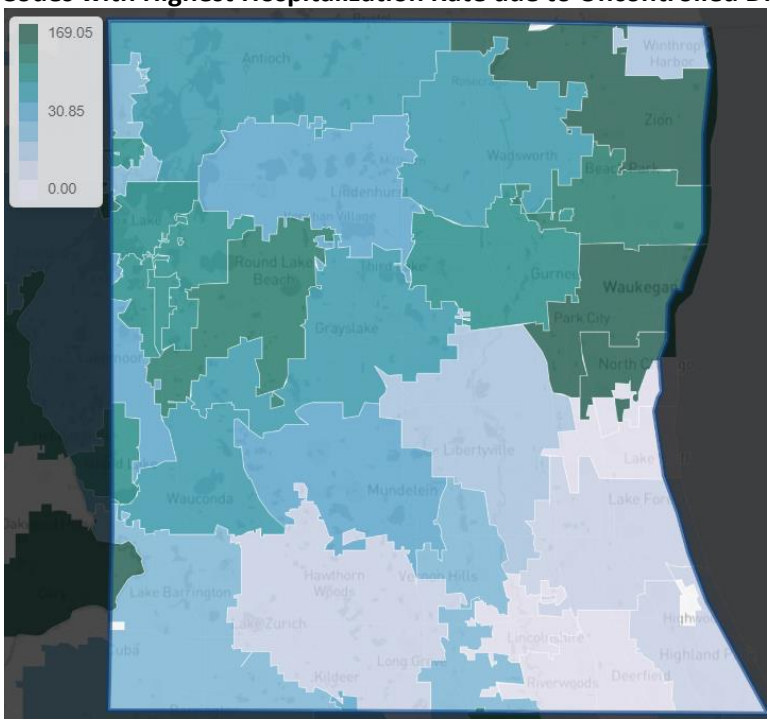
Emergency Department Visit Rate Due to Uncontrolled Diabetes

The Lake County ED visit rate due to uncontrolled diabetes 122.9 ED visits per 100,000 residents and the Illinois rate (187.2 ED visits per 100,000 residents) is higher than the Lake County rate. The ED visit rate increases as age increases; the ED visit rate for uncontrolled diabetes for non-Hispanic Black residents (452.0 ED visits per 100,000 residents) is more than 2.4 times higher than the rate for the full county population (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to Uncontrolled Diabetes

In Lake County 43 out of every 100,000 residents are hospitalized annually due to uncontrolled diabetes. In the state, 46.7 residents are hospitalized annually due to uncontrolled diabetes. In Lake County, residents who are non-Hispanic Black have the highest hospitalization rate for uncontrolled diabetes (163.1 hospitalizations per 100,000 residents) compared to other racial and ethnic groups. Those that are 65 years and older (110.3 hospitalizations per 100,000 residents) and men (46.8 hospitalizations per 100,000 residents) have the highest hospitalization rates due to uncontrolled diabetes. Zip codes with the darker shading in the map below have the highest hospitalization rates for uncontrolled diabetes in the county – 60064 (North Chicago), 60085 (Waukegan) and 60099 (Zion). These same communities also have the highest ED visit rates for uncontrolled diabetes (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 32: Lake County Zip Codes with Highest Hospitalization Rate due to Uncontrolled Diabetes 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Emergency Department Visit Rate Due to Short-term Complications of Diabetes

For short-term complications of diabetes for adults ages 18 years and older, the rate is 3.3 ED visits per 100,000 residents, which is much lower than the Illinois rate of 10.0 ED visits per 100,000 residents. Short-term complications of diabetes mellitus include diabetic ketoacidosis, hyperosmolarity and coma. These life-threatening emergencies arise when a patient experiences an excess of glucose (hyperglycemia) or insulin (hypoglycemia). As with the other diabetes indicators, non-Hispanic Black residents have the highest ED rates due to short-term complications of diabetes, at 13.4 ED visits per 100,000 residents – four times the rate for the overall population. However, unlike the other diabetes indicators, the age group with the highest ED visit rate due to short-term diabetes complications is young adults, ages 18-39 years (5.6 ED visits per 100,000 residents). These communities have the highest ED visit rates due to short-term complications of diabetes in the county:

- Fox Lake (60020) 15.2 ED visits per 100,000 residents
- Zion (60099) 11.6 ED visits per 100,000 residents
- Wauconda (60084) 10.2 ED visits per 100,000 residents
- North Chicago (60064) 9.8 ED visits per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

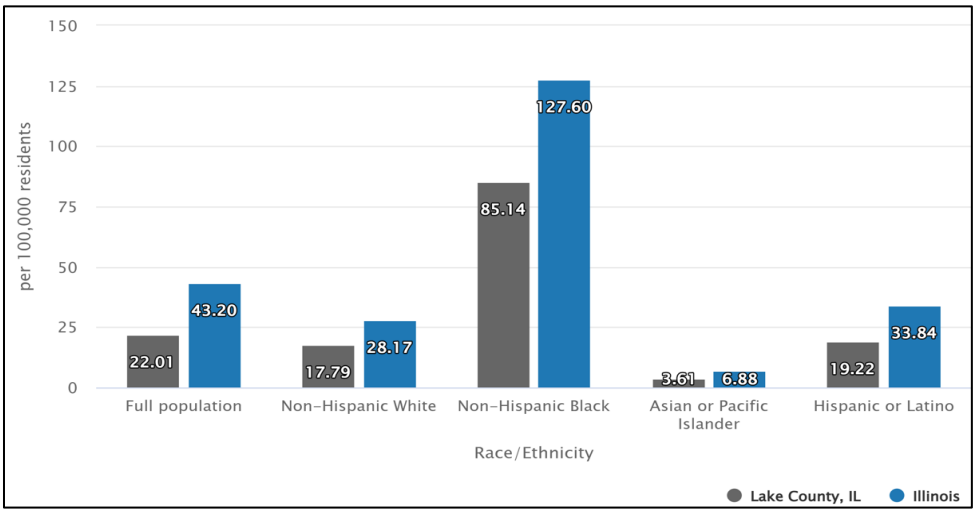
Hospitalization Rate Due to Short-term Complications of Diabetes

The hospitalization rate due to short-term complications of diabetes for adults ages 18 years and older in Lake County is 52.1 hospitalizations per 100,000 residents; the Illinois hospitalization rate due to short-term complications of diabetes (62.3 hospitalizations per 100,000 residents) is higher than the Lake County rate. By age group, young adults, ages 18-39 years again have the highest hospitalization rate for short-term complications of diabetes (75.1 hospitalizations per 100,000 residents). Men have a higher rate than women and non-Hispanic Black residents also have a significantly higher hospitalization rate due to short-term complications of diabetes (226.8 hospitalizations per 100,000 residents) compared to Lake County residents of a different race or ethnicity (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Emergency Department Visit Rate Due to Long-term Complications of Diabetes

Long-term complications of diabetes mellitus include renal, eye, neurological, and circulatory disorders and occur to some degree in the majority of patients with diabetes. The ED visit rate due to long-term complications of diabetes for adults age 18 years and older in Illinois (43.2 ED visits per 100,000 residents) is almost double the rate for Lake County (22.0 ED visits per 100,000 residents). Stratifying by age, seniors ages 65 years and older (33.5 ED visits per 100,000 residents) have an ED visit rate only slightly higher than the rate for adults ages 40-64 years (30.1 ED visits per 100,000 residents). Asian or Pacific Islander residents have the lowest ED visit rate (3.6 ED visits per 100,000 residents), a stark contrast to the rate for non-Hispanic Black residents, who have the highest ED visit rate in Lake County due to long-term complications of diabetes (85.1 ED visits per 100,000 residents (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 33: Lake County Emergency Department Visit Rate due to Long-term Complications of Diabetes by Race and Ethnicity 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Hospitalization Rate Due to Long-term Complications of Diabetes

The hospitalization rate due to long-term complications of diabetes for Lake County is 88.8 hospitalizations per 100,000 residents ages 18 years and older, lower than the Illinois rate of 101.6 hospitalizations per 100,000 residents. The hospitalization rate in Lake County increases as age increases, males have much higher rates than females and the highest hospitalization rate by race or ethnicity is among non-Hispanic Black residents (193.7 hospitalizations per 100,000 residents). The following communities have the highest hospitalization rates in the county due to long-term complications of diabetes:

- Waukegan (60085) 187.2 hospitalizations per 100,000 residents
- Waukegan (60087) 179.3 hospitalizations per 100,000 residents
- North Chicago (60064) 160.7 hospitalizations per 100,000 residents
- Zion (60099) 154.3 hospitalizations per 100,000 residents

- Gurnee (60031) 127.0 hospitalizations per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

The following is a summary of the key ED and hospitalization diabetes indicators for Lake County and the zip codes in the county with the highest rates compared to other zip codes. A total of 64.1 percent of key informants in the 2022 PRC, online survey characterized diabetes as a "major problem" in the community (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 34: Lake County Diabetes Indicators Summary 2016-2020

Diabetes Indicators (per 100,000 residents) 2016-2020	Lake County	Illinois	60064 (North Chicago)	60085 (Waukegan)	60087 (Waukegan)	60099 (Zion)	60073 (Round Lake)	60020 (Fox Lake)	60084 (Wauconda)	60031 (Gurnee)
Diabetes emergency department visit rate	132.4	239.7	422.08	339.11	241.82	308.62	161.97	129.3	140.61	137.97
Diabetes hospitalization rate	150.96	176.9	377.97	306.38	280.95	354.12	197.31	143.85	136.21	183.74
Uncontrolled diabetes emergency department visit rate	122.9	187.2	394.48	314.71	213.14	277.53	156.81	110.49	135.42	140.71
Uncontrolled diabetes hospitalization rate	43	46.73	169.05	103.55	65.59	97.1	58.2	40.5	38.23	48.3
Diabetes short-term complications emergency department visit rate	3.33	9.97	9.83	4.78		11.55	3.79	15.16	10.19	
Diabetes short-term complications hospitalization rate	52.09	62.27	138.33	88.77	107.89	194.57	52.52	43.83	35.52	51.65
Diabetes long-term complications emergency department visit rate	22.01	43.2	78.41	63.27	59.76	71.21	24.35	11.74		19.55
Diabetes long-term complications hospitalization rate	88.78	101.6	160.68	187.15	179.26	154.3	126.5	89.06	93.13	126.95

Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Chronic Kidney Disease

Diabetes is the most frequent cause of chronic kidney disease, not only in the United States but in most industrialized countries. Kidney disease in people with diabetes is caused by multiple factors, including diabetic changes in the kidneys as well as vascular changes due to hypertension. People with diabetes have high glycemia, or blood glucose, which can damage the kidneys and lead to kidney disease (National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, The Link Between Diabetes and Kidney Disease, 2020 The Link Between Diabetes and Kidney Disease | NIDDK (nih.gov)).

In Lake County, 2.5 percent of adults, ages 18 years and older, report ever having been told by a health professional that they have kidney disease, which is slightly lower than both the state (2.7 percent) and U.S. rates (2.8 percent). The communities in Lake County with the highest chronic kidney disease rates are:

- North Chicago (60064) 3.6 percent of adults
- Lincolnshire (60069) 3.2 percent of adults
- Waukegan (60085) 3.1 percent of adults
- Zion (60099) 3.0 percent of adults

(Metopio, Behavioral Risk Factor Surveillance System (BRFSS), Razzaghi, Wang, et.al. (MMWR Morb Mortal Wkly Rep 2020), PLACES, 2019).

The 2022 PRC community survey found 5.4 percent of adults with chronic kidney disease. Seventeen percent of key informants rated kidney disease as a "major problem" in Lake County (PRC Community Health Needs Assessment – Lake County, Illinois, 2022).

Kidney Disease Mortality

Kidney disease mortality includes mortality from nephritis, nephrotic syndrome and nephrosis. The death rate due to kidney disease in Lake County is 15.3 deaths per 100,000 residents. The Illinois kidney disease mortality rate is higher than Lake County, at 16.7 deaths per 100,000 residents, but the U.S. rate is lower than both (12.9 deaths per 100,000 residents). Seniors ages 65 years and older have the highest rates of kidney disease mortality in the county (66.7 deaths per 100,000 residents). Males also have higher rates of kidney disease mortality in the county (19.7 deaths per 100,000 residents) (Metopio, National Vital Statistics System Mortality (CDC Wonder), 2016-2020).

Mental Health

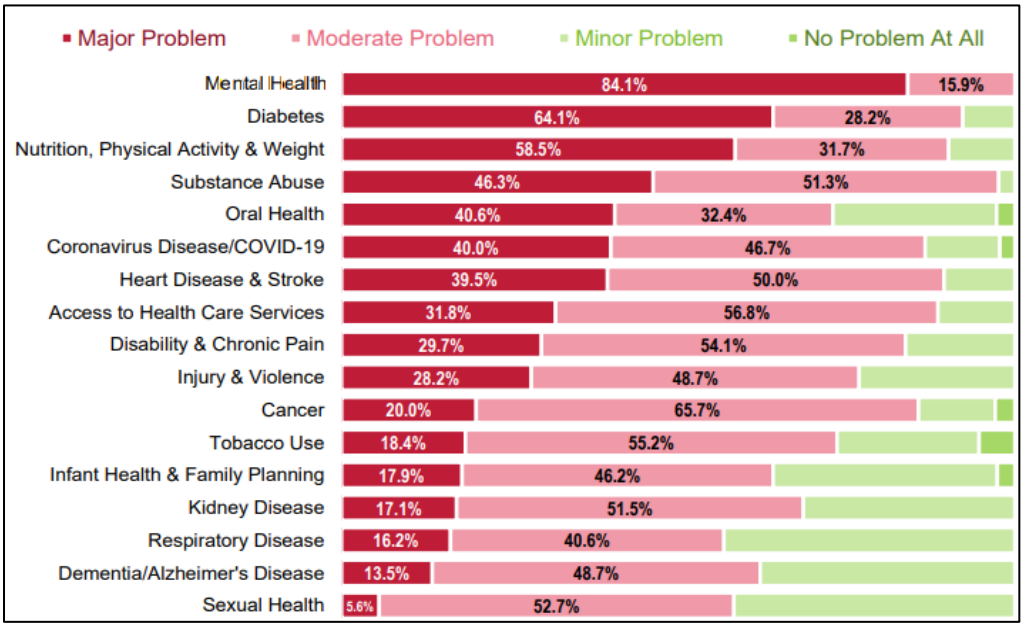
Mental health includes our emotional, psychological and social well-being. It affects how we think, feel and act and also helps to determine how we handle stress, relate to others and make choices (mentalhealth.gov). According to 2022 report, The State of Mental Health in America, nearly 50 million, or 19.9 percent of all American adults experienced a mental illness in 2019. Additionally, 4.6 percent of adults report having serious thoughts of suicide and this has increased every year since 2011-2012. More than half of adults with mental illness do not receive treatment, totaling over 27 million adults. The same report found that 15.1 percent of youth in the us experienced a major depressive episode in the past year and over 60 percent of youth with major depression do not receive any mental health treatment. Even in the states with the greatest access, nearly 1 in 3 youth are going without treatment (Mental Health America, The State of Mental Health in America, 2022).

February 2021 data from the National Alliance on Mental Illness (NAMI) Illinois shows that more than 1.75 million Illinois adults have a mental health condition. Unfortunately, COVID-19 has had a negative impact on the mental health of many. In February 2021, 38.5 percent of adults in Illinois reported symptoms of anxiety or depression and 28 percent were unable to get needed counseling or therapy. A total of 145,000 Illinois youth, ages 12-17 years have depression and 62 percent of Illinois youth ages 12-17 years who have depression did not receive any care in the last year (NAMI Illinois Mental Health in Illinois Fact Sheet, nami.org/mhpolicystats, 2021).

Poor Mental Health

In Lake County, 12 percent of resident adults, ages 18 years and older report 14 or more days during the past 30 days during which their mental health was not good (Metopio, PLACES, 2019). In the 2022 PRC, Lake County community survey, 77.6 percent of adults rate their overall mental health as "excellent," "very good" or "good." However, 22.4 percent of adults in the survey rated their overall mental health as "fair" or "poor" which is higher than the comparable 2022 national rate of 13.4 percent. Individuals in the survey who live below 200 percent of the FPL had an even higher rate (21.9 percent). In the survey, 28.8 percent of Lake County adults indicated their mental health had gotten worse since the pandemic began. Additionally, 84.1 percent of key informant survey respondents rated mental health as a major problem, with an additional 15.9 percent rating it as a moderate problem; therefore, mental health was identified as the top problem, compared to other health topics (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 35: Lake County Key Informant Survey Respondent Rating of Health Topics in PRC Community Health Needs Assessment 2022



Source: PRC Community Health Needs Assessment - Lake County, Illinois, 2022

Poor Mental Health Days
In Lake County, adults ages 18 years and older indicate that they have had 3.8 mentally unhealthy days in the past 30 days, which is slightly lower than the rate for Illinois (4.2 days) and the U.S. (4.4 days). The rate was steady in Lake County between 2009 and 2017 at 3.6 days and then ticked up slightly in 2018 to 3.8 days (Metopio, Illinois Behavioral Risk Factor Surveillance System, 2018).

Loneliness
Adults taking part in the PRC 2022 community survey answered three questions as part of the loneliness index, asking how often ("often," "some of the time," or "hardly ever") they feel:

- Left out
- Isolated from others
- That they lack companionship.

Based on their responses to the three survey questions, 28.9 percent of Lake County residents were found to be lonely, higher than the U.S. rate of 23.8 percent. Rates of residents who are lonely were much higher for those ages 18-39 years (41.8 percent), individuals in low-income households (40.4 percent) and those identified as "other race" in the survey (includes Black, Asian and American Native) (PRC Community Health Needs Assessment – Lake County, Illinois, 2022).

Emergency Department Visit Rate Due to Mental Health
Mental health includes illnesses such as depression, anxiety, schizophrenia, bipolar disorder, attention deficit, and eating disorders. However, it does not include alcohol or substance abuse disorders. In Lake County, the ED rate due to mental health is 883.9 ED visits per 100,000 residents. Prior to COVID-19, the Lake County ED visit rate due to mental health increased consistently from 2016 to 2019. The rate decreased in 2020, but increased again in 2021, although the rate in 2021 is still lower than in 2019. The following communities have the highest ED visit rates in the county due to mental health:

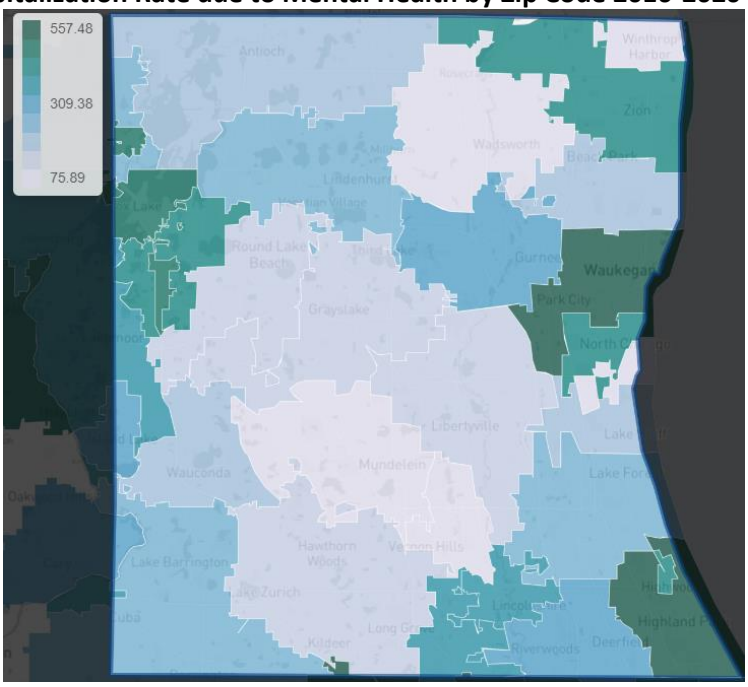
- Fox Lake (60020) 1,538.1 ED visits per 100,000 residents
- Waukegan (60085) 1,519.8 ED visits per 100,000 residents
- Zion (60099) 1,518.1 ED visits per 100,000 residents
- North Chicago (60064) 1,418.4 ED visits per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Young adults (ages 18-39 years) have the highest rate ED visit rate due to mental health by age group (1,207.5 ED visits per 100,000 residents), followed by youth ages 5-17 years (1,166.5 ED visits per 100,000 residents). Stratifying by race, the rate for non-Hispanic Black residents is significantly higher than all other race or ethnicity groups at 2,041.0 ED visits per 100,000 residents. The Lake County ED visit rate due to mental health is lower than the rate for Illinois (988.6 ED visits per 100,000 residents) (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to Mental Health
For every 100,000 individuals in the county, 308.2 residents are hospitalized annually for mental health and the rate has been decreasing gradually over time. The state hospitalization rate (514.7 hospitalizations per 100,000 residents) is higher than the Lake County rate. Those that identify as non-Hispanic Blacks (571.5 hospitalizations per 100,000 residents), young adults (424.7 hospitalizations per 100,000 residents) and youth ages 5-17 years (366.0 hospitalizations per 100,000 residents) have the highest hospitalization rates in Lake County. Females have a slightly higher rate than males - 335.0 hospitalizations per 100,000 residents and 280.5 hospitalizations per 100,000 residents, respectively. Waukegan (60085), Highland Park (60035), Fox Lake (60020) and Ingleside (60041) are the zip codes with the highest hospitalizations rates compared to other zip codes in the county (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 36: Lake County Hospitalization Rate due to Mental Health by Zip Code 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Emergency Department Visit Rate Due to Suicide and Self-Injury

In Lake County, the ED rate due to suicide and self-injury is 72.2 ED visits per 100,000 residents. It should be noted that this rate is very different from the rate presented to the Advocate Condell Community Health Council in February 2022. The definition for this indicator has been updated by Metopio to match changes made by the CDC. The definition of "suicide/self-harm" has expanded to include additional diagnosis codes for occurrences like intentional poisoning and the variations of that diagnosis. The definition better reflects self-harm as a matter of public health. Data for the most recent year has been added and historical data have been updated to conform with this new definition to provide consistency over time.

The Lake County rate is slightly lower than the Illinois rate (74.8 ED visits per 100,000 residents). The ED rate due to suicide and intentional self-inflicted injury is highest among youth ages 5-17 years (161.2 ED visits per 100,000 residents) and young adults ages 18-39 years (124.4 ED visits per 100,000 residents). In the county, females (97.7 ED visits per 100,000 residents) have more than twice the rate for males (44.2 ED visits per 100,000 residents). The following communities have the highest ED visit rates due to suicide and self-injury in the PSA:

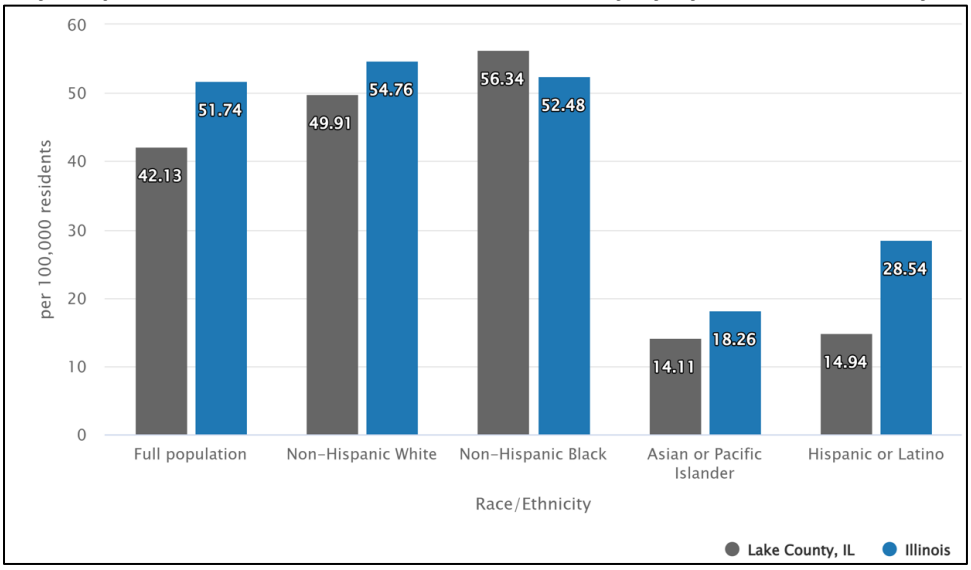
- Fox Lake (60020) 195.4 ED visits per 100,000 residents
- Ingleside (60041) 161.0 ED visits per 100,000 residents
- Lake Villa (60046) 116.9.0 ED visits per 100,000 residents
- Wauconda (60084) 105.0 ED visits per 100,000 residents

Illinois Hospital Association, COMPdata Informatics, 2016-2020.

Hospitalization Rate Due to Suicide and Self-Injury

The hospitalization rate due to suicide and self-injury is 42.1 hospitalizations per 100,000 residents in Lake County, which is lower than the Illinois rate of 51.7 hospitalizations per 100,000 residents. Note that this indicator has also been updated since February 2022 to match the new CDC definition. Females have a significantly higher rate of hospitalizations due to suicide and self-injury at 52.5 hospitalizations per 100,000 residents compared to males at 31.5 hospitalizations per 100,000 residents. Stratifying by race and ethnicity, the hospitalization rates are also highest for non-Hispanic Black residents at 56.3 hospitalizations per 100,000 residents, followed by non-Hispanic Whites (49.9 hospitalizations per 100,000 residents) (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 37: Lake County Hospitalization Rate due to Suicide and Self-Injury by Race and Ethnicity 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

For the full population, the Lake County communities with the highest hospitalization rates due to suicide and self-injury are:

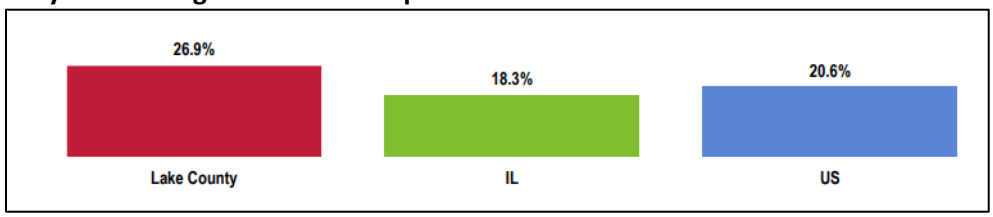
- Fox Lake (60020) 79.4 hospitalizations per 100,000 residents
- Ingleside (60041) 74.8 hospitalizations per 100,000 residents
- Highwood (60040) 60.2 hospitalizations per 100,000 residents.

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Depression Prevalence in Adults

As of 2019, 17.4 percent of adults ages 18 years and older living in Lake County have been diagnosed with depression by a physician, lower than both Illinois and us rates at 18.8 percent and 19.6 percent, respectively (Metopio, PLACES, 2019). The 2022 Lake County community survey results showed 26.9 percent of adults have been diagnosed with having a depressive disorder by a physician. The 2022 rate is much higher than the 2022 Illinois (18.3 percent) and U.S. rate (20.6 percent) (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 38: Lake County Adults Diagnosed with a Depressive Disorder 2022



Source: PRC Community Health Needs Assessment - Lake County, Illinois, 2022

Depression Prevalence in Medicare Beneficiaries

Depression is an ongoing condition that negatively affects a person's feeling, behaviors and their overall thought process. A total of 14.4 percent of Medicare beneficiaries in the state have a depression diagnosis, but in Lake County, 13.3 percent of Medicare beneficiaries have a depression diagnosis. Both rates are lower than the us rate of 16.0 percent (Metopio, CMS Chronic Conditions Data Warehouse (CCW), 2020).

Suicide Mortality

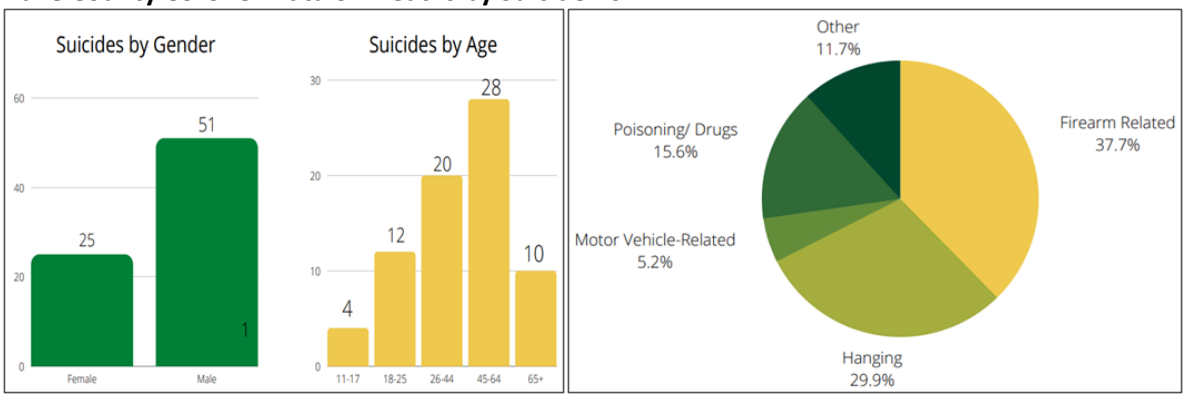
In the United States, decisions about whether deaths are listed as suicides on death certificates are usually made by a coroner or medical examiner. The definition of suicide is "death arising from an act inflicted upon oneself with the intent to kill oneself" (Metopio, 2022). In Lake County, the death rate due to suicide is 9.7 deaths per 100,000 residents. In Lake County, males (15.1 deaths per 100,000 residents) have death rates due to suicide more than three times higher than

females 4.5 deaths per 100,000 residents). Non-Hispanic White residents have higher rates of death by suicide than those of any other race or ethnicity group in the county at 12.0 deaths per 100,000 residents. The Illinois rate is 10.9 per 100,000 residents and the U.S. rate is 13.8 deaths per 100,000 residents. Adults ages 40-64 years have the highest suicide mortality rate compared to other age groups (13.3 deaths per 100,000 residents) (Metopio, National Vital Statistics System-Mortality, 2016-2020).

Suicide Deaths

In 2021, the Lake County Coroner's Office investigated 76 suicide deaths. A suicide is a death resulting from a self-inflicted injury which ends one's life. A total of 51 of the 76 deaths (67.1 percent) were males and the highest percent of Lake County suicide deaths (37.8 percent) were of individuals ages 45-64 years. Four deaths were of youth, between the ages of 11 and 17 years. When reviewing suicide deaths in Lake County from 2018 through 2021, the rate is trending up. The largest percentage of suicide deaths were firearm-related (37.7 percent) (Lake County, Illinois Coroner's Office Annual Report, 2021).

Exhibit 39: Lake County Coroner Data on Deaths by Suicide 2021



Source: Lake County, Illinois Coroner's Office 2021 Annual Report, 2022

Illinois Youth Survey Results

According to the 2022 Illinois Youth Survey, 14 percent of 10th graders and 12 percent of 12th graders answered yes to "seriously considered attempting suicide" in the past 12 months. When asked "In the past 12 months have you felt so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?" a total of 31 percent of 8th graders, 37 percent of 10th graders and 36 percent of 12th graders answered yes, as shown in Exhibit 40. In 2022, the rate of who indicated they "feel so sad or hopeless daily for two weeks or more" increased for both 10th and 12th grade students from 2020. For 10th graders, the rate grew from 30 percent to 37 percent and for 12th grade students, the rate increased from 30 percent to 36 percent (Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2022).

Exhibit 40: Illinois Youth Survey Mental Health-Related Questions 2022

During the past 12 months did you ever:

	8th		10th		12th	
	%	N	%	N	%	N
Seriously consider attempting suicide	N/A	N/A	14%	639	12%	429
Feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities	31%	1824	37%	1799	36%	1342

Source: Center for Prevention Research and Development, Illinois Youth Survey, Lake County, 2022

Respiratory Disease

Residents with Asthma

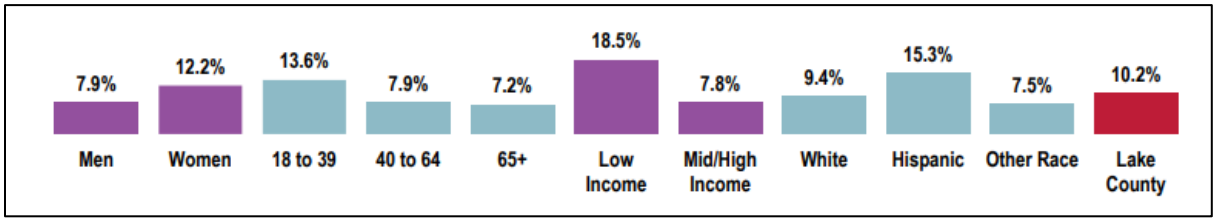
In Lake County, 8.1 percent of residents answered "yes" to both of the following questions: "Have you ever been told by a doctor, nurse, or other health professional that you have asthma?" and the question "Do you still have asthma?" Both

Illinois (8.7 percent of residents) and the U.S. (9.2 percent of residents) have higher rates of residents with asthma when compared to Lake County (Metopio, Illinois Behavioral Risk Factor Surveillance System, 2019).

Adults with Asthma

In the 2022 PRC, community survey, adults were asked to indicate whether they suffer from or have been diagnosed with various respiratory conditions, including asthma and Chronic Obstructive Pulmonary Disease (COPD). In the survey, 7.9 percent of Lake County adults stated they suffer from COPD, including emphysema and bronchitis – higher than both Illinois (5.8 percent) and U.S. (6.4 percent) rates. The survey also showed that 10.2 percent of Lake County adults currently suffer from asthma - higher than the Illinois rate of 8.2 percent, but lower than the U.S. rate of 12.9 percent. The rate is even higher for Lake County adults whose income is less than 200 percent of the FPL (18.5 percent) and those of Hispanic heritage (15.3 percent) as shown in Exhibit 41 (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 41: Lake County Adults with Asthma 2022



Source: PRC Community Health Needs Assessment - Lake County, Illinois, 2022

Children with Asthma

The 2022 PRC, community survey also found that among children under age 18, 4.8 percent currently have asthma, which is lower than the U.S. rate of 7.8 percent of children with asthma. In Lake County, PRC survey results indicate that 6.1 percent of boys and 3.7 percent of girls currently have asthma (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

The greatest share (43.2 percent) of key informants taking part in an online survey characterized respiratory disease as a “minor problem” in Lake County. Only 16.2 percent of key informants rated respiratory disease as a “major problem” in the county (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Emergency Department Visit Rate Due to Asthma

The CDC defines asthma as a disease that affects your lungs. It causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing. Asthma can be controlled by taking medicine and avoiding the triggers that can cause an attack (Centers for Disease Control and Prevention, 2022).

The ED rate due to asthma is 196.9 ED visits per 100,000 residents for Lake County, which is lower than the Illinois rate of 292.7 ED visits per 100,000 residents. The ED rate due to asthma is significantly higher for non-Hispanic Black residents (1,042.4 ED visits per 100,000 residents. Infants ages 0-4 years (335.2 ED visits per 100,000 residents) and youth ages 5-17 years (295.6 ED visits per 100,000 residents) have the highest rates compared to other age groups and females do have a higher rate than males.

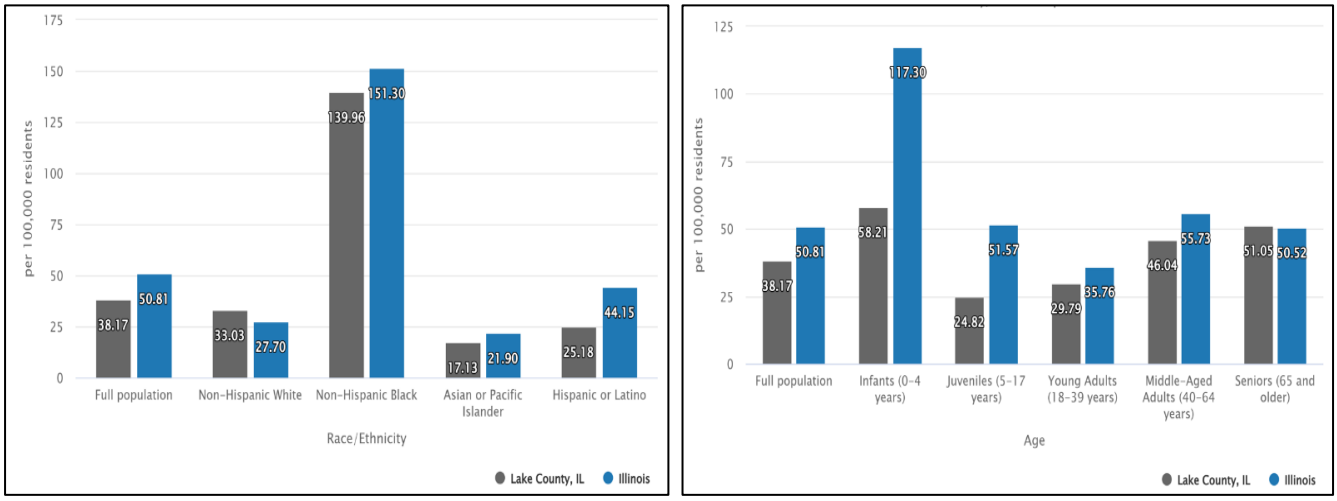
The communities with the highest ED visit rates due to asthma are all in the northeastern part of the county - North Chicago (60064) (595.1 ED visits per 100,000 residents); Zion (60099) (477.3 ED visits per 100,000 residents); Waukegan (60085) (436.6 ED visits per 100,000 residents) and Waukegan (60087) (337.0 ED visits per 100,000 residents) (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to Asthma

The Illinois rate of hospitalization due to asthma (50.9 hospitalizations per 100,000 residents) is higher than the Lake County rate of 38.2 hospitalizations per 100,000 residents. As is the case with the ED visit rates, Lake County

hospitalization rates are highest in the northeastern part of the county. The highest rate is in Zion (60099) at 133.4 hospitalizations per 100,000 residents, followed by North Chicago (60064) (93.6 hospitalizations per 100,000 residents) and both Waukegan zip codes - 60085 (80.8 hospitalizations per 100,000 residents) and 60087 (53.2 hospitalizations per 100,000 residents). As shown in Exhibit 42, hospitalization rates due to asthma are highest for non-Hispanic Blacks and infants ages 0-4 years (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 42: Lake County Asthma Hospitalization Rate by Race/Ethnicity and Age 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Emergency Department Visit Rate Due to Community-Acquired Pneumonia

Bacterial pneumonia is a relatively common acute condition, treatable for the most part with antibiotics. If left untreated in susceptible individuals, such as the elderly, pneumonia can lead to death. In Lake County, the community-acquired pneumonia ED rate is 203.1 ED visits per 100,000 residents, which is less than the Illinois rate (227.3 per 100,000 residents). However, the rate for the full population does not tell the full story. Emergency department visit rates due to community-acquired pneumonia are highest for non-Hispanic Black residents (468.4 ED visits per 100,000 residents) and infants ages 0-4 years (879.2 ED visits per 100,000 residents); these rates are more than double and four-times the ED rate of the full county population, respectively (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

The following communities have the highest ED visit rates due to community-acquired pneumonia in the county, once again, all in the northeastern part of the county along the lakeshore:

- North Chicago (60064) 464.7 ED visits per 100,000 residents
- Waukegan (60085) 375.0 ED visits per 100,000 residents
- Waukegan (60087) 348.7 ED visits per 100,000 residents
- Zion (60099) 318.1 ED visits per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to Community-Acquired Pneumonia

The Lake County hospitalization rate for community-acquired pneumonia is 131.1 hospitalizations per 100,000 residents, which is trending down since 2016. The county rate is slightly lower than the Illinois rate (149.7 hospitalizations per 100,000 residents). Examining the rates by race and ethnicity, non-Hispanic Black residents have the highest rates compared to other groups, at 173.7 hospitalizations per 100,000 residents, followed closely by non-Hispanic White residents at 152.7 hospitalizations per 100,000 residents. Stratifying by age, rate is highest for seniors ages 65 years and older at 540.2 hospitalizations per 100,000 residents. (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Some of the same northeastern Lake County communities with the highest ED visit and hospitalization rates due to asthma also have the highest ED and hospitalization rates for community-acquired pneumonia:

- Waukegan (60085) 207.32 hospitalizations per 100,000 residents
- Zion (60099) 202.5 hospitalizations per 100,000 residents
- Waukegan (60087) 181.7 hospitalizations per 100,000 residents
- Wauconda (60084) 173.0 hospitalizations per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Emergency Department Visit Rate Due to COPD

Chronic obstructive pulmonary disease, or COPD, refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema and chronic bronchitis. COPD makes breathing difficult for the 16 million Americans who have this disease. Millions more people suffer from COPD but have not been diagnosed and are not being treated. Although there is no cure for COPD, it can be treated (Centers for Disease Control and Prevention, 2022).

The ED rate due to COPD is 285.1 ED visits per 100,000 residents ages 40 years and older for Lake County, which is significantly lower than the Illinois rate (611.8 ED visits per 100,000 residents). Chronic obstructive pulmonary disease (COPD) comprises three primary diseases that cause respiratory dysfunction—asthma, emphysema, and chronic bronchitis (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020). The Lake County ED visit rate due to COPD for females (343.7 ED visits per 100,000 residents) is higher than males (219.2 ED visits per 100,000 residents). Asian or Pacific Islander and Hispanic residents have the two lowest ED rates compared to other groups, and non-Hispanic Black residents have the highest ED rate due to COPD at 1,254.6 ED visits per 100,000 residents – more than four times higher than the rate for the full Lake County population (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

The following communities have the highest ED visit rates due to COPD in the county:

- North Chicago (60064) 885.7 ED visits per 100,000 residents
- Waukegan (60085) 784.6 ED visits per 100,000 residents
- Zion (60099) 741.7 ED visits per 100,000 residents
- Waukegan (60087) 544.1 ED visits per 100,000 residents
- Fox Lake (60020) 451.5 ED visits per 100,000 residents

Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to COPD

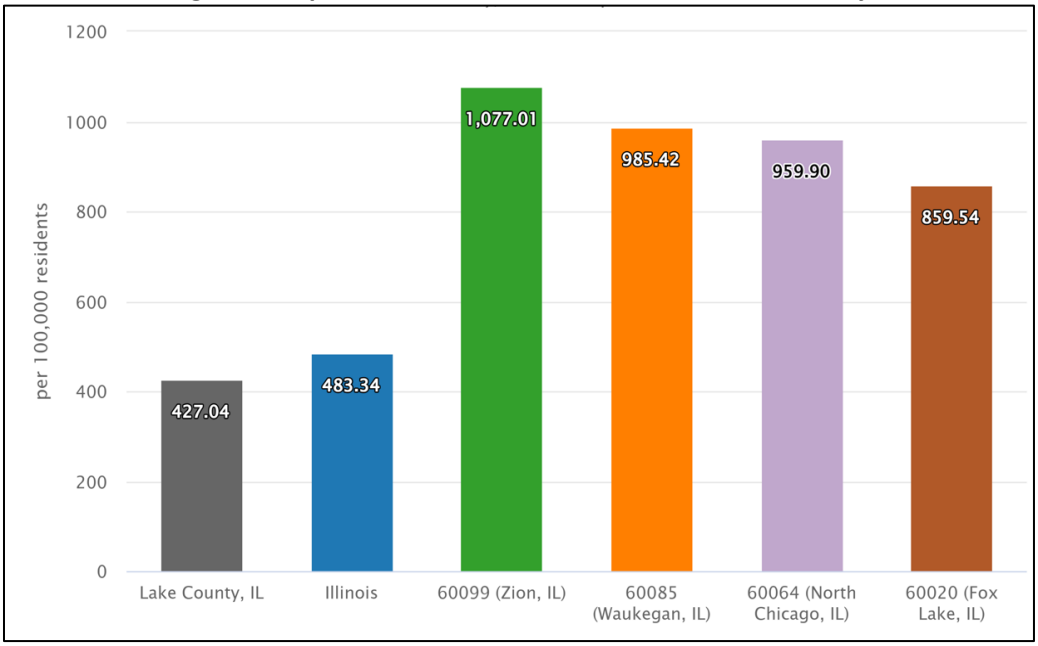
The hospitalization rate due to COPD in Illinois is 483.3 hospitalizations per 100,000 residents, ages 40 years and older; the state rate is slightly higher than the rate for the full population of Lake County of 427.0 hospitalizations per 100,000 residents Those with disproportionately higher hospitalizations rates are who identify as non-Hispanic Blacks (1,238.3 hospitalizations per 100,000 residents) and seniors ages 65 years and older (784.9 hospitalizations per 100,000 residents).

The following communities have the highest hospitalization rates due to asthma within the PSA:

- Zion (60099) 1,077.0 hospitalizations per 100,000 residents
- Waukegan (60085) 985.4 hospitalizations per 100,000 residents
- North Chicago (60064) 959.9 hospitalizations per 100,000 residents
- Fox Lake (60020) 859.5 hospitalizations per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 43: Communities with Highest Hospitalization Rates Due to COPD in Lake County 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

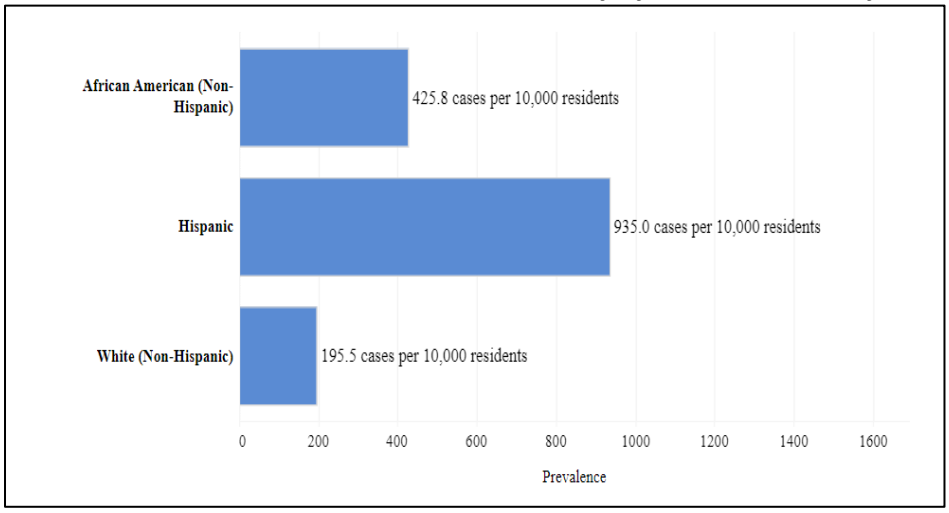
Impact of COVID-19

The COVID-19 pandemic has had direct and indirect effects on people with chronic disease. In addition to morbidity and mortality, high rates of community spread and various mitigation efforts, including stay-at-home recommendations, have disrupted lives and created social and economic hardships. This pandemic has also raised concerns about safely accessing health care and has reduced the ability to prevent or control chronic disease. The COVID-19 pandemic has resulted in enormous personal and societal losses, with more than half a million lives lost. In addition to the physical toll, the emotional impact has yet to be fully understood. For those with chronic disease, the impact has been particularly profound. In addition to COVID-19-related deaths since February 1, 2020, an increase in deaths has been observed among people with dementia, circulatory diseases and diabetes among other causes (Hacker KA, Briss PA, Richardson L, Wright J, Petersen R. COVID-19 and Chronic Disease: The Impact Now and in the Future. Preventing Chronic Disease 2021;18:210086. DOI: http://dx.doi.org/10.5888/pcd18.210086)

COVID-19 Prevalence

The COVID-19 pandemic disproportionately affected racial and ethnic minority groups, with high rates of death in African American, Native American, and LatinX communities. Although the mechanisms of these disparities are being investigated, they can be conceived as arising from biomedical factors as well as social drivers of health. Minority groups are disproportionately affected by chronic medical conditions and lower access to healthcare that may portend worse COVID-19 outcomes. Furthermore, minority communities are more likely to experience living and working conditions that predispose them to worse outcomes. Underpinning these disparities are long-standing structural and societal factors that the COVID-19 pandemic has exposed (Tai DBG, Shah A, Doubeni CA, Sia IG, Wieland ML. The Disproportionate Impact of COVID-19 on Racial and Ethnic Minorities in the United States. Clin Infect Dis. 2021 Feb 16;72(4):703-706. doi: 10.1093/cid/ciaa815. PMID: 32562416; PMCID: PMC7337626). Exhibit 44 shows the age-adjusted prevalence of COVID-19 cases as of November 14, 2020 from the Lake County Health Department. The graph shows the disproportionate number of COVID-19 cases that occurred in Lake County among individuals who are non-Hispanic Black and Hispanic, as compared to the rate of cases for individuals who are non-Hispanic White (Lake County COVID-19 Details, Lake County Health Department, 2020 Lake County COVID-19 Details | Tableau Public).

Exhibit 44: Age-Adjusted Prevalence of COVID-19 Cases in Lake County by Race and Ethnicity 2020



Source: Lake County COVID-19 Details, Lake County Health Department, 2022

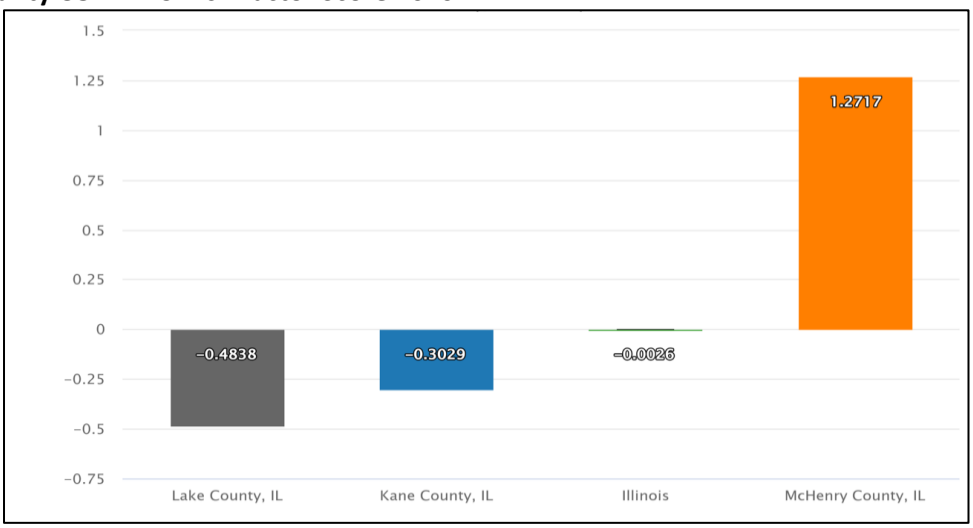
A total of 46.7 percent of key informants in the PRC, Lake County online survey characterized Coronavirus Disease/COVID-19 as a "moderate problem" in Lake County; an additional 40.0 percent perceived COVID-19 as a "major problem" (PRC Community Health Needs Assessment - Lake County, Illinois, 2022). One public health expert shared,

> "In addition to directly affecting the individuals who become ill or die from COVID, COVID continues to impact many elements of daily life for Lake County community members. Many families continue to struggle with the socioeconomic consequences of the pandemic, including reduced hours/lost income, challenges with remote learning, and mental health issues. While vaccination rates for the county overall are trending towards herd immunity, significant disparities continue to exist for marginalized populations and children" (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

COVID-19 Risk Factor Score

The COVID-19 risk factor score is a score representing predicted risk of fatalities from COVID-19, built using data on chronic disease prevalence, hospitalization, and mortality as well as demographic characteristics. Higher scores indicate a greater predicted risk. The score for Lake County was -0.4838 in 2020, lower than the score for Illinois (-0.0026) and the other northern collar counties (Metopio, UIC School of Public Health, 2020).

Exhibit 45: Lake County COVID-19 Risk Factor Score 2020



Source: Metopio, UIC School of Public Health, 2022

COVID-19 Death Rate

In Illinois, confirmed deaths from the SARS-CoV-2 virus that causes COVID-19 is 295.5 deaths per 100,000 residents. The state death rate was notably higher than the death rate in Lake County (208.5 per 100,000 residents). Note that these rates only include cases where the underlying or contributing cause of death was the virus, meaning that the patient had to have a confirmed test result for the virus. The true number of deaths from the virus is higher by an unknown amount. These case counts are extremely biased by where testing and resources are available. Some patients expire at home and are never tested for SARS-CoV-2 (Metopio, Various state health departments, The New York Times, 2020-2021). Lake County Health Department data indicates a total of 551 confirmed deaths in Lake County due to COVID-19, as of November 12, 2020 (Lake County COVID-19 Details, Lake County Health Department, 2020 Lake County COVID-19 Details | Tableau Public).

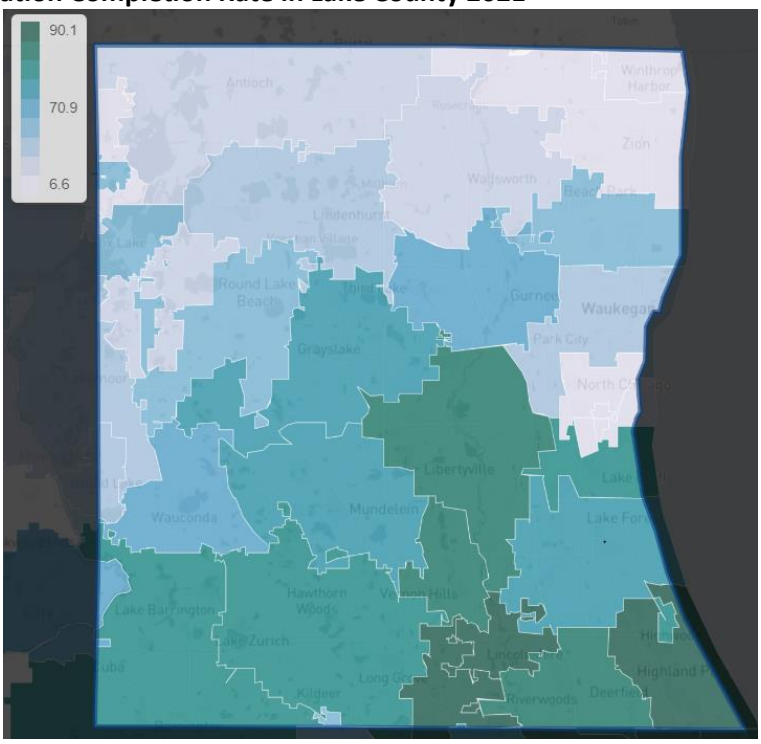
Low-Income Jobs Lost to COVID-19

In Lake County, 13.7 percent of low-income jobs (<$40,000 salary) were lost because of COVID-19, as of May 8, 2020. The percentage does not include independent contractors, those working in the gig economy or jobs with pay cuts. The rate of low-income jobs lost for Illinois (13.2 percent) was very similar, but the rate for the U.S. (18.3 percent) was higher (Metopio, Urban Institute, 2020).

Vaccination Completion Rate

As of 2021, a total of 70.8 percent of the Lake County population completed the COVID-19 vaccine series (the first dose of a one-dose series, the second dose of a two-dose series), nearly the same as the Illinois rate of 69.5 percent. The U.S. COVID-19 vaccination completion rate is 67.7. As shown in Exhibit 46, higher COVID-19 vaccination rates occurred in the southern half of the county (Metopio, Illinois Department of Public Health (IDPH), 2021).

Exhibit 46: COVID-19 Vaccination Completion Rate in Lake County 2021



Source: Metopio, Illinois Department of Public Health (IDPH), 2021

<u>Other Chronic Diseases or Conditions</u>

Emergency Department Visit Rate Due to Dehydration

Dehydration is caused by a lack of water intake and can be fatal for vulnerable patients. In Lake County, the ED visit rate due to dehydration (176.9 ED visits per 100,000 residents) is slightly higher than the state rate (170.9 ED visits per

100,000 residents). Non-Hispanic Black residents (305.4 ED visits per 100,000 residents), seniors ages 65 years and older (344.9 ED visits) and females (211.3 ED visits per 100,000 residents) all have the highest rates in the county (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to Dehydration

In Lake County, 178.4 out of every 100,000 residents are hospitalized due to dehydration annually, which is higher than the Illinois rate of 154.6 hospitalizations per 100,000 residents. As is the case with the ED visit rate, women, seniors ages 65 years and older and non-Hispanic Blacks have the highest rates in the county. The communities with the highest rates of hospitalization due to dehydration are:

- Waukegan (60085) 278.3 hospitalizations per 100,000 residents
- Zion (60099) 271.3 hospitalizations per 100,000 residents
- North Chicago (60064) 264.3 hospitalizations per 100,000 residents
- Waukegan (60087) 263.0 hospitalizations per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Emergency Department Visit Rate Due to Urinary Tract Infection

Urinary tract infections can commonly be treated with antibiotics in an outpatient setting. However, this condition can progress to more clinically significant infections in vulnerable individuals with inadequate treatment. In Illinois, the ED visit rate due to Urinary Tract Infection (UTI) is 781.5 ED visits per 100,000 residents, higher than the Lake County rate of 658.6 ED visits per 100,000 residents. Non-Hispanic Black residents have the highest rate compared to other race and ethnicity groups, at 1,609.0 ED visits per 100,000 residents. Women have a much higher rate (1,096.3 ED visits per 100,000 residents) than men (197.2 ED visits per 100,000 residents) in Lake County, and seniors ages 65 years and older (912.1 ED visits per 100,000 residents) along with young adults ages 18-39 years (746.6 ED visits per 100,000 residents) have the highest ED visit rates by age (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to Urinary Tract Infection

The Lake County hospitalization rate due to UTI (142.7 hospitalizations per 100,000 residents) is nearly the same as the Illinois rate (143.6 hospitalizations per 100,000 residents). Non-Hispanic Black residents (178.0 hospitalizations per 100,000 residents) and non-Hispanic White residents (165.5 hospitalizations per 100,000 residents) have the two highest rates amongst all race and ethnicity groups. Seniors ages 65 years and older (547.5 hospitalizations per 100,000 residents) have a disproportionately high rate as compared to other age groups. Females (207.1 hospitalizations per 100,000 residents) have a hospitalization rate more than 2.5 times higher than males (74.9 hospitalizations per 100,000 residents) (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Alzheimer's Disease Mortality

Alzheimer's disease is a degenerative brain disease and the most common form of dementia. Dementia is not a specific disease, but an overall term that describes a group of symptoms. Researchers believe there is not a single cause of Alzheimer's disease. It likely develops from multiple factors, such as genetics, lifestyle and environment (Alzheimer's Association, Alzheimer's and Dementia, 2022 Alzheimer's & Dementia | Alzheimer's Association).

In Illinois, the age-adjusted death rate due to Alzheimer's disease is 25.9 deaths per 100,000 residents, lower than the U.S. rate of 30.8 deaths per 100,000 residents. In Lake County, the death rate due to Alzheimer's disease is 26.2 deaths per 100,000 residents and the rate has steadily increased over time since 2010-2014. By gender, females in Lake County (29.7 deaths per 100,000 residents) have higher death rates due to Alzheimer's than males (20.5 deaths per 100,000 residents) due to Alzheimer's disease. Stratifying by race and ethnicity, non-Hispanic White residents have the highest mortality rate due to Alzheimer's disease at 27.9 deaths per 100,000 residents, compared to other groups (Metopio, National Vital Statistics System Mortality, 2016-2020). In the PRC key informant survey, 48.7 percent of community stakeholders perceived Dementia/Alzheimer's Disease as a "moderate problem" in the county and an additional 13.5 percent rated it as a "major problem" (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Dental Health (Oral Health)

Oral health refers to the health of the teeth, gums, and the entire oral-facial system that allows us to smile, speak, and chew. Some of the most common diseases that impact our oral health include cavities (tooth decay), gum (periodontal) disease, and oral cancer. Poor oral health is associated with other chronic diseases such as diabetes and heart disease. Oral disease also is associated with risk behaviors such as using tobacco and consuming sugary foods and beverages. The nation spends more than $124 billion on costs related to dental care each year. On average, over 34 million school hours and more than $45 billion in productivity are lost each year as a result of dental emergencies requiring unplanned care (CDC, Oral Health Conditions, 2022 Oral Health Conditions (cdc.gov)).

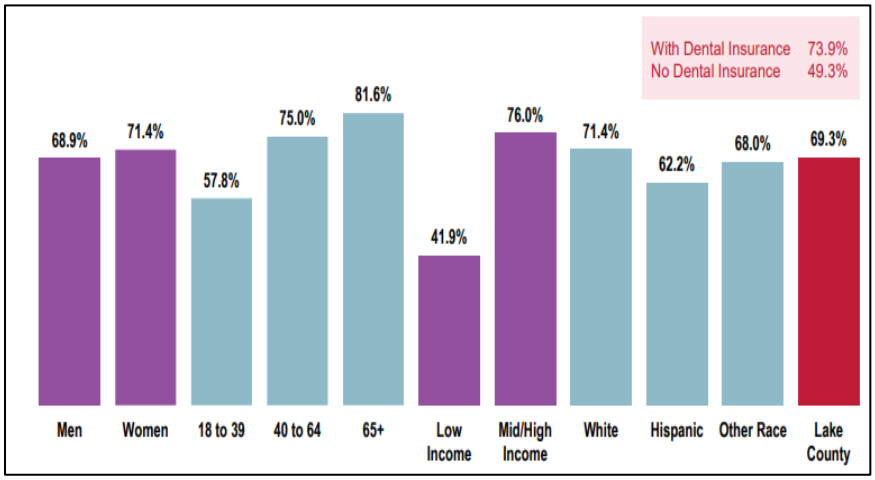
Emergency Department Visit Rate Due to Dental Problems

The ED visit rate due to dental problems for Lake County is 260.2 ED visits per 100,000 residents, which has been trending downward. The rate is significantly higher for young adults ages 18-39 years (480.1 ED visits per 100,000 residents) and non-Hispanic Black residents (1,261.5 ED visits per 100,000 residents). The Lake County rate is much lower than the Illinois rate of 458.9 ED visits per 100,000 residents. The communities with the highest ED rates due to dental problems are North Chicago (60064) (866.1 ED visits per 100,000 residents); Zion (60099) (668.6 ED visits per 100,000 residents); Waukegan (60085) (554.1 ED visits per 100,000 residents); Ingleside (60041) (470.4 ED visits per 100,000 residents) and Fox Lake (60020) (413.7 ED visits per 100,000 residents) (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Adults Who Have Visited a Dentist or Dental Clinic

A total of 60.3 percent of Lake County adults have visited a dentist or dental clinic (for any reason) within the past year, according to the PRC 2022 community survey. This rate is higher than both the Illinois rate (68.1 percent) and U.S. rate (62 percent). However, the rate is particularly low among younger adults ages 18-39 years (57.8 percent) and those living in households below 200 percent of the FPL (41.9 percent) (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 47 Lake County Adults Who Have Visited a Dentist or Dental Clinic Within the Past Year 2022



Source: PRC Community Health Needs Assessment - Lake County, Illinois, 2022

Children Who Have Visited a Dentist or Dental Clinic

A total of 86.3 percent of Lake County parents in the 2022 PRC community survey reported that their child (ages 2 to 17 years) had been to a dentist or dental clinic within the past year. This rate is higher than the national rate of 72.1 percent (PRC, Community Health Needs Assessment – Lake County, Illinois, 2022).

In the key informant survey, 40.6 percent of respondents characterized oral health as a "major problem" in Lake County and an additional 32.4 percent rated it as a "moderate problem" (PRC, Community Health Needs Assessment – Lake County, Illinois, 2022).

5. Maternal, Child and Reproductive Health

Maternal and child health is an important public health issue because:

- We can end preventable deaths among all women, children and adolescents and to greatly improve their health and well-being.
- Far too many women, infants and children worldwide still have little or no access to essential, quality health services and education, clean air and water, and adequate sanitation and nutrition.
- Investments in prevention, health care and education last a lifetime

(American Public Health Association, Maternal and Child Health, Maternal and Child Health (apha.org), 2022).

Key findings: Maternal, Child and Reproductive Health

- In Lake County, 27.6 percent of births are to mothers who are obese.
- The Lake County rate of pre-term births for non-Hispanic Blacks is disproportionately higher than the total population rate and the highest infant mortality rate in Lake County is for non-Hispanic Black residents, at more than four times higher than the rate for non-Hispanic White residents.
- The rate of new cases of sexually transmitted infections are trending upward in Lake County and the U.S. More than half of these cases are from chlamydia alone.

Prenatal Care

Prenatal Care in First Trimester

Seventy-nine percent of live births in Lake County were to mothers who began prenatal care during the first trimester, only slightly higher than the percent for Illinois (78.2 percent) (Metopio, Illinois Department of Public Health (IDPH), 2016-2018).

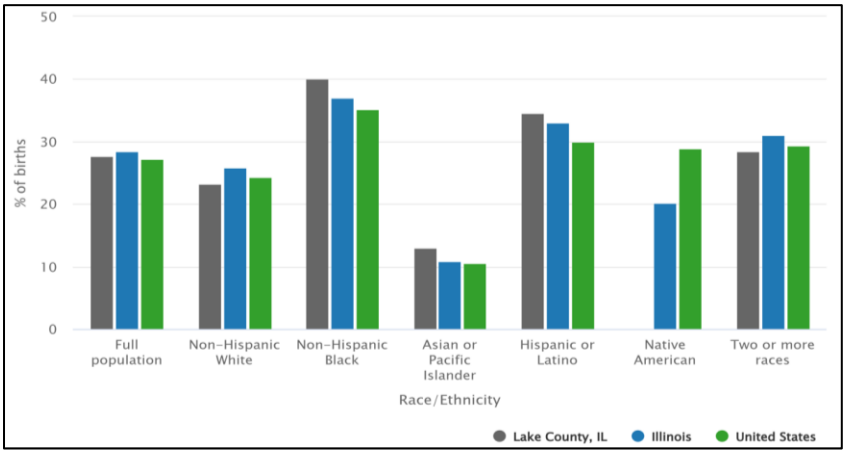
Births with at Least One Maternal Risk Factor

In Lake County, 17.7 percent of births were to mothers who had at least one of the following conditions: chronic hypertension, eclampsia, diabetes, tobacco use, or pregnancy-associated hypertension, which is below the Illinois (22.4 percent) and U.S. (21.0 percent) rates. The rate of births with at least one maternal risk factor is highest for women who are Native American (23.5 percent), followed by non-Hispanic Black women (21.7 percent) and Asian or Pacific Islander women at 21.4 percent (Metopio, National Vital Statistics System-Natality (NVSS-N), 2016-2020).

Births to Mothers with Obesity

Obesity increases the risk of a range of diseases for adults, including pregnancy complications (Trust for America's Health, The State of Obesity: Better Policies for A Healthier America, 2021). In Lake County, 27.6 percent of births are to mothers who are obese, that is whose Body Mass Index (BMI) is 30 or above. The U.S. rate is slightly lower at 27.3 percent but the Illinois rate is higher than Lake County at 28.4 percent. When stratified by race and ethnicity, the rate of births to mothers with obesity is highest in Lake County for non-Hispanic Black residents at 40.1 percent and Hispanic residents at 34.6 percent (Metopio, National Vital Statistics System-Natality (NVSS-N), CDC Wonder, 2016-2020).

Exhibit 48: Lake County Births to Mothers with Obesity 2016-2020



Source: Metopio, National Vital Statistics System-Natality (NVSS-N), CDC Wonder, 2022

Birth Outcomes

Infant Mortality

The infant mortality rate is 4.4 deaths per 1,000 live births in Lake County, which is decreasing over time. The Illinois rate of 6.1 deaths per 1,000 live births and U.S. rate of 5.8 deaths per 1,000 live births are both higher than the Lake County rate. The highest infant mortality rate in Lake County is for non-Hispanic Black residents at 12.4 deaths per 1,000 live births, which is more than four times higher than the rate for non-Hispanic White residents. The infant mortality rate for Hispanic residents is 4.1 deaths per 1,000 live births and for non-Hispanic White residents the rate is 3.0 deaths per 1,000 live births (Metopio, National Vital Statistics System-Natality, CDC Wonder, 2015-2019).

Pre-term Births (Less than 37 Weeks Gestation)

In Lake County, 11.2 percent of births occur pre-term (with less than 37 weeks of completed gestation), below the Illinois rate of 12.1 percent and U.S. rate of 11.7 percent. The rate for non-Hispanic Black residents (17.8 percent) is disproportionately higher than the total population rate (Metopio, National Vital Statistics System-Natality, CDC Wonder, 2016-2020).

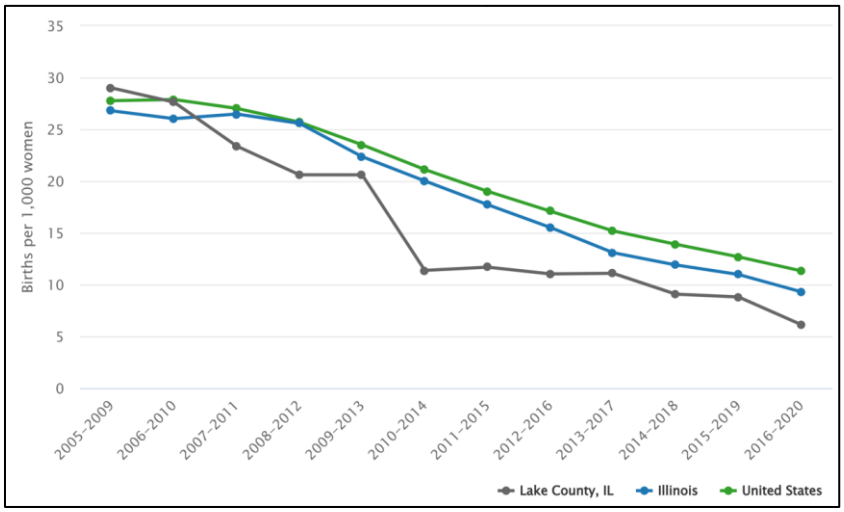
Babies with Very Low Birth Weight

Babies born with very low birth weight (weighing less than 1,500 grams (3 lbs., 4 oz) are more likely to have health problems as compared to babies born of normal weight. The percent of live births of babies with very low birth weight in Lake County is 1.3 percent, slightly lower than the Illinois and U.S. rates, both at 1.4 percent. The rate of very low birth weight for non-Hispanic Black residents (3.4 percent) is disproportionately higher than the rate for the full population (Metopio, National Vital Statistics System-Natality, CDC Wonder, 2016-2020).

Teen Births

Teen birth rate is defined as births to women ages 15-19 years in the past year, per 1,000 women ages 15-19 years. with a birth in the past year, per 1,000 women age 15-19). Note that this indicator does not include births to women below age 15 years. Teen birth rates have shown a consistent decrease over the past decade nationally, in Illinois and in Lake County. The Lake County teen birth rate is 6.1 births per 1,000 women (Metopio, National Vital Statistics System-Natality, CDC Wonder, 2016-2020).

Exhibit 49: Lake County Teen Birth Rate 2016-2020



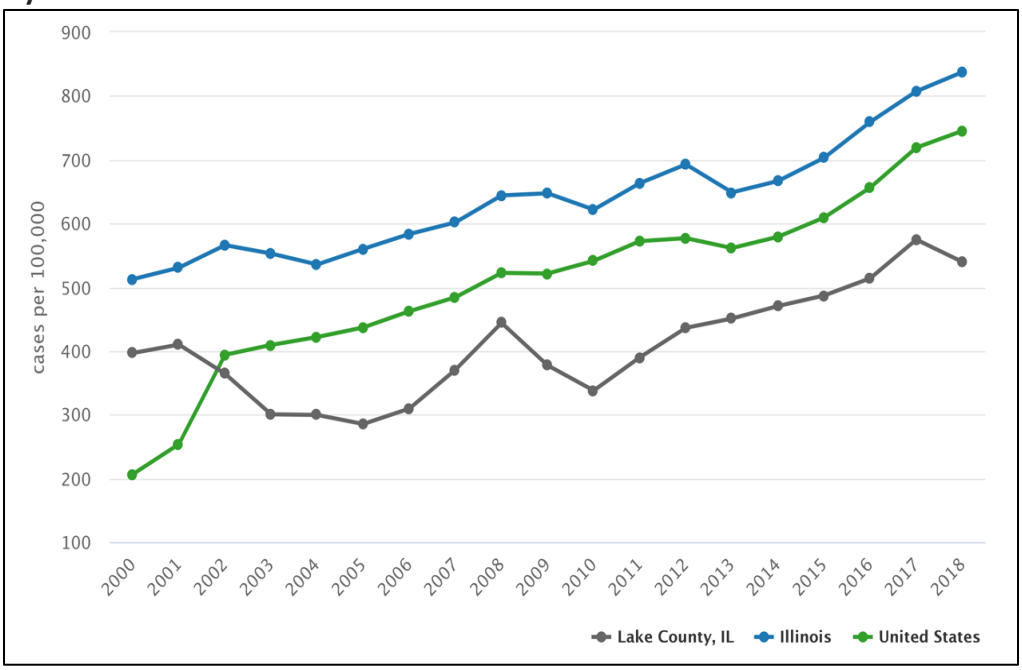
Source: Metopio, National Vital Statistics System-Natality, CDC Wonder, 2022

Sexually Transmitted Infections

As shown in Exhibit 50, the rate of new cases of sexually transmitted infections (STIs), including chlamydia, gonorrhea, syphilis and HIV/AIDS, are trending upward in Lake County and the U.S. The STI infection rate for Lake

County is 539.6 cases per 100,000 residents. Both the national (745.3 cases per 100,000 residents) and Illinois (837.5 cases per 100,000 residents) rates are higher than the county rate. More than half of these cases are from chlamydia alone (Metopio, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2018).

Exhibit 50: Sexually Transmitted Infection Rate 2018



Source: National Center for HIV/Aids, Viral Hepatitis, STD and TB Prevention, 2022.

Chlamydia

Chlamydia is the most frequently reported bacterial STI in the U.S. Chlamydia is most common among young people. Two-thirds of new chlamydial infections occur among youth ages 15-24 years (Centers for Disease Control and Prevention, 2022). The incidence rate for chlamydia (new cases per 100,000 residents) is 459.7 cases per 100,000 residents in Lake County which has been increasing since 2010. Lake County chlamydia incidence rates are lower than Illinois (604.0 cases per 100,000 residents) and the U.S. (540.0 cases per 100,000 residents) rates (Metopio, National Center for HIV/Aids, Viral Hepatitis, STD, and TB Prevention, 2018).

Gonorrhea

Gonorrhea is a very common infectious disease. CDC estimates that approximately 1.6 million new gonococcal infections occurred in the U.S. in 2018, and more than half occur among young people ages 15-24 years. Gonorrhea is the second most commonly reported bacterial sexually transmitted infection in the U.S. (Centers for Disease Control and Prevention, 2022). The gonorrhea prevalence rate in Lake County is 63.8 cases per 100,000 residents), which is significantly lower than the Illinois rate (198.6 cases per 100,000 residents) and U.S. rate (179.1 cases per 100,000 residents) (Metopio, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2018).

Syphilis

Syphilis is a STI disease that progresses through a series of clinical stages and can cause long-term complications if not treated correctly. In Lake County, there are 9.1 reported syphilis cases for every 100,000 residents and the rate is increasing over time, as are the Illinois and U.S. rates. The Lake County rate is much lower than the rate for Illinois (22.4 cases per 100,000 residents) and the U.S. (22.6 cases per 100,000 residents) (Metopio, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2018).

6. Environment

Social drivers of health (SDOH) are the conditions in the environments where people are born, live, learn, work, play worship and age that affect a wide range of health, functioning and quality of life outcomes and risks. Social drivers of health (SDOH) have a major impact on people's health, well-being, and quality of life. Examples of SDOH include:

- Safe housing, transportation, and neighborhoods
- Racism, discrimination, and violence
- Education, job opportunities, and income
- Access to nutritious foods and physical activity opportunities
- Polluted air and water
- Language and literacy skills.

SDOH also contribute to wide health disparities and inequities. For example, people who don't have access to grocery stores with healthy foods are less likely to have good nutrition. That raises their risk of health conditions like heart disease, diabetes, and obesity — and even lowers life expectancy relative to people who do have access to healthy foods. Just promoting healthy choices won't eliminate these and other health disparities. Instead, public health organizations and their partners in sectors like education, transportation, and housing need to take action to improve the conditions in people's environments (Healthy People 2030, Healthy People 2030 | health.gov. 2022).

Key findings: Environment

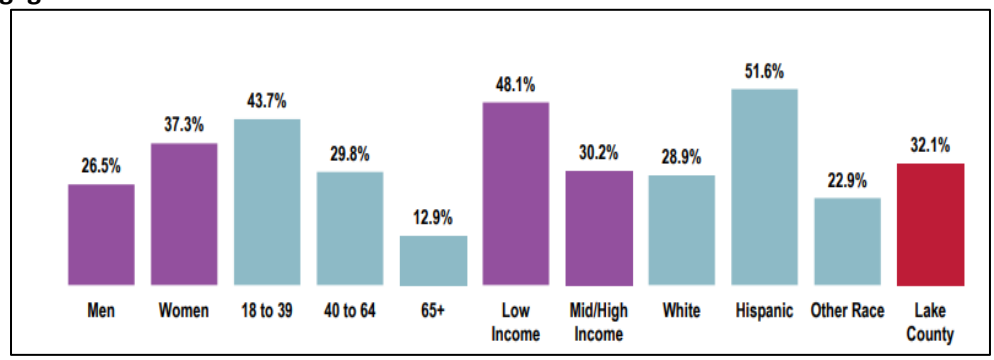
- The communities in Lake County with the highest rate of severe housing-burden occupied units are North Chicago (60088 and 60064) at Highwood (60040) and Zion (60099); these households are spending at least 50 percent of their salary on housing.
- North Chicago (60064), Waukegan (60085) and Lincolnshire (60069) are the communities with the highest rates of occupied households with no vehicle available.
- Zip codes in the southwestern and southcentral part of Lake County have the highest concentration levels of particulate matter smaller than 2.5 microns (PM2.5).
- Communities with the highest rates of food insecurity in Lake County are North Chicago (60064), Waukegan (60085), Highwood (60040), Zion (60099), Fox Lake (60020) and Lincolnshire (60069).

Housing

Housing Insecurity

Results of the PRC 2022 community survey found that most adults in the county rarely, if ever, worry about the cost of housing. However, 7.8 percent responded that they were "always" worried or stressed about paying rent or mortgage in the past year; 5.5 percent responded they were "usually" worried or stressed and another 18.8 percent indicated they were "sometimes" worried or stressed about paying rent or mortgage in the last year, totaling 32.1 percent. The percent of "always, usually or sometimes" worried about paying rent or mortgage in the past year was even higher for those ages 18 to 39 years (43.7 percent, those who are Hispanic (51.6 percent) and among individuals living below the FPL (48.1 percent) (PRC Community Health Needs Assessment - Lake County, Illinois, 2022).

Exhibit 51: Percent of Lake County Adults Who Report They Were "Always, usually or Sometimes" Worried About Paying Rent/Mortgage in the Past Year 2022

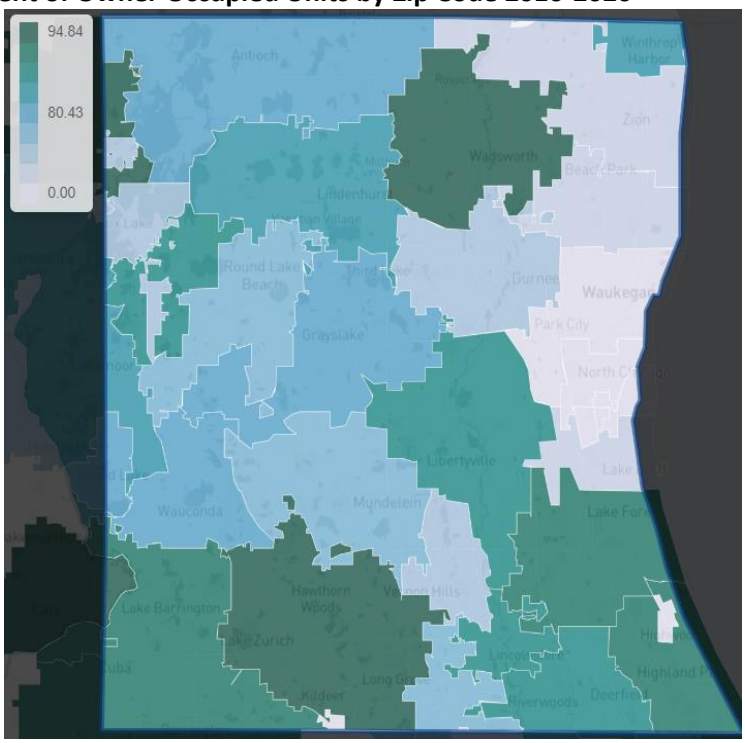


Source: PRC Community Health Needs Assessment - Lake County, Illinois, 2022

Owner Occupied Units

Homeownership has many benefits for both individuals and communities. Homeowners are more likely to improve their homes and to be involved in the community. In Lake County 73.5 percent of the housing units are owner-occupied, which is higher than both the state and national rates of 66.3 percent and 64.4 percent, respectively. The lowest percent of owner-occupied units in the county occur in Waukegan (60085) (42.4 percent) and North Chicago (60064) (44.9 percent). The highest percent of owner-occupied units are Wadsworth (60083) (90.8 percent) and Lake Zurich (60047) (89.7 percent) (Metopio, American Community Survey 2016-2020).

Exhibit 52: Lake County Percent of Owner Occupied Units by Zip Code 2016-2020



Source: Metopio, American Community Survey, 2022

Housing Cost Burden

The definition of housing cost-burdened is when a household is spending more than 30 percent of income on housing; this indicator includes both renters and owners. For a renter, costs include any utilities or fees the renter must pay, but do not include insurance or building fees. For an owner, it includes mortgage and other owner costs. In Lake County, the percent of occupied housing units that are housing cost-burdened has been declining since 2013 and is currently at 29.0 percent, just slightly lower than Illinois (29.6 percent) and us (30.4 percent) rates. The North Chicago 60088 zip code has the highest percent of occupied units with households who are housing cost-burdened, at 56 percent, followed by Zion (38.8 percent), Waukegan (60085) (38.4 percent) and Highwood at 37.1 percent (Metopio, American Community Survey, 2016-2020).

Severe Housing Cost Burden

Households spending more than 50 percent of income on housing are considered severely housing cost-burdened. The rate of occupied housing units which are severely housing cost-burdened has been declining in Lake County since 2015. However, a total of 12.7 percent of all occupied housing units in the county are severely housing cost-burdened; this rate is lower than both the state and national rates. The North Chicago zip code of 60088 has the highest rate of severely housing-burdened occupied units (30.6 percent). The other communities with the highest rates are:

- North Chicago (60064) 19.5 percent
- Highwood (60040) 19.4 percent
- Zion (60099) 18.5 percent

(Metopio, American Community Survey, 2016-2020).

Rent Burden
In the Lake County, 43.5 percent of occupied units have households that are spending more than 30% of income on rent which is considered rent-burdened. These rental costs do not include utilities, insurance or building fees. Spending a high percentage of household income on rent can create financial hardship, especially for lower-income renters. The county rate of rent-burdened households has decreased slightly since 2017 (46.3 percent). The county rate is lower than both the Illinois rate of 43.7 percent and the U.S. rate of 45.7 percent (Metopio, American Community Survey 2016-2020).

Severe Rent Burden
Households spending more than 50 percent of their income on rent are considered severely rent-burdened. Rent costs are excluding utilities, insurance or building fees. In Lake County, 20.3 percent of occupied units have households that are severely rent-burdened, slightly lower than the state rate (22.1 percent) and national rate (22.7 percent). Lincolnshire (60069) has the highest rate of occupied units that are severely rent-burdened at 48 percent, followed by both zip codes of North Chicago - 60088 at 30.6 percent and 60064 at 28.6 percent (Metopio, American Community Survey, 2016-2020).

Annual Income Needed and Weekly Minimum Wage Hours Needed to Afford Two-bedroom at Fair Market Rent
In Lake County, a worker needs to earn an annual income of $52,612 in order to afford the fair market rent for a two-bedroom rental home, without paying more than 30 percent of his or her income for rent. Fair market rent is determined by the Department of Housing and Urban Development. This income is similar to the amount needed in the U.S. ($52,517), but higher than the Illinois amount $46,699 (Metopio, National Low Income Housing Coalition (Out of Reach 2020), 2020).

Looking at the issue of affordability from a different angle, at minimum wage, a worker would need to work 96 hours per week, 52 weeks per year, in order to afford the fair market rent for a two-bedroom rental home in Lake County, without paying more than 30 percent of his or her income on rent. In comparison, a worker in the U.S. would have to work 132.2 hours per week and in Illinois, 85.2 hours per week (Metopio, National Low Income Housing Coalition (Out of Reach 2020), 2020).

Unhealthy or Unsafe Housing
In the PRC community survey, Lake County residents were asked, “Thinking about your current home, over the past 12 months have you experienced ongoing problems with water, leaks, rodents, insects, mold or other housing conditions that might make living there unhealthy or unsafe?” A total of 9.9 percent of the survey respondents reported living in unhealthy or unsafe housing conditions in Lake County in the past year. This was most prevalent among adults under age 65 years (ages 18-39 and 40-64 both 11.2 percent), those living in lower-income households (19.3 percent) as well as those who rent their homes (14.9 percent) (PRC Community Health Needs Assessment – Lake County, Illinois, 2022).

Transportation

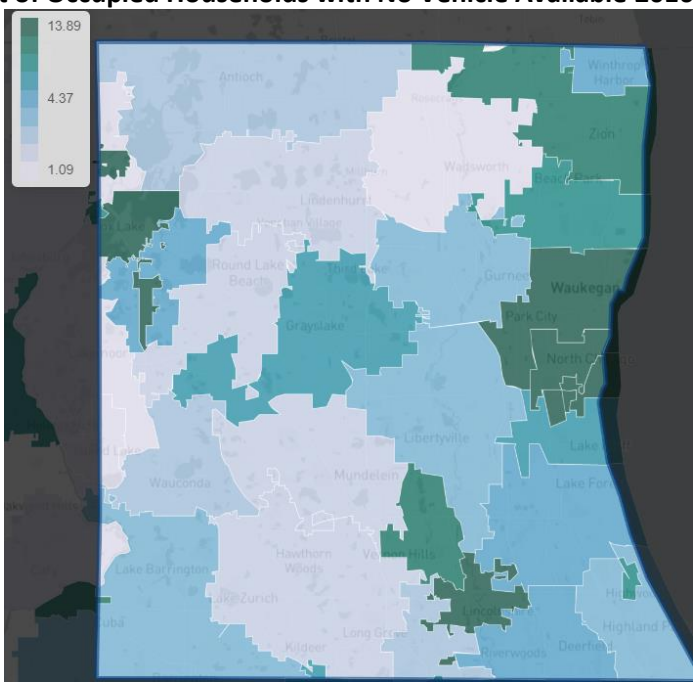
Households Without a Vehicle
Vehicle ownership is directly related to the ability to travel and not having a vehicle limits access to essential local services such as supermarkets, post offices, doctors’ offices and hospitals. A total of 8.5 percent of occupied households in the U.S. have no vehicle available, which is lower than the Illinois rate of 10.7 percent. The rate in Lake County is even lower, where 5.0 percent of occupied households have no vehicle available.

The communities in Lake County with the highest rates of occupied households with no vehicle available are:

- North Chicago (60064) 13.9 percent
- Waukegan (60085) 11.9 percent
- Lincolnshire (60069) 11.3 percent

(Metopio, American Community Survey, 2016-2020).

Exhibit 53: Lake County Percent of Occupied Households with No Vehicle Available 2016-2020



Source: Metopio, American Community Survey, 2022

Mean Travel Time to Work

Long commutes for workers can contribute to health problems such as headaches, anxiety and increased blood pressure. The average daily travel time to work in Lake County is 30.4 minutes for workers 16 years and older who do not work at home, which is longer than the average daily travel time in Illinois (29 minutes) and in the us (26.9 minutes). This travel time is regardless of the transportation method. The longest average daily travel times to work are in Fox Lake (60020) at 40.4 minutes, Ingleside (60041) at 40.1 minutes and Antioch (60002) at 35.9 minutes (Metopio, American Community Survey, 2016-2020).

Public Transportation to Work

In Lake County, only 4.3 percent of workers ages 16 years and older commute to work using public transportation. In the us, the rate is slightly higher at 4.6 percent, but the rate for Illinois is much higher, at 8.8 percent (Metopio, American Community Survey, 2016-2020).

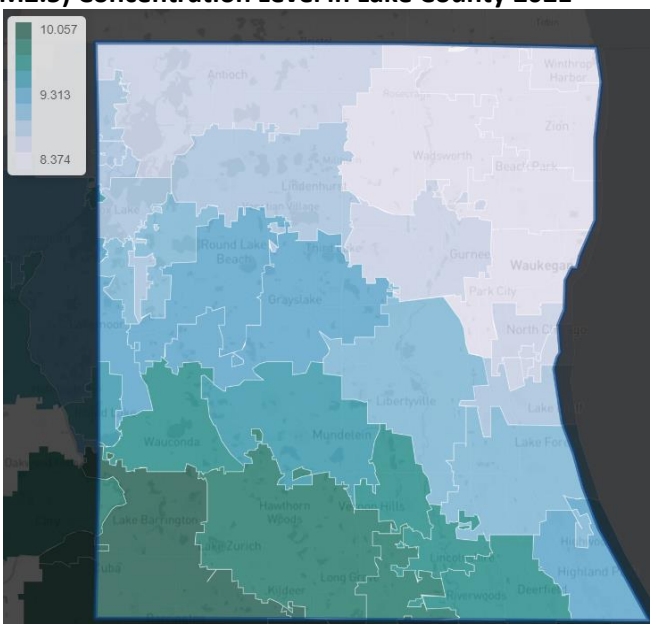
Particulate Matter

Particulate Matter

Particulate matter concentration is the annual average concentration in micrograms per cubic meter (µg/m3). PM2.5, or particulate matter smaller than 2.5 microns in diameter, is one of the most dangerous pollutants because the particles can penetrate deep into the alveoli of the lungs. Common sources of PM 2.5 emissions include power plants and industrial facilities. Secondary PM 2.5 can form from gases, such as oxides of nitrogen (NOx) or sulfur dioxide (SO2) reacting in the atmosphere. Health effects associated with exposure to PM 2.5 include elevated risk of premature mortality from cardiovascular diseases or lung cancer and increased health problems such as asthma attacks. These data are estimated from a combination of monitoring data and air quality modeling by EPA.

Lake County has a PM 2.5 concentration of 9.2 µg/m3. The Barrington zip code of 60010 has the highest PM2.5 concentration in Lake County at 9.9 µg/m3, slightly higher than the Lake County PM2.5 concentration level. As shown in the map below, the most southwestern and southcentral zip codes in Lake County have the highest PM2.5 concentration levels (Metopio, Environmental Protection Agency (EPA), EJSCREEN, 2021).

Exhibit 54: Particulate Matter (PM2.5) Concentration Level in Lake County 2021



Source: Metopio, Environmental Protection Agency (EPA), EJSCREEN, 2022

One key informant who rated respiratory disease as a "major" problem in Lake County shared,

> "Asthma and other respiratory diseases are prevalent in areas of our county where there is questionable air quality. The coal plant and concentration of brown fields certainly contributes to the problem." Community Leader

(PRC Community Health Needs Assessment – Lake County, Illinois, 2022).

Particulate Matter Environmental Justice Index

Particulate matter environmental justice index measures exposure to PM 2.5 in the air, weighted by population vulnerability and reported as a percentile nationally, where 0 = lowest exposure, and 100 = highest exposure. Weighting by the vulnerability of residents can provide a better estimate of the disproportionate impact of environmental hazards.

The Lake County percentile weighted index of vulnerability to particulate matter is 17.9, which is slightly higher than Illinois (17.5 percentile) but lower than the U.S. (23.4 percentile). In Lake County, the highest percentile weighted index of vulnerability to particulate matter is in Barrington (60010) at 44.2 percentile, followed by Buffalo Grove (60089) at 39.1 percentile and Lake Zurich (60047) at 37.6 percentile (Metopio, Environmental Protection Agency (EPA), (EJSCREEN, 2021).

Food Security and Access to Healthy Foods

Food Insecurity Rate

The Food Insecurity (FI) rate shows the percentage of residents experiencing food insecurity at some point. Food insecurity is the household-level economic and social condition of limited or uncertain access to adequate food, as represented in United States Department of Agriculture (USDA) food-security reports. In Lake County, 7.1 percent of residents are food insecure, compared to Illinois at 8.3 percent. The FI rate in Lake County increased between the years 2017 (6.5 percent) and 2020 (7.1 percent). The communities with the highest rates of food insecurity in Lake County are:

- North Chicago (60064) 15.8 percent
- Waukegan (60085) 13.9 percent
- Highwood (60040) 13.9 percent

- Zion (60099) 13.2 percent
- Fox Lake (60020) 12.6 percent
- Lincolnshire 11.2 percent

(Metopio, Feeding America, Map the Meal Gap, 2020).

In the 2022 PRC community survey, 23.1 percent of Lake County residents were determined to be "food insecure" – having run out of food in the past year and/or been worried about running out of food. Rates of food insecurity were even higher for those ages 18-39 years (36.5 percent), Hispanic residents (39 percent) and those whose household income is below 200 percent of the FPL (47.3 percent) (PRC Community Health Needs Assessment – Lake County, Illinois, 2022).

Low Food Access

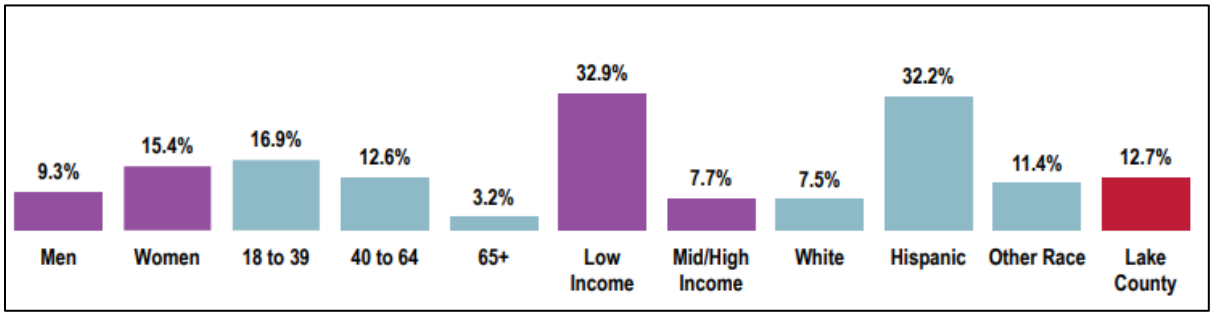
Low access to food is defined solely by distance: further than 1/2 mile from the nearest supermarket in an urban area, or further than 10 miles in a rural area. In Lake County, 67.5 percent of residents have low access to food, which is above the Illinois (49.9 percent) and U.S. (50.2 percent) rates. The following communities have the highest rates of low food access in the county:

- North Chicago (60088) 100 percent
- Winthrop Harbor (60096) 99.1 percent
- Lake Bluff (60044) 90.8 percent
- Gurnee (60031) 89.3 percent

(Metopio, USDA, Food Access Research Atlas, 2019).

The PRC 2022 community survey found that 12.7 percent of Lake County adults have used a food bank or received free meals from a charitable organization in the past year. Of note is that one quarter of these adults had never needed such assistance prior to the COVID-19 pandemic. The survey also found that younger adults, lower income and Hispanic residents more often relied on food assistance (PRC Community Health Needs Assessment – Lake County, Illinois, 2022).

Exhibit 55: Percent of Lake County Adults Who used a Food Bank or Received Free Meals from a Charitable Organization in the Past Year 2022



Source: PRC Community Health Needs Assessment – Lake County, Illinois, 2022

Average Cost per Meal

In Lake County, the 2020 average cost per meal was $3.88, higher than the average cost in Illinois ($3.36) and the U.S. ($3.40). The Lake County average cost per meal has been increasing steadily over time (Metopio, Feeding America, Map the Meal Gap, 2020).

Living in a Food Desert

Living in a food desert is defined as being low-income and further than one mile from a supermarket in an urban area or twenty miles in a rural area. In 2019, 6.2 percent of Lake County residents were living in a food desert, an increase from 5.9 percent in 2015. The Illinois rate (4.4 percent) is lower than the Lake County rate but the U.S. rate (10.2 percent) is

higher than county The zip codes with the highest percent of residents living in a food desert are North Chicago (60088 and 60064), Ingleside (60041) and Zion (60099) rate (Metopio, USDA, Food Research Atlas, 2019).

Social Environment and Community Safety

Emergency Department Visit Rate Due to an Unintentional Fall

In Lake County, the unintentional fall annual ED visit rate is 2,048.6 ED visits per 100,000 residents ages 18 years and older. This includes falls from vehicles, recreational accidents, trips and falls and other unintentional falls. The rate for Lake County is higher than the Illinois rate of 1,998.5 ED visits per 100,000 residents. ED visits due to unintentional falls are highest in the county among non-Hispanic Black residents (2,453.3 ED visits per 100,000 residents), followed closely by non-Hispanic White residents (2,161.0 ED visits per 100,000 residents). Looking at the rates by age, seniors ages 65 years and older by far have the highest rate at 5,025.4 ED visits per 100,000 residents, more than double the rate for the full population. Additionally, females have a higher ED visit rate due to unintentional falls (2,470.7 ED visits per 100,000 residents) compared to males (1,603.6 ED visits per 100,000 residents). The following communities have the highest ED visit rates due to unintentional falls in the county:

- Zion (60099) 2,575.1 ED visits per 100,000 residents
- Fox Lake (60020) 2,539.5 ED visits per 100,000 residents
- Waukegan (60085) 2,464.2 ED visits per 100,000 residents
- Grayslake (60030) 2,168.7 ED visits per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Hospitalization Rate Due to an Unintentional Fall

In Lake County there are 610.7 hospitalizations annually for unintentional falls per 100,000 residents (ages 18 years and older), which includes falls from vehicles, recreational accidents, trips and falls and other unintentional falls. The Lake County hospitalization rate due to unintentional falls is higher than the Illinois rate of 496.9 hospitalizations per 100,000. Hospitalizations due to unintentional falls are highest among the non-Hispanic White residents (760.2 hospitalizations per 100,000 residents) and seniors ages 65 years and older (2,424.8 hospitalizations per 100,000 residents). Females have higher rates of hospitalizations due to unintentional falls than males in Lake County at 689.0 hospitalizations per 100,000 residents and 528.1 hospitalizations per 100,000 residents, respectively. The following communities have the highest hospitalization rates due to unintentional falls in Lake County:

- Fox Lake (60020) 906.3 hospitalizations per 100,000 residents
- Vernon Hills (60061) 750.7 hospitalizations per 100,000 residents
- Grayslake (60030) 724.0 hospitalizations per 100,000 residents
- Lake Bluff (60044) 704.0 hospitalizations per 100,000 residents

(Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Fall Mortality

In Lake County, the rate of deaths due to unintentional falls is 6.0 deaths per 100,000 residents, which is an increase from 4.9 deaths per 100,000 residents in the previous period. Death rates due to unintentional falls have been trending up in Lake County since 2013. Seniors ages 65 years and older in Lake County have higher death rates due to unintentional falls (19.3 deaths per 100,000 residents) when compared to other age groups. The mortality rate for men in Lake County due to unintentional falls (7.5 deaths per 100,000 residents) is higher than that for women (4.8 deaths per 100,000 residents). Non-Hispanic White residents have the highest death rate of all race and ethnicity groups at 6.6 deaths per 100,000 residents (Metopio, National Vital Statistics System-Mortality (NVSS-M), 2016-2020).

Deaths Due to Motor Vehicle Traffic

In the state of Illinois, there are 8.9 deaths per 100,000 residents due to motor vehicle traffic. Lake County's death rate due to motor vehicle traffic is lower at 7.3 deaths per 100,000 residents. Like Illinois, the Lake County motor vehicle mortality rate is highest among 18-39 year olds (10.7 deaths per 100,000 residents); the rate is also much higher for males (11.0 deaths per 100,000 residents) than females (3.6 deaths per 100,000 residents) in Lake County. Residents

who are non-Hispanic Black have the highest motor vehicle mortality rate (11.7 deaths per 100,000) compared to other groups in Lake County (Metopio, National Vital Statistics System-Mortality (NVSS-M), 2016-2020).

Criminal Sexual Assault

Criminal sexual assault is defined as any sexual act directed against another person, forcibly and/or against that person's will or not forcibly or against the person's will in instances where the victim is incapable of giving consent, including and especially rape. In Lake County, the criminal sexual assault rate is 23.6 crimes per 100,000 residents. The county rate is lower than the rate for Illinois (43.7 crimes per 100,000 residents) and the U.S. (41.7 crimes per 100,000 residents). The criminal sexual assault rate is trending upward in Lake County (Metopio, FBI Crime Data Explorer, 2016-2020).

Intimate Partner Violence

In the PRC community survey, 16.2 percent of Lake County adults in the PRC 2022 community survey acknowledge that have ever been hit, slapped, pushed, kicked or otherwise hurt by an intimate partner. The intimate partner violence was more often reported among women, younger adults (ages 18-39 years) and those at lower incomes. The rate of intimate partner violence for Lake County is higher than the comparable U.S. rate (13.7 percent). A total of 48.7 percent of key informants characterized injury and violence as a "moderate problem" in the community; an additional 28.2 percent rated injury and violence as a "major problem." One key informant shared,

> "The high level of violence in the community causes anxiety in addition to greater harm to those who experience it firsthand. Not having access to social programs that would give the youth psychological help and support, avoid gang life, etc. that could lead to violence." – Social Service Provider

(PRC Community Health Needs Assessment – Lake County, Illinois, 2022).

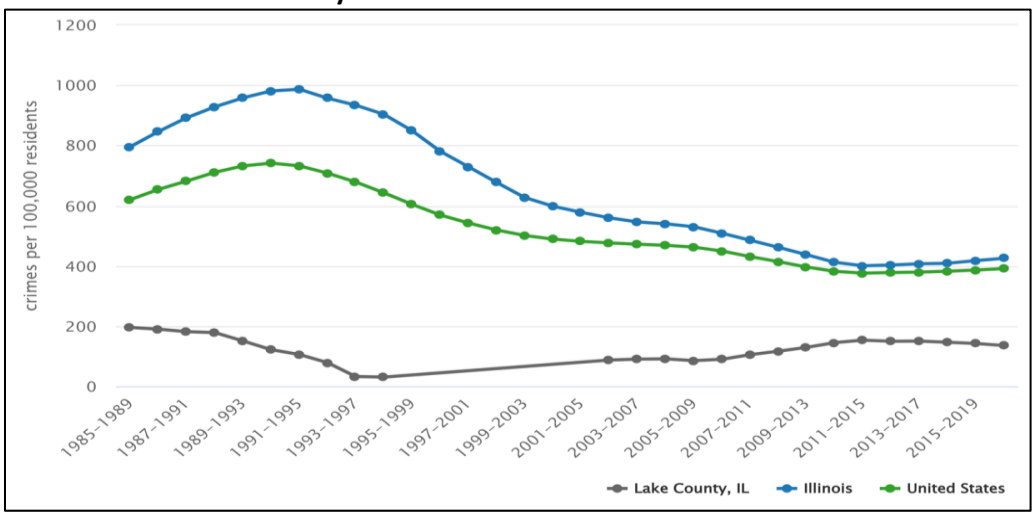
Victim of a Violent Crime

PRC 2022 community survey results show that 4.7 percent of Lake County adults acknowledged being the victim of a violent crime in the area in the past five years, slightly lower than the U.S. rate of 6.2 percent. The rate was more than two times higher for individuals living below the 200% FPL, those who are ages 18 to 39 years (both at 10.9 percent) and those indicated in the survey as "other race" (9.9 percent) (includes Black, Asian and American Native) (PRC Community Health Needs Assessment – Lake County, Illinois, 2022).

Violent Crime Rate

Crimes related to violence (yearly rate) include homicide, criminal sexual assault, robbery, aggravated assault and aggravated battery. In Lake County, the violent crime rate is 135.4 crimes per 100,000 residents, lower than Illinois (425.1 crimes per 100,000 residents) and the U.S. (391.0 crimes per 100,000 residents) rates (Metopio, FBI Crime Data Explorer, 2016-2020).

Exhibit 56: Violent Crime Rate in Lake County 2016-2020



Metopio, FBI Crime Data Explorer, 2022

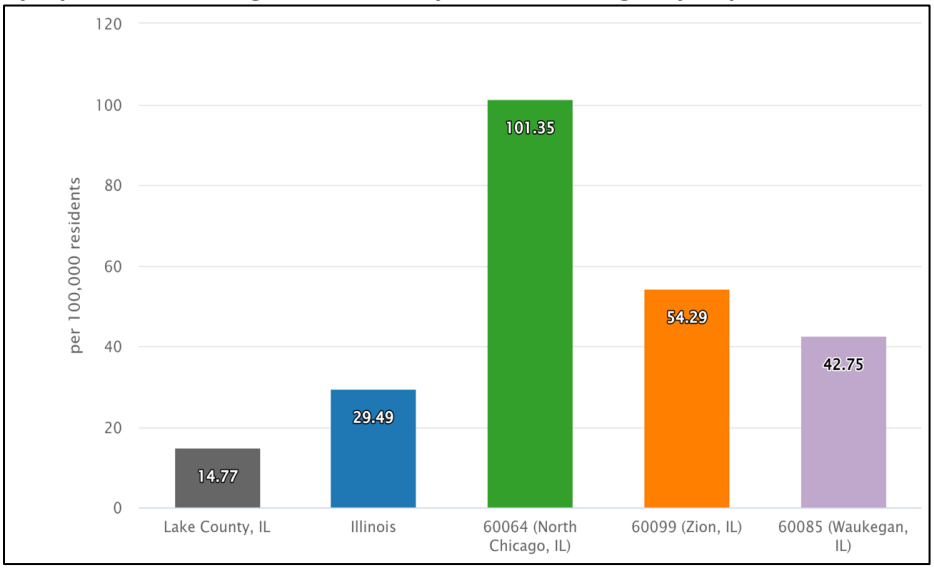
Homicide Rate

The Homicide rate is defined as first or second-degree murder, which is the killing of one human being by another. The homicide rate for Lake County is 1.7 crimes per 100,000 residents. The rate in Lake County has been trending upward over the past decade. The Illinois (7.8 crimes per 100,000 residents) and U.S. (5.5 crimes per 100,000 residents) rates are much higher than the Lake County homicide rate (Metopio, FBI Crime Data Explorer, 2016-2020).

Assault by Firearms Emergency Department Visit Rate

The annual ED visit rate for assault by firearms in Lake County is 14.8 ED visits per 100,000 residents, well below the Illinois rate of 29.5 ED visits per 100,000 residents. The highest rate by age in Lake County occurs among young adults ages 18-39 years at 31.2 ED visits per 100,000 residents and males have a significantly higher ED visit rate for assault by firearms (25.9 ED visits per 100,000 residents) than females (4.0 ED visits per 100,000 residents). The ED visit rate for assault by firearms is disproportionately higher for non-Hispanic Black residents in Lake County (121.8 ED visits per 100,000 residents) when compared to other race or ethnicity groups. The communities with the highest rate of ED visits for assault by firearms are North Chicago (60064), Zion (60099) and Waukegan (60085) (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

Exhibit 57: Lake County Zip Codes with Highest Assault by Firearm Emergency Department Visit Rates 2016-2020



Source: Metopio, Illinois Hospital Association, COMPdata Informatics, 2022

Assault by Firearms Hospitalization Rate

The rate of hospitalization for assault by firearms for Illinois is 14.6 hospitalizations per 100,000 residents, which is significantly higher than the Lake County rate of 6.1 hospitalizations per 100,000 residents. As is the case with the ED visit rate, the Lake County hospitalization rate for assault by firearms is highest for men (11.0 hospitalizations per 100,000 residents) individuals ages 18-39 years (13.6 hospitalizations per 100,000 residents) and individuals who are non-Hispanic Black (55.3 hospitalizations per 100,000 residents). North Chicago (60064), Zion (60099) and Waukegan (60085) have the highest rates of hospitalization for assault by firearms, when compared to other zip codes in Lake County) (Metopio, Illinois Hospital Association, COMPdata Informatics, 2016-2020).

IV. Prioritization of Health-Related Issues

Priority Setting Process

Advocate Condell's community health department provided a series of six comprehensive data presentations from November 2021 through May 2022 to the CHC. The presentations were divided into sections, each highlighting key

elements of Lake County's demographics, the eight major health issues, key social drivers of health and subject-matter presentations from community leaders. At the sixth meeting, CHC members were guided through a cumulative voting exercise to select the top health issues, based on a set of criteria. A handout was provided of prevalence and incidence rates with a calculation of estimated lives affected for each health indicator, to help CHC members gauge the severity of each health issue in Lake County. Other criteria used to make the selection were mortality rates and consideration of available resources to address the issue. The health issues selected by the CHC were obesity and behavioral health (which includes mental health and substance use).

Health Needs Selected

Obesity

Obesity was a health priority in the two previous CHNA cycles and the issue continues to be a strong health need. In the U.S., the prevalence rates for obesity continue to rise steadily. The COVID-19 pandemic added new obstacles and exacerbated existing barriers to healthy eating and physical activity in 2020 and 2021, and deepened longstanding racial and economic inequities in the U.S. Emerging data suggests eating habits shifted, physical activity declined, stress and anxiety increased, food insecurity worsened, and many Americans gained weight throughout the pandemic. These more recent changes are on top of a decades-long rise in obesity rates across the U.S., with the adult rate passing 40 percent nationally for the first time in 2017-2018, according to the National Health and Nutrition Examination Survey (NHANES). Since 1999-2000, the adult obesity rate in the U.S. has increased 39 percent.

The food insecurity rate in Lake County increased from 6.5 percent in 2017 to 7.1 percent in 2020. Food insecurity limits an individual's access to fresh produce and healthy food choices, increasing his or her risk of obesity. The Lake County rate of obesity in adults ages 18 and older increased from 2017 to 2019. The 2022 PRC community survey results show that 34.3 percent of Lake County adults are obese, based on BMI calculated from self-reported weight and height of respondents. PRC survey results showed obesity rates for Hispanic Lake County adults are even higher at 57.4 percent, and 43.3 percent of those living below 200 percent of the FPL are obese. In 2022, Lake County IYS results show 14 percent of 8th graders are overweight and nine percent obese; 13 percent of 10th grade students are overweight and eight percent obese and 14 percent of 12th graders are overweight and seven percent obese.

Obesity increases the risk of a range of diseases for adults – including higher rates of complications and serious illness from COVID-19, as well as type 2 diabetes, high blood pressure, heart disease, stroke, arthritis and many types of cancer – and contributes to an overall risk of higher mortality (Trust for America's Health, The State of Obesity: Better Policies for A Healthier America, 2021). Due to its strong correlation to chronic diseases and other health conditions, the Advocate CHC voted to continue focusing on obesity as a priority health issue.

Behavioral Health

Behavioral health (which includes both and mental health and substance use) was the second health issue identified as a top need in Lake County. Mental health was identified in the PRC 2022 key informant survey as the top problem issue, identified by 84.1 percent as a "major" problem in Lake County. Metopio data indicates that 12 percent of Lake County adults report 14 or more days during the past 30 days during which their mental health was not good. The 2022 PRC community survey found that 22.4 percent of adults rated their overall mental health as "fair" or "poor" which is higher than the comparable 2022 national rate of 13.4 percent. In the PRC survey, 28.8 percent of adults indicated their mental health had gotten worse since the pandemic began. Mental health status is also a concern with youth. In the 2022 Illinois Youth Survey, the rate of 10th and 12th grade students who indicated they "feel so sad or hopeless daily for two weeks or more" both increased from 2020. For 10th graders, the rate grew from 30 percent to 37 percent and for 12th grade students, the rate increased from 30 percent to 36 percent. The Lake County Health Department has selected "access and utilization of physical and mental healthcare" as one of the top health priorities in the Lake County Community Health Assessment process.

Key informants in the 2020 PRC study rated alcohol and heroin or other opioids as the most problematic substances in the community. Metopio data indicates that in Lake County, 20.6 percent of adults report binge drinking on an occasion

in the past 30 days. The county rate of adults who binge drink has consistently increased year-over-year since 2010, when the rate was 9.3 percent. In the Illinois Youth Survey (IYS) data for Lake County, the rate of students who reported binge drinking and marijuana use in the past two weeks did show a decline from 2018 to 2022 in all three grade levels. However, these results should be viewed with caution, given that many students were in remote or hybrid learning environments during the COVID-19 pandemic, impacting the ability to ensure a representative sample in the survey. Despite the overall rates being lower in the 2022 IYS survey, binge drinking and marijuana use continues to hold to the pattern of increased use with age.

The drug overdose mortality rate in Lake County has been increasing over time as have the state and national overdose death rates. Lake County Coroner's Office data shows there have been 63 overdose deaths in 2022 from January through the end of June, which is a 9 percent increase from the number of deaths in 2021. Substance use, particularly heroin and other opioid use, continues to be a primary focus of the Lake County Opioid Initiative and the Lake County substance treatment providers. The increasing rates for both adults and youth in mental health conditions and substance use were contributing factors in the CHC selecting behavioral health as a priority need.

Health Needs Not Selected

Diabetes

Diabetes was not identified as one of the priority health needs although diabetes prevalence is increasing over time in Lake County, Illinois and the U.S. The ED visit rate due to diabetes in Lake County is lower than the Illinois rate. Additionally, the kidney disease mortality rate for Lake County is lower than the Illinois rate, but the county rate is higher than the national rate. Disparities do exist by age and race when examining the data, as residents who are ages 65 and older and non-Hispanic Black residents consistently have significantly higher ED visit and hospitalization rates due to diabetes. Because programs to address diabetes are already in place in Lake County, the CHC made the decision to continue to focus on obesity as a priority, given its correlation with the risk for pre-diabetes and diabetes.

Cardiovascular Disease

Cardiovascular disease was not selected as a top health priority in the voting process. Metopio 2019 data shows that 4.7 percent of resident adults in Lake County have angina or coronary heart disease. The 2022 PRC community survey found that 7.1 percent of Lake County adults report having coronary heart disease. The mortality rate from coronary heart disease in Lake County is lower than both the U.S. and Illinois rates and the mortality rate from coronary heart disease in Lake County has been declining consistently. The current death rate due to coronary heart disease of 62.5 deaths per 100,000 residents is down from the 2015-2017 rate of 67.8 deaths per 100,000 residents reported in the previous CHNA. However, non-Hispanic Black residents have the highest coronary heart disease and stroke mortality rates in the county.

Advocate Condell currently promotes and conducts heart health risk assessments using the American Heart Association tool, conducts heart scan CTs to identify calcium in the heart and promotes prevention measures such as good nutrition and physical activity in the community. All of these activities are coordinated with the Advocate Heart Institute programs focused on treating cardiovascular disease in the county. Since heart disease death rates are declining and many community-based programs to address cardiovascular disease are already active, the CHC decided it was more beneficial to prioritize obesity due to its relationship to increased risk for heart disease.

Maternal, Child and Reproductive Health

Maternal, child and reproductive health was not selected as a health priority based on the data presented in the CHNA. In Lake County, 17.7 percent of births were to mothers with at least one of the health conditions of chronic hypertension, eclampsia, diabetes, tobacco use or pregnancy-associated hypertension, which below the Illinois and U.S. rates. In Lake County, 11.2 percent of births occur pre-term, which is below the Illinois and national rates. Teen births have shown a consistent decrease over the past decade nationally, in Illinois and in Lake County. The infant mortality rate in Lake County is decreasing over time and the Illinois and U.S. rates of infant mortality are both higher than the county rate. In Lake County, 27.6 percent of births are to mothers who are obese, slightly higher than the national rate,

but lower than the Illinois rate. However, the rate of births to mothers with obesity is highest for non-Hispanic Black women, the rate of pre-term births is disproportionately higher for non-Hispanic Black residents and the infant mortality rate for non-Hispanic Black Lake County residents is more than four times higher than the rate for non-Hispanic White residents. Advocate Aurora Health is implementing a system-wide strategy in targeted geographic areas where infant mortality rates are highest. Based on these efforts, and the status of other maternal and child health indicators, the CHC did not feel that this health need was a priority for this CHNA cycle.

Respiratory Diseases

The greatest share of key informants taking part in the PRC 2022 online survey characterized respiratory disease as a "minor problem" in Lake County. The PRC community survey found that 10.2 percent of Lake County adults currently suffer from asthma, which is higher than the Illinois rate but lower than the national rate. Illinois Hospital Association COMPdata in Metopio indicates that the ED visit rate due to asthma and community-acquired pneumonia rates for Lake County are both lower than the comparable Illinois rates. The PRC community survey also found that the Lake County rate of children under age 18 with asthma is lower than the national rate of children with asthma. Metopio data also shows the Lake County ED visit rate due to COPD for adults ages 40 years and older is significantly lower than the Illinois rate. However, Lake County ED visit and hospitalization rates due to asthma are significantly higher for non-Hispanic Blacks, infants and young children. Additionally, communities with the highest ED and hospitalization visit rates in the county are all in the northeastern part of the county - North Chicago (60064), Zion (60099) and both zip codes of Waukegan (60085 and 60087). Advocate Condell community health staff work collaboratively with local health departments, the Cancer Care Center and the American Cancer Society to coordinate lung cancer screenings and prevention efforts for respiratory conditions. The council decided to continue focusing on other health issues as priorities, given that other programs addressing respiratory diseases are in place at this time.

Sexually Transmitted Infections

The rate of new cases of sexually transmitted infections (STIs), including chlamydia, gonorrhea, syphilis and HIV/AIDS, are trending upward in Lake County and the U.S. However, the STI infection rate for Lake County is lower than the national and Illinois rates. The incidence rate for chlamydia has been increasing in Lake County for more than a decade, but it is still lower than the Illinois and national rates. The Lake County gonorrhea and syphilis prevalence rates are also lower than the Illinois and national rates. Although sexually transmitted infections are a considerable health issue in Lake County, the local health department is taking the lead on identification and prevention efforts through their respective communicable disease departments. Advocate Condell community health staff assist with sharing prevention messages and practices with primary care providers in the AAH system. However, because the county health departments are leading these efforts already and the number of residents affected is small compared to those affected by obesity and behavioral health, sexually transmitted infections were not selected as a primary focus.

Unintentional Falls

The ED visit and hospitalization rates due to an unintentional fall in Lake County is higher than the Illinois rate. The ED visit rate is highest for non-Hispanic Black residents and seniors ages 65 years and the hospitalization rate due to an unintentional fall is highest for non-Hispanic White residents and seniors.

The death rate due to an unintentional fall has been trending up in Lake County since 2013. Again, because the number of residents affected is small compared to those affected by obesity and behavioral health, the CHC did not select unintentional falls as a priority. However, Advocate Condell community health staff do work closely with senior service agencies and other community organizations to promote education to prevent falls. Advocate Good Shepherd does implement the evidence-based program, A Matter of Balance, focusing on education of identifying risks for falls, increasing core strength and teaching a safe way to fall to avoid serious injury. Community health staff often refer Lake County residents to this program.

Oral Health

Despite 40.6 percent of respondents to the PRC key informant online survey characterizing oral health as a "major problem" in Lake County, many oral health indicators show positive progress in oral health. The ED visit rate due to dental problems for Lake County has been trending downward and is much lower than the Illinois rate. PRC 2022

community survey results show 60 percent of Lake County adults have visited a dentist or dental clinic within the past year and 86.3 percent of Lake County parents reported their child (ages 2-17) had been to a dentist in the past year. However, rates of visiting a dentist are lower for younger adults (18-38 years) and individuals living below 200 percent of the FPL. Given the positive results from many of the indicators, the CHC decided to focus on other health issues.

Cancer

Twenty percent of online key informants in the 2022 PRC study perceived cancer as a "major" problem in the community. The colorectal diagnosis rate for Lake County has generally remained steady for the past decade, is higher than the national rate, but lower than the Illinois rate. The colorectal cancer mortality rate for the county is lower than the state and national mortality rates. The Lake County cervical cancer diagnosis rate is lower than both the state and U.S. cervical cancer diagnosis rates. The lung cancer diagnosis rate for Lake County has been increasing over time, is lower than the Illinois rate, but higher than the U.S. lung cancer diagnosis rate. The mortality rate for lung, trachea and bronchus cancer in Lake County is lower than the Illinois rate. The Lake County prevalence rate for prostate cancer is slightly lower than the Illinois rate, but both the Lake County and Illinois prostate cancer prevalence rates are higher than the U.S. rate. The diagnosis rate for invasive breast cancer in Lake County is higher than both the Illinois and U.S. rates and the rates have been climbing since 2002-2006. However, Metopio data shows the breast cancer death rate for females in Lake County is slightly lower than both the Illinois and U.S. rates. Advocate Condell community health staff are part of the Advocate Aurora Health Integrated Network Cancer Program (INCP) committee for the north Illinois PSA and work closely with Cancer Center staff to address barriers to navigation and promote early screening and detection for several types of cancer, including breast, colorectal and lung cancer. To meet the Commission on Cancer standards, ongoing focus on prevention and screening is required. Cancer was not included in the voting choices for the CHC because activities related to cancer screening and prevention are already integrated into the regular programming of both the community health program and the Cancer Center through the INCP. CHNA data is presented annually to the INCP leadership and is used to develop prevention and screening outreach and educational programs.

COVID-19

In the U.S., the COVID-19 pandemic disproportionately affected racial and ethnic minority groups, with high rates of death in African American, Native American and Hispanic communities. As of November 2020, the COVID-19 prevalence rate in Lake County for Hispanics was more than 4.5 times higher than the rate for non-Hispanic White residents and the prevalence rate for non-Hispanic Black residents was more than twice the rate for non-Hispanic White residents. The state death rate due to COVID-19 was notably higher than the COVID-19 death rate in Lake County. As of 2021, 70.8 percent of the Lake County population completed the COVID-19 vaccine series, nearly the same as the Illinois rate and slightly higher than the U.S. COVID-19 vaccination completion rate. The impact of the pandemic was felt in many other areas in Lake County, including loss of low-income jobs, increased obesity rates, the exacerbation of mental health in both youth and adults and increased substance use. Advocate Condell continues to serve as a trusted source for reliable information on COVID-19 prevention and vaccination. COVID-19 was not included in the list of voting choices to the CHC, as it is an ongoing priority system-wide, working locally in alignment with other health systems and the LCHD. The medical center works with numerous partners to ensure up-to-date educational information is shared with Lake County community residents and access to both prevention and acute treatment is ensured.

V. Approval of Community Health Needs Assessment

The Advocate Condell CHC selected obesity and behavioral health (which includes mental health and substance use) as the health priorities on May 27, 2022. The Advocate Condell Governing Council approved the two recommended health priorities of obesity and substance use and the medical center's 2022 CHNA report on October 18, 2022.

VI. Vehicle for Community Feedback

SCAN ME

Community Feedback

Advocate Condell Medical Center welcomes all feedback regarding the 2022 Community Health Needs Assessment. Any member of the community wishing to comment on this report, can click on the link below to complete a CHNA feedback form. Questions will be addressed and will also be considered during the next CHNA cycle.
Feedback Link: Advocate Aurora Health CHNA Feedback

If you experience any issues with the link to our feedback form or have any other questions, please email Elvis Munoz at Elvis.munoz@aah.org

This report can be viewed online at Advocate Health Care's Community Health Needs Assessment Report webpage via the following link: Hospital CHNA Reports Implementation Plans Progress Reports | Advocate Health Care

A paper copy of this report may also be requested by contacting the hospital's Community Health Department.

VII. Evaluation of Impact from Previous CHNA

The priorities selected in the previous CHNA were obesity and substance use. The following is a summary of the impact of programs and strategies implemented by Advocate Condell in 2021 to address these issues.

2021 Program Outcomes for Obesity
Since 2019, Advocate Condell and local partners have been working together to address food insecurity in the Round Lake area through the implementation of a Rx Mobile Food Pantry. The mobile food pantry in Round Lake served 5,150 families and 19,951 household members. In December, the mobile pantry transitioned into an Rx Market at Catholic Charities in Round Lake. This new location will offer long-term sustainability and greater access to healthier food during the week. As an established Rx Market, Catholic Charities will receive healthier food options and can continue to serve food insecure residents of Round Lake.

From July 2019 to December 2021, the Advocate Condell's Rx Mobile Food Pantry program served 12,043 families and 46,036 household members. Over the course of two and one-half years, 650,000 pounds of food were distributed in the area of Round Lake. The program served all residents in need of food. The COVID-19 Food Resource Guide was updated and published to the community to reflect the current food access points in Lake County, including food pantries, soup kitchens and Meals on Wheels programs. Due to COVID-19, the Mundelein Park District did not operate the GO Mundelein walking program in 2021.

2021 Program Outcomes for Substance Use
In partnership with Advocate Good Shepherd Hospital, Advocate Condell supported the launch of a Mental Health and Substance Abuse Parent University for Hispanic parents in the Round Lake Area School District 116. The 10-month program offered a wide range of resources and education to a cohort of 120 Spanish-speaking parents. The program goal is to educate adults on how to identify signs of mental health and substance use among youth. In addition, the program aims to break the stigma of behavioral health in the Hispanic community. At the end of the program, a graduation ceremony is planned for June of 2022.

The Warm Handoff Program is a partnership with Gateway Foundation, an addictions treatment provider. A Gateway engagement specialist meets with a patient in the Advocate Condell Emergency Department (ED) being treated for substance use-related health issues. The engagement specialist screens and links the patient into addiction treatment.

Additionally, a recovery coach on the Gateway Foundation team provides community support to patients as they transition into treatment. In 2021, Gateway Foundation completed 166 patient encounters and 59% of those patients were successfully placed in treatment. The full 2021 Community Health Improvement Plan Progress Report can be found at this link cond-chip-2021-final.pdf (advocatehealth.com)

VIII. Appendices

Appendix 1: 2022 Community Health Needs Assessment Data Sources

(All data was verified, and website links were fully functional within the CHNA Report and Appendices as of October 4, 2022).

Advocate Aurora Business Development Analytics, 2022

Advocate Aurora Health – EpicHB 2021

Advocate Condell Finance Department, 2021

Agency for Healthcare Research and Quality. Topic: Access to Care, 2022. Retrieved from www.ahrq.gov

Alzheimer's Association. Alzheimer's and Dementia, 2022. Retrieved from www.act.alz.org

American Diabetes Association, 2021. Retrieved from www.diabetes.org

American Cancer Society, 2022. Retrieved from www.cancer.org

America's Health Rankings, 2019. Retrieved from www.americashealthrankings.org

American Heart Association, 2022. Retrieved from www.heart.org

American Public Health Association. Maternal and Child Health, 2022. Retrieved from Maternal and Child Health (apha.org).

Behavioral Risk Factor Surveillance System (BRFSS), America's Health Rankings, United Health Foundation, 2019. Retrieved from www.americashealthrankings.org

Centers for Disease Control and Prevention. Oral Health Conditions, 2022. Retrieved from Oral Health Conditions (cdc.gov).

Center for Prevention Research and Development. (2018, 2020, 2022). *Illinois Youth Survey, Lake County*. Retrieved from County Reports - Illinois Youth Survey

County Health Rankings. Fatality Analysis Reporting System, 2016-2020. Retrieved from Alcohol-Impaired Driving Deaths in Illinois | County Health Rankings & Roadmaps

County Health Rankings, 2022. Retrieved from County Health Rankings & Roadmaps

Hacker KA, Briss PA, Richardson L, Wright J, Petersen R. COVID-19 and Chronic Disease: The Impact Now and in the Future. Preventing Chronic Disease 2021;18:210086. DOI: http://dx.doi.org/10.5888/pcd18.210086

Illinois Department of Public Health. Website Data-Deaths, 2021. Retrieved from Website data - Deaths 2021.xlsx (illinois.gov)

Illinois Department of Public Health. Website Data-Death Causes by County 2021. Retrieved from *Website data - Deaths 2021.xlsx (illinois.gov).

Healthy People 2030. 2022. Retrieved from Healthy People 2030 | health.gov

Healthy People 2030. Heart Disease and Stroke, 2022. Retrieved from www.health.gov/healthypeople

Illinois Department of Public Health. Heart Disease and Stroke, 2022. Retrieved from dph.illinois.gov

Lake County COVID-19 Details, Lake County Health Department, 2020 Lake County COVID-19 Details | Tableau Public). Lake County, Illinois Coroner's Office. 2021 Annual Report, 2021. Retrieved from Lake County, IL (lakecountyil.gov)

Reinert, M., Nguyen, T., Fritze, D. (2022). *The State of Mental Health in America*. Mental Health America.

2022 State of Mental Health in America Report | Mental Health America (mhanational.org)

Metopio. Accessed via a contract with Advocate Aurora Health. Website is unavailable to the public. The following data sources were accessed through the portal:

American Community Survey, 2015-2019, 2016-2020

Bureau of Labor Statistics, 2020

Behavioral Risk Factor Surveillance System, 2019

Behavioral Risk Factor Surveillance System (BRFSS), Razzaghi, Wang, et.al. (MMWR Morb Mortal Wkly Rep 2020), PLACES, 2019).

Centers for Disease Control and Prevention, 2018

Centers for Disease Control and Prevention WONDER, 2015-2019, 2016-2020

Centers for Medicare and Medicaid Services, 2018

Centers for Medicare and Medicaid Services, National Provider Identifier, 2021

Diabetes Atlas, 2019

Environmental Protection Agency (EPA), EJSCREEN, 2021Feeding America, 2020

Feeding America, Map the Meal Gap, 2020

FBI Crime Data Explorer, 2016-2020

Health Resources and Services Administration, 2018

Illinois Department of Public Health, 2014-2018, 2021

IHA COMPdata Informatics, 2016-2020

Illinois State Cancer Registry, 2014-2018

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2018

National Low Income Housing Coalition (Out of Reach 2020), 2020

National Vital Statistics System-Mortality, 2016-2020

National Vital Statistics System-Natality (NVSS-N), 2016-2020.

UIC School of Public Health, 2020, 2021

United Way ALICE Data, 2018

USDA, Food Access Research Atlas, 2019

National Alliance on Mental Illness. Mental Health in Illinois Fact Sheet, 2021. Retrieved from www.nami.org/mhpolicystats

National Institutes of Health. Adolescent marijuana, alcohol use held steady during COVID-19 pandemic, 2021. Retrieved from Adolescent marijuana, alcohol use held steady during COVID-19 pandemic | National Institutes of Health (NIH)

Office of the Illinois Secretary of State. Illinois DUI Fact Book, 2022. Retrieved from Illinois DUI Fact Book (ilsos.gov)

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World Health Organization. WHO Launches New Report on Global Tobacco Use Trends, 2019. Retrieved from https://www.who.int/news/item/19-12-2019-who-launches-new-report-on-global-tobacco-use-trends