



# Community Health Needs Assessment

2014 – 2016





December 2016

Advocate Condell Medical Center is pleased to present the 2014-2016 Community Health Needs Assessment (CHNA). Our Community Health staff have worked closely with the Condell Medical Center Community Health Council to complete a comprehensive review of the health issues in Lake County. Condell Medical Center has strong commitment as a faith-based community hospital to fulfill the mission of meeting the health needs of patients, families and the community.

This CHNA specifically demonstrates the strength of collaboration, as the hospital worked extensively with a broad array of community organizations—public, private and not-for-profit, to identify the primary health issues facing the Lake County community. Data has been gathered and analyzed to help identify specific areas of need. The Community Health Council selected and recommended that Condell Medical Center focus on mental health and obesity as our priority issues for the next three years. The Condell Medical Center Governing Council then voted to approve these priorities. We are committed to work in collaboration with community partners to develop programs to impact mental health and obesity in Lake County.

We want to extend a special thank you to the members of the Condell Medical Center Community Health Council and the Lake County Health Department and Community Health Center (LCHD/CHC). The Community Health Council spent numerous meetings reviewing the data and the LCHD/CHC worked with us to administer community surveys in Waukegan and Wauconda. The Health Department's own Community Health Assessment has proven a valuable document to inform the hospital's CHNA.

It is indeed a privilege to serve as your health care provider in Lake County. We look forward to our work together to improve the health of our community.

Sincerely,

A handwritten signature in black ink that reads "Dominica Tallarico". The script is cursive and fluid.

Dominica Tallarico  
President  
Advocate Condell Medical Center

# Table of Contents

## **I. Executive Summary 4**

## **II. Description of Advocate Health Care and Advocate Condell Medical Center 5**

- 5 Advocate Health Care
- 5 Advocate Condell Medical Center

## **III. Summary of the 2011-2013 Community Health Needs Assessment and Program Implementation 6**

- 6 Community Definition
- 6 Assessment Process
- 6 Needs Identified and Priorities Selected
- 7 Summary of Program Strategies and Outcomes to Meet Identified Priorities
  - 7 Diabetes Prevention Management
  - 7 Obesity
    - 7 Elementary School Age Children
    - 8 Obesity Prevention in Newborn Infants of Low-Income Mothers
- 8 Input From the Community
- 8 Lessons Learned

## **IV. 2014-2016 Community Health Needs Assessment 9**

- 9 Community Definition and Sociodemographic Description
  - 10 Age, Gender, Race and Ethnicity
    - 10 Age
    - 10 Gender
    - 10 Race and Ethnicity
  - 12 Languages Spoken at Home
  - 14 Economics
    - 14 Income and Poverty Level
  - 15 Insurance Status
    - 15 Total Insured Adults
    - 16 Medicare
    - 16 Medicaid
    - 16 Uninsured
  - 17 Unemployment
    - 17 Employment by Occupation
  - 17 Education
  - 17 Social Determinants of Health: SocioNeeds Index
  - 19 Key Findings: Demographics
- 19 Key Roles in the Assessment
  - 19 System and Hospital Leadership
  - 20 Community Health Council
  - 21 Governing Council
  - 21 Lake County Health Department Collaboration
  - 22 Collaboration with Other Partners

# Table of Contents continued...

22	Methodology
22	Timeline
22	Secondary Data
23	Primary Data
23	Lake County Community Strengths Survey
23	Wauconda and Waukegan Community Surveys
24	Input from the Community and Vulnerable Populations in Particular
24	Summary of Results
25	Summary of Condell Medical Center-Lake County Health Needs
25	Cardiovascular Disease
27	Key Findings: Cardiovascular Disease
28	Diabetes
29	Key Findings: Diabetes
29	Obesity
33	Key Findings: Obesity
33	Mental Health
33	Mental Health in Adults
35	Mental Health in Children and Adolescents
36	Key Findings: Mental Health
36	Substance Abuse
37	Smoking
37	Marijuana
37	Heroin and Opioids
38	Alcohol
40	Key Findings: Substance Abuse
41	Maternal and Child Health
42	Key Findings: Maternal and Child Health
42	Identifying Priorities
42	Priority Setting Process
42	Criteria
43	Priorities Selected
43	Cumulative Voting Process
43	Mental Health
43	Obesity
43	Explanation Why Other Needs Not Selected as Priorities
43	Diabetes
44	Cardiovascular Disease
44	Substance Abuse
44	Cancer
44	Maternal and Child Health
44	Approval of CHNA by Condell Medical Center Governing Council



# Table of Contents continued...

## **V. 2016 Implementation Planning 45**

- 45 Obesity
  - 45 Lake County Health Department
- 45 Mental Health
  - 45 Lake County Health Department Behavioral Health Action Teams

## **VI. Community Feedback and Sharing Results 46**

- 46 Community Feedback
- 46 Sharing Results

## **VIII. Appendices 47**

- 47 Appendix 1: County Community Health Improvement Plans, Surveys and Other Reports
  - 47 Live Well Lake County Community Health Improvement Plan 2016-2021
  - 49 Live Well Lake County Community Health Assessment 2016-2021
  - 52 Wauconda Community Survey Findings 2016
  - 54 Waukegan Community Survey Findings 2016
  - 56 Lake County Health Department/Community Health Center Obesity in Lake County 2015 Status Report
  - 58 An Assessment of Behavioral Health Needs, Service Capacities and Projected Trends in Northern Lake County, July 2014
  - 61 Community Action Plan for Behavioral Health in Lake County, Illinois, 2016-2020, November 2015
- 62 Appendix 2: Data Sources for 2014-2016 CHNA
- 63 Appendix 3: Cancer Presentation Provided to Condell Medical Center's Community Health Council
- 68 Appendix 4: Health Issues Review: Advocate Condell Medical Center Top Health Issues

# I. Executive Summary

Advocate Condell Medical Center has strong commitment as a faith-based community hospital to fulfill the mission of meeting the health needs of patients, families and community members. This work begins with a broad understanding of the assets, needs, challenges and social and economic conditions facing the community. Condell Medical Center has had a long history of working closely with community stakeholders through coalitions to accomplish this task. By building sustainable relationships and partnering with community organizations, the hospital can gain a stronger understanding of needs and create solutions that are comprehensive, inclusive and aligned with other strategies in Lake County. This Community Health Needs Assessment (CHNA) report explains the process, data sources and strategy used to help bring improved health and vitality to the communities that Condell Medical Center is privileged to serve. For the purposes of this CHNA, Condell Medical Center has defined “community” as Lake County.

The hospital established a Community Health Council (CHC) in 2011 and has a community health plan in place from the 2011-2013 CHNA. For the 2014-2016 CHNA cycle, the CHC focused on developing a three-year plan, based on the results of the assessment. While the CHC defined the community as Lake County, data from the hospital’s Primary Service Area (PSA) and Secondary Serve Area (SSA) was also analyzed, where available, to further define specific health issues.

Through Lake County community partnerships and coalitions, Condell Medical Center participated in the Lake County Health Department’s comprehensive community health assessment in 2016. The Live Well Lake County 2016-2021 Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP) were important source documents used in the Condell Medical Center CHNA. Additionally, Advocate Condell Medical Center and Good Shepherd Hospital commissioned community surveys in Waukegan and Wauconda, and these survey results were also used to more clearly understand the unique health needs in Lake County, particularly in communities of higher poverty.

A key source for secondary data was the Healthy Communities Institute (HCI), a centralized data platform purchased by Advocate Health Care. In early 2014 Advocate Health Care signed a three-year contract with HCI, now a Xerox Company, to provide an internet-based data resource for their eleven hospitals during the 2014-2016 CHNA cycle. Hospital-based data for specific health diagnoses was queried and combined with public health data to identify geographic areas with specific health needs.

In preparation for the selection of priorities, Condell Medical Center community health staff presented a comprehensive summary of the demographics, six health issues and social determinants. Staff asked CHC members to consider a defined list of criteria when making the priority selections.

The Community Health Council put significant time and thought into determining how to select priorities that were meaningful to the health of community members as well as having the potential to show measurable health improvements. Mental health and obesity were the main health priorities selected for focus. (Once priorities were determined, specific tactics and measurable targeted outcomes were established including a hospital budget to be sure specific resources were allocated toward addressing specific needs.)

The final CHNA document was presented for approval to the hospital Governing Council in December 2016. The Community Health Council will work in conjunction with the Condell Medical Center community health staff to develop a detailed three-year plan for 2017-2019. The Community Health Council will continue to meet quarterly to review the progress of the interventions and outcomes and engage in annual strategic discussions to evaluate any modifications to the plan that might be necessary. It is the hope of Advocate Condell Medical Center that this report will prove valuable and will allow members of the Lake County community to gain a greater understanding of the health issues within Lake County.

## II. Description of Advocate Health Care and Advocate Condell Medical Center

### Advocate Health Care

Advocate Condell Medical Center is one of 11 hospitals in the Advocate Health Care (Advocate) system. Advocate is the largest health system in Illinois and one of the largest healthcare providers in the Midwest, operating more than 400 sites of care, including 11 acute care hospitals, the state's largest integrated children's network, five Level I trauma centers, two Level II trauma centers, the region's largest medical group and one of the region's largest home health care companies. The Advocate system trains more primary care physicians and residents at its four teaching hospitals than any other health system in the state.

Advocate is a faith-based, not-for-profit health system related to both the Evangelical Lutheran Church in America and the United Church of Christ. Advocate's mission is to serve the health needs of individuals, families and communities through a holistic philosophy rooted in the fundamental understanding of human beings as created in the image of God. This holistic approach provides quality care and service and treats each patient with dignity, respect and integrity. To guide its relationships and actions, Advocate embraces the five values of compassion, equality, excellence, partnership and stewardship. The mission, values and holistic philosophy (MVP) permeate all areas of Advocate's healing ministry and are integrated into every aspect of the organization building a cultural foundation. The MVP calls Advocate to extend its services into the community to address access to care issues and to improve the health and well-being of the people in the communities Advocate serves. As an Advocate Hospital, Condell Medical Center embraces the Advocate system MVP.

### Advocate Condell Medical Center

Advocate Condell Medical Center (Condell Medical Center) has been providing high quality care to residents in the north suburbs of Chicago for more than 80 years. Ranked among *US News & World Report's* top hospitals, Condell Medical Center is the largest health care provider and only Level I trauma center in Lake County, Illinois. Condell Medical Center is a non-profit, acute care hospital offering a full spectrum of medical services. Condell Medical Center offers comprehensive cardiac care and Lake County's most comprehensive cardiovascular program, wide-ranging orthopedic services from diagnostics to treatment and rehabilitation, 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 is the only Sexual Assault Nurse Examiner (SANE) in Lake County to provide 24/7 care and support for victims of sexual assault.

Condell Medical Center uses the latest in advanced technology for care, including the Robotic da Vinci® Surgical System, PET/MRI, computer-assisted surgery, PET/CT scanning, and Linear Accelerator for Radiation Therapy. The hospital is accredited by DNV Healthcare as a Primary Stroke Center. Condell Medical Center also features the only dedicated pediatric emergency department in Lake County and is the only hospital in Lake County to offer all private adult patient rooms.

Condell Medical Center has been named to the Truven Health 100 Top Hospitals list and has the Society of Thoracic Surgeons "3-Star" designation for cardiac surgery. The hospital is a member of the American College of Radiology Breast Imaging Center of Excellence and the Sleep Disorders Center is accredited by the American Academy of Sleep Medicine.



**Exhibit 1: Advocate Condell Medical Center Statistics 2015**

Category	Number
Admissions	16,698
Observations	6,559
Outpatient Visits	205,516
Births	2,271
Emergency Department Visits	59,068
Inpatient Surgeries	3,788
Outpatient Surgeries	6,754
Total Surgeries	10,542
Medical Staff Physicians	624

Source: Advocate Health Care Strategic Planning Department, 2016.

### III. Summary of the 2011-2013 Community Health Needs Assessment and Program Implementation

#### Community Definition

For the purposes of the 2011-2013 CHNA Condell Medical Center defined the “community” as Lake County. According to the US Census Bureau, Lake County had a total population of 706,222 in 2011, made up of roughly equal proportions of females (353,134) and males (353,088), with a median age of 36.7 years. This represented a growth of 10.6 percent, or about 1 percent a year, over the 2000 census. According to 2010 census data, about 27.4 percent of the population was younger than 18, and 10.4 percent was 65 years and older. Lake County population was 75.1 percent White; 7 percent African-American; 6.3 percent Asian; and 1.6 percent other. About 19.9 percent of the population was Hispanic, who may be of any racial group. Most Hispanics – about 81.6 percent – were born in the United States, including 60 percent born in Illinois. (Note: Population percentages total more than 100% as some individuals were able to select more than one category.)

#### Assessment Process

For the 2011-2013 Community Health Needs Assessment, Condell Medical Center convened its Community Health Council (CHC) to review a broad set of primary and secondary community data. Primary data sources included the 2009 Lake County Illinois Project for Local Assessment of Needs (IPLAN), the Behavioral Risk Factor Surveillance System, 2010, Centers for Disease Control and Prevention (CDC), 2016. Additionally, a wide array of 2010-2012 hospital discharge, registry and hospitalization data was reviewed including hospital admission, discharge and emergency department data, which allowed the CHC to capture disease-specific health information about Condell patients. Informational interviews with key informants also were conducted to supplement other primary and secondary data collection. The Council was chaired by the hospital’s community health leader and comprised of representatives from the executive team, public affairs and marketing, mission and spiritual care, and business development and strategy. Community members serving on the hospital’s Governing Council were also recruited as active participants in the Community Health Council.

#### Needs Identified and Priorities Selected

Several common themes emerged from the 2011-2013 Community Health Needs Assessment. In the Lake County Community Health Status Assessment (CHSA) Report, behavioral health (comprised of mental health, mental illness and substance abuse) was identified as a cross-cutting issue and a priority health concern. Diabetes prevention and management was a top need community-wide, from health care providers serving low-income, minority populations to faith-based organizations serving predominantly

white residents. In a community survey conducted by the Lake County MAPP Steering Committee, diabetes was rated as a moderate to major problem. Obesity was also identified as a top health issue, both for adults and school-aged children. Informants expressed a need for both prevention and intervention. The 2009 Behavior Risk Factor System Survey (BRFSS) found that 19.8 percent of Lake County adults were obese, and the 2010 Illinois Youth Survey data showed 25 percent of 6th through 12th-graders were overweight or obese. Finally, while countywide health status indicators tend to be favorable for Lake County, the rates of hospitalization for chronic and ambulatory sensitive conditions suggested some geographical disparity. The communities that are in the northern part of the county tended to have higher rates of hospitalization than the southern part of the county. The Lake County assessment noted that social determinants of health, including access to reliable options for physical activity, community safety, access to healthy foods, and cultural biases had an effect on the health status of some Lake County residents.

For the 2011-2013 CHNA, Condell Medical Center's Community Health Council identified the following health needs for Lake County – cardiovascular disease, behavioral health, obesity, cancer and diabetes. Based on the alignment of Condell Medical Center's capabilities and expertise, as well as community partnerships, the Community Health Council selected diabetes and obesity as the top health priorities to address.

## **Summary of Program Strategies and Outcomes to Meet Identified Priorities**

The following is a brief summary of program strategies and outcomes for each priority.

### *Diabetes Prevention Management*

Condell Medical Center developed a community-based Diabetes Prevention and Management Program for low-income adults with the goal of improving health outcomes by reaching individuals who are at risk for diabetes or who have diabetes at an early, less acute stage of disease. In 2014, the hospital began working with HealthReach, a free clinic providing primary care to uninsured residents of Lake County. Condell Medical Center clinicians provided diabetes care for 22 HealthReach clients at the Mundelein site. In June of 2014, HealthReach was dissolved and transitioned to a Federally Qualified Health Center (FQHC) operated by Erie Family Health Center, and the Mundelein location was closed.

In 2015, Condell Medical Center transitioned to focus its community-based diabetes prevention and management program in Antioch with grant support from the Healthcare Foundation of Northern Lake County. The goal was to improve health outcomes in the Antioch community by helping individuals prevent or manage diabetes before the disease became acute. The program provided small-group education, individual counseling sessions with a diabetes nurse educator and a diabetes nutritionist and tracking of participants' A1C levels. Through April 2016, the program served 47 clients in diabetes education, counseling and A1C level monitoring. A total of 35 clients completed at least two counseling visits with a dietitian, and 12 clients had one visit for a total of 82 counseling sessions provided. Among clients with diabetes, the average A1C level at first test was 7.4 and the average A1C level on a follow-up test was 6.3. Pre-diabetic clients (A1C levels of 5.7-6.4) also decreased their A1C levels, from an average of 6.0 to 5.8 on a second test. As of the end of 2015, 96% of participants completing a post-test of knowledge scored 70% or better. A comparison of pre and post-tests showed scores increased by an average of 60%.

### *Obesity*

#### **Elementary School Age Children**

Condell Medical Center initiated the CATCH (Coordinated Approach to Child Health) program with a goal of educating at least 2,000 elementary-aged children. CATCH is an evidence based program that targets elementary-age, school children, with the goal to reduce the risk factors for obesity. The program creates behavior change through enabling physical activity and healthy food awareness. CATCH has actively engaged in over 25 years of research and experience, with over 10,000 schools and communities currently using CATCH – additionally, 32 states use CATCH in their YMCA's. Over the years, the program has expanded from elementary schools to middle schools and after-school programs as well.

During the 2014-2015 school year, the physical education (PE) teachers at the Woodland Intermediate School in Gurnee presented the CATCH program to more than 1,200 4th and 5th graders. For the 4th grade students, the average score increased by 6% from the pre-test to the post-test; and for 5th grade students,

the average score increased by 11%. FitnessGram, a tool designed to assess fitness levels, was not able to be utilized due to problems with the software following the sale to a new company. In October 2015, a day-long CATCH training was provided to additional Gurnee school district staff and additional CATCH equipment was also purchased. During the 2014-2015 school year, at the four Libertyville District 70 schools, PE teachers included CATCH topics, activities and vocabulary in their instruction. However, they did not consistently administer pre-and post-tests in 2016.

### **Obesity Prevention in Newborn Infants of Low-Income Mothers**

The obesity prevention program was focused on low-income new mothers in Lake County, with the goal of reducing the risk factors associated with childhood obesity. Literature shows that breastfeeding can be a significant way to impact future childhood obesity. The performance measures included: increase by 5% the number of infants breastfeeding exclusively for at least three months, increase by 5% the number of women enrolled in the Family Case Management Program, and increase by 5% the number of Medicaid women enrolled in prenatal and postpartum support groups, by 2019. Additionally, long-term goals included increasing by 5%, the number of infants' breastfeeding at six months and at one year. In correlation to the breastfeeding goals, long-term indicators also included reducing by 5% the number of children who are considered obese.

To meet the goals, one of the objectives was to partner with the Lake County Health Department (LCHD) to link Nurse-Family Partnership staff with Medicaid mothers within 48 hours of discharge. A second objective involved expanding the program to offer prenatal education to Medicaid mothers. Next steps were to discuss community-based prenatal education and services with the LCHD.

Condell Medical Center nurses continue to educate all postpartum patients about the importance of exclusive breastfeeding and offer ongoing support through two breastfeeding support groups. Condell Medical Center staff continue to educate Lake County Health Department patients about the Nurse Family Partnership follow-up program. The Condell Medical Center birth certificate registrar obtains consents to release health information and faxes to the LCHD Special Supplemental Nutrition Program for Women Infants and Children (WIC) program. Data collected through 2015 shows that 35.3% of all Lake County WIC postpartum clients are contacted by breastfeeding peer counselors at least twice in the week after delivery, and 47.8% of postpartum clients are contacted at the Mid-Lakes WIC clinic at least twice in the week after delivery.

A poster presentation was developed from the collaboration entitled "Partnering Hospital and Community Resources to Increase Breastfeeding in Lake County, Illinois." The poster was presented at the 2015 Perinatal Nursing Conference, the Advocate Health Care Nursing Research Symposium, the Advocate Condell Medical Center Nurse Week Poster Forum 2015, the 2015 Lamaze and International Childbirth Education Association (ICEA) Joint Conference, and the 2015 Illinois Perinatal Quality Collaborative (PQC) 3rd Annual Conference.

### **Input From the Community**

After the CHNA was completed, it was posted on the hospital's website in December 2013 with a mechanism for public comment. Subsequently, the CHNA's progress has been posted on the hospital's website each year for community information and comment. No comments have been received from the public regarding the 2011-2013 CHNA report or implementation plan.

### **Lessons Learned**

Condell Medical Center identified two key lessons learned from the previous CHNA cycle. First, due to the nature of the programs developed to address diabetes, it was difficult to sustain community participation over a long period of time. Grant funding from a local community foundation allowed Condell Medical Center to conduct education and screening programs in the community of Antioch; however, the number of participants was not as large as anticipated. Secondly, there were more opportunities to share the results of the CHNA, both internally and in the community, to promote collaboration and partnerships to address specific needs. Condell Medical Center will develop a plan to disseminate and share the 2014-2016 CHNA results more widely.



## IV. 2014-2016 Community Health Needs Assessment

### Community Definition and Sociodemographic Description

For the purpose of this 2014-2016 CHNA, Condell Medical Center defines the “community” as Lake County. The combined population of the Condell Medical Center Primary Service Area (PSA) and Secondary Service Area (SSA) equals 80% of the total population of Lake County. Patients are admitted to Condell Medical Center from communities throughout Lake County. In light of the fact that Condell Medical Center serves all of Lake County, county data was utilized in the community health needs assessment (CHNA). This data will be supplemented by detailed data for both the PSA and SSA wherever available, which will provide a more localized understanding of health issues.

As of 2016, the population of Lake County is 707,030. The population of the PSA is 391,022 and the SSA population is 172,345. The three largest communities within the PSA are Waukegan (60085) with a population of 69,644; Round Lake with a population of 60,766 and Gurnee with a population of 38,842. The largest communities in the SSA are Buffalo Grove with a population of 41,380 and Zion with a population of 31,535. The growth rate of the PSA is quite slow, with only 0.83% growth from 2010 to 2016. The growth rate of the SSA is higher, increasing 1.09% since 2010. The overall growth rate of Lake County is 0.51%. (Healthy Communities Institute, Claritas, 2016.) The table in Exhibit 2 contains the zip codes and cities within the PSA and SSA.

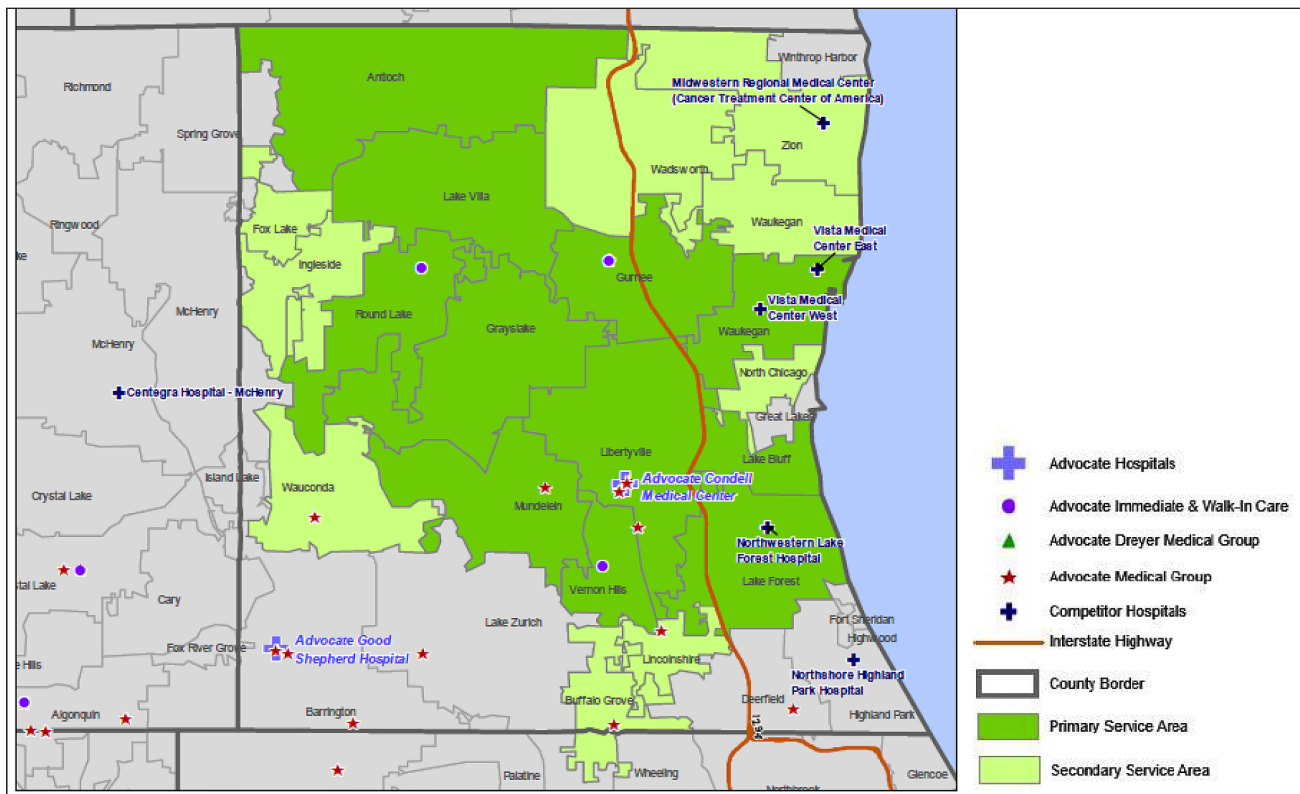
**Exhibit 2: Condell Medical Center PSA and SSA Communities by Zip Code 2016**

Advocate Condell Medical Center			
Primary Service Area			
Zip Code	City	Zip Code	City
60002	Antioch	60020	Fox Lake
60030	Grayslake	60041	Ingleside
60031	Gurnee	60064	North Chicago
60044	Lake Bluff	60069	Lincolnshire
60045	Lake Forest	60083	Wadsworth
60046	Lake Villa	60084	Wauconda
60048	Libertyville	60087	Waukegan
60060	Mundelein	60089	Buffalo Grove
60061	Vernon Hills	60099	Zion
60073	Round Lake		
60085	Waukegan		

Source: Advocate Health Care Strategic Planning Department, 2016.

The map of Condell's service area is displayed in Exhibit 3. Dark green indicates the PSA and light green shows the SSA.

**Exhibit 3: Condell Medical Center PSA and SSA Map**



Source: Advocate Health Care Strategic Planning Department, 2016.

## *Age, Gender, Race and Ethnicity*

### **Age**

Lake County has a median age of 37.9 years. In Lake County, 25% of the population is under the age of 18. North Chicago and Waukegan (60085) are the two communities with the highest percentage of population under age 18, at 31% and 30% respectively. Additionally, 13% of the Lake County population is sixty-five years of age and older, with Lincolnshire, Barrington and Highland Park having the largest senior populations.

The median age for the PSA is 38.05 years. In the PSA, 26% are under the age of 18, with Waukegan (60085) and Round Lake being the communities with the largest percentages of children and youth. Twelve percent of the PSA population is 65 years of age and older; Libertyville and Lake Villa have the largest senior populations.

In the SSA, the median age 39.19 years. In the SSA, 24% are less than 18 years old, with North Chicago and Zion having the highest percentage of population under age 18. Fourteen percent of the SSA population is age 65 or older. Lincolnshire and Fox Lake have the largest senior populations in the SSA.

### **Gender**

Fifty percent of PSA residents are male and 50% female; the same gender ratio is true for Lake County. The SSA population is 49% male and 51% female.

### **Race and Ethnicity**

Seventy-two percent of the PSA population is White, 8% Asian, 6% African American, and less than 1% American Indian. Twenty-five percent of PSA residents are of Hispanic ethnicity. The PSA has a higher population of individuals of Hispanic ethnicity and Asian residents, than Lake County and the SSA. The SSA has the highest percentage of African American residents. Exhibit 4 shows the key demographic characteristics of Lake County, the PSA and SSA.

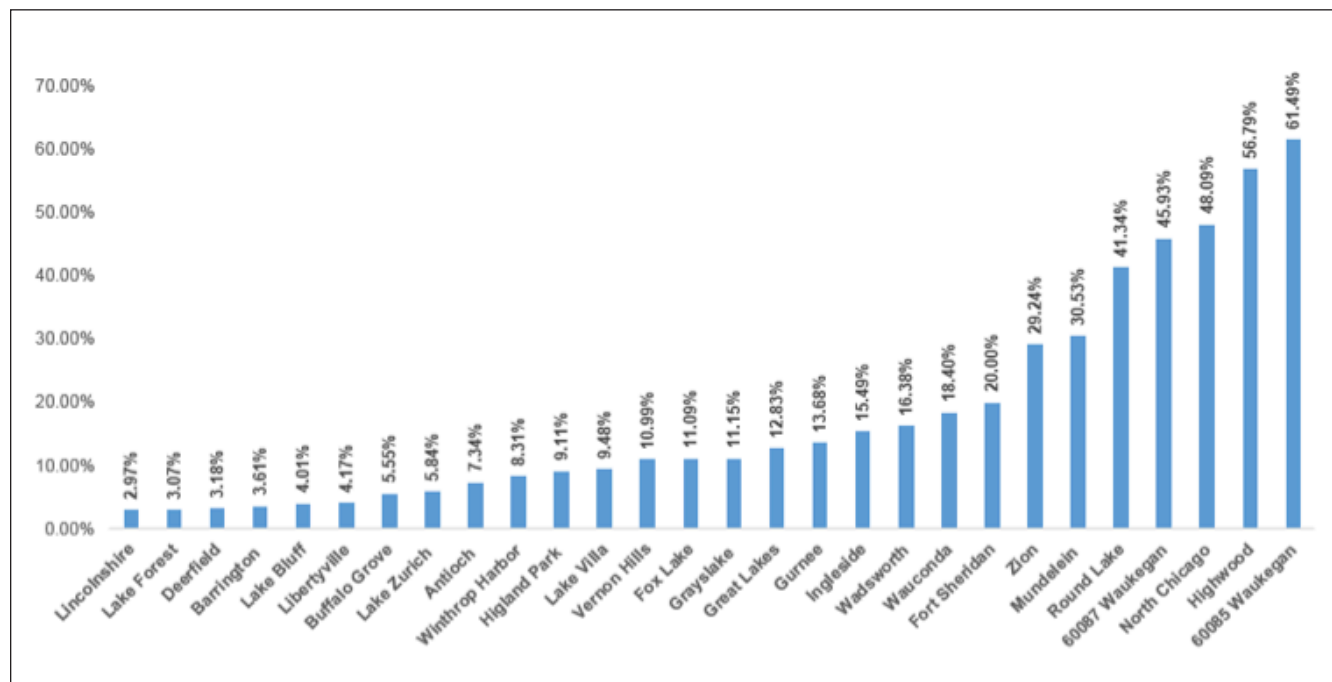
#### Exhibit 4: Gender, Race and Ethnicity for PSA, SSA and Lake County 2016

2016 Indicator	Lake County	PSA	SSA
Total Population	707,030	391,022	172,345
Median Age	37.9	38.05	39.19
Race and Ethnicity			
White	73.30%	71.60%	66.07%
African American	7.09%	6.17%	12.58%
Asian	7.15%	7.66%	7.71%
American Indian	0.48%	0.60%	0.46%
Native Hawaiian/Pacific Island	0.05%	0.05%	0.05%
Other Race	9.11%	11.01%	9.94%
Two or More Races	2.81%	2.92%	3.19%
Hispanic Ethnicity	21.31%	25.39%	22.75%

Source: Healthy Communities Institute, Claritas, 2016.

The zip codes in Lake County with the largest Hispanic population are Waukegan (60085) at 62%, Round Lake (60073) at 41% and Mundelein (60060) at 31%, as shown in Exhibit 5. (Healthy Communities Institute, Claritas, 2016.)

#### Exhibit 5: Percent of Hispanic Population in Lake County by Zip Code 2016



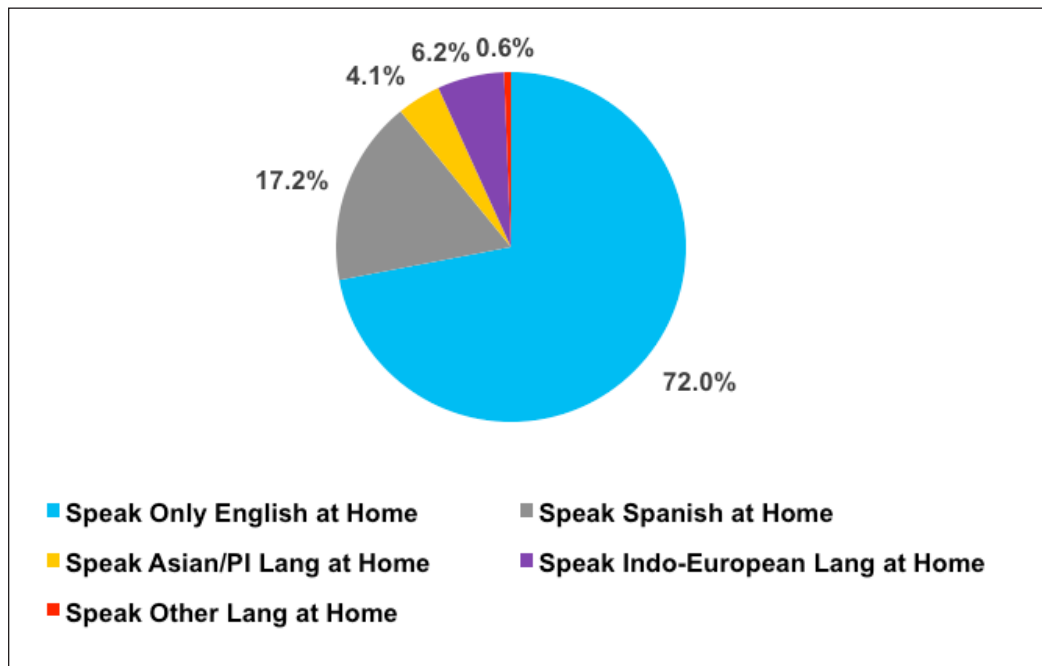
Source: Healthy Communities Institute, Claritas, 2016.



## Languages Spoken at Home

A total of 28% of the Lake County population speaks a language other than English at home, including Spanish, Indo-European languages, Asian/Pacific Island and other languages. Exhibit 6 displays the language breakdown for Lake County.

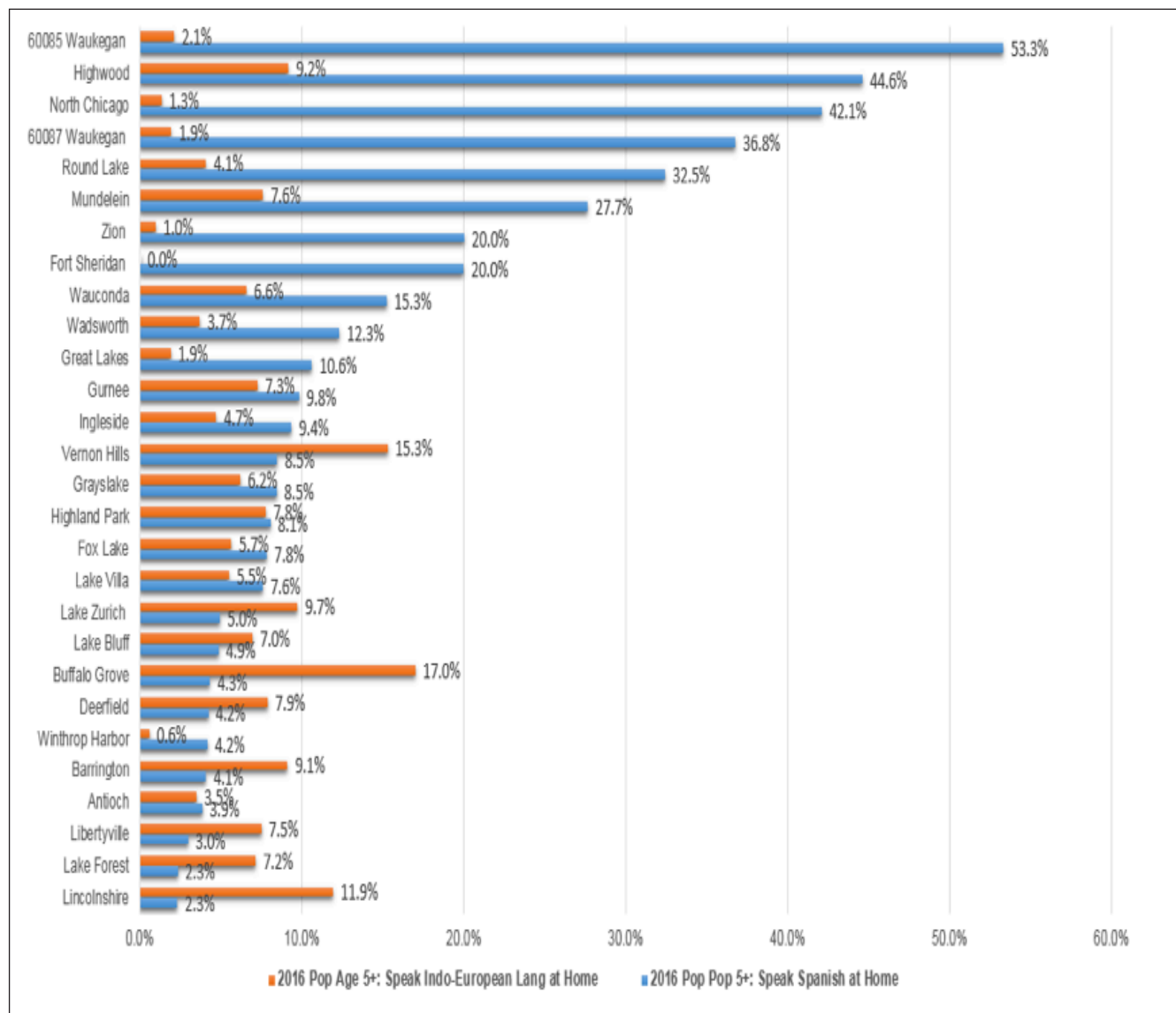
**Exhibit 6: Lake County Population Age 5+ by Language Spoken at Home 2016**



Source: Healthy Communities Institute, Claritas, 2016.

The cities in Lake County with the highest percentage of the population who speak Spanish at home are Waukegan (60085) at 53% and Highwood at 45%. The Lake County communities with the largest population speaking an Indo-European language are Buffalo Grove at 17% and Vernon Hills at 15%, as shown in Exhibit 7. The cities with the highest percentage of the population speaking an Asian and Pacific Island language are Vernon Hills at 12% and Lincolnshire at 10%. (Healthy Communities Institute, Claritas, 2016.)

**Exhibit 7: Lake County Percent of Spanish and Indo-European Languages Spoken by Zip Code 2015**



Source: Healthy Communities Institute, Claritas, 2016.

In the PSA, 32% of the population speaks a language other than English at home. Spanish-speakers comprise 21%, 4% speak Asian/Pacific Island languages, 6% speak Indo-European languages, and 0.6% speak other languages. When compared to other communities in the PSA, Waukegan (60085) at 53% and Round Lake (60073) at 33% have the highest percentage of Spanish speaking population. The areas in the PSA with the highest Indo-European speaking population are Vernon Hills at 15% and Mundelein at 8%. The communities with the highest population speaking an Asian or Pacific Island language at home are Vernon Hills at 12% and Gurnee at 7%.

In the SSA, 29% of the population speak a language other than English at home. Spanish-speakers make up 18% of the SSA population, 4% speak Asian/Pacific Island languages, 7% speak Indo-European languages, and 0.4% speak other languages. The communities in the SSA with the highest percentage of Spanish speaking population, compared to other communities within the SSA, are North Chicago at 42% and Waukegan (60087) at 37%. The areas with the highest percent of Indo-European speaking population are Buffalo Grove at 17% and Lincolnshire at 12%. The towns with the highest population speaking an Asian or Pacific Island language are Lincolnshire at 10% and Buffalo Grove at 9%. (Healthy Communities Institute, Claritas, 2016.)

## Economics

### Income and Poverty Level

Lake County has an overall median household income of \$78,536. The median household income varies by race and ethnicity in Lake County as shown in Exhibit 8.

**Exhibit 8: Lake County Median Household Income by Race and Ethnicity 2016**

Household Type	Median Household Income
White	\$84,986
African American	\$42,878
American Indian/Alaskan Native	\$50,000
Asian	\$101,597
Native Hawaiian/Pacific Islander	\$200,001
Hispanic Ethnicity	\$51,740

Source: Healthy Communities Institute, Claritas, 2015.

In Lake County 7.5% of families are living below 100% of the Federal Poverty Level (FPL), which is \$24,300 for a family of four. The rate for Lake County is lower than the Illinois rate for families living below 100% of the FPL at 10.8%. North Chicago and Waukegan (60085) are the two communities in Lake County with the highest percentage of families living below 100% of the FPL at 27% and 21%, respectively. (Healthy Communities Institute, Claritas, 2016.) Additionally, 2.2% of households are receiving public assistance in Lake County, including Temporary Assistance to Needy Families (TANF). (Healthy Communities Institute, American Community Survey, 2010-2014.)

In the PSA, the median household income is \$81,352. Eight percent of families in the PSA are living below 100% of the FPL. Comparing all PSA communities, Waukegan (21%) and Round Lake (11%) have highest number of families living below 100% of the FPL. (Healthy Communities Institute, Claritas, 2016.) In the PSA, 2.2% of households are receiving public assistance, such as Temporary Assistance to Needy Families (TANF). (Healthy Communities Institute, American Community Survey, 2010-2014.)

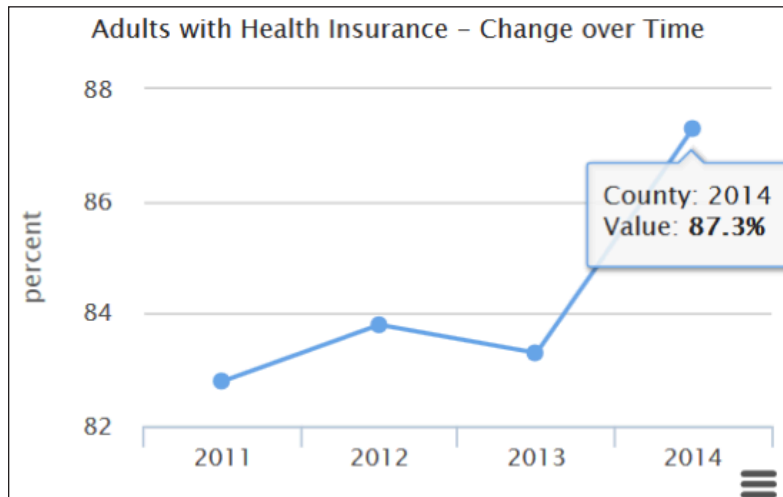
The SSA has the lowest median household income of \$72,760. A total of 8.9% of the families in the SSA are living below 100% of the FPL. Comparing communities within the SSA, North Chicago (27%) and Waukegan (60087) (14%) have the highest percentage of families living below 100% of the FPL. (Healthy Communities Institute, Claritas, 2016.) Data is not available for the SSA for households receiving public assistance.

## Insurance Status

### Total Insured Adults

For Lake County, the total number of adults with health insurance increased to 87.3% in 2014. The rate was 82.8% in 2011, as shown in Exhibit 9. This is still below the Healthy People 2020 national health target of 100% people with health insurance.

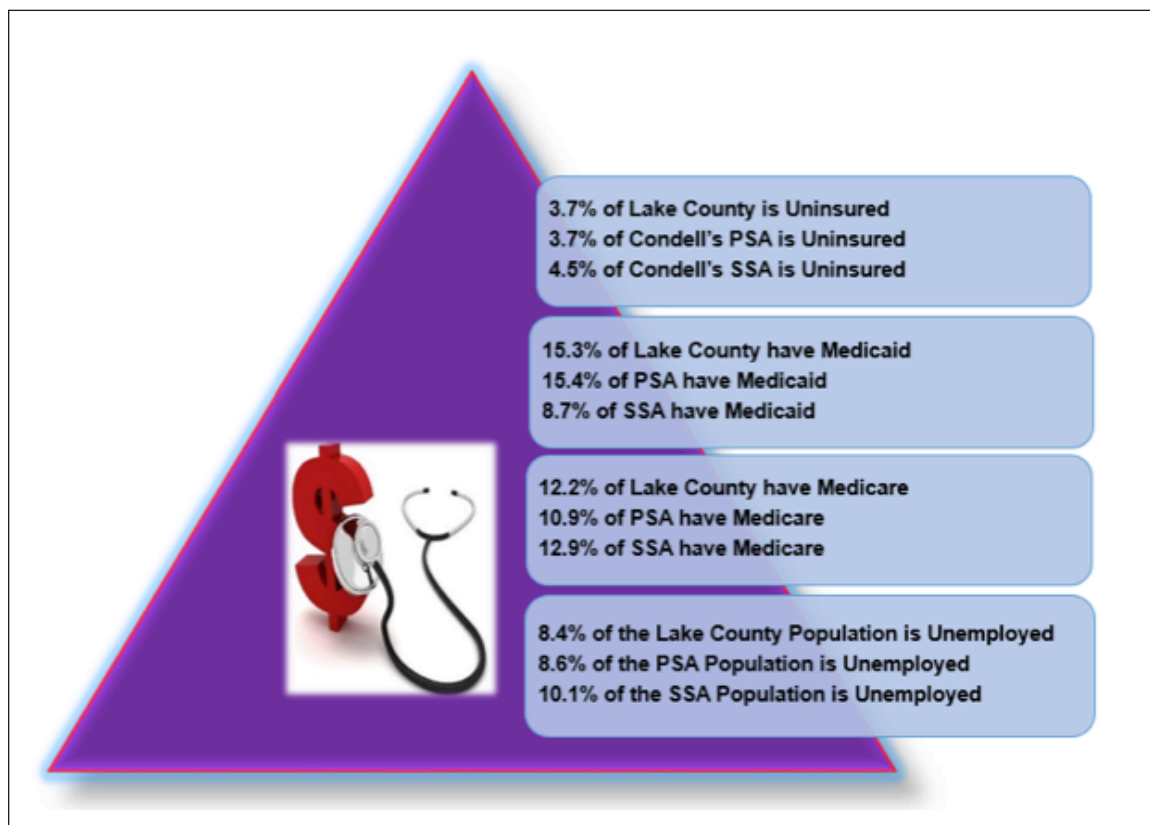
**Exhibit 9: Lake County Adults with Health Insurance 2011-2014**



Source: Healthy Communities Institute, American Community Survey, 2015.

An overview of the key insurance and economic status indicators is provided in Exhibit 10.

**Exhibit 10: Lake County, PSA and SSA Insurance and Economic Status 2016**



Source: Truven Health, Claritas, 2016.

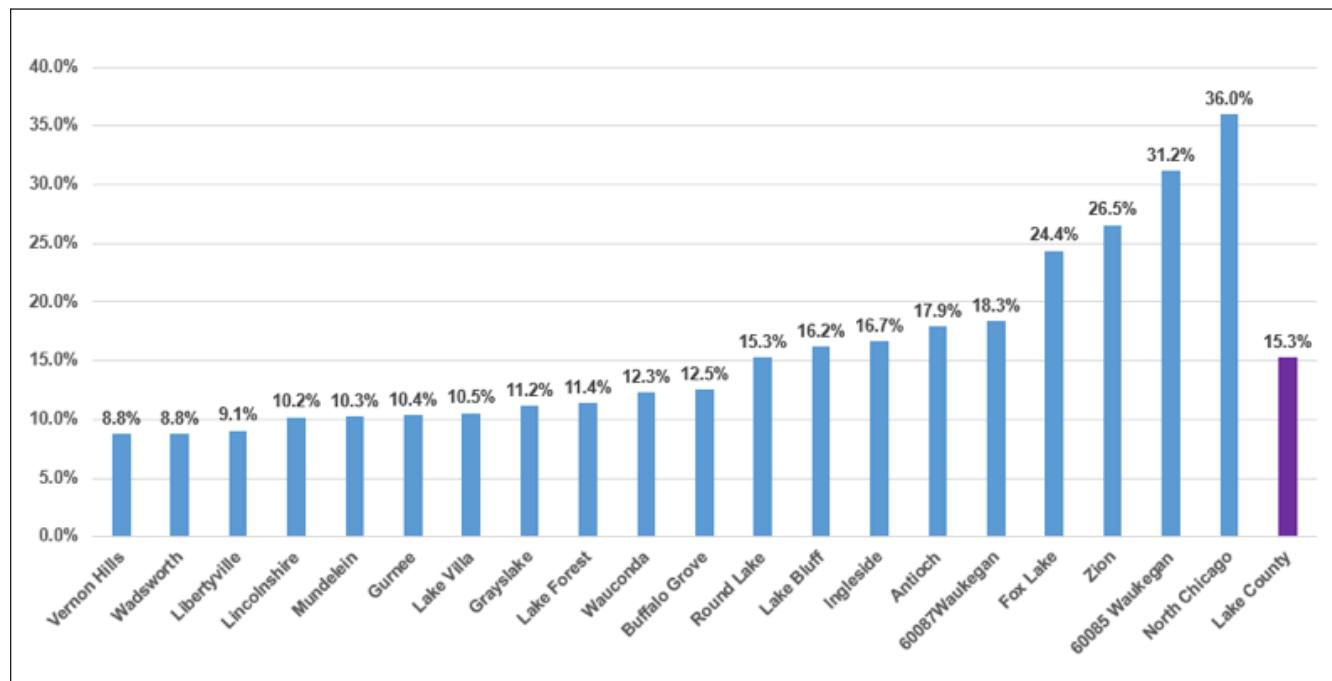
## Medicare

Twelve percent of the Lake County population, 11% of the PSA and 13% of the SSA population are Medicare recipients. In Lake County, 6% of the residents age 65 and over are living below 100% of the FPL. For the PSA, 6.5% live below the federal poverty level. Medicare-age poverty data is not available for the SSA. (Healthy Communities Institute, American Community Survey, 2010-2014.)

## Medicaid

On July 22, 2013, the Illinois Governor signed Medicaid expansion into law, making low-income adults eligible for Medicaid in Illinois. In Illinois from state fiscal year 2014 to FY2016, an additional 55,726 Lake County adults enrolled in Medicaid, who were previously not eligible. (Illinois Healthcare and Family Services, 2016.) There are an estimated 92,382 Medicaid enrollees in the PSA and SSA. Fifteen percent of the PSA population has Medicaid insurance and in the SSA, 18.7% are insured through Medicaid. Exhibit 11 shows that the PSA and SSA communities with the highest Medicaid enrollment are North Chicago with 36%, Waukegan (60085) 31.2%, and Zion 26.5%. (Truven Insurance Coverage Estimates, 2016.)

**Exhibit 11: Lake County Percent of Medicaid Enrollees by Zip Code 2016**



Source: Truven Insurance Coverage Estimates, 2016.

## Uninsured

As of 2016, 3.7% of the Lake County population and 3.7% of the PSA population is uninsured. A slightly higher percentage of residents in the SSA are uninsured at 4.5%. (Truven Insurance Coverage Estimates, 2016.) In Lake County, the communities with the highest uninsured rates are North Chicago (8.4%), Waukegan (60085) (7.2%), Zion (6.5%), Antioch and Waukegan (60087) both at 4.4%. (Truven Insurance Coverage Estimates, 2016.)



## *Unemployment*

The 2016 unemployment rate for Lake County is 8.7%, much lower than the 9.9% unemployment rate for Illinois. The 2016 unemployment rate for the PSA is 8.7%, which is lower than the rate of 10.1% for the SSA. For Lake County, the communities with the highest unemployment rates are North Chicago (17.4%), Zion (14.1%) and Ingleside (13.3%); these communities are all part of Condell Medical Center's SSA. The highest unemployment rates in the PSA are Waukegan (60085) at 11.8% and Round Lake (9.2%). (Healthy Communities Institute, Claritas, 2016.)

### **Employment by Occupation**

In Lake County 67.3% of the employed civilian population, age 16 and older, are white collar workers, 17.2% are blue collar and 15.4% work in a farm-related service. In the PSA, 65.4% are white collar workers, 18.6% are blue collar and 15.9% work in a farm-related service. Finally, in the SSA, 63.8% are white collar workers, 19.7% are blue collar and 16.5% are service and farm workers. (Healthy Communities Institute, Claritas, 2016.)

## *Education*

Graduating high school is important for an individual's social and economic advancement. In Lake County, 11% of the population, age 25 or older, has less than a high school diploma as compared to the Illinois rate at 12.3%. The communities in Lake County with the highest populations without a high school degree are Waukegan (60085) at 32.3% and North Chicago at 32.1%, followed by Waukegan (60087) at 21% and Round Lake (20%). Six percent of Lake County residents have less than a ninth grade education. In contrast, 25% of the Lake County population has a bachelor's degree, which is higher than Illinois at 19.7%. The communities with the highest percentages of adults with a bachelor's degree are Lake Bluff (38%), Lake Forest (38%) and Deerfield (36%). (Healthy Communities Institute, Claritas, 2016.)

In the PSA, 84.8% of the population age 25 or older has a high school degree or higher, but 12.8% of the population has no high school diploma, slightly higher than Illinois overall at 12.3%. After Waukegan (60085) and Round Lake, the city of Mundelein has the highest percentage without a high school degree in the PSA (11.5%). (Healthy Communities Institute, Claritas, 2016.)

In the SSA, 11.9% of the population has no high school diploma. As mentioned earlier, North Chicago and Waukegan (60087) have the highest rates of individuals without a high school diploma. Additionally, 19.1% of the North Chicago population and 11.2% of the Waukegan (60087) population have less than a ninth grade education. (Healthy Communities Institute, Claritas, 2016.)

## *Social Determinants of Health: SocioNeeds Index*

The SocioNeeds Index is an HCI indicator that is a measure of socioeconomic need, correlated with poor health outcomes. The index is calculated from six indicators, one each from the following topics: poverty, income, unemployment, occupation, education and language. The indicators are weighted to maximize the correlation of the index with premature death rates and preventable hospitalization rates. All zip codes, counties, and county equivalents in the United States (US) are given an Index Value from 0 (low need) to 100 (high need). To help identify the areas of highest need within a defined geographic area, the selected zip codes are ranked from 1 (low need) to 5 (high need) based on their Index Value. These values are sorted from low to high and divided into five ranks using natural breaks. These ranks are then used to color the zip codes on a map with the highest SocioNeeds Indices with the darker colors.

The following communities are listed and ranked in order of greatest socioeconomic need to lowest socioeconomic need for all of Lake County. The cities with the highest Index Value and the ranking of 5 are estimated to have the highest socioeconomic need.

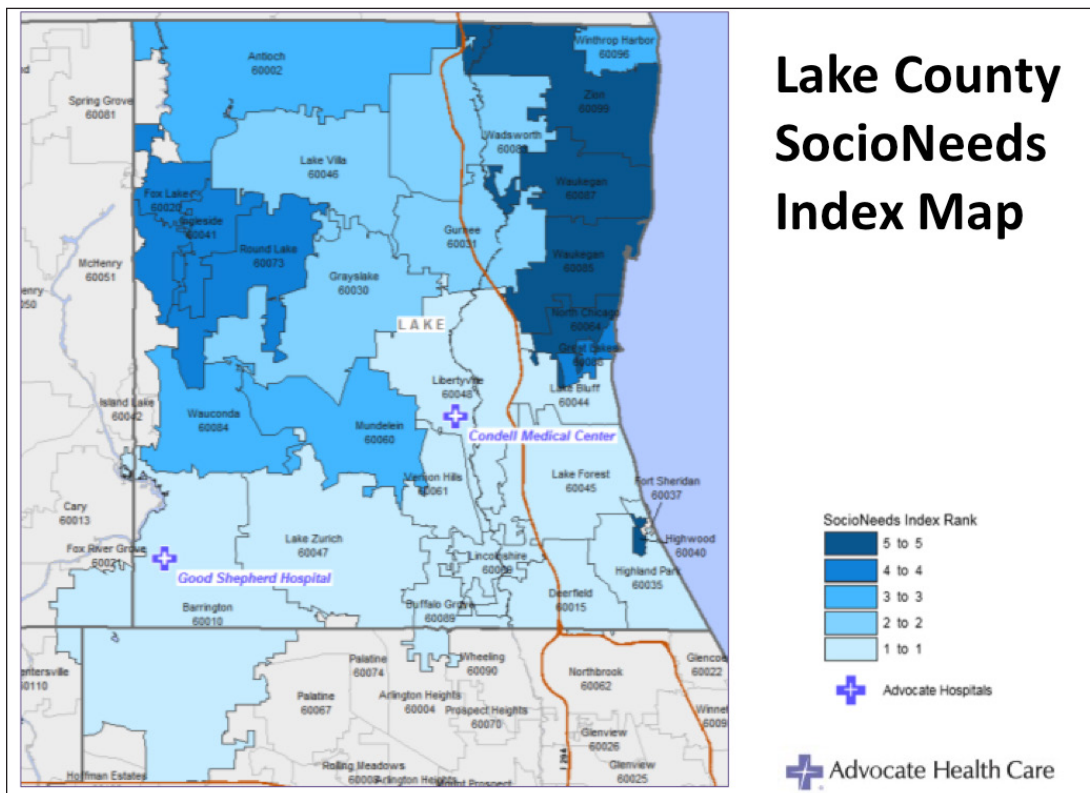
**Exhibit 12: Lake County Communities by SocioNeeds Index Value and Rankings 2016**

Zip Code	City	Index Value	Ranking	Population
60064	North Chicago	96.9	5	14,689
60085	Waukegan	94	5	69,644
60087	Waukegan	74.3	5	27,860
60099	Zion	71.7	5	31,535
60040	Highwood	69.1	5	5,179
60073	Round Lake	59.9	4	60,766
60041	Ingleside	47.1	4	10,060
60020	Fox Lake	40.6	4	10,701
60088	Great Lakes	38.5	4	14,977
60096	Winthrop Harbor	31.6	3	6,678
60002	Antioch	21.5	3	25,452
60084	Wauconda	19.8	3	17,618
60060	Mundelein	19.1	3	37,278

Source: Healthy Communities Institute, Claritas, 2016.

The map in Exhibit 13 illustrates the zip codes and communities in Lake County by their SocioNeeds ranking, from 1 to 5, with 5 being the highest level. The communities in dark navy blue have the highest ranking of 5 and are estimated to have the highest socioeconomic need (North Chicago, Waukegan [60085 and 60087], Zion and Highwood). The communities with the next lighter shade of blue have the ranking of 4, but they are still considered communities of need (Round Lake, Ingleside, Fox Lake and Great Lakes). It should be noted that although Great Lakes (60088) is within the county, it is not served by Condell Medical Center directly. This zip code contains the Great Lakes Naval Base, and the Captain James A. Lovell Federal Health Care Center, part of the US Department of Veterans Affairs, located in North Chicago, provides health care to Navy recruits and veterans.

## Exhibit 13: SocioNeeds Index Map of Lake County 2016



Source: Healthy Communities Institute, Claritas, 2016.

### Key Findings: Demographics

- In Lake County, 25% of the population are under the age of 18.
- North Chicago and Waukegan are the two communities with the highest population under age 18.
- 21.31% of Lake County residents are of Hispanic ethnicity.
- Waukegan (60085) and Round Lake have the highest Hispanic population.
- 28% of Lake County residents speak a language other than English at home.
- Buffalo Grove has the highest percentage of the population speaking an Indo-European language at home.
- Lake County median household income varies greatly by race and ethnicity.
- 7.5% of Lake County families are living below 100% of the FPL.
- The total number of adults with medical insurance increased with the implementation of the Affordable Care Act, from 82.8% in 2011 to 87.3% in 2014.
- As of 2016, 3.7% of the Lake County population remains uninsured.
- The unemployment rate for Lake County is lower than the state rate. However, North Chicago, Zion, Ingleside and Waukegan all have unemployment rates over 11%.
- The communities in Lake County with the highest socioeconomic need are North Chicago, Waukegan, Zion and Highland.

### Key Roles in the Assessment

#### System and Hospital Leadership

In 2014, Advocate Health Care began organizing resources to implement the 2014-2016 CHNA cycle. The system signed a three-year contract with the Healthy Communities Institute (HCI), now a Xerox Company, to provide an internet-based data resource for their eleven hospitals during the 2014-2016 CHNA cycle. This robust platform offered the hospitals 171 health and demographic indicators including thirty-one (31) hospitalization and emergency room (ER) visit indicators at the service area and zip code levels. In addition, system leaders collaborated with the Strategic Planning Department to create sets

of demographic, mortality and utilization data for each hospital site. This collaboration with Strategic Planning continued during the three year cycle ensuring that each hospital site had detailed inpatient, outpatient and emergency department data for its site.

By the end of 2014, a new Department of Community Health was established under Mission and Spiritual Care, a vice-president named to lead the department, and a plan developed to ensure that each hospital in the system would have a community health expert to coordinate its community health work. Condell Medical Center brought a long history of support for community health; key staff now include a Regional Director for Community Health (Advocate Condell Medical Center, Good Shepherd and Sherman Hospitals) and a Community Health Coordinator at Condell Medical Center.

### *Community Health Council*

In alignment with Advocate Health Care's standardized approach, Condell Medical Center convened its Community Health Council (CHC) to review both primary and secondary health data for the CHNA. This CHC is co-chaired by two community representatives who also serve as hospital Governing Council members. The CHC is comprised of eleven community members, representing 50% of the total membership. Non-Advocate-affiliated members represent the Lake County Health Department, a Federally Qualified Health Center, faith-based organizations, area school districts, the American Cancer Society, social service agencies, the primary care and mental health providers, and law enforcement. Condell Medical Center representatives include members of the executive team, mission and spiritual care, trauma, cardiac center and business development and strategy.

#### 2016 Community Health Council Members

- Antioch Orchard Medical Center, Office Manager
- Creating Conversations, Owner
- Erie Family Health Center, Vice President, Patient Support Services
- Lake County Housing Authority, Executive Director
- Lake County Health Department, Prevention Coordinator
- Libertyville School District, Retired School Principal; Condell Medical Center Community Health Council Co-Chair
- Libertyville School District 70, Superintendent
- Mano a Mano Family Resource Center, Executive Director
- Mundelein Ivanhoe Congregational Church, Senior Pastor; Condell Medical Center Community Health Council Co-Chair
- Waukegan Public Library, Community Engagement and Spanish Literacy Services Manager
- Youth Family Counseling, Director, Clinical Services
- Village of Libertyville, Economic Coordinator
- Village of Mundelein, Chief of Police
- Advocate Health Care, Manager, Strategic Planning
- Advocate Medical Group, Internal Medicine Physician
- Condell Medical Center, Chair, Pediatric Department
- Condell Medical Center, Director, Cardiovascular Services
- Condell Medical Center, Director, Nursing and Clinical Operations
- Condell Medical Center, Director of Nursing
- Condell Medical Center, Director, Orthopedic and Neurology Institutes
- Condell Medical Center, Director, Public Affairs and Marketing
- Condell Medical Center, Vice President, Clinical Excellence
- Condell Medical Center, Vice President, Clinical Service Lines and Support Services
- Condell Medical Center, Vice President, Mission and Spiritual Care

During the first meeting of the year, a brief overview of Community Health was presented, along with a schedule of the meetings and work to be completed by the CHC during 2016. The CHC voted to ratify a formal charter, outlining the council's authority, purpose, responsibility, scope of activities and annual goals.

Community Health staff presented data in a series of three meetings over an eight-month period. In a fourth meeting, CHC members voted to select two health priorities to focus on in the 2017-2019 period. In the fifth meeting of the year, council members reviewed the 2014-2016 programs and the guidelines for implementation planning, as presented by Community Health staff. Key interventions will be developed around the selected health priority areas.

### *Governing Council*

The Condell Medical Center Governing Council is comprised of 13 members, representing a broad array of community sectors. Members come from the fields of education, manufacturing, faith communities, finance and banking, the community at large, primary care and subspecialty health care. Two members of the Governing Council co-chair the Community Health Council to ensure coordination of information. On December 14, 2016, the Governing Council reviewed and approved the recommended health need priorities from the Community Health Council and the 2016 Community Health Needs Assessment Report.

### *Lake County Health Department Collaboration*

Condell Medical Center worked closely with the LCHD/CHC throughout the CHNA process in 2016. The hospital received regular updates from the health department's ongoing community health improvement plan process and often consulted the LCHD/CHC Community Health Assessment staff for interpretation of data, as it was released. Additionally, Advocate Condell Medical Center and Advocate Good Shepherd Hospital commissioned the health department to conduct two targeted community surveys in Waukegan and Wauconda. Waukegan is within the PSA for Condell Medical Center and Wauconda is within the SSA. These communities were selected because both include a growing Hispanic population and areas of higher poverty. Additionally, Waukegan (60085) is a more densely populated community (69,644) and Wauconda (60084) has a smaller population (17,618) and is identified as more "rural."

The LCHD/CHC's community health improvement process, named Live Well Lake County, was developed within the **M**obilizing for **A**ction through **P**lanning and **P**artnerships, or MAPP, framework. MAPP is a community-driven strategic planning framework utilized in community health improvement. This framework assists communities not only in the prioritization of public health issues, but in creating a platform to develop and implement efforts to address them, leading to action.

From early 2015 through spring 2016, the community health improvement 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's Director of Community Health for the northern region is an active member of this steering committee. Sectors represented include:

- Healthcare (all hospitals in Lake County);
- Federally Qualified Health Center (FQHC);
- Local philanthropic foundations;
- Social service agencies;
- Environmental advocacy agencies;
- Active lifestyle and fitness advocacy agencies;
- County Housing Authority;
- Mental Health agencies;
- County government departments;
- Federal healthcare agency;
- Social service coalition;
- Medical School in Lake County;
- Regional Office of Education.



The community health improvement process yielded two distinct deliverables: 1) the Community Health Assessment; and 2) the Community Health Improvement Plan. The Community Health Assessment uses quantitative and qualitative methods to collect and examine health status indicators and provide an understanding of health in a community. Risk factors, mortality, morbidity, forces of change, the capacity of the local public health system, quality of life, community assets, social determinants of health, and health inequities were collected to identify the community's key health issues. Ultimately, the Community Health Assessment guides the development and implementation of a Community Health Improvement Plan by justifying how and where resources should be allocated to best meet community needs. (Live Well Lake County Community Health Assessment, Summer, 2016.)

### *Collaboration with Other Partners*

Condell Medical Center also collaborated with a number of additional partner organizations on the CHNA. These included the Lake County Underage Drinking and Drug Prevention Task Force, Mano a Mano Family Resource Center, the Lake County Opioid Initiative Task Force and the Wauconda United Health Partnership. Each of the organizations have a focus on medically underserved, low-income and minority populations. Hospital staff are actively engaged in a number of Lake County working committees focused on health. The Condell Medical Center Community Health Coordinator was appointed to the Lake County Health Department Health Literacy Action Team, and the Advocate Northern Region Community Health Director is a member of the Live Well Lake County Steering Committee, as well as the LCHD/CHC Behavioral Health Telemedicine Action Team.

## **Methodology**

### *Timeline*

Condell Medical Center gathered and analyzed a variety of primary and secondary data from 2014 through 2016. This data was presented to the Community Health Council over a period of several meetings and included demographic, economic, education, employment and health data.

### *Secondary Data*

Secondary data was pulled from more than twenty sources to create a demographic profile of Lake County as well as community specific health profiles, which were presented to the Community Health Council. Incidence, mortality and prevalence data was included when available, and a detailed table showing the incidence and mortality rates for Lake County was presented to the CHC on September 22, 2016, as a reference for the selection of priorities. Comparisons to national, state and Healthy People 2020 goals were also included in the health issue profiles. Finally, geographic areas or subpopulations of health disparity were noted for specific health indicators.

A key source for secondary statistics was the Healthy Communities Institute (HCI), a centralized data platform purchased by Advocate Health Care. In early 2014 Advocate Health Care signed a three-year contract with HCI, now a Xerox Company, to provide an internet-based data resource for their eleven hospitals during the 2014-2016 CHNA cycle. This robust platform offered the hospitals 171 health and demographic indicators including thirty-one (31) hospitalization and emergency department (ED) visit indicators at the service area and zip code levels. Utilizing the Illinois Hospital Association's COMPdata, HCI is able to summarize, age adjust and average the hospitalization and ED data for five time periods from 2009-2015.

The HCI contract also provided a wealth of county and zip code data comparisons, a SocioNeeds Index visualizing vulnerable populations within service areas and counties, a Healthy People 2020 tracker and a database of promising and evidence-based interventions. HCI provides a gauge that illustrates comparison of indicators between Lake County, McHenry County, other Illinois counties, Illinois as a state, and other counties in the US.

<b>Green (Good):</b>	When a high value is good, community value is equal to or higher than the 50th percentile (median), or, when a low value is good, community value is equal to or lower than the 50th percentile.
<b>Yellow (Fair):</b>	When a high value is good, community value is between the 50th and 25th percentile, or when a low value is good, the community value is between the 50th and 75th percentiles.
<b>Red (Poor):</b>	When a high value is good, the community value is less than the 25th percentile, or when a low value is good, the community value is greater than the 75th percentile.

Throughout the CHNA, indicators may be referred to as being in the HCI green, yellow or red “zone” or above the “red cutoff,” in reference to the above value ratings from HCI. A full list of the secondary data sources used for the CHNA is included in Appendix 2.

## *Primary Data*

In order to garner community viewpoints and opinions on specific health issues, three main sources of primary data were included in the CHNA. These were:

- Lake County Community Strengths Survey, 2015 (part of Live Well Lake County Community Health Assessment, 2016-2021).
- Waukegan, Illinois Community Survey Report, 2015.
- Wauconda, Illinois Community Survey Report, 2015.

Summaries of these surveys are included in Appendix 1.

### **Lake County Community Strengths Survey**

The Community Strengths Survey was conducted to understand the opinions and perceptions of Lake County residents regarding the quality of life and health in their community. The survey was developed through a workgroup that consisted of members of the Live Well Lake County Steering Committee and Lake County Health Department staff. A total of 14 survey questions were developed that focused on demographics, quality of life, health, and strengths in the community. The survey was distributed online and through paper copies and was available in English and Spanish. The online survey link was distributed to community partners and organizations throughout Lake County email list-serves, website posts, newsletters, flyers and social media messages. A total of 2,370 Lake County residents over the age of 18 years responded to the survey.

### **Wauconda and Waukegan Community Surveys**

In order to better understand the needs and strengths within a community and effectively plan for the future, Advocate Health Care and the Lake County Health Department and Community Health Center (LCHD/CHC) collaborated to collect data on high risk communities within the Advocate Condell Medical Center and Advocate Good Shepherd Hospital service areas. Utilizing a survey tool generated for the Lake County Community Health Status Assessment, individuals in the target community were invited to share their health status and contribute to an assessment of the strengths and needs unique to their neighborhoods. The survey questions were adapted from national tools designed to collect data for improving understanding of health conditions and challenges and drew heavily from the Behavioral Risk Factors Surveillance System (BRFSS) survey used by the Centers for Disease Control and Prevention (CDC) in order to describe health burdens by state. Additional questions were added to assess the prevalence of behavioral health and chronic disease conditions. New questions were subjected to three rounds of review prior to being approved for use in the survey tool. Surveys were administered in English and Spanish.

The community survey in Waukegan has the highest relevance for the Condell Medical Center CHNA. Five thousand randomly-selected households in the Waukegan community were contacted by mail in mid-September 2015 and invited to participate in an anonymous online or call-in survey offered in both English and Spanish. Respondents had a window of ten weeks to participate in the survey. Of the initial 5,000 invitations, 312 were returned as undeliverable. From the invitations sent, the survey received 241 contacts for a contact rate of 5.1% of delivered invitations. A total of 215 respondents moved past the screening questions that verified a respondent’s age and home zip code. Because only the screening questions

were mandatory, the total responses per individual question varied throughout the survey. Responses were collected and weighted for different demographic features including age and sex of the respondents unique to the geography sampled. The source of age and sex estimates were based on the US Census' American Community Survey 5-Year Estimates for years 2010-2014. With this weighting strategy, the Lake County survey was found to produce rates comparable to the I-BRFSS Round 5 estimates. (Wauconda Community Survey Findings, July 2016.)

### *Input from the Community and Vulnerable Populations in Particular*

Input from Waukegan residents was very important, primarily because Waukegan is the largest city in Lake County. The combined population of zip codes 60085 and 60087 is 97,504. With 57% of all Waukegan residents identifying as Hispanic, it also has the largest Hispanic community in Lake County. Forty-five percent of all Waukegan residents speak Spanish at home. Many residents of Waukegan are vulnerable, when compared to the other communities in Lake County. Waukegan is one of the cities with the highest percent of families living below 100% of the FPL, has one of the highest number insured by Medicaid, has one of the highest uninsured rates, has one of the highest unemployment rates, has one of the highest percentage of population with no high school degree, and has the highest SocioNeeds ranking of 5, with an Index Value of 94. Wauconda has a SocioNeeds ranking of 3, with an Index Value of 19.8, reflecting less severe socioeconomic needs.

In the surveys, residents were asked to describe their individual health status. Questions were designed to determine if persons with "very good" or "excellent" health might be realizing benefits from their community environment, while persons in poorer health might not have access to the same resources or be afflicted at higher rates with certain conditions. Both surveys were conducted in English and Spanish to ensure that language was not a barrier to providing input on key community and health issues. Additionally, as part of the Local Public Health Assessment for Lake County, the Live Well Lake County Steering Committee invited public health system partners from public, private and voluntary sectors to participate. The participants were selected with careful consideration to ensure that diverse perspectives of vulnerable populations were shared in each breakout group as well as balanced participation across sectors and agencies. Forty-eight individuals participated, including representatives from homeless shelters, community coalitions, housing, Latino services, workforce development and youth services.

### **Summary of Results**

Upon thorough review of the primary and secondary source data, Condell Medical Center Community Health staff presented to the Community Health Council a comprehensive demographic profile of Lake County and detailed health profiles of the top health needs identified through four main documents, including:

- 2016-2021 Lake County Health Department Community Health Improvement Plan (CHIP);
- 2016-2021 Lake County Health Department Community Health Assessment (CHA);
- An Assessment of Behavioral Health Needs, Service Capacities and Projected Trends in Northern Lake County, July 2014;
- Community Action Plan for Behavioral Health in Lake County, Illinois, 2016–2020.

The Lake County Health Department CHIP identified four community health priorities:

- Cardiovascular Disease and Hypertension;
- Behavioral Health;
- Obesity;
- Diabetes.

While the health improvement priorities were selected based on the most recent data available, the conditions have emerged as driving factors in the health of Lake County residents over longer time periods. Lake County has experienced upward trends in the prevalence of these chronic conditions.

## *Summary of Condell Medical Center-Lake County Health Needs*

Key criteria for selection of the specific health issues were the incidence, prevalence and mortality rates within Lake County, the PSA and SSA, coupled with community opinion and perspective from various surveys. Condell Medical Center Community Health staff analyzed the results from the three assessments, supplemented by statistics from a number of additional secondary data sources. These results were coupled with key hospitalization and Emergency Department rates, to create specific health profiles of six high need health issues. A profile of cancer was provided to the Community Health Council as well. However, because cancer is already being addressed as a priority health need through the Condell Medical Center Cancer Committee in order to meet the accreditation requirements of the Commission on Cancer, it was not profiled as a health need of focus for the 2017-2019 implementation plan period. A copy of the Cancer presentation provided to the CHC is contained in Appendix 3. The six health issues profiled in detail were:

- Cardiovascular Disease;
- Diabetes/Kidney Disease;
- Obesity;
- Mental Health;
- Substance Abuse;
- Maternal Health.

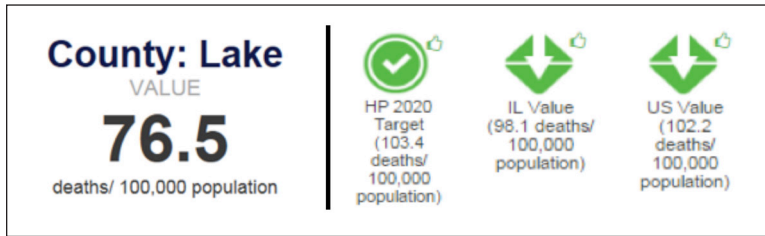
### **Cardiovascular Disease**

Hypertension (high blood pressure) is a common, yet serious condition in which the force of the blood in a person's arteries is too high. This damages artery walls and the heart and when uncontrolled, can increase the risk of heart attack and stroke. Lifestyle risk factors for cardiovascular disease and hypertension include physical inactivity, being overweight or obese, eating too much salt, drinking too much alcohol, and using tobacco. Results from the Lake County 2015 Community Health Status Survey showed that cardiovascular diseases, in particular hypertension, affect over a third of adults in Lake County. The prevalence of hypertension in Lake County adults has dramatically increased over time, from 18% to 35%. (Live Well Lake County Community Health Improvement Plan, 2016-2021.)

The prevalence rate of heart disease within Lake County is 2.8%, lower than the rates for Illinois (3.8%) and the US (4.4%). (Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2013.) Heart disease is also the second highest cause of death in Lake County from 2010-2014. (Live Well Lake County Community Health Assessment, 2016-2021.)

The age-adjusted death rate for Lake County due to coronary heart disease is 76.5 per 100,000 population in 2012-2014. The rate has declined since the 2010-2012 period, which was 79.9 deaths per 100,000. The Lake County rate is below the Healthy People 2020 target of 103.4 deaths/100,000 population, as shown in Exhibit 14. The rate is also lower than the Illinois rate of 98.1/100,000. (Healthy Communities Institute, Centers for Disease Control and Prevention, 2015.)

**Exhibit 14: Lake County Age-Adjusted Death Rate Due to Coronary Heart Disease Performance Against Healthy People 2020 Target, IL Value and US Value 2012-2014**



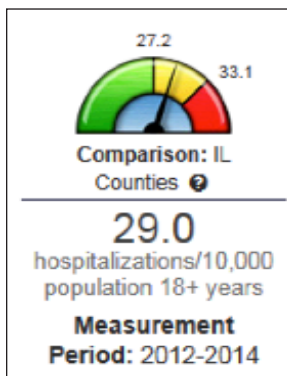
Source: Healthy Communities Institute, Centers for Disease Control and Prevention, 2015.

At Condell Medical Center the highest emergency room diagnosis in 2015 was unspecified chest pain (1172 visits). The third highest diagnosis was "other chest pain," generating an additional 529 visits in 2015. (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.) The age-adjusted 2012-2014 Lake County emergency room (ER) rate for adults due to hypertension is 19.2 ER visits/10,000 population. This rate has shown a consistent increase over time since the 2009-2011 period. The PSA ER rate for hypertension rate grew from 10.6 to 18.7/10,000 population, and the SSA rate increased from 14.7 to 22.1/10,000 in the same time period. The ER rates due to hypertension increase as age increases and are higher for minority groups. (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.) The 2012-2014, Lake County age-adjusted hospitalization rate due to heart failure was 29.0/10,000. This rate is in the HCI yellow zone compared to other Illinois counties, as shown in Exhibit 15. The communities in Lake County with the highest hospitalization rates due to heart failure are as follows.

North Chicago	(92.3/10,000)
Waukegan (60085)	(45.7/10,000)
Zion	(45.6/10,000)
Waukegan (60087)	(32.7/10,000)
Fox Lake	(34.2/10,000)
Wauconda	(34.3/10,000)

The 2012-2014 age adjusted rate for hospitalization due to heart failure for the PSA is 28.4/10,000 and the SSA rate is 32.6/10,000. The PSA and SSA rates are also in the HCI yellow zone, compared to other Illinois counties.

**Exhibit 15: Lake County Age-Adjusted Hospitalization Rate due to Heart Failure per 10,000 Population 2015**

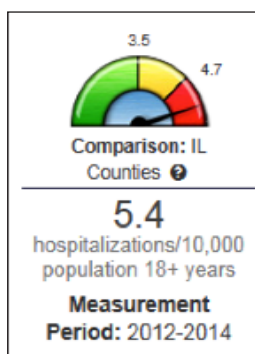


Source: Healthy Communities Institute, Center for Medicare and Medicaid Services, 2015.

The 2012-2014 Lake County age-adjusted hospitalization rate due to hypertension was 5.9/per 10,000 and is in the HCI red zone, as shown in Exhibit 16. The PSA hospitalization rate due to hypertension was 5.9/10,000 and the SSA rate was 7.0/10,000; both are in the HCI red zone, compared to other Illinois counties.



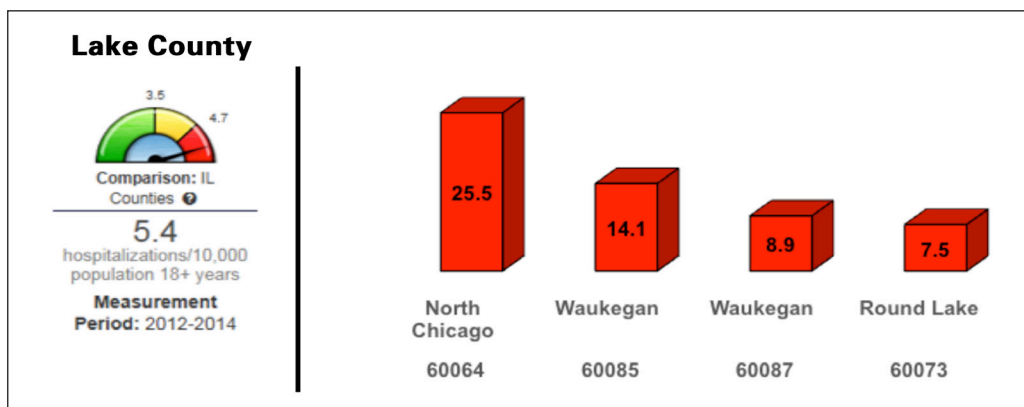
## Exhibit 16: Age-Adjusted Hospitalization Rate due to Hypertension per 10,000 population in Lake County 2012-2014



Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.

Exhibit 17 shows the communities with the highest hospitalization rates due to hypertension in Lake County are North Chicago (25.5/10,000), Waukegan 60085 (14.1/10,000) and 60087 (8.9/10,000), and Round Lake (7.5/10,000). (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.)

## Exhibit 17: Lake County Highest Hospitalization Rates Due to Hypertension 2012-2014



Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2016.

The 2014 percentage of Medicare beneficiaries in Lake County who were treated for stroke was 4%, which is in the HCI red zone, compared to other Illinois counties. Additionally, the percentage of Lake County Medicare beneficiaries treated for atrial fibrillation was 9.3%, also in the HCI red zone – and higher than rates in other Illinois counties. (Healthy Communities Institute, Center for Medicare and Medicaid Services, 2015.)

### Key Findings: Cardiovascular Disease

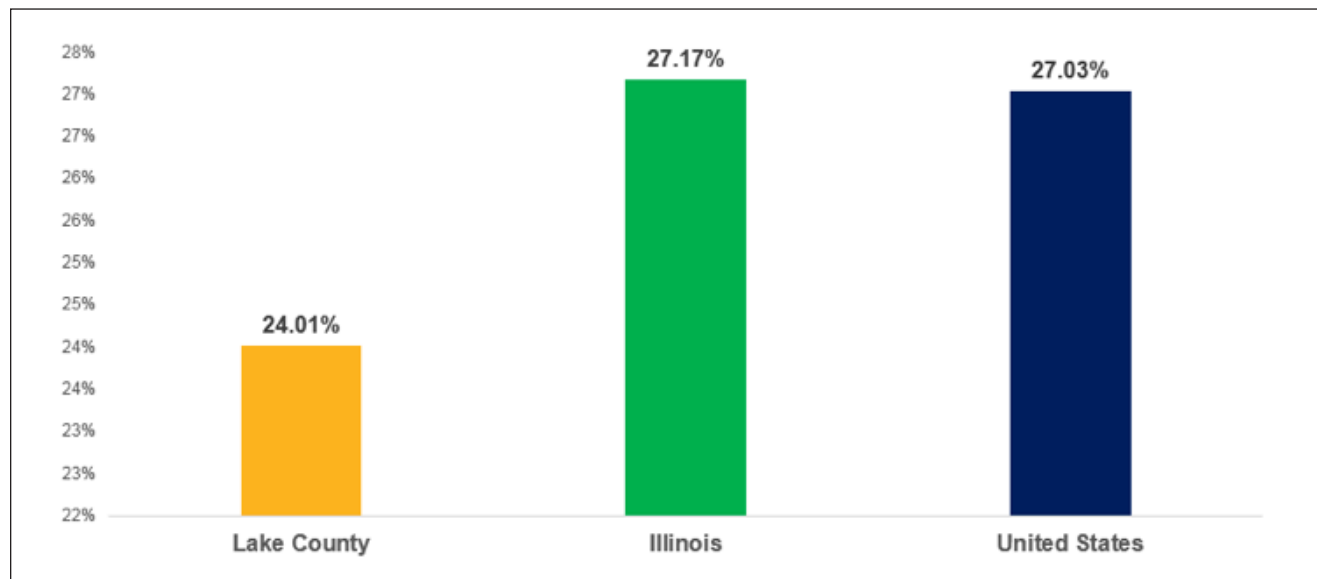
- The prevalence of hypertension in Lake County adults has been consistently increasing from 18% in 1998 to 35% in 2015.
- The age-adjusted death rate due to coronary heart disease for Lake County has declined since the 2010-2012 period, and is meeting the Healthy People 2020 target.
- The age-adjusted hospitalization rate due to hypertension for Lake County is in the HCI red zone.
- North Chicago, Waukegan and Round Lake have the highest age-adjusted hospitalization rates for hypertension in Lake County.
- The 2014 percentage of Medicare beneficiaries in Lake County who were treated for stroke and atrial fibrillation are both in the HCI red zone.

## Diabetes

In the United States, nearly 30 million people have diabetes and 86 million are estimated to have pre-diabetes. (American Diabetes Association, 2013.) In Lake County, over 31,000 adults have been diagnosed with diabetes and over 73,000 have been diagnosed with pre-diabetes. (Live Well Lake County Community Health Improvement Plan, 2016.)

In Lake County, as of 2013, 8.4% of adults age 20 and older have been diagnosed with diabetes. This is a slight decrease from the 2012 rate of 9%. (Centers for Disease Control and Prevention, 2013.) Twenty-four percent of Medicare beneficiaries in Lake County are diagnosed with diabetes, which is lower than the Illinois rate (27.17%) and the US rate (27.03%). (Center for Medicaid and Medicare Services, 2012.) These Medicare beneficiary comparisons are shown in Exhibit 18. The Live Well Lake County Steering Committee did select diabetes as one of the health department's community health improvement health priorities in the CHIP.

**Exhibit 18: Lake County, Illinois and US Comparison Percent of Medicare Beneficiaries with Diagnosed Diabetes 2012**



Source: Center for Medicare and Medicaid Services, 2012.

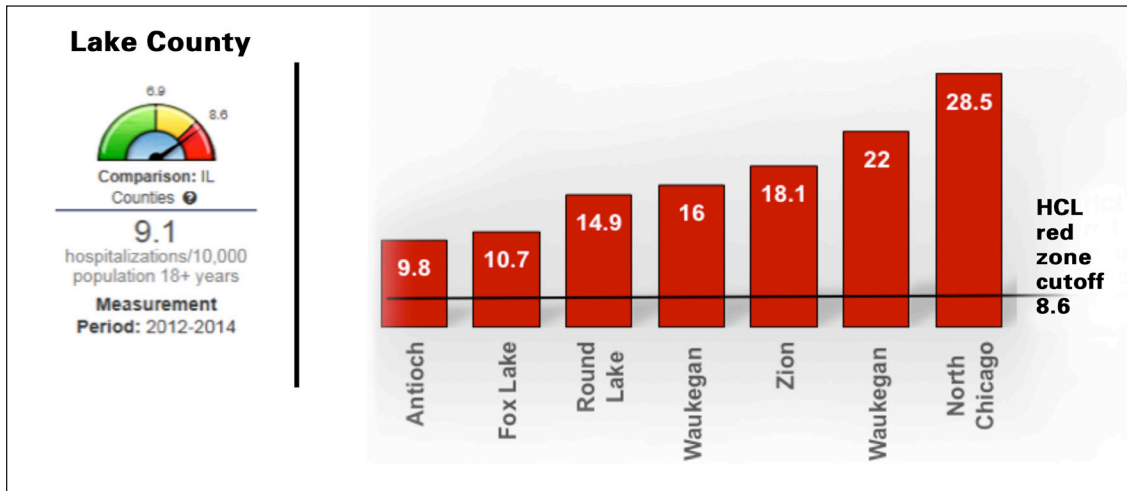
The 2012-2014 age-adjusted ER rate due to diabetes for Lake County is 12.9 ER visits per 10,000 population. Although in the HCI green zone, the rate has been climbing steadily since the 2009-2011 period (from 9.9/10,000). The ER rate for diabetes for the PSA is 13.9/10,000 and the SSA rate is 15.8/10,000 are both in the HCI green zone. ER rates due to diabetes are much higher in the communities of North Chicago (46.3/10,000), Waukegan (60085) (35.5/10,000), Zion (25.2/10,000) and Waukegan (60087) at 17.3/10,000.

The 2012-2014 Lake County age-adjusted hospitalization rate due to diabetes is in the HCI yellow zone (15.9 hospitalizations/10,000 population), though this rate did decline from 2009-2011 (16.3/10,000). The PSA hospitalization rate due to diabetes is 16.4/10,000 and the SSA rate is 20.4/10,000, the former in the HCI yellow and the latter in the HCI red zones.

Diabetes can have a harmful effect on most organ systems in the human body and it is a frequent cause of renal disease in adults. (Healthy Communities Institute, 2016.) The 2012-2014 Lake County age-adjusted death rate for chronic kidney disease is 14.1 deaths per 100,000 population and is in the HCI green zone, compared to other Illinois counties and the US. The kidney disease death rate is much higher for men (18.0/100,000) than for women (11.4/100,000) per 100,000 population. (Healthy Communities Institute, CDC, 2015.) For the Medicare population, the percentage of beneficiaries who were treated for chronic kidney disease has increased from 13.1% in 2010, to 15.3% in 2014. The rate is higher for those age 65 and over versus those under age 65. (Healthy Communities Institute, Center for Medicare and Medicaid Services, 2015.)

Finally, as shown in Exhibit 19, the Lake County 2012-2014 age-adjusted hospitalization rate due to long-term complications of diabetes is in the HCI red zone at 9.1/10,000. The rate has declined from 2009-2011, when it was 10.1/10,000. The same communities identified earlier for high ER rates due to diabetes have the highest hospitalization rates for long-term complications. These are North Chicago, both Waukegan zip codes and Zion. Additionally, Round Lake, Fox Lake and Antioch are in the HCI red zone.

**Exhibit 19: Lake County Age-Adjusted Hospitalization Rate due to Long-term Complications of Diabetes – Selected Communities above the HCI Red Zone Cutoff Hospitalizations per 10,000 population 2012-2014**



Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2016.

#### Key Findings: Diabetes

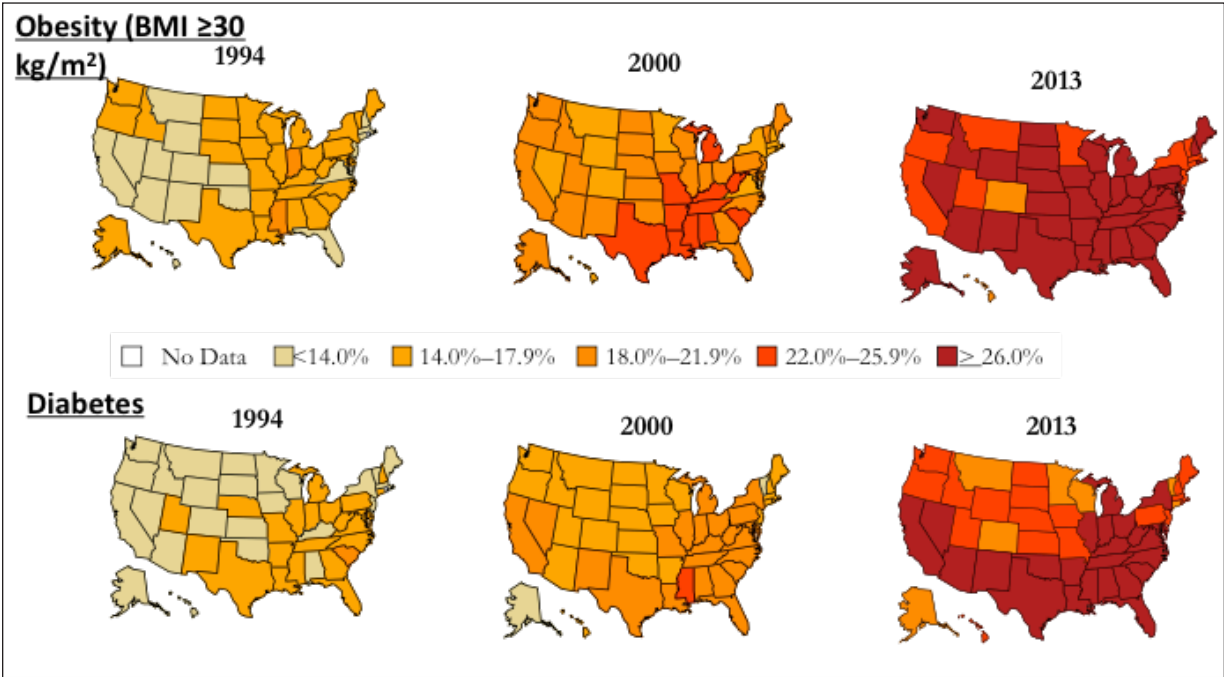
- Prevalence: 8.4% of adults in Lake County have diabetes (2014). This is a slight decrease from the 2012 rate of 9%.
- Prevalence: 24% of Medicare beneficiaries in Lake County have been diagnosed with diabetes. The rates for Medicare beneficiaries are lower than Illinois (27.2%) and the US (27.0%).
- In Lake County, over 31,000 adults have been diagnosed with diabetes and over 73,000 have been diagnosed for prediabetes.
- The 2012-2014 age-adjusted ER rate due to diabetes for Lake County has been climbing steadily since the 2009-2011 period.
- The 2012-2014 Lake County age-adjusted hospitalization rate due to diabetes is in the HCI yellow zone, though the rate has declined from 2009-2011.
- The Lake County 2012-2014 age-adjusted hospitalization rate due to long-term complications of diabetes is in the HCI red zone.
- ER rates due to diabetes and hospitalization rates due to long-term complications of diabetes are highest in the communities of North Chicago, Waukegan (60085) and Zion. Note that North Chicago and Waukegan (60085) are the two communities in Lake County with the highest percentage of the families living below 100% of the FPL.
- The percentage of Medicare beneficiaries who were treated for chronic kidney disease has increased to 15.3% from 2010 to 2014.
- The Live Well Lake County Steering Committee did select diabetes as one of the community health improvement priorities in the CHIP.

#### Obesity

Obesity contributes to an individual's risk of chronic conditions, osteoarthritis, diabetes, heart disease and other health issues that disrupt quality of life. (Live Well Lake County Community Health Assessment, 2016-2021.) There has been a significant increase in obesity rates in the US over the last 20 years. For purposes of tracking overweight and obese levels, the measurement used is Body Mass Index (BMI). Adults with a BMI greater than or equal to 30 (BMI  $\geq 30$  kg/m<sup>2</sup>) are considered obese. A level of BMI  $\geq 25$  is considered overweight. The percentage of obesity among US adults is 36%. The series of maps in Exhibit 20 visually portrays the increasing rate of obesity from 1994 to 2013 and the related increase in diabetes

rates in the US. The darker red shade indicates BMI rates of 26% or more in the state. Illinois is shaded dark red; thirty-six percent of adults in Illinois are overweight and 27% are obese. (Centers for Disease Control and Prevention, Division of Diabetes Translation, National Diabetes Surveillance System, 2013.)

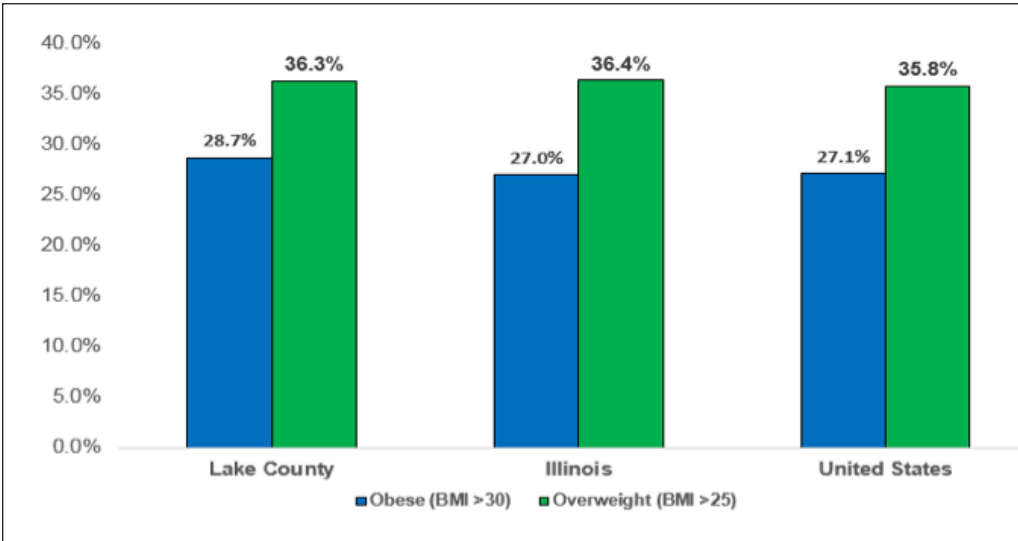
Exhibit 20: Age-Adjusted Prevalence of Obesity and Diagnosed Diabetes among US Adults 1994-2013



Source: Centers for Disease Control, Divisions of Diabetes Translation, National Diabetes Surveillance System, 2016.

In Lake County, the 2012 percentage of adults with a BMI over 25 (overweight) is 36.3%; the Lake County rate of those with a BMI over 30 (obese) is 28.7%. The percentage of Lake County obese adults is slightly higher than the state rate. (Community Commons, Centers for Disease Control, National Center for Chronic Disease Prevention and Health Promotion, 2015.) See Exhibit 21 for this comparison. Lake County is below the Healthy People 2020 target, which is to reduce the number of adults age 20 and older who are obese to 30.5%. (Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance System, 2016.)

Exhibit 21: Lake County, Illinois, US Comparison Adults Overweight or Obese Percentage of Adults with BMI over 25 or 30 Respectively 2012

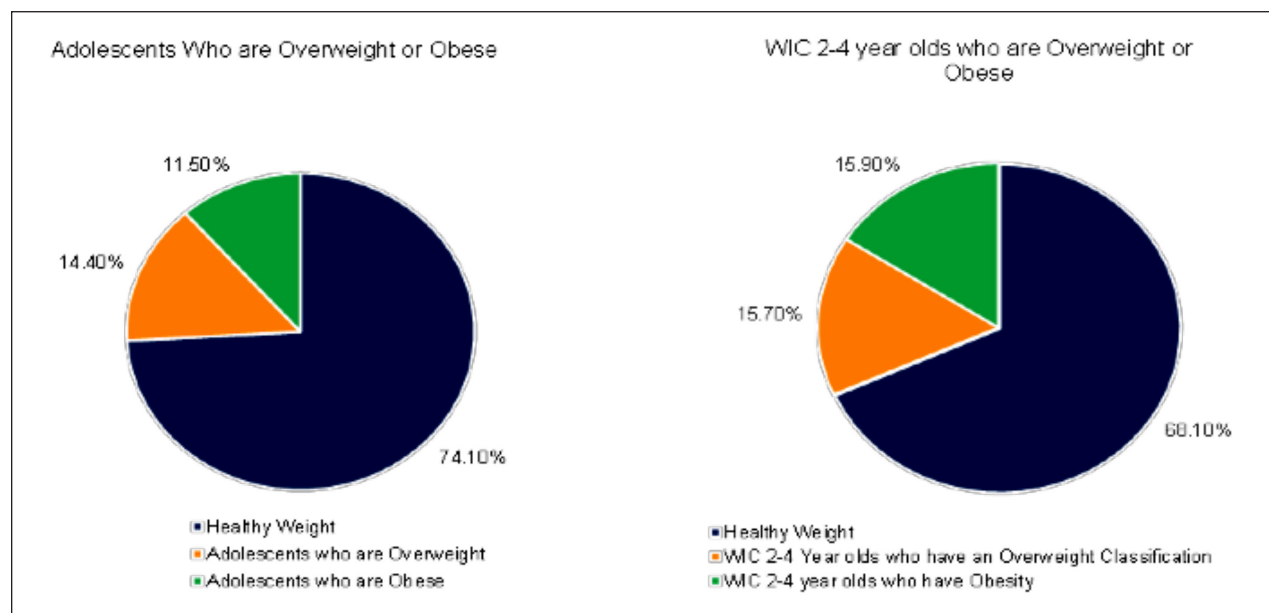


Source: Community Commons, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2015.

In the eight year period from 2008 to 2012, the obesity rate in Lake County has fluctuated but generally the rate has been on an upward trend. Lake County experienced a decrease in 2009, however, the rate has continued to climb since 2009, with Lake County's obesity rate increasing from 25% in 2011 to 28.7% in 2012. (Community Commons, Centers for Disease Control and Prevention, 2012.) Illinois rates for overweight or obesity for adolescents and young children also reflect the growing epidemic. In Illinois, 14% of adolescents are overweight and 12% are obese. (Youth Risk Behavior Surveillance System, 2013.)

The Special Supplemental Nutrition Program for Women Infants and Children (WIC) program provides federal grants to states for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk. (US Department of Agriculture, Food and Nutrition Services, 2016.) Illinois WIC program data indicates 16% of Illinois WIC recipients aged two to four have an overweight classification and 16% have obesity. (National Center for Chronic Disease Prevention and Health Promotion, Illinois State Nutrition, Physician Activity and Obesity Profile, 2016.)

#### Exhibit 22: Childhood Overweight and Obesity Percentages in Illinois 2016



Source: National Center for Chronic Disease Prevention and Health Promotion, Illinois State Nutrition, Physical Activity and Obesity Profile, 2016.

The percentage of children aged 2-4 participating in federally funded health and nutrition programs in Lake County is in the HCI red zone, with 18% of Lake County low-income pre-school children classified as obese. (Healthy Communities Institute, US Department of Agriculture, Food Environment Atlas, 2009-2011.)

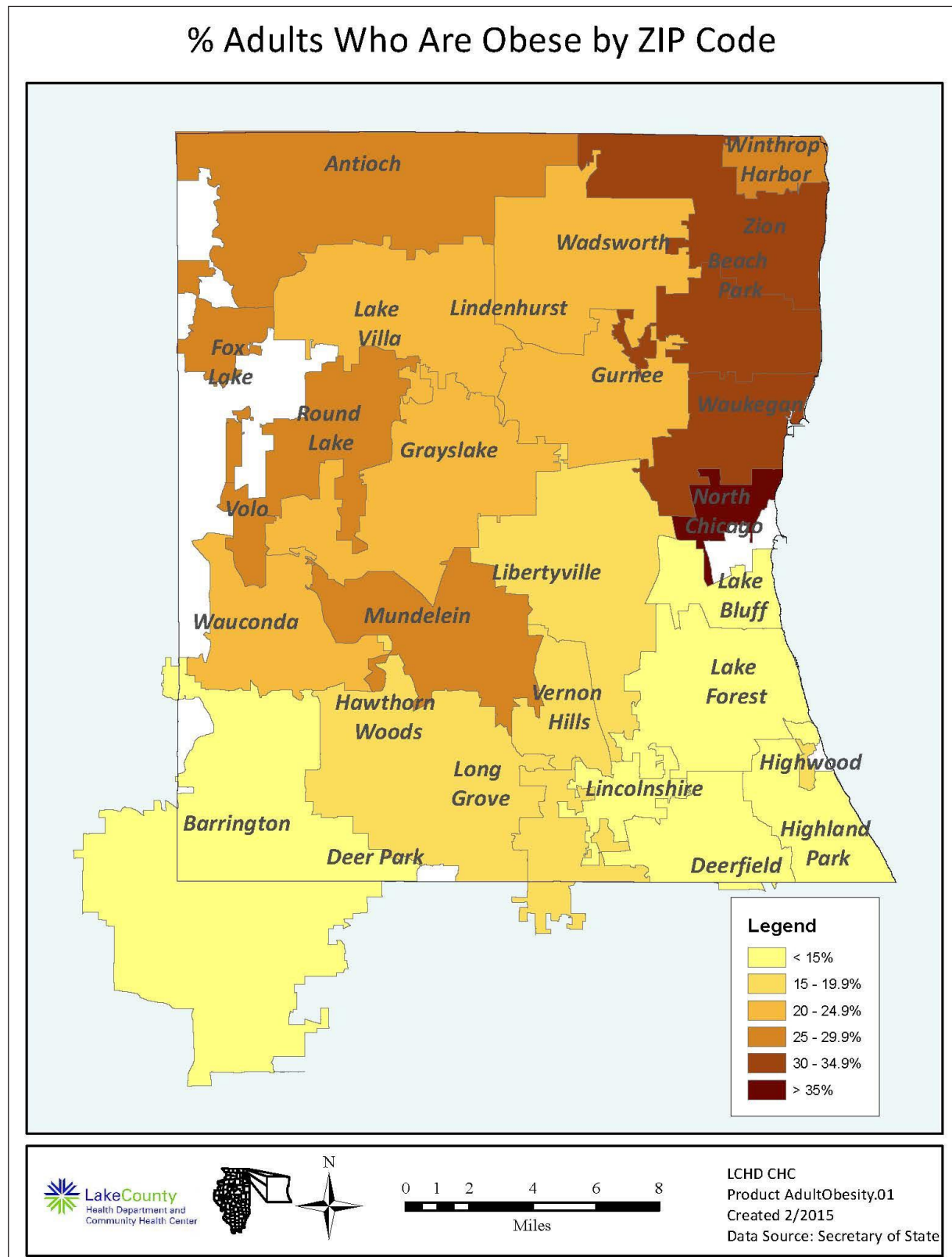
In 2014, the LCHD/CHC used the Illinois Secretary of State's Driver's License Records to assess obesity in Lake County communities. The analysis indicated that certain communities experience dramatic obesity disparities rates. For example, only 11.7% of adults in Lake Forest are obese. The rate of obesity in North Chicago is over three times greater than in Lake Forest (35.7%). The communities identified with the highest percentage of residents who are overweight or obese are:

- North Chicago 35.7%
- Zion 34.1%
- Waukegan (60085) 32.3%
- Waukegan (60087) 31.2%
- Winthrop Harbor 28.1%
- Round Lake 28.0%



Exhibit 23 maps the obesity rates in Lake County by zip code. The darker shaded areas have the higher obesity rates, with North Chicago indicated in dark brown.

**Exhibit 23: Lake County Percentage of Adults Who Are Obese by Zip Code 2015**



Source: Lake County Health Department, Obesity in Lake County Status Report, 2015.

The LCHD/CHC determined that median household income is strongly related to rates of obesity and overweight status. As income increases, rates of adult obesity drop. The 2016 median household income for North Chicago is \$44,600 with the highest percentage of residents who are obese in the county. Lake Forest has a 2016 median household income of \$146,867 with the lowest percentage of residents who are obese (11.7%). (Lake County Health Department, Obesity in Lake County Status Report, 2015.)

In 2015, the LCHD/CHC conducted household surveys in Waukegan and Wauconda, comparing their findings to Lake County. The survey results showed residents self-reported higher rates of obesity in Waukegan (42%) and Wauconda (29%), when compared to Lake County (19%). (LCHD/CHC Waukegan and Wauconda Community Survey, 2015.)

#### *Key Findings: Obesity*

- The prevalence of obesity in the US has steadily increased. Prevalence rates as of 2013 show that 40 of the 50 states have  $\geq 26\%$  of the population with BMI measurements in the obese range.
- As of 2014, prevalence rates for Illinois remain between 25% and 30%. The 2012-2014 rates are even higher for Illinois Hispanic adults (between 30% and 35%) and non-Hispanic African American adults ( $\geq 35\%$ ). (Behavioral Risk Factor Surveillance System, Prevalence of Self-Reported Obesity Among US Adults by Race/Ethnicity, State and Territory, 2012-2014.)
- More than 11% of Illinois adolescents are obese and 14% are overweight.
- Sixteen percent of Illinois WIC preschoolers (age two to four) are overweight and 16% are obese.
- In Lake County, 29% of adults are obese and 36% are overweight.
- Lake County is below the Healthy People 2020 target to reduce the number of adults, age 20 and older, who are obese to 30.5%.
- 18% percent of Lake County preschool children are obese.
- In the 2015 Obesity in Lake County status report, the LCHD/CHC determined that median household income is strongly related to rates of obesity and overweight status. As income increases, rates of adult obesity drop.

### **Mental Health**

#### *Mental Health in Adults*

Poor mental health is a burden on an individual's quality of life. The Lake County Health Department selected mental health or behavioral health as one of the health priorities for their Community Health Improvement Plan (CHIP). The Lake County Forces of Change Assessment (FoCA) identified potential forces that may affect the local public health system's capacity to implement the CHIP. While all identified forces should be considered, the six top ranked as having the most impact on the county should be given priority when identifying and building system capacity to address strategic issues. Mental health was ranked the highest of the forces identified. (Lake County Community Health Improvement Plan, 2016-2021.)

The Assessment of Behavioral Health Needs in Northern Lake County report (Lake County Health Department and Community Health Center, July 2014) indicates more than 17 percent of adults reported mental illness in the past year, while more than four percent reported serious mental illness. Among adults age 18-25 years, well over a quarter reported mental illness in the past year, with more than seven percent reporting serious mental illness.

The results of the 2015 Waukegan and Wauconda community surveys indicate that Waukegan residents rated their mental health status worse than Wauconda and Lake County on several issues, as displayed in Exhibit 24. Additionally, Waukegan residents rated worse than Lake County and Wauconda on three mental health indicators: having some mental health condition (13%); have considered suicide (19%) and have attempted suicide (7%). (LCHD/CHC Waukegan and Wauconda Community Survey, 2015.)

# Exhibit 24: Lake County Community Survey Results – Mental Status Questions 2015

Mental Health	Lake County	Waukegan	Wauconda
In the past month, my mental health was not good for 1 or more reasons	36%	50%	36%
In the past month, my mental health was not good for 8 or more days	8%	17%	12%
Average days that mental health was "not good"	2.6	4.2	3.2
In the past month, my mental health has kept me from usual activities 1 or more days	14%	20%	14%
In the past month, my mental health has kept me from usual activities 8 or more days	4%	9%	4%
Average days that mental health prevented usual activities	0.9	0.9	1.0

**Better:** +

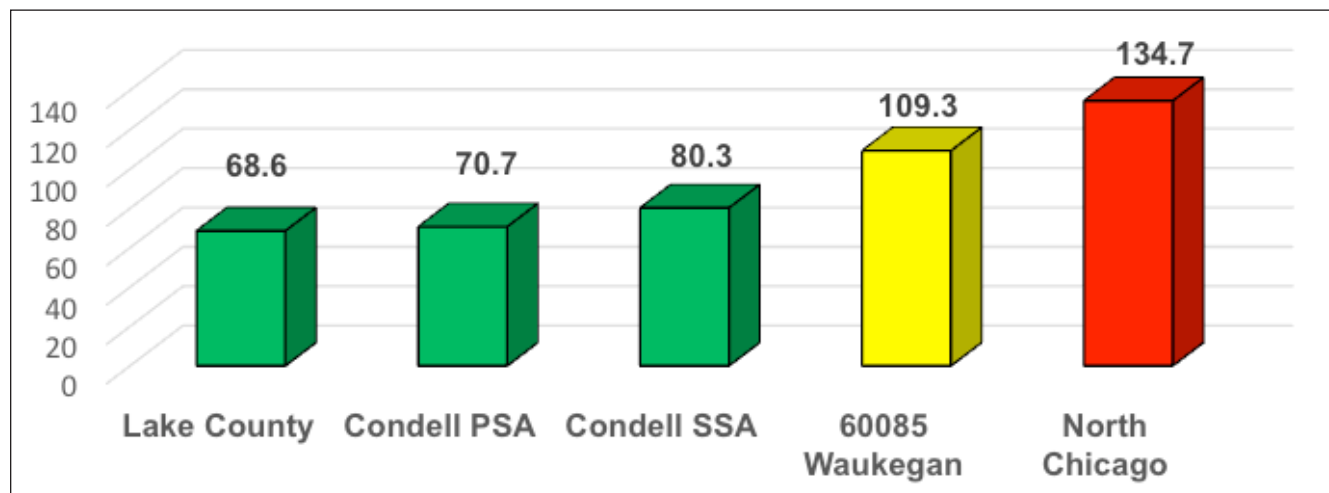
**Equal:** =

**Worst:** -

Source: Lake County Health Department and Community Health Center, Waukegan and Wauconda Community Survey Results, 2015.

The 2012-2014 age-adjusted ER rate for Lake County adults due to mental health is 68.6/10,000 population. The rate is in the HCI green zone, and is lower than the rate for the PSA (70.7/10,000) and SSA (80.3/10,000). The top zip codes with the highest ER rates for mental health for adults in the Lake County were North Chicago (134.3/10,000) and Waukegan (60085) (109.3/10,000) as displayed in Exhibit 25. North Chicago is in the HCI red zone. (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.)

## Exhibit 25: Lake County, PSA and SSA Comparison of Age-Adjusted ER Rate due to Mental Health for Adults per 10,000 Population Age 18 and Older 2012-2014

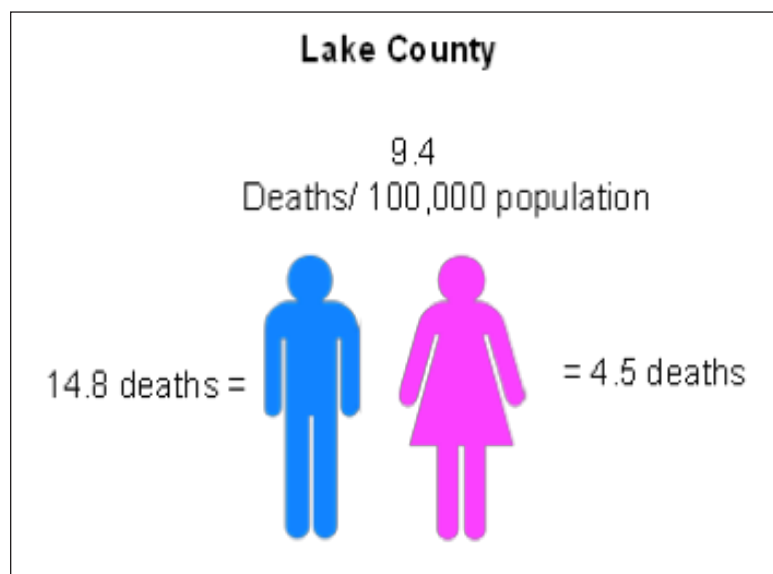


Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.

The age-adjusted ER rate due to suicide and intentional self-inflicted injury is 18.9/10,000 for adults in Lake County. Women had more emergency room visits for suicide and intentional self-injury than men. The zip codes in Lake County with the highest adult ER rates for suicide and intentional self-injury are Ingleside (40.2/10,000), Fox Lake (41.2/10,000) and North Chicago (30.4/10,000). Ingleside and Fox Lake are in the HCI yellow zone, while North Chicago is in the green zone.

Finally, the 2012-2014 age-adjusted death rate due to suicide is 9.4/100,000 in Lake County as shown in Exhibit 26. Men have more than three times the number of deaths due to suicide than women. The Lake County age-adjusted death rate due to suicide is below the Healthy People 2020 target of 10.2 deaths per 100,000 population. (Healthy Communities Institute, Centers for Disease Control and Prevention, 2015; Illinois Department of Public Health, 2010-2011.)

**Exhibit 26: Lake County Comparison of Age-Adjusted Death Rate due to Suicide Deaths per 100,000 Population 2012-2014**



Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.

Medicare-age adults also experience mental health issues. The Center for Medicare and Medicaid Services estimate that depression in older adults occurs in 25 percent of those with other illnesses, including: arthritis, cancer, cardiovascular disease, chronic lung disease, and stroke. (Healthy Communities Institute, February 2016.) As of September 2015, an estimated 12.7% of the Medicare recipients in Lake County were diagnosed with depression (10,972 individuals). (Healthy Communities Institute, September 2015.)

*Mental Health in Children and Adolescents*

Half of children that need mental health services don't receive them. Seventy-five percent of chronic mental illness begins by age 24, 50% by age 14. Adolescents usually struggle for years before getting help. Seventy percent of youth in state and local juvenile justice systems have a mental illness. Suicide is the leading cause of death in kids in the US. Ninety percent of those who died by suicide had an underlying mental illness. (National Alliance on Mental Illness, National Institute of Mental Health, [www.nimh.nih.gov](http://www.nimh.nih.gov), Leading Causes of Death in the United States, 2014.)

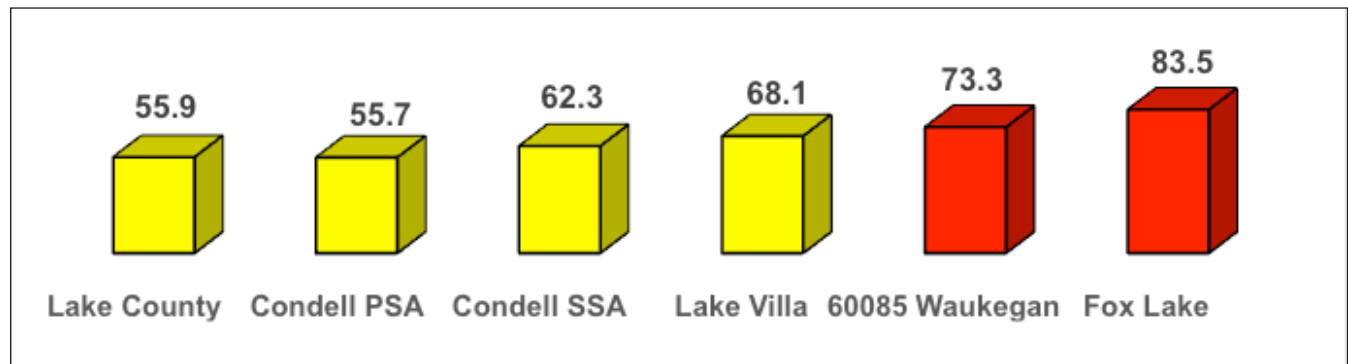
Mental health presents unique, acute challenges for adolescents in Lake County. Over one in four of the students surveyed in the 2014 Illinois Youth Survey reported having a depressive episode within the past twelve months – 27% of eighth, 28% of tenth, and 26% of twelfth graders. Nearly one in six tenth graders (16%) and one in seven twelfth graders (13%) had seriously considered suicide within the past twelve months. Social stresses weigh heavily on adolescents. Almost half of middle school students (42% of sixth graders and 46% of eighth graders) have experienced some type of bullying in the past year. In high school, one in three tenth graders (32%) and one in four twelfth graders (25%) experienced some type of bullying. When asked about their social support systems, 12% of sixth, 19% of eighth, 19% of tenth, and 14% of twelfth graders reported that they did not have a non-parent adult that they could talk to about important things. (Live Well Lake County Community Health Assessment, 2017-2021.)

Data on the capacity of mental health providers indicates that the mental health care provider rate per 100,000 population is 232.8/100,000 for Lake County, which is higher than the rate for Illinois (180.2/100,000) and the US (202.8/100,000). (University of Wisconsin Population Health Institute, County Health Rankings, 2016.) Even though the mental health care provider rate is higher for Lake County, the 2014 Assessment of Behavioral Health Needs in Northern Lake County identified that there is limited capacity in Lake County. The report indicated that the non-profit sector is essentially at capacity and many providers in the for-profit sector are unable to provide charity care and do not generally accept Medicaid. Additionally, only about a dozen psychiatrists in Northern Lake County accept Medicaid, and some accept very few Medicaid patients.

Assessment findings indicate there is a serious need for more behavioral health professionals accessible to the population. Far more psychiatrists are needed, but other key services such as general counseling, case management and supportive housing are inadequate in Northern Lake County. In 2015, the LCHD/CHC commissioned the development of a Community Action Plan for Behavioral Health in Lake County. This action plan outlines thirteen strategies to address the need of behavioral health.

The Lake County age-adjusted ER rate for pediatric mental health is 55.9 ER visits/10,000. The PSA rate is 55.7/10,000, but the SSA rate is higher at 62.3/10,000. The Lake County rate is higher for girls than boys, and the largest percentage of the ER visits are from those ages 15-17. The rate has been consistently increasing over time, from the 2009-2011 time period to 2012-2014. The Lake County communities with the highest ER rates due to pediatric mental health are Fox Lake (83.5/10,000) and Waukegan (60085) (73.3/10,000), as shown in Exhibit 27.

**Exhibit 27: Lake County Age-Adjusted ER Rate due to Pediatric Mental Health per 100,000 Population under 18 years of Age 2012-2014**



Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.

Also related to adolescent mental health, the ER rate due to adolescent suicide and intentional self-inflicted injury in Lake County is 49.2 per 10,000. The ER rate due to suicide and intentional self-inflicted injury for females is much higher than the rate for males. (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.) Young persons are overrepresented in hospital emergency departments for behavioral health. Persons 15-24 years old are 14 percent of the population but 30 percent of emergency visits. (An Assessment of Behavioral Health Needs in Northern Lake County, July 2014.)

#### *Key Findings: Mental Health*

- The 2014 Lake County behavioral health needs assessment identified that there is limited provider capacity in Lake County.
- Lake County has had steady increases over the past four years in emergency room rates due to mental health for both pediatrics and adults.
- The top zip codes in Lake County with the highest ER rates due to mental health for adults are North Chicago and Waukegan.
- The top three zip codes in Lake County with the highest ER rates due to pediatric mental health are Fox Lake and Waukegan.
- Results of the Waukegan and Wauconda community surveys showed that Waukegan residents rated their mental health status worse than Wauconda and Lake County residents.
- The LCHD/CHC selected behavioral health as one of their community health priorities for the CHIP.
- In 2015, a Community Action Plan for Behavioral Health in Lake County was published. This action plan outlines thirteen strategies to address the need of behavioral health in Lake County.

#### **Substance Abuse**

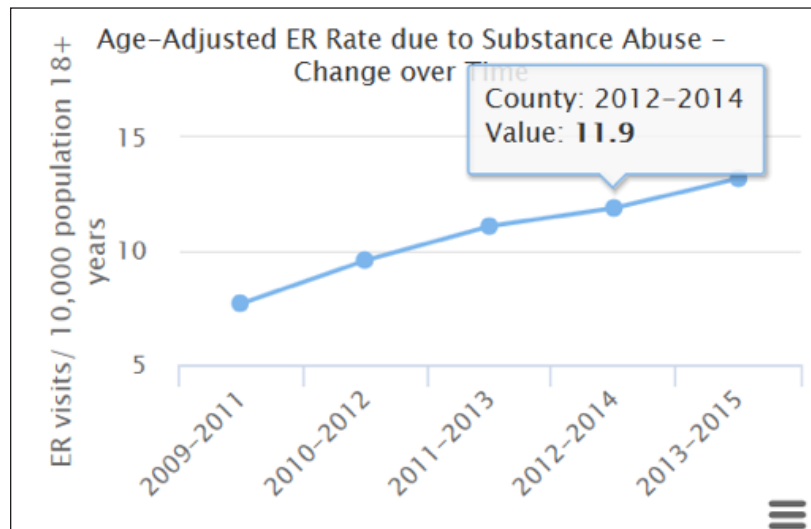
Preventing initiation of substance use is an important strategy for preventing abuse. Those who are mentally ill are more likely to abuse drugs or alcohol. The two issues often co-occur. According to SAMHSA, 26.7% of people with mental health issues abused illicit drugs in 2012. In the general public, only 13.2% of people abused drugs. According to the National Institute on Drug Abuse (NIDA), those who suffer from mental illness may attempt to self-medicate their symptoms via drug use.

[www.drugabuse.com](http://www.drugabuse.com)

The Lake County 2016-2021 CHIP found that depression, binge drinking, and illicit drug use are prevalent in Lake County. The Lake County Health Department and Community Health Center and other non-profit sector providers are at capacity and cannot keep up with demand for behavioral health services – both mental health and substance abuse services. The 2014 Illinois Youth Survey data shows that 65% of 12th graders in Lake County have used some substance (alcohol, cigarettes, inhalants or marijuana) in the past year. Additionally, 13% of Lake County 6th graders have used some substance in the past year.

The 2012-2014 age-adjusted ER rate due to substance abuse for Lake County is 11.9/10,000. The rate has been steadily increasing from 7.7/10,000 in 2009-2011, as shown in Exhibit 28. The Lake County rate is in the HCI green zone. The PSA rate is 12.9/10,000 and the SSA rate is 13.8/10,000. Several Lake County communities are above the HCI red zone cutoff of 18.1/10,000 – North Chicago (23.3/10,000), Antioch (19.1/10,000) and Libertyville (18.2/10,000). (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.)

**Exhibit 28: Lake County Age Adjusted ER Rate due to Substance Abuse 2012-2014**



Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.

### *Smoking*

The number of teens who smoke in Lake County (8%) has decreased since 2010. Although also declining, the adult smoking rate for Lake County (13.8%) is above the Healthy People 2020 target of less than 12% of adults smoking. (Healthy Communities Institute, County Health Rankings, April 2016.)

### *Marijuana*

Marijuana is the most commonly used illicit drug abused in the US. The Illinois Youth Survey (IYS) 2014 results indicate that 37% percent of Lake County 12th graders have used marijuana in the past 12 months. According to the IYS 2014 survey, 24% Lake County have used marijuana in the last 30 days and the survey indicates that 9% of Lake County 12th grade students said that they had driven or been in a vehicle six or more times when they had been using marijuana. The Lake County rate is in the HCI red zone and the rate declined steadily from 2010 (26%) to 2014 (24%). (Illinois Youth Survey, 2014.)

### *Heroin and Opioids*

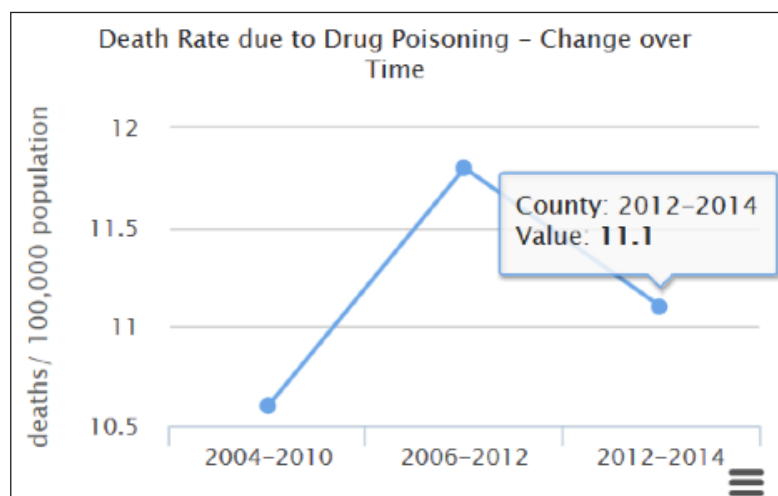
In 2015, Lake County had 42 deaths related to heroin use. (Lake County Coroner, 2015.) While the use of heroin is spreading throughout the United States, the death rate for Lake County (9.9 deaths/100,000) is below both the Illinois (12.2/100,000) and US rates (13.2/100,000). (Lake County Underage Drinking and Drug Prevention Task Force, 2015.) The percentage of Lake County 10th and 12th grade students who have used heroin in the past year is higher than the US and Illinois rates, but is still only 1%. (Illinois Youth Survey, 2014; National Institute on Drug Abuse, 2015). Heroin is not the drug used the most by teens. Ecstasy, followed by hallucinogens/LSD and crack cocaine are the most popular. (Illinois Youth Survey, 2014.)

Drug overdose deaths are the leading cause of injury death in the United States, with over 100 drug overdose deaths occurring every day. The US death rate due to drug overdose has been increasing over the last two decades. In 2010, 60% of drug overdose deaths were related to pharmaceuticals, the



majority of which were prescription painkillers. Drug overdose deaths may be accidental, intentional, or of undetermined intent. (Healthy Communities Institute, April 2016.) The death rate due to drug poisoning for Lake County grew from the 2004-2010 period (10.6 deaths/100,000 population) to 11.8/100,000 in 2006-2012, then fell again in 2012-2014 to 11.1/10,000, as shown in Exhibit 29. The 2012-2014 rate is in the HCI green zone. (Healthy Communities Institute, County Health Rankings, 2015.)

**Exhibit 29: Lake County Death Rate due to Drug Poisoning 2012-2014**



Source: Healthy Communities Institute, County Health Rankings, 2015.

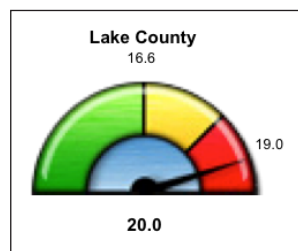
### *Alcohol*

Alcohol abuse is a significant concern for Lake County. Alcohol is the most popular drug among adolescents in Lake County, used more frequently across all grade levels than either cigarettes or marijuana. The 2014 Assessment of Behavioral Health Needs in Northern Lake County report indicated 80,000 residents likely engaged in binge drinking in the last month, and that almost 10,000 residents have had alcohol dependence in the past year.

Though the percentage of teens who drink alcohol in Lake County has decreased from 2010 to 2014, according to the 2014 Illinois Youth Survey (IYS), 45% of Lake County teens use alcohol. The 2014 IYS survey also shows that 24% of Lake County high school seniors indicated that they had engaged in binge drinking within the past two weeks. Exposure to alcohol and experimentation is starting early. According to the IYS survey, in Lake County the age that teens take one sip of alcohol was 15 years old, with the average age of drinking alcohol regularly at 16 years old. (Illinois Youth Survey, 2014.)

According to the CDC, excessive alcohol use is defined as either heavy drinking (drinking more than two drinks per day on average for men or more than one drink per day on average for women), or binge drinking (drinking more than five drinks during a single occasion for men or more than four drinks during a single occasion for women). Twenty percent of adults in Lake County drink excessively, compared to the Illinois rate of 21.4%. (Healthy Communities Institute, County Health Rankings, April 2016.) See Exhibit 30.

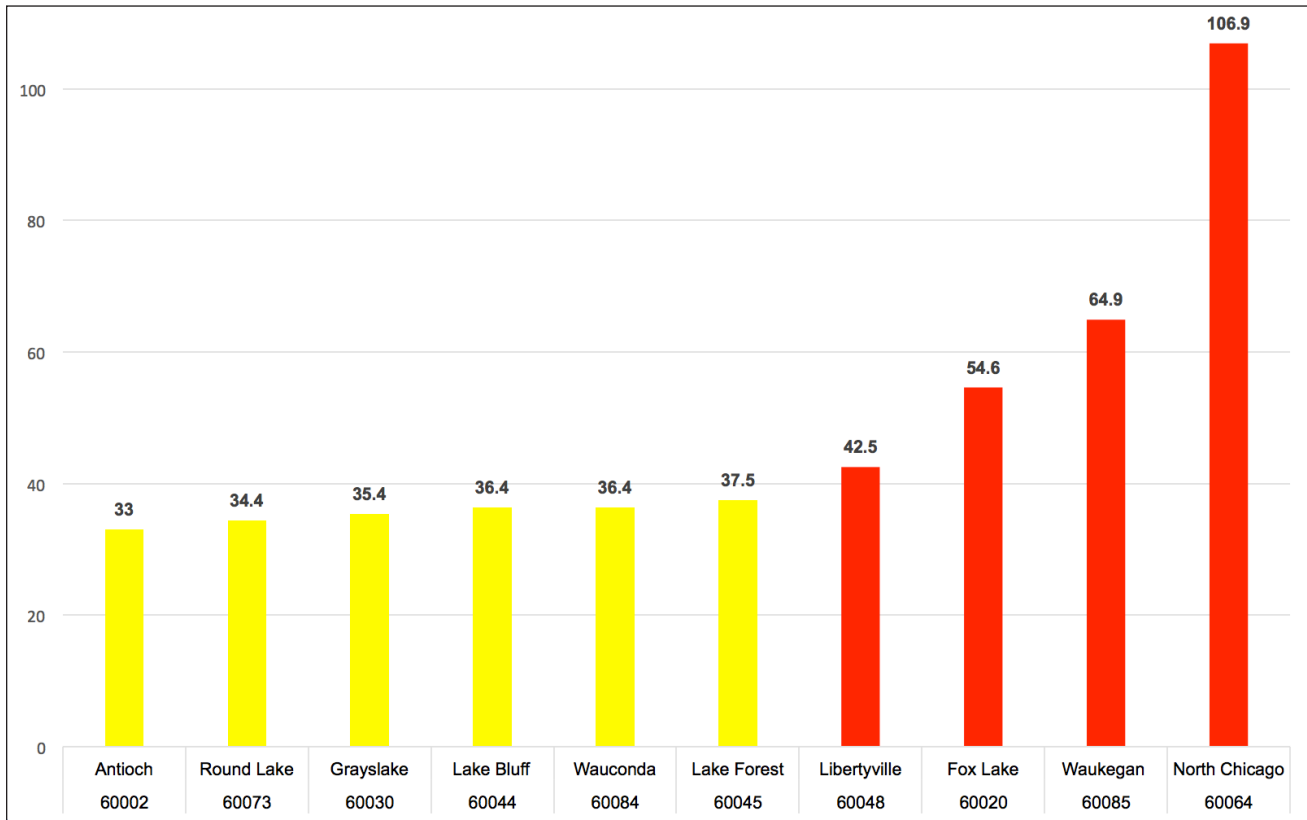
**Exhibit 30: Lake County Adults Who Drink Excessively 2015**



Source: Healthy Communities Institute, County Health Rankings, 2016.

The ER rate due to alcohol abuse in Lake County is 33.7/10,000 population, which places it in the HCI yellow zone. The Condell Medical Center PSA rate is 35.9/10,000 and the SSA rate is 33.9/10,000 population – both in the HCI red zone. Communities in the HCI red zone are North Chicago (106.9/10,000), Waukegan (60085) (64.9/10,000), Fox Lake (54.6/10,000), and Libertyville (42.5/10,000) as displayed in Exhibit 31.

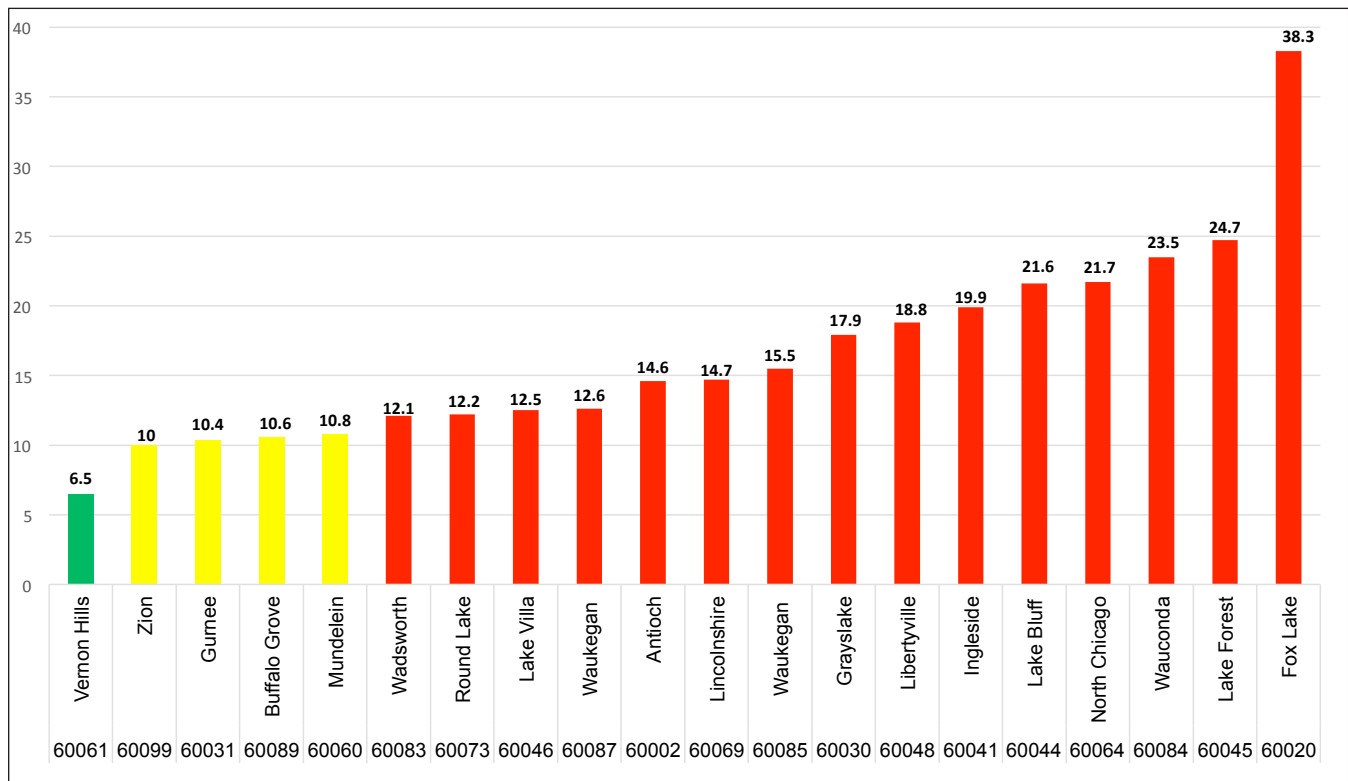
**Exhibit 31: Lake County Rate of ER Visits due to Alcohol Abuse for Highest Zip Codes per 10,000 Population Age 18 and Older (HCI Red and Yellow Zone) 2012-2014**



Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.

The 2012-2014 age-adjusted hospitalization rate due to alcohol abuse for Lake County is 14.4/10,000 population, which is in the HCI red zone. The rate for the PSA is 13.6/10,000 and the SSA is 15.2/10,000; both are also in the HCI red zone, above 11.6 hospitalizations/10,000 population. Communities in Lake County with the highest hospitalization rates for alcohol abuse are Fox Lake (38.3/10,000), Lake Forest (24.7/10,000), Wauconda (23.5/10,000), North Chicago (21.7/10,000) and Lake Bluff (21.6/10,000). (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.) These communities are shown in Exhibit 32.

**Exhibit 32: Lake County Age-Adjusted Hospitalization Rate due to Alcohol Abuse by Zip Code 2012-2014**



Source: Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.

One final indicator to note is the alcohol-impaired driving death rate for Lake County, which measures the percentage of motor vehicle crash deaths with alcohol involvement. The Lake County alcohol-impaired driving death rate is 43%. This rate is in the HCI red zone and is higher than McHenry County (38.9%), Cook County (37.9%) and Kane County (33.3%). Though very high, the rate decreased from in the 2009-2013 period (45.6%).

#### *Key Findings: Substance Abuse*

- The IYS survey indicates that 65% of 12th graders in Lake County have used some substance (alcohol, cigarettes, inhalants or marijuana) in the past year. Additionally, 13% of Lake County 6th graders have used some substance in the past year.
- The age-adjusted ER rate due to substance abuse for Lake has been steadily increasing from 2009-2011 to 2012-2014.
- The number of teens who smoke in Lake County (8%) has gone down since 2010.
- Adult smoking rate for Lake County (13.8%) has not met the Healthy People 2020 target of less than 12%.
- IYS survey results indicate that 37% of Lake County high school seniors have used marijuana in the past 12 months; 24% of Lake County seniors in high school have used marijuana in the past 30 days.
- While the use of heroin is spreading throughout the United States, Lake County is below the state and national averages for deaths.
- The US death rate due to drug overdose has been increasing over the last two decades.
- The death rate due to drug poisoning for Lake County grew from the 2004-2010 period to the 2006-2012 period, then fell again in the 2012-2014 period.
- Alcohol abuse is a significant concern for Lake County.
- Though the percentage of teens who drink alcohol in Lake County has decreased from 2010 to 2014, according to the 2014 Illinois Youth Survey (IYS), 45% of Lake County teens use alcohol.
- The 2014 IYS survey also shows that 24% of Lake County high school seniors indicated that they had engaged in binge drinking within the past two weeks.

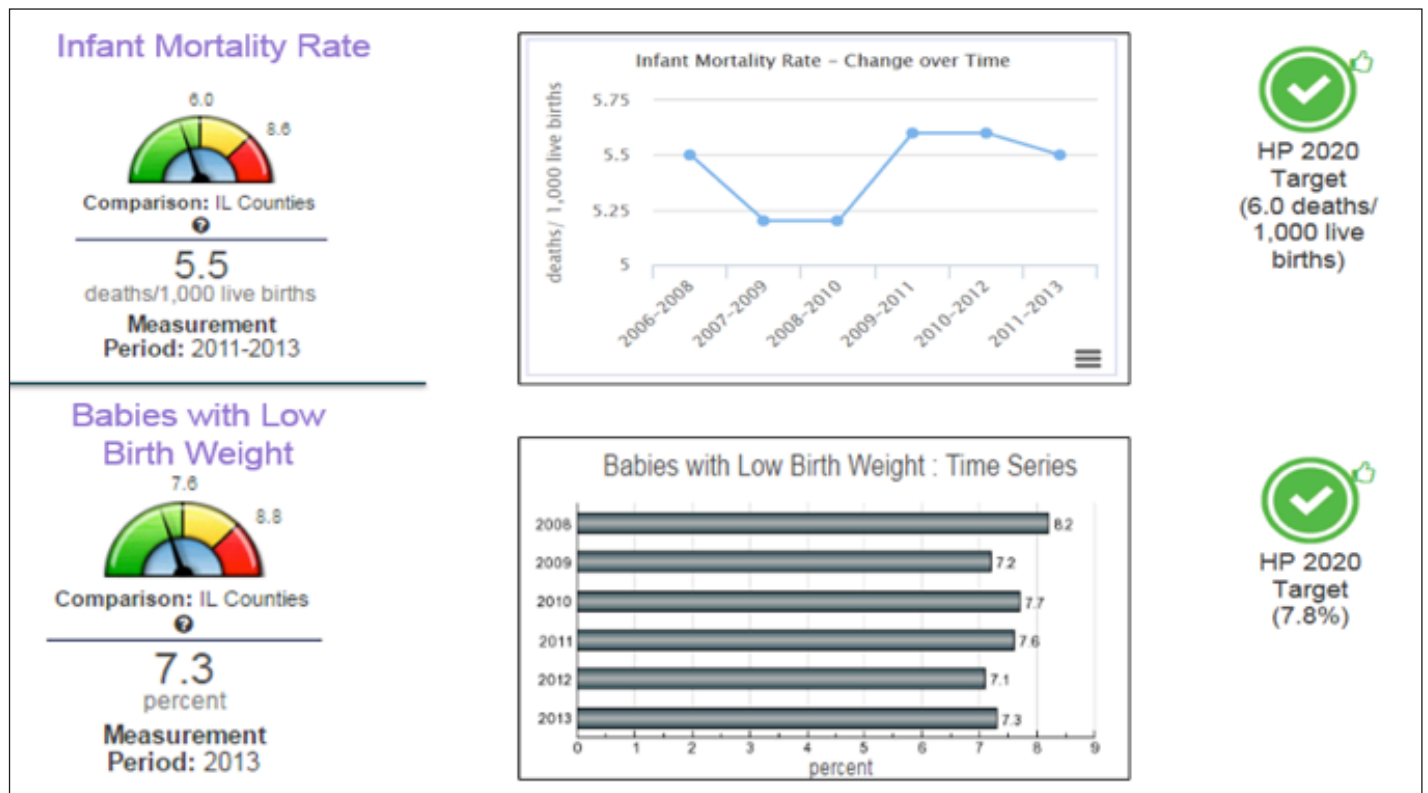
- Twenty percent of adults in Lake County drink excessively, compared to the Illinois rate of 21.4%.
- Communities in Lake County with high ER rates due to alcohol abuse are North Chicago (106.9/10,000), Waukegan (60085) (64.9/10,000), Fox Lake (54.6/10,000) and Libertyville (42.5/10,000).
- Communities in Lake County with the highest hospitalization rates for alcohol abuse are Fox Lake (38.3/10,000), Lake Forest (24.7/10,000), Wauconda (23.5/10,000), North Chicago (21.7/10,000) and Lake Bluff (21.6/10,000).
- The Lake County alcohol-impaired driving death rate of 43% is higher than the rate for McHenry County, Cook County and Kane County.

### Maternal and Child Health

One key indicator used to measure the health of a community in terms of maternal and child health is the percentage of babies born at low birth weight, which is less than 2,500 grams (5 pounds, 8 ounces). For the period of 2011-2013, a total of 7.4% of babies born in Lake County are low birth weight. This meets the Healthy People 2020 target of 7.8%.

An additional measurement to examine is the rate of infant mortality, which shows the number of deaths per 1,000 live births for infants within the first year. The leading causes of death among infants are birth defects, pre-term delivery, low birth weight, Sudden Infant Death Syndrome (SIDS), and maternal complications during pregnancy. In Lake County for the period of 2011-2013, 5.5 deaths occurred for every 1,000 live births of infants. The Lake County rate has been declining since 2009-2011 (5.6/1000) and does meet the Healthy People 2020 target of 6.0 deaths/1000 live births. (Healthy Communities Institute, Illinois Department of Public Health, 2015.) See Exhibit 33.

**Exhibit 33: Lake County Infant Mortality Rate 2011-2013 and Low Birth Weight Rate 2013**



Source: Healthy Communities Institute, Illinois Department of Public Health, 2011-2013; Healthy Communities Institute, Illinois Department of Public Health, 2013.

The 2013 teen birth rate in Lake County is only 1.5%, and it has shown a downward trend since 2009. (Healthy Communities Institute, Illinois Department of Public Health, 2015.) However, the October 2014-September 2015 average annual teen delivery rate for females 15-19 years old shows a rate of 53.6 deliveries/1000 births to teens in North Chicago, a rate of 47.2/1000 for Waukegan (60085), 35/1000 for Zion and 27.8/1000 for Round Lake. (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015.)

### *Key Findings: Maternal and Child Health*

- The teen birth rate for Lake County is trending downward since 2009.
- The average annual delivery rates for girls age 15-19 are highest in North Chicago and Waukegan.
- The Lake County infant mortality rate is meeting the Healthy People 2020 goal.
- The low birth weight rate for Lake County is meeting the Healthy People 2020 goal.

## **Identifying Priorities**

### *Priority Setting Process*

In preparation for the selection of priorities, Condell Medical Center's Community Health staff presented a comprehensive summary of the demographics, six health issues and social determinant factors to the Community Health Council on September 22, 2016. A copy of the Health Issues Summary handout is contained in Appendix 4. The six health issues are listed below.

- Obesity
- Diabetes
- Cardiovascular Disease
- Mental Health
- Substance Abuse
- Maternal and Child Health

A profile of cancer was provided to the Community Health Council, but because cancer is already being addressed as a priority health need through the hospital's internal Cancer Committee in order to meet the accreditation requirements of the Commission on Cancer, it was not profiled as a health need of focus for the 2017-2019 implementation plan period.

Community Health staff asked CHC members to consider the following criteria when making the priority selections.

### *Criteria*

- *Is the health issue clearly identified as a need through data?*

Staff noted to consider if any of the indicators examined had been trending up over time.

- *Is the health issue in alignment with other goals and objectives?*

Staff provided handouts of the Lake County Health Department CHIP goals and strategies, along with the thirteen strategies for behavioral health that were developed as part of the 2016-2020 Behavioral Health Action Plan. These were to inform CHC members on priorities that are already being worked on in the community. Opportunities may exist for collective impact. Collective impact refers to the commitment of a group of important factors from different sectors to a common agenda for solving a specific social problem at scale. The approach engages multiple players in working together to solve complex social problems. (The Community Tool Box, University of Kansas Workgroup for Community Health and Development, 2016.)

- *Does our involvement as a hospital make a difference in the outcome?*

Council members were asked to consider if it is important to have a hospital system at the table as a stakeholder to make an impact on the health issue.

- *Can we demonstrate measurable results with interventions for this health issue?*

Community Health staff reiterated that interventions will be designed around best practice models or evidence-based programs. Special emphasis will be placed on developing metrics to measure the impact of the programs and interventions that will be developed.

- *By focusing on this issue, can there be a positive influence on other health issues?*

Members were asked to consider if work to affect change in one particular health issue may have an influence on other health issues.

- *Are there existing coalitions or partnerships working on this health issue?*

Lake County Health Department action teams are already established around the selected health priorities from the recently completed Community Health Improvement Plan. Additionally, mental health and substance abuse coalitions are actively working in Lake County.

- *Does Advocate Condell Medical Center have the resources/capacity to commit to interventions around this health issue?*

Financial and human resources will be developed during the next three years to assist in programming to address the selected priorities. Staff also shared that grant funding can be pursued to support initiatives.

## *Priorities Selected*

### **Cumulative Voting Process**

Upon conclusion of the summary and criteria presentation, each member was given two “sticky-dots” and was asked to vote using the cumulative voting method. Using the criteria as a guide, CHC members were instructed to use their sticky-dots to vote for the two health issues they identified as the highest priorities for the next three years. The health issues with the highest votes were:

- Mental Health
- Obesity

### **Mental Health**

The Lake County Forces of Change Assessment (FOCA), conducted as part of the MAPP process, identified potential forces that may have the most impact on the county when identifying and building system capacity to address strategic issues. Mental health was ranked the highest of the forces identified. (Lake County Community Health Improvement Plan, 2017-2021.) The 2014 Northern Lake County Behavioral Health needs assessment identified that there is limited capacity in Lake County. The zip codes in Lake County with the highest ER rates due to mental health for adults are North Chicago and Waukegan. The top Lake County zip codes with the highest ER rates due to pediatric mental health are Fox Lake and Waukegan. Mental health is a current priority of the Lake County Health Department as one of their health priorities for their community health improvement plans.

### **Obesity**

The prevalence of obesity in the United States has steadily increased. Prevalence rates as of 2013 show that 40 of the 50 states have  $\geq 26\%$  of the population with BMI measurements in the obese range. Illinois is one of these states and, as of 2014, prevalence rates for Illinois remain between 25% and 30%. The rates are even higher for Illinois Hispanic adults and non-Hispanic African American adults. (Behavioral Risk Factor Surveillance System, Prevalence of Self-Reported Obesity among US Adults by Race/Ethnicity, State and Territory, 2012-2014.) More than 11% of Illinois adolescents are obese and 14% are overweight. Sixteen percent of Illinois WIC preschoolers, age two to four, are overweight and 16% are obese. In Lake County, 29% of adults are obese and 36% are overweight. Eighteen percent of Lake County preschool children are obese. Prevalence for diabetes is also increasing in the US and locally, demonstrating a relationship between obesity and diabetes. The Lake County Health Department has identified obesity as one of the priorities in the CHIP.

## *Explanation Why Other Needs Not Selected as Priorities*

The Community Health Council did not select the following needs as priorities for the 2014-2016 CHNA.

### **Diabetes**

Diabetes was identified as one of the key health needs for Lake County. Diabetes prevalence is increasing over time both locally and nationally. Emergency room visit rates for diabetes have also continued to increase over time. In the past implementation plan period, Condell Medical Center selected diabetes as a health priority. Prevention education and diabetes screening activities were completed in Antioch. Though a significant need, the Community Health Council made the decision to focus on obesity as a priority given its impact on the risk for prediabetes and diabetes.



## **Cardiovascular Disease**

Results from the 2015 Lake County Community Health Status Survey showed that cardiovascular diseases affect over a third of adults in Lake County. Although heart disease is the second highest cause of death in Lake County from 2010-2014 (Live Well Lake County Community Health Assessment, 2016-2021), the prevalence rate of heart disease within Lake County is lower than the rates for Illinois and the US. (Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2013.) Furthermore, the age-adjusted death rate for Lake County due to coronary heart disease has declined since the 2010-2012 period. This rate is below the Healthy People 2020 target, and is lower than the Illinois rate of 98.1/100,000. (Healthy Communities Institute, Centers for Disease Control and Prevention, 2015.)

Because of the decline in the death rate and the positive performance against the Healthy People 2020 target, the Community Health Council determined that progress is being made to decrease cardiovascular disease in Lake County. Additionally, Condell Medical Center is a member of the Advocate Heart Institute, which combines advanced diagnostics and treatment with state-of-the-art technology to provide patients with the best possible outcomes. The Heart Institute initiates a variety of annual heart disease prevention and treatment programs to decrease cardiovascular disease. The Community Health Council determined it was more beneficial to prioritize obesity because of its underlying relationship to heart disease.

## **Substance Abuse**

Substance abuse was identified as a need within Lake County. Particular health behaviors identified included excessive alcohol use in adults and the percentage of teens using marijuana. Those who are mentally ill are more likely to abuse drugs or alcohol. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), 27% of people with mental health issues abused illicit drugs in 2012. Because of the underlying mental health issues affecting the use of substances, the Community Health Council decided to select mental health as the first priority.

## **Cancer**

Cancer was identified as a health need in Lake County, and cancer incidence, prevalence, and mortality data was provided to the Community Health Council. The cancer mortality rate is highest in Lake County for lung cancer, followed by breast cancer, prostate cancer, and then colorectal cancer. Approximately 9% of the Medicare population in Lake County are treated for cancer, higher than McHenry County (8.5%). Lake County has not met the Healthy People 2020 target for the breast cancer death rate. Cancer prevention, screening and treatment are part of the hospital's institutional operation as it is required to maintain the hospital's accreditation with the Commission on Cancer. The Condell Medical Center Cancer Committee works with Community Health Staff to conduct an annual community needs assessment on cancer. The hospital partners closely with the American Cancer Society to develop education, prevention and screening programs. Currently, the organizations are focusing on increasing colorectal cancer screening rates in Lake County as part of the 80% by 2018 initiative. Because work around cancer prevention, screening and treatment is ongoing through the Cancer Committee, Community Health staff did not include it as one of the health issues to be considered for a vote.

## **Maternal and Child Health**

In some higher poverty level areas of Lake County, some maternal and child health issues do show a high need. However, because many of the indicators reviewed for Maternal and Child Health showed downward trends, or were meeting the Healthy People 2020 targets, the Community Health Council did not select this issue as a key priority.

## ***Approval of CHNA by Condell Medical Center Governing Council***

The Community Health Director for the Advocate North Region and the Condell Medical Center Community Health Coordinator provided a copy of the Community Health Needs Assessment to each Governing Council member in advance of the December Governing Council meeting in preparation for approval. The co-Chairs of the Community Health Council, who are also Governing Council members, and the hospital President presented the CHNA document and recommended the health priorities of obesity and mental health to the Governing Council. On December 14, 2016, Condell Medical Center's Governing Council approved the CHNA and selected priorities.

## V. 2016 Implementation Planning

The Advocate North Region Community Health Director and Condell Medical Center Hospital Community Health Coordinator will lead the development of the CHNA 2017-2019 Implementation Plan. The plan will outline goals, strategies and metrics to measure the impact of specific interventions. Progress will be monitored and reported annually. Community Health staff will identify best practice models and evidence-based programs to use as the basis for program planning to address the priorities of obesity and mental health. Focus will be placed on the high needs communities identified during the assessment. Additionally, in the implementation planning, Condell Medical Center will consider developing “a balanced portfolio of interventions” including actions addressing socioeconomic factors, the physical environment, health behaviors and clinical care. (Centers for Disease Control, Community Health Improvement Navigator, Office of the Associate Director for Policy, 2016.)

### Obesity

One of the key collaborating partners that Condell Medical Center will work with is the LCHD/CHC.

#### *Lake County Health Department*

Because obesity and mental health are also health priorities of the Lake County Health Department, the hospital will work collaboratively with the LCHD/CHC in the planning and development of interventions for both priorities. For obesity, the hospital will continue its commitment to the CATCH program in the existing schools. The CATCH program may be expanded to additional school districts, but with any new programs, the hospital will focus on high need communities – those with the higher SocioNeeds Index ranking and higher rates of related health indicators. Other programs that promote healthy lifestyle, good nutrition and fitness will also be explored. Efforts will be made to develop interventions that are coordinated or aligned with existing strategies through the health department.

### Mental Health

The LCHD/CHC has served as a leader in Lake County to address the issue of behavioral health. They first initiated a comprehensive assessment of behavioral health needs, followed by the development of a detailed action plan. Their expertise will be invaluable to Condell Medical Center as it develops strategies to address mental health.

#### *Lake County Health Department Behavioral Health Action Teams*

The Lake County Health Department formed action teams as a result of the 2014 Behavioral Health Assessment and the 2016 Behavioral Health Action Plan. The Lake County Health Department also identified behavioral health capacity and infrastructure as a priority in its recently completed 2016-2021 Community Health Improvement Plan, and additional sub-action teams are being developed as a result of this community health assessment. The action teams are developing strategies to increase provider capacity, expand telemedicine options for psychiatry, reduce mental health stigma, and integrate mental health into the primary care clinical environment. The Advocate Northern Region Director of Community Health is a member of the telemedicine action team. As Condell Medical Center develops its implementation plan, Community Health staff will try to align strategies to make the most positive impact on mental health.

## VI. Community Feedback and Sharing Results

### Community Feedback

Advocate Condell Medical Center welcomes all feedback regarding the 2016 Community Health Needs Assessment. To comment on this report, please click on the link below to complete a CHNA feedback form. Questions will be addressed within thirty days. Comments will also be considered during the next CHNA cycle.  
<http://www.advocatehealth.com/chnareportfeedback>

If there are any issues with the link to the feedback form or any other questions, please click below to send an email:

[AHC-CHNAReportCmtFeedback@advocatehealth.com](mailto:AHC-CHNAReportCmtFeedback@advocatehealth.com)

This report can be viewed online at Advocate Health Care's CHNA Report webpage via the following link:  
<http://www.advocatehealth.com/chnareports>

A paper copy of this report may also be requested by contacting the hospital's Community Health Department at 847.842.4088.

### Sharing Results

In addition to the opportunity to provide feedback through the means described above, Condell Medical Center Community Health staff will proactively present the results of the 2016 CHNA to hospital leadership, clinical service line staff, community partners and coalitions. Feedback from the community will be collected verbally and electronically through the comments and questions portion of the presentation. Additional presentations will be scheduled as requested.

## VIII. Appendices

### Appendix 1: County Community Health Improvement Plans, Surveys and Other Reports

#### *Live Well Lake County Community Health Improvement Plan 2016-2021*

## EXECUTIVE SUMMARY

Residents of Lake County,

The following document outlines Lake County's Community Health Improvement Plan (CHIP), our long-term, systematic effort to address public health issues. This plan is based on the results of community health assessment activities and the community health improvement process with the vision of "Achieving the highest level of health and wellness for all in Lake County." The strategies outlined in this plan are critical in providing guidance to the community on improving health through identification of key priorities, engaging and empowering partners, defining necessary efforts, and targeting actions.



The purpose of this Community Health Improvement Plan is to:

- Identify our community health priorities;
- Focus our attention and resources on strategies to affect positive health outcomes;
- Monitor our progress in achieving these outcomes; and
- Improve our community's health.

Our community health improvement process was led by the Live Well Lake County Steering Committee with guidance from the Lake County Health Department and Community Health Center. The process utilized data from community health assessments completed in 2015 to identify four key priority health issues. Objectives were created and then strategies for action were developed to ensure measurable and actionable health improvement. Implementation efforts are ongoing and will occur over the course of the next five years and into the future.

Lake County's CHIP is a call to action. The success of the community health improvement process relies on our engaged community members, partners, and stakeholders. All our community members and organizations can play a role in the process, whether it is through the understanding of the community priorities and spreading awareness or joining action teams to implement strategies. The community health improvement process looks outside the performance of individual organizations serving specific segments of our community to the way in which the activities of many organizations or community members contribute to the overall improvement of our health. The Lake County Health Department and Community Health Center can provide facilitative guidance as you incorporate this CHIP into your own work plans. Contact us at [healthassessment@lakecountyl.gov](mailto:healthassessment@lakecountyl.gov).

Mark Pfister, MSES, LEHP  
Interim Executive Director  
Lake County Health Department and Community Health Center



# LIVE WELL LAKE COUNTY

Community Health Improvement Plan 2016-2021

## Vision

ACHIEVING THE  
**highest**  
LEVEL OF  
**health & wellness**  
FOR ALL IN  
**Lake County**

## Priorities

- Cardiovascular Disease and Hypertension
- Obesity
- Behavioral Health Capacity and Infrastructure
- Diabetes

## Strategies

- Improve Policies, Systems, and Environments to Promote Healthy Lifestyles
- Increase Physical Activity in Adults and Youth
- Improve and Promote Nutritional Opportunities in the Food Environment
- Improve Clinical Interventions for Chronic Disease
- Improve Behavioral Health Capacity and Infrastructure in Lake County

## Voice of the Community

### Community Priorities

- Poor Diet and Inactivity
- Chronic Disease
- Substance Use (tobacco, alcohol, and drug use)
- Safe Affordable Housing
- Older Adult Health

### Health System Needs

- Improve Surveillance and Data Sharing
- Increase Health Equity Education
- Increase Public Health Awareness
- Assure Linkages to Healthcare
- Create Research Infrastructure

### Emerging Trends

- Mental Health
- Healthcare Access
- Electronic Health Records & the Health Information Exchange
- Health in All Policies Approach
- Economic Inequities

## Community Health Data

### Obesity



23% of Lake County adults are obese

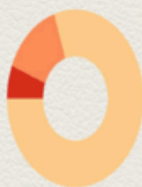
34% of Lake County adults are Overweight

### Hypertension and Cardiovascular Disease



35% of Lake County adults have been diagnosed with hypertension

### Diabetes



6% of Lake County adults have been diagnosed with diabetes

14% of Lake County adults have been diagnosed with pre-diabetes

Lake County Health Department, Assessment Team, Obesity in Lake County 2015 Status Report Lake County Health Department Community Health Status Assessment Survey 2015

## Goals

### Hypertension

- Reduce prevalence of Lake County adults who have been diagnosed with hypertension by 10% by 2031
- Reduce the number of annual emergency room visits due to hypertension by 10% by 2021

### Obesity

- Reduce prevalence of Lake County adults who are obese by 10% by 2031
- Reduce prevalence of Lake County adults who are overweight by 10% by 2031

### Behavioral Health Capacity and Infrastructure

- Reduce the percent of youth who report feeling so sad or hopeless almost every day for two weeks or more in a row that stopped them from doing some usual activities by 10% by 2021
- Reduce the average annual count of all emergency room visits due to mental health diagnoses by 10% by 2021
- Reduce the proportion of adults who report having a day or more in the past month where their mental health status prevented them from carrying on usual activities by 10% by 2021

### Diabetes

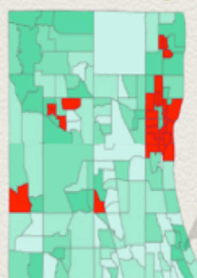
- Reduce prevalence of Lake County adults who have been diagnosed with diabetes by 10% by 2031
- Reduce the average annual count of emergency room visits due to diabetes by 10% by 2021

## Health Equity

Health Equity is where every person has the opportunity to achieve their full capabilities and potential for health and well-being (NACCHO).

Social determinants of health are conditions in the environments in which 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 (Healthy People 2020).

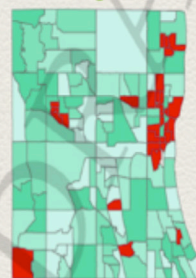
### Childhood Poverty



Percent of Children in Poverty

- < 2%
- 2.1 - 6.3%
- 6.4 - 12.6%
- 12.7 - 22.2%
- 22.3 - 68.4%

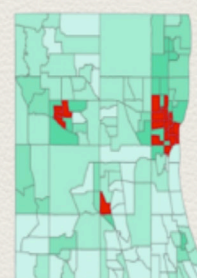
### Housing Stress



Rates of Housing Stress (> 30% of Income Spent on Housing Costs)

- 17.4 - 32.0%
- 32.1 - 35.5%
- 35.6 - 39.7%
- 39.8 - 46.3%
- 46.4 - 60.0%

### Educational Attainment



Percent of Adults with Less than High School Diploma or Equivalent

- < 3.5%
- 3.5 - 8.2%
- 8.3 - 16.3%
- 16.4 - 29.3%
- 29.4 - 51.9%

U.S. Census Bureau, 2010-2014 American Community Survey 5 Year Estimates

## Get Involved:

What to be part of the movement to improve community health? For more information on the Live Well Lake County Community Health Improvement Plan, visit:

[LiveWellLakeCounty.org](http://LiveWellLakeCounty.org)

**Lake County**  
Health Department and  
Community Health Center

Summer 2016

## Appendix 1: County Community Health Improvement Plans, Surveys and Other Reports (cont'd)

### Live Well Lake County Community Health Assessment 2016-2021

## INTRODUCTION

### MOBILIZING FOR ACTION THROUGH PLANNING AND PARTNERSHIPS (MAPP)

The Lake County community health improvement process was developed within the Mobilizing for Action through Planning and Partnerships, or MAPP, framework.

MAPP follows seven guiding principles:

1. Systems Thinking
2. Dialogue
3. Shared Vision
4. Data
5. Partnerships and Collaboration
6. Strategic Thinking
7. Celebration of Successes



The National Association of County and City Health Officials (NACCHO) and the Centers for Disease Control and Prevention (CDC) created the MAPP framework as a strategic approach for community health improvement that creates a healthy community and better way of life, increases the visibility of public health within the community, anticipates and manages change, creates a stronger public health infrastructure, and engages the community and creates community ownership for public health issues. Since its completion in 2000, MAPP has become the leading tool that health departments and their partners use to guide public health planning processes. To begin Lake County's planning process, LCHD/CHC supported community efforts by conducting the four MAPP Assessments:

- Local Public Health System Assessment – Conducted on June 18, 2015, this assessment utilized the National Public Health Standards Program assessment of the components, activities, competencies and capacities of the local public health system and analyzed how well the Essential Public Health Services are delivered.
- Forces of Change Assessment – Conducted on October 23, 2015, the assessment identified the forces that affect or will be affecting the community and public health system, as well as the threats or opportunities that result.
- Community Themes and Strengths Assessment – Conducted from September to December of 2015, the assessment identified the community's interests, perceptions about quality of life in Lake County, and community assets.
- Community Health Status Assessment – Throughout 2015, primary and secondary data were gathered to describe the health status, quality of life, demographics, and behavioral risk factors in the community.<sup>3,4</sup>

<sup>3</sup> <http://archived.naccho.org/topics/infrastructure/mapp/framework/upload/MAPP-Brochure-2.pdf>

<sup>4</sup> <http://www.naccho.org/programs/public-health-infrastructure/mapp>



# SELECTED COMMUNITY HEALTH PRIORITIES

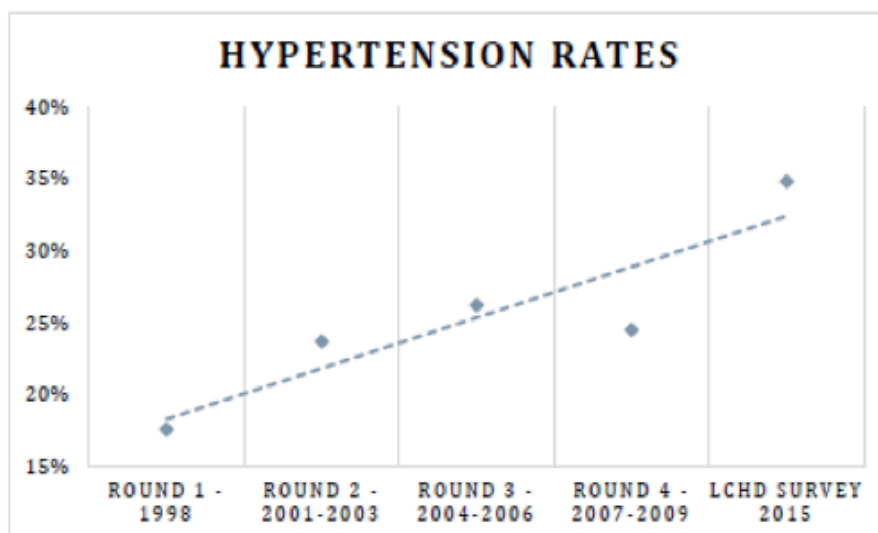
## Selected Community Health Priorities

### FOUR COMMUNITY HEALTH PRIORITIES

1. Cardiovascular disease and hypertension
2. Behavioral health
3. Obesity
4. Diabetes

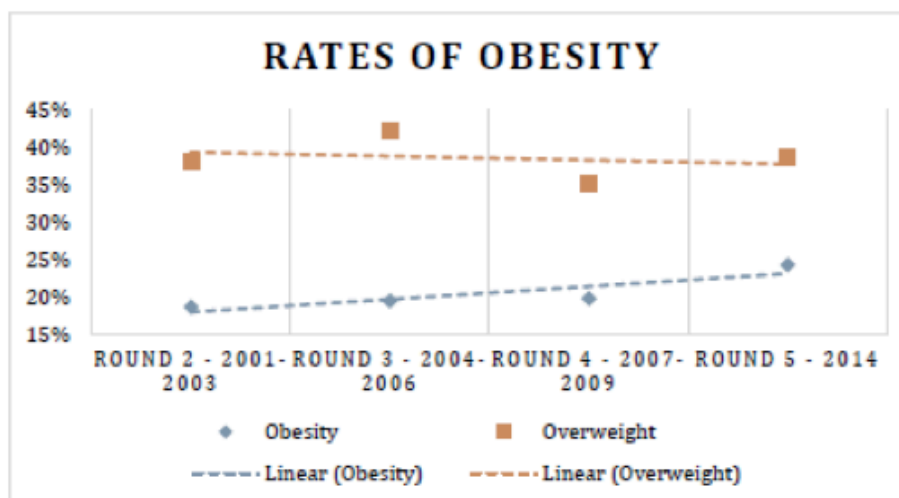
While the health improvement priorities were selected based on the most recent data available, the conditions have emerged as driving factors in resident health over longer time horizons. Lake County has experienced upward trends in the prevalence of these key chronic conditions. Historical data supports the growing magnitude of these health issues.

### HISTORIC TRENDS

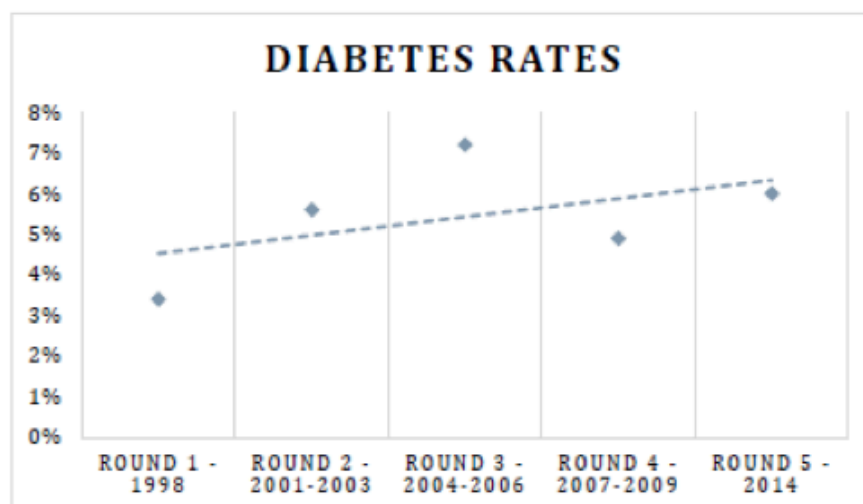


Hypertension rates have increased dramatically. Between the first round of the I-BRFSS in 1998 and the Lake County Community Health Survey in 2015, the percentage of adults reporting that they have hypertension has increased from 18% to 35%, nearly doubling over the interval. While some demographic shifts such as an aging population can help to explain some of the increase in disease, the burden of the condition is ultimately much higher now than in the past.

## SELECTED COMMUNITY HEALTH PRIORITIES



**Obesity** contributes to an individual's risk of chronic conditions, osteoarthritis, and other health issues that disrupt quality of life. While obesity rates in the county remain slightly lower than the state, obesity has increased by 5% in the past 12 years. The percentage of adults who are overweight has remained relatively stable. 62% of adults in Lake County are overweight or obese. While complete or historical data sets do not exist in Lake County for children, childhood obesity is an emerging national and state priority.



**Diabetes** in adults has increased over time from 3.4% to 6%. An additional 14% have been diagnosed with prediabetes and are at greater risk of developing the disease.

## Appendix 1: County Community Health Improvement Plans, Surveys and Other Reports (cont'd)

### *Wauconda Community Survey Findings 2016*

#### Introduction

Data that can help inform communities on their health status is not always available in a timely or understandable manner. Health and social indicators are reported at much larger, less relevant scales. Health information tends to be most well documented at the state and national level. Even these data are difficult to use, as they tend to only become available several years after the information is collected. Consequently, local health and social challenges are more difficult to define. Focused interventions are more difficult to implement.

In order to better understand the needs and strengths within a community and effectively plan for the future, Advocate Health Care and the Lake County Health Department and Community Health Center (LCHD/CHC) have partnered to collect, interpret, and share essential data that can help communities make informed decisions about proposed priorities, plans, and projects.

#### Background

With the advent of the Affordable Care Act, not-for-profit hospitals are responsible for developing and implementing comprehensive plans to support the broader health of the communities they serve. The first step of the three year cycle is to create a Community Health Needs Assessment (CHNA). Effective plans require accurate, timely data to foment action that delivers meaningful results. To support the development of a data-driven CHNA, Advocate Health Care and LCHD/CHC collaborated to collect data on high priority communities within the Good Shepherd service area. Utilizing a survey tool generated for the Lake County Community Health Status Assessment, individuals in the target community were invited to share their health status and contribute to an assessment of the strengths and needs unique to their neighborhoods.

#### Wauconda

The Village of Wauconda is located in southeast Lake County. The Village is home to 13,189 residents.<sup>1</sup> About 26.4% of residents are under the age of 18. 18.2% of residents identify as Hispanic or Latino. 73.1% identify as non-Hispanic White. 0.6% identify as non-Hispanic Black. 6.0% identify as Asian. 15.5% of residents were born outside of the United States. 25.0% of residents speak a language other than English at home; of these residents, 37.9% speak English less than “very well.” 42.4% of households who rent and 37.9% of households who own their homes spend greater than 30% of their household income on housing costs. The most common language spoken at home (by about 15% of all residents) is Spanish or a Spanish Creole. 5.8% of all residents and 4.2% of children under 18 years old fall below the federal poverty level. 19.4% of working residents are in Educational services, health care, and social assistance industries. Another 15.2% are employed in manufacturing. 13.2% work in retail trade.

#### Methods

The survey questions were adapted from national tools designed to collect data for improving understanding of health conditions and challenges and drew heavily from the Behavioral Risk Factors Surveillance System survey used by the Centers for Disease Control and Prevention in order to describe health burdens by state. Additional questions were added to assess the prevalence of behavioral health

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<sup>1</sup> 2010-2014 American Community Survey 5-Year Average

and chronic disease conditions. New questions were subjected to three rounds of review prior to being approved for use in the survey tool. Surveys were developed in English and Spanish.

Five thousand randomly-selected households in the Wauconda community were contacted by mail in mid-September and invited to participate in an anonymous online or call-in survey offered in English and Spanish. Two reminder postcards were delivered two and six weeks after the initial mailing. Respondents had a window of ten weeks to participate in the survey. Of the initial 5000 invitations, 158 were returned as undeliverable.

From the invitations sent, the survey received 598 contacts for a contact rate of 12.4% of delivered invitations. A total of 558 respondents moved past the screening questions that verified a respondent's age and home ZIP code. Because only the screening questions were mandatory, the total responses per individual question varied throughout the survey. Responses were collected and weighted for different demographic features including age and sex of the respondents unique to the geography sampled. The source of age and sex estimates were based on the U.S. Census's American Community Survey 5-Year Estimates for years 2010-2014. With this weighting strategy, the Lake County survey was found to produce rates comparable to the I-BRFSS Round 5 estimates.

For ease of interpretation, a symbol indicates whether, for the value for the question asked is performing better than, equal to, or worse than Lake County. An indicator that is a better value than Lake County overall is symbolized as a green circle with a white "+" enclosed. Equivalent values are symbolized with a yellow circle with a white "=" enclosed. Values that are worse than Lake County are represented by a red circle with a white "-" enclosed. Examples of the three symbols are as follows:

Better	Equal	Worse
		

### Further Information

Questions and comments can be directed to Seth Kidder, Assessment and Planning Coordinator at the Lake County Health Department. He can be reached by phone at 847.984.5014 or by email at [skidder@lakecountyil.gov](mailto:skidder@lakecountyil.gov).



## Appendix 1: County Community Health Improvement Plans, Surveys and Other Reports (cont'd)

### *Waukegan Community Survey Findings 2016*

#### Introduction

Data that can help inform communities on their health status is not always available in a timely or understandable manner. Health and social indicators are reported at much larger, less relevant scales. Health information tends to be most well documented at the state and national level. Even these data are difficult to use, as they tend to only become available several years after the information is collected. Consequently, local health and social challenges are more difficult to define. Focused interventions are more difficult to implement.

In order to better understand the needs and strengths within a community and effectively plan for the future, Advocate Health Care and the Lake County Health Department and Community Health Center (LCHD/CHC) have partnered to collect, interpret, and share essential data that can help communities make informed decisions about proposed priorities, plans, and projects.

#### Background

With the advent of the Affordable Care Act, not-for-profit hospitals are responsible for developing and implementing comprehensive plans to support the broader health of the communities they serve. The first step of the three year cycle is to create a Community Health Needs Assessment (CHNA). Effective plans require accurate, timely data to foment action that delivers meaningful results. To support the development of a data-driven CHNA, Advocate Health Care and the LCHD/CHC collaborated to collect data on high priority communities within the Condell service area. Utilizing a survey tool generated for the Lake County Community Health Status Assessment, individuals in the target community were invited to share their health status and contribute to an assessment of the strengths and needs unique to their neighborhoods.

#### Waukegan

The City of Waukegan is located in northeastern Lake County on the shore of Lake Michigan. With a population of 88,671,<sup>1</sup> Waukegan is the largest city in Lake County and serves as the County Seat. About 28.9% of residents are under the age of 18. 53.4% of residents identify as Latino, 22.4% identify as non-Hispanic White, 17.2% identify as non-Hispanic Black, and 4.7% identify as non-Hispanic Asian. 30.7% of residents were born outside of the United States. 54.2% speak a language other than English at home; of these residents, 44.9% speak English less than “very well.” 53.8% of households who rent and 37.4% of households who own their homes spend greater than 30% of household income on housing costs. 20.3% of all residents and 30.7% of children under 18 fall below the federal poverty level. 22.2% of working residents are in manufacturing. 16.7% of working residents are in educational services, health care, or social assistance industries.

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<sup>1</sup> 2010-2014 American Community Survey 5-Year Estimates




## Methods

The survey questions were adapted from national tools designed to collect data for improving understanding of health conditions and challenges and drew heavily from the Behavioral Risk Factors Surveillance System survey used by the Centers for Disease Control and Prevention in order to describe health burdens by state. Additional questions were added to assess the prevalence of behavioral health and chronic disease conditions. New questions were subjected to three rounds of review prior to being approved for use in the survey tool. Surveys were developed in English and Spanish.

Five thousand randomly-selected households in the Waukegan community were contacted by mail in mid-September and invited to participate in an anonymous online or call-in survey offered in English and Spanish. Two reminder postcards were delivered two and six weeks after the initial mailing. Respondents had a window of ten weeks to participate in the survey. Of the initial 5,000 invitations, 312 were returned as undeliverable.

From the invitations sent, the survey received 241 contacts for a contact rate of 5.1% of delivered invitations. A total of 215 respondents moved past the screening questions that verified a respondent's age and home ZIP code. Because only the screening questions were mandatory, the total responses per individual question varied throughout the survey. Responses were collected and weighted for different demographic features including age and sex of the respondents unique to the geography sampled. The source of age and sex estimates were based on the U.S. Census's American Community Survey 5-Year Estimates for years 2010-2014. With this weighting strategy, the Lake County survey was found to produce rates comparable to the I-BRFSS Round 5 estimates.

For ease of interpretation, a symbol indicates whether, for the value for the question asked is performing better than, equal to, or worse than Lake County. An indicator that is a better value than Lake County overall is symbolized as a green circle with a white "+" enclosed. Equivalent values are symbolized with a yellow circle with a white "=" enclosed. Values that are worse than Lake County are represented by a red circle with a white "-" enclosed. Examples of the three symbols are as follows:

Better	Equal	Worse
		

## Further Information

Questions and comments can be directed to Seth Kidder, Assessment and Planning Coordinator at the Lake County Health Department. He can be reached by phone at 847.984.5014 or by email at [skidder@lakecountyil.gov](mailto:skidder@lakecountyil.gov).



## Appendix 1: County Community Health Improvement Plans, Surveys and Other Reports (cont'd)

### Lake County Health Department/Community Health Center Obesity in Lake County 2015 Status Report



## Introduction

### What is obesity?

People are healthiest when they are at a healthy weight – not too much or too little body fat. Obesity is a condition where a person's body fat is too high. Individuals struggling with obesity face greater health challenges (morbidity) and tend to die younger (mortality) than those with normal weights. People who are obese have a higher risk for many chronic conditions like diabetes, heart disease, stroke, high blood pressure, liver and gallbladder disease, respiratory problems, osteoarthritis, and certain types of cancer<sup>1</sup> that can reduce an obese person's quality of life. Obesity-related diseases are leading causes of premature death in the United States. Because obesity creates major challenges to living a long and healthy life, addressing obesity is vital to protecting and promoting public health.

The most common way of determining weight status is to calculate a person's Body Mass Index (BMI). A person's weight in pounds is divided by the square of the person's height in inches. The quotient is then multiplied by 703 to give a BMI value. The World Health Organization classifies BMI values into four broad categories: Underweight (< 18.5), Normal Weight (18.5-24.9), Overweight (25-29.9), and Obese (> 30). While very athletic people can have weights that place them in higher BMI brackets, BMI is generally useful in determining a person's weight status and risk of health problems.

$$\frac{\text{weight}_{\text{lb}}}{\text{height}_{\text{in}}^2} \times 703 = \text{BMI}$$

### What causes obesity?

Some causes of obesity are based on the choices an individual makes. Eating unhealthy foods or too much food and not getting enough physical activity can put a person at higher risk for obesity. There are also many factors outside of a person's control. Genetics and family history, a person's sex, his or her economic status, and race and ethnicity all influence the likelihood that someone will be obese. Where someone lives has an impact. In public health, these opportunities are related to the "built environment," or the man-made resources immediately available in a community. Location and the built environment can create barriers to accessing health care services, being able to find and afford healthy and nutritious foods, and having safe spaces nearby to exercise. Healthy diet, exercise, education, and access to healthcare can help to reduce a person's body fat or maintain a healthy weight. Infrastructure such as transportation, schools, safe parks, jobs, and stores that offer healthy food at affordable prices can promote health in a community. By looking at rates and causes of obesity, community organizations can work to address the barriers that keep people from living healthy lives.

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<sup>1</sup> "The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity." Office of the Surgeon General (US) (2001).

### Why is obesity important to the healthcare system?

Obesity is a common and costly condition across the United States. More than one in three adults in the United States is obese. Another third of adults are overweight and at risk of becoming obese.<sup>2</sup> The number of obese persons in the United States has grown rapidly over the past few decades, with national rates increasing from 12% in 1990<sup>3</sup> to nearly 35% in 2012.<sup>4</sup> The Centers for Disease Control and Prevention describes this surge in the obesity rate as an epidemic.

Because obese individuals are more likely to have chronic conditions, their healthcare costs are significantly higher than those with normal weights. Additional medical costs for an obese person are \$1,429 higher per year than costs for a person in the normal weight range.<sup>5</sup> Healthcare costs related to obesity in the United States were \$147 billion in 2006.<sup>6</sup> Costs to individuals and the healthcare system at large are expected to rise with further increases in obesity.

### What does this mean for Lake County?

Lake County residents see obesity as an important health issue in their communities. Almost half of respondents to the county-wide Community Themes and Strengths Assessment identified obesity as a moderate or major problem in their communities (48.1%). More than six in ten residents see obesity as a moderate or major problem in Lake County as a whole (62.0%).<sup>8</sup> As a community priority, timely, accurate data on the weight status of the communities are needed to identify priority communities and develop effective strategies to support healthy weight.

In the past, local obesity data has come from the Centers for Disease Control and Prevention's Behavioral Risk Factors Surveillance System (BRFSS), a massive phone survey designed to collect health data for the states. BRFSS's most recent estimate was calculated across years 2006-2012 and estimated an obesity rate for Lake County of 24.7% (95% CI 21.8%-27.9%).<sup>9</sup> Lake County's rate is lower than Illinois's (29.4%)<sup>10</sup> and the nation's (34.9%),<sup>11</sup> but still indicates a considerable burden on residents' well-being and the local healthcare system. Furthermore, different areas of the county likely experience different burdens of obesity. At the state level, obesity rates vary greatly. Rates range from a low of 21.3% for adults in Colorado up to a high of 35.1% in West Virginia and Mississippi.<sup>13</sup> Although the BRFSS can be used as a starting point, the all-county data does not provide sufficiently local information to identify community-level priorities and plan effective programming and interventions.

<sup>2</sup> Ogden, C.L., Carroll, M.D., Kit, B.K., Flegal, K.M. "Prevalence of Childhood and Adult Obesity in the United States, 2011-2012." *JAMA*. 2014;311(8):806-814.

<sup>3</sup> Menifield, C.E., Doty, N., Fletcher A. "Obesity in America." *ABNF J*. 2008 Summer; 19(3):83-88.

<sup>4</sup> Ogden et al, 2014.

<sup>5</sup> Finkelstein, E.A., Trogdon, J.G., Cohen, J.W., Dietz, W. "Annual Medical Spending Attributable to Obesity: Payer- and Service-Specific Estimates." *Health Affairs*, 2009;28(5). w822-w831.

<sup>6</sup> Ibid.

<sup>8</sup> Community Themes and Strengths Survey (2011). Lake County Health Department and Community Health Center.

<sup>9</sup> Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data.

Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2006-2012.

<sup>10</sup> Ibid.

<sup>11</sup> Ogden et al, 2014.

<sup>13</sup> CDC BRFSS 2012.



## Appendix 1: County Community Health Improvement Plans, Surveys and Other Reports (cont'd)

### *An Assessment of Behavioral Health Needs, Service Capacities and Projected Trends in Northern Lake County, July 2014*

#### *Behavioral Health Needs in Northern Lake County*

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### **Executive Summary**

This report describes behavioral health in terms of needs, service capacities and projections for the future in Northern Lake County, especially as they relate to lower-income populations. The information presented here is the culmination of a nine-month, in-depth process that sought to capture the complexities of needs, providers, services and other aspects of behavioral health. The tools used to gather data included a survey of 250 behavioral health specialists, nineteen individual interviews, four focus groups and analysis of quantitative data. Northern Lake County is defined as the portion of Lake County, Illinois that lies north of Route 137, extending from Lake Michigan on the east to McHenry County on the west.

Key findings of this process include the following:

#### **Findings on Need**

*The Need Is Enormous.* For example, almost 80,000 Northern Lake County residents likely engaged in binge drinking in the last month. Almost 4,000 residents had dependence on illicit drugs in the last year. Some 10,000 residents had serious thoughts of suicide in the last year, and 17,000 had one or more major depressive episodes. (page 7)

*Large Numbers of Young Adults Are Using Alcohol and Tobacco.* Almost half of young adults aged 18-25 have used a tobacco product in the last month. Two-thirds report binge drinking. One in eight 12-17 year olds has used a tobacco product in the past month and one in ten 12-17 year olds has engaged in binge drinking in the past month. (page 6)

*Young Persons are overrepresented in hospital emergency departments for behavioral health.* Persons 15-24 years old are 14 percent of the population but 30 percent of emergency department visits. Persons aged 25-34 years are also overrepresented in the emergency department data in numerous diagnostic categories. (page 10)

*The Need Is Highly Concentrated In Some Areas.* Local areas in the environs of Waukegan and North Chicago have deep need for behavioral health services. Some zip code areas have residents visiting the emergency room with behavioral health crises at ten times the rate of persons in zip codes just a few miles away. Other zip codes in the western portion of Northern Lake County also have notably high use of emergency department services for behavioral health. (page 8)

*Specific Populations Are Underserved in Different Ways.* Latinos, who are a fifth of the area's population, are dramatically underrepresented in data on hospital use. African Americans meanwhile are overrepresented among persons requiring emergency services. (page 9)

***Critical Services Are Lacking.*** There is a serious need for more behavioral health professionals in Northern Lake County, especially when compared to the numbers of professionals in Southern Lake County. Far more psychiatrists are needed, but also key services such as general counseling, case management and housing. (page 34)

### **Findings on Capacity**

***There Is Limited Capacity.*** The numbers served by Lake County Health Department are small in comparison to the demand. The non-profit sector is essentially at capacity. The for-profit sector is not a major player because it cannot provide charity care and it largely does not accept Medicaid. (Section III)

***More Medicaid Providers Are Needed.*** Medicaid is the only health insurance available to most persons of low income, yet few providers are available. Only about a dozen psychiatrists in Northern Lake County accept Medicaid, and some of them take on very few patients. (page 26)

***The Lake County Health Department Has Experienced Shifts in Its Service Capacity, with Some Decline of Services in Recent Years.*** The County's behavioral health caseloads have fallen in some areas such as Outpatient Counseling, while Child and Adolescent Behavioral Services have risen. Overall, most programs have had their most recent service peaks three or four years ago due to declines in state funding. (page 25)

### **Projections**

***The Affordable Care Act Will Dramatically Improve Access, but Will Strain Already Limited Behavioral Health Capacity for Low-Income Persons.*** Some 39,000 Northern Lake County residents will gain access to health insurance via the ACA. If even a modest portion of these persons seek behavioral health services for the first time, it will strain a system that is already largely at capacity. (page 38)

***12,000 Persons Newly Eligible for Medicaid Represent a Diverse Population.*** About 38 percent of the population newly eligible for Medicaid is White, Non-Latino, 37 percent is Latino, and 20 percent is African American. (page 38)

***County Government Needs a Market Orientation Toward the Newly Insured.*** A large number of about 12,000 persons newly insured by the ACA will fall under the "Medicaid Expansion" category. Many have been getting treated at county facilities, yet they will have the ability to seek care elsewhere. The county will need to compete to retain these newly insured (i.e., paying) customers. (page 38)

***A "Catch-Up" Strategy toward Growth and Diversity Is Insufficient.*** For the foreseeable future, population growth and diversification – and the particular requirements they imply for

behavioral health services -- will be the norm. In as much as the population growth may continue to be driven by immigration, good clinical interventions will require culturally informed and ethnically diverse clinicians attuned to the culture of the person in treatment. This will require investment in linguistically and culturally appropriate services. The community needs more behavioral health providers who speak languages other than English. *(page 41 and map on page 15).*



## Appendix 1: County Community Health Improvement Plans, Surveys and Other Reports (cont'd)

### *Community Action Plan for Behavioral Health in Lake County, Illinois, 2016-2020, November 2015*

Community Action Plan for Behavioral Health in Lake County, Illinois  
For the Five Years 2016 – 2020

## Executive Summary

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This report provides a recommended five-year action plan to address the unmet behavioral health needs in Lake County, IL. These needs were identified in a July 2014 report entitled “An Assessment of Behavioral Health Needs, Service Capacities, and Projected Trends in Northern Lake County” (Assessment). The action plan presented here is a result of a ten month project involving collaboration from behavioral health and social service providers and stakeholders from Northern Lake County, led by Leading Healthy Futures (LHF), and funded by the Healthcare Foundation of Northern Lake County.

Based on the tremendous behavioral needs identified, stakeholders in Lake County prioritized four population groups whose behavioral health needs would need to be addressed in any successful action plan: low income adults and youth who have non-severe mental health conditions; individuals who have substance abuse disorders and are not severely mentally ill; individuals who are severely mentally ill, do not require residential treatment, and are not homeless; and individuals who are severely mentally ill, and require residential treatment and/or are homeless. In addition to the four population groups, four main underlying issue areas to address were identified: provider workforce; coordination/continuum of care; awareness; and access. For all of these population groups and underlying issues, the need for improved linguistic, cultural, racial and ethnic competencies was held as a constant.

This report presents detailed discussions of 13 unique strategies, grouped according to the underlying four issue areas, which have great potential to meet the needs of these population groups over the next five years. Each strategy was researched by LHF and discussed in detail by groups of Northern Lake County stakeholders. The results of these conversations and research are presented here, including summaries of the strategies and more detailed considerations around scale, potential partners, expected outcomes, revenue potential, and cost assumptions.

The report outlines recommendations for successful implementation of the action plan. LHF's recommendation is to leverage the existing structure of *Live Well, Lake County* to serve as the convener for implementation. A Behavioral Health Action Team, with interdisciplinary representation, would be created under this existing structure, meeting for the first time between February and April of 2016. The Behavioral Health Action Team would guide decisions around which strategies to pursue in which order, with the recommendation of initially choosing one strategy per issue area to pursue in Year 1, and choosing additional strategies in Year 2 and beyond.

Pursuit of the strategies recommended and expounded upon in this report is expected to have a substantial impact on unmet behavioral health needs in Northern Lake County. Successful implementation of this action plan would create:

- Greater awareness of behavioral and mental health issues in the community;
- More effective referrals and care coordination between social service, health, and behavioral health agencies in the county;
- Greater access to services throughout the county; and
- Expansion of the provider work force and capacity to serve patients and clients in the county.

With careful and strategic implementation of these strategies, Northern Lake County has the potential to reduce the unmet behavioral health needs of its population, and become a model for other counties, communities, and collaboratives seeking to do the same.

## Appendix 2: Data Sources for 2014-2016 CHNA

*(All data sources and website links were verified as of the date of Governing Council approval.)*

### Primary Sources

An Assessment of Behavioral Health Needs, Service Capacities and Projected Trends in Northern Lake County, Lake County Health Department and Community Health Center, Behavioral Health Services, Rob Paral and Associates, July 2014.

Community Action Plan for Behavioral Health in Lake County, Illinois, 2016–2020, Lake County Health Department and Community Health Center, November 2015.

2016-2021 Live Well Lake County Community Health Assessment, Live Well Lake County Steering Committee, Lake County Health Department, August 24, 2016.

2016-2021 Live Well Lake County Community Health Improvement Plan, Live Well Lake County Steering Committee, Lake County Health Department, August 24, 2016.

Obesity in Lake County 2015 Status Report, Lake County Health Department Assessment Team, March 2015.

Wauconda Community Survey Findings, Lake County Health Department and Community Center, Assessment and Planning, July 2016.

Waukegan Community Survey Findings, Lake County Health Department and Community Center, Assessment and Planning, July 2016.

### Secondary Sources

Healthy Communities Institute, A Xerox Company, 2016, accessed via a contract with Advocate Health Care. Website unavailable to the public. The following data sources were accessed through the HCI portal:

Centers for Disease Control and Prevention, 2015.

Claritas, 2015, 2016.

County Health Rankings, 2014, 2015.

Illinois COMPdata, 2015, 2016.

Illinois Department of Public Health, 2011-2013, 2013.

Illinois Hospital Association, COMPdata, 2015, 2016.

US Census, American Community Survey, 2008-2012, 2010-2014, 2015.

Center for Medicare and Medicaid, Medicare Enrollment Dashboard, 2016.

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Dashboard/Medicare-Enrollment/Enrollment%20Dashboard.html>

Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016.

<http://www.cdc.gov/brfss/>

Centers for Disease Control and Prevention, Diabetes Data and Statistics, 2012.

<http://www.cdc.gov/diabetes/atlas/countydata/atlas.html>

Community Commons, 2016. [www.communitycommons.org](http://www.communitycommons.org)

County Health Rankings, 2016. [www.countyhealthrankings.org](http://www.countyhealthrankings.org)

Illinois Behavioral Risk Factor Survey, 2015. <http://app.idph.state.il.us/brfss/>

Illinois Department of Public Health, Data and Statistics, 2016. <http://www.dph.illinois.gov/data-statistics>

Illinois Healthcare and Family Services, Facts and Figures (Medicaid Enrollment Data), 2016.


<https://www.illinois.gov/hfs/info/factsfigures/Pages/default.aspx>

Illinois Youth Survey, 2014. <https://iys.cprd.illinois.edu/>

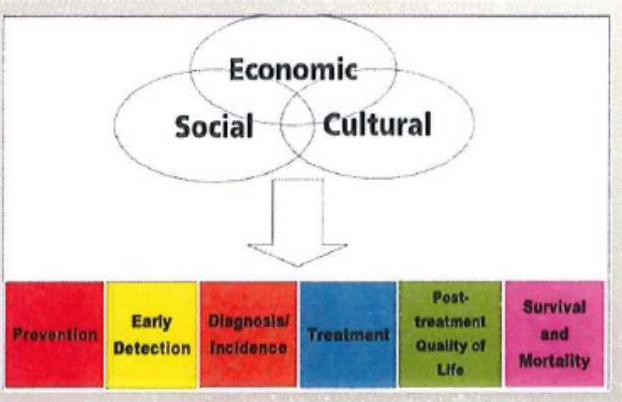
Truven Health, Claritas, 2016.

Truven Insurance Coverage Estimates, 2016.

## Appendix 3: Cancer Presentation Provided to Condell Medical Center's Community Health Council



### Cancer Overview



Freeman, and Institute of Medicine


**Literature on Cancer Health Disparities:**

- ❑ White women have the highest incidence rates for all cancers, but African-American women have the highest mortality rates.
- ❑ Persons with low socioeconomic status have higher rates of cancer incidence and mortality and lower rates of cancer survival compared to more affluent persons.

**Estimates of the costs of Cancer disparities:**


- ❑ Whites have higher cancer incidence and mortality rates than Asians and Hispanics, they bear 80% of the costs of cancer disparities.
- ❑ African Americans bear 17% of the costs of cancer disparities
- ❑ The annual costs of racial/ethnic disparities are almost \$197 billion:
  - ❑ \$193 billion for premature death
  - ❑ \$2.3 billion for direct medical costs
  - ❑ \$471.5 million for lost productivity

2
AHRQ National Healthcare Disparities Report, 2008

 Advocate Condell Medical Center


### Top leading Causes of Death in Illinois for Cancer- All Races: 2012

**i** Lung and Bronchus, Female Breast and Prostate Cancer are the top 3 leading causes of Death in both Male and Female in Illinois



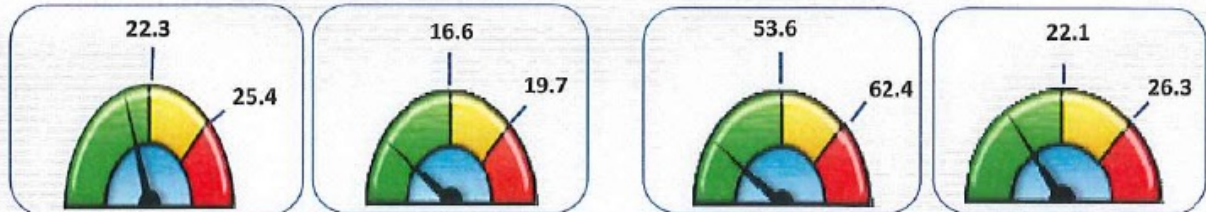
Rank	All Races	Per 100,000
1	Lung and Bronchus	47.9
2	Female Breast	22.9
3	Prostate	21.3
4	Colon and Rectum	15.8
5	Pancreas	10.9
6	Leukemias	7.6
7	Ovary	7.6
8	Non-Hodgkin Lymphoma	5.9

U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999-2012 Incidence and Mortality Web-based Report. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2015

 Advocate Condell Medical Center



## Cancer Mortality Rates in Lake County



Age-Adjusted Death  
Rate due to  
**Breast Cancer**

**21.8**  
deaths/100,000  
females  
Measurement  
Period: 2008-2012

Age-Adjusted Death  
Rate due to  
**Colorectal Cancer**

**12.9**  
deaths/100,000  
population  
Measurement  
Period: 2008-2012

Age-Adjusted Death  
Rate due to  
**Lung Cancer**

**41.3**  
deaths/100,000  
population  
Measurement  
Period: 2008-2012

Age-Adjusted Death  
Rate due to  
**Prostate Cancer**

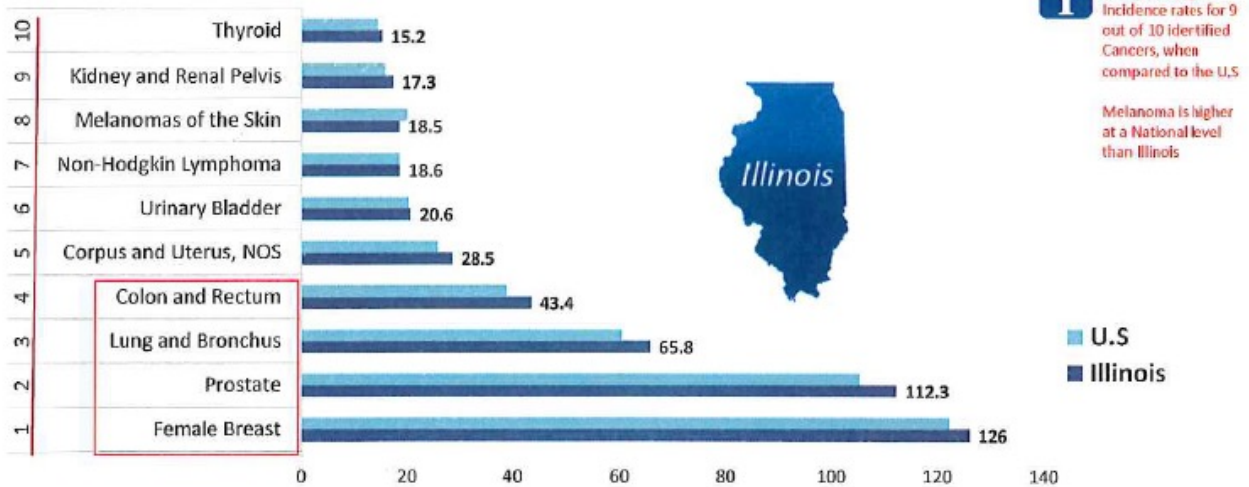
**19.2**  
deaths/100,000 males  
Measurement  
Period: 2008-2012

1 HCL National Cancer Institute, 2008-2012

Advocate Condell Medical Center

## Top 10 Cancers in Illinois and the U.S

State V.S National Incidence Rates: 2012, Male and Female, Illinois  
Per 100,000 persons



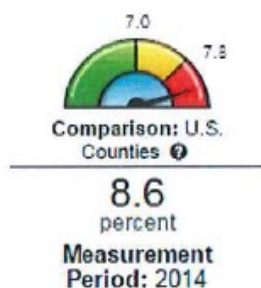
U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2015

Advocate Condell Medical Center

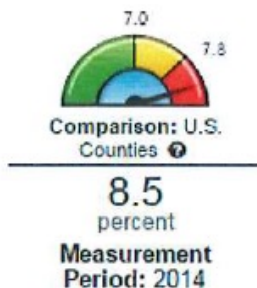
## Percentage Treated for Cancer: Medicare Population

**i** While neighboring counties have high Cancer percentages for Medicare beneficiaries who were treated for Cancer, Lake County is still slightly higher when compared.

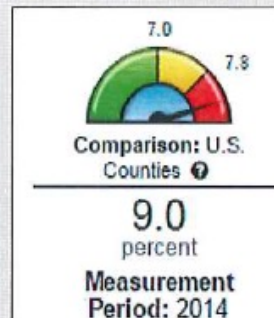
### McHenry County



### Kane County



### Lake County



HCI. Center for Medicare and Medicaid Services

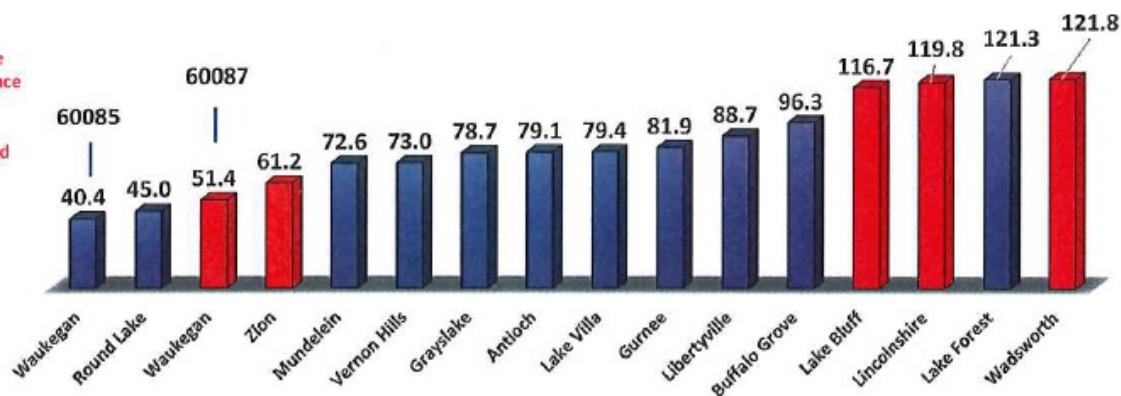
Advocate Condell Medical Center

## Incidence Rates for Breast Invasive Cancer in Lake County

**i** Communities in red are under Condell's SSA

The highest Breast Invasive Cancer Incidence Rates are in Lincolnshire, Lake Forest and Wadsworth

5 year Average Breast Invasive Cancer Incidence Rate (per 100,000 persons)  
'2008-2012'



Illinois Department of Public Health, Illinois State Cancer Registry, Nielson Demographics 2010

Advocate Condell Medical Center



## Incidence Rate for Colorectal Cancer in Lake County

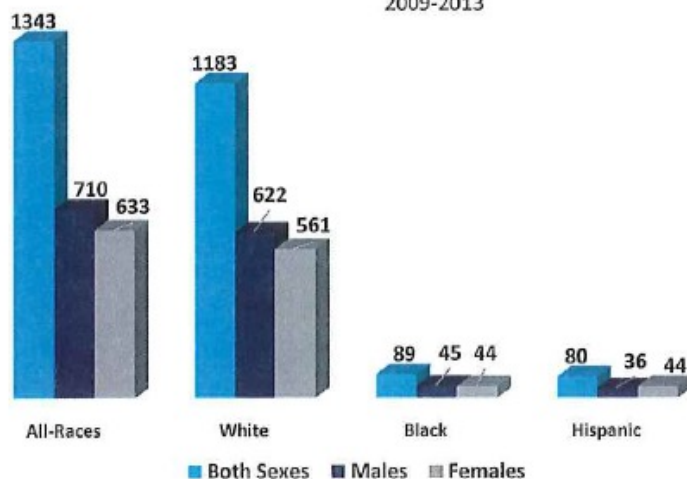
5 year age-adjusted Rates by Sex per 100,000  
2009-2013

5 year Average Colorectal Cancer Incidence  
Rate (per 100,000 population) '2008-2012'



Lake County is largely Non-Hispanic White populated which explains the uneven outcomes in colorectal cancer data

Males have higher incidence rates for Colorectal Cancer



Round Lake	22.0
Waukegan	26.5
Gurnee	32.3
Lake Villa	35.4
Mundelein	37.4
Waukegan	40.6
Vernon Hills	42.6
Buffalo Grove	42.9
Grayslake	43.1
Antioch	43.2
Zion	44.6
Lake Forest	51.4
Libertyville	54.4

Illinois Department of Public Health, Illinois State Cancer Registry, data as of November 2015.  
Nelson Demographics 2010

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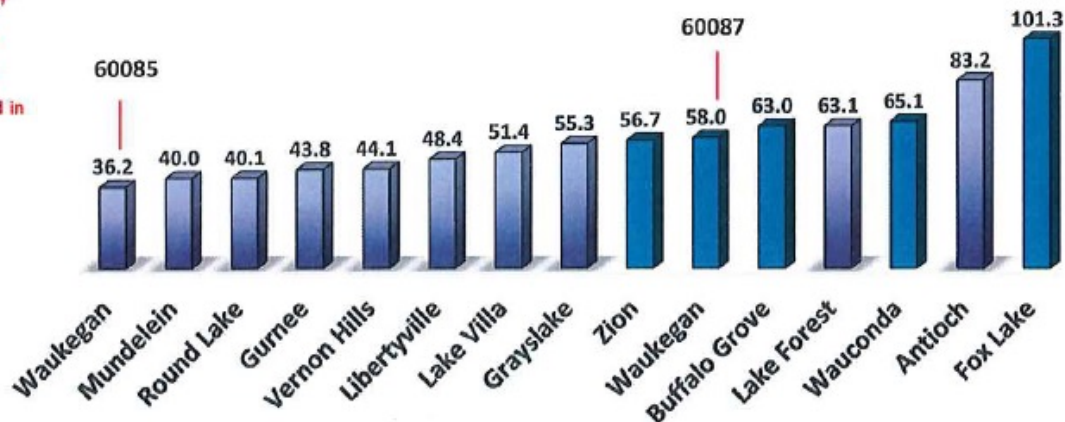
## Incidence Rates for Lung and Bronchus Cancer in Lake County

5 year Average Bronchus & Lung Cancer Incidence Rate  
(per 100,000 populations) '2008-2012'



Condell's Secondary service area is highlighted in blue

Primary Service area, highlighted in purple



Illinois Department of Public Health, Illinois State Cancer Registry. Nelson Demographics 2010  
Public Dataset as of March 2016.

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## Incidence Rates for Prostate Cancer in Lake County

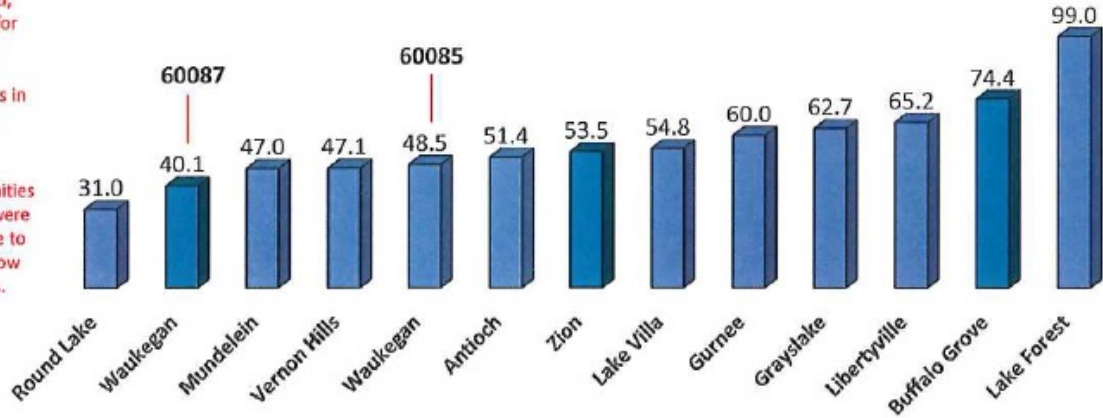


For Condell's service area, Lake Forest, Buffalo Grove and Libertyville have the highest, reported, incidence rates for prostate cancer.

The communities in Blue are part of Condell's SSA.

Certain communities in Lake County were not included due to limited data or low number of cases.

5 year Average Prostate Cancer Incidence Rate  
(per 100,000 populations) '2008-2012



Illinois Department of Public Health, Illinois State Cancer Registry, Nielson Demographics 2010  
Public Dataset as of March 2016.



Advocate Condell Medical Center

# Health Issues Review

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## Advocate Condell Medical Center (ACMC) Top Health Issues

Cardiovascular Disease

Obesity

Diabetes/Kidney Disease

Mental Health

Substance Abuse

Maternal Health

Cancer

Social Determinants





## Cardiovascular Disease



Adults with Heart Disease:

Lake County: **2.8%** McHenry: **2.9%** Illinois: **3.8%**



Rates of Hypertension  
in the Service Area  
have dropped over  
the last 5 years



Heart disease is  
the second  
leading cause of  
death in both  
Lake and  
McHenry County



### Mortality— Coronary Heart Disease

The communities with the highest  
Hospitalization Rate due to Heart  
Failure in ACMC's service area per  
10,000 population 18+ are:

North Chicago	92.3
Waukegan (60085)	45.7
Zion	45.6
Waukegan (60087)	32.7

The death rates due to  
coronary heart disease  
in Lake County are lower  
than the U.S and State.

### SOURCES:

Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. 2009-13.  
Source geography: County, CDC, NCHS. Underlying Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Healthy Communities Institute, 2016.

# Health Issues Review

## Obesity



**29%** of Lake County Adults are Obese

**36%** of Lake County Adults are Overweight

### Low-Income preschool children

McHenry County- **16.8%** are obese.

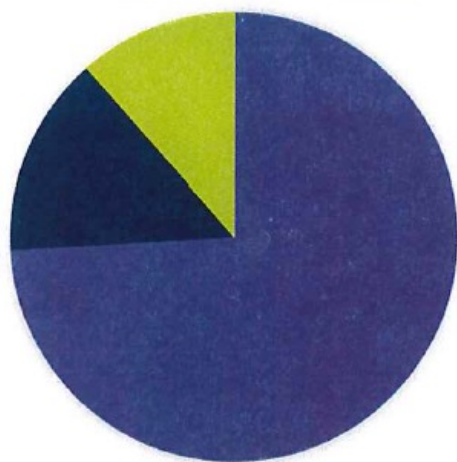
Lake County, **17.6%** are obese.

Each year the percentage of people who are overweight or obese continues to rise in the US, McHenry and Lake Counties



### Top Priority

Both Lake County and McHenry County Health Departments have made Obesity a top health priority

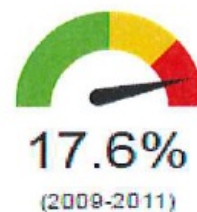


### In Illinois...

**14.4%** of adolescents are overweight

**11.5%** of adolescents are obese

**Low-Income Preschool obesity rates are in the RED in Lake County**



### SOURCES:

HCI.YRBSS, 2013. WIC PC, 2012 , CDC 2015, U.S. Department of Agriculture - Food Environment Atlas 2009-2011 , Community Commons, Centers for Disease Control and Prevention, Diabetes Data & Trends: Methods and References for County-Level Estimates and Ranks. (2012). , Finkelstein EA1, Trogon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: payer- and service-specific estimates. Health Aff (Millwood). 2009 Sep-Oct;28(5)



# Health Issues Review

## Diabetes/Kidney Disease

### Lake County

**8.4%** of adults have been diagnosed with diabetes

**49%** of diabetes cases are **women**   
**51%** are **men** 

In Lake County, **15.3%** of the Medicare population are treated for **Chronic Kidney Disease**

### McHenry County

**8.8%** of adults have been diagnosed with diabetes

**46%** of diabetes cases are **women**   
**54%** are **men** 

*The zip codes with the highest hospitalization and ED rates also have the highest Hispanic and African American populations in Lake County*

#### Top Zip Codes for Long Term Diabetes Issues

60064-	North Chicago
60085-	Waukegan
60099-	Zion
60087-	Waukegan
60073-	Round Lake

### Illinois

**8.67%** of adults have been diagnosed with diabetes

**14%** Of Lake County residents have been told by a medical provider that they have pre-diabetes.



### SOURCES:

America Diabetes Association. 2013. , IHA Comp data 2012-2014, CDC National Center for Disease Prevention and Health Promotion 2012. Lake County Health Department. Healthy Communities Institute, 2016. Center for Medicare and Medicaid Services, HCL.

# Health Issues Review

## Mental Health

Adult ED Rate due to Mental Health

68.6 per 10,000

Pediatric ED Rate due to Mental Health

58.7 per 10,000



By Age:

15-17: 175.8 per 10,000

18-24: 132 per 10,000

25-34: 96.1 per 10,000

35-44: 57.6 per 10,000

45-64: 46.2 per 10,000

85+: 75.8 per 10,000



Lake County and McHenry County have both had significant increases in ED Rates due to Pediatric and Adult Mental Health



**Lake County:** ED rate due to Suicide and Intentional Self-Inflicted Injury:

- Adult: 21.2 per 10,000

- Adolescent: 58.4 per 10,000

Death Rate due to Suicide: 9.4 per 10,000

### Highest Suicide Rates:

- Ingleside
- Fox Lake
- North Chicago

### Highest Adult Mental Health Rates:

- North Chicago
- Waukegan 60085

### Highest Pediatric Mental Health Rates:

- Fox Lake
- Waukegan 60085

## SOURCES:

NAMI (National Alliance on Mental Illness), Illinois Hospital Association, data as of September 2015, University of Wisconsin Population Health Institute, County Health Rankings. 2016. :



## Substance Abuse

Alcohol has emerged as the most abused substance in the APMC service area.

### Heroin

While the use of heroin is spreading throughout the United States, both Lake and McHenry Counties are below the state and national averages.

### Teens Who Use Marijuana

**24%** - Lake County

**25%** - McHenry County

### Top Zip Codes for Substance Abuse

60064- North Chicago

60048- Libertyville

60002- Antioch

60099- Zion

Top ED Rates Due to Alcohol Abuse are in:

**North Chicago**

**Waukegan (60085)**



**Fox Lake**

**Libertyville**

**Highwood**

**Round Lake**

Adults who drink excessively is in the **RED** in the APMC service area.



**20%**

### SOURCE

Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2014 Illinois Youth Survey. Health Communities Institute, 2016.

# Health Issues Review



**3.6% of Mothers  
in Lake County  
Smoke during  
Pregnancy**

## Maternal Health

REDUCING TEEN PREGNANCY  
ENHANCES OVERALL CHILD WELL-BEING.  
**TEEN MOTHERS ARE  
NEARLY TWICE AS LIKELY TO  
FORGO PRENATAL CARE IN  
THE FIRST TRIMESTER  
COMPARED TO OLDER MOTHERS**



**In Lake County, teen  
births have declined from  
2.4% in 2008, to 1.3% in  
2014.**



**IL Value  
(1.7%)**



**US Value  
(4.3%)**

### Preterm Births in Lake County are gradually on the rise



**IL Counties  
9.7%**



### Annual Percent of Births Which are Premature, 2014-2015 by Community

- ⇒ Zion : 8.6%
- ⇒ Mundelein : 8.3%
- ⇒ Buffalo Grove : 8.1%

### Infant Mortality

**In Lake County, 5.1 deaths per  
1,000 live births.**

Sources: Healthy Communities Institute, 2016. Illinois Department of Public Health, 2008. Illinois Hospital Association COMP data Oct 2014-Sept 2015



# Health Issues Review

## Cancer

### Most common Cancers in ACMC Service Area

Breast Cancer  
Prostate Cancer  
Lung Cancer  
Colorectal Cancer

### Cancer Mortality Rates per 100,000

155.4– Lake County  
176.4– McHenry County  
173.9– Illinois  
166.3–United States

Breast Cancer Incidence Rate Per 100,000:

**Lake County: 135.8** McHenry County: 138.2 Illinois: 128.5



## Healthy People 2020

### TARGET MET

#### Lake County

- Colorectal Cancer Death Rate
- Lung Cancer Death Rate
- Prostate Cancer Death Rate
- Colorectal Cancer Incidence Rate

#### McHenry County

- Prostate Cancer Death Rate

### TARGET NOT MET

#### Lake County

- Breast Cancer Death Rate

#### McHenry County

- Breast Cancer Death Rate
- Colorectal Cancer Death Rate
- Lung Cancer Death Rate
- Colorectal Cancer Incidence Rate

## SOURCES:

NAMI (National Alliance on Mental Illness) , Illinois  
Hospital Association, data as of September 2015 , Uni-  
versity of Wisconsin Population Health Insti-  
tute, County Health Rankings. 2016. :



# Health Issues Review

## Social Determinants

**4.8%** of Lake County is unemployed, **5.7%** of McHenry County is unemployed

**3.7%** of adults don't have health insurance in the ACMC Primary Service Area

### Highest Unemployment

North Chicago

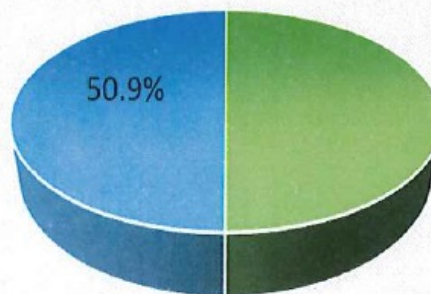
Zion

Ingleside

Highwood

Waukegan 60085

ACMC's Service Area has Housing affordability issues with 50% of renters or homeowners spending more than 30% of their income on housing.



Children Eligible for Free/  
Reduced Price Lunch

**29.8%** Lake County

**27.71%** McHenry County

MEAN TRAVEL TIME  
TO WORK IS **29.5**  
MINUTES—HIGHER  
THAN STATE VALUE

### SOURCES:

Local Initiatives Support Corporation, US Department of Agriculture Food Environment Atlas 2015, American Community Survey, US Bureau of Labor Statistics 2016. Healthy Communities Institute, 2016.



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