Community Health Needs Assessment

2017 - 2019

December 2019

Advocate Sherman Hospital is pleased to present the 2019 Community Health Needs Assessment (CHNA). Every three years the hospital completes a CHNA by collecting and analyzing demographic and health data as well as gathering input from community residents through a community health survey.

Throughout 2019, the Advocate Sherman Manager of Community Outreach and Director of Community Health have worked with the hospital Community Health Council (CHC) to review the key health issues in our primary service area (PSA). As a key health care provider serving Elgin, Kane and McHenry Counties, is committed to both providing the safest and highest quality patient care, and to improving the health of our community through partnerships and collaboration.

The CHC reviewed emergency room and hospitalization data, disease and health condition incidence data, mortality data and results from numerous studies and surveys on health behaviors. This comprehensive review of data is critical to help shape the future interventions and programming to address the identified health issues. We would like to extend a special thank you to the members of the CHC, the Kane County Health Department and McHenry County Health Department for their assistance and guidance.

After reviewing data and working through a prioritization process, CHC members selected obesity and behavioral health as the health priorities that the hospital will focus on for the next three years. The Advocate Sherman Board of Directors approved these priorities in September, and we are excited to focus our time and resources on these issues for 2020-2022.

It is an absolute privilege to serve as your community hospital. Through strong partnerships, collaboration, input from the community and effective programming, we continually strive to positively impact the health of the residents in our community.

Sincerely,

Linda Deering, President
Advocate Sherman Hospital

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I. Executive Summary

Advocate Sherman Hospital (Advocate Sherman) is committed to fulfilling the purpose of helping people live well through meeting the health needs of the community. This work begins with a broad understanding of the assets, needs, challenges and social determinants facing the community. Advocate Sherman has a long-standing history of collaborating with community stakeholders to accomplish this task. By building sustainable relationships and partnering with community organizations, the hospital has gained a stronger understanding of community needs and the ability to create solutions that are comprehensive and inclusive. 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 served.

For purposes of this CHNA process, Advocate Sherman and the CHC defined the community as its PSA, which includes communities in both Kane and McHenry Counties. In order to ensure a comprehensive representation of data, Advocate Sherman was able to successfully leverage community partnerships through health coalitions established in both Kane and McHenry Counties.

Through these partnerships, Advocate Sherman participated in two comprehensive community assessments in collaboration with each of the county health departments: the 2017 McHenry County Healthy Community Study (McHenry County) and the 2018 Kane County Community Health Needs Assessment Report (Kane County). A key source for secondary data was the Conduent Healthy Communities Institute (HCI), a centralized platform purchased by Advocate Health Care.

In preparation for the selection of priorities, Advocate Sherman community health staff presented extensive community data to the Advocate Sherman CHC through a series of meetings including a summary of demographics, social determinants of health and the eight most significant health issues in the PSA. Council members used a modified Hanlon Method to select the health priorities.

The CHC put significant time and thought into determining how to select priorities that were meaningful to the health of the community as well as having the potential to show measurable health improvements. Factors considered were incidence and mortality rates, the societal cost of the health issue and the availability of evidence-based interventions or best practice programs to address the issue. Obesity and behavioral health were the main health priorities selected.

The CHC and the community health staff will work collaboratively to develop a detailed implementation plan for 2020-2022. The CHC will continue to meet regularly to review progress and evaluation of interventions and outcomes. Advocate Sherman Hospital hopes that this report will prove to be valuable and will allow community members to gain a greater understanding of the health issues within Kane and McHenry Counties.

II. Description of Advocate Aurora Health Care and Advocate Sherman Hospital

Advocate Aurora Health

Advocate Aurora Health is one of the 10 largest not-for-profit, integrated health systems in the United States and a leading employer in the Midwest with more than 70,000 employees, including more than 22,000 nurses and the region's largest employed medical staff and home health organization. A national leader in clinical innovation, health outcomes, consumer experience and value-based care, the system serves nearly 3 million patients annually in Illinois and Wisconsin across more than 500 sites of care. Advocate Aurora is engaged in hundreds of clinical trials and research studies and is nationally recognized for its expertise in cardiology, neurosciences, oncology and pediatrics. The organization contributed $2.1 billion in charitable care and services to its communities in 2018. We help people live well.

Advocate Sherman Hospital

Advocate Sherman is a non-profit, acute care hospital with highly skilled physicians and clinical professionals, who have provided high-quality, comprehensive, and compassionate health care to the patients and communities of Chicago's northwest suburbs for more than 125 years. The hospital has 255 beds in private rooms, three outpatient centers with immediate care services staffed by emergency medicine physicians in Elgin, South Elgin and Algonquin, and one comprehensive imaging center in Elgin. A 15-acre geothermal lake heats and cools the hospital. Comprehensive and recognized programs provided at Advocate Sherman include cardiology, oncology, neurosciences, orthopedics and women's health. The hospital also features a Level II Trauma Center and an emergency department approved for pediatrics that is backed by the resources of Advocate Children's Hospital.

Advocate Sherman is recognized by Watson Health as one of the "Top 100 hospitals" in the United States with Everest distinction, demonstrating the most improvement in five years with leading national results. The hospital is also certified as a Primary Stroke Center by DNV-GL Healthcare and received Magnet designation as an American Nursing Credentialing Center (ANCC). The hospital has also received a 2017 Patient Safety Excellence Award by Healthgrades, an ACTION Registry Platinum Performance Achievement Award offered by the American College of Cardiology and Baby-Friendly Designation from the World Health Organization's Baby-Friendly USA Program.

Exhibit 1: Advocate Sherman Statistics 2018

Category	Number
Inpatient Admissions and Observations	14,400
Births	2,435
Emergency Department Visits	60,027
Surgeries	16,711
Outpatient Visits	310,813
Medical Staff Physicians	846
Nurses and Team Members	2,200

Source: Advocate Sherman Hospital Finance Department, 2019

III. Summary of the 2014-2016 Community Health Needs Assessment and Program Implementation

Community Definition

For purposes of the 2014-2016 Community Health Needs Assessment (CHNA), Advocate Sherman defined the community as its PSA, which included communities in McHenry County and Kane County, Illinois. As of 2016, the population of the PSA was 295,699 (Truven Health, 2016). Generally 80 percent of all participants served come from the PSA.

The three largest communities within the PSA were Elgin (60120), with a population of 52,703; Elgin (60123) with a population of 47,644 and Carpentersville (60110) with a population of 39,541 (Truven Health, 2016). The population of the PSA grew by 2.9 percent from 2010-2016 (Healthy Communities Institute, Claritas, 2016). The following are the cities and zip codes within the PSA: Algonquin (60102), Carpentersville (60110), Dundee (60118), Elgin (60120, 60123 and 60124), Gilberts (60136), Huntley (60142), Lake in the Hills (60156) and South Elgin (60177) (Advocate Health Care Strategic Planning Department, 2016).

Exhibit 2: Advocate Sherman Primary Service Area 2016

Advocate Sherman Hospital	
Primary Service Area	
Zip Code	City
60102	Algonquin
60110	Carpentersville
60118	Dundee
60120	Elgin
60123	Elgin
60124	Elgin
60136	Gilberts
60142	Huntley
60156	Lake in the Hills
60177	South Elgin

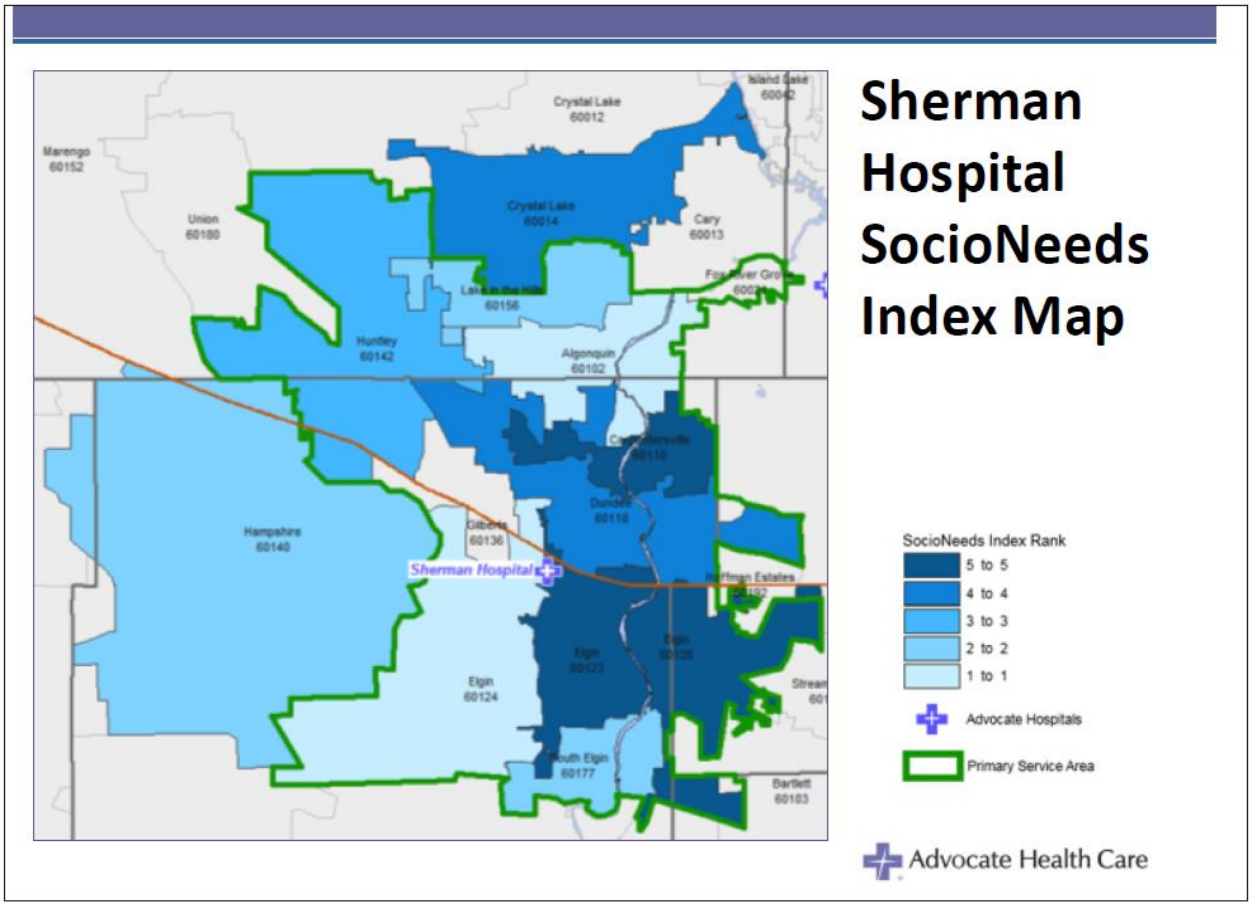
Source: Advocate Health Care Strategic Planning Department, 2016

Communities with Highest SocioNeeds Index Values

The SocioNeeds Index is a Conduent Healthy Communities Institute 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 (U.S.) 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 rankings using natural breaks. These ranks are then used to color the zip codes with the highest SocioNeeds Indices with the darker colors.

The communities in the PSA with the SocioNeeds Index ranking of 5 are Carpentersville (60110), Elgin (60120) and Elgin (60123). Dundee (60118) has a SocioNeeds Index ranking of 4.

Exhibit 3: Advocate Sherman Socioneeds Index Map 2016



Source: Healthy Communities Institute, 2016

Overview of Collaborations

In 2014, a new Department of Community Health was established within Advocate Health Care and a plan developed to ensure that each hospital in the system would have a community health expert to coordinate its community health work. Key staff for Advocate Sherman included a masters-prepared regional director for community health (covering Advocate Good Shepherd, Advocate Sherman and Advocate Condell) and a full-time bachelors-prepared community health manager dedicated to Advocate Sherman.

To begin the CHNA, Advocate Sherman established a new CHC to review both primary and secondary health data. The CHC was chaired by a community representative who also serves as a Governing Council member of the hospital. The CHC was comprised of nine community members, representing 65 percent of the total membership. Community members included the Mayor of Elgin and representatives from the McHenry County and Kane County Health Departments, area federally qualified health centers, faith-based organizations, United Way of Elgin, the American Cancer Society and social service agencies. Hospital representatives included executive team members, a physician champion and a business development leader.

For the 2014-2016 CHNA, Advocate Sherman collaborated with numerous stakeholders. The key stakeholders and partners included the following:

- Advocate Sherman Community Health Council
- Advocate Sherman Governing Council
- Kane County Health Department
- McHenry County Department of Health
- Advocate system and hospital leadership

Summary of Assessment Process

Since the hospital's service area includes both McHenry County and Kane County, the hospital collaborated with both county health departments for the CHNA. Community health staff presented demographic, economic, education, employment, social determinants of health and health data to the council. These results were coupled with key hospitalization and emergency department rates pulled from Healthy Communities Institute. This internet-based data resource provided 171 health and demographic indicators including thirty-one hospitalization and emergency department (ED) visit indicators at the service area and zip code levels.

Advocate Sherman also consulted with several additional community organizations to inform the hospital of key issues for the CHNA. These included Consolidated School District U-46 Alignment Collaborative for Education staff, Greater Elgin Family Care Center, VNA Health Care (Visiting Nurses Association) and the United Way of Elgin. Each of the organizations have a focus on medically underserved, low-income and minority populations.

Needs Identified and Priorities Selected

Advocate Sherman community health staff presented data to the CHC in a series of four meetings over a nine-month period. Key criteria for selection of the specific health issues were incidence, prevalence and mortality rates within McHenry and Kane Counties and the service area, coupled with community opinion and perspective from the health department assessments. The health issues profiled in detail were:

- Heart Disease and Stroke
- Diabetes and Kidney Disease
- Obesity
- Mental Health
- Substance Abuse
- Cancer

Each council member used the cumulative voting method to select their top two health issues. The health issues with the highest votes were diabetes and obesity.

Summary of Implementation Programs and Key Accomplishments

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

Diabetes

Advocate Sherman's goal was to reduce the long-term complications related to diabetes and kidney disease for residents living in Carpentersville (60110) and Elgin (60120 and 60123). The strategies implemented were to: (1) increase the percentage of adults screened to identify pre-diabetes and diabetes and referred for follow up to a primary care provider; (2) implement the Stanford School of Medicine Diabetes Self-Management Program (DSMP) in Elgin; and (3) increase the access points to fresh produce for residents living within Carpentersville (60110) and Elgin (60120 and 60123).

The Diabetes in the Latino Community program made great strides in screening and education in 2018. In 2018, diabetes glucose screenings were conducted in areas of higher socioeconomic need, including the Elgin Mall Flea Market, several Elgin area laundromats, the Carpentersville FISH Food Pantry and at the Grand Victoria Casino for their employees. Individuals who had elevated glucose levels were referred to their physician and to the DSMP class. The DSMP class, conducted in Spanish, was also held at Elgin locations with easy access for community residents—the YWCA, Centro de Información and the Gail Borden Library. The Diabetes Self-Management Program (DSMP) was implemented by training several individuals to be lead instructors and to implement the DSMP class in Spanish. In 2018, there were 44 participants enrolled in the class and 32 completed the DSMP class.

A total of 370 individuals were screened for blood glucose levels, and 86 percent were at a normal glucose level, eight percent were considered to be pre-diabetic and six percent indicated a high glucose level equivalent to that of having diabetes. Thirty people were referred from the glucose screenings in the community for follow up with a primary care provider and 167 physician referrals were made for diabetes follow-up appointments at the Advocate Sherman Diabetes Center.

In 2018, Advocate Sherman developed a process to provide excess fresh produce from the on-site community garden to the hospital's Diabetes Center patients who are identified as food insecure based on the Hunger Vital Sign® questionnaire screening. Distribution of fresh produce from the garden to Diabetes Center patients began in March 2018. Additionally, the hospital initiated a new partnership with the Elgin Community College (ECC) Student Food Pantry. ECC students have been assigned garden plots at the Advocate Sherman Community Garden and the produce harvested is provided to the ECC Student Food Pantry. In the 2018 garden season, 376 pounds of produce was provided to patients in the Diabetes Center as well as to the ECC Food Pantry.

Obesity

Advocate Sherman's overall goal was to reduce the prevalence of Kane County residents who are obese by one percent by 2020. The strategies implemented were to: (1) implement walking campaigns in targeted Elgin neighborhoods or communities within Advocate Sherman's PSA; (2) improve parents' and child care providers' knowledge and skills in nutrition and physical education practices through the Nutrition and Physical Activity Self-Assessment for Child Care (Go NAP SACC) Program; and (3) identify individuals living in census tracts within Elgin and Carpentersville designated as food deserts who are food insecure and refer them to community resources.

Advocate Sherman annually sponsors the Kane County Health Department Fit for Kids Walk to School Day. This event gathers over 200 participants and is a collaborative effort between the hospital, the health department and the Activate Elgin coalition. A walkability assessment, Sidewalk Gap and Transit Stop Study was completed for the City of Elgin and reviewed by community health staff at Advocate Sherman. Community health staff sit on the Activate Elgin coalition to align hospital walking initiatives in targeted Elgin zip codes.

The Go NAP SACC program is an evidence-based early intervention program targeting infants through pre-kindergarten which aims to advance the childcare environment by improving nutrition, physical activity and policies in the child care center. The hospital is leading the Go NAP SACC assessment process with childcare centers in Elgin and Carpentersville. Advocate Sherman partnered with Advocate Good Shepherd and Advocate Condell to make this program a regional initiative. Advocate Sherman has collaborated with the Elgin Partnership for Early Learning and the Two Rivers Head Start Agencies to promote the program. At the end of 2018, four centers were actively developing their action plans to focus on changes in nutrition and physical activity practices and policies, impacting a total of 212 enrolled children.

Food Insecurity (FI) screening is being conducted with all patients in the Advocate Sherman Diabetes Center and Mobile Integrated Health Program using the Hunger Vital Signs® questionnaire. This was implemented in March 2018 and a total of 174 individuals were screened by the end of the year. Twenty-six percent of those screened were identified as food insecure and were provided a Food Resource Guide (English and Spanish) that includes resources such as food pantries, soup kitchens, congregate meals and farmers markets.

Input from the Community

After the CHNA was completed, it was posted on the hospital's website for public comment. Although many feedback mechanisms were put in place for the public to comment or provide input on the community health needs assessment, the hospital did not receive any feedback. The hospital will continue to encourage input from the community by providing various feedback mechanisms.

Lessons Learned

Advocate Sherman identified one key lesson learned from the previous CHNA cycle. While selecting and planning the community health interventions, additional time was needed to identify key partners and build collaborations to fully implement the programs. This issue caused some delay in program setup and establishing initial baselines. More advance planning to identify possible strategic alignment with existing community agencies and coalitions needs to be designed into the implementation timeline. Additionally, some child care centers identified to participate in the Go NAP SACC program were very small and therefore had limited staff capacity to conduct the assessment and implement an action plan. This resulted in some centers dropping out after the assessment or stalling in the action plan stage. The centers did find the online version of the Go NAP SACC much easier to use and took much less time to complete and score.

IV. 2017-2019 Community Health Needs Assessment

Community Definition

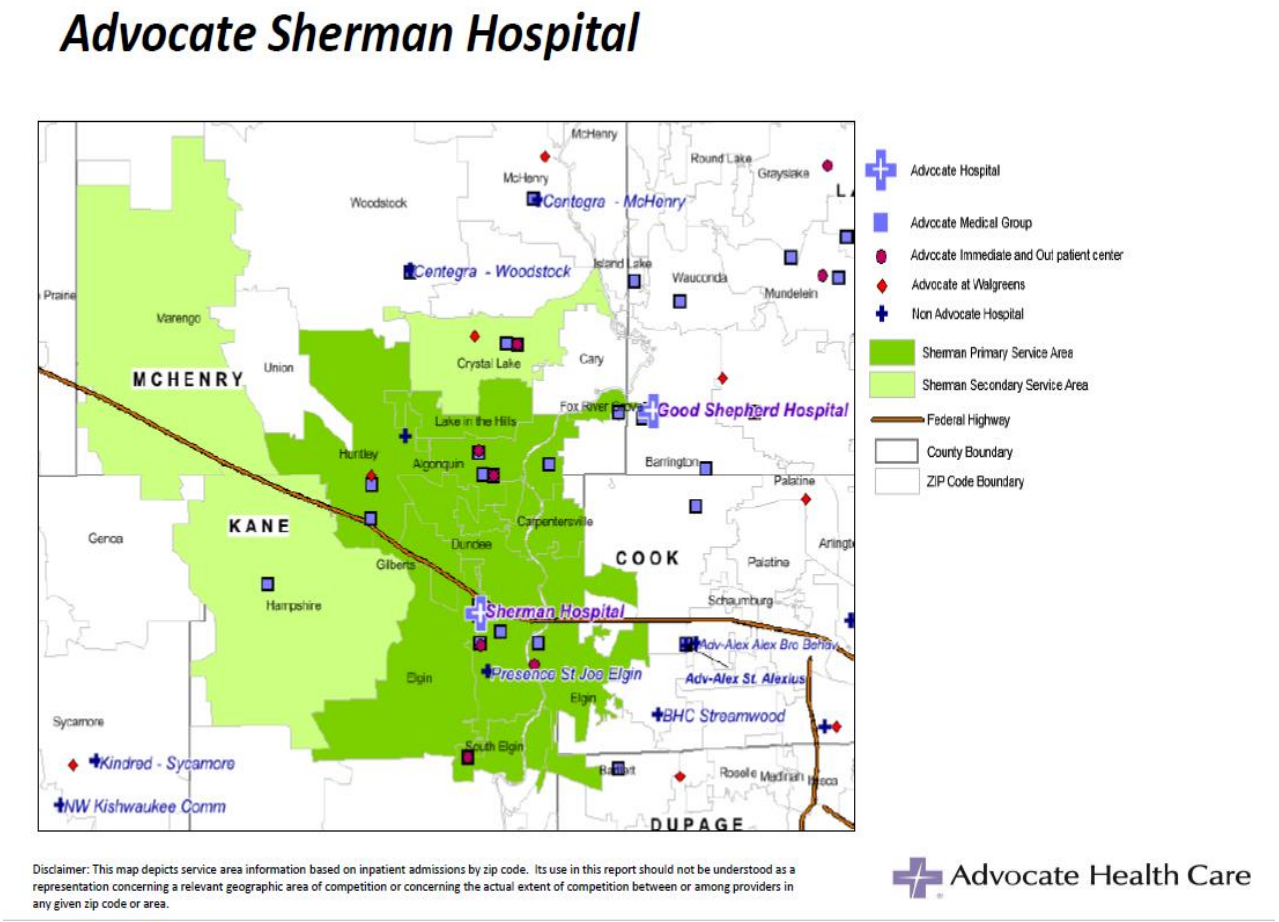
For purposes of the 2017-2019 CHNA, Advocate Sherman defines the community as its PSA, which includes communities in McHenry County and Kane County, Illinois. Exhibit 4 lists the communities within the Advocate Sherman PSA.

Exhibit 4: Communities within Advocate Sherman PSA 2019

SHERMAN HOSPITAL			
Zip Code	**Zip City Name**	**County**	**Service Area**
60120	Elgin	Cook	PSA
60156	Lake in the Hills	McHenry	PSA
60110	Carpentersville	Kane	PSA
60118	Dundee	Kane	PSA
60123	Elgin	Kane	PSA
60124	Elgin	Kane	PSA
60136	Gilberts	Kane	PSA
60177	South Elgin	Kane	PSA
60102	Algonquin	McHenry	PSA
60142	Huntley	McHenry	PSA

Source: Conduent Healthy Communities Institute, 2019

Exhibit 5: Advocate Sherman Service Area 2019



Source: Advocate Aurora Business Development Analytics, 2019

Population

The Advocate Sherman service area is illustrated in Exhibit 5 and is divided between the PSA and the Secondary Service Area (SSA). The PSA is illustrated as dark green and the SSA is lighter green. Generally 75 percent of all patients served by Advocate Sherman come from the PSA, and 25 percent of all patients served come from the SSA.

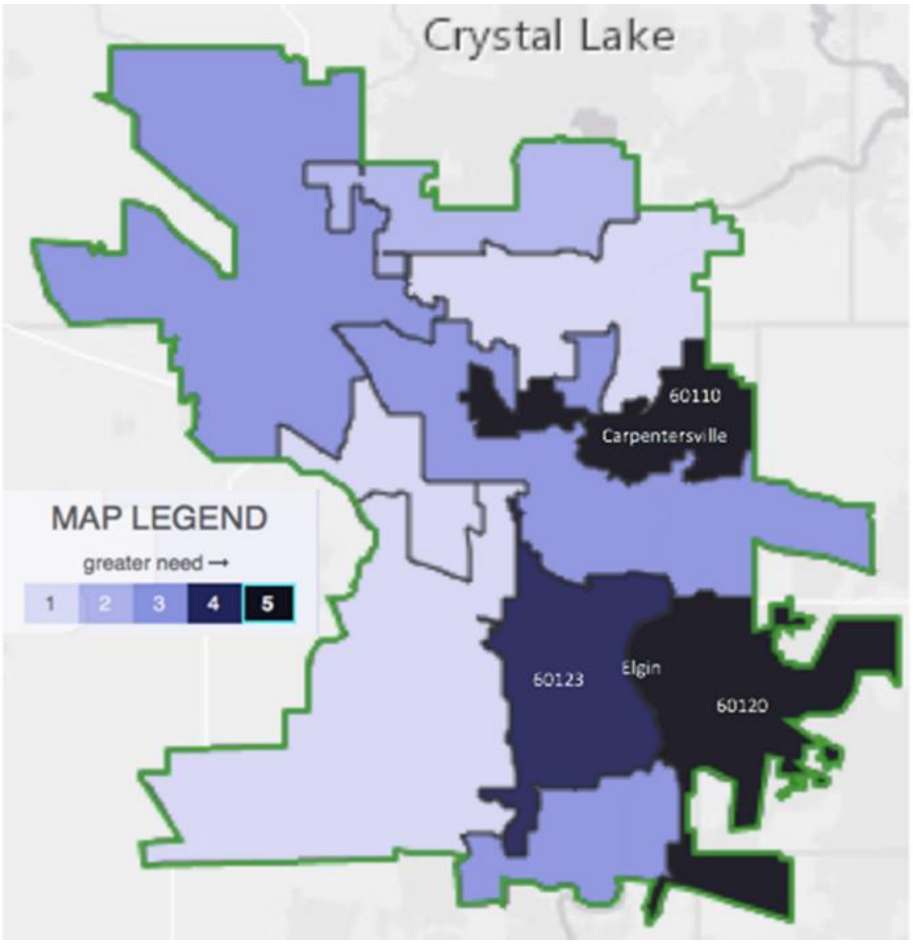
The population of the Advocate Sherman PSA is 301,055 which is a 4.75 percent increase from 2010 to 2019. The three largest communities within the PSA are Elgin (60120) with a population of 52,712, Elgin (60123) with a population of 47,906 and Carpentersville (60110) with a population of 39,634 (Conduent Healthy Communities Institute, Claritas, 2019).

Social Determinants of Health: SocioNeeds Index

The SocioNeeds Index is a Conduent Healthy Communities Institute 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 U.S. 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 with the highest SocioNeeds Indices with the darker colors. Carpentersville (60110), Elgin (60120) and Elgin (60123) are the communities with the highest needs within Advocate Sherman's PSA and are illustrated in Exhibit 6 in the darkest blue shading (Conduent Healthy Communities Institute, Claritas, 2019).

Exhibit 6: Advocate Sherman SocioNeeds Index Map 2019



Key Findings:
The zip codes with the highest SocioNeeds Ranking:

-60110 (Carpentersville)	**-60123 (Elgin)**	**-60118 (Dundee)**
-60120 (Elgin)	**-60177 (South Elgin)**	**-60142 (Huntley)**

Source: Conduent Healthy Communities Institute, 2019

Demographics

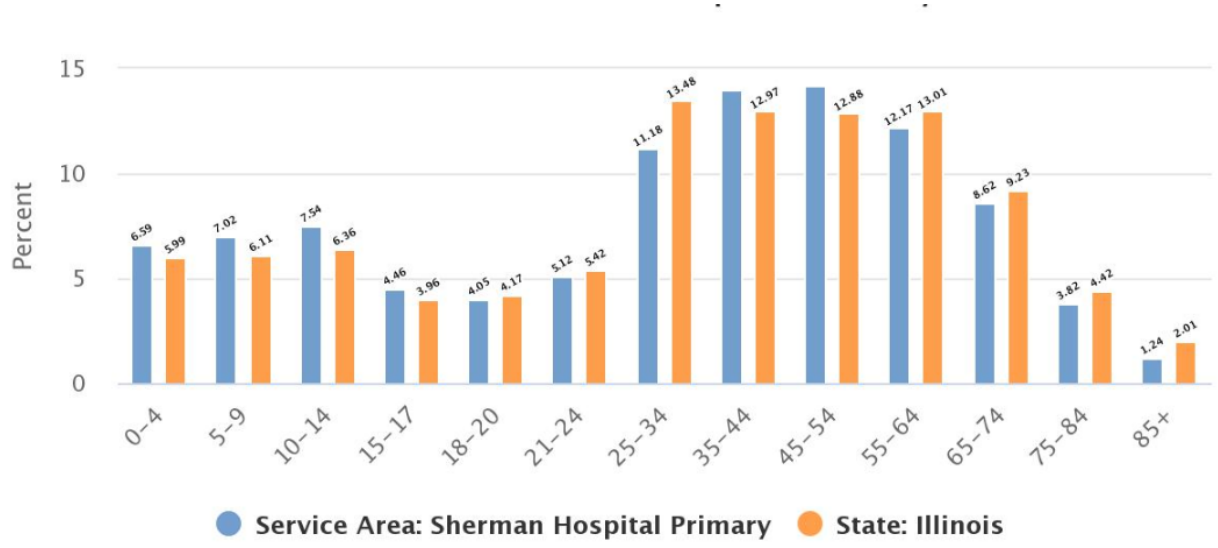
Median Age

The median age of the PSA is 38.34 years old. In the PSA, 25.61 percent of the population is ages 17 years and younger and 13.68 percent is ages 65 years and over. The largest population in the PSA are those ages 35-64 years at 40.35 percent (Conduent Healthy Communities Institute, Claritas, 2019).

Population by Sex

The PSA is comprised of 50.46 percent males and 49.54 percent females (Conduent Healthy Communities Institute, Claritas, 2019).

Exhibit 7: Advocate Sherman PSA Population by Age 2019

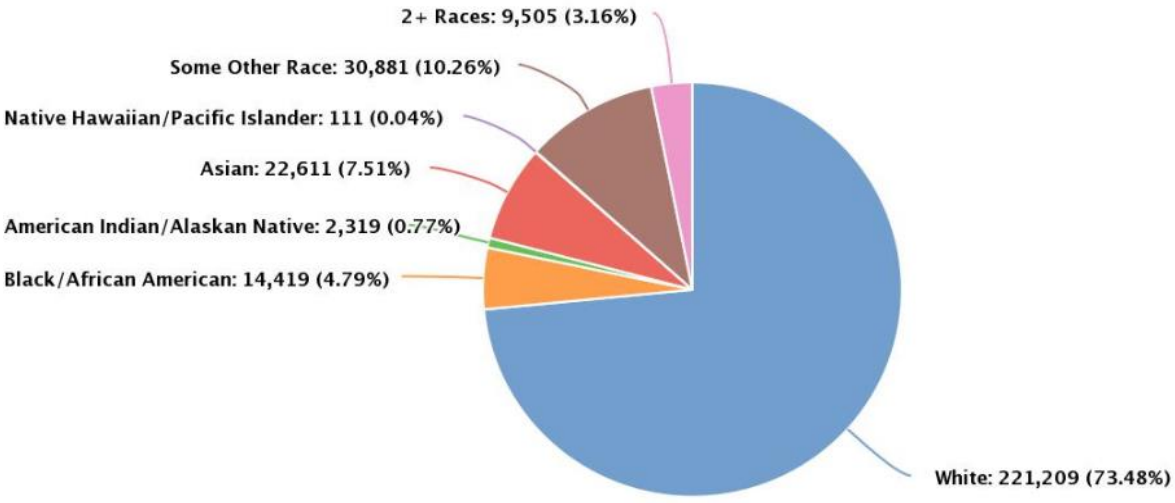


Source: Conduent Healthy Communities Institute, Claritas, 2019

Race

Seventy-three percent of the PSA population is White, 7.51 percent Asian, 4.79 percent Black/African American, 3.16 percent two or more races, 0.77 percent American Indian/Alaskan Native, 0.04 percent Native Hawaiian/Pacific Islander and 10.26 percent some other race (Conduent Healthy Communities Institute, Claritas, 2019).

Exhibit 8: Advocate Sherman PSA Population by Race 2019

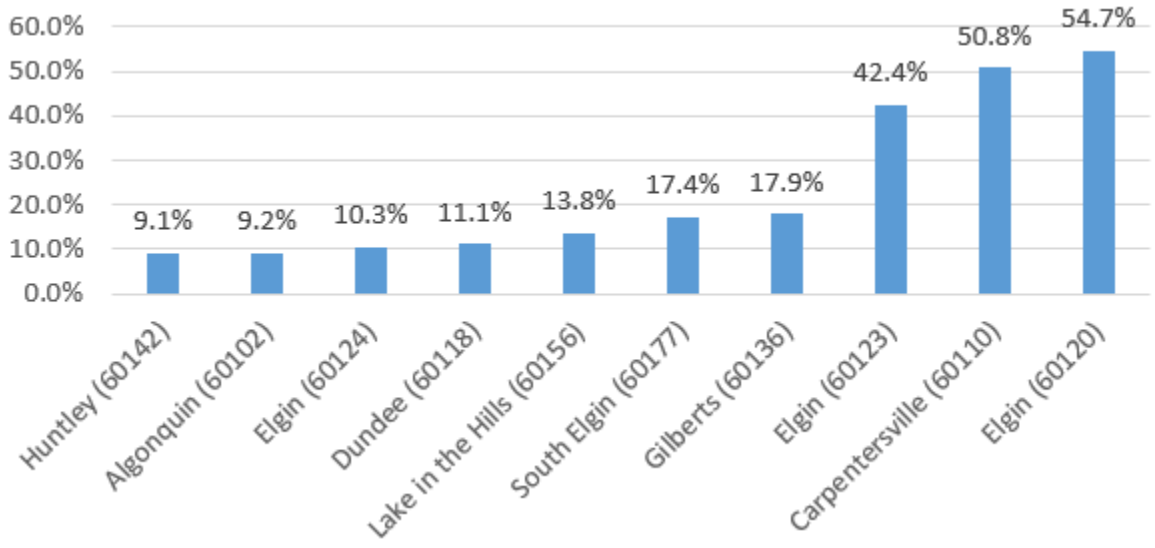


Source: Conduent Healthy Communities Institute, Claritas, 2019

Ethnicity

Twenty-nine percent of the PSA population is of Hispanic/Latino ethnicity. The largest Hispanic population in the PSA are in zip codes Elgin (60120) at 54.65 percent and Carpentersville (60110) at 50.75 percent as shown below (Conduent Healthy Communities Institute, Claritas, 2019).

Exhibit 9: Advocate Sherman PSA Hispanic Population by Zip Code 2019

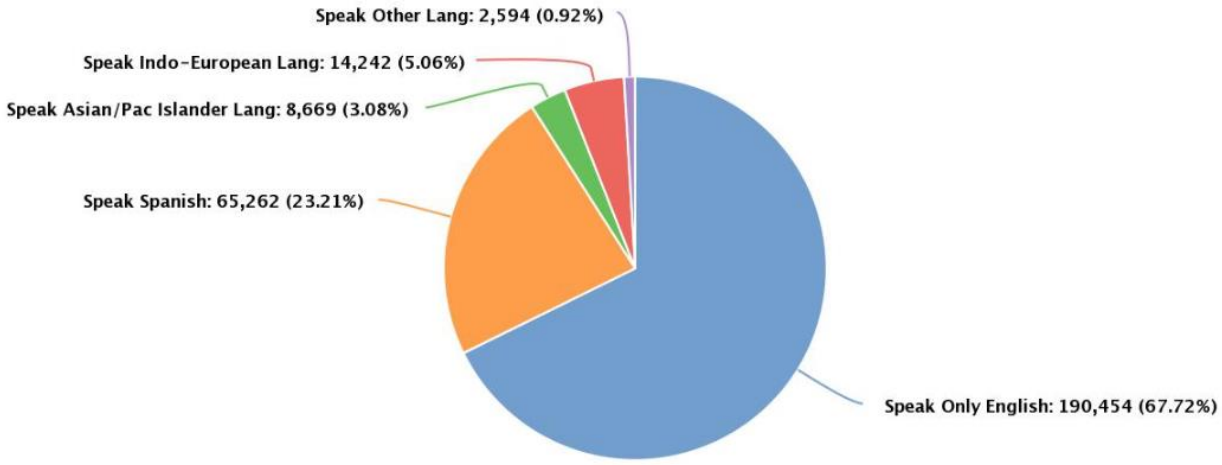


Source: Conduent Healthy Communities Institute, Claritas, 2019

Language Spoken at Home

A total of 67.72 percent of the PSA population (age five and older) speaks only English at home. A total of 32.27 percent of the PSA population speak a language other than English at home, including Spanish, Asian/Pacific Islander languages, Indo-European languages and other languages.

Exhibit 10: Advocate Sherman PSA Population by Language Spoken at Home 2019



Source: Conduent Healthy Communities Institute, Claritas, 2019

Number of Households and Average Household Size

There are 100,869 households in the PSA with the average household size of 2.96 persons. There has been a 5.16 percent increase in the PSA household size from 2010-2019, higher than the Illinois rate of 0.60 percent increase for the same time period. There are 76,509 families in the PSA, which is a 5.25 percent increase in the number of families from 2010-2019, higher than the growth rate for Illinois (increase of 0.37 percent in number of families) for 2010-2019. There are 43,071 households with children (42.7 percent of all households) in the PSA (Conduent Healthy Communities Institutes, Claritas, 2019).

Seniors Living Alone

In the PSA, 23.7 percent of seniors (ages 65 and older) are living alone, which is lower than the Illinois rate of 28.5 percent and the U.S. value of 26.2 percent (Conduent Healthy Communities Institute, American Community Survey, 2013-2017).

Single Parent Households

Twenty-two percent of children in the PSA are living in a single parent family household which is lower than the state value of 32.4 percent and the U.S. value of 33.3 percent (Conduent Healthy Communities Institute, American Community Survey, 2013-2017).

Median Household Income by Race and Ethnicity

The median household income for the PSA population is $83,604. The median household income varies by race and ethnicity in the PSA. The household type with the highest median household income is Asian at $115,310 and the lowest median household income is for African American households at $48,584 (Conduent Healthy Communities Institute, Claritas, 2019). Exhibit 11 includes the median household income for other household types.

Exhibit 11: Advocate Sherman PSA Median Household Income by Race and Ethnicity 2019

Household Type	Median Household Income
White	$87,047
African American	$48,584
American Indian / Alaskan Native	$54,313
Asian	$115,310
Native Hawaiian / Pacific Islander	$57,024
Hispanic Ethnicity	$62,343

Source: Conduent Healthy Communities Institute, Claritas, 2019

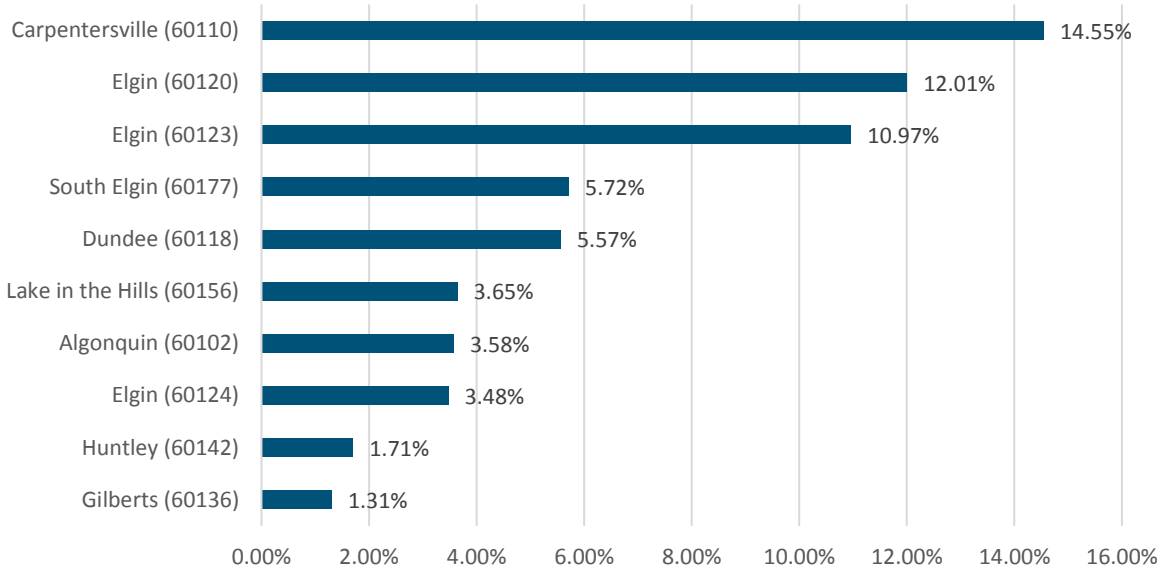
People Living Below Poverty Level

In the Advocate Sherman PSA, 9.4 percent of the population is living below the federal poverty level, which is less than the Illinois rate of 13.5 percent and the U.S. rate of 14.6 percent (Conduent Healthy Communities Institute, American Community Survey, 2013-2017).

Families Living Below Poverty Level

There is a total of 5,608 families in the PSA (7.3 percent of total families) living below the federal poverty level. A total of 4,636 families with children in the PSA (6.06 percent of all families) are living below the poverty level. The communities with the largest percentage of families living below the federal poverty level are those in the following zip codes: Carpentersville (60110) at 14.55 percent, Elgin (60120) at 12.01 percent and Elgin (60123) at 10.97 percent, as shown in Exhibit 12 (Conduent Healthy Communities Institute, Claritas, 2019).

Exhibit 12: Advocate Sherman PSA Families Living Below Poverty Level by Zip Code 2019



Source: Conduent Healthy Communities Institute, Claritas, 2019

Individuals with Disabilities Living Below Poverty

In the PSA, 13.3 percent of the individuals (aged 20-64 years) with disabilities are living below the federal poverty level, lower than the Illinois value of 25.5 percent of individuals with disabilities living below poverty level (Conduent Healthy Communities Institute, American Fact Finder, American Community Survey, 2017).

People ages 65 and Older Living Below Poverty

In the PSA, 5.7 percent of people ages 65 years and older are living below the federal poverty level (Conduent Healthy Communities Institute, American Community Survey, 2013-2017).

Unemployment

The percent of population in the PSA, ages 16 and older, that is unemployed is 5.35 percent, which is lower than the Illinois unemployment rate of 6.7 percent. The highest unemployment rates in the PSA are in the zip codes of Elgin (60123) at 7.29 percent, Carpentersville (60110) at 6.78 percent and Elgin (60120) at 6.84 percent (Conduent Healthy Communities Institute, Claritas, 2019).

Top Industries for Employment

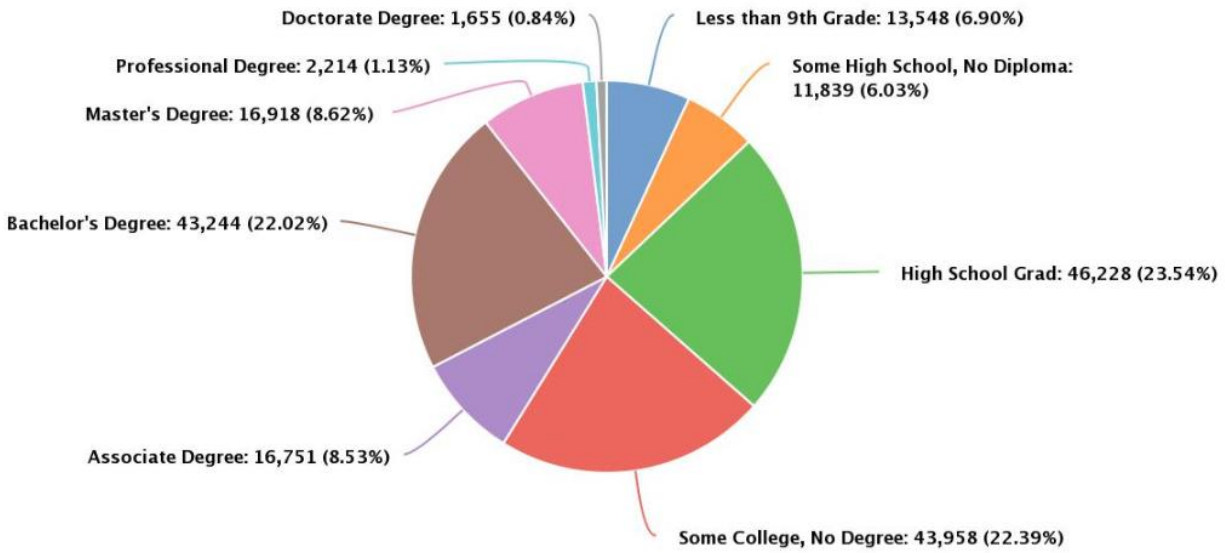
Advocate Sherman PSA residents are employed in the following occupation categories: 61 percent white collar, 23 percent blue collar and 16 percent service and farm. The top three industries that employ PSA residents, ages 16 and older, are manufacturing (18 percent), retail trade (12 percent) and health care/social services (11 percent). The top three occupations in the PSA are office/administrative

support (14.19 percent), management (11.73 percent) and sales (11.15 percent) (Conduent Healthy Communities Institute, Claritas, 2019).

Educational Attainment

In the PSA population ages 25 and older, 23.54 percent are high school graduates, 8.53 percent have an associate's degree, 22.02 percent have a bachelor's degree, 8.62 percent have a master's degree, 1.13 percent have a professional degree and 0.84 percent have a doctorate degree (Conduent Healthy Communities Institute, Claritas, 2019).

Exhibit 13: Advocate Sherman PSA Population ages 25 years and older by Educational Attainment 2019



Source: Conduent Healthy Communities Institute, Claritas, 2019

High School Graduation Rate

Graduating high school is important for an individual's social and economic advancement. In the PSA, 12.93 percent of the population ages 25 and older (25,387 residents) has less than a high school education. Of this group, 13,548 residents (6.9 percent of the population ages 25 and older) have less than a ninth-grade education (Conduent Healthy Communities Institute, Claritas, 2019).

The high school graduation rate for Kane County is 85.1 percent and for McHenry County is 91.5 percent (Conduent Healthy Communities Institute, County Health Rankings, 2014-2015). The Healthy People 2020 target for high school graduation is 87 percent; McHenry County has met this target and Kane County is slightly below the target. The zip codes in the Advocate Sherman PSA with the highest percentage of the population with less than a high school degree are Elgin (60120) 28.7 percent, Carpentersville (60110) 27.5 percent and Elgin (60123) 18.9 percent, all in the worst 25th percentile (red

indicator) compared to other Illinois zip codes (Conduent Healthy Communities Institute, American Community Survey, 2013-2017).

Student-To-Teacher Ratio

This indicator shows the average number of public school students per teacher in the region. It does not measure class size. According to the National Center for Education Statistics, larger schools tend to have higher student-teacher ratios. There are 16.0 students per teacher in Kane County and 15.1 students per teacher in McHenry County (Conduent Healthy Communities Institute, National Center for Education Statistics, 2016-2017).

Advocate Sherman's community health staff mapped all health care resources within the hospital's PSA. These health care resources are listed below.

Name of Facility	Type of Facility	Location
Northwestern Medicine Delnor Community Hospital	Hospital	Geneva
Amita St. Joseph's Hospital	Hospital	Elgin
Greater Elgin Family Care Center	FQHC	Elgin
VNA Health Center	FQHC	Elgin
Aunt Martha's Health Center	FQHC	Carpentersville
Elgin Mental Health Center	Behavioral Health	Elgin
Northwestern Medicine	Hospital	Huntley

Key Findings: Community Definition

- The zip codes in the PSA with the highest socioeconomic needs are Carpentersville (60110) and Elgin (60120 and 60123).
- The median age of the Advocate Sherman PSA is 38.34 years. The largest population in the PSA are those ages 35-64 at 40.35 percent.
- Twenty-nine percent of the PSA population is of Hispanic/Latino ethnicity. The largest Hispanic population in the PSA are in the zip codes of Elgin (60120) at 54.65 percent and Carpentersville (60110) at 50.75 percent.
- A total of 32.27 percent of the PSA population speak a language other than English at home.
- The median household income for the PSA population is $83,604. Asians have the highest median household income ($115,310) and African Americans have the lowest median household income ($48,584).
- The largest population of families living below the poverty level is in the zip codes of Carpentersville (60110) at 14.55 percent, Elgin (60120) at 12.01 percent and Elgin (60123) at 10.97 percent.

Key Roles in the 2017-2019 Community Health Needs Assessment

Advocate Aurora System and Advocate Sherman Leadership

The Advocate Sherman community health staff includes a full-time Community Health Manager and a regional Director of Community Health, covering Advocate Good Shepherd, Advocate Condell and Advocate Sherman. The Community Health Director reports to the Vice President of Community Health and Faith Outreach for Illinois and the community health programs are under the leadership of the Advocate Aurora Chief External Affairs Officer. Locally, the Advocate Sherman community health manager and the director of community health meet monthly with the director of service excellence and population health. Additionally, the community health staff meet regularly with the hospital president to coordinate and align strategy for community health interventions.

Governing Council

The Advocate Sherman Governing Council is comprised of 25 members, representing a broad array of community sectors. Members come from the fields of education, manufacturing, philanthropy, faith communities, marketing, financial industry, primary care and subspecialty health care. One member of the Governing Council serves as chair of the CHC to ensure coordination of information. The Governing Council reviewed and approved the recommended health need priorities from the CHC on May 20, 2019 and later approved the 2019 CHNA report on September 23, 2019.

Community Health Council

The CHC is chaired by a community member who also serves as a board member of the hospital. The CHC is comprised of eight community members, representing 67 percent of the total membership. Non-Advocate Aurora-affiliated members represent the McHenry County and Kane County Health Departments, the American Cancer Society and a variety of social service agencies. Advocate Sherman representatives include executive team members, a physician champion and a business development leader.

The affiliations and titles of the hospital's Community Health Council members are provided below. Unless otherwise indicated, CHC members with an asterisk (*) represent medically underserved, low-income and minority populations.

CHC Members from the Community

- American Cancer Society, Hospital Systems Manager
- Elgin Community Member, Advocate Sherman Board member (minority populations)
- Greater Elgin Family Care Center, Chief Operating Officer *
- Kane County Health Department, Executive Director *
- McHenry County Department of Health, Administrative Manager *
- Second Baptist Church of Elgin, Pastor; Advocate Sherman Hospital Board member and CHC Chair (low-income and minority populations)
- United Way of Elgin, President/CEO (low-income and minority populations)

- Coalition for a Safe and Healthy Elgin, Program Coordinator *

CHC Members from Advocate Aurora

- Advocate Aurora, Director of Community Health, North Region
- Advocate Sherman, Director of Service Excellence and Population Health
- Advocate Sherman, Manager, Community Outreach
- Advocate Sherman, Physician, Family Practice

Advocate Sherman community health program staff presented extensive community data in a series of three meetings over a three-month period. In a fourth meeting, council members voted, using a modified Hanlon Method, to select two health priorities to focus on in the 2020-2022 implementation plan period—obesity and behavioral health (substance use and mental health).

Collaborations with Health Departments

Since the Advocate Sherman PSA includes both McHenry County and Kane County, the hospital collaborated with both county health departments to conduct a comprehensive CHNA. Advocate Sherman referenced the Kane County and McHenry County community assessment reports to supplement other hospital and public health data pulled for the hospital CHNA.

McHenry County Department of Health

The McHenry County Department of Health conducted its most recent assessment in 2017, the *McHenry County Healthy Community Study*. Partner organizations directing the study included the following:

- Advocate Good Shepherd
- Advocate Sherman
- Centegra Health Systems
- Family Alliance, Inc.
- McHenry County Department of Health
- McHenry County Mental Health Board
- McHenry County Substance Abuse Coalition
- United Way of Greater McHenry County.

A community survey focus group and key informant interviews were conducted to gather input from community residents on key health issues. In addition, a broad data review of McHenry County using secondary sources was conducted, which included demographics, housing, income and poverty, education, employment, crime and safety, birth and death rates, health status and behaviors, and health utilization.

Advocate Sherman community health staff served on the steering committee for the Healthy Community Study assessment. Additionally the hospital helped design the survey questions, select key stakeholders to participate in the interviews and promote and distribute the survey throughout McHenry County. As an active member of the steering committee, Advocate Sherman reviewed the assessment

results with other members and helped to select priorities and develop strategies to address the identified needs in McHenry County.

Kane County Health Department

The Kane County Health Department's most recent report is the *2018 Community Health Needs Assessment Report*, *Kane County, Illinois*. This assessment is conducted in collaboration with multiple partners in Kane County, including the 708 INC Board, Advocate Sherman, Kane County Health Department, Northwestern Medicine Delnor Community Hospital, Amita Mercy Medical Center, Amita St. Joseph's Hospital and Rush Copley Medical Center. The assessment was conducted by Professional Research Consultants, Inc. (PRC).

Advocate Sherman community health staff served on the executive committee for the CHNA for Kane County. As an active member of the executive committee, Advocate Sherman staff reviewed the assessment results with other community members and helped to select priorities and develop strategies to address the identified needs within Kane County.

The Kane County needs assessment included a community health survey and an on-line key informant survey. A variety of secondary data sources were consulted for county-level data in the areas of demographics, public health, mental health, substance abuse, education, disease incidence and prevalence, economics and public safety.

Collaborations with other Key Stakeholders

Advocate Sherman also consulted with a number of additional partner organizations on the hospital CHNA. These included several partner Federally Qualified Health Centers (Greater Elgin Family Care Center, VNA Health Care, Aunt Martha's), Kane County Substance Abuse Coalition, McHenry County Substance Abuse Coalition and the Mental Health 708 INC Board. Each of the organizations have a focus on medically underserved, low-income and minority populations.

Methodology

Timeline

Advocate Sherman gathered and analyzed a variety of primary and secondary data from 2017 through 2019. This data was presented to the CHC at three meetings, from January through March 2019. Indicators presented included demographic, economic, education, employment, social determinants, health status and health behavior. Invited guest speakers gave presentations on selected health topics to expand the CHC members' knowledge on key issues in the community. In the April 2019 meeting, council members selected the top two health priorities for the 2020-2022 implementation plan. These priorities were approved by the Advocate Sherman Governing Council on June 20, 2019. The Governing Council approved the 2019 CHNA Report on September 23, 2019. The Advocate Health Care Network Board of Directors approved Advocate Sherman's 2019 CHNA Report at the system level on December 16, 2019.

Secondary Data

Multiple data collection sources were employed for the 2019 CHNA. As indicated in the section above, Advocate Sherman collaborated with many partners to collect PSA and county-level data. Data was pulled from national, state, regional Chicago and local community source documents. Some of the primary sources included the National Obesity Report, National Alliance on Mental Illness, Centers for Disease Control and Prevention, County Health Rankings, Illinois State Department of Public Health, Illinois Hospital Association and the Conduent Healthy Communities Institute. Additionally, secondary data included in both the 2017 McHenry County Healthy Community Study and the 2018 Kane County Community Health Needs Assessment Report was reviewed and analyzed.

Conduent Healthy Communities Institute

As indicated, Conduent Healthy Communities Institute was a key source of data for the 2019 CHNA. This secondary data was crucial in analyzing the hospital's PSA health needs as the data base was the only source that provided such an extensive amount of data specific to the PSA. All data collected through Conduent Healthy Communities Institute was quantitative and included data comparisons between PSA communities and counties in Illinois. These comparisons were exemplified in the form of community dashboards, which provided great insight on the health status of the hospital's PSA in comparison to other counties and communities in Illinois.

Advocate Health Care has a current contract with Conduent Healthy Communities Institute. This robust platform contains 198 health and demographic indicators, including 38 hospitalization and emergency department (ED) visit indicators at the service area and zip code levels. Utilizing the Illinois Hospital Association COMPdata, Conduent Healthy Communities Institute summarizes, age adjusts and averages the hospitalization and ED data for five-time periods from 2009-2017. The contract also provides 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.

Conduent Healthy Communities Institute provides a color code system that illustrates comparison of indicators across counties, service areas and zip codes.

Green (Good):	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.
Yellow (Fair):	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.
Red (Poor):	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 this CHNA document, indicators may be referred to as being green, yellow or red indicators, in reference to the above value ratings from Conduent Healthy Communities Institute. For purposes of this report, secondary data was pulled for the Advocate Sherman PSA. However, for indicators where PSA data was unavailable, data for Kane County and McHenry County was used for the indicator.

Primary Data

Specific health issues and opinions of the community were gathered for the Advocate Sherman CHNA through two primary data sources:

- General community survey, focus groups and key informant interviews conducted as part of the 2017 McHenry County Healthy Community Study
- General community survey and survey of selected community stakeholders conducted as part of the 2018 Kane County Community Health Needs Assessment Report.

2017 McHenry County Healthy Community Study

The 2017 McHenry County Healthy Community Study included four components – a community survey, focus groups of target populations, key informant interviews of community leaders and community analysis using secondary data sources. Through the assessment, the current health status of county residents is described along with demographic trends, social and economic indicators, health behaviors and utilization of health services. The assessment also strived to understand the perceptions of community strengths and weaknesses as well as answer questions about health and human services delivery, unmet needs, gaps and barriers to care. Health Systems Research of the University of Illinois College of Medicine at Rockford was hired to guide the process, conduct the full assessment and prepare the summary report.

The community survey was conducted on-line and in paper format and was available in both English and Spanish. A total of 1,090 surveys were completed (774 electronic and 316 paper). The response rate was more than 40 percent above the 2014 response rate. The respondents constituted a “convenience sample” rather than a random sample of the county population. Questions covered in the survey included:

- Availability of selected community features

- Accessibility to some of these features
- Access to care with a focus on primary health care, dental, mental health and substance abuse treatment services
- Occurrence of physical and mental health/development conditions
- Perception of overall health
- Caring for children, older adults, and individuals with special needs
- Household financial problems.

Five focus groups were conducted with a total of 59 participants. Target populations for the focus groups were: (1) parents/persons with mental illness; substance abuse or developmental/intellectual disabilities; (2) Hispanic/Latinos; (3) veterans; and (4) low-income parents of young children. In addition to the above questions, these target populations were also asked about specific service needs for their respective group, experiences utilizing existing services and particular needs or problems facing the community.

Key informant interviews were conducted with 29 community leaders, agency directors and other experts in their field based on professional expertise, knowledge of local human services or the health care system. Interview questions addressed were:

- The best aspects of living in McHenry County
- The local health and human services delivery system: strengths, weaknesses, service gaps and insufficiencies
- Effects of the implementation of the Affordable Care Act
- Challenges to living a healthy lifestyle in McHenry County.

The priorities in the McHenry County Healthy Community study were selected using a modified Hanlon process. The following are the top priorities by category:

Physical Health	Mental Health/Substance Abuse	Community
• Obesity • Cardiovascular disease and risk factors • Cancer • Diabetes	• Mental health and substance abuse service availability • Alcohol and drug abuse, misuse of prescription medications and opioids • Depression, anxiety/panic disorders • Suicide	• Lack of awareness of existing services • Public transportation • Affordable housing

2018 Kane County Community Health Needs Assessment (CHNA) Report

The Kane County needs assessment included a community health survey, conducted via telephone and online, an on-line survey of key community stakeholders and secondary data for vital statistics and a variety of health-related topics. The goal of the community health needs assessment was to: (1) improve residents' health status, increase their life spans and elevate their overall quality of life; (2) to reduce the health disparities among residents; and (3) to increase accessibility to preventive services for all community residents in Kane County, Illinois and the Advocate Sherman PSA.

The random survey was designed to interview those residents ages 18 and older in Kane County and yielded 1,053 responses. Questions covered in the survey included:

- Overall health
- Social determinants of health including poverty, education, employment, food insecurity, and child care services
- Mental health
- Diseases and chronic conditions, including cardiovascular disease, cancer, respiratory disease, injury and violence, diabetes, Alzheimer's disease, kidney disease and potentially disabling conditions
- Infectious diseases, such as Influenza and Pneumonia, HIV and sexually transmitted infections
- Family planning
- Nutrition
- Physical activity
- Weight status
- Substance abuse
- Tobacco use
- Access to health care services, including health insurance coverage, difficulties associated with access, primary care services, oral health, vision care and emergency room utilization.

Key informant online surveys were completed by 157 community stakeholders, including physicians, public health representatives, other health providers, social services providers and other community leaders. In the online survey the respondents were asked to rate the degree to which various health issues are a problem in their own community. Follow-up questions were asked to describe why they identified problem areas as such and how these might be addressed.

A group of community stakeholders, representing a cross-section of community based agencies and organizations was convened to evaluate and prioritize the health issues, based on the findings of the Kane County CHNA. Participants considered the scope and severity of the health issue and the ability to impact change when selecting their top issues. The ratings were averaged for each criteria and the following is the prioritized list of community health needs:

1. Mental Health
2. Nutrition, Physical Activity & Weight
3. Substance Abuse
4. Access to Healthcare Services
5. Diabetes
6. Heart Disease & Stroke
7. Tobacco Use
8. Cancer
9. Injury & Violence
10. Sexual Health
11. Respiratory Disease
12. Potentially Disabling Conditions
13. Oral Health
14. Kidney Disease

Both county assessment reports served as critical resource documents, providing primary viewpoints and opinions from community residents and community leaders, and serving as valuable sources of secondary data to inform the hospital's own CHNA.

Health Status

Mortality Ranking

Mortality ranking indicates the ranking of the county in overall length of life according to the County Health Rankings and is based on a measure of premature death. In Kane County, the mortality ranking is 5 and the ranking for McHenry County is 11. Both counties are in the best 0-50th percentile (green indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, County Health Rankings, 2019).

Morbidity Ranking

Morbidity ranking is the ranking of the county in overall quality of life according to the County Health Rankings. This is based on a summary composite score calculated from the following measures: poor or fair health, poor physical health days, poor mental health days and low birthweight. The morbidity ranking for Kane County is 18 and McHenry County is 7; both are in the best 0-50th percentile (green indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, County Health Rankings, 2019).

Top Causes of Death

The top three causes of death in Kane County, according to the 2018 Kane County Health Department Community Health Needs Assessment Report are: cancer, heart disease and stroke. The top three causes of death in McHenry County, according to the 2017 McHenry County Health Department Healthy Community Study (Original Source: National Center for Health Statistics, CDC WONDER Online Database) are cancer, heart disease and chronic lower respiratory diseases (previously known as COPD).

Health Behaviors Ranking

The Health Behaviors Ranking shows the ranking of the county in overall health behaviors and is based on a summary composite score calculated from the following measures: adult smoking, adult obesity, physical inactivity, access to exercise opportunities, excessive drinking, alcohol-impaired driving deaths, sexually transmitted infections, teen births and a food environment index. Each year the counties in the state are ranked according to health behaviors, known as County Health Rankings, with higher number ranks considered to be the healthiest.

In 2019, out of 102 counties in the state of Illinois, Kane County ranked number 6 and McHenry County ranked number 5. Both counties have a green indicator and fall in the best 0-50th percentile, compared to other Illinois counties (Conduent Healthy Communities Institute, County Health Rankings, 2019).

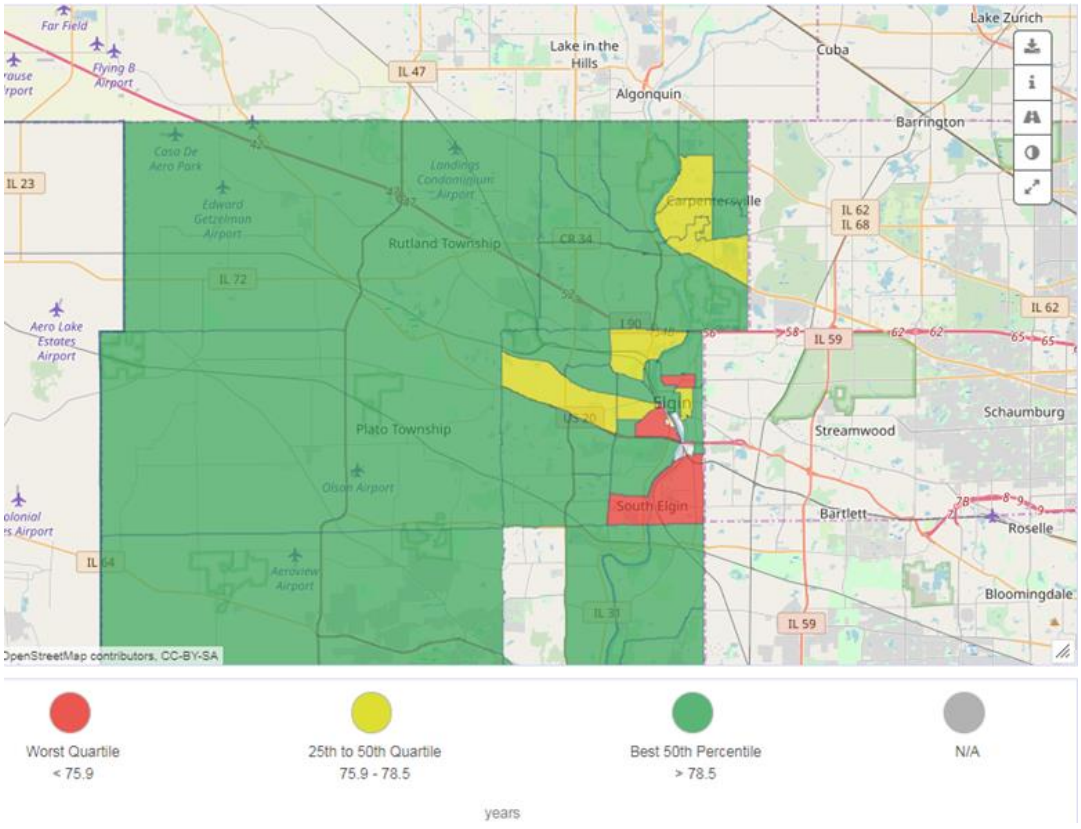
General Health Assessment

According to County Health Rankings, 16.2 percent of adults in Kane County self-reported their general health was either poor or fair, which falls in the worst 50th-75th percentile (yellow indicator), while only 12.9 percent of McHenry County adults reported poor or fair health status—in the best 0-50th percentile (green indicator) compared to other Illinois counties (Conduent Healthy Communities Institute, County Health Rankings, 2016).

Life Expectancy in PSA

The lowest average life expectancy within the Advocate Sherman PSA occur within census tracts that correspond to the following zip codes: 60123 Elgin (75.2 years), 60120 Elgin (75.6 years), and 60120, 60177, 60103 Elgin/South Elgin/Bartlett (75.8 years). These zip codes all fall within the worst 25th percentile (red indicator) when compared to other Illinois census tracts (Conduent Healthy Communities Institute, U.S. Small-Area Life Expectancy Estimates Project, 2010-2015).

Exhibit 14: Advocate Sherman PSA Life Expectancy Map 2010-2015



Source: Conduent Healthy Communities Institute, U.S. Small-Area Life Expectancy Estimates Project, 2019

Life Expectancy for Males and Females

Life expectancy for males in Kane County is 79.1 years and McHenry County is 78.4 years. The life expectancy for females is longer—in Kane County it is 82.7 years and in McHenry County, females live an average of 81.8 years (Conduent Healthy Communities Institute, County Health Rankings, 2017).

Poor Physical Health

The poor physical health indicator shows the average number of days that adults reported their physical health was not good in the past 30 days. In Kane County, adults reported not having good health for 3.6 days in the past 30 days, and in McHenry County it was reported as 3.4 days in the past 30 days. Both county values are in the best 0-50th percentile (green indicator), when compared to other counties in Illinois (Conduent Healthy Communities Institute, Claritas, 2019).

Frequent Physical Distress

Frequent physical distress is related to adults who experience chronic conditions or severe physical health issues. This indicator shows the percentage of adults who stated that their physical health, which includes physical illness and injury, was not good for 14 or more of the past 30 days. In Kane County, 10.4 percent of adults reported having frequent physical distress, whereas McHenry County adults reported a rate of 9.8 percent. Both values are in the best 0-50th percentile (green indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, County Health Rankings, 2016).

Key Findings: Health Status

- The top two causes of death for both Kane and McHenry Counties are cancer and heart disease.
- The lowest average life expectancy within the Advocate Sherman PSA occurs within census tracts that correspond to Elgin and South Elgin/Bartlett.
- In both counties, the life expectancy for males is lower than the life expectancy for females. In Kane County, females live an average of 3.6 years longer and in McHenry County, females live an average of 2.7 years longer.
- In Kane County, 10.4 percent of adults reported that their physical health was not good for 14 or more of the past 30 days; the rate was slightly lower for McHenry County adults at 9.8 percent.

Health Care Coverage

Adults with Health Insurance

Adults, ages 19-64 years, that have any type of health insurance was reported as 88.7 percent in Kane County and 93.5 percent in McHenry County. While both counties report coverage for residents at a higher rate than the U.S. value of 87.7 percent, neither county is meeting the Healthy People 2020 target of 100 percent. The percentage of adults with health insurance in McHenry County is higher than the Illinois rate of 90.2 percent, but the percent in Kane County is lower than the Illinois rate.

The groups with the lowest rates of coverage in Kane County are adults ages 26-34 years (84.9 percent) and 35-44 years (84.4 percent), Hispanics (73.0 percent) and those of other races (64.7 percent); all groups have rates that are significantly lower than the overall county rate. For McHenry County, Hispanic/Latino adults (79.6 percent) also had rates significantly lower than the overall county rate (Conduent Healthy Communities Institute, American Community Survey, 2017).

Children with Health Insurance

Ninety-five percent of children under the age of 19 years in the U.S. have some type of health insurance coverage. In Illinois, 97.1 percent of children have coverage. Both Kane County (97.9 percent) and McHenry County (97.0 percent) report high rates of insurance coverage for children, but still below the Healthy People 2020 target of 100 percent. For the census place (city) of Elgin, 97.1 percent of children under age 19 years have some type of health insurance coverage (Conduent Healthy Communities Institute, American Community Survey, 2017).

Persons with Private Insurance Only

In the Advocate Sherman PSA, 62.5 percent of the households are estimated to have commercial insurance (Advocate Aurora Business Development Analytics, Sg2, 2019). People reporting having only private health insurance was 62.7 percent in Kane County and 69.3 percent in McHenry County, which is higher than both the Illinois value of 59 percent and the national value of 55.8 percent (Conduent Healthy Communities Institute, American Community Survey, 2017).

Persons with Public Health Insurance

The U.S. value of residents who report having public health insurance only, including Medicare, Medicaid, Veterans Administration Health Care, Children's Health Insurance Program and state health plans is 23.6 percent, which is similar to the Illinois rate of 23.3 percent. However, both Kane and McHenry Counties indicate lower rates of public health insurance only, at 19.8 percent and 15.9 percent respectively (Conduent Healthy Communities Institute, American Community Survey, 2017).

Medicare Beneficiaries

In the Advocate Sherman PSA, 21.1 percent of households are estimated to be covered by Medicare and 3.7 percent of households with Veterans insurance (Advocate Aurora Business Development Analytics, Sg2, 2019). As of July 31, 2018, there were 76,151 Medicare beneficiaries in Kane County. In McHenry County, for the same time period, there were 50,592 Medicare beneficiaries (Centers for Medicare and Medicaid Services, Office of Enterprise Data and Analytics, July 2019).

Medicare Health Care Costs

In both Kane and McHenry Counties, the price-adjusted Medicare reimbursement per enrollee, which includes both Medicare Parts A and B, is $10,253 per enrollee, which is higher than the Illinois value of $9,981 per enrollee and the U.S. value of $9,729 per enrollee. The price-adjusted Medicare

reimbursement amount per enrollee in both counties is increasing unfavorably over time, but not at a statistically significant rate (Conduent Healthy Communities Institute, County Health Rankings, 2015).

Adults with Medicaid

In the Advocate Sherman PSA, 6.1 percent of households are estimated to be covered by Medicaid (Advocate Aurora Business Development Analytics, Sg2, 2019). According to the Illinois Department of Healthcare and Family Services, as of June 30, 2018, there were 109,988 total Medicaid enrollees in Kane County and 42,412 total Medicaid enrollees in McHenry County (Illinois Department of Healthcare and Family Services, 2018).

Children with Medicaid

In Kane County, as of June 30, 2018, there were 62,124 children enrolled in Medicaid (56.5 percent of total Kane County Medicaid enrollees). In McHenry County, there were 22,666 children enrolled in Medicaid for the same time period (53.4 percent of total McHenry County Medicaid enrollees) (Illinois Department of Healthcare and Family Services, 2018).

Uninsured

In the Advocate Sherman PSA, 4,559 households are estimated to be uninsured, which is 4.1 percent of all households in the PSA (Advocate Aurora Business Development Analytics, Sg2, 2019). For Kane County, 8.8 percent of adults ages 18-64 years surveyed in the 2018 Kane County Community Health Needs Assessment indicated that they lack health insurance, which is a decrease from 12.6 percent in 2015 and is lower than the state uninsured rate of 10.7 percent and the U.S. rate of 13.7 percent (Kane County Community Health Needs Assessment, 2018). In McHenry County, 7.1 percent of adults ages 18-64 years lack health insurance (McHenry County Community Health Study, 2017).

Dental Insurance

The percentage of students with no access to dental insurance or a dental clinic in Kane County is 0.07 percent and 0.08 percent of students in McHenry County. A total of 0.05 percent of Kane County students are ineligible for dental insurance, and 0.02 percent of McHenry County students are ineligible. The percentage of students who need a dentist that will accept Medicaid/All Kids is 0.06 percent in Kane County and 0.05 percent in McHenry County (Dental Examination Compliance Status of School-Age Children, Illinois State Board of Education, 2015).

Key Findings and Disparities: Health Care Coverage

- A total of 88.7 percent of Kane County adults, ages 19-64 years, and 93.5 percent of McHenry County adults have some type of health insurance. However, both counties are not meeting the Healthy People 2020 target of 100 percent.
- The percentage of children with health insurance coverage in both Kane County (97.9 percent) and McHenry County (97.0 percent) is equal to or greater than the state rate (97.1 percent).

- For the census place (city) of Elgin, 97.1 percent of children under age 19 years have some type of health insurance coverage.
- The price-adjusted Medicare reimbursement amount per enrollee in both counties is increasing unfavorably over time, but not at a statistically significant rate.

Disparities:

In Kane County, these groups all have rates of health insurance coverage that are significantly lower than the Kane County population:

- Hispanic/Latino adults (73.0 percent)
- Adults of other races (64.7 percent)
- Adults ages 26-34 years (84.9 percent) and ages 35-44 years (84.4 percent).

In McHenry County, the percentage of Hispanic/Latino adults with health insurance coverage (79.6 percent) is also significantly lower than the overall county rate.

Access to Care

Health Professionals Shortage Area

Health Professionals Shortage Areas (HPSAs) are designated by the Health Resources and Services Administration (HRSA) as having shortages of primary care, dental care or mental health providers and may be geographic, by population or facilities. In Kane County, there are two Primary Care low-income populations HPSAs, two Primary Care facility HPSAs (Federally Qualified Health Centers-FQHCs), one low-income population Dental HPSA, two Dental facility FQHC HPSAs and two Mental Health facility FQHC HPSAs. In McHenry County, there are no designated HPSAs (www.data.hrsa.gov/tools/shortage-area/hpsa-find).

Medically Underserved Area or Population (MUA/MUP)

Medically Underserved Areas (MUA) or Medically Underserved Populations (MUP) are designated by HRSA as having too few primary care providers, high infant mortality, high poverty or a high elderly population. In Kane County, there are three MUAs—one for the inner city Aurora service area, one for the Kane County service area and one for the central Carpentersville service area. In McHenry County, there is one MUP for the poverty population of Woodstock (www.data.hrsa.gov/tools/shortage-area/mua-find).

Primary Care Provider Rate

Access to primary care providers allows the community to have access to annually required screenings, checkups and immunizations, therefore increasing the health of the community. In Kane County, there are 42 providers per 100,000 population and McHenry County has 55 providers per 100,000 population. While Kane County is in the worst 50th-75th percentile (yellow indicator), McHenry County is in the best 0-50th percentile (green indicator), compared to other counties in Illinois. Both county rates are showing an unfavorable decrease over time, but not a statistically significant decrease. In

comparison, these counties are below the Illinois value of 84 per 100,000 population (Conduent Healthy Communities Institute, County Health Rankings, 2016).

Non-Physician Primary Care Provider Rate

An increase in non-physician providers such as nurse practitioners, physician assistants and clinical nurse specialists is helping to make up for the decrease in primary care physicians. Compared to other counties in Illinois, Kane County has 64 non-physician providers per 100,000 population, which is in the best 0-50th percentile (green indicator) and McHenry County has 41 non-physician providers per 100,000 population, which is in the worst 50th-75th percentile (yellow indicator). Even though both county rates are favorably increasing over time at a statistically significant level, they are both below the Illinois rate of 72 non-physician providers per 100,000 population (Conduent Healthy Communities Institute, County Health Rankings, 2018).

Clinical Care Ranking

Clinical care ranking is based on clinical care according to the County Health Rankings and is a summary composite score calculated from the following measures: uninsured, primary care physicians, mental health providers, dentists, preventable hospital stays, diabetic monitoring and mammography screening. Kane County is ranked at 93, which is in the worst 25th percentile (red indicator) compared to other counties in Illinois, and McHenry County is ranked at 30, which is in the best 0-50th percentile (green indicator) compared to other counties in Illinois (Conduent Healthy Communities Institute, County Health Rankings, 2019).

Preventable Hospital Stays—Medicare Population

This indicator shows the hospital discharge rate for ambulatory care-sensitive conditions. Both county rates are lower than the Illinois value of 54.8 discharges per 1,000 Medicare enrollees. In Kane County the rate is 50.7 discharges per 1,000 Medicare enrollees, which is in the best 0-50th percentile (green indicator) compared to other Illinois counties. The McHenry County rate is 52.9 discharges per 1,000 Medicare enrollees and is also in the best 0-50th percentile (green indicator) compared to Illinois counties. (Conduent Healthy Communities Institute, The Dartmouth Atlas of Health Care, 2015).

Key Findings: Access to Care

- Kane County has a clinical care ranking of 93, which is in the worst 25th percentile (red indicator) in comparison to other counties in Illinois. Factors contributing to this unfavorable ranking are the number of uninsured in the county; the capacity of the primary care, mental health and dental system of care; breast cancer screening and chronic disease management support.
- In Kane County, there are several Health Professional Shortage Area (HPSA) designations, including those for primary care, mental health and dental care, indicating there are issues of lack of access to available providers.
- The number of primary care providers per 100,000 population in both counties are unfavorably decreasing, though not a statistically significant decrease.

- To help offset the decrease in primary care providers, both counties are seeing rates for non-physician primary care providers increase at a statistically significant level.

Nutrition, Physical Activity and Obesity

Nutrition

Adult Fruit and Vegetable Consumption

Having a well-balanced diet is essential to maintaining a healthy lifestyle. In Kane County, 18.5 percent of adults indicated that they ate fruit and vegetables five or more times per day which is in the best 0-50th percentile of counties in Illinois (green indicator). Conversely, in McHenry County the rate is 12.8 percent which is the worst 50th-75th percentile (yellow indicator) as compared to other counties in Illinois. Both county rates are lower than the U.S. rate of 23.4 percent. There is no comparative Illinois value for this indicator (Conduent Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance System, 2007-2009).

Teen Fruit Consumption

According to the Illinois Youth Survey, students in 10th and 12th grade were asked questions relating to consumption of fruits and vegetables. In Kane County, 36 percent of 10th grade students (down from 39 percent in 2016) and 34 percent of 12th grade students (down from 38 percent in 2016) “ate fruit two or more times per day in the past seven days.” In McHenry County, the responses were 37 percent for 10th grade students (down from 42 percent in 2016) and 33 percent for 12th grade students (down from 36 percent in 2016) for the same question.

Teen Vegetable Consumption

Additionally, the students were also asked if they ‘ate vegetables two or more times per day in the past seven days. In Kane County, 26 percent of both 10th grade and 12th grade students responded affirmatively to this question, down only slightly form 27 percent for both 10th and 12th grade students in 2016. Twenty-seven percent of McHenry County 10th grade students (down from 31 percent in 2016) and 26 percent of 12th grade students (down from 29 percent in 2016) responded yes to this question (Illinois Youth Survey, Kane County and McHenry County Report, 2016 and 2018).

Physical Activity

Adults Who Are Sedentary

In Kane County, 16.5 percent of adults and 20.1 percent of McHenry County adults are considered sedentary, meaning they did not participate in any leisure time activities within the past month. The percentage of sedentary adults is trending favorably downward at a statistically significant rate. Both counties are in the best 0-50th percentile (green indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, County Health Rankings, 2015).

Teens Participating in Physical Activity

According to the 2018 Illinois Youth Survey, 25 percent of McHenry County 10th grade students are physically active at least 60 minutes daily in the past seven days, while eight percent are physically active zero days. For 12th grade students, 20 percent were physically active 60 minutes daily in the past week, while nine percent are active zero days.

In Kane County, the 2018 Illinois Youth Survey indicated those physically active at 60 minutes daily in the past seven days were: 10th grade students at 22 percent and 12th grade students at 21 percent. Students, by grade level, reporting that they have zero days of physical activity are as follows: 10th grade at 11 percent and 12th grade at 12 percent.

The 2016 Illinois Youth Survey results for both counties are very similar. The results from the McHenry County report showed those physically active 60 minutes for seven days per week were: 10th grade at 26 percent and 12th grade at 24 percent. Six percent of 10th grade students and seven percent of 12th grade students reported that they had zero days of physical activity in the past seven days.

In Kane County the 2016 results were: 10th grade at 23 percent and 12th grade at 21 percent. Nine percent of 10th grade students and eight percent of 12th grade students reported that they had zero days of physical activity in the past seven days (Illinois Youth Survey, McHenry County Report, Lake County Report, 2016 and 2018).

In summary, McHenry County 10th and 12th grade students did have decreased physical activity from 2016-2018. There was no change in the physical activity of 12th grade students in Kane County, but 10th grade students did show a decrease in physical activity from 2016-2018.

Exhibit 15 provides a summary of the 2016 and 2018 Illinois Youth Survey results for physical activity for teens.

Exhibit 15: Illinois Youth Survey 2016 and Results for Physical Activity 2018

		2016		2018	
County	Grade	Physically Active for 60 Minutes Daily for Past 7 days	Physically Active for 0 days in past 7 days	Physically Active for 60 Minutes Daily for Past 7 days	Physically Active for 0 days in past 7 days
McHenry County	10th grade	26%	6%	25%	8%
	12th grade	24%	7%	20%	9%
Kane County	10th grade	23%	9%	22%	11%
	12th grade	21%	8%	21%	12%

Source: Illinois Youth Survey, 2016 and 2018

Obesity

Adults Who Are Obese

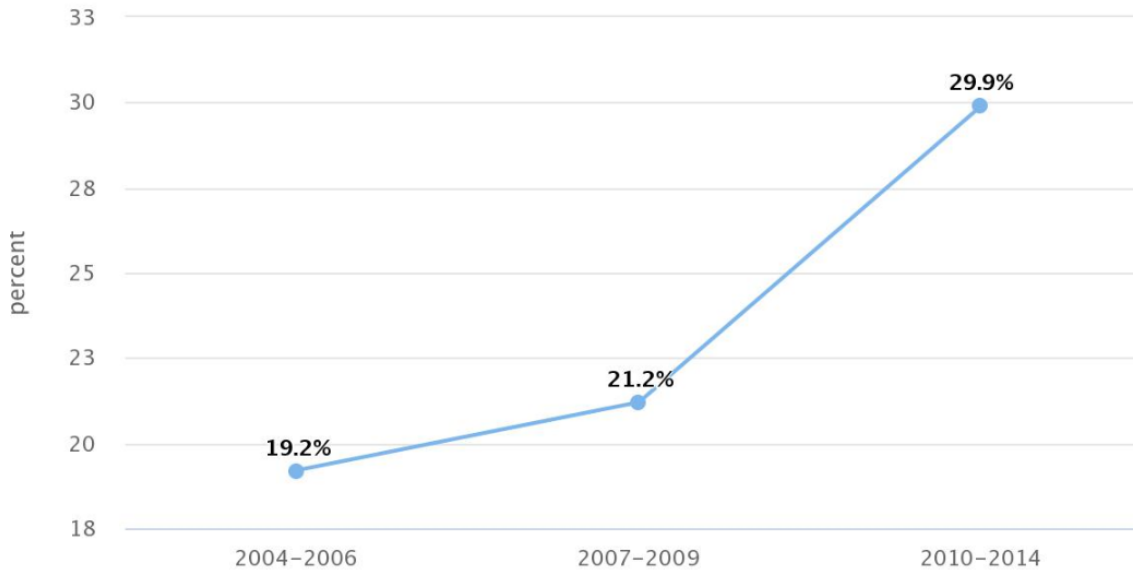
Obesity rates are rising across the U.S., which in turn increases the risk of many chronic diseases and health conditions such as heart disease, diabetes, cancer, stroke and more. Obesity is measured using Body Mass Index (BMI). Adults with BMI greater than or equal to 30 (BMI ≥ 30 kg/m2) are considered obese.

The percentage of adults who are obese living in the census place (city) of Elgin is 33.1 percent. When compared to the largest 500 cities in the U.S., Elgin falls within the 50th-75th percentile (yellow indicator), and is higher than the national value for these 500 cities of 28.8 percent (Conduent Healthy Communities Institute, 500 Cities Project, 2015).

In Kane County, 29.9 percent of adults (ages 18 and older) are obese; in McHenry County, 26.5 percent of adults are obese. Both Kane County and McHenry County rates are below the Healthy People 2020 target of 30.5 percent; both rates are also better than the U.S. rate of 31.3 percent and the Illinois rate of 31.6 percent. Additionally, both county rates fall within the best 0-50th percentile (green indicator) compared to other Illinois counties.

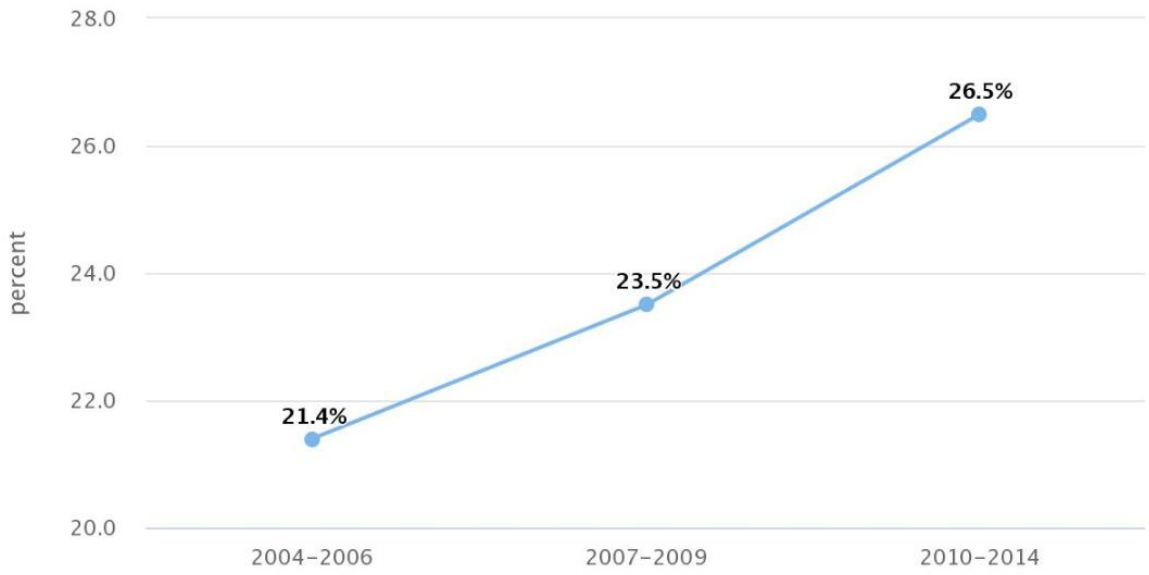
Even though the obesity rates have been rising in both Kane and McHenry County since 2004-2006, the most recent percentages (2010-2014) showed no statistically significant change from the prior 2007-2009 rates (Conduent Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance System, 2010-2014). Exhibits 16 and 17 illustrate the obesity rate changes over time for each county.

Exhibit 16: Kane County Adults who are Obese 2004-2014



Source: Conduent Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance System, 2019

Exhibit 17: McHenry County Adults who are Obese 2004-2014



Source: Conduent Healthy Communities Institute, Illinois Behavioral Risk factor Surveillance System, 2019

Teen Obesity Rate

According to the 2018 Illinois Youth Survey, 25 percent of 10th grade students (down from 29 percent in 2016) and 22 percent of 12th grade students (down from 24 percent in 2016) were considered to be overweight or obese in Kane County. In McHenry County, 25 percent of 10th grade students (up from 21 percent in 2016) and 23 percent of 12th grade students (up from 22 percent in 2016) were considered to be overweight or obese (Illinois Youth Survey, Kane County and McHenry County Report, 2016 and 2018).

Key Findings: Nutrition, Physical Activity and Obesity

- For obesity rates, both Kane County (29.9 percent of adults) and McHenry County (26.5 percent of adults) have rates below the Healthy People 2020 target of 30.5 percent.
- According to the Illinois Youth Survey's results from 2016 and 2018, the percentage of Kane County 10th and 12th grade students who are overweight or obese decreased slightly from 2016-2018. However, the percentage of McHenry County 10th and 12th grade students who are overweight or obese increased slightly between 2016-2018.
- Illinois Youth Survey results indicate that McHenry County 10th and 12th grade students had a decrease in physical activity from 2016-2018.
- There was no change in the physical activity level of 12th grade students in Kane County from 2016-2018, but 10th grade students did show a decrease in physical activity for that period, according to the Illinois Youth Survey.
- In McHenry County, only 12.8 percent of adults indicated that they ate fruit and vegetables five or more times per day, which is the worst 50th-75th percentile (yellow indicator) as compared to other counties in Illinois.

Cancer

According to the 2017 McHenry County Community Health Study and the 2018 Kane County Community Health Needs Assessment Report, cancer is the leading cause of death in both Kane County and McHenry County.

Breast Cancer

Breast Cancer Screening Rate

For the census place (city) of Elgin, 70 percent of women ages 50-74 have had a mammogram in the past two years. This is lower than the U.S. rate of 75.8 percent and unfavorably below the Healthy People 2020 target of 81.1 percent (Conduent Healthy Communities Institute, 500 Cities Project, 2014).

The percentage of Kane County Medicare beneficiaries, ages 67-69, who have had a mammography screening in the past two years is 65.9 percent and 66.0 percent for McHenry County beneficiaries. The rates for both counties are in the best 0-50th percentile (green indicator) when compared to other Illinois counties and are favorably increasing, but not at a statistically significant level (Conduent Healthy Communities Institute, the Dartmouth Atlas of Health Care, 2015).

Breast Cancer Incidence Rate

The incidence rate for breast cancer in Kane County is 121.3 cases per 100,000 females, which is in the best 0-50th percentile (green indicator) compared to other Illinois counties, and the rate is favorably decreasing at a statistically significant rate.

In McHenry County, the incidence rate, at 139.2 cases per 100,000 females, is in the worst 25th percentile (red indicator) compared to other counties in Illinois. Furthermore, the McHenry County breast cancer incidence rate is trending unfavorably upward at a statistically significant rate (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

Age-Adjusted Death Rate due to Breast Cancer

Breast Cancer is the leading cause of death among women in the United States. The age-adjusted death rate due to breast cancer in Kane County is 18.8 per 100,000 females (green indicator) when compared to other counties in Illinois; the rate is favorably trending down, but the trend is not statistically significant.

In McHenry County 24.2 per 100,000 females die from breast cancer, which is in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois. The McHenry County death rate is showing a decrease, but not a statistically significant decrease.

The state breast cancer death rate of 22.4 deaths per 100,000 females is higher than the Kane County rate, but lower than the rate for McHenry County. While Kane County meets the Healthy People 2020

target of 20.7 deaths per 100,000 population, McHenry County does not meet the target (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

Exhibit 22 compares the breast cancer death rates for Illinois counties where Advocate Aurora operates hospitals. Note that the McHenry County breast cancer death rate is one of the highest, second only to Woodford County. All counties displayed in red do not meet the Healthy People 2020 target.

Exhibit 22: Age-Adjusted Death Rate due to Breast Cancer: Kane and McHenry Counties 2011-2015

Source: Conduent Healthy Communities Institute, National Cancer Institute, 2019

Colorectal Cancer

Colorectal Cancer Screening Rate

It is recommended that adults ages 50 and over be screened for colon cancer by having a colonoscopy or sigmoidoscopy. For the census place (city) of Elgin, 55.9 percent of those ages 50-75 have had either a fecal occult blood test (FOBT) in the past year, a sigmoidoscopy in the past five years and a FOBT in the past three years, or a colonoscopy in the past ten years for colorectal cancer screening. This rate is in the worst 25th percentile (red indicator) when compared to the 500 largest cities in the U.S. and is below the Healthy People 2020 target of 70.5 percent (Conduent Healthy Communities Institute, 500 Cities Project, 2014).

In Kane County, 70.6 percent of adults (over the age of 50) reported having a colonoscopy or sigmoidoscopy, which is in the best 0-50th percentile(green indicator) compared to other counties in Illinois and is favorably above than the Illinois screening rate of 68.3 percent in 2016. However, the colorectal screening rate for McHenry County is in the worst 25th percentile (red indicator) compared to

other Illinois counties—at 62.3 percent and is unfavorably lower than the Illinois 2016 screening rate. Both county rates are remaining stable (Conduent Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance Survey, 2010-2014).

Colorectal Cancer Incidence Rate

The incidence rate for colorectal cancer is favorably decreasing at a statistically significant level in both counties. McHenry County is not meeting the Healthy People 2020 target of 39.9 per 100,00 population, but Kane County is meeting the target. The McHenry County rate is 40.8 cases per 100,000 population and Kane County is 35.4 cases per 100,000 population; both rates are in the best 0-50th percentile (green indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

Age-Adjusted Death Rate due to Colorectal Cancer

Colorectal cancer is the most commonly diagnosed cancer and is the second leading cancer killer in the U.S. The age-adjusted death rate for colorectal cancer is favorably decreasing at a statistically significant rate over time in both Kane and McHenry County. The Kane County age-adjusted death rate due to colorectal cancer is 12.9 deaths per 100,000 population and the rate for McHenry County is 13.9 deaths per 100,000 population. Both county rates are in the best 0-50th percentile (green indicator) compared to other counties in Illinois (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

Cervical Cancer

Cervical Cancer Screening Rate

For the census place (city) of Elgin, 80.4 percent of women ages 21-65 have had a Pap smear in the past three years, which is in the best 0-50th percentile (green indicator) when compared to the 500 largest cities in the U.S. (Conduent Healthy Communities Institute, 500 Cities Project, 2014).

In Kane County, 68.6 percent of women (ages 18 years and older) have reported having a Pap smear in the past year. This rate falls in the worst 50th-75th percentile (yellow indicator) in comparison to other counties in Illinois. A total of 70.2 percent of McHenry County women (ages 18 years and older) have had a Pap smear in the past year, which is in the best 0-50th percentile (green indicator) when compared to other Illinois counties.

Both county screening rates are above the Illinois rate of 65.6 percent in 2016. However, of note, the current 2010-2014 cervical cancer screening rates for both counties are worse than the previous 2007-2009 screening rates (Kane County 83.6 percent and McHenry County 82.8 percent) but no trend information is available (Conduent Healthy Communities Institute, National Cancer Institute, 2010-2014).

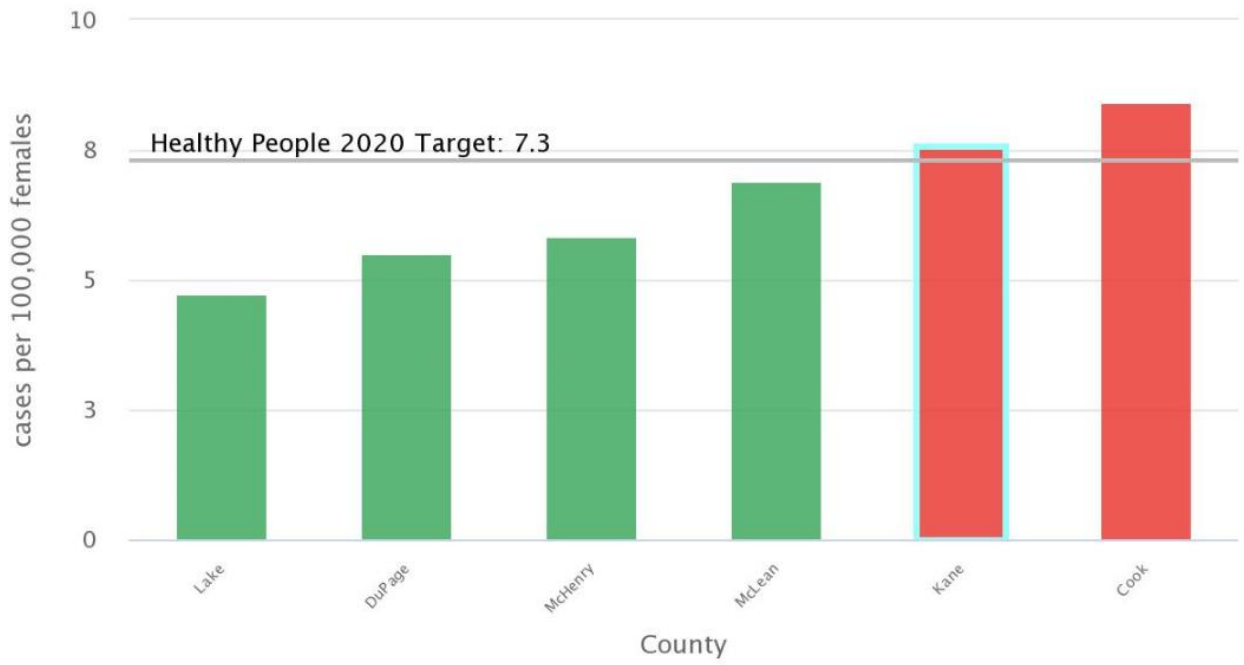
Cervical Cancer Incidence Rate

The Illinois rate for cervical cancer incidence is 7.7 cases per 100,000 females. The incidence rate in Kane County is 7.6 cases per 100,000 females, which is in the best 0-50th percentile (green indicator) compared to other counties in Illinois. However, the Kane County incidence rate for cervical cancer is trending unfavorably upward at a non-statistically significant level and is not meeting the Healthy People 2020 target of 7.3 per 100,000 females.

The McHenry County cervical cancer incidence rate of 5.8 cases per 100,000 females is meeting the Healthy People 2020 target and falls in the best 0-50th percentile (green indicator) when compared to other Illinois counties. Cervical cancer incidence in McHenry County is favorably decreasing, but not at a statistically significant level (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

Exhibit 23 displays the comparison of cervical cancer incidence rates for the Illinois counties where Advocate Aurora operates hospitals. The counties displayed in red, including Kane County, do not meet the Healthy People 2020 target.

Exhibit 23: Cervical Cancer Incidence Rate by County 2011-2015



Source: Conduent Healthy Communities Institute, National Cancer Institute, 2019

Lung Cancer

Lung Cancer Incidence Rate

According to the American Lung Association, more people die from lung cancer annually than any other type of cancer, exceeding the total deaths caused by breast cancer, colorectal cancer and prostate cancer combined. The greatest risk factor for lung cancer is duration and quantity of smoking (American Lung Association, 2018).

The incidence rates for lung and bronchus cancers in Kane County and McHenry County are both in the best 0-50th percentile (green indicator) compared to other counties in Illinois and are lower than the Illinois lung cancer incidence rate (66.0 cases per 100,000 population). The Kane County incidence rate (52.9 cases per 100,000 population) is favorably decreasing at a statistically significant pace. The incidence rate for McHenry County (64.6 cases per 100,000 population) is also favorably decreasing, although not at a statistically significant level (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2014).

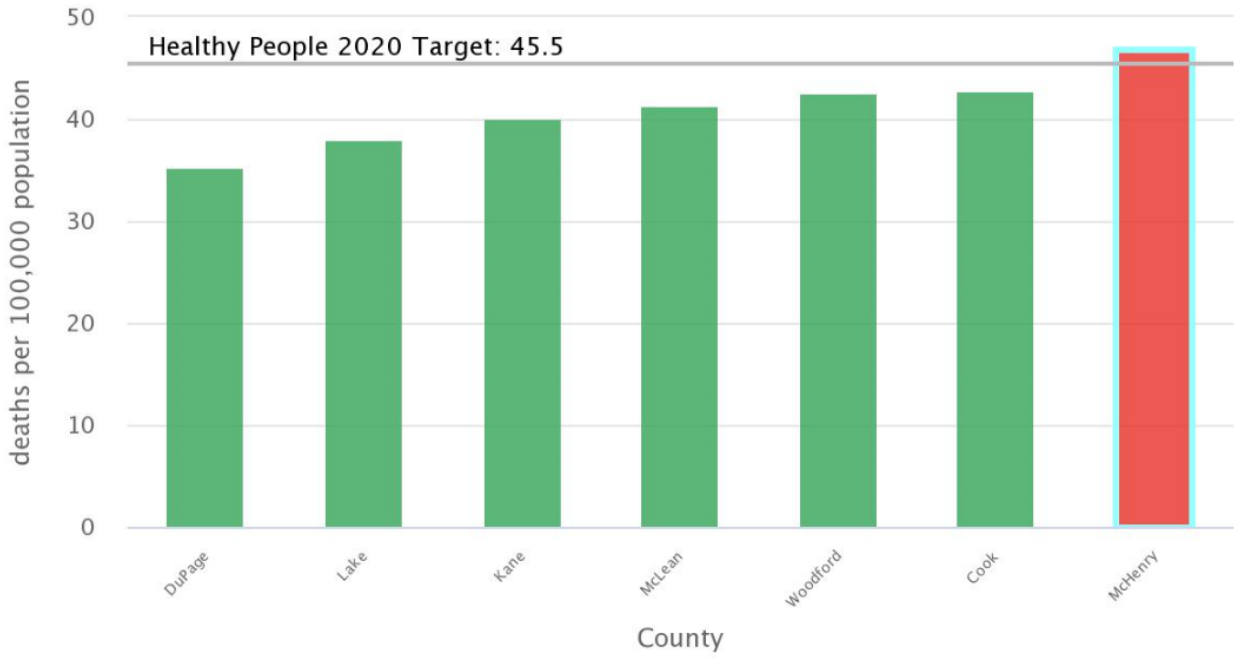
Age-Adjusted Death Rate due to Lung Cancer

The Healthy People 2020 target for age-adjusted death rates due to lung cancer is 45.5 deaths per 100,000 population. The Kane County death rate (40.0 deaths per 100,000 population) meets the Healthy People 2020 target, but the McHenry County rate (46.9 deaths per 100,000 population) does not meet it.

Both counties are in the best 0-50th percentile (green indicator) compared to other Illinois counties. Even so, the McHenry County rate is slightly higher than the state death rate (46.3 deaths per 100,000 population). Both rates are favorably declining, but neither are decreasing at a statistically significant rate. (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

Exhibit 24 displays the comparison of lung cancer death rates for the Illinois counties where Advocate Aurora operates hospitals. McHenry County, displayed in red, is the only county that does not meet the Healthy People 2020 target.

Exhibit 24: Age-Adjusted Death Rate due to Lung Cancer by County 2011-2015



Source: Conduent Healthy Communities Institute, National Cancer Institute, 2019

Oral Cavity and Pharynx

Oral Cancer Incidence Rate

The McHenry County oral cavity and pharynx incidence rate is favorably trending downward at a non-statistically significant pace. However, the Kane County incidence rate is unfavorably increasing at a statistically significant rate. Despite this, the incidence rate in Kane County (10.1 per 100,000 population) and McHenry County (10.3 per 100,000 population) are both in the best 0-50th percentile (green indicator) compared to other Illinois counties; both rates are also better than the Illinois rate of 12.1 per 100,000 population (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

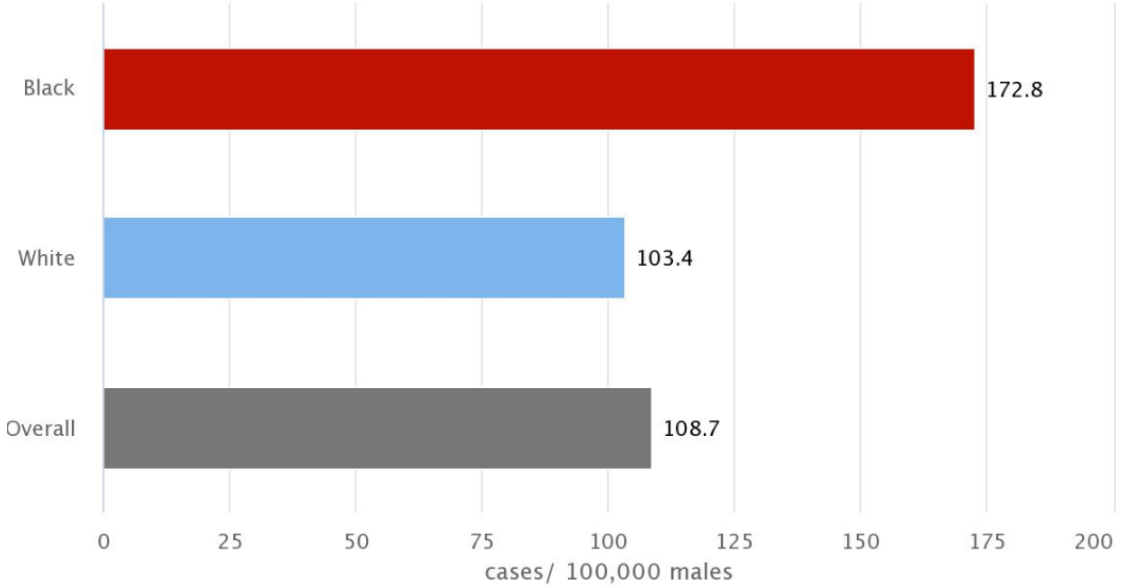
Prostate Cancer

Prostate Cancer Incidence Rate

The incidence rate for prostate cancer in Kane County (108.7 cases per 100,000 males) is in the worst 50th-75th percentile (yellow indicator) and the McHenry County rate (107.1 cases per 100,000 males) is in the best 0-50th percentile (green indicator) compared to other counties in Illinois. The rates for both counties are favorably decreasing at a statistically significant rate over time. In Kane County, the highest incidence rate for prostate cancer is for African Americans (172.8 per 100,000 males), which is significantly higher than the overall county rate (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

Exhibit 18 displays the prostate cancer incidence rate by race in comparison to the overall Kane County rate.

Exhibit 18: Kane County Prostate Cancer Incidence Rate by Race and Ethnicity 2011-2015



Source: Conduent Healthy Communities Institute, National Cancer Institute, 2019

Age-Adjusted Death Rate due to Prostate Cancer

Prostate cancer is the leading cause of cancer death in men in the U.S. The age-adjusted death rate for prostate cancer is decreasing in both Kane County and McHenry County. The decrease in Kane County is statistically significant. The Kane County rate is 19.6 cases per 100,000 males and the McHenry County rate is 22.4 cases per 100,000 males; both are in the best 0-50th percentile (green indicator) compared to other counties in Illinois. The Kane County rate has met the Healthy People 2020 target of less than 21.8 cases per 100,000 males, but the McHenry County rate is still above the target (Conduent Healthy Communities Institute, National Cancer Institute, 2011-2015).

Key Findings and Disparities: Cancer

- In Elgin, 70 percent of women (ages 50-74) have had a mammogram in the past two years, which is lower than the U.S. rate and below the Healthy People 2020 target.
- The breast cancer incidence rate for women in McHenry County (139.2 cases per 100,000 females) is in the worst 25th percentile (red indicator) compared to other counties in Illinois and is increasing at a statistically significant rate.
- The colorectal screening rate for McHenry County (62.3 percent) is in the worst 25th percentile (red indicator) compared to other Illinois counties.
- The death rate for colorectal cancer is favorably decreasing at a statistically significant rate over time in both Kane and McHenry Counties.

- In both counties, the lung cancer incidence rate is favorably decreasing. However, only in Kane County is the rate of decrease statistically significant.

Disparities:

- A disparity of note in Kane County is that incidence rate for prostate cancer in African Americans (172.8 per 100,000 males) is significantly higher than the overall county rate.

Cardiovascular Disease

Heart disease is the second leading cause of death in both Kane and McHenry Counties (2017 McHenry County Healthy Community Study, Kane County Community Health Needs Assessment Report, 2018).

Due to a change in methodology with the transition to ICD-10 coding, trend data is not available to compare change over time for cardiovascular ER and hospitalization indicators in this section.

Age-Adjusted ER Rate due to Heart Failure for Adults Ages 18 Years and Older

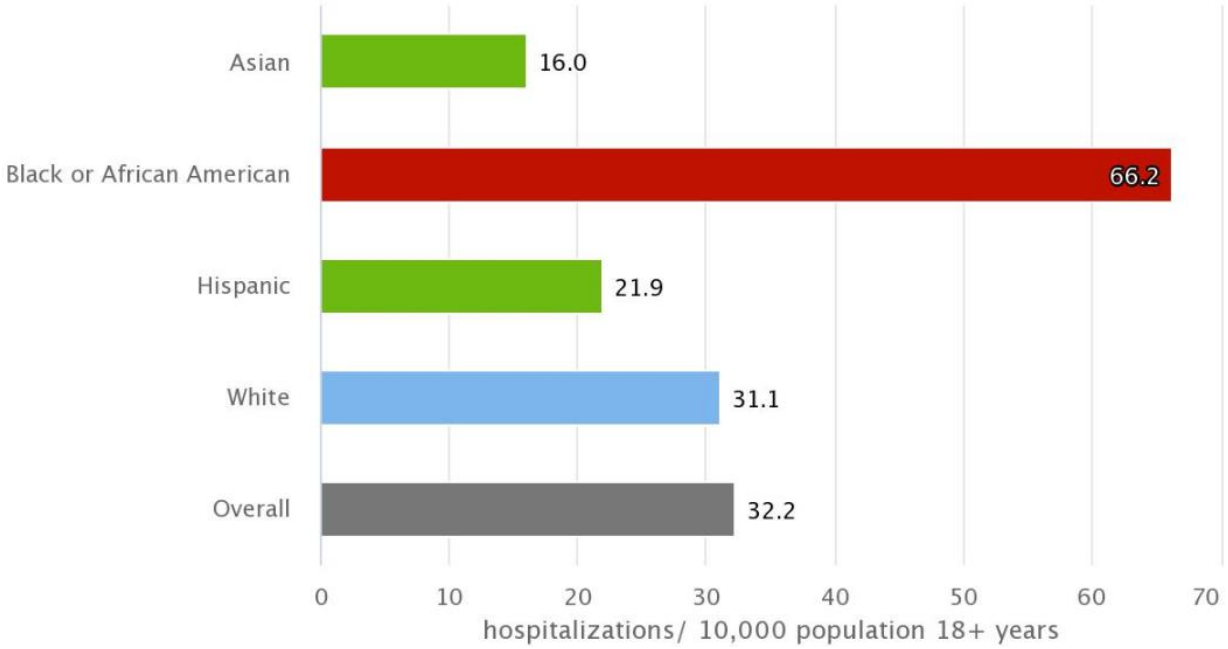
In the Advocate Sherman PSA, the age-adjusted ER rate due to heart failure is 3.3 visits per 10,000 population for adults (18 years and older). This is lower than the Illinois rate of 8.7 per 10,000 population and when compared to other Illinois counties, the PSA rate is in the best 0-50th percentile (green indicator) (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Heart Failure for Adults Ages 18 Years and Older

The age-adjusted hospitalization rate due to heart failure in the Advocate Sherman PSA is 32.2 per 10,000 population for adults (ages 18 years and older). This rate falls in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois and is lower than the state rate of 36.3 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Exhibit 19 compares the hospitalization rates due to heart failure by race and ethnicity; African Americans have the highest hospitalization rate due to heart failure (66.2 per 10,000 population).

Exhibit 19: Advocate Sherman PSA Age-Adjusted Hospitalization Rate due to Heart Failure by Race and Ethnicity 2015-2017



Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted ER Rate due to Hypertension for Adults Ages 18 Years and Older

The Illinois age-adjusted ER rate due to hypertension, for adults ages 18 and older, is 36.4 per 10,000 population. The Advocate Sherman PSA rate (26.5 per 10,000 population) is lower than the state rate and falls in the best 0-50th percentile (green indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Hypertension for Adults Ages 18 Years and Older

The age-adjusted hospitalization rate due to hypertension for adults ages 18 years and older in the Advocate Sherman PSA (5.2 per 10,000 population) is higher than the state rate (4.6 per 10,000 population). In comparison to other counties, the PSA rate falls in the worst 25th percentile (red indicator) (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Death Rate due to Cerebrovascular Disease (Stroke)

Nothing kills more Americans than heart disease and stroke. More than 859,000 Americans die of heart disease, stroke, or other cardiovascular diseases every year—that's one-third of all U.S. deaths. These diseases also take an economic toll, costing $199 billion a year to our health care system and causing $131 billion in lost productivity from premature death alone. Seventy-eight million people have high blood pressure, a key risk factor for heart disease and stroke (Centers for Disease Control and Prevention, 2019).

The age-adjusted death rate due to stroke in Kane County is 35.8 deaths per 100,000 population and 36.7 deaths per 100,000 population in McHenry County. Both rates are in the best 0-50th percentile (green indicator) compared to other counties in Illinois. However, neither county death rate is meeting the Healthy People 2020 target of 34.8 deaths per 100,000 population. Both county rates are favorably trending downward, but not a statistically significant decrease. The Illinois death rate is 38.4 deaths per 100,000 population, which is higher than both county rates (Conduent Healthy Communities Institute, Centers for Disease Control and Prevention, 2015-2017).

Age-Adjusted Death Rate due to Coronary Heart Disease

Coronary heart disease is the most common type of heart disease. In Kane County, the age-adjusted death rate due to coronary heart disease is 67.9 deaths per 100,000 population, and in McHenry County the rate is 81.4 deaths per 100,000 population. Both county rates are favorably decreasing at a statistically significant level.

The Illinois death rate due to coronary heart disease is 87.0 per 100,000 population, which is higher than both county rates. The Kane County and McHenry County death rates are in the best 0-50th percentile (green indicator) compared to other counties in Illinois and are meeting the Healthy People 2020 target of 103.4 deaths per 100,000 population (Conduent Healthy Communities Institute, Centers for Disease Control and Prevention, 2015-2017).

Medicare Beneficiaries Treated for Stroke

In Kane County, 3.9 percent of Medicare beneficiaries were treated for stroke in 2017 and in McHenry County, 3.5 percent of the beneficiaries were treated for stroke. The rate for McHenry County is lower than the state rate (3.8 percent) and the U.S. (3.8 percent) rates, but the Kane County rate is slightly higher than the Illinois rate.

In comparison to other counties in Illinois, Kane County is in the worst 25th percentile (red indicator) and McHenry County is in the worst 25th-75th percentile (yellow indicator). Both county rates are favorably decreasing over time at a statistically significant pace (Conduent Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2017).

Medicare Beneficiaries Treated for Ischemic Heart Disease

Medicare beneficiaries being treated for ischemic heart disease in Kane County is 23.9 percent and 26.5 percent in McHenry County. Both county rates are in the best 0-50th percentile (green indicator) compared to other Illinois counties. Both rates are also below the Illinois rate of 26.8 percent and are favorably decreasing at a statistically significant rate over time (Conduent Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2017).

Medicare Beneficiaries Treated Hyperlipidemia

In Kane County, 43.2 percent of Medicare beneficiaries were treated for hyperlipidemia which is in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois. In McHenry County, 38.4 percent were treated for hyperlipidemia, which is in the best 0-50th percentile (green indicator) in

comparison to other counties in Illinois. The Kane County rate is remaining stable but is higher than the Illinois rate of 39.8 percent. The McHenry County rate is unfavorably increasing, but not at a statistically significant rate, and is also lower than the Illinois rate (Conduent Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2017).

Medicare Beneficiaries Treated Hypertension

A total of 58.3 percent of Medicare beneficiaries in Kane County were treated for hypertension, and the rate is 55.5 percent in McHenry County. Both rates are in the best 0-50th percentile (green indicator) in comparison to other counties in Illinois, but both are unfavorably increasing, but not a statistically significant increase. The Kane County rate is just above the Illinois rate of 58.2 percent, but the McHenry County rate is below the state rate (Conduent Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2017).

Medicare Beneficiaries Treated for Atrial Fibrillation

In Kane County, 9.7 percent of Medicare beneficiaries were treated for atrial fibrillation in 2017 and 10.1 percent were treated in McHenry County. Both county rates are higher than the Illinois rate of 8.9 percent. Additionally, the rate for both counties are in the worst 25th percentile (red indicator) compared to other counties in Illinois and are unfavorably increasing at a statistically significant rate (Conduent Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2017).

Medicaid Beneficiaries Treated for Heart Failure

In Kane County, 12.3 percent of Medicare beneficiaries were treated for heart failure in 2017 and 14.3 percent were treated in McHenry County. The Illinois rate of 15.2 percent is higher than both county rates. The McHenry County rate of Medicare beneficiaries treated for heart failure is unfavorably increasing, but not a statistically significant increase. The rate for Kane County is favorably decreasing at a statistically significant level. Both county values are in the best 0-50th percentile (green indicator) compared to other counties in Illinois (Conduent Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2017).

Key Findings and Disparities: Cardiovascular Disease

- The hospitalization rate due to heart failure in the Advocate Sherman PSA for adults ages 18 years and older is in the worst 50th-75th percentile (yellow indicator).
- The Kane County rate of Medicare beneficiaries treated for heart failure is favorably decreasing at a statistically significant level.
- The Advocate Sherman PSA hospitalization rate for hypertension falls in the worst 25th percentile (red indicator), compared to Illinois counties.
- Kane County is in the worst 25th percentile (red indicator) and McHenry County is in the worst 25th to 75th percentile (yellow indicator) for Medicare beneficiaries treated for stroke, in comparison to other counties in Illinois.
- The percent of Medicare beneficiaries treated for atrial fibrillation in 2017 for Kane County (9.7 percent) and McHenry County (10.1 percent) are in the worst 25th percentile (red indicator),

compared to Illinois counties, and both rates are unfavorably increasing at a statistically significant rate.

Disparities:

There are several cardiovascular disparities to note:

- In comparison to other races, African Americans have the highest ER rates due to heart failure (13.0 per 10,000 population) and hypertension (109.2 per 10,00 population), with rates significantly higher than the PSA rates.
- African Americans also have the highest hospitalization rates due to heart failure (66.2 per 10,000 population) and hypertension (19.5 per 10,000 population) compared to other races, with rates significantly higher than the overall PSA rates.
- Males have the highest death rate due to coronary heart disease in both Kane County (93.1 per 100,000 population) and McHenry County (106.7 per 100,000 population), both significantly higher than the overall county rate. Males also have a hospitalization rate due to heart failure (36.6 per 10,000 population) that is significantly higher than the overall PSA hospitalization rate due to heart failure.
- Females have an ER rate due to hypertension 29.7 per 10,000 population that is significantly higher than the overall PSA rate.
- As age increases, there is increasing risk for cardiovascular disease. Adults ages 65-84 years have ER rates due to heart failure (43.6 per 10,000 population) and hypertension (66.3 per 10,000 population), and hospitalization rates due to heart failure (106.6 per 10,000 population) and hypertension (13.4 per 10,000 population), that are significantly higher than the overall PSA rate.
- The cardiovascular-related ER and hospitalization rates are even higher for those ages 85 and older, with rates all significantly higher than the overall PSA rate:
    - ER rates for heart failure (43.6 per 10,000 population) and hypertension (127.0 per 10,000 population)
    - Hospitalization rates due to heart failure (533.1 per 10,000 population) and hypertension(36.8 per 10,000 population).

Diabetes and Kidney Disease

Due to a change in methodology with the transition to ICD-10 coding, trend data is not available to compare change over time for the following diabetes indicators.

Diabetes

Age-Adjusted ER Rate due to Diabetes for Adults Ages 18 Years and Older

This indicator and the next one include a primary diagnosis of both Type 1 and Type 2 diabetes, but cases of gestational diabetes are excluded. In the Advocate Sherman PSA, the age-adjusted ER rate for adults (18 years and older) due to diabetes is 19.4 visits per 10,000 population which is in the best 0-50th percentile (green indicator) compared to other counties in Illinois and lower than the Illinois rate

of 27.7 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Diabetes for Adults Ages 18 Years and Older

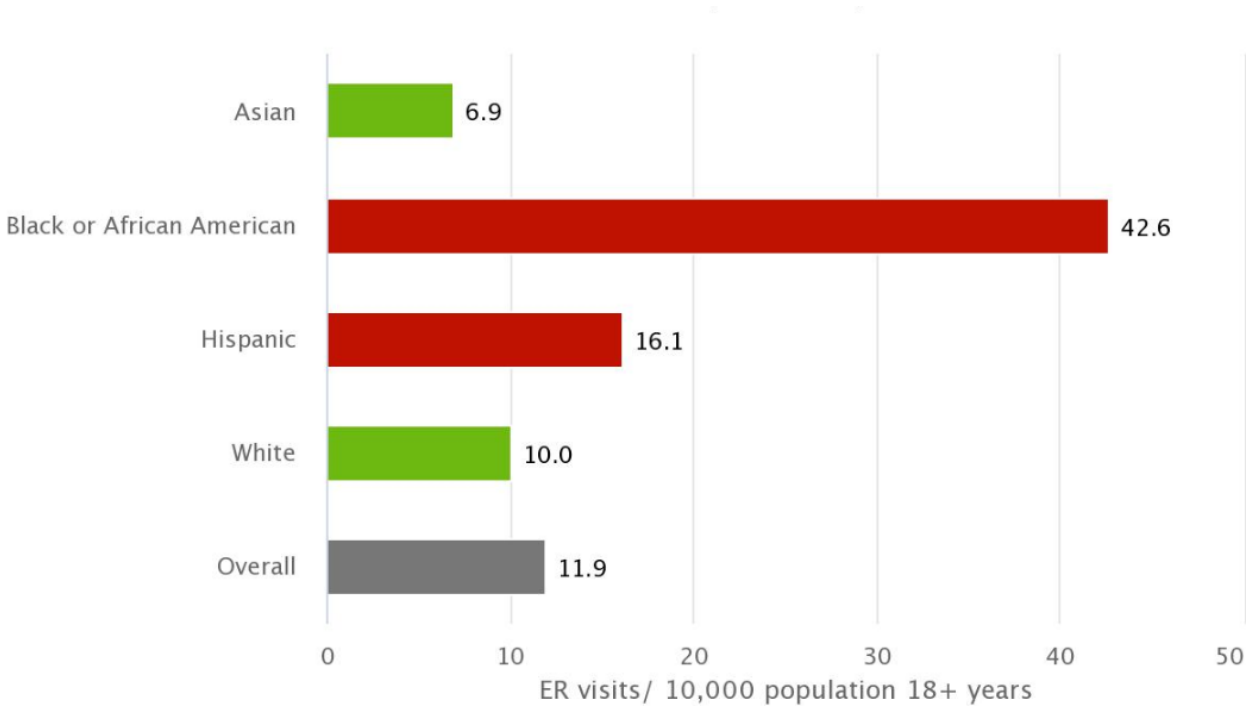
The Advocate Sherman PSA age-adjusted hospitalization rate due to diabetes for adults (18 and older) (15.6 hospitalizations per 10,000 population) falls in the worst 50th-75th percentile (yellow indicator) when compared to other counties in Illinois. The Illinois rate of 17.6 per 10,000 population is higher than the PSA rate (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted ER Rate due to Uncontrolled Diabetes for Adults Ages 18 Years and Older

Uncontrolled diabetes is a non-specific diagnosis, which indicates that the patient's blood sugar level is not kept within acceptable levels by his or her current treatment routine. The Illinois ER rate due to uncontrolled diabetes for adults (ages 18 and older) is 14.0 per 10,000 population. The Advocate Sherman PSA rate (11.9 per 10,000 population) is lower than the state rate and it falls within the best 0-50th percentile (green indicator) compared to other counties in Illinois (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Exhibit 20 displays the ER rates due to uncontrolled diabetes by race and ethnicity. The red bars indicate rates which are significantly higher than the overall PSA rate.

Exhibit 20: Advocate Sherman PSA Age-Adjusted ER Rate due to Uncontrolled Diabetes by Race and Ethnicity 2015-2017



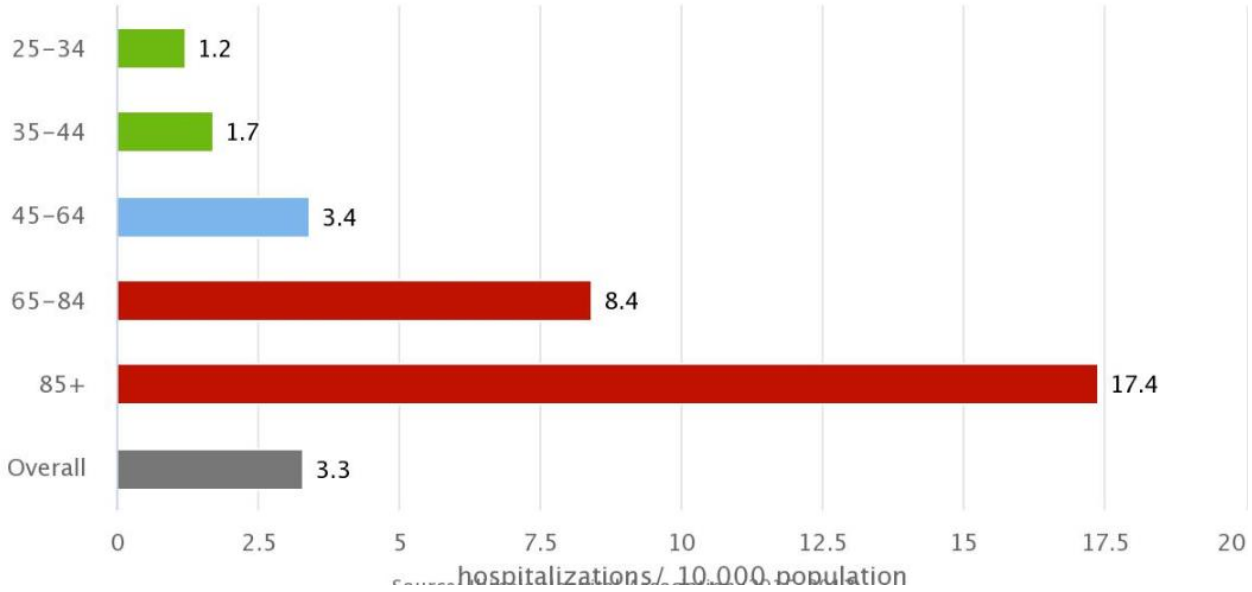
Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted Hospitalization Rate due to Uncontrolled Diabetes for Adults Ages 18 Years and Older

The Advocate Sherman PSA age-adjusted hospitalization rate for uncontrolled diabetes for adults (18 years and older) is 3.3 per 10,000 population and is in the worst 50th-75th percentile (yellow indicator) when compared to other counties in Illinois. The Illinois rate (3.7 per 10,000 population) is higher than the PSA rate (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Exhibit 21 displays the disparities that exist by age. The red age are the hospitalization rates which are significantly higher than the overall PSA rate.

Exhibit 21: Advocate Sherman PSA Age-Adjusted Hospitalization Rate due to Uncontrolled Diabetes by Age 2015-2017



Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted ER Rate due to Short-term Complications of Diabetes for Adults Ages 18 Years and Older

Short-term complications of diabetes include ketoacidosis, hyperosmolarity or coma. As with the above indicators, gestational diabetes is excluded. The Advocate Sherman PSA for age-adjusted ER rate for short-term complications of diabetes for adults (18 years and older) of 0.7 per 10,000 population is slightly lower than the Illinois rate (0.8 per 10,000 population). The PSA rate is also in the best 0-50th percentile (green indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Short-term Complications of Diabetes for Adults ages 18 Years and Older

The same pattern as ER visits holds true for hospitalization visits due to short-term diabetes complications for adults (age 18 and older)—the PSA rate (3.7 per 10,000 population) is in the best 0-50th percentile (green indicator) in comparison to other counties in Illinois. The Illinois rate of 5.1 per 10,000 population is also higher than the PSA rate (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted ER Rate due to Long-term Complications of Diabetes for Adults Ages 18 Years and Older

Long-term complications of diabetes include eye, renal, neurological or circulatory complications. The Illinois ER rate due to long-term complications of diabetes is 5.6 per 10,000 population, ages 18 years and older, which is higher than the PSA rate (4.5 visits per 10,000 population). The PSA rate is in the best 0-50th percentile (green indicator), compared to other counties in Illinois (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Long Term Complications of Diabetes for Adults Ages 18 Years and Older

The age-adjusted hospitalization rate for adults (18 years and older) due to long-term complications of diabetes in the PSA is 8.5 per 10,000 population. This is in the worst 25th percentile (red indicator) compared to other counties in Illinois but is below the Illinois rate of 8.6 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Diabetes in the Medicare Population

A total of 25.6 percent of Kane County Medicare beneficiaries and 24 percent of McHenry County Medicare beneficiaries have been treated for diabetes. Both counties rates are lower than the Illinois rate of 27.2 percent and are in the best 0-50th percentile (green indicator) compared to other Illinois counties. The Kane County rate is favorably decreasing, but not significantly; however, the McHenry county rate is unfavorably increasing, also at a non-statistically significant level (Conduent Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2017).

Adults with Diabetes

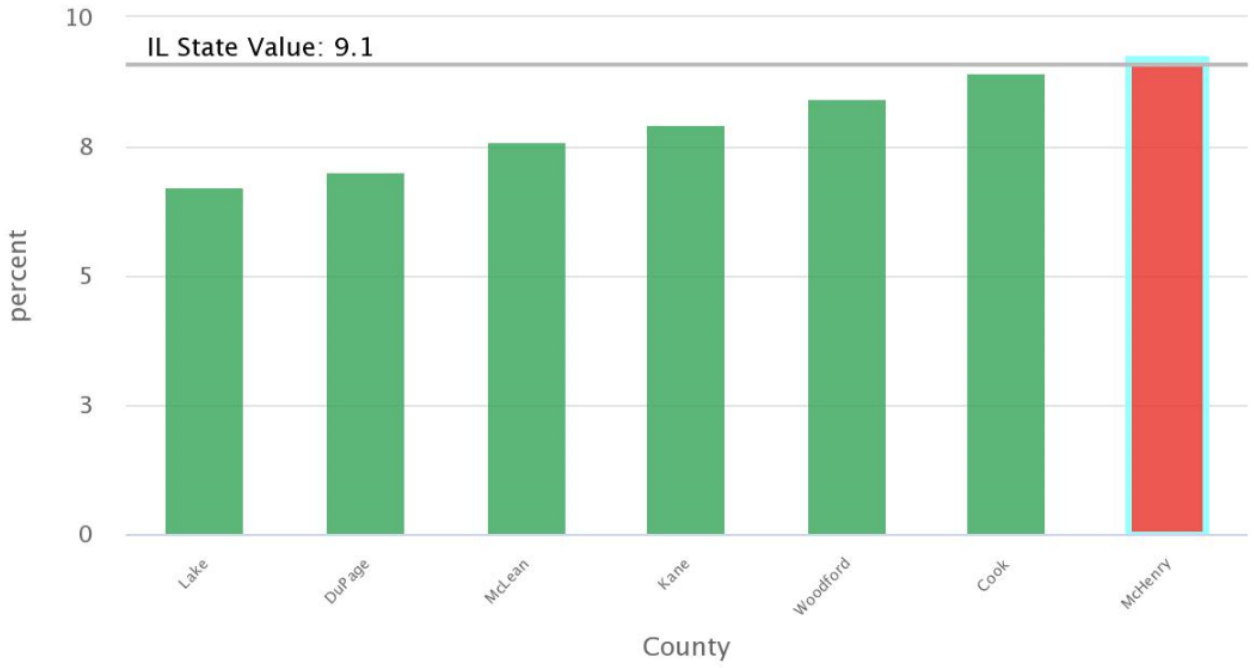
The census place (city) of Elgin has an estimated 9.3 percent of adults (ages 18 and older) who have been diagnosed with diabetes, which is a slight decrease from the 2014 rate of 9.4 percent, but the rate is in the best 0-50th percentile (green indicator) compared to the largest 500 cities in the U.S. (Conduent Healthy Communities Institute, 500 Cities Project, 2015).

In Kane County, 7.9 percent of adults (ages 20 and older) have been diagnosed with diabetes which is an increase from 7.2 percent in 2014. However, over time the Kane County rate is decreasing, but not a statistically significant decrease. The Kane County rate remains in the best 0-50th percentile (green indicator) compared to other counties in Illinois and is better (lower) than the Illinois rate of 9.1 percent.

In McHenry County, the rate is higher at 9.2 percent of adults (ages 20 and older) with diabetes, which is in the worst 25th percentile (red indicator) in comparison to other counties in Illinois and is higher than the Illinois value. Although the rate for McHenry County has declined from the highest point of 10.1 percent in 2013, it is increasing over time at a non-statistically significant pace (Conduent Healthy Communities Institute, Centers for Disease Control and Prevention, 2015).

Exhibit 22 shows the comparison of adults (ages 20 years and older) with diabetes between the Illinois counties served by hospitals in the Advocate Aurora Health system. The red bar for McHenry County indicates that it is the only county above the Illinois rate.

Exhibit 22: Adults 20+ with Diabetes – Kane and McHenry Counties 2015



Source: Conduent Healthy Communities Institute, Centers for Disease Control and Prevention, 2019

Kidney Disease

Age-Adjusted Death Rate due to Kidney Disease

Kidney disease is most often caused by diabetes or high blood pressure, which slowly damage the blood vessels in the kidneys and decrease their ability to remove waste from the blood (Conduent Healthy Communities Institute, 2019).

The age-adjusted death rate due to kidney disease in Kane County is 16.9 deaths per 100,000 population which is in the best 0-50th percentile (green indicator) when compared to other counties in Illinois. The good news is the Kane County rate is decreasing at a statistically significant level. The death rate in McHenry County is 15.9 deaths per 100,000 population, also in the best 0-50th percentile

(green indicator), but is increasing, though not a statistically significant increase. Both county rates are below the Illinois rate of 17.0 deaths per 100,000 population (Conduent Healthy Communities Institute, Centers for Disease Control and Prevention, 2015-2017).

Medicare Beneficiaries Treated for Chronic Kidney Disease

According to the Centers for Medicare and Medicaid Services, the percent of Medicare beneficiaries being treated for chronic kidney disease is 22.6 percent in Kane County and 22.5 percent in McHenry County. Both rates are in the best 0-50th percentile (green indicator) compared to other counties in Illinois. The Kane County rate is favorably decreasing at a non-statistically significant rate, but the McHenry County rate is unfavorably increasing at a non-statistically significant level (Conduent Healthy Communities Institute, Centers for Medicare & Medicaid Services, 2017).

Key Findings and Disparities: Diabetes and Kidney Disease

- The PSA hospitalization rate for adults due to long-term complications of diabetes (8.5 per 10,000 population) is in the worst 25th percentile (red indicator) compared to other counties in Illinois.
- The rate of Medicare beneficiaries diagnosed with diabetes in McHenry county is unfavorably increasing, but at a non-statistically significant level.
- In McHenry County, 9.2 percent of adults (ages 20 and older) have been diagnosed with diabetes, which is in the worst 25th percentile (red indicator) in comparison to other counties in Illinois, and the McHenry County rate is increasing over time at a non-statistically significant pace.
- Although the death rate due to kidney disease in McHenry County (15.9 deaths per 100,000 population) is in the best 0-50th percentile (green indicator), it is increasing over time, though not a statistically significant increase.
- The ER rate due to diabetes for residents living in Elgin (60123) is in the worst 25th percentile (red indicator) compared to other zip codes in Illinois.

Disparities:

Disparities exist for the African American population for a number of ER and hospitalization diabetes indicators, all of which are significantly above the overall PSA rate. All rates below are for ages 18 and older.

- ER rate (66.4 per 10,000 population) and hospitalization rate (39.4 per 10,000 population) due to diabetes.
- ER rate (42.6 per 10,000 population) and hospitalization rate (11.6 per 10,000 population) due to uncontrolled diabetes.
- Hospitalization rate due to short-term complications of diabetes (12.9 per 10,000 population).
- Hospitalization rate due to long-term complications of diabetes (18.8 per 10,000 population).

Hispanics also have an ER rate due to uncontrolled diabetes (16.1 per 10,000 population) which is significantly higher than the PSA rate.

Males have a hospitalization rate due to diabetes (19.1 per 10,000 population, ages 18 and older) and a hospitalization rate due to long-term complications of diabetes (11.6 per 10,000 population) that are both significantly higher than the PSA rate.

The ER rate for adults ages 18-24 years (1.9 per 10,000 population) and hospitalization rate (79 per 10,000 population) due to short-term complications of diabetes are both significantly higher than the overall PSA rate.

ER and hospitalization rates for many diabetes indicators increase with age. The following indicators are all significantly higher than the overall PSA rate. All rates that follow are for ages 18 and older.

- Ages 45-64 – ER rate due to diabetes (24.4 per 10,000 population); ER rate due to uncontrolled diabetes (15.5 per 10,000 population).
- Ages 65-84 – ER rate (31.4 per 10,000 population) and hospitalization rate (30.7 per 10,000 population) due to diabetes; ER rate (19.9 per 10,000 population) and hospitalization rate (8.4 per 10,000 population) due to uncontrolled diabetes; ER rate (7.7 per 10,000 population) and hospitalization rate (18.8 per 10,000 population) due to long-term complications of diabetes.
- Ages 85 years and older – ER rate (37.8 per 10,000 population) and hospitalization rate (34.9 per 10,000 population) due to diabetes; ER rate (24.2 per 10,000 population) and hospitalization rate (17.4 per 10,000 population) due to uncontrolled diabetes.

Infectious Diseases & Sexually Transmitted Infections

Chlamydia

The incidence rate for chlamydia is significantly increasing over time in both Kane and McHenry counties, with rates of 366.8 per 100,000 population and 231.0 cases per 100,000 population, respectively. The Illinois rate is 561.4 per 100,000 population. Both county rates are unfavorably increasing at a statistically significant level. The rate for Kane County falls within the worst 50th-75th percentile (yellow indicator) and the McHenry County rate is in the best 0-50th percentile (green indicator) compared to Illinois counties (Conduent Healthy Communities Institute, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2016).

Gonorrhea

The incidence rate for gonorrhea is higher in Kane County, with 87.6 cases per 100,000 population, than in McHenry County, with a rate of 29.3 cases per 100,000 population. Both rates are lower than the Illinois rate (164.8 per 100,000 population). Both county incidence rates are trending unfavorably upward; the rate for McHenry County is increasing at a statistically significant rate and the Kane County rate is increasing at a non-statistically significant level. The Kane County incidence rate falls within the worst 25th percentile (red indicator), while McHenry County is within the best 0-50th percentile, when compared to other Illinois counties (Conduent Healthy Communities Institute, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2016).

Syphilis

The incidence rate for syphilis in both Kane County (2.8 cases per 100,000 population) and McHenry County (1.6 cases per 100,000 population) are unfavorably rising at a statistically significant rate. Both county rates are lower than the Illinois rate (9.8 per 100,000 population) (Conduent Healthy Communities Institute, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2016).

HIV Diagnosed Cases

In 2017, there were 25 reported newly diagnosed cases of HIV in Kane County and six cases in McHenry County. The number of diagnosed HIV cases for Kane County is favorably decreasing, but not at a statistically significant level. The rate of HIV cases in McHenry County is unfavorably increasing, at a non-statistically significant level (Illinois Department of Public Health, 2017).

Tuberculosis Cases

There were 16 cases of tuberculosis reported in Kane County and one case in McHenry County in 2017. Both county rates are showing a decrease over time, but not a statistically significant decrease (Conduent Healthy Communities Institute, Illinois Department of Public Health, 2017).

Hepatitis

Due to a change in methodology with the transition to ICD-10 coding, trend data is not available to compare change over time for the following hepatitis indicators.

Age-Adjusted ER Rate due to Hepatitis for Adults Ages 18 Years and Older

Hepatitis refers to an inflammation of the liver resulting from a viral or non-viral infection, auto-immune or metabolic condition, or alcohol or drug use. The age-adjusted ER rate for adults (18 years and older) due to hepatitis for the Advocate Sherman PSA is 0.3 ER visits per 10,000 population which is below the Illinois rate of 0.5 ER visits per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Hepatitis for Adults Ages 18 Years and Older

The Advocate Sherman PSA age-adjusted hospitalization rate for adults (18 years and older) due to hepatitis is 1.0 hospitalizations per 10,000 population. This is equal to the Illinois rate (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Key Findings: Infectious Diseases & Sexually Transmitted Infections

- Both county rates for chlamydia are unfavorably increasing at a statistically significant level.
- The Kane County incidence rate for gonorrhea falls within the worst 25th percentile (red indicator) compared to other Illinois counties and is unfavorably increasing, but not at a statistically significant level.
- The gonorrhea incidence rate for McHenry County is increasing at a statistically significant rate.
- Both Kane County and McHenry County incidence rates for syphilis are unfavorably rising at a statistically significant rate.

Mental Health

Due to a change in methodology with the transition to ICD-10 coding, trend data is not available to compare change over time for the following mental health indicators.

Age-Adjusted ER Rate due to Mental Health Ages 18 Years and Older

The age-adjusted ER rate for adults (18 years and older) due to mental health in the Advocate Sherman PSA is 90.6 visits per 10,000 population ages 18 and older, which is in the best 0-25th percentile (green indicator) compared to other Illinois counties. The PSA rate is below the Illinois rate of 95.3 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

The zip codes in the PSA with the highest ER rates due to mental health are shown in Exhibit 23. The zip code of 60123 for Elgin is in the worst 25th percentile (red indicator) when compared to other Illinois zip codes.

Exhibit 23: Advocate Sherman PSA Zip Codes Age-Adjusted ER Rate due to Adult Mental Health 2015-2017

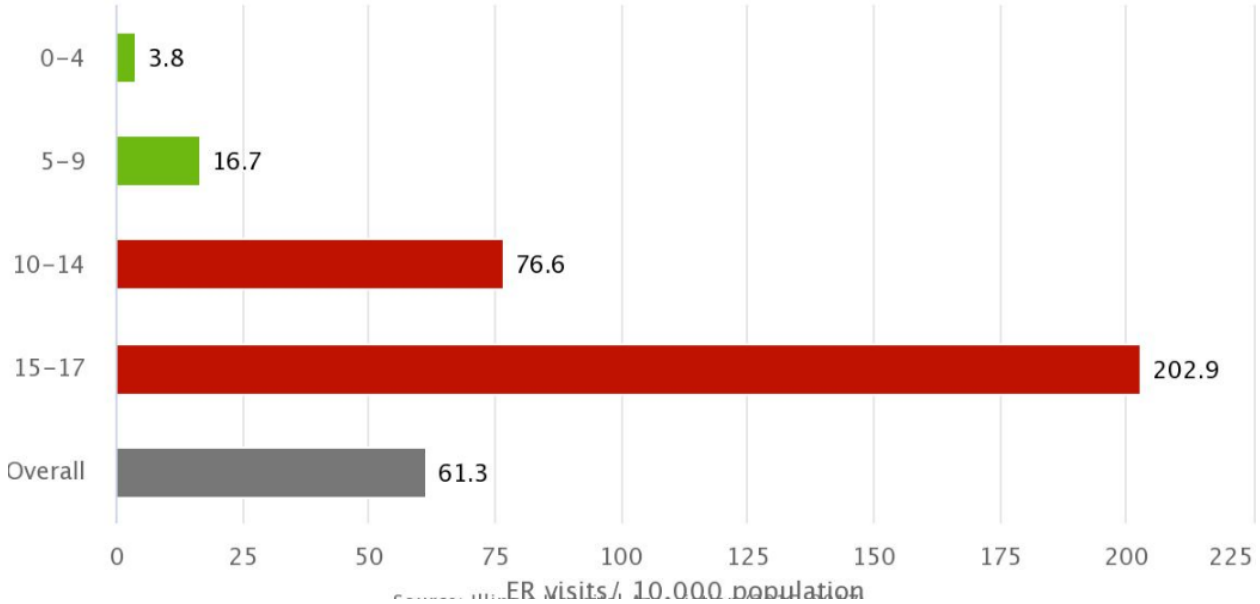
Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted ER Rate Due to Pediatric Mental Health Ages Under 18 years

In the Advocate Sherman PSA, the age-adjusted ER rate due to pediatric mental health is 61.3 visits per 10,000 population under 18 years of age, which is in the best 0-50th percentile (green indicator) compared to other counties in Illinois. The Illinois ER rate (64.5 per 10,000 population) is higher than the PSA rate (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Exhibit 24 provides an illustration of the ER rates due to pediatric mental health by age. The red bars indicate ER rates that are significantly higher than the overall PSA rate.

Exhibit 24: Advocate Sherman PSA Age-Adjusted ER Rate due to Pediatric Mental Health by Age 2015-2017



Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted ER Rate due to Adolescent Suicide and Intentional Self-Inflicted Injury Ages 10-17 Years

The Advocate Sherman PSA age-adjusted rate for adolescent suicide and intentional self-inflicted injury for those ages 10-17 years is 46.8 ER visits per 10,000 population, which falls within the best 0-50th percentile (green indicator) compared to other Illinois counties. The PSA rate is favorably lower than the state rate of 63.9 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted ER Rate due to Adult Suicide and Intentional Self-Inflicted Injury Ages 18 Years and Older

The Illinois age-adjusted emergency room visit rate due to suicide and intentional self-inflicted injury is 34.3 per 10,000 population ages 18 years and older. The state rate is higher than the PSA rate of 23.4 per 10,000 population, which is in the best 0-50th percentile (green indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Poor Mental Health

In the census place (city) of Elgin, 12.1 percent of adults stated that their mental health was not good for 14 or more days in the past month, which is in the best 0-50th percentile (green indicator) in comparison to the 500 largest cities in the U.S. However, this rate is higher than the U.S. rate of 11.4 percent (Conduent Healthy Communities Institute, CDC-500 Cities Project, 2015).

In Kane County, the average number of days that adults reported their mental health was not good in the past 30 days was 3.5 days, and in McHenry County it was 3.3 days, both in the best 0-50th percentile (green indicator) compared to other Illinois counties. The McHenry County rate is below the Illinois rate of 3.4 days, but the Kane County rate is higher than the state rate (Conduent Healthy Communities Institute, County Health Rankings, 2015).

Frequent Mental Distress

Frequent mental distress is measured by the percentage of adults who stated that their mental health (which includes stress, depression and problems with emotions) was not good for 14 or more of the past 30 days. In Kane County, 10.1 percent of adults and 9.4 percent of McHenry County adults reported frequent mental distress, as compared to the Illinois rate of 10.0 percent. Both county rates are within the best 0-50th percentile (green indicator) compared to other Illinois counties (Conduent healthy Communities Institute, County Health Rankings, 2015).

Depression in the Medicare Population

A total of 16.4 percent of Kane County Medicare beneficiaries, and 16.1 percent of McHenry County Medicare beneficiaries were treated for depression in 2017. Despite being within the best 0-50th percentile (green indicator) when compared to other Illinois counties, both county rates are increasing at a statistically significant level. The McHenry County rate is lower than the Illinois rate (16.4 percent). The Kane County rate is equal to the Illinois rate (Conduent Healthy Communities Institute, Centers for Medicare & Medicaid Services, 2017).

Age-Adjusted Death Rate due to Suicide

The age-adjusted death rate due to suicide in McHenry County is 11.4 deaths per 100,000 population, which is in the best 0-50th percentile (green indicator) compared to other counties in Illinois. This rate is higher than the Illinois rate of 10.7 per 100,000 population and does not meet the Healthy People 2020 target of 10.2 per 100,000 population. The McHenry County rate is unfavorably increasing at a statistically significant level over time.

In Kane County, the age-adjusted death rate due to suicide is 8.4 deaths per 100,000 population which is also in the best 0-50th percentile (green indicator) compared to other counties in Illinois. It is meeting Healthy People 2020 target, is better than the Illinois rate, but is unfavorably increasing at a statistically significant level (Conduent Healthy Communities Institute, Centers for Disease Control and Prevention, 2015-2017).

Suicide Deaths in the County

In McHenry County, there were 34 deaths due to suicide in 2018 which was a decrease from 43 deaths in 2017 (McHenry County Coroner's Office, 2019). There were 45 deaths of Kane County residents by suicide in 2017, with the greatest increase over time being for those ages 15-34 years (Kane County Health Department, 2019).

Key Findings and Disparities: Mental Health

- Despite being within the best 0-50th percentile (green indicator) when compared to other Illinois counties, both Kane County and McHenry County rates for depression in the Medicare population are increasing at a statistically significant level.
- The death rates due to suicide for both counties are unfavorably increasing over time at a statistically significant level.
- The ER rate due to mental health for Elgin (60123) is within the worst 25th percentile (red indicator) compared to other zip codes in Illinois.

Disparities:

Disparities exist for the African American population for a number of mental health indicators. The following ER rates for African Americans are all significantly above the overall PSA rate.

All rates below are for ages 18 and older, unless otherwise specified:

- The ER rate due to mental health (211.9 visits per 10,000 population)
- The ER rate due to pediatric mental health (115.8 per 10,000 population, under age 18 years)
- The ER rate due to adult suicide and intentional self-inflicted injury (51.3 per 10,000 population).

Females have rates that are significantly higher than the PSA rate for:

- The ER rate due to mental health (96.7 per 10,000 population)
- The ER rate due to adolescent suicide and intentional self-inflicted injury (67.5 per 10,000 population, ages 10-17 years).

The highest ER rates due to pediatric mental health occur in the following age groups; each is significantly above the PSA rate:

- Children ages 10-14 years (76.6 per 10,000 population, under age 18 years)
- Adolescents ages 15-17 years (202.9 per 10,000 population, under age 18 years).

Adolescents ages 15-17 years also have an ER rate significantly above the PSA rate for adolescent suicide and intentional self-injury (81.5 visits per 10,000 population, ages 10-17 years).

Young adults also have ER rates that are significantly higher than the PSA rate for:

- Ages 18-24 – ER rate due to mental health (155.7 per 10,000 population); ER rate due to adult suicide and intentional self-inflicted injury (51.2 per 10,000 population)
- Ages 25-34 – ER rate due to mental health (132.2 per 10,000 population); ER rate due to adult suicide and intentional self-inflicted injury (35.4 per 10,000 population).

Substance Use

Due to a change in methodology with the transition to ICD-10 coding, trend data is not available to compare change over time for the substance use ER and hospitalization indicators in this section.

Tobacco Use

Teens Who Smoke

A total of 1,902 Kane County 12th grade students and 2,541 10th grade students participated in the Illinois Youth Survey in 2018. Teens (12th grade students) who reported smoking at least one day during the 30 days prior to the survey was four percent in Kane County and five percent in McHenry County. The smoking rates for 12th grade students for both counties are decreasing at a statistically significant rate over time and fall within the best 0-50th percentile compared to other Illinois counties. The Illinois rate aligns with both counties, reporting five percent for teens smoking in 2018. The 2016 rates of high school seniors smoking cigarettes were eight percent for Kane County and nine percent for McHenry County. (Conduent Healthy Communities Institute, Center for Prevention Research and Development, Illinois Youth Survey, 2016 and 2018).

Teens Who Use E-Cigarettes

The 2018 Illinois Youth Survey indicates that 28 percent of Kane County 12th grade students had used e-cigarettes in the past 30 days prior to the survey (up from 19 percent in 2016). In 2018, 22 percent of the Kane County 12th grade students indicated they were new users (first time users) of e-cigarettes in the past 12 months, which is an increase from 18 percent in 2016.

For McHenry County, 37 percent of 12th grade students had used e-cigarettes in the past 30 days prior to the survey (up from 27 percent in 2016). In 2018, 28 percent of the 12th grade students indicated they were new users of e-cigarettes in the past 12 months which is up from 18 percent in 2016 (Kane County and McHenry County, Illinois Youth Survey, 2016 and 2018).

Adults Who Smoke

There are 14.1 percent of adults who report smoking in Kane County and 14.9 percent in McHenry County. These results are lower than the Illinois rate of 15.8 percent and the U.S. rate of 17.1 percent. The Healthy People 2020 goal across the nation is 12.0 percent which indicates that there is still room for improvement in both the counties and state (Conduent Healthy Communities Institute, County Health Rankings, 2016).

Alcohol Use

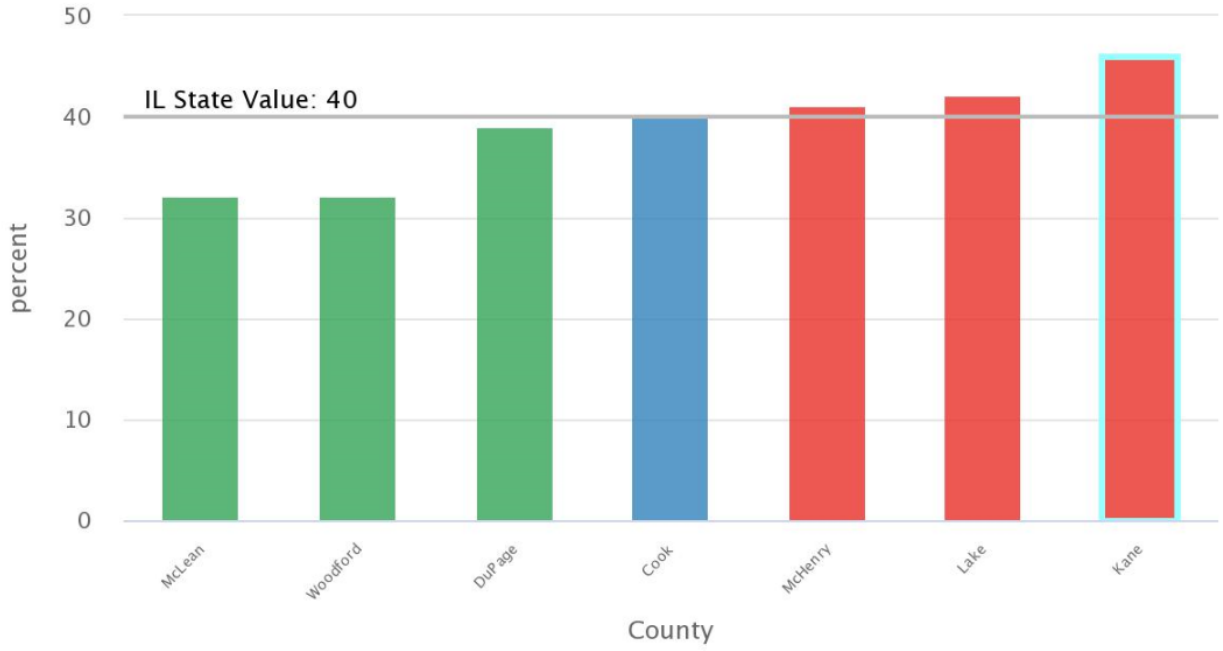
Teens Who Use Alcohol

Teens (12th grade students) who reported drinking alcohol on at least one occasion during the 30 days prior to the Illinois Youth Survey was 46 percent in Kane County which is in the worst 25th percentile (red indicator) in comparison to other counties in Illinois, and is up from 40 percent in 2016. The rate for McHenry County is 41 percent, which is in the worst 50th-75th percentile (yellow indicator), when compared to other Illinois counties, but a slight decrease from 43 percent in 2016. The Kane County rate is increasing, though not statistically significant. The McHenry County rate is decreasing, at a

statistically significant rate (Conduent Healthy Communities Institute, Center for Prevention and Research and Development, Illinois Youth Survey, 2018).

Kane County has the highest rate of teens who use alcohol in comparison to the Illinois counties where Advocate Aurora hospitals are located, as displayed in Exhibit 25.

Exhibit 25: Teens who Use Alcohol in Kane and McHenry Counties 2018



Source: Conduent Healthy Communities Institute, Center for Prevention Research and Development, Illinois Youth Survey, 2019

Adults Who Drink Excessively

Adults who drink excessively is reported as those who drink more than 15 drinks per week on average for men, or more than eight drinks per week for women, or binge drinking which is having more than five drinks for men or more than four drinks for women during a single occasion. In Kane County 20.8 percent of adults report drinking excessively and in McHenry County, 23 percent of adults report drinking excessively. Both county rates meet the Healthy People 2020 target of 25.4 percent. The Kane County rate is less than the Illinois rate of 21.1 percent, and is in the worst 50th-75th percentile (yellow indicator) compared to Illinois counties. The McHenry County rate is higher than the Illinois rate and is in the worst 25th percentile (red indicator) compared to Illinois counties. (Conduent Healthy Communities Institute, County Health Rankings, 2016).

Alcohol Impaired Driving Deaths

Alcohol impaired driving deaths is measured by the percentage of motor vehicle crash deaths where alcohol was involved. In Kane County, the trend is decreasing, but not a statistically significant decrease. Kane County, (31.5 percent) is in the best 0-50th percentile (green indicator) compared to other counties in Illinois. McHenry County is increasing at a statistically significant level over time with a

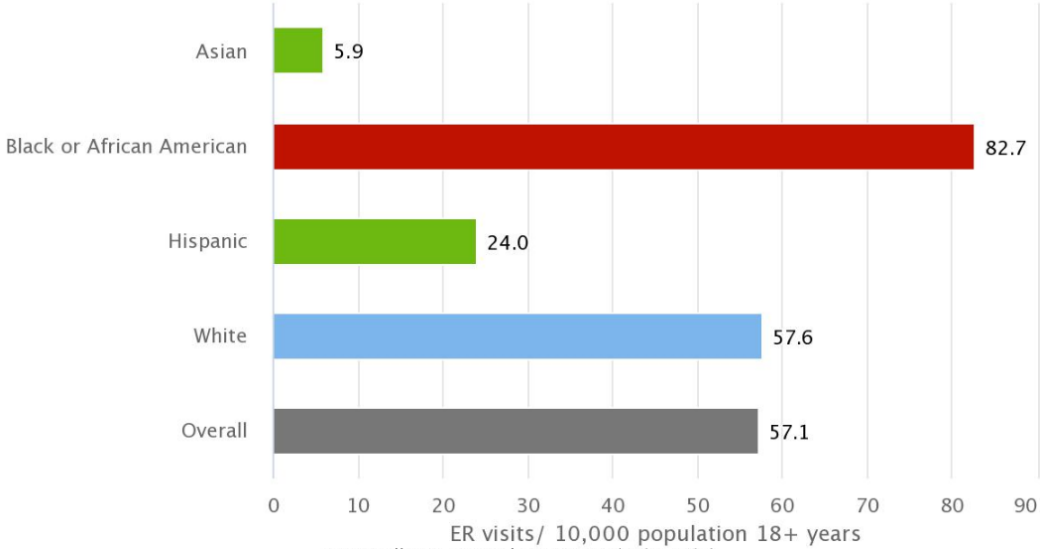
rate of 44.3 percent, and is in the worst 25th percentile (red indicator) in comparison to other counties in Illinois. The McHenry County rate is higher than the Illinois rate of 32.6 percent (Conduent Healthy Communities Institute, County Health Rankings, 2013-2017).

Age-Adjusted Emergency Room Rate due to Alcohol Use for Adults Ages 18 Years and Older

The 2015-2017 age-adjusted ER rate due to alcohol use for adults (18 years and older) in the Advocate Sherman PSA is 57.1 per 10,000 population. This is in the worst 25th percentile (red indicator) when compared to other counties in Illinois and is higher than the Illinois rate of 55.0 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Exhibit 26 illustrates the ER rate for alcohol use by race and ethnicity. The ER rate due to alcohol use for African Americans (82.7 per 10,000 population) is significantly higher than the overall PSA rate and the highest among all races and ethnicities in the PSA.

Exhibit 26: Advocate Sherman Hospital PSA Age-Adjusted ER Rate due to Alcohol Use per 10,000 population 18+ years by Race and Ethnicity 2015-2017



Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

The ER rates due to alcohol use for the zip codes of Elgin (60123) (94.3 per 10,000 population); Elgin (60120) (82.4 per 10,000 population) and South Elgin (60177) (60.6 per 10,000 population) are all within the worst 25th percentile (red indicator) compared to other Illinois zip codes as shown in Exhibit 27.

Exhibit 27: Advocate Sherman Hospital PSA Age-Adjusted ER Rate due to Alcohol Use per 10,000 population 18+ years by Zip Code 2015-2017

Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted Hospitalization Rate due to Alcohol Use for Adults Ages 18 Years and Older

The Advocate Sherman PSA age-adjusted hospitalization rate due to alcohol use in adults (18 years and older) is 17.8 per 10,000 population, which is below the Illinois rate of 18.1 per 10,000 population. The PSA rate is in the worst 25th percentile (red indicator) compared to other Illinois counties. The Illinois rate (18.1 per 10,000 population) is slightly higher than the PSA rate (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Other Substances

Teen Substance Use

The 2018 Illinois Youth Survey data indicates that 60 percent of McHenry County 12th grade students (down from 64 percent in 2016) and 44 percent of 10th grade students (equal to 44 percent in 2016) have used a substance (including alcohol, cigarettes, inhalants or marijuana) in the past year. The rate is 61 percent for Kane County 12th grade students (down from 66 percent in 2016) and 43 percent for 10th grade students (down from 47 percent in 2016 (Kane County and McHenry County Illinois Youth Survey, 2016 and 2018).

Teens Who Use Marijuana

According to the 2018 Illinois Youth Survey, 24 percent of teens (12th grade students) reported using marijuana one or more times during the 30 days prior to the survey in both Kane and McHenry

Counties. This rate is down slightly from 25 percent in 2016. While the rate is decreasing (not at a statistically significant level) for these counties, both are in the worst 25th percentile (red indicator) when compared to other counties in Illinois (Conduent Healthy Communities Institute, Center for Prevention Research and Development, Illinois Youth Survey, 2016 and 2018).

Age-Adjusted ER Rate due to Substance Use for Adults Ages 18 Years and Older

Substance-related disorders that present to the emergency room include the use, abuse or dependence of opioids, cannabis, sedatives, hypnotics, cocaine, hallucinogens, nicotine, inhalants and other substances (Conduent Healthy Communities Institute, 2018).

In the Advocate Sherman PSA the age-adjusted ER rate due to substance use for adults (ages 18 years and older) at 17.2 per 10,000 population is lower than the Illinois value of 28.9 per 10,000 population. The PSA ER rate is in the best 0-50th percentile (green indicator) when compared to other Illinois counties (Conduent Healthy Communities Institute, Illinois Hospital Association 2015-2017).

Age-Adjusted Emergency Room Rate for Opioid Use for Adults Ages 18 Years and Older

Opioid use is a serious health concern across the nation and in both Kane and McHenry Counties. In the Advocate Sherman PSA the age-adjusted emergency room rate for opioid use for adults (18 years and older) is 9.5 emergency room visits per 10,000 population. This is in the worst 50th-75th percentile (yellow indicator) when compared to other Illinois counties and lower than the Illinois rate of 13.0 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate for Opioid Use for Adults Ages 18 Years and Older

The Illinois age-adjusted hospitalization rate for opioid use for adults (18 years and older) is 11.7 per 10,000 population, which is more than double the PSA rate (5.3 per 10,000 population). The PSA rate is in the best 0-50th percentile (green indicator), when compared to other counties (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Death Rate Due to Drug Poisoning

Death rates due to drug poisoning includes deaths due to drug injury of any intent (unintentional, suicide, homicide or undetermined) and is calculated as a three-year average. According to County Health Rankings, Kane County has 12.0 deaths per 100,000 population, which is in the best 0-50th percentile (green indicator) compared to other counties in Illinois.

McHenry County has 15.3 deaths per 100,000 population, which is in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois. Both county rates are trending upward at a statistically significant rate. The Illinois death rate due to drug poisoning is 15.4 per 100,000 population (Conduent Healthy Communities Institute, County Health Rankings, 2015-2017).

In McHenry County, there were 54 deaths in 2018 due to drug overdose (McHenry County Substance Abuse Coalition, McHenry County Coroner's Office, 2019). There were 64 deaths in Kane County in 2018 due to drug overdose (Kane County Health Department, 2019).

Key Findings and Disparities: Substance Use

- The smoking rate for teens in both counties are decreasing at a statistically significant rate over time.
- According to Illinois Youth Survey results, the percent of Kane County 12th grade students who used e-cigarettes in the past 30 days increased by nine percentage points from 2016-2018 and the rate for McHenry County 12th grade students increased by 10 percentage points in the same time period.
- The rate is increasing for teens who use alcohol in Kane County, though not a statistically significant increase; whereas the McHenry County teen alcohol use rate is decreasing at a statistically significant rate.
- In McHenry County, the rate of adults who drink excessively is in the worst 25th percentile (red indicator) compared to Illinois counties; the rate of alcohol impaired driving deaths in the county is also in the worst 25th percentile (red indicator) compared to Illinois counties, and is increasing at a statistically significant level over time.
- The PSA ER and hospitalization rates due to alcohol use are both in the worst 25th percentile (red indicator) compared to other Illinois counties.

Disparities:

Disparities exist by race related to substance use. African Americans have ER and hospitalization rates that are significantly higher than the PSA rate for the following indicators.
All indicators are for ages 18 and older.

- ER rate due to alcohol use (82.7 per 10,000 population); ER rate due to substance use (39.8 per 10,000 population); ER rate due to opioid use (19.4 per 10,000 population) and hospitalization rate due to opioid use (14.4 per 10,000 population).

Males have rates that are significantly higher than the overall PSA rate for the following:

- ER rate due to substance use (22.7 per 10,000 population); ER rate due to opioid use (12.4 per 10,000 population); hospitalization rate due to alcohol use (24.9 per 10,000 population) and hospitalization rate due to opioids (6.9 per 10,000 population).

For young adults ages 18-24 years, the ER rates due to substance use (40.2 per 10,000 population) and due to opioids (18.5 per 10,000 population) are both significantly higher than the overall PSA rate.

Adults ages 25-34 have ER rates due to alcohol use (85.0 per 10,000 population); due to substance use (31.4 per 10,000 population) and due to opioid use (18.1 per 10,000 population) that are all significantly higher than the PSA rate.

Adults ages 45-64 have rates for ER (68.6 per 10,000 population) and hospitalization (27.9 per 10,000 population) due to alcohol use that are significantly above the PSA rate.

Oral Health

Due to a change in methodology with the transition to ICD-10 coding, trend data is not available to compare change over time for the following dental indicators.

Age-Adjusted ER Rate due to Dental Problems

The PSA age-adjusted ER rate due to dental problems (35.0 per 10,000 population ages 18 and older) is lower than the Illinois rate of 57.9 per 10,000 population, is in the best 0-50th percentile (green indicator) compared to other counties in Illinois (Conduent Healthy Communities Institute, 2015-2017).

Adults Who Visited a Dentist

For the census place (city) of Elgin, 61.6 percent of adults have visited a dentist in the past year, which is in the worst 50th-75th percentile (yellow indicator) compared to the 500 largest cities in the U.S. (Conduent Healthy Communities Institute, CDC-500 Cities Project, 2014).

Seventy-eight percent of adults visited a dentist or dental clinic in the past year in Kane County and 71.3 percent in McHenry County; both rates are within the best 0-50th percentile (green indicator) compared to other Illinois counties. Both county rates are higher than the state rate of 65.5 percent in 2016 (Conduent Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance System, 2010-2014).

Dentist Rate

In Kane County, there are 63 dentists per 100,000 population and in McHenry County there are 60 dentists per 100,000 population. Both counties are in the best 0-50th percentile (green indicator) compared to other counties in Illinois. The dentist rate is increasing in McHenry County, but not at a statistically significant rate. The rate for Kane County is increasing at a statistically significant rate (Conduent Healthy Communities Institute, County Health Rankings, 2016).

Key Findings and Disparities: Oral Health

- ER rate due to dental problems in the Advocate Sherman PSA is in the best 0-50th percentile (green indicator) compared to other counties in Illinois.
- The rate of dentists per 100,000 population for Kane County is increasing at a statistically significant rate**.**

Disparities:

- The following ER rates due to dental problems are significantly higher than the PSA rate:
    - African Americans (169.9 per 10,000 population)
    - Adults ages 25-34 years (87.8 per 10,000 population)
    - Adults ages 18-24 years (44.6 per 10,000 population)
    - Adults ages 35-44 years (42.6 per 10,000 population).

Respiratory Disease

Due to a change in methodology with the transition to ICD-10 coding, trend data is not available for the respiratory disease ER and hospitalization rates within this section.

Pneumonia Vaccination Rate

In Kane County, 24.4 percent of adults (ages 18 years and older) reported receiving a pneumonia vaccine, along with 20.5 percent in McHenry County. Both rates are lower than the Illinois rate of 33.6 percent and both counties are in the worst 25th percentile (red indicator) in comparison to other counties in Illinois (Conduent Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance Survey, 2010-2014).

Influenza Vaccination Rate

A total of 43.3 percent of Kane County adults (ages 18 years and older) reported receiving an annual influenza vaccine; 34.4 percent of McHenry County adults received an annual influenza vaccine. While these compliance rates are similar to the Illinois rate of 36.5 percent, both counties are not meeting the Healthy People 2020 target of 73 percent. The Kane County rate is in the best 0-50th percentile (green indicator) and the McHenry County rate is in the worst 25th percentile (red indicator) compared to Illinois counties (Conduent Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance Survey, 2010-2014).

Age-Adjusted ER Rate due to Community Acquired Pneumonia for Adults Ages 18 Years and Older

In comparison to other counties in Illinois, the age-adjusted ER rate for adults (18 years and older) due to community acquired pneumonia (bacterial pneumonia) for the PSA (14.2 per 10,000 population) is in the best 0-50th percentile (green indicator). The PSA rate is below the state rate of 21.0 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Community Acquired Pneumonia for Adults Ages 18 Years and Older

The PSA age-adjusted hospitalization rate for adults (18 and older) due to community acquired pneumonia (bacterial pneumonia) is 22.5 per 10,000 population, which is also in the best 0-50th percentile (green indicator) compared to other counties in Illinois. The PSA rate is higher than the Illinois rate (18.7 per 10,000 population) (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Death Rate due to Pneumonia and Influenza

The age-adjusted death rate due to pneumonia and influenza per 100,000 population in Kane County is 13.6 per 100,000 population, which is lower than the McHenry County rate of 9.2 per 100,000 population. Both rates are lower than the Illinois rate of 15.3 per 100,000 population and both counties fall within the best 0-50th percentile (green indicator) compared to other Illinois counties. Both counties

are favorably trending down—the McHenry County decrease is statistically significant, but the Kane County decrease is not statistically significant (Conduent Healthy Communities Institute, Centers for Disease Control and Prevention, 2015-2017).

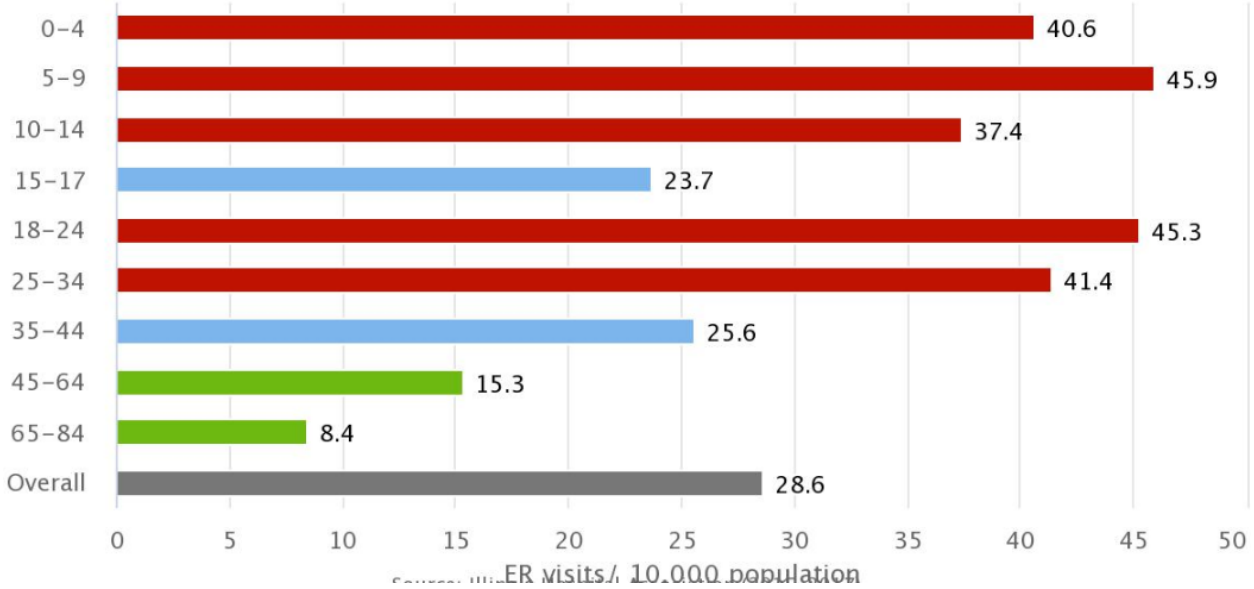
Age-Adjusted ER Rate due to Asthma

The age-adjusted ER rate due to asthma in the Advocate Sherman PSA is 28.6 per 10,000 population, which is in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois. The PSA rate is lower than the Illinois rate of 41.9 per 10,000 population.

The ER rate due to asthma for Elgin (60123) (52.5 per 10,000 population) is in the worst 25th percentile (red indicator) compared to other Illinois zip codes.

Exhibit 28 illustrates the ER rate due to asthma for the PSA by age. The red bars indicate rates which are significantly higher than the overall PSA rate.

Exhibit 28: Advocate Sherman PSA Age-Adjusted ER Rate due to Asthma by Age 2015-2017



Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted Hospitalization Rate due to Asthma

The Advocate Sherman PSA age-adjusted hospitalization rate due to asthma is 5.7 per 10,000 population, which is in the worst 25th percentile (red indicator) compared to other counties in Illinois. However, the PSA rate is lower than the Illinois rate of 7.0 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

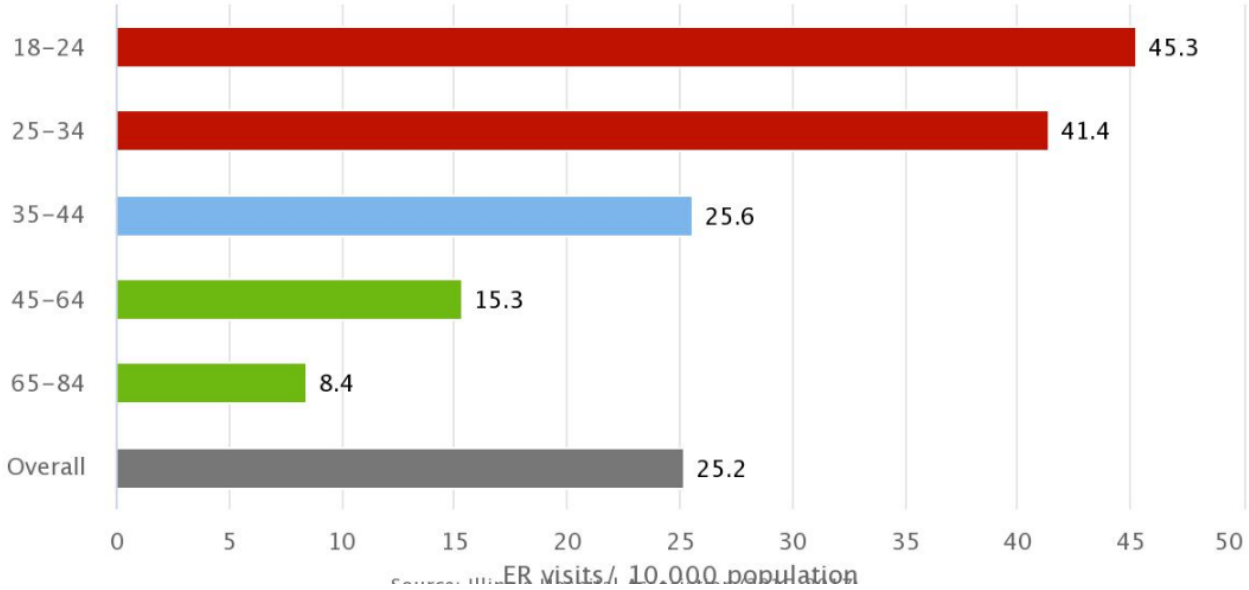
Age-Adjusted ER Rate due to Adult Asthma

The age-adjusted ER rate in the Advocate Sherman PSA for adult asthma is 25.2 per 10,000 population, which is in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois but is still lower than the Illinois rate of 34.7 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

The ER rate due to adult asthma for Elgin (60123) at 50.2 per 10,000 population is in the worst 25th percentile (red indicator) compared to other Illinois zip codes.

Exhibit 29 illustrates that the highest ER rates due to adult asthma occur within younger adults; the rates for individuals ages 18-24 and 25-34 are all significantly higher than the PSA rate.

Exhibit 29: Advocate Sherman PSA Age-Adjusted ER Rate due to Adult Asthma by Age 2015-2017



Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted Hospitalization Rate due to Adult Asthma ages 18 years and Older

The PSA age-adjusted hospitalization rate for adult asthma of 6.0 per 10,000 population (ages 18 years and older) is lower than the Illinois rate of 6.5 per 10,000 population. The PSA is in the worst 50th-75th percentile (yellow indicator) compared to Illinois counties (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted ER Rate due to Pediatric Asthma ages 18 years and Under

The Advocate Sherman PSA age-adjusted ER rate for pediatric asthma (38.4 per 10,000 population) for ages 18 years and under, falls in the best 0-50th percentile (green indicator) compared to other Illinois counties. The Illinois rate of 62.6 per 10,000 population is much higher than the PSA rate (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Pediatric Asthma ages 18 years and Under

The Illinois age-adjusted rate of hospitalization due to pediatric asthma is 8.5 per 10,000 population (age 18 years and older) and is higher than the PSA rate of 4.9 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Adults with Current Asthma

As of 2015, for the census place (city) of Elgin 8.8 percent of adults have been told by a health care provider that they currently have asthma; this is a decrease from 9.3 percent in 2014. The rate for Elgin falls within the best 0-50th percentile (green indicator) compared to the 500 largest cities in the U.S. (Conduent Healthy Communities Institute, CDC-500 Cities Project, 2015).

The percentage of adults who have been told by a health care provider that they currently have asthma in Kane County is 7.6 percent and 11 percent in McHenry County. The McHenry County rate is in the worst 50th-75th percentile (yellow indicator) and the rate for Kane County falls within the best 0-50th percentile (green indicator) compared to other Illinois counties. The Illinois rate is 8.9 percent (Conduent Healthy Communities Institute, IL Behavioral Risk Factor Surveillance System, 2010-2014).

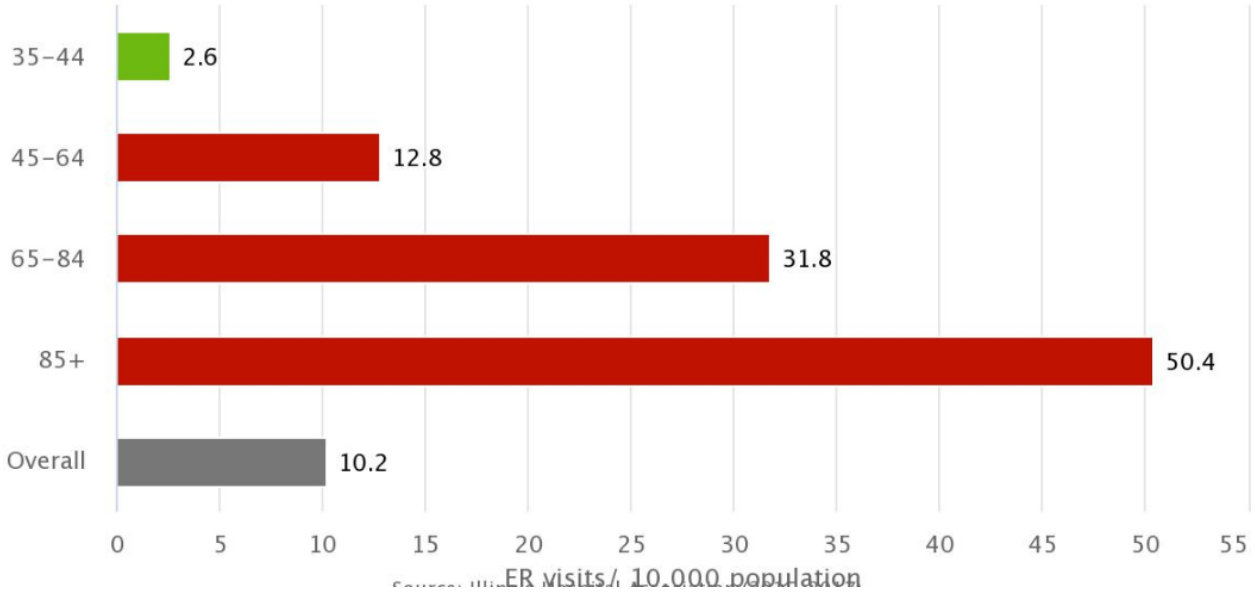
Medicare Beneficiaries with Asthma

The percentage of Kane County Medicare beneficiaries who were treated for asthma in 2017 was 4.7 percent and 4.1 percent were treated in McHenry County. These rates are lower than the Illinois rate of 4.9 percent. The Kane County rate falls within the worst 50th-75th percentile (yellow indicator) compared to other Illinois counties, and is increasing over time, but not at a statistically significant level. The McHenry County rate falls within the best 0-50th percentile (green indicator) compared to Illinois counties, and is also increasing over time, but not at a statistically significant pace (Conduent Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2017).

Age-Adjusted ER Rate due to Chronic Obstructive Pulmonary Disorder (COPD) Ages 18 years and Older

The age-adjusted ER rate due to Chronic Obstructive Pulmonary Disorder (COPD) in the Advocate Sherman PSA is 10.2 per 10,000 population for adults ages 18 and older. The PSA rate is in the best 0-50th percentile (green indicator) compared to Illinois counties and below the Illinois rate of 24.1 per 10,000 population (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017). Exhibit 34 shows how the ER rates for COPD increase with age. The rates in red are significantly above the overall PSA rate.

Exhibit 34: Advocate Sherman PSA Age-Adjusted ER Rate due to COPD by Age 2015-2017



Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Age-Adjusted Hospitalization Rate due to COPD for Adults ages 18 and Older

In the PSA, the COPD age-adjusted hospitalization rate is 22.4 per 10,000 population for adults ages 18 and older. The state rate (23.6 per 10,000 population) is above the PSA rate. The COPD rate for the PSA is in the best 0-50th percentile (green indicator) when compared to other counties in Illinois. (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Medicare Beneficiaries with COPD

The Kane County rate of Medicare beneficiaries with a diagnosis of COPD is remaining stable, but the McHenry County rate is increasing over time, but not at a statistically significant rate. The percentage of Medicare beneficiaries treated for COPD in Kane County is 9.5 percent in and 11.5 percent in McHenry County. Both county rates are lower than the Illinois rate of 11.9 percent and are in the best 0-50th percentile (green indicator) compared to Illinois counties (Conduent Healthy Communities Institute, Centers for Medicare & Medicaid Services, 2017).

Key Findings and Disparities: Respiratory Diseases

- Both Kane County and McHenry County vaccination rates for pneumonia are in the worst 25th percentile (red indicator) in comparison to other counties in Illinois.
- The McHenry County rate for adults receiving influenza vaccination is in the worst 25th percentile (red indicator) compared to Illinois counties.
- The PSA hospitalization rate due to asthma is in the worst 25th percentile (red indicator) compared to other counties in Illinois.

- The percentage of Medicare beneficiaries who were treated for asthma in 2017 in both Kane County and McHenry County is increasing over time, but not at a statistically significant level.

Disparities:

For respiratory disease in the PSA, there is a substantial disparity for African Americans. All of the following ER and hospitalization rates for African Americans are significantly higher than the overall PSA rate. All of the rates below are for adults ages 18 and older, unless otherwise indicated.

- ER rate (32.7 per 10,000 population) and hospitalization rate (35.7 per 10,000 population) due to community acquired pneumonia
- ER rate (180.9 per 10,000 population) and hospitalization rate (20.4 per 10,000 population) due to asthma
- ER rate (187.9 per 10,000 population) and hospitalization rate (24.6 per 10,000 population) due to adult asthma
- ER rate (160.6 per 10,000 population, under age 18) due to pediatric asthma
- ER rate (30.9 per 10,000 population) and hospitalization rate (51.1 per 10,000 population) due to COPD.

Asthma is having a significant effect on children, with high PSA ER rates due to asthma for infants and children. All of the ER rates due to asthma below are significantly higher than the overall PSA value. This indicator shows the rate per total 10,000 population.

- Children ages 0-4 years (40.6 per 10,000 population)
- Children ages 5-9 years (45.9 per 10,000 population)
- Children ages 10-14 years (37.4 per 10,000 population).

However, younger adults are also affected by asthma, as high ER rates due to asthma are also occurring for adults between 18 and 34 years. These ER rates are also significantly higher than the overall PSA rate. This indicator also shows the rate per total 10,000 population.

- Adults ages 18-24 years (45.3 per 10,000 population)
- Adults ages 25-34 years (41.4 per 10,000 population).

The impact of respiratory disease is apparent in older adults as well, as the following indicators for the age group of ages 85 years and older are all significantly higher than the overall PSA rate:

- ER rate (34.9 per 10,000 population) and hospitalization rate (274.3 per 10,000 population) due to community acquired pneumonia
- ER rate (50.4 per 10,000 population); and hospitalization rate (175.8 per 10,000 population) due to COPD.

Maternal and Child Health

Smoking During Pregnancy

Smoking during pregnancy poses risks for both mother and fetus. While both counties are trending favorably as compared to the Illinois rate of 7.9 percent, neither county met the Healthy People 2020 target of 1.4 percent for mothers who report smoking during pregnancy. Four percent of Kane County

mothers and 6.7 percent of McHenry County mothers reported smoking during pregnancy (Conduent Healthy Communities Institute, Illinois Department of Public Health, 2008).

Infant Mortality

The infant mortality rate in Kane County is 5.5 deaths per 1,000 live births and 4.2 deaths per 1,000 live births in McHenry County. Both counties have met the Healthy People 2020 target of 6.0 deaths per 1,000 live births and are decreasing, but not at a statistically significant rate. Additionally, both county rates are lower than the Illinois rate of 6.3 deaths per 1,000 live births. Comparing these two counties to other Illinois counties, the infant mortality rates are within the best 0-50th percentile (green indicator) (Conduent Healthy Communities Institute, Illinois Department of Public Health, 2014-2016).

Pre-Term Labor and Delivery Hospitalizations

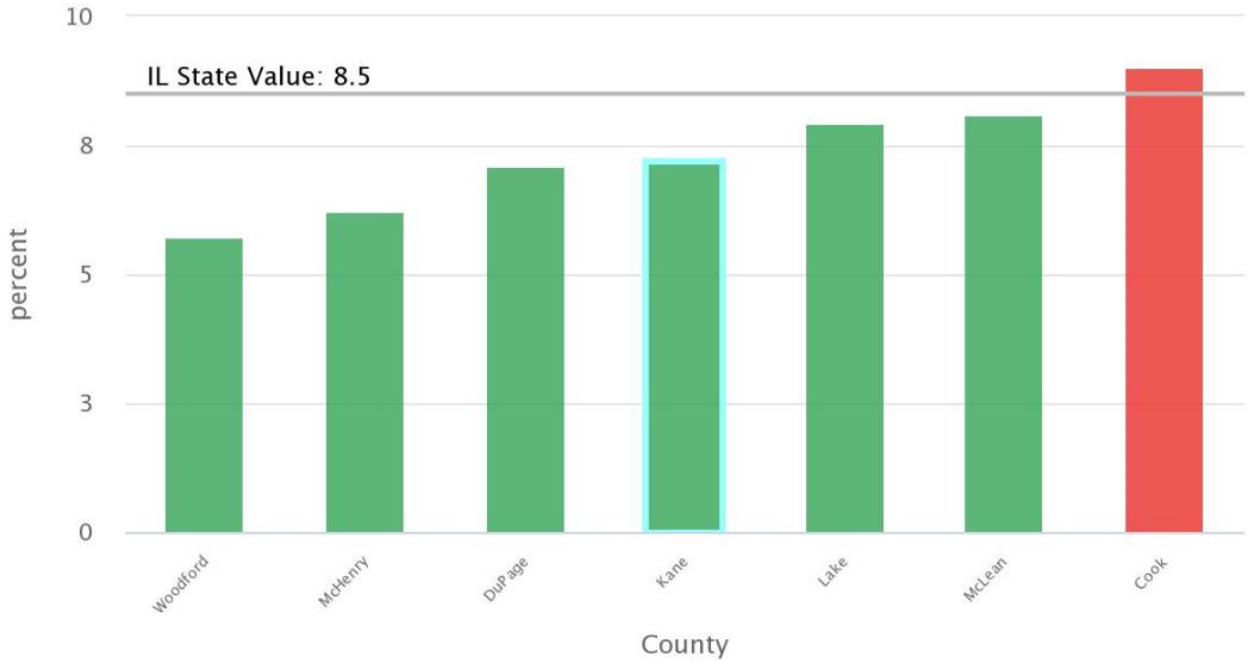
Pre-term labor is characterized as labor that starts with less than 37 weeks of completed gestation. Pre-term labor and delivery hospitalizations for the Advocate Sherman PSA is 4.7 percent which is in the worst 50th-75th percentile (yellow indicator) in comparison to other counties in Illinois. The PSA rate is below the Illinois rate of 5.0 percent (Conduent Healthy Communities Institute, Illinois Department of Public Health, 2014-2016).

Babies with Low Birth Weight

Babies born with low birth weight (weighing less than 2,500 grams or five pounds eight ounces) are more likely to have health problems as compared to babies born of normal weight. In 2017, Kane County reported 7.2 percent and McHenry County reported 6.2 percent of babies that were born with low birth rate. Both county rates are within the best 0-50th percentile (green indicator) compared to other Illinois counties. The rates for both counties are decreasing, but not at a statistically significant rate. Both counties have met the Healthy People 2020 target of 7.8 percent and are lower than the Illinois rate of 8.5 percent (Conduent Healthy Communities Institute, Illinois Department of Public Health, 2014-2017).

Exhibit 35 shows a comparison of rates for low birth weight babies for Illinois counties served by Advocate Aurora hospitals. Kane County and McHenry County are both in green, and are below the state rate.

Exhibit 35: Babies with Low Birth Weight-Kane and McHenry Counties 2017



Source: Conduent Healthy Communities Institute, Illinois Department of Public Health, 2019

Teen Births

Teen births (the percentage of all live births to females under 18 years of age) are decreasing in the PSA at a statistically significant rate. The U.S. rate of teen births is at 3.5 percent and the Illinois rate is only 1.4 percent in 2016. In 2017, only 1.3 percent of all Kane County live births were to females under 18 years of age, and the rate was 0.6 percent for McHenry County. Both county rates are within the best 0-50th percentile (green indicator) compared to Illinois counties (Conduent Healthy Communities Institute, Illinois Department of Public Health, 2016).

Key Findings: Maternal and Child Health

- The infant mortality rates in both Kane and McHenry Counties have met the Healthy People 2020 target and are both decreasing over time, but not at a statistically significant rate.
- Teen births are decreasing at a statistically significant rate over time.
- Babies born with low birth weight for both counties are decreasing, but not at a statistically significant rate.
- Pre-term labor and delivery hospitalizations for the Advocate Sherman PSA is in the worst 50th-75th percentile (yellow indicator) in comparison to other counties in Illinois.

Social Determinants of Health

Social determinants of health are conditions in the places where people live, learn work and play. These conditions affect a wide range of health risks and outcomes (Centers for Disease Control and Prevention, 2018). Our health is also determined in part by access to social and economic opportunities; the resources and supports available in our homes, neighborhoods, and communities; the quality of our schooling; the safety of our workplaces; the cleanliness of our water, food and air; and the nature of our social interactions and relationships (Healthy People 2020, HealthyPeople.gov, 2019). The following indicators are a selection of social determinants of health for the Advocate Sherman PSA.

Physical Environment

Physical Environment Ranking

The physical environment ranking in Illinois is based on a summary score calculated from measures including daily fine particulate matter, drinking water violations, severe housing problems, driving alone to work and long commute while driving alone. The lower the ranking, the better the health outcomes. Kane County has a ranking of 96 and McHenry County is ranked at 84. Both values are in the worst 25th percentile (red indicator) in comparison to other counties in Illinois (Conduent Healthy Communities Institute, County Health Rankings, 2019).

Annual Ozone Air Quality

This indicator gives a grade to each county in the U.S. based on the annual number of ozone action days. The air quality index grade for Kane County is a D, with four days that ozone levels exceeded U.S. standards during the three-year measurement period. The Kane County grade is in the worst 25th percentile (red indicator) compared to other counties in Illinois and is unfavorably increasing over time, but not at a statistically significant level.

The air quality index grade for McHenry County is an F, with five days that ozone levels exceeded U.S. standards during the three-year measurement period and is also in the worst 25th percentile (red indicator) compared to other counties in Illinois. The McHenry County rate is unfavorably increasing at a statistically significant rate over time (Conduent Healthy Communities Institute, American Lung Association, 2015-2017).

Annual Particle Pollution

The annual particle pollution indicator is a grade that is provided to the county based on the average annual number of days that exceed the U.S. particle pollution standards (PM2.5). Kane County has a grade of B, with two days that exceeded the particle pollution standards, which is in the best 0-50th percentile (green indicator) of Illinois counties. The Kane County rate is unfavorably trending upward, but not at a statistically significant rate.

McHenry County has a grade of A, with one day that exceeded the U.S. particle pollution standards which is also in the best 0-50th percentile (green indicator) when compared to other counties in Illinois.

The McHenry County rate has remained stable over time (Conduent Healthy Communities Institute, American Lung Association, 2015-2017).

Recognized Carcinogens Released Into the Air

In Kane County there are 50,090 pounds of reported and recognized carcinogens released into the air. The Kane County rate is unfavorably increasing at a statistically significant rate. In McHenry County 23,301 pounds were released into the air, which is down from the prior year. Despite the dip, the McHenry County rate is unfavorably increasing over time, though not at a statistically significant pace (Conduent Healthy Communities Institute, U.S. Environmental Protection Agency, 2017).

Housing

Homeownership

A total of 73 percent of housing units in the PSA are occupied by homeowners. The PSA rate falls in the best 0-50th percentile (green indicator) compared to other Illinois counties, but is higher than the Illinois rate of 59.7 percent. The PSA rate is unfavorably decreasing at a statistically significant rate over time (Conduent Healthy Communities Institute, American Community Survey, 2013-2017).

Renters Spending 30 Percent or more of Household Income on Rent

A total of 51.8 percent of renters in the city of Elgin are spending 30 percent or more of their household income on rent (are rent-burdened), which is in the worst 50th-75th percentile (yellow indicator) when compared to other cities in Kane County and Cook County. In Kane County, 49.9 percent of renters are spending 30 percent or more of household income on rent, which is in the worst 25th percentile (red indicator) compared to other Illinois counties.

The rent-burdened rate for McHenry County is 46.9 percent of renters, which is in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois. Both county rates are favorably decreasing over time at a statistically significant level. The Illinois rate is 49.2 percent (Conduent Healthy Communities Institute, American Community Survey, 2013-2017).

Severe Housing Problems

Severe housing problems are measured by the percentage of households with at least one of the following problems: overcrowding, high housing costs, lack of kitchen or lack of plumbing facilities. The Illinois rate of severe housing problems is 18.4 percent. In Kane County, 19 percent of households have severe housing problems, and in McHenry County the rate is 15.7 percent of households. Both rates are in the worst 25th percentile (red indicator) compared to other Illinois counties. The McHenry County rate is decreasing over time, but not at a statistically significant rate. The Kane County rate is remaining stable (Conduent Healthy Communities Institute, County Health Rankings, 2010-2014).

Physical Activity

No Participation in Physical Activities

In Kane County, 14.6 percent of adults ages 20 years and older do not participate in any leisure time physical activities (are sedentary), other than their regular job during the past month. In McHenry County, 20.4 percent of adults ages 20 years and older are sedentary. Compared to other counties, both Kane and McHenry County fall in the best 0-50th percentile (green indicator. Both counties also meet the Healthy People 2020 target of 32.6 percent. The McHenry County rate is favorably decreasing (not at a statistically significant rate), but the Kane County rate is favorably decreasing at a statistically significant rate, meaning people are becoming more physically active (Conduent Healthy Communities Institute, Centers for Disease Control and Prevention, 2016).

Live Near Park or Recreational Facility

Access to exercise opportunities measures the percentage of individuals who live reasonably close to a park or recreational facility. In Kane County, 95.9 percent and in McHenry County, 91.7 percent of residents live reasonably close to a park or recreation facility. The Illinois rate of 90.8 percent is below both county rates. These county rates fall in the best 0-50th percentile (green indicator) in the range of Illinois counties (Conduent Healthy Communities Institute, County Health Rankings, 2019).

Recreation and Fitness Facilities Ratio

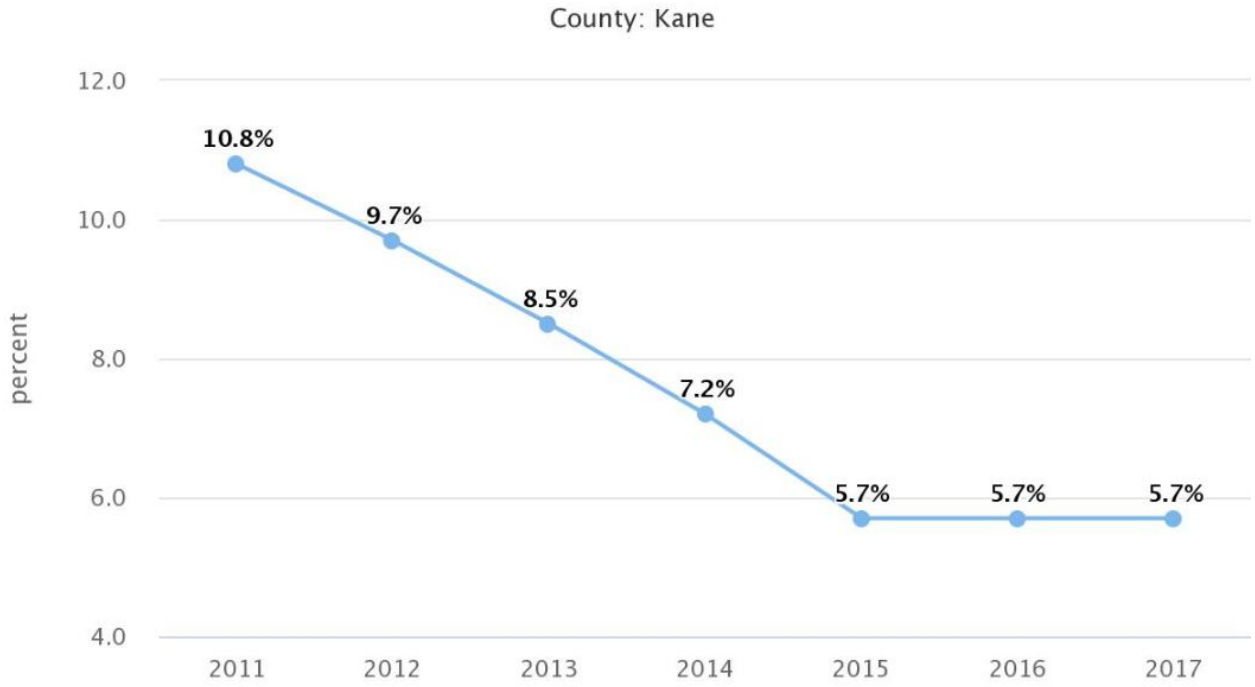
Those individuals who engage in physical activity are reported to have reduced risk of serious health conditions including obesity, heart disease and diabetes. Having access to recreation and fitness facilities helps to reduce these risks. There are 0.09 facilities per 1,000 population in Kane County and in McHenry County the ratio is 0.12 facilities per 1,000 population. The Kane County rate is remaining stable and is lower than the U.S. rate of 0.06 facilities per 1,000 population. The McHenry County rate is also above the U.S. rate, but has seen a decrease, although not a statistically significant decrease. There is no Illinois comparative value for this indicator (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2014).

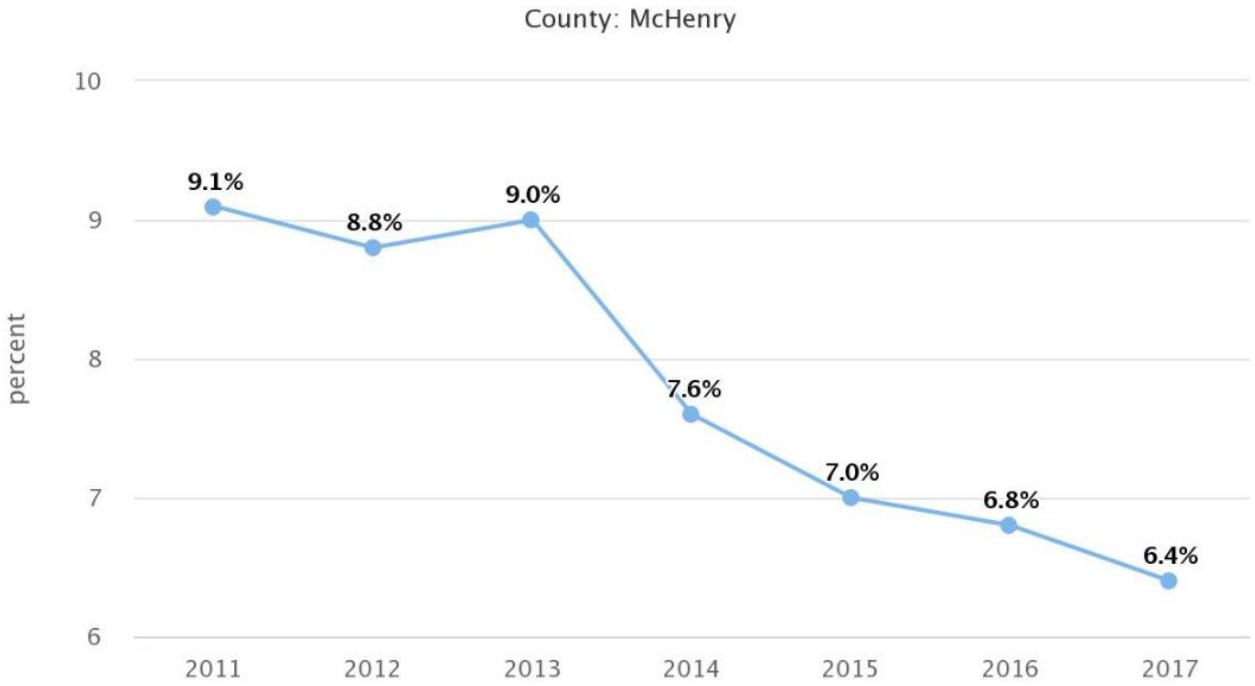
Access to Food

Food Insecurity Rate

The food insecurity rate is the percentage of the population who has experienced food insecurity at some point during the year. The U.S. Department of Agriculture defines food insecurity as limited or uncertain availability of nutritionally adequate foods or uncertain ability to acquire these foods in socially acceptable ways. According to Feeding America, the food insecurity rate was 5.7 percent in Kane County and 6.4 percent in McHenry County; both rates are in the best 0-50th percentile (green indicator) in comparison to other counties in Illinois. The rate is decreasing at a statistically significant level in both counties, as shown in Exhibit 36 (Conduent Healthy Communities Institute, Feeding America, 2017).

Exhibit 36: Food Insecurity Rate in Kane and McHenry Counties 2017





Source: Conduent Healthy Communities Institute, Feeding America, 2019

Child Food Insecurity Rate

The food insecurity rate for children under the age of 18 years living in households that experienced food insecurity at some point during the year has been decreasing at a statistically significant rate over time in both Kane and McHenry Counties. In 2017, the food insecurity rate for children in Kane County was 13.2 percent and 12.6 percent in McHenry County; both within the best 0-50th percentile (green indicator) compared to other counties in Illinois (Conduent Healthy Communities Institute, Feeding America, 2017).

Food Insecure Children Likely Ineligible for Assistance

There are 37 percent of food insecure children in Kane County with incomes above 185 percent of the federal poverty level who are likely not income-eligible for federal nutrition assistance. The percentage is 48 percent in McHenry County. Both county rates are in the worst 25th percentile (red indicator) when compared to other counties in Illinois. The Kane County rate is unfavorably increasing (not a statistically significant increase) but the McHenry County rate is favorably decreasing over time (not a statistically significant decrease). Both county rates are higher than the Illinois rate of 34 percent (Conduent Healthy Communities Institute, Feeding America, 2017).

SNAP Certified Stores

In Kane County, the number of Supplemental Nutrition Assistance Program (SNAP)-certified stores is 0.5 stores per 1,000 population and the rate has experienced an unfavorable decrease, but not a statistically significant decrease. The rate in McHenry County is 0.4 stores per 1,000 population and is remaining stable. Both county rates are in the worst 25th percentile (red indicator) compared to other counties in Illinois (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2016).

Farmers Market Density

This indicator shows the number of farmers markets per 10,000 population. A farmer's market is a retail outlet in which vendors sell agricultural products directly to customers. The Kane County farmer's market density is 0.02 markets per 1,000 population and the McHenry County rate is 0.03 markets per 1,000 population. The U.S. rate is 0.03 markets per 1,000 population and there is no comparison Illinois value (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2016).

Fast Food Restaurant Density

This indicator shows the number of fast food establishments per 1,000 population. In McHenry County, the fast food restaurant density is 0.70 restaurants per 1,000 population and in Kane County, the rate is 0.62 restaurants per 1,000 population. Both rates are in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois. The Kane County rate is favorably decreasing and the McHenry County rate is unfavorably increasing, but both rates of change are not statistically significant (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2014).

Food Environment Index

The food environment index combines two measures of food access: 1) the percentage of the population that is low income and has low access to a grocery store; and 2) the percentage of population that did not have access to a reliable source of food during the past year (food insecurity). The index ranges from 0 (worst) to 10 (best) and equally weights the two measures.

The Kane County index is 9.4 and is increasing at a statistically significant pace over time. The McHenry County index is 8.9 and is increasing, though not at a statistically significant level. The indices for both counties are in the best 0-50th percentile (green indicator) in comparison to other counties in Illinois. Both indices are higher than the Illinois index (8.7) (Conduent Healthy Communities Institute, County Health Rankings, 2019).

Grocery Store Density

Grocery store density shows the number of supermarkets and grocery stores per 1,000 population. Convenience stores and large general merchandise stores, such as supercenters and warehouse club stores, are not included. The Kane County grocery store density rate is 0.15 stores per 10,000 population, which is decreasing, though not a statistically significant decrease. The rate for McHenry County is also 0.15 stores per 1,000 population, but the rate is increasing (not statistically significant increase). The rates for both counties are in the worst 50th-75th percentile (yellow indicator) in comparison to other counties in Illinois (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2014).

People with Low Access to a Grocery Store

In Kane County, 18.5 percent of urban residents (down from 2010 value of 19.7 percent) live more than one mile from a supermarket or large grocery store, or more than 10 miles from a supermarket or large grocery store if in a rural area, which is in the worst 50th-75th percentile (yellow indicator) in comparison to other counties in Illinois. For McHenry County, the rate is much higher at 43.2 percent, which is in the worst 25th percentile (red indicator) compared to other Illinois counties. The previous value was 43.1 percent in 2010. There is no Illinois state value of comparison for this indicator (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2015).

Households with No Car and Low Access to a Grocery Store

This indicator shows the percentage of housing units that do not have a car and are more than one mile from a supermarket or large grocery store if in an urban area, or more than 10 miles from a supermarket or large grocery store if in a rural area. In Kane County, 0.9 percent of housing units have no car and low access to a grocery store, and in McHenry County, the rate is 1.4 percent. Both county rates fall in the best 0-50th percentile (green indicator) compared to other counties in Illinois. There is no Illinois state value of comparison for this indicator (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2015).

Low-Income and Low Access to a Grocery Store

This indicator shows the percentage of the total population in a county that is low-income and living more than one mile from a supermarket or large grocery store if in an urban area, and more than 10 miles from a supermarket or large grocery store if in a rural area.

The Kane County rate (3.8 percent) is in the best 0-50th percentile (green indicator) in comparison to other counties in Illinois; this is an unfavorable increase from 3.4 percent in 2010. The McHenry County rate (7.1 percent) also shows an unfavorable increase from 6.4 percent in 2010 and is in the worst 50th-75th percentile (yellow indicator) compared to Illinois counties. There is no state value of comparison for this indicator (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2015).

Children with Low Access to a Grocery Store

In Kane County, 5.3 percent of children live more than one mile from a supermarket or large grocery store, or more than 10 miles from a supermarket or large grocery store if in a rural area, which is in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois. For McHenry County, the rate is more than double that of Kane County, at 12.6 percent, which is in the worst 25th percentile (red indicator) compared to other Illinois counties. There is no state value of comparison for this indicator (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2015).

People ages 65 and Older with Low Access to a Grocery Store

This indicator shows the percentage of adults ages 65 and older living more than one mile from a supermarket or large grocery store if in an urban area, or more than 10 miles from a supermarket or large grocery store if in a rural area. In Kane County, the rate is 1.8 percent, which is in the best 0-50th percentile (green indicator) compared to other counties in Illinois, while in McHenry County, 3.4 percent of older adults have low access to a grocery store—in the worst 50th-75th percentile (yellow indicator) compared to other Illinois counties. There is no Illinois value of comparison for this indicator (Conduent Healthy Communities Institute, U.S. Department of Agriculture—Food Environment Atlas, 2015).

Liquor Store Density

This indicator shows the number of liquor stores per 100,000 population, defined as a business that primarily sells packaged alcoholic beverages, such as beer, wine and spirits. The liquor store density for Kane County is 11.5 stores per 100,000 population. The Kane County rate is unfavorably increasing, but not at a statistically significant pace, and is higher than the Illinois rate (10.0 per 100,000 population). For McHenry County, the liquor store density rate is 10.0 stores per 100,000 population, which is favorably trending downward (not statistically significant decrease) and is lower than the state rate. Both rates are in the worst 50th-75th percentile (yellow indicator) in comparison to other counties in Illinois (Conduent Healthy Communities Institute, U.S. Census—County Business Patterns, 2016).

Transportation

Households Without a Vehicle

In the Advocate Sherman PSA, 4.0 percent of households do not have a vehicle, which is in the best 0-50th percentile (green indicator) compared to other counties within Illinois. However, this rate is increasing at a statistically significant level. The PSA rate is below the Illinois rate (10.8 percent) (Conduent Healthy Communities Institute, American Community Survey, 2012-2016).

Average Travel Time to Work

The average commute time for workers in the PSA, ages 16 years and older, is 31.7 minutes, which is in the worst 25th percentile (red indicator) compared to other Illinois counties. The average commute time is favorably decreasing at a statistically significant level. There are 29.73 percent of the workers in the PSA that travel 15-29 minutes, followed by 21.39 percent travelling 30-44 minutes and 20.46 percent who travel under 15 minutes. The PSA rate is higher than the state rate of 28.7 minutes (Conduent Healthy Communities Institute, American Community Survey, 2012-2016).

Workers Who Drive Alone to Work

A total of 81.5 percent of the workers in the PSA, ages 16 years and older, drive alone to work in a car, truck or van. This is in the best 0-50th percentile (green indicator) compared to other Illinois counties, but is higher than the Illinois rate (73.4 percent) and is trending down over time, but not at a statistically significant level (Conduent Healthy Communities Institute, American Community Survey, 2012-2016).

Solo Drivers with a Long Commute

In Kane County, 43.2 percent of commuters drive alone to work and commute for more than 30 minutes and in McHenry County the rate is 49.8 percent commuting alone. Both rates are in the worst 25th percentile (red indicator) compared to other counties in Illinois. The Kane County percentage is favorably decreasing (not statistically significant decrease) and the McHenry County rate of solo drivers is unfavorably increasing (not statistically significant increase). Both county rates are above the Illinois rate (40.4 percent) (Conduent Healthy Communities Institute, County Health Rankings, 2012-2016).

Workers Commuting by Public Transportation

In the Advocate Sherman PSA, 2.2 percent of workers, ages 16 years and older, commute to work by public transportation. This rate is in the best 0-50th percentile (green indicator) compared to other counties in Illinois but is trending downward (not at statistically significant pace) and is not meeting the Healthy People 2020 target of 5.5 percent. The PSA rate is also below the Illinois rate (9.2 percent) (Conduent Healthy Communities Institute, American Community Survey, 2012-2016).

Social Environment

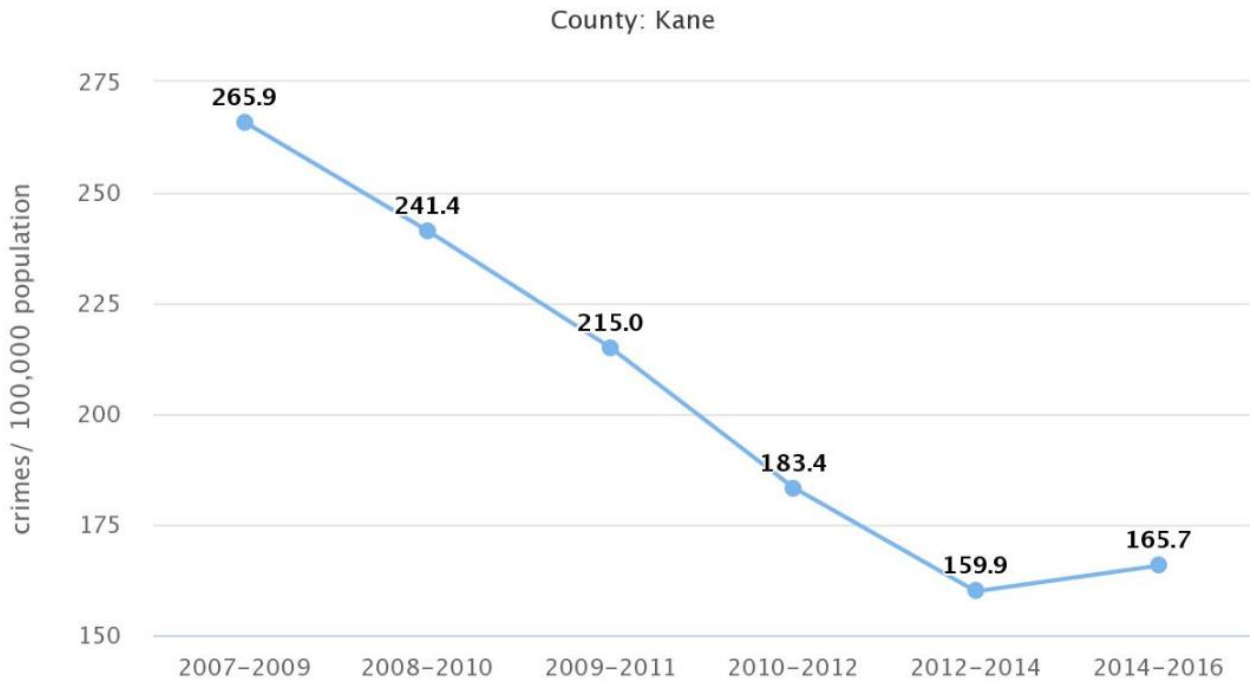
Social and Economic Factors Ranking

The health outcomes of a community are often attributed to the social environment where one works, plays and lives. According to County Health Rankings 2019, the social and economic factors ranking is based on a summary score calculated from the following measures: high school graduation, some college, unemployment, children in poverty, income inequality, children in single-parent households, social associations, violent crime and injury death rate. The lower the number, the healthier the community as compared to other Illinois counties. Kane County was ranked 30 and McHenry County was ranked as 7. Both rankings are in the best 0-50th percentile (green indicator), compared to other counties in Illinois. There is no Illinois state value of comparison for this indicator (Conduent Healthy Communities Institute, County Health Rankings, 2019).

Violent Crime Rate

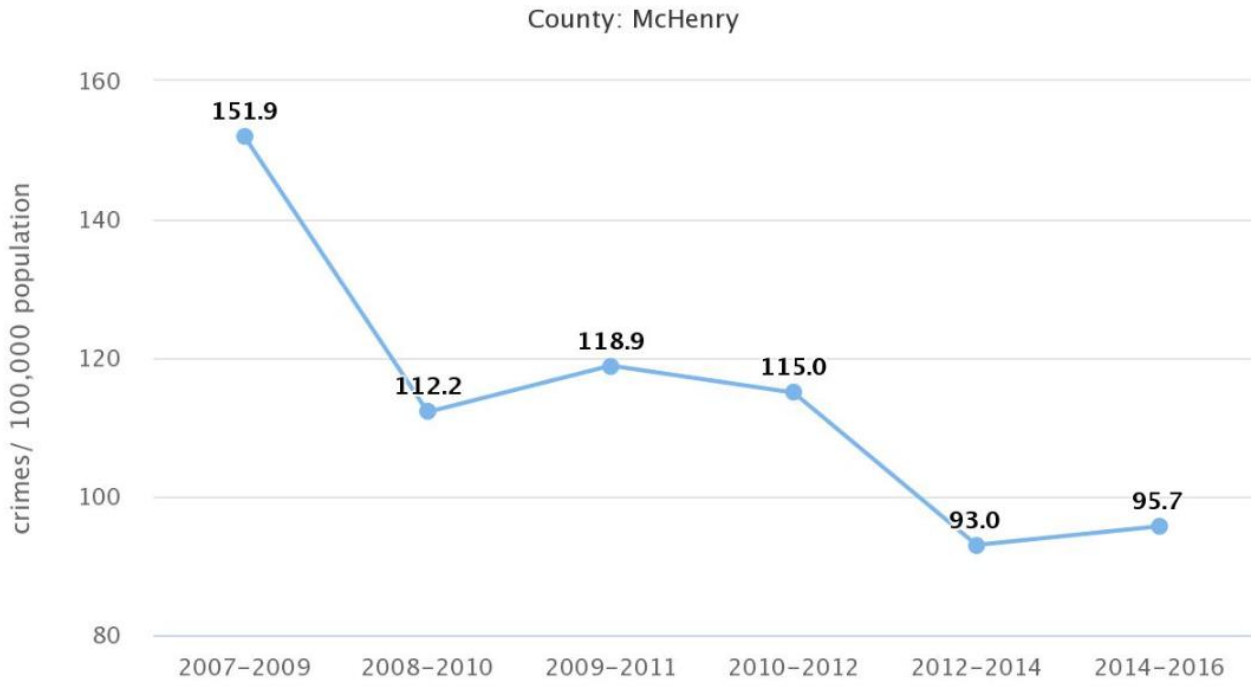
The violent crime rate in Kane County was 165.7 crimes per 100,000 population and in McHenry County the rate was 95.7 crimes per 100,000 population. Kane County and McHenry County are in the best 0-50th percentile (green indicator) in comparison to other counties in Illinois. The McHenry County violent crime rate has favorably decreased, but not a statistically significant decrease, while Kane County has had a favorable statistically significant decrease, as shown in Exhibits 37 for Kane County and 37.1 for McHenry County (Conduent Healthy Communities Institute, County Health Rankings, 2014-2016).

Exhibit 37: Violent Crime Rate in Kane County 2014-2016



Source: Conduent Healthy Communities Institute, County Health Rankings, 2019

Exhibit 37.1: Violent Crime Rate in McHenry County 2014-2016



Source: Conduent Healthy Communities Institute, County Health Rankings, 2019

Substantiated Child Abuse Rate

This indicator shows the number of children under 18 years of age that experienced abuse or neglect in cases per 1,000 children. In Kane County, there are 8.1 cases of abuse or neglect per 1,000 children and in McHenry County, the rate is 7.2 cases per 1,000 children. Both rates are in the best 0-50th percentile (green indicator) compared to other counties in Illinois. Both county rates are lower than the Illinois rate of 9.7 per 1,000 children (Conduent Healthy Communities Institute, Illinois Department of Children and Family Services, 2015).

Students Feel Safe in School

According to the 2018 Illinois Youth Survey, 13 percent of Kane County 12th grade students (down from 14 percent in 2016) and 13 percent of 10th grade students (down from 17 percent in 2016) disagreed or strongly disagreed to the question, "I feel safe in my school." Fifty percent of Kane County 12th grade students (63 percent in 2016) and 63 percent of 10th grade students (58 percent in 2016) agreed or strongly agreed that they feel safe in school.

For McHenry County, nine percent of 12th grade students (up from eight percent in 2016) and 10 percent of 10th grade students (up from eight percent in 2016) disagreed or strongly disagreed that they feel safe in school. Seventy-two percent of McHenry County 12th grade students (down from 78 percent in 2016) and 68 percent of 10th grade students (down from 71 percent in 2016) agreed or strongly agreed that they feel safe in school (Illinois Youth Survey, 2016 and 2018).

Student Threatened to Hurt You

In the 2018 Kane County Illinois Youth Survey, 10 percent of 12th grade students (10 percent in 2016) and 13 percent of 10th grade students (12 percent in 2016) indicated that another student at school had "threated to hurt you" in the past 12 months. The results for McHenry County Illinois Youth Survey are that 11 percent of 12th grade students (no change from 2016) and 14 percent of 10th grade students (15 percent in 2016) indicated that someone had "threatened to hurt you" in the past 12 months (Illinois Youth Survey, 2018).

Social Isolation—People Ages 65 years and Older Living Alone

People ages 65 and older who live alone may be at risk for social isolation, limited access to support or inadequate assistance in emergency situations. In the Advocate Sherman PSA, 23.7 percent of seniors are living alone, which is in the best 0-50th percentile (green indicator) compared to other counties in Illinois. This rate is lower than the Illinois rate (28.5 percent) and is decreasing at a statistically significant rate (Healthy Communities Institute, American Community Survey, 2013-2017).

Age-Adjusted ER Rate due to Unintentional Falls for Adults Ages 18 Years and Older

The age-adjusted ER rate due to unintentional falls for adults (18 years and older) in the PSA is 197.0 per 10,000 population—in the best 0-50th percentile (green indicator) compared to other counties in Illinois. This rate is below the Illinois rate of 206.2 per 10,000 population. Due to a change in methodology, no trend data is available for this indicator (Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

Age-Adjusted Hospitalization Rate due to Unintentional Falls for Adults Ages 18 Years and Older

The PSA age-adjusted hospitalization rate due to unintentional falls for adults (18 years and older) is in the worst 25th percentile (red indicator) in comparison to other counties in Illinois at 43.0 per 10,000 population. This PSA rate is also higher than the Illinois rate (38.6 per 10,000 population) (Conduent Healthy Communities Institute, Illinois Hospital Association, 2015-2017).

The hospitalization rate due to unintentional falls for several zip codes in the PSA fall within the worst 25th percentile (red indicator) compared to other Illinois zip codes, as shown in Exhibit 38. These zip codes are:

- Elgin (60120) (47.3 per 10,000 population)
- Carpentersville (60110) (46.3 per 10,000 population)
- Elgin (60123) (46.1 per 10,000 population)
- Algonquin (60102) (45.5 per 10,000 population)
- Elgin (60124) (45.3 per 10,000 population).

Exhibit 38: Advocate Sherman PSA Age-Adjusted Hospitalization Rate due to Unintentional Falls by Zip Code 2015-2017

Source: Conduent Healthy Communities Institute, Illinois Hospital Association, 2019

Key Findings and Disparities: Social Determinants of Health

- The air quality index grade for McHenry County is an F, and the grade for Kane County is a D. Both counties are in the worst 25th percentile (red indicator) compared to other counties in Illinois. The McHenry County rate is increasing at a statistically significant rate.
- The rate of reported and recognized carcinogens released into the air in Kane County is increasing at a statistically significant rate.
- Although the rate of renters spending 30 percent or more of household income in Kane County is in the worst 25th percentile (red indicator) and in McHenry County is in the worst 50th-75th percentile (yellow indicator), the rates for both counties are favorably decreasing at a statistically significant level.
- There appears to be some good progress in terms of food insecurity—the food insecurity rate is decreasing at a statistically significant level in both counties and the rate of children (under age 18 years) living in households that experience food insecurity has been decreasing at a statistically significant rate over time in both Kane and McHenry Counties.
- The average commute time for workers in the PSA, ages 16 years and older, is 31.7 minutes, which is in the worst 25th percentile (red indicator) compared to other Illinois counties.

Disparities:

- African Americans have ER rates (303.8 per 10,000 population) due to unintentional falls that are significantly higher than the PSA rate.
- Females also have ER rates (224.3 per 10,000 population) that are significantly higher than the overall PSA rate.
- Older adults have both ER and hospitalization rates that are significantly higher than the PSA rate:
    - Ages 65-84 – ER rate (360.6 per 10,000 population) and hospitalization rate (135.6 per 10,000 population) due to unintentional falls;
    - Ages 85 and older – ER rate (1,159.3 per 10,000 population) and hospitalization rate (647.5 per 10,000 population) due to unintentional falls.

V. Prioritization of Health-Related Issues

Priority Setting Process

In preparation for the selection of priorities, Advocate Sherman community health staff presented extensive community data in a series of three meetings over a three-month period, with a summary of the demographics, social determinants of health and the eight most significant health issues. In a fourth meeting, Advocate Sherman CHC members voted using a modified Hanlon Method to select two health priorities to focus on in the 2020-2022 Advocate Sherman Implementation Plan. The eight health issues are listed below:

- Substance Abuse
- Mental Health
- Healthy Eating/Nutrition (exercise, nutrition, obesity, and food access/food insecurity)
- Heart Disease
- Diabetes
- Respiratory Diseases
- Sexually Transmitted Infections
- Adult Vaccinations.

A profile of cancer was provided to the council, but because cancer is already being addressed as a priority health need through the hospital's internal requirements for the Commission on Cancer, it was not presented as a separate health need for voting for the 2020-2022 Implementation Plan.

Using a modified Hanlon Method, council members were asked to prioritize scores based on the size and seriousness of the health problem, the cost of the health problem to society and the effectiveness of available interventions.

Health Needs Selected

Upon conclusion of the summary and criteria presentation, the modified Halon Method was conducted and tabulated. The health issues with the highest votes were:

- Obesity (diabetes, heart disease, nutrition, exercise)
- Behavioral Health (substance abuse and mental health).

Obesity

The CHC voted to select obesity as the first health priority, as it received the highest score once the Hanlon method was completed. The prevalence of obesity across the United States is steadily rising, which increases the risk of chronic diseases and health conditions such as diabetes, heart disease, cancer and more. Although the obesity rates in both Kane and McHenry Counties meet the Healthy People 2020 target, the rates continue to rise.

In the Kane County CHNA key informant interviews, 40.7 percent of participants considered nutrition, physical activity and weight as a “major problem” and 43.6 percent considered it to be a “moderate problem.” In the McHenry County healthy community study, 44.4 percent of community leaders interviewed stated that obesity is considered a major problem in the county. In Kane County, the rate for obesity for Hispanic ethnicity is higher (29.9 percent) as compared to the White population at 26.3 percent (Conduent Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance Survey, 2010-2014). The results are similar in McHenry County with 26.5 percent of residents of Hispanic ethnicity considered obese as compared to 25.6 percent of the White population. In 2018, the Illinois Youth Survey conducted in McHenry and Kane Counties, indicated that 25 percent of 10th and 12th grade students who participated in the survey were considered to be overweight/obese.

Both the Kane and McHenry County Health Departments have identified obesity as a priority in their respective community health improvement plans. Advocate Sherman selected obesity as a priority in the last CHNA cycle and will continue with this priority due to the continual rise in obesity rates and demonstrated link between chronic conditions and obesity.

Behavioral Health

The CHC selected behavioral health as the second health priority. Behavioral Health is comprised of both substance abuse and mental health. Council members emphasized that because mental health and substance use frequently co-occur, both should be addressed.

In the Advocate Sherman PSA, the highest age-adjusted ER rates due to mental health are for African Americans, those ages 18-24 years, ages 25-34 years and females. The highest PSA pediatric mental health ER rates are in Elgin (60123 and 60120) and Carpentersville (60110). Additionally, the ER rate due to pediatric mental health for those ages 15-17 years, 10-14 years and African Americans are significantly above the overall rate. Additionally, ER rates due to adolescent suicide and intentional self-inflicted injury for the PSA has been increasing over time. Twelve percent of adults in the city of Elgin indicated that their mental health was not good for 14 or more days in the past month, higher than the U.S. rate of 11.4 percent. Sixteen percent of both Kane County and McHenry County Medicare

beneficiaries were treated for depression in 2017, and this rate is increasing at a statistically significant rate. In the Kane County Community Health Needs Assessment key informant interviews, 61 percent of participants indicated that mental health was a “major problem” and 44.7 percent indicated that substance abuse was a “major problem.”

Substance use was also identified as an area of concern within the Advocate Sherman PSA. In the Illinois Youth Survey, the percentage of teens who reported drinking alcohol on at least one occasion during the past 30 days is increasing over time in Kane County, although the rate is favorably trending downward at a statistically significant rate in McHenry County. On a positive note, tobacco use among teens is significantly decreasing over time in both counties. However, in the 2018 Illinois Youth Survey, 28 percent of Kane County 12th grade students and 37 percent of McHenry County 12th grade students reported using e-cigarettes in the past 30 days. Emergency room and hospitalization rates due to alcohol use for adults in the PSA are in the worst 25th percentile (red indicator) compared to other counties in Illinois, with the highest rates in Elgin (60120 and 60123) and South Elgin (60177). Additionally, ER rates due to alcohol use are significantly higher than the overall rate for African Americans, those ages 25-34 years and 45-64 years. In the PSA, emergency room rates due to opioid use are significantly above the overall PSA rate for Elgin (60123 and 60120), Dundee (60118), those ages 18-24 and 25-34 years, African Americans and males. The Kane County and McHenry County death rates due to drug poisoning are increasing significantly. In the McHenry County assessment, community leaders stated that a major health problem is prescription misuse (55.6 percent) and drug abuse (51.9 percent).

Health Needs Not Selected

Heart Disease

Heart disease was identified as one of the top health needs in the PSA and remains the second leading cause of death in both Kane and McHenry Counties. However, both county death rates due to coronary heart disease are better than the Illinois and U.S. rates (green indicators) and meet the Healthy People 2020 target. Additionally, age-adjusted emergency room and hospitalization rates for heart failure and hypertension for the Advocate Sherman PSA are all within the best 0-50th percentile (green indicator) compared to other counties in Illinois. The percentages of Medicare beneficiaries being treated for hypertension is better than the Illinois and U.S. rates and continues to be on a downward trend. Because these rates are improving in the PSA, the council selected to continue focusing on obesity as a health priority, which has a direct correlation to heart disease.

Diabetes

Advocate Sherman PSA rates for emergency room utilization due to adult diabetes is performing better than Illinois rates. However, the areas of most concern continue to be residents living in Elgin (60120 and 60123) and Carpentersville (60110). The ER rate due to uncontrolled diabetes remains highest in the PSA for Hispanics and African Americans. Advocate Sherman chose diabetes as a priority in the last CHNA and has implemented a comprehensive program for the Hispanic community in Elgin and Carpentersville. Although not selected as a priority for the next implementation plan, the current Diabetes in the Latino Community program will continue into the 2020-2022 period.

Respiratory Diseases

Respiratory diseases include asthma (adults and pediatrics) and chronic obstructive pulmonary disorder (COPD). The ER rate due to asthma in the Advocate Sherman PSA is in the worst 50th-75th percentile (yellow indicator) compared to other counties in Illinois and the hospitalization rate due to asthma is in the worst 25th percentile (red indicator) compared to other counties in Illinois. The same communities with the highest adult asthma ER rates also have the highest pediatric asthma ER rates—Carpentersville (60110) and Elgin (60123 and 60120). Males and African Americans also have ER rates due to pediatric asthma that are significantly higher than the overall PSA rate. The Advocate Sherman PSA ER and hospitalization rates due to COPD are both in the best 0-50th percentile (green indicators) in comparison to other counties in Illinois.

However, the data indicates that respiratory diseases are influencing the health of the PSA population, particularly African Americans and residents of Elgin and Carpentersville. As patients are identified with asthma and/or COPD, they are referred to the Advocate Sherman Mobile Integrated Health—Community Paramedicine Program, and the program has demonstrated a decrease in hospital readmissions.

Issues of air quality and reported and recognized carcinogens released into the air are contributing factors to respiratory disease. The Kane County and McHenry County Health Departments have monitoring and oversight responsibilities for air quality and the Advocate Sherman community health staff have worked with the health departments to coordinate lung cancer screening efforts as a prevention effort. The council decided to continue focusing on other health issues as priorities, given that some current programs are in place at this time.

Sexually Transmitted Infections

The incidence rate for chlamydia is increasing at a statistically significant rate in both Kane and McHenry County. Both county incidence rates for gonorrhea are trending upward and the incidence rate for syphilis in both counties is steadily rising at a statistically significant rate.
The number of HIV cases in both counties is low, although the number of diagnosed cases in McHenry County is increasing. In 2017, there were only 16 cases of tuberculosis reported in Kane County and one case in McHenry County. There is currently a large regional campaign, to combat the HPV virus, focusing on pediatric vaccinations and parent education. The community health staff is collaborating with the Advocate Sherman Cancer Care Center and the American Cancer Society to address this community health need. Although sexually transmitted infections are a considerable health issue in both counties, the local health departments are taking the lead on identification and prevention efforts through their respective communicable disease departments. Advocate Sherman community health staff assist with sharing prevention messages and practices with primary care providers in the PSA. However, because the county health departments are leading these efforts already, and the number of residents affected is small compared to those affected by obesity and behavioral health, sexually transmitted infections were not selected as a primary focus.

Adult Vaccinations

Vaccinations include influenza and pneumonia for the adult population. In both Kane and McHenry Counties, adults who reported receiving the vaccine were lower than both the Illinois and U.S. values. However, the CHC thought that there is more of an issue with education on the importance of vaccine compliance, rather than an access issue. In addition the vaccinations are available in physician offices, at the local health departments and in the local pharmacies. Therefore, the CHC decided to focus on other health issues.

VI. Approval of Community Health Needs Assessment

The Advocate Sherman CHC approved the CHNA health priorities on April 12, 2019. The Advocate Sherman Hospital Executive Team approved them on May 8, 2019, and the Advocate Sherman Governing Council (Board of Directors) approved the two recommended health priorities of Obesity and Behavioral Health on May 20, 2019, as well as the full CHNA Report on September 23, 2019. The Advocate Health Care Network Board approved Advocate Sherman's 2017-2019 CHNA Report at the system level on December 16, 2019.

VII. Overview of 2020-2022 Implementation Plan Goals and Community Resources

Obesity

To address obesity, Advocate Sherman will continue the food insecurity screening program, started in 2018 at the Diabetes Center. This program, in coordination with the on-site community garden, provides fresh produce to those patients who are food insecure. Additionally, a food resource guidebook is provided to patients who are screened as being food insecure. The food insecurity program will be expanded to include additional agencies throughout the service area with a focus on communities with high SocioNeeds Index ranking and higher rates of related poor health indicators. Obesity has also been a top priority of the Kane County and McHenry County Health Departments with both departments having active action teams around obesity and nutrition. Advocate Sherman will continue to work collaboratively with both agencies in the planning and development of interventions for both priorities. Other programs that promote healthy lifestyle, good nutrition and fitness will also be explored. Efforts will also be made to develop stronger connections with the Northern Illinois Food Bank to address food insecurity in the Advocate Sherman PSA.

Behavioral Health

Community health staff are actively involved in the Coalition for a Safe and Healthy Elgin (CSHE), the Kane County Opioid Task Force and the McHenry County Substance Abuse Coalition. Community health staff will work in coordination with these coalitions to develop opportunities for alignment on

interventions to address youth and adult alcohol use and youth vaping (use of e-cigarettes). Additionally, programs will be developed to address opioids in both Kane and McHenry County. The director of community health is an active member of the Kane County Behavioral Health Council, which is comprised of both mental health and substance use treatment providers in the county. Advocate Sherman staff will work with members of this coalition in the development of goals related to mental health and substance use. For example, a very successful partnership has been established with Gateway Foundation, a well-respected substance use treatment provider, to develop and implement the Warm Handoff program in Advocate Condell and Advocate Good Shepherd emergency departments. The program helps to counsel and navigate individuals into treatment who come into the ER for opioid use disorder or other substance use issues. As Advocate Sherman develops its implementation plan, community health staff will work with Gateway Foundation to expand the program into Advocate Sherman and explore additional substance use interventions.

VIII. Vehicle for Community Feedback

Community Feedback

Advocate Sherman welcomes all feedback regarding the 2019 Community Health Needs Assessment. Any member of the community wishing to comment on this report, can click on the link below to complete a CHNA feedback form. Questions will be addressed and will also be considered during the next CHNA cycle.
http://www.advocatehealth.com/chnareportfeedback

If you experience any issues with the link to our feedback form or have any other questions, please click below to send an email to us at:
AHC-CHNAReportCmtyFeedback@advocatehealth.com

This report can be viewed online at Advocate Health Care's Community Health Needs Assessment 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.

Sharing Results

In addition to the opportunity to provide feedback through the means described above, Advocate Sherman Community health staff will proactively present the results of the 2019 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 presentations. Additional presentations will be scheduled as requested.

IX. Appendices

(All data was verified and website links were fully functional within the CHNA Report and Appendices as of September 1, 2019.)

Appendix 1: 2017-2019 Community Health Needs Assessment Data Sources

Advocate Aurora Business Development Analytics, 2019
Advocate Aurora Business Development Analytics, Sg2, 2019
Advocate Health Care Strategic Planning Department, 2016
Advocate Sherman Hospital Finance Department, 2019

Community Survey of the McHenry County Healthy Community Study, Health Systems Research, Division of Health Policy and Social Science Research, University of Illinois College of Medicine at Rockford, 2017. Full documents can be accessed at the following websites:
https://www.mchenrycountyil.gov/home/showdocument?id=71354
https://www.mchenrycountyil.gov/home/showdocument?id=71454
https://www.mchenrycountyil.gov/home/showdocument?id=71454
https://www.mchenrycountyil.gov/home/showdocument?id=71360

Community Survey of the Kane County Community Health Needs Assessment Report, Professional Research Consultants, Inc., 2018
https://www.countyofkane.org/Documents/Quality%20of%20Kane/Community_Health_Needs_Assessment.PDF

Conduent Healthy Communities Institute. Accessed via a contract with Advocate Health Care. Website is unavailable to the public. The following data sources were accessed through the portal:

- American Community Survey, 2012-2016, 2013-2017
- American Fact Finder, 2017
- American Lung Association, 2015-2017
- Centers for Disease Control and Prevention, 2015-2017, 2019
- Centers for Medicare and Medicaid Services, 2017
- Center for Prevention Research and Development, 2016, 2018
- Claritas, 2019
- County Health Rankings, 2015, 2016, 2017, 2018, 2019
- Feeding America, 2017
- Illinois Behavioral Risk Factor Surveillance System, 2007-2009, 2010-2014
- Illinois Department of Children and Family Services, 2015
- Illinois Department of Public Health, 2014-2016, 2017
- Illinois Hospital Association, 2015-2017
- Illinois Youth Survey, 2018
- National Cancer Institute, 2011-2015
- National Center for Education Statistics, 2016-2017
- National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2016
- U.S. Census-County Business Patterns, 2016

Appendix 1: 2017-2019 Community Health Needs Assessment Data Sources (continued)

Conduent Healthy Communities Institute (cont'd)

- U.S. Department of Agriculture-Food Environment Atlas, 2014, 2015, 2016
- U.S. Small-Area Life Expectancy Estimates Project, 2010-2015
- The Dartmouth Atlas of Health Care, 2015
- 500 Cities Project, 2014, 2015

Dental Examination Compliance Status of School-Age Children, Illinois State Board of Education, 2015
https://www.isbe.net/Documents/dental_report1314.pdf

Illinois Department of Healthcare and Family Services, 2018
https://www.illinois.gov/hfs/MedicalClients/Pages/medicalprograms.aspx

Illinois Youth Survey, 2018
https://iys.cprd.illinois.edu/

Appendix 2: Hanlon Method Score Sheet

Health Concern	A Size	B Seriousness	C Effectiveness of Interventions	D Priority Score (A+2B)C	
Substance Abuse	4	9.4	8.6	**196.2**	1
Mental Health	4	8.4	7.2	**150.9**	3
Respiratory Disease	3				
Diabetes	2	8.7	7.0	**135.3**	5
Heart Disease	4	8.6	6.9	**145.4**	4
Healthy Eating /Nutrition	6	8.8	8.0	**188.4**	2
Sexually Transtitted Infections	2				
Adult Vaccinations	9				

Appendix 3: P.E.A.R.L. Test (Hanlon Method)

P.E.A.R.L Test					
Health Concern	**P**ropriety	**E**conomics	**A**cceptibility	**R**esources	**L**egality
Substance Abuse	x	x	x	x	x
Mental Health	x	x	x		x
Respiratory Diseases	x	x	x		x
Diabetes	x	x	x	x	x
Heart Disease	x	x	x	x	x
Healthy Eating / Nutrition	x	x	x	x	x
Sexually Transmitted Infections	x		x		x
Adult Vaccinations	x		x		x
	x = yes				
	blank = no				

Appendix 4: Effective and Evidence-Based Practices

Effective and Evidence-Based Practices
4/10/2019

	HCI Promising Practices	County Health Rankings and City Health Dashboard	The Community Guide
Classification Labels	***Evidence-Based and Effective Practices***	***Scientifically Supported***	***Recommended***
Substance Use	Children/Teens (112) Adults/Elderly (49)	Alcohol and Drug Use (15)	Children/Teens (8) Adults/Elderly (23) Excessive Alcohol Consumption (7)
Mental Health	Children/Teens (77) Adults/Elderly (25)		Children/Teens (2) Adults/Elderly (3) Mental Health (4)
Respiratory	Children/Teens (19) Adults/Elderly (3)	Air and Water Quality (6)	Children/Teens (1) Adults/Elderly (0) Asthma (2)
Diabetes	Children/Teens (11) Adults/Elderly (30)	Diet and Exercise (26)	Children/Teens (2) Adults/Elderly (2) Diabetes (9)
Heart Disease	Children/Teens (4) Adults/Elderly (28)	Diet and Exercise (26)	Children/Teens (0) Adults/Elderly (0) Cardiovascular Disease (10)
Healthy Eating/Nutrition and Active Living	Children/Teens (98) Adults/Elderly (64)	Diet and Exercise (26)	Children/Teens (8) Adults/Elderly (8) Physical Activity (13) Obesity (8) Nutrition (5)
Immunizations & Infections Disease	Children/Teens (57) Adults/Elderly (46)	Sexual Activity (7)	Children/Teens (16) Adults/Elderly (0) Vaccination (15) HIV/AIDS, STIs and Pregnancy (9)

Appendix 5: Economic Impact of Top Health Priorities 2019

Economic Impact of Top Health Priorities 2019

Substance Abuse

- Abuse of tobacco, alcohol and illicit drugs is costly to our nation, exacting more than **$740 billion** in costs in 2010 related to crime, lost work productivity and health care (National Institute on Drug Abuse).
- The total cost of excessive alcohol use in the U.S. reached **$249 billion** in 2010, or about $2.05 per drink (CDC).
- Most (77%) of these costs were due to binge drinking. Nationally, 1 in 6 people binge drink (CDC).
- Most of the costs resulted from losses in workplace productivity (72% of the total cost), health care expenses for treating problems caused by excessive drinking (11% of total), law enforcement and other criminal justice expenses (10%), and losses from motor vehicle crashes related to excessive alcohol use (5%) (CDC).
- In **Illinois**, the estimated cost of alcohol use in 2010 was over $9.7 billion, which is $757 per capita or about $1.86 per drink (CDC).
- The total economic burden of prescription opioid overdose, abuse and dependence to the U.S. in 2013 is estimated to be **$78.5 billion**. Over one third of this amount is due to increased health care and substance abuse treatment costs **($28.9 billion**) (*Med Care*, 2016 October, Volume 54, U.S. National Library of Medicine, National Institutes of Health).

Mental Health

- Each year, serious mental illness costs Americans **$193 billion** in lost earnings (American Journal of Psychiatry).
- Much of the economic burden of mental illness is not the cost of care, but the loss of income due to unemployment, expenses for social supports, and a range of indirect costs due to a chronic disability that begins early in life (NIH).
- Depression and anxiety have a significant economic impact; the estimated cost to the global economy is **U.S. $1 trillion** per year in lost productivity. (WHO)
- Suicide costs society over **$44.6 billion** a year in combined medical and work loss costs. The average suicide costs **$1,164,499** (CDC).
- The economic burden of schizophrenia, bipolar disorder and major depressive disorder in adults in **Illinois** is estimated to be at least **$1.4 billion for each serious mental illness (MacEwan JP, Seabury S, et al. Pharmaceutical Innovation in the treatment of schizophrenia and mental disorders**.

Respiratory Disease

- The yearly cost of asthma in the U.S. is around **$56** billion (2009 dollars). The direct costs make up almost **$50.1 billion**. Hospital stays are the largest part of that cost. Indirect costs make up **$5.9 billion**. This includes lost pay from sickness or death and lost work output from missed school or work days (EPA).
- Nationally, children with asthma **miss 2.48 more days of school** each year than children without asthma.

- In Illinois, **$383 million** was spent on asthma hospitalizations in 2010 (IDPH).
- In 2010, the cost of COPD in the U.S. was projected to be approximately **$50 billion**, which includes $20 billion in indirect costs and $30 billion in direct health care expenditures (*ClinicoEconomics and Outcomes Research*, U.S. National Library of Medicine, National Institutes of Health).
- Total costs incurred by COPD patients are approximately $6000 higher than non-COPD patients (COPD Foundation).

Diabetes

- The total of diagnosed diabetes in 2017 in the U.S. was **$327 billion**, including **$237 billion** in direct medical costs and **$90 billion** in reduced productivity (American Diabetes Association).
- The largest components of medical expenditures for diabetes are:
    - hospital inpatient care (30% of the total medical cost),
    - prescription medications to treat complications of diabetes (30%),
    - anti-diabetic agents and diabetes supplies (15%), and
    - physician office visits (13%) (American Diabetes Association).
- People with diagnosed diabetes incur average medical expenditures of $16,752 per year, of which about $9601 is attributed to diabetes (American Diabetes Association).
- People with diagnosed diabetes on average have medical expenditures approximately 2.3 times higher than what they would be in the absence of diabetes (American Diabetes Association).
- Diabetes and prediabetes cost an estimated **$12.2 billion in Illinois** each year (American Diabetes Association).

Heart Disease

- In 2016, cardiovascular disease cost America **$555 billion**. By 2035, the cost will skyrocket to **$1.1 trillion**." (American Heart Association)
- 1 in every 6 health care dollars is spent on cardiovascular disease. (CDC)
    - On average, an employee with cardiovascular disease costs his or her employer nearly 60 hours and over $1,100 more in lost productivity per year than an employee without cardiovascular disease. (RTI International for the American Heart Association)
    - Studies have found **Illinois** spends more than **$12.5 billion** a year in health care dollars to treat chronic diseases. The financial burden from the impact of lost work days and lower employee productivity during the same period resulted in an annual economic loss of **$43.6 billion** (IDPH).
    - Chronic diseases are largely preventable conditions associated with an individual's health and lifestyle choices. At least 80 percent of premature heart disease, stroke and type 2 diabetes and 40 percent of cancer diagnoses could be prevented through healthy diet, regular physical activity and avoidance of tobacco products.

Obesity

- The estimated annual medical cost of obesity in the U.S. was **$147 billion** in 2008 U.S. dollars (CDC).
- The medical costs for people who are obese were **$1,429 higher** than those of normal weight (CDC).

- The annual nationwide productive costs of obesity-related absenteeism range between **$3.38 billion** ($79 per obese individual) and **$6.38 billion** ($132 per obese individual).
- Obesity costs the **Illinois** health care system and taxpayers nearly **$3.4 billion** per year (Illinois Alliance to Prevent Obesity).

Adult Immunizations

- The estimated total remaining economic burden at approximately **$9 billion** in 2015 from vaccine-preventable diseases related to ten vaccines recommended for adults ages nineteen and older. Unvaccinated individuals are responsible for almost 80 percent, or **$7.1 billion**, of the financial burden (CDC).
- This burden includes unexpected increases in health expenditures and lost income as a result of reduced functional capacity. (*Health Affairs*, November 2016, U.S. National Library of Medicine, National Institutes of Health).

Sexually Transmitted Infections (STIs)

- In February 2013, CDC published two analyses to provide an in-depth look at the human and economic burden of STIs in the U.S.
- The CDC concluded that STIs place a significant economic strain on the U.S. health care system. Conservative estimates indicate that the lifetime cost to treat eight of the most common STIs contracted in just one year is **$15.6 billion** in 2010 dollars. The eight common STIs included are chlamydia, gonorrhea, hepatitis B virus (HBV), herpes simplex virus type 2 (HSV-2), HIV, Human papillomavirus (HPV), syphilis and trichomoniasis.
- Because some STIs, especially HIV, require lifelong treatment and care, they are by far the costliest. In addition, HPV is particularly costly due to the expense of treating HPV-related cancers. However the annual cost of curable STIs is also significant, at **$743 million**. Among these, chlamydia is most common and therefore the costliest (CDC).

Appendix 6: Advocate Sherman PSA Area Dashboard Snapshots

**Full dashboards are available upon request*

Advocate Sherman Hospital PSA Zip Codes			Economy					
Rank	Zip Code	Community/County/State	Household with Case Public Assistance Income	Homeownership	Renters Spending 30% of More of Household Income on Rent	Children Living Below Poverty Level	People 65+ Living Below Poverty Level	Median Household Income
	US	**US Value**	2.7%	55.9%	47.3%	21.2%	9.3%	$55,322
	State	**Illinois Value**	2.5%	59.6%	49.6%	19.5%	8.8%	$59,196
	County	**Kane**	1.7%	69.0%	49.1%	16.8%	6.2%	$71,602
	County	**McHenry**	1.2%	74.1%	45.3%	10.8%	5.1%	$79,836
		PSA	1.6%	72.7%	51.1%	15.6%	5.7%	N/A
5	60110	Carpentersville	1.9%	63.8%	51.2%	27.7%	6.5%	$59,011
5	60120	Elgin	1.8%	59.8%	52.6%	24.9%	8.7%	$53,390
4	60123	Elgin	2.1%	56.7%	59.3%	24.1%	7.4%	$56,554
3	60118	Dundee	1.1%	72.5%	45.2%	10.7%	6.3%	$80,882
3	60177	South Elgin	2.9%	82.4%	49.6%	8.3%	7.4%	$86,741
3	60142	Huntley	0.8%	87.3%	63.3%	1.1%	5.4%	$80,136
2	60156	Lake in the Hills	0.8%	79.8%	37.3%	7.0%	2.3%	$85,778
1	60102	Algonquin	1.8%	82.9%	45.7%	3.8%	4.1%	$98,864
1	60136	Gilberts	0.0%	88.0%	0.0%	0.0%	0.0%	$123,399
1	60124	Elgin	0.3%	88.8%	21.9%	7.2%	2.5%	$96,266
Data Source			2012-2016 American Community Survey	2012-2016 American Community Survey	2012-2016 American Community Survey	2012-2016 American Community Survey	2012-2016 American Community Survey	2012-2016 American Community Survey