



# Community Health Needs Assessment

2014 - 2016



Advocate Good Samaritan Hospital



December 2016

Thank you for taking the time to learn more about Advocate Good Samaritan Hospital's Community Health Needs Assessment (CHNA). I believe that this CHNA report will provide a comprehensive picture of the health status of the communities served by the hospital. Meeting the health needs of the communities that we are privileged to serve is at the core of our mission. Good Samaritan associates, leaders and physicians are committed to providing high-quality and safe care with compassion and dignity.

Every three years the hospital completes a comprehensive CHNA by collecting and analyzing demographic and health data to strategically direct our efforts to the communities and health issues where they are most needed. Developing a strategic health plan that aligns with the health needs of the community is essential in creating a measurable impact in the communities that we serve.

Good Samaritan Hospital convened a Community Health Council, comprised of community experts and hospital leaders, that reviewed comprehensive demographic, socioeconomic and health data, engaged community input and made recommendations for the selection of priority health needs. Based upon the consideration of comprehensive data and community feedback, the Council selected mental health and healthy lifestyles as health need priorities.

As a community hospital, we understand healthy lifestyles and mental health as fundamental building blocks of a healthy community. We also appreciate the importance of utilizing evidence informed programs and collaborating with community partners to address these health needs.

We encourage you not only to read the report, but to also provide feedback you may have regarding the health needs of our community. A link at the end of the report will provide you with an opportunity to leave any feedback, comments or ideas regarding our Community Health Needs Assessment. Through strong partnerships, a collaborative spirit and effective programming we will be able to create a measurable impact in the communities that we serve.

A handwritten signature in black ink that reads "David S. Fox". The signature is written in a cursive, flowing style.

David S. Fox  
*President*  
*Advocate Good Samaritan Hospital*

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# I. Executive Summary

Advocate Good Samaritan Hospital completed a comprehensive Community Health Needs Assessment (CHNA) process in 2016. The CHNA report includes demographic data for the hospital's primary service area (PSA) and key findings regarding the community's health status. For the purposes of this report, the "community" was defined as the PSA of the hospital. The PSA consists of fifteen communities in western DuPage County, two communities in Will County and one community that has portions in Will, Cook and DuPage Counties.

Demographic and socioeconomic data were collected for the hospital's PSA to more accurately analyze the health needs of the community. The hospital's PSA is 78.65 percent white, 9.45 percent Asian, 6 percent African American, 3.44 percent other, 2.4 percent Native Hawaiian/Pacific Islander and .03 percent American Indian/Alaskan Native. The largest ethnicity is Hispanic at 10.32 percent and the largest age group is 25-64. The PSA is 48.64 percent male and 51.34 percent female with an average household income of \$110,956.

In 2016, the Community Health Council (CHC) was formed to advise and oversee the CHNA process. The CHC, which includes community and hospital representatives, along with the Community Health Manager reviewed and analyzed both primary and secondary data to determine the health needs of the hospital's PSA. The top ten health needs of the hospital's primary service area are listed below.

- Substance and Alcohol Abuse
- Asthma
- Cancer
- Access to Healthcare
- Obesity and Nutrition
- Immunization-Preventable Pneumonia and Influenza
- Mental Health
- Senior Health
- Domestic Violence
- Heart Disease and Stroke

After a thorough review and analysis of data, the CHC began the initial stage of prioritization using the Hanlon Method. This method of prioritization provided a foundation for the CHC to evaluate the feasibility of addressing each of the health needs. Using the Hanlon Method results, Council members voted for the top three health needs for the hospital's PSA. Various criteria were considered during this phase of prioritization such as, degree to which community partners are involved in addressing the health need, importance to the community and hospital resources available to address the health need. The CHC selected obesity and nutrition, mental health and substance abuse as the top three health needs for the hospital's defined community.

Mental health, substance abuse, and obesity and nutrition were selected as the top three health needs for the hospital's PSA for various reasons. Both mental health and substance abuse have become increasingly important to the community and rates of emergency department (ED) visits and hospitalizations due to mental health and substance abuse have increased over time. Substance abuse prevalence and incidence rates are also high compared to other counties. According to the DuPage County community survey, obesity and nutrition were reported as top health concerns in the community. Rates of overweight and obesity in DuPage County were high, especially in the low-income population. Obesity and nutrition are also some of the causal factors for many of the other identified health issues within the PSA such as heart disease, stroke and cancer; therefore obesity and nutrition were included in the top three health needs because of their ability to serve as protective factors for many of the other identified health needs within the PSA.

It is essential that the hospital creates a measurable impact through a robust CHNA Implementation Plan. In consideration of the hospital's capacity and resources, the CHC and the Community Health Manager decided to narrow the number of priorities from three to two. This allows the hospital to create

a measurable impact while developing and implementing feasible and realistic goals and objectives. After extensive discussion, the following health needs were voted as the 2016 CHNA priorities.

- Healthy lifestyles (obesity prevention/nutrition)
- Mental Health

To address the 2016 CHNA healthy lifestyles priority, the hospital will explore multiple strategies and partnerships including a partnership with University of Illinois Extension and local food pantries to implement healthy lifestyle workshops to food pantry clients and community residents. The Good Samaritan Health and Wellness Center Dietician will also collaborate with University of Illinois Extension and food pantries to implement the workshops.

The hospital will explore multiple strategies, programs and partnerships that address mental health including a collaboration with the National Alliance for Mental Illness (NAMI). The hospital is exploring the opportunity to partner with schools and NAMI along with Good Samaritan Hospital mental health counselors to implement the Ending the Silence program in schools within the hospital's PSA.

The hospital will begin developing the CHNA Implementation Plan, which will provide details around how the hospital will address the prioritized health needs including: implementation strategies, community partnerships, and program goals and objectives. The Community Health Manager will work closely with the CHC to identify programs, community partners and target communities. It is essential that the hospital work collaboratively with community organizations to create and sustain a measurable impact therefore the Implementation Plan will outline specific and measureable program goals and objectives.

The 2014-2016 CHNA process provided great insight into the health needs of the PSA and the hospital looks forward to creating innovative partnerships to implement programs that address the needs of the community.

## **II. Description of Advocate Health Care and Advocate Good Samaritan Hospital**

### **Advocate Health Care**

Advocate Good Samaritan Hospital is one of 11 hospitals in the Advocate Health Care (Advocate) system. Advocate is the largest health system in Illinois and one of the largest healthcare providers in the Midwest, operating more than 400 sites of care, including 11 acute care hospitals, the state's largest integrated children's network, 5 Level I trauma centers, 2 Level II trauma centers, the region's largest medical group and one of the region's largest home health care companies. The Advocate system trains more primary care physicians and residents at its four teaching hospitals than any other health system in the state.

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

### **Advocate Good Samaritan Hospital**

Advocate Good Samaritan Hospital opened in 1976 and is a 300-bed hospital committed to providing clinically excellent, compassionate care. The hospital has more than 1,000 physicians representing 63 specialties and more than 2,200 associates, 580 volunteers and 1,130 auxiliaries. Through strong partnerships with outstanding physician and nursing staff, the hospital is improving the health of residents in the community and meeting the highest standard of patient care. Over its 40-year history, Good Samaritan Hospital has evolved into a recognized national leader in health care. It has been named

to the 100 Top Hospitals list seven times. Good Samaritan Hospital also is the only health care organization in the state of Illinois to earn the prestigious Malcolm Baldrige National Quality Award, achieving this honor in 2010.

Good Samaritan Hospital features DuPage County’s only Level I trauma center. It also provides the community with a certified Level III neonatal intensive care unit and has twice received the American Nurses Credentialing Center Magnet® recognition for nursing excellence. A range of services are offered at the hospital including cardiology, oncology, neurosurgery, orthopedic surgery, general surgery, gastroenterology, stroke care, obstetrics and gynecology, low-dose diagnostic imaging, and a comprehensive breast center. In addition to the clinical service lines, the hospital also has a Wellness Center, which is a 90,000 square-foot medical-model fitness center that is located on the hospital’s campus.

**Exhibit 1: Advocate Good Samaritan Hospital General Statistics 2015**

	Number
Inpatient Admissions	15,583
Observation Admissions	5,083
Births	1,846
Emergency Department Visits	42,355
Surgical Cases	8,947
Outpatient Visits	141,078

Source: Advocate Health Care Strategic Planning Department, 2016.

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

#### Community Definition

In the 2011-2013 Community Health Needs Assessment (CHNA), Good Samaritan Hospital defined the community as the hospital’s primary service area (PSA). The PSA consists of 15 communities in western DuPage County, 2 communities in Will County and 1 community that has portions in Will, Cook and DuPage Counties.

#### Assessment Process

After the data collection phase of the assessment was complete, the Good Samaritan Hospital Community Health Council (CHC) met several times to review key findings and discuss how to prioritize the identified needs. The CHC alongside key community partners used a prioritization tool to rank the six key community health needs. The prioritization tool used a rating system based on six criteria, which included:

- Seriousness of the need
- Importance to the community
- Size of the problem (% of population affected)/Extent of the need
- Degree to which effective programs are available to address the need
- Degree to which community assets can help address the need
- Degree to which community partners can/are involved in solving the problem

The Community Health Council indicated significance of community need through using the following rating scale:

- High (3)
- Medium (2)
- Low (1)
- None (0)

Good Samaritan Hospital convened a meeting with hospital leadership and community representatives to discuss the identified health needs. The Community Health Council and invited key community partners were asked to rate each criterion in context of each key community health need. Participants used the rating scale indicated above to assign 0, 1, 2 or 3 based on data and their belief that need was high, medium or low in the community. The scores were aggregated and each identified health need was assigned a value, and ranked in order of the assigned score. The prioritized health needs that resulted from this process were:

- Senior Health 17.0
- Overweight/Obesity 16.67
- Mental Health 16.16
- Access to Health Care 15.20
- Substance Abuse 14.60
- Infectious Disease 11.40

After carefully reviewing the data and considering key community partners' feedback, the CHC determined that senior health and overweight/obesity would be chosen as the hospital's priority needs based on the availability of resources and community partners.

### **Needs Identified and Priorities Selected**

As indicated in the previous section Good Samaritan Hospital identified six key health needs for the hospital's PSA. These key health needs included: senior health, overweight/obesity, mental health, access to health care, substance abuse and infectious disease. After undergoing an extensive prioritization process with community partners, the hospital's CHC prioritized senior health and childhood obesity as health needs for the 2013 CHNA.

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

As a result of the 2013 CHNA the hospital identified two community programs to address childhood obesity and senior health. In 2014 the hospital implemented Matter of Balance (MOB) and partnered with the ProActive Kids (PAK) program to effectively address the prioritized health needs within the PSA. The MOB program focuses on fall prevention for seniors while PAK aims to reduce childhood obesity.

#### *ProActive Kids*

PAK's overall program goal is to reduce childhood obesity in children age eight to fourteen with a high body mass index (BMI). The program provides nutrition education, physical education and healthy lifestyle coaching to high-risk children and their families. A pre and post survey measures increases in physical activity, social engagement and improved diet and nutrition. Since the inception of the Good Samaritan Hospital PAK program, over 172 children have been served and 129 children have graduated from the program. From 2014-2016, 65 percent of program participants reported changing their commitment to fitness as a result of the program, and 67 percent of parents reported a solid to significant improvement in how their child changed their attitude toward diet and nutrition since beginning the program.

#### *Matter of Balance*

The MOB program aims to reduce the fear of falling and increase physical activity among seniors. Each MOB class consists of 8 sessions within four weeks. These sessions teach seniors strategies to reduce falling. Since the inception of the program at Good Samaritan Hospital, over 127 seniors have graduated. An average of over 89 percent of participants that completed the class evaluation survey agreed that they planned to continue exercising after completion of the MOB program. An average of over 81 percent of program participants that completed the class evaluation survey made changes to his/her environment to reduce the risk of falling.

### **Input from the Community**

Although many feedback mechanisms were put in place for the general public to comment or provide input on the CHNA, the hospital did not receive any feedback from the community. The hospital will continue to encourage input from the community by providing various feedback mechanisms for the 2014-2016 CHNA.

## Lessons Learned

Throughout the 2011-2013 CHNA process there were several lessons learned. Although the hospital partnered with several community organizations and held community focus groups, the importance of sustaining community involvement throughout the entire process and after completion of the CHNA is essential to a successful Implementation Plan. The hospital will increase community representation on the Community Health Council and will create and maintain a sustainable Council that convenes throughout the year for the 2014-2016 CHNA. The Council will not only support the completion of the 2014-2016 CHNA but will also monitor progress of the Implementation Plan and provide feedback for program improvement.

In addition, the hospital also learned that addressing health need priorities through programs that use train-the-trainer models is a more effective and sustainable method to address health needs and increases the capacity of both the hospital and the community. Through implementing the MOB program—a train-the-trainer program—the hospital has been able to train several community organizations to implement the program within the communities they serve. Programs that utilize the train the trainer model are sustainable and can reach several communities in need without relying solely on hospital staff or capacity.

Furthermore, the hospital recognized the need to include target communities in the Implementation Plan to ensure that community programs are reaching the most vulnerable populations within the hospital's PSA. As the hospital began program implementation in 2014, a need to reach additional underserved PSA communities was recognized, therefore additional community partnerships were established to provide a community-based setting for program implementation in more at-risk PSA communities. For example, PAK was offered in Westmont within a community setting. This community had one of the highest percentages of free and reduced lunches in the hospital PSA.

Lastly, the importance for the hospital to be engaged in other CHNAs within DuPage County became evident as the 2011-2013 CHNA was being conducted. The duplication of CHNA health priorities and data was not only inefficient but also complicated the hospital's process to obtain feedback from community partners, as most of them were not only engaged in their own CHNA process but several others around DuPage County.

## IV. 2014-2016 Community Health Needs Assessment

### Community Definition and Sociodemographic Description

Over 75 percent of Good Samaritan Hospital's patient volume comes from the hospital's primary service area (PSA). An additional 7.3 percent of the patient volume comes from the hospital's secondary service area (SSA). The combined PSA and SSA make up the hospital's total service area (TSA), which accounts for 82.8 percent of the patient volume. The remaining 17.2 percent of the hospital's patient volume comes from outside the TSA.

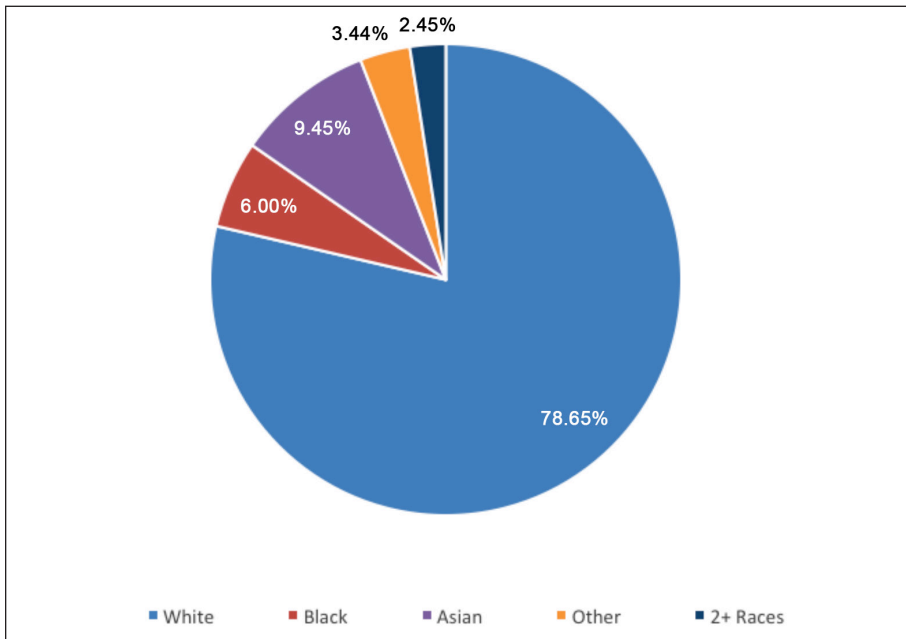
For the purposes of this CHNA, Good Samaritan Hospital defines the community as its primary service area (PSA). The PSA for the hospital consists of 15 communities representing 21 zip codes in DuPage County and 3 communities representing 3 zip codes in Will and Cook Counties. The PSA communities include Lombard (60148), Downers Grove (60515, 60516), Westmont (60559), Woodridge (60517), Darien (60561), Glen Ellyn (60137), Lisle (60532), Villa Park (60181), Oak Brook (60523), Willowbrook (60527), Bolingbrook (60440), Lemont (60439), Wheaton (60189, 60187), Elmhurst (60126), Naperville (60563, 60540), Clarendon Hills (60514), Romeoville (60446) and Hinsdale (60521).

### *Race/Ethnicity*

The total population for the PSA is 653,410 (Healthy Communities Institute, Claritas, 2016). The demographic data shows that the hospital's PSA is 78.65 percent White, 9.45 percent Asian, 6 percent African American, 3.44 percent Other, 2.4 percent Native Hawaiian/Pacific Islander and .03 percent American Indian/Alaskan Native. A graph showing the racial composition of the PSA is pictured below in Exhibit 2.



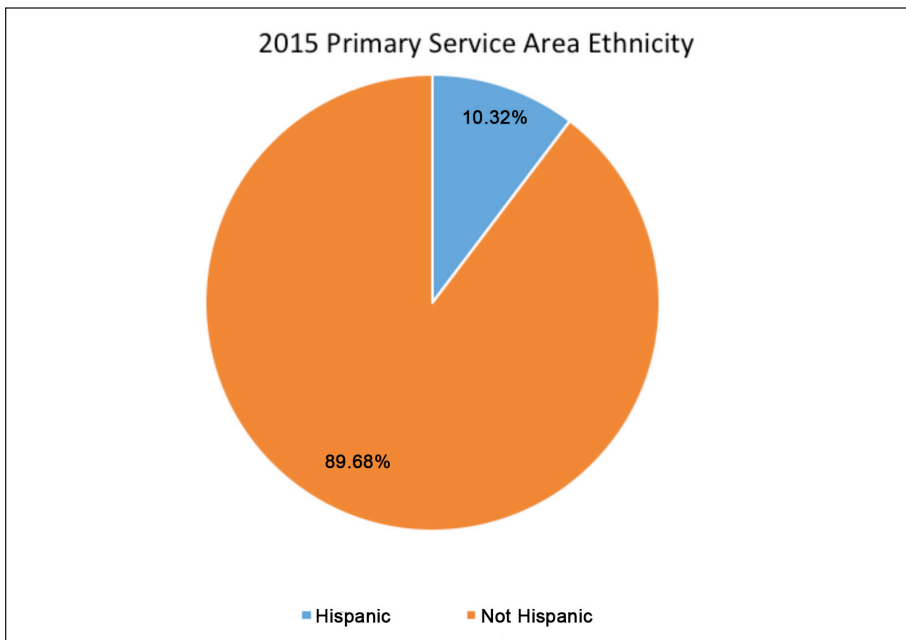
### Exhibit 2: Primary Service Area by Race 2015



Source: Healthy Communities Institute, Claritas, 2015.

The PSA is 10.32 percent Hispanic and 89.68 percent non-Hispanic. A graph of the PSA ethnic composition is pictured below in Exhibit 3.

### Exhibit 3: Primary Service Area by Ethnicity 2015



Source: Healthy Communities Institute, Claritas, 2015.

### Age

22.7 percent of the PSA is under the age of 18 while 9 percent is between the ages of 18-24 (Healthy Communities Institute, Claritas, 2015). The largest age group is 25-64 year olds with 52.9 percent of the population belonging in this age bracket (Healthy Communities Institute, Claritas, 2015). The senior population was the third largest group, with 15.3 percent of the PSA above the age of 65 (Healthy Communities Institute, Claritas, 2015). Exhibit 4 displays the PSA by age group.

**Exhibit 4: Primary Service Area by Age 2015**

Age	Population	Percent
Age < 18	148,418	22.7%
Age 18-24	59,120	9%
Age 25- 64	345,889	52.9%
Age 65+	99,992	15.3%

Source: Healthy Communities Institute, Claritas, 2015.

*Gender*

**Exhibit 5: Primary Service Area by Gender 2015**

Gender	
Male	48.64%
Female	51.34%

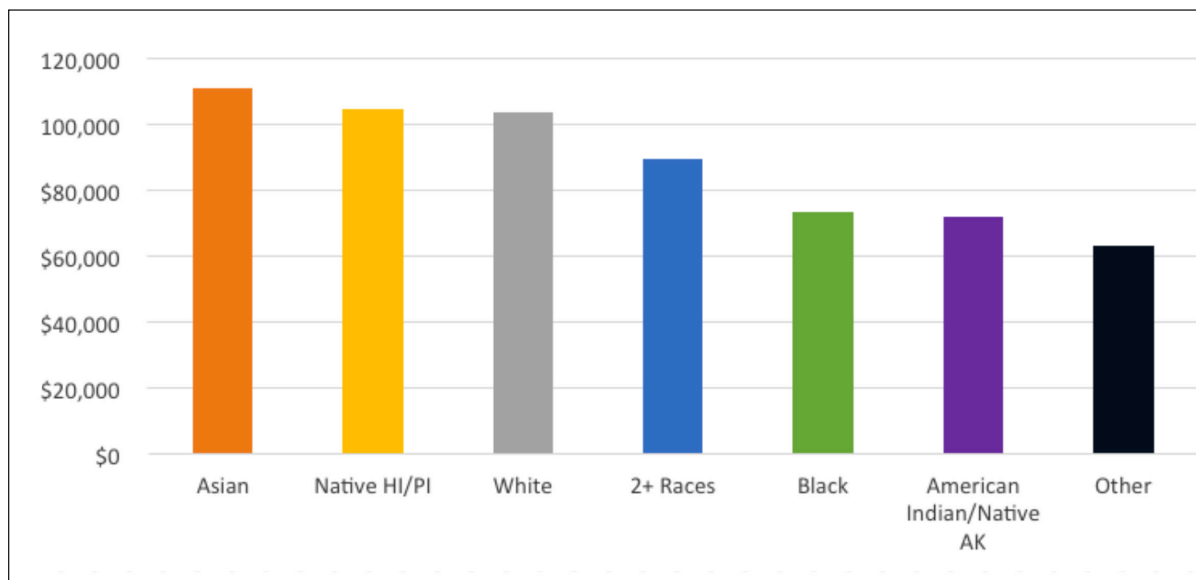
Source: Healthy Communities Institute, Claritas, 2015.

*Income*

The average annual household income in 2015 for the hospital’s PSA is \$110,956, which is significantly higher than the state’s average household income at \$81,390 (Healthy Communities Institute, Claritas, 2016). The number of families living below the federal poverty level is 7,526, which accounts for 4.4 percent of the PSA population. The Asian, Native Hawaiian/Pacific Islander and White racial groups have the highest average household income, while the Black and American Indian/Alaskan Natives subgroups had the lowest average household incomes. Income disparity also existed between Hispanic and non-Hispanic ethnicity.

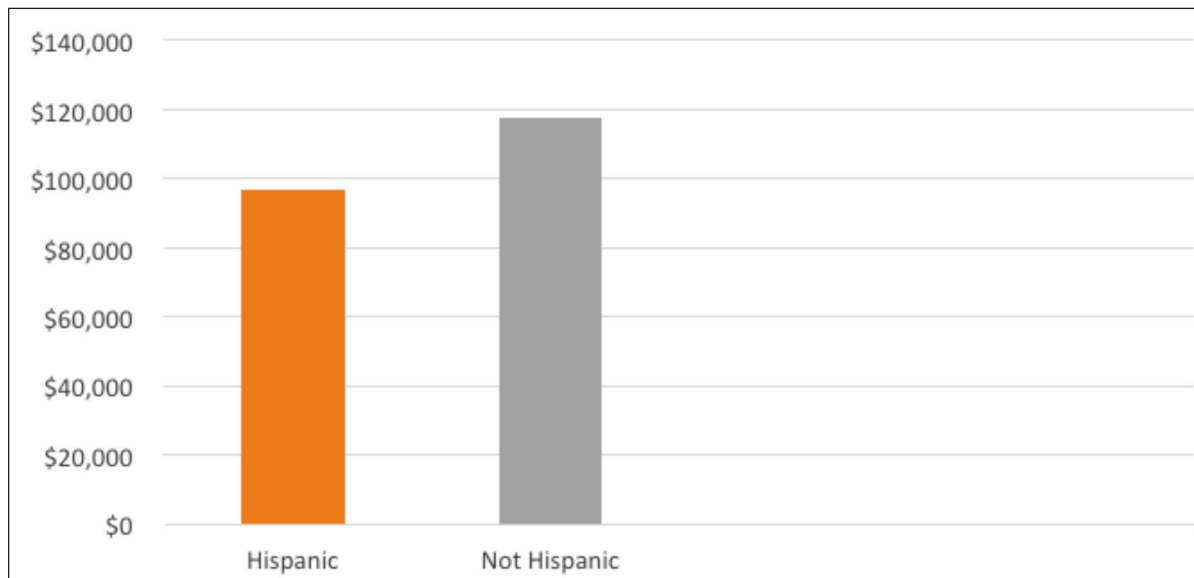
The Hispanic population’s average household income for the PSA is \$82,294 while the average household income for non-Hispanics is \$113,285. The graphs in Exhibits 6 and 7 depict PSA average household income by race and average household income by ethnicity.

**Exhibit 6: Primary Service Area Average Household Income by Race 2015**



Source: Healthy Communities Institute, Claritas, 2015.

**Exhibit 7: Primary Service Area Average Annual Household Income by Ethnicity 2015**



Source: Healthy Communities Institute, Claritas, 2015.

*Languages Spoken*

**Exhibit 8: Primary Service Area by Languages Spoken at Home 2016**

Language	Percentage of People in PSA
Speak Only English at Home	77.93%
Speak Spanish at Home	8.32%
Speak Asian/Pacific Islander at Home	4.39%
Speak Indo-European Language at Home	8.46%
Speak Other Language at Home	0.89%

Source: Healthy Communities Institute, Claritas, 2016.

*Education and Employment*

5.4 percent of the hospital’s PSA population over the age of 25 does not have a high school diploma, which is 7.6 percent lower than the Illinois rate. The unemployment rate among those 16 years of age or older in the PSA is 7.5 percent, which is also lower than the Illinois unemployment rate at 9.8 percent.

Considering 79 percent of the hospital’s PSA is in DuPage County, the hospital also reviewed and analyzed educational attainment data for DuPage County to provide a more comprehensive understanding of the level of education achieved in the hospital’s PSA. Exhibit 9 displays the educational attainment rates in DuPage County.

*Educational Attainment*

**Exhibit 9: DuPage County Educational Attainment 2016**

Educational Attainment	2013
Less than 9th Grade	2.61%
Some High School, No Diploma	3.63%
High School Diploma	18.14%
Some College or Associates Degree	26.27%
Bachelor Degree	29.59%
Graduate or Professional degree	19.76%

Source: Healthy Communities Institute, Claritas, 2016.

## Health Insurance Coverage

**Exhibit 10: Primary Service Area by Health Insurance Coverage**

Insurance	Percent of PSA	Number of People in PSA
Medicaid	14.2%	93,496
Medicare	14.3%	94,155
Uninsured	2.8%	19,094

Source: Advocate Health Care Strategic Planning Department, Truven Insurance Coverage Estimates, 2016.

## PSA SocioNeeds Index

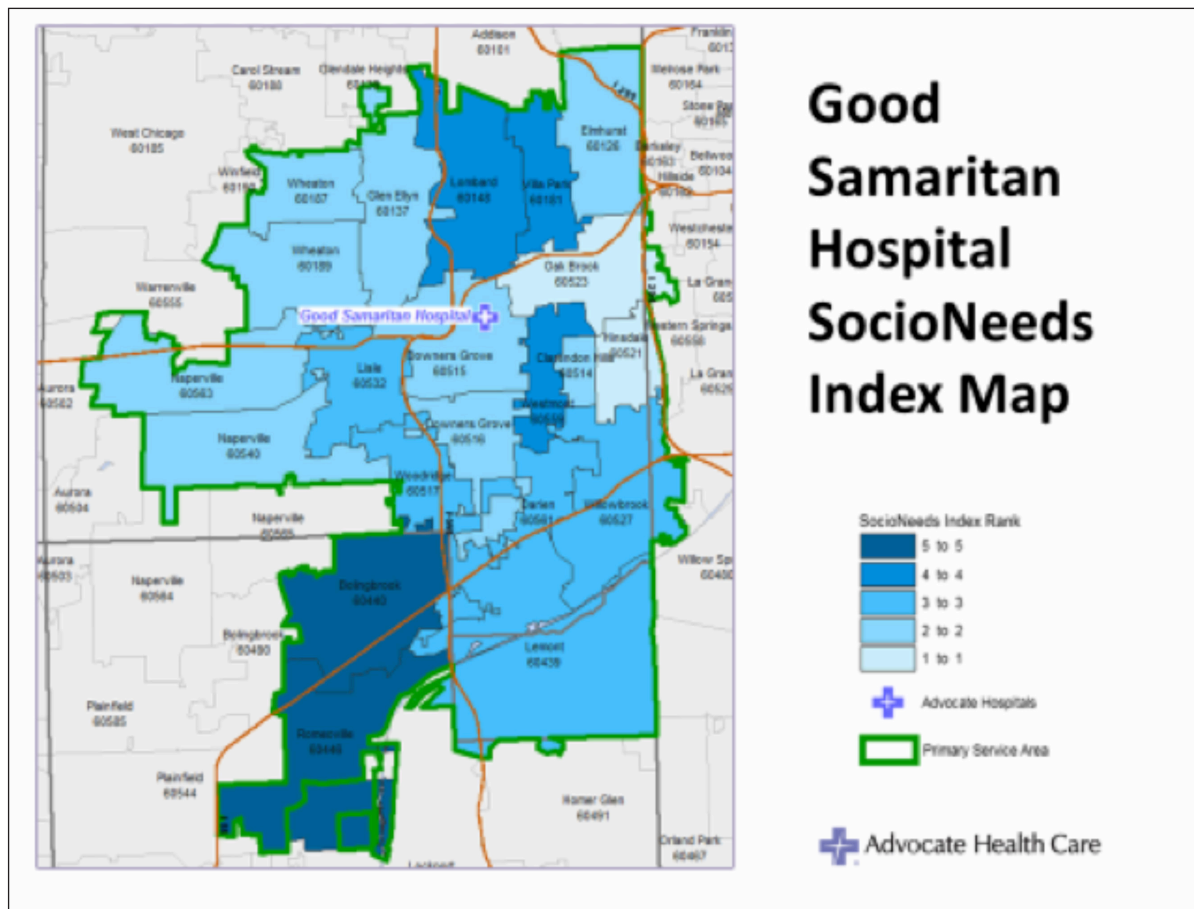
The socioneeds index is a measure of socioeconomic need that is correlated with poor health outcomes (Healthy Communities Institute). Indicators for the index are weighted to maximize the correlation of the index with premature death rates and preventable hospitalization rates. This index combines multiple socioeconomic indicators into a single composite value. As a single indicator, the index can serve as a concise way to explain which areas are of highest need. The scores can range from 1 to 100. A score of 100 represents the highest socioeconomic need. The ranking of 1-5 is a local comparison of each zip code to all others within the PSA; a 5 represents areas of highest socioeconomic need in comparison to others in the specific geographic area under consideration.

The hospital has several communities within the PSA that have greater socioeconomic needs compared to the hospital's other PSA communities. Romeoville, Bolingbrook, Westmont, Lombard and Villa Park are Good Samaritan Hospital's highest need communities. According to the Healthy Communities Institute, Romeoville and Bolingbrook are ranked as 5 and have the most socioeconomic needs that are associated with poor health outcomes compared to all other communities within the hospital's PSA. Zip code level data also supports the high level of socioeconomic need in these two communities through higher rates of emergency department (ED) visits, hospitalization and disease. Specifically, Romeoville and Bolingbrook had the highest rates of age-adjusted hospitalization due to asthma, age-adjusted ED visits due to immunization-preventable pneumonia and influenza, and pediatric mental health issues.

In addition, these two communities have some of the lowest per capita incomes in the hospital's PSA, with Bolingbrook at \$25,757 and Romeoville at \$22,670 compared to the overall PSA at \$40,780. The percentage of people living below the federal poverty level in these two communities is also greater than the overall PSA. Bolingbrook has 10.9 percent of the population living below the poverty level while Romeoville has 9.1 percent, while the overall percentage of people living below poverty level within the PSA is 6.6 percent. Educational attainment is lower in the two communities and the percentage of households with cash public assistance income is greater compared to the overall PSA percentage.

Throughout the data analysis phase of the assessment a trend indicated that communities with higher educational attainment and average household incomes overall had lower incidence and prevalence rates within each of the identified health needs. The correlation between socioeconomic need and higher rates of disease and other health issues is consistent with the social determinants of health concept. This concept correlates social determinants such as employment, education, and housing with health outcomes. For example, populations with lower levels of educational attainment are more likely to have adverse health outcomes. Exhibit 11 shows the SocioNeeds Index Map for the hospital's PSA. This map depicts the various levels of socioeconomic need in the hospital's PSA. The higher numbered rankings are indicators of greater socioeconomic need.

**Exhibit 11: Primary Service Area SocioNeeds Index**



Source: Healthy Communities Institute, Nielsen Company, 2016.

**Key Roles in the 2014-2016 Community Health Needs Assessment**  
*Community Health Council*

In 2016, the Advocate Good Samaritan Hospital Community Health Council (CHC) was formed. The CHC is led by the Community Health Manager and is a diverse council comprised of Good Samaritan Hospital leadership and community representatives from community-based organizations. There are a total of 13 CHC members of which six are hospital representatives and seven are community organization representatives. The CHC serves as an advisory council for the hospital’s community health work and helps to drive the work of the hospital’s CHNA through supporting data collection, data review, prioritizing identified health needs and identifying community partners to support the creation and development of the CHNA Implementation Plan.

The CHC convened for five two-hour in-person meetings throughout 2016 to complete each phase of the CHNA. In addition to in-person meetings, CHC members shared their feedback, comments and recommendations electronically. Community representative council members provided critical feedback and insight regarding needs and community-based programs, while hospital representative council members provided essential feedback and insight related to the hospital’s areas of expertise, capacity and current resources available to the community. In addition, community representatives were able to provide perspectives from various health and social disciplines including knowledge about social determinants of health such as housing and employment. Community representatives were able to share specific knowledge regarding the correlation between social conditions and poor health outcomes. These social indicators were critical in successfully identifying the hospital’s CHNA priorities.

The CHC was essential in thoroughly and successfully completing the CHNA and will continue to convene to ensure that the hospital produces an attainable and collaborative Implementation Plan. The affiliations and titles of Good Samaritan Hospital’s CHC members are listed below.

## **2016 CHC Members**

- DuPage County Health Department, Assistant Director, Client Access
- DuPage County Health Department, Coordinator, Population Health
- DuPage Emergency Physicians, Emergency Department Physician; Hospital Governing Council Member
- DuPage Health Coalition, President
- DuPage Pads, President, Chief Executive Officer
- DuPage Senior Citizens Council, Executive Director
- Peoples Resource Center, Executive Director
- Samaritan Interfaith Counseling, Clinical Director, Adult Services
- Advocate Good Samaritan Hospital, Director, Business Development
- Advocate Good Samaritan Hospital, Director, Public Affairs and Marketing
- Advocate Good Samaritan Hospital, Manager, Community Health
- Advocate Good Samaritan Hospital, OP, Advanced Practice Nurse, Psychology
- Advocate Good Samaritan Hospital, Vice President, Mission and Spiritual Care

The hospital's Governing Council is comprised of community leaders and executive level hospital staff. The principal roles of each governing council member are to support hospital leadership in achievement of the hospital's goals, represent the community's interests to the hospital and to serve as a hospital ambassador in the community. The Governing Council monitors clinical outcomes, patient satisfaction, associate satisfaction, physician credentialing and relations, financial performance, strategic direction and overall community health.

The Governing Council representative on the Community Health Council ensures alignment of community health needs and programming with the hospital's resources, capacity and areas of expertise. Governing Council representation in the CHNA process is critical in understanding and considering the capacity and overall strategic plan and focus of the hospital. These factors are not only important when examining the community's health needs but they are essential in creating and developing the CHNA Implementation Plan. Under the guidance of the Governing Council, the hospital's capacity and strategic plan will support the development and implementation of community programs that will address the CHNA prioritized health needs.

The Governing Council is also the hospital body that has final approval and endorses the CHNA. The Community Health Manager, along with one of the Community Health Council members who is also a Governing Council member, presented the process and findings of the 2016 CHNA to the full Governing Council. The presentation included details of the priority setting process and prioritized health needs. The Good Samaritan Hospital Governing Council approved the 2016 CHNA and the priority health needs on November 18, 2016.

## ***Collaboration with DuPage County Health Department***

There were several ways in which Good Samaritan Hospital collaborated with the DuPage County Health Department on the 2016 CHNA. The most prominent collaboration was through the DuPage County Health Department's membership on the hospital's CHC. During the CHNA process, there were two DuPage County Health Department representatives that served on the CHC including the population health coordinator and the assistant director of quality and compliance. Both of these health department representatives had extensive knowledge of various community health needs and provided input regarding county-wide health issues and program needs.

In addition, Good Samaritan Hospital was engaged in the Impact DuPage community health assessment process, which was led by the DuPage County Health Department. The hospital's Community Health Manager provided valuable input regarding the health needs of the hospital's service area and was engaged throughout the entire health needs assessment. Good Samaritan Hospital is also an active Steering Committee member for the Impact DuPage Initiative, which is led by the DuPage County Health Department. The hospital has been a member of the Steering Committee since its inception in 2013.

Impact DuPage engages community stakeholders in a coordinated approach to ongoing community needs assessment, resulting in data-driven solutions to address county priorities, align resources and improve population level outcomes. These efforts are driven by the Impact DuPage Steering committee.

A presentation outlining Impact DuPage's goals, county health needs and the programs being implemented to address prioritized health needs was provided to the CHC. This provided Community Health Council members with an opportunity to compare the needs of the hospital's PSA to those of the county and determine any overlap or opportunities for alignment. Please see Appendix 3 for a summary of the Impact DuPage Landscape Review. To learn more about Impact DuPage and the Impact DuPage Community Assessment and priorities, click on the following link <http://www.impactdupage.org/>.

### *Collaboration with Other Partners*

In order to complete a comprehensive CHNA, the hospital collaborated with many community organizations, initiatives and experts. Partners from the mental health, substance abuse and obesity fields provided great insight into the county's health issues through presentations and participation in CHC meetings. The details regarding the hospital's collaborations with various service lines and community organizations are highlighted below.

#### **System and Hospital Leadership**

In 2014, Advocate Health Care began organizing resources to implement the 2014-2016 CHNA cycle. The system signed a three-year contract with the Healthy Communities Institute (HCI), now Xerox Health Solutions, to provide an internet-based data resource for their eleven hospitals during the 2014-2016 CHNA cycle. This robust platform offered the hospitals 171 health and demographic indicators including thirty-one (31) hospitalization and emergency department (ED) visit indicators at the service area and zip code levels. In addition, system leaders collaborated with the System Planning Department to create sets of demographic, mortality and utilization data for each hospital site. This collaboration with Strategic Planning continued during the three-year cycle ensuring that each hospital site had detailed inpatient, outpatient and emergency department data for its site.

By the end of 2014, a new Department of Community Health was established under Mission and Spiritual Care. A vice-president was named to lead community health across the system, and a plan developed to ensure that each hospital in the system would have a community health expert to coordinate its community health work. A master's prepared community health manager was hired at Good Samaritan Hospital in October 2015. This community health expert is responsible for coordinating and promoting the hospital's involvement in policies, programs and services to improve the overall health status of the communities it serves. The community health needs assessment process, the convening of the community health council and the co-administering of the hospitals' community benefits reporting process are all responsibilities of the director of community health. There is a matrixed relationship between the community health manager and the hospital's vice president of support operations to ensure the CHNA process and community benefits reporting reflect and influence the hospital's strategic plan.

The hospital's Manager of Outpatient Behavioral Health Services participated in Community Health Council meetings and engaged the hospital's Behavioral Health Department through providing primary data collected by hospital staff. In addition, the Manager of Outpatient Behavioral Health Services was able to share qualitative data on the mental health needs and concerns of patients within the PSA.

The hospital's Cancer Care Center was also engaged in the CHNA process. The hospital's Manager of Oncology Outreach provided primary data on the hospital's cancer patient population. Social and demographic data was also included, which assisted the Community Health Manager and Council in determining any disparities in cancer diagnoses and care.

#### **National Alliance on Mental Illness**

The National Alliance on Mental Illness of DuPage County (NAMI DuPage) is one of the leading mental health organizations in the county. In 2016, NAMI presented at and participated in two Community Health Council meetings. NAMI's presentation included data on common mental health issues within DuPage County, most affected populations in DuPage County, best practices of mental health programming and mental health community programs currently being implemented to address the health need.

### The Prevention Leadership Team

The Prevention Leadership Team (PLT) is a coalition of DuPage County organizations, schools, individuals and initiatives that work together to reduce substance use and increase mental wellness among youth in DuPage County. The task force supported the CHNA through sharing critical substance use/abuse data and shared data regarding substance abuse programs and best practices. The PLT Director also participated in a Community Health Council meeting where she provided critical feedback and input on the substance abuse/use health issue within DuPage County.

### Fighting Obesity Reaching Healthy Weight Among Residents of DuPage

The hospital also collaborated with Fighting Obesity Reaching Healthy Weight Among Residents of DuPage (FORWARD), which is an organization focused on reducing/preventing overweight and obesity within DuPage County. FORWARD supported the development of the 2016 CHNA by providing crucial data on obesity rates within DuPage County including the PSA, health disparities within the hospital's PSA, obesity prevention best practices and programs within our PSA that focus on reducing obesity.

## Methodology

### Secondary Data

Multiple data collection strategies were employed to collect data for the 2016 CHNA. As indicated in the section above, Good Samaritan Hospital collaborated with many partners to collect PSA and county data. Details regarding the hospital's 2016 CHNA secondary data sources are listed below.

### Healthy Communities Institute (HCI)

In early 2014 Advocate Health Care signed a three-year contract with the Healthy Communities Institute (HCI), now Xerox Health Solutions, to provide an internet-based data resource for their eleven hospitals during the 2014-2016 CHNA cycle. This robust platform offered the hospitals 171 health and demographic indicators, including thirty-one (31) hospitalization and emergency department (ED) visit indicators at the service area and zip code levels. Utilizing the Illinois Hospital Association COMPdata, HCI was able to summarize, age adjust and average the hospitalization and ED data for five time periods from 2009-2015. The HCI contract also provided a wealth of county and zip code data comparisons, a Socio Needs Index visualizing vulnerable populations within service areas and counties, a Healthy People 2020 tracker and a database of promising and evidence-based interventions.

As indicated, HCI was a key source of data for the 2016 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 2016 CHNA defined community. All data collected through HCI 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.

HCI provides a gauge that illustrates comparison of indicators across counties, service areas and zip codes.

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

Throughout the CHNA, indicators may be referred to as being in the green, yellow or red zone, in reference to the above value ratings from HCI.



## *Impact DuPage Assessment*

Significant county-level data was available from the 2014 Impact DuPage community assessment process. Impact DuPage assessment data was analyzed by the Community Health Manager and Community Health Council to provide a broad sense of the county's health needs. In conjunction with the Community Health Council the Community Health Manager compared county-level data to PSA-level data to gain an understanding of the health needs of the hospital's PSA compared to health needs of the county. The Impact DuPage assessment also provided data in the form of a community survey, which was a survey conducted in 2014 by Impact DuPage organizations. The survey contained questions on DuPage County's greatest strengths, important health concerns, risky behaviors, community and personal health, and where the community should focus its attention to make things better in DuPage County. The survey also collected respondents' demographic information including zip code, sex, age, marital status, children living in home, DuPage County residency, household income, level of education, race, ethnicity, where respondents receive healthcare and how they pay for healthcare. The demographic data provided context to the responses and enabled the Community Health Council along with the Community Health Manager to identify any social determinants of health and trends in disparities.

## *National Data*

Data regarding national health disparities and social determinants of health was collected from the Centers for Disease Control and National Institute of Health to compare national disparities and social determinants of health to local data trends. This data analysis and comparison assisted the Community Health Manager and Community Health Council in determining vulnerable populations within the PSA and programmatic needs for the Implementation Plan.

## *Primary Data*

In addition to collecting secondary data, the Community Health Manager worked with several Advocate hospital and corporate departments to collect and analyze primary data from Good Samaritan Hospital's Behavioral Health Department, Emergency Department (ED), Cancer Care Center and Strategic Planning Department. Below is a description of the data that was collected from each department within the hospital.

### *Good Samaritan Hospital Behavioral Health Department*

The hospital's Behavioral Health Department provided a robust set of data including number of ED visits due to mental health issues, number of psychiatric admissions over the last three years, number of substance abuse consults completed in the past two years, number of patients admitted and discharged to the hospital's detox unit, insurance coverage for mental health and substance abuse patients and demographic data for patients admitted to the Detox Unit. This data was analyzed and compared to PSA and county data to identify any common trends and disparities as well as social determinants of health. The data was also used in the hospital's Implementation Planning phase to determine the most effective programming and community partners for prioritized health need programs.

### *Good Samaritan Hospital ED*

The hospital ED provided a diverse set of data that captured the admission rates for specific diagnoses. Most importantly the ED data provided information on health care coverage/lack of coverage for patients admitted to the hospital's ED. This data was extremely helpful in identifying issues with access to health care services.

### *Good Samaritan Hospital Cancer Care Center*

In 2015 the hospital's Cancer Care Center conducted a Community Needs Assessment. The assessment provided a description of the hospital's PSA including demographic and socioeconomic data. The assessment also contained data regarding disparities in cancer cases within the PSA, screening programs and prevention programs. This data was used to gain a more in depth understanding of cancer as a health concern within Good Samaritan Hospital's PSA.

## Advocate Health Care Strategic Planning Department

Advocate Health Care Strategic Planning Department collected data from several of the hospital's service lines and ED for analysis of health needs among the hospital's patient population. This data was then compared to PSA and DuPage County data to determine the significance of the health need. Data analysis also identified the top health needs for the hospital and PSA. The data was used as a foundation to conduct a CHNA which identified health needs using more robust and diverse data.

### Input from the Community and Vulnerable Populations

The Community Health Council is comprised of various members that represent the community and vulnerable populations. Recognizing that health issues disproportionately affect vulnerable populations, the Community Health Manager ensured input from social service and community organizations on the Council. Agencies such as DuPage PADS are members of the Council and provided feedback on the health/social needs of vulnerable populations within the hospital's PSA. Community Health Council members from the following organizations represented the needs and concerns of the vulnerable populations as indicated below.

Agency/Organization	Vulnerable Population(s) Represented
DuPage Pads	Homeless, Unemployed, Underemployed, Low-income, Uninsured
Engage DuPage	Uninsured, Underinsured
DuPage Health Coalition	Uninsured, Underinsured, Foreign Born, Low-income
People's Resource Center	Unemployed, Underemployed, Foreign Born, Low-income
DuPage Senior Citizens Council	Low-income Seniors
Access DuPage	Uninsured, Underinsured

In addition to Council members representing vulnerable populations, the hospital engaged the National Alliance on Mental Illness (NAMI), Prevention Leadership Team (PLT) and Fighting Obesity Reaching Weight Among Residents of DuPage (FORWARD), which are organizations that were all able to provide input on the vulnerable populations that are disproportionately affected by health issues and social barriers in the PSA.

### Summary of Results

The initial data collection and analysis was completed by the Community Health Manager. The criteria used to identify and evaluate the health needs for the PSA were as follows:

- Number of cases/people affected by health issue drastically increased over time
- Large number/percentage of people affected by the health issue
- Incidence and prevalence rates are high/low compared to other counties
- The community expressed concern and indicated the health issue is important

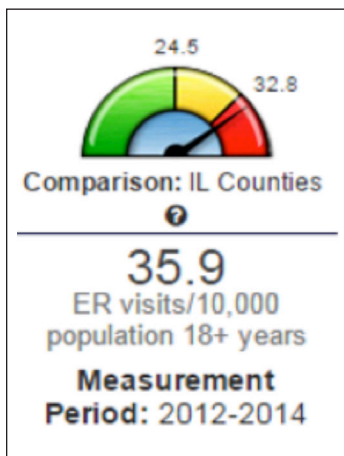
Using this set of criteria, the Community Health Manager generated a list of the top ten health needs in the hospital's PSA. Data binders that contained demographic and health needs data from the hospital's PSA and DuPage County were created for each Council member. Supporting data for each identified health need was presented along with the PSA's demographic and socioeconomic data. (See Appendix 4 for the detailed data presented to the CHC.) Eighteen of the twenty-one zip codes in the hospital's PSA are in DuPage County therefore DuPage County data was included in the data review and analysis to include a more diverse and robust data set for analysis of the PSA's health needs. Data was reviewed and discussed by CHC members. The sections below review key data for each of the PSA's top ten health needs.

## Substance and Alcohol Abuse

The rate of substance and alcohol abuse continues to increase in the hospital's PSA. From 2009 to 2014 the rate of ED visits due to alcohol abuse went from 20.5 per 10,000 population to 35.9. Similarly the age-adjusted ED rate due to substance abuse increased from 7.8 in 2009 to 11.6 in 2014. The hospital's PSA also has a higher rate of hospitalization due to alcohol abuse compared to other counties in the state at 20.5 per 10,000 population aged 18 and older.

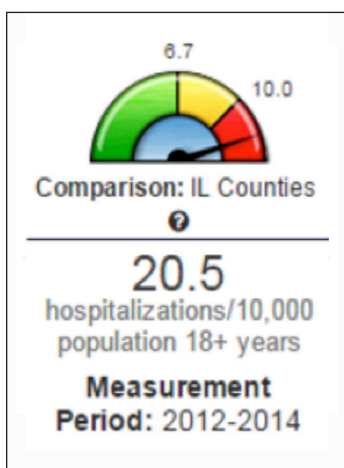
There were three zip codes in the hospital's PSA that had higher rates of alcohol related hospitalization and ED visits due to substance abuse compared to all other communities in the PSA. Westmont (60559), Downers Grove (60515) and Wheaton (60187) all had significantly higher rates of hospitalization due to alcohol abuse and ED visits due to substance abuse. The overall PSA had a rate of 20.5 per 10,000 for hospitalization due to alcohol abuse compared to Wheaton (60187) at 35.9, Westmont at 33.7 and Downers Grove (60515) at 36.4. The PSA ED visit rate due to substance abuse was 11.6 per 10,000 compared to Wheaton (60187) at 14.8, Westmont at 18.3 and Downers Grove (60515) at 14.8.

### Exhibit 12: PSA Age-Adjusted ER Rate due to Alcohol Abuse 2012-2014



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

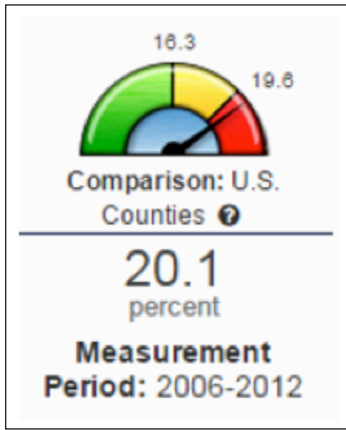
### Exhibit 13: PSA Age-Adjusted Hospitalization Rate due to Alcohol Abuse 2012-2014



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

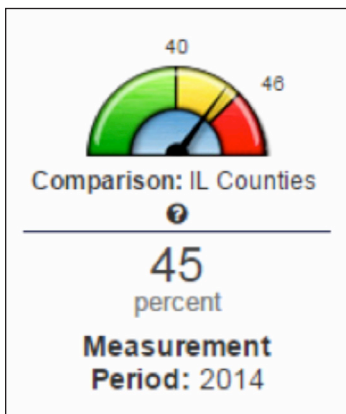
As indicated in the section above, the hospital and 86 percent of the hospital's PSA are within DuPage County; therefore the Community Health Manager and Council reviewed DuPage County data. Similar to the hospital's PSA, the county has significantly higher rates of substance and alcohol abuse compared to other counties in Illinois. The county data trends of substance and alcohol abuse were similar and consistent with the hospital's PSA. Additional county data showed that 20.1 percent of adults in DuPage County drink excessively and the hospitalization rate due to alcohol (19.1 per 10,000 population aged 18 and older) is substantially higher than other Illinois counties. Teens in DuPage County also had high rates of alcohol and marijuana use compared to other counties in Illinois.

**Exhibit 14: DuPage County Adults who Drink Excessively 2006-2012**



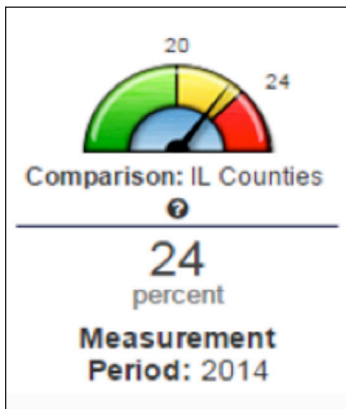
Source: Healthy Communities Institute, County Health Rankings, 2015.

**Exhibit 15: DuPage County Teens who Use Alcohol 2014**



Source: Healthy Communities Institute, Center for Prevention Research and Development, Illinois Youth Survey, 2015.

**Exhibit 16: DuPage County Teens who Use Marijuana 2014**



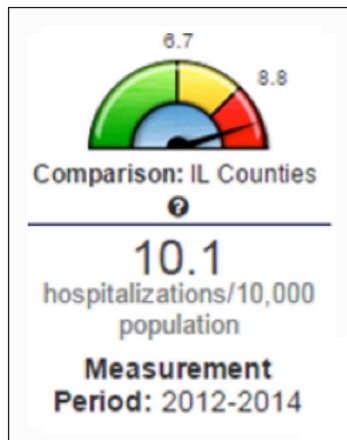
Source: Healthy Communities Institute, Center for Prevention Research and Development, Illinois Youth Survey, 2015.

## Asthma

Asthma affects people of all ages, but it most often starts during childhood. In the United States, more than 25 million people are known to have asthma (National Heart Lung and Blood Institute, 2015). Asthma is a chronic lung disease that inflames and narrows the airways (National Heart Lung and Blood Institute). Rates of adult and pediatric hospitalization due to asthma are high in the hospital's PSA compared to other counties in Illinois. Data from the Healthy Communities Institute indicates that from 2012-2014, the age-adjusted hospitalization rate due to asthma was 10.1 per 10,000 population aged 18 and older, and the age-adjusted hospitalization rate due to pediatric asthma was 11.0 per 10,000 population under the age of 18. The rates of hospitalization due to asthma are high in the PSA compared to other counties in Illinois. Data shows that rates of hospitalization due to adult and pediatric asthma in the PSA are stable with no significant increases or decreases over time.

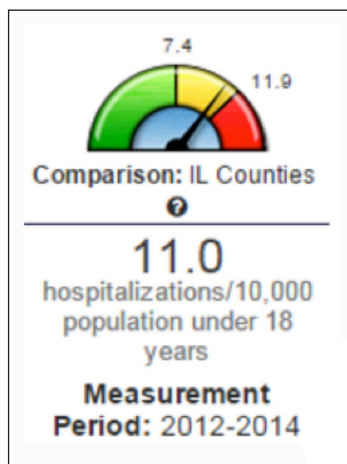
There are five zip codes within the PSA that have higher rates of pediatric and adult asthma. The zip codes with higher rates of hospitalization due to adult asthma include Wheaton (60187) at 18.5, Bolingbrook (60440) at 16.6 and Romeoville (60446) at 16.6 compared to the overall PSA rate of hospitalization due to asthma at 10.1 per 10,000 population. In addition, there were several zip codes within the PSA that had significantly higher rates of hospitalization due to pediatric asthma. Naperville (60540) with 19.8, Wheaton (60187) with 17.3 and Woodridge (60517) with 17.0 all have higher rates of hospitalization due to pediatric asthma compared to the overall PSA at 11.0 per 10,000 population under the age of 18.

### Exhibit 17: PSA Age-Adjusted Hospitalization Rate due to Asthma 2012-2014



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

### Exhibit 18: PSA Age-Adjusted Hospitalization Rate due to Pediatric Asthma 2012-2014



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

## Access to Health Care Services

Access to health care services is essential in preventing unnecessary ED visits and managing and preventing chronic disease. One of the major barriers to health care services is the lack of insurance; therefore the Community Health Manager along with the Council analyzed insurance coverage rates to determine the need for access to health care. In addition to the uninsured populations, data suggests Medicaid recipients are more likely to visit the ED for non-emergency medical needs, which implies that this population may experience many socioeconomic barriers to health care (Stateline, Pew Charitable Trust, 2015).

Data for the hospital's PSA and DuPage County indicated that foreign-born residents were more likely to be uninsured and experience language barriers. According to Truven Insurance Coverage Estimates, 14.2 percent of the PSA are Medicaid recipients, 14.3 percent are Medicare recipients and 2.8 percent of the PSA is uninsured. Furthermore, over 9,000 Good Samaritan Hospital ED patients were classified as Public Aid or Medicaid and over 2,000 patients were classified as self-pay or charity in 2015. Consistent with national trends, the data also indicated a racial disparity in insurance coverage with 93 percent of White adults in DuPage County having health insurance while only 70.4 percent of Hispanic adults in DuPage County have health insurance.

To further support the need for access to health care services, the DuPage County community survey reported that 13 percent of survey respondents said that the community should focus on access to health care services to improve quality of life.

### Exhibit 19: PSA Medicaid, Medicare and Uninsured Populations

Insurance	Percent of PSA	Number of People in PSA
Medicaid	14.2%	93,496
Medicare	14.3%	94,155
Uninsured	2.8%	19,094
		Total PSA Population: 653,410

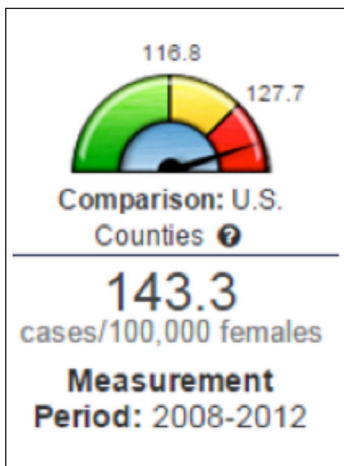
Source: Advocate Health Care Strategic Planning Department, Truven Insurance Coverage Estimates, 2016.

## Cancer

The Community Health Council identified cancer as a health need due to high incidence and prevalence rates of cancer in the PSA. The PSA incidence rate of all cancers exceeds the rate for all of Advocate Hospital's PSA, Illinois and DuPage County. The most prevalent cancers in the PSA are breast and prostate. In 2015, there were 662 cancer patients at Good Samaritan Hospital. Over 38 percent of cancer patients had a breast cancer diagnosis and 16.5 percent had a lung cancer diagnosis.

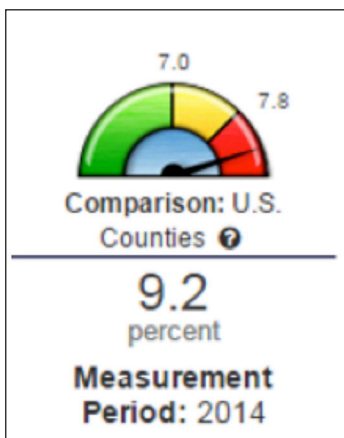
DuPage County cancer rates are consistent with the hospital's PSA cancer rates. The breast cancer incidence rate for the county is 143.3 per 100,000 females, which is significantly higher than other counties in Illinois. The cancer rates among the Medicare population in DuPage County are also significantly higher than other counties in Illinois with over 9 percent of DuPage County Medicare patients being treated for cancer in 2014 (Healthy Communities Institute, Centers for Medicaid and Medicare Services, 2016). Data trends show that both the incidence rate of breast cancer and the number of DuPage County Medicare beneficiaries being treated for cancer has increased over time.

## Exhibit 20: DuPage County Breast Cancer Incidence Rate 2008-2012



Source: Healthy Communities Institute, National Cancer Institute, 2015.

## Exhibit 21: DuPage County Cancer in Medicare Population 2014



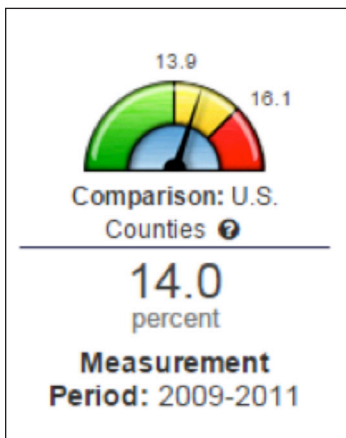
Source: Healthy Communities Institute, Centers for Medicaid and Medicare Services, 2016.

## *Obesity and Nutrition*

Obesity and poor nutrition is one of the leading causes for heart disease, diabetes, stroke, poor mental health and poor overall quality of life. Due to the limited availability of zip code level data, the Community Health Manager and Council analyzed DuPage County data to determine the extent of need related to obesity and nutrition within the hospital's PSA. According to data collected from the 2015 FORWARD obesity report, over 15 percent of kindergarteners, sixth and ninth grade students in DuPage County are obese. In addition 14 percent of low-income preschoolers in DuPage County are obese, which is higher than other counties in Illinois and suggests an income disparity in which social determinants of health have a large impact on low-income DuPage County residents. To further support this claim data showed that one in five 2-4 year olds enrolled in WIC were obese compared to the overall rate, which is one in seven 2-4 year olds. Adults in DuPage County had an obesity rate of 23 percent. From 1995 through 2013 obesity rates steadily increased.

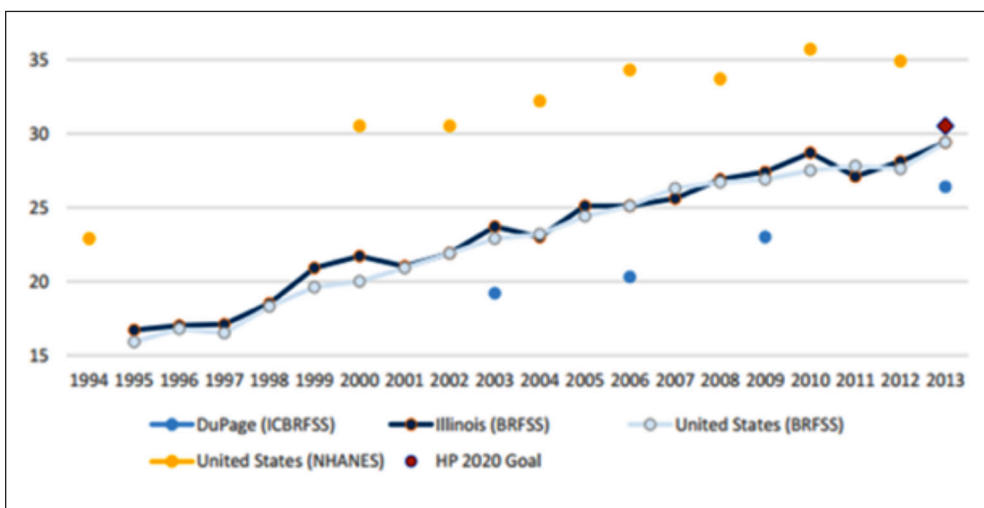
To further support the evidence of income disparity, PSA communities with higher percentages of low-income and minority populations had higher rates of obesity. PSA communities such as Lombard, Villa Park and Westmont all have larger minority populations and lower average household incomes and had higher rates of childhood obesity compared to other PSA communities.

**Exhibit 22: DuPage County Low-Income Preschool Obesity 2009-2011**



Source: Healthy Communities Institute, U.S. Departments of Agriculture, Food Environment Atlas, 2014.

**Exhibit 23: DuPage County Adult Obesity 1994-2013**



Source: Impact Control Community Profile, Illinois Department of Public Health, Centers for Disease Control and Prevention, Fryar CD, Carroll MD, Ogden CL, 2013.

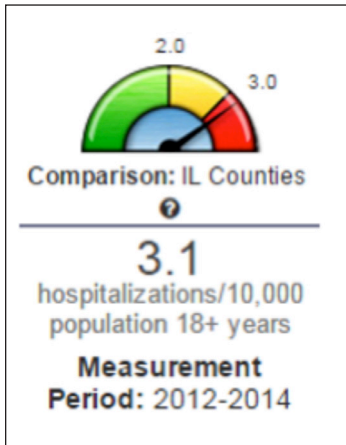
*Immunization-Preventable Pneumonia and Influenza*

Immunization-Preventable Pneumonia and Influenza can have a devastating impact on seniors. According to the Centers for Disease Control and Prevention pneumonia and influenza are the fifth leading cause of death in older adults in the U.S. The Healthy Communities Institute reports that the hospital’s PSA age-adjusted hospitalization rate due to immunization-preventable pneumonia and influenza is 3.1 per 10,000 population, which is high compared to other counties in Illinois. The age-adjusted rate of hospitalization due to immunization-preventable pneumonia and influenza has increased since 2009 (1.3 per 10,000 population) to 2014 (3.1 per 10,000 population) suggesting that this is an increasing health need in the community. In addition to hospitalization rates, ED visit rates for immunization-preventable pneumonia and influenza have also significantly increased over time going from 5.9 in 2009 to 10.2 in 2014.

There are three communities within the hospital’s PSA that had significantly higher rates of hospitalization due to immunization-preventable pneumonia and influenza. These communities include Romeoville at 6.2 per 10,000 population, Elmhurst at 4.4 per 10,000 population and Willowbrook at 4.4 per 10,000 population compared to the overall PSA rate of 3.1.



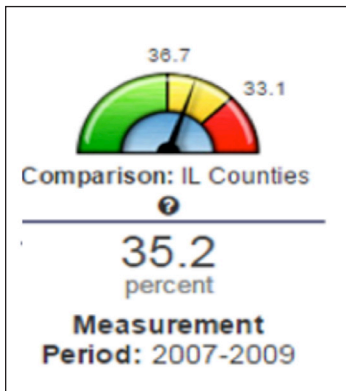
**Exhibit 24: PSA Age-Adjusted Hospitalization Rate due to Immunization-Preventable Pneumonia and Influenza 2012-2014**



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

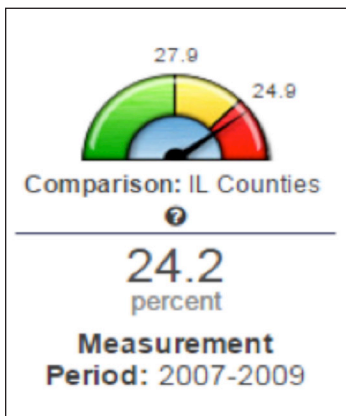
DuPage County adult immunization rates are low compared to other counties in Illinois. According to Healthy Communities Institute only 35.2 percent of adults were immunized for influenza and only 24.2 percent of adults were immunized for pneumonia from 2007-2009. These rates are compatible with the hospital’s PSA rates of hospitalization due to immunization-preventable pneumonia and influenza. DuPage County is also significantly below the Healthy People 2020 goal for adult immunizations, which aims to vaccinate 70 percent of adults for pneumonia and influenza.

**Exhibit 25: DuPage County Adults with Influenza Vaccination 2007-2009**



Source: Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance System, 2015.

**Exhibit 26: DuPage County Adults with Pneumonia Vaccination 2007-2009**



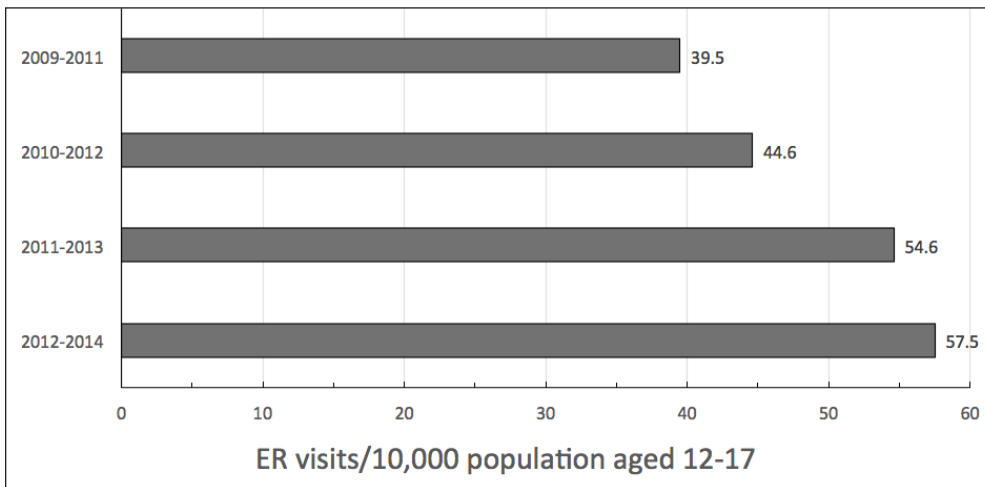
Source: Healthy Communities Institute, Illinois Behavioral Risk Factor Surveillance System, 2015.

## Mental Health

Mental health is an increasing health issue in many communities including the hospital's PSA. Over time mental health problems have become more prevalent and the rates of ED visits and hospitalization due to mental health related issues have increased suggesting that mental health services and programming are a key health need for the PSA. From 2012-2014 the PSA age-adjusted ED rate due to adolescent suicide and intentional self-injury was 57.5 per 10,000 population. The rate of ED visits due to adolescent suicide and intentional self-injury has significantly increased over time going from 39.5 per 10,000 population in 2009-2011 to 57.5 per population in 2012-2014. The same trend can be observed in the PSA rates of ED visits due to mental health, which went from 42.4 per 10,000 population from 2009-2011 to 57.5 per 10,000 population from 2012-2014. The PSA age-adjusted ED rate due to suicide and intentional self-inflicted injury has also increased over time going from 11.7 per 10,000 population from 2009-2011 to 17.9 from 2012-2014. (Healthy Communities Institute, Illinois Hospital Association, COMPdata, 2015)

There are three PSA zip codes that have significantly higher rates of ED visits due to mental health from 2012-2014. The community of Wheaton (60187) had a rate of 100.0 ED visits due to mental health per 10,000 population, while Bolingbrook (60440) had a rate of 81.1 per 10,000 population and Villa Park with a rate of 78.3 per 10,000 population HCI, Illinois Hospital Association, COMPdata, 2015).

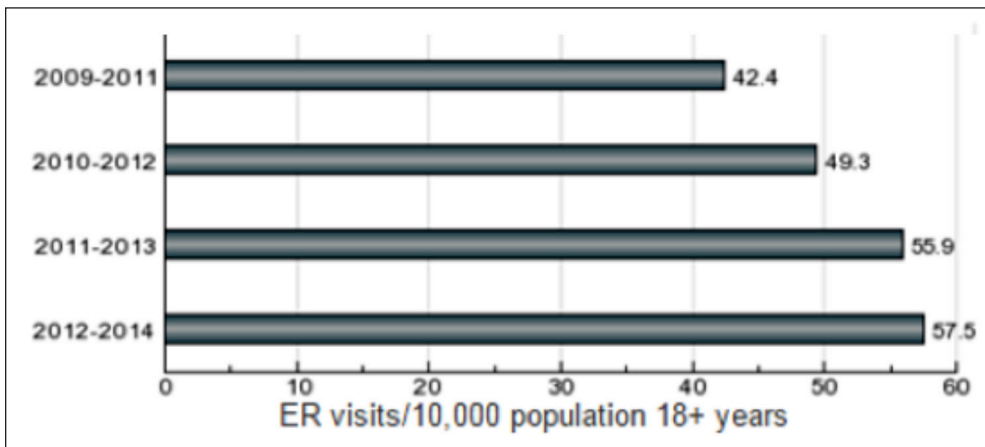
### Exhibit 27: PSA Age-Adjusted ER Rate due to Adolescent Suicide and Intentional Self-inflicted Injury 2009-2014



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

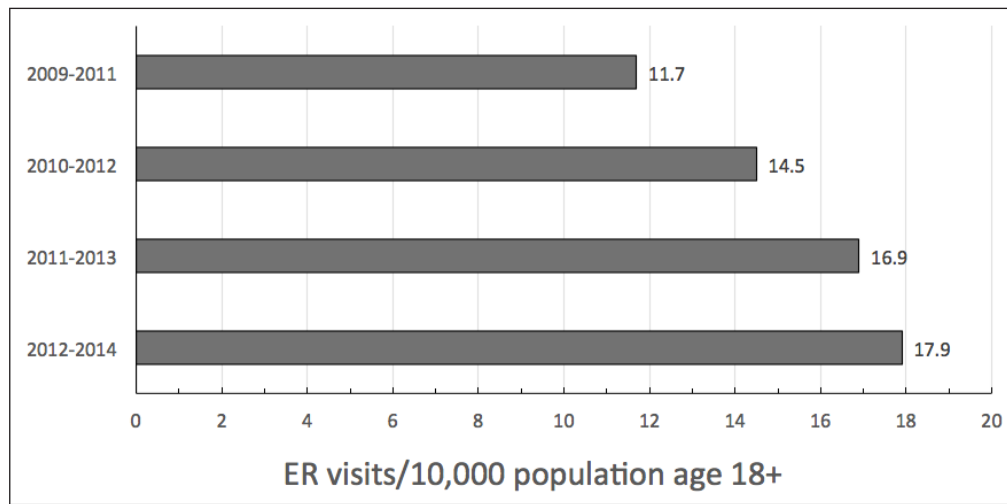
Exhibit 27 above and Exhibits 28 below and 29 on page 25 depict moderate to substantial increases in mental health related issues over time. This proved to be true for both the adult and adolescent populations. These increases were concerning to the CHC, which lead to the Council's interest in addressing mental health issues through mental health crisis prevention programming.

### Exhibit 28: PSA Age-Adjusted ER Rate due to Mental Health 2009-2014



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

## Exhibit 29: PSA Age-Adjusted ER Rate due to Suicide and Intentional Self-inflicted Injury 2009-2014



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

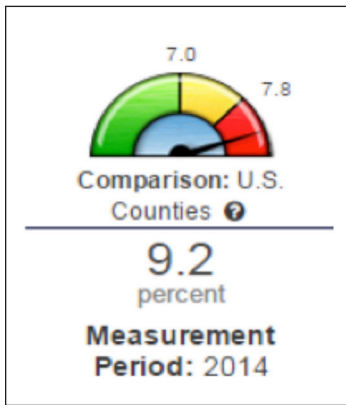
Community survey data also suggests that mental health services and programs are a key health need in DuPage County. DuPage County Health Department's community survey reports that 37 percent of survey respondents indicated mental health as one of the most important health concerns in DuPage County. Overall, mental health was in the top three most important health concerns in DuPage County across all survey respondents. Additionally, the survey reported that mental health services was the third most important health need that the community should focus on to make things better in DuPage County.

### Senior Health

Over 15 percent of the PSA is aged 65 or older. The hospital's PSA has specific zip codes that have significantly large populations of seniors. In consideration of the PSA's large population of seniors the Community Health Manager along with the Council reviewed and analyzed data on senior health. Falls were a significant issue for those aged 70 and older for several PSA zip codes including: Elmhurst (60187), Glen Ellyn (60137), Romeoville (60446) and Oak Brook (60523). The overall PSA fall rate for those aged 70 and older was 85.5 per 1,000 population (IHA COMPdata, 2015).

Due to a lack of senior (65+) specific data for the hospital's PSA, the Community Health Manager and Council analyzed the top DuPage County Medicare health needs, specifically for those Medicare recipients aged 65 and older. Based on data for Medicare recipients aged 65 and older, the top health issues for seniors in the county include: cancer, atrial fibrillation, hyperlipidemia, stroke, Alzheimer's disease and osteoporosis. For all of the aforementioned health issues within the Medicare population, rates are high compared to other counties in Illinois (Healthy Communities Institute, Centers for Medicaid and Medicare Services, 2016).

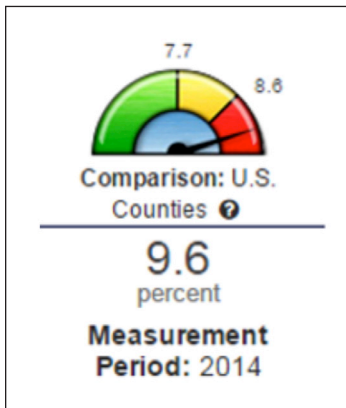
### Exhibit 30: DuPage County Cancer in Medicare Population 2014



Source: Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2016.

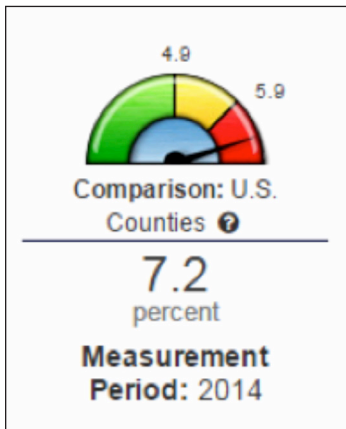
The graphs above and below depicting cancer, atrial fibrillation and osteoporosis rates in the Medicare populations primarily indicate the health issues in the senior population. Although the qualifications for Medicare expand beyond the senior population, the majority of the population experiencing these health issues are above the age of 65 (Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2016). These dashboards were used to measure the significance of senior health issues within the hospital's PSA because of the large percentage of Medicare recipients above the age of 65 that were affected by cancer, atrial fibrillation and osteoporosis.

### Exhibit 31: DuPage County Atrial Fibrillation in Medicare Population 2014



Source: Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2016.

### Exhibit 32: DuPage County Osteoporosis in Medicare Population 2014



Source: Healthy Communities Institute, Centers for Medicare and Medicaid Services, 2014.

## *Domestic Violence*

According to IHA COMPdata, from 2013-2014 there were 6,472 people affected by domestic violence in the hospital's PSA. The overall rate of domestic violence in the PSA was 985.0 per 100,000 population, which was slightly higher than the overall rate for DuPage County at 982.1. There were three PSA communities where the domestic violence rate was substantially higher than the overall PSA, county and state (Illinois rate 1,773.4 per 100,000 population). These communities include Clarendon Hills at 1,883.6 per 100,000 population, Hinsdale at 2,424.8 per 100,000 population and Willowbrook at 2,024.4 per 100,000 population. Data from DuPage County Health Department's community survey also indicated that domestic violence was the 8th most important health concern in DuPage County among residents.

## *Heart Disease and Stroke*

Rates of heart disease and stroke were highest in the senior population within the hospital's PSA. According to IHA COMPdata, in 2014 the rate of inpatient discharge for stroke in the PSA was 207.7 per 100,000 population, which is higher than the county at 194.7 and state at 203.5. In addition, the Advocate Health Care Strategic Planning Department reported that in 2014 stroke affected approximately 1,365 people in the hospital's PSA. DuPage County data also indicated that hospitalization rates due to heart failure and hypertension were highest among DuPage County African Americans (DuPage County IPLAN, 2015), which is consistent with national disparity trends in heart disease and stroke (Centers for Disease Control and Prevention, 2015).

There were three zip codes in particular that had higher rates of inpatient discharge for stroke. The three communities include Oak Brook (60523) with 316.3 per 100,000 population, Downers Grove (60515) at 276.2 per 100,000 population and Lemont at 270.7 per 100,000 population (IHA COMPdata, 2014).

## *Social Determinants of Health*

The PSA health needs discussed above are strongly influenced by various social factors; this concept is known as social determinants of health. The World Health Organization (WHO) defines the social determinants of health as the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The Community Health Manager and Council analyzed the social determinants of health pertaining to each identified health need to determine some of the potential causes of high rates in specific communities. Social determinants of health were particularly evident in analyzing the SocioNeeds Index Map (see page 12) and the prevalence rates of health need within each PSA zip code. Specifically, the data showed higher rates of health issues within the zip codes ranked highest on the SocioNeeds Index Map, which supports the correlation between social barriers and adverse health outcomes. The communities of Bolingbrook (60440) and Romeoville (60446) were ranked highest for socioeconomic need on the SocioNeeds Index Map and also had the highest rates of hospitalization and ED visits for many of the identified health needs.

Both PSA and DuPage County data showed a relationship between income, race/ethnicity and obesity rates. Those communities within the PSA with lower average household incomes and higher numbers of minority populations had higher rates of obesity. This data is consistent with national trends, which indicate obesity rates are higher among minority and low income populations (Trust for America's Health and Robert Wood Johnson Foundation, The State of Obesity Report, 2014).

## **Identifying Priorities**

### **Priority Setting Process**

The Community Health Manager presented data to the CHC for the top ten health needs in the hospital's PSA. This data was reviewed and discussed by the CHC. The top ten health needs presented to the council are listed below.

- Substance and Alcohol Abuse
- Asthma
- Access to Health Care Services
- Cancer

- Obesity and Nutrition
- Immunization-Preventable Pneumonia and Influenza
- Mental Health
- Senior Health
- Domestic Violence
- Heart Disease and Stroke

Council members were able to ask questions and dialogue about the ten health needs, which led to the prioritization phase of the CHNA. The Community Health Manager introduced the Hanlon Method (see Appendix 2) as the method for initial prioritization of health needs. The Hanlon Method uses three criteria to prioritize each health need. The criteria used are listed below.

1. Size of the health need – This was calculated using ED and hospitalization data for each health issue. Prevalence and incidence rates for each health issue were also utilized when available.
2. Seriousness of health need – Several questions were taken into consideration to rate the seriousness of each health need. The CHC considered the following questions when rating the seriousness of each health issue:
  - Is the health issue important to the community/public?
  - Does the health issue impact the quality of life?
  - What are the hospitalization and mortality rates caused by the health issue?
3. Effectiveness of interventions
  - Are prevention programs effective in preventing the health issue?
  - Do treatment programs effectively address the health issue?
  - How many best practices/evidence-based programs are available to address the health issue?

More details and information regarding the history and criteria rating for the Hanlon Method are attached in Appendix 2.

Each Council member completed a Hanlon Method grid, which scored each health need within each given criteria. Scores of all Hanlon Method grids were then aggregated by the Community Health Manager and the top ten health needs were presented in highest to lowest score order. According to the Hanlon Method those health needs with higher scores more closely aligned with the criteria to be a top priority, while those health needs with lower scores did not fulfill the Hanlon Method criteria to be identified as a top priority. Council members reviewed the results and engaged in an in depth discussion regarding the accuracy of the Hanlon Method prioritization. The prioritization results of the Hanlon Method process are below.

1. Senior Health (1,503)
2. Obesity (1,422)
3. Cancer (1,198)
4. Heart Disease and Stroke (1,180)
5. Asthma (1,105)
6. Access to Health Care Services (1,049)
7. Immunization-Preventable Pneumonia and Influenza (1,020)
8. Domestic Violence (945)
9. Mental Health (902)
10. Substance and Alcohol Abuse (826)

Although the Hanlon Method provided a good foundation for our prioritization process there were many drawbacks to utilizing this method. For example, the Council did not have data on the number of people who were abusing substances within the total PSA population; this type of data would have more accurately rated the size of the health need. To determine the size of health need for substance abuse,

the Council used hospitalization and ED visit rates due to substance abuse. This is a subset of the overall substance abuse population therefore, the data used to rate the size of the health problem produced results that underestimated the extent of need and size of the health issue.

The CHC and the Community Health Manager reviewed and discussed the drawbacks of the Hanlon Method prioritization results. Specifically, the Council looked at mental health and substance abuse, which received the lowest scores but also had inaccurate score results due to a gap in data. In consideration of the Hanlon Method challenges, the Community Health Manager called for a vote of the top three health needs. Council members used the Hanlon Method results to guide their selections. The following criteria were also used to help Council members vote on the top three health needs.

- Degree to which community partners are involved in solving/addressing the health issue
- Hospital and community resources available to address the health issue
- Hospital's capacity to address the health issue
- Importance to the community
- Degree to which effective programs are available to the community

After careful review of data and extensive discussion, the CHC voted 1) obesity/nutrition, 2) substance abuse and 3) mental health as the top three health priorities for the hospital's PSA. The Community Health Manager along with community representative Council members carefully analyzed the selected health needs in comparison to the amount of available community resources and programs to address the needs. In consideration of the hospital's capacity and the extent of community resources and programs available to address the three health issues, the Community Health Manager proposed that two health needs be selected as priorities. Narrowing the number of priorities from three to two allows the hospital to be more focused in community programming, which increases program effectiveness and community impact.

To further support the CHC in making an informed decision on priority health needs, DuPage County community organizations that specialize in mental health, substance abuse and obesity, and nutrition made presentations to the CHC. The National Alliance on Mental Illness, Prevention Leadership Team (substance abuse) and FORWARD (obesity and nutrition) attended a two-hour CHC meeting to present data and provide feedback to CHC members on the specific health needs. Presentations consisted of data for each health need including disparities, current programs available to address the health need and best practices in community programming. Following presentations, CHC members along with health need expert community organizations engaged in an in-depth discussion. Proceeding the discussion, the Community Health Manager called for a second vote to narrow the health needs from three to the final two 2016 CHNA priorities.

## Priorities Selected

### **Healthy Lifestyles**

Obesity and poor nutrition are the main causes of many chronic diseases and health issues including heart disease, stroke, some cancers and diabetes. Taking this into consideration, the CHC selected healthy lifestyles as one of the two health priorities due to the large impact it has on quality of life and overall health status. The prevention of obesity, proper nutrition and physical activity have the potential to decrease the rate of chronic disease thus increasing life expectancy and quality of life, therefore the CHC made the recommendation to focus on creating and maintaining a healthy lifestyle. Data also revealed that low-income populations within DuPage County have higher rates of obesity indicating obesity prevention and nutrition education is an essential need in the more vulnerable communities within the hospital's PSA. The term healthy lifestyles is used to encompass multiple factors that cause obesity and impact quality of life.

### **Mental Health**

The CHC selected mental health as the second health need priority. Data trends indicated that mental health issues are increasing and the need for mental health services and programming is continuing to grow. This is a health need that is also correlated with substance abuse as many substance users/abusers also experience mental health issues and many individuals with mental health disorders experience

substance abuse issues. NAMI, one of the leading mental health agencies in DuPage County, provided mental health data that also indicated the need for resilience and mental health crisis training among adolescents and young adults. The high rates of ED visits and hospitalization due to mental health issues are preventable through employing coping mechanisms and resilience training. The CHC is specifically interested in programs that prevent mental health emergencies and decrease ED visits and hospitalization due to mental health issues.

## Explanation Why Other Needs Not Selected as Priorities

Health needs that were not selected will not be included in the Implementation Plan but may be addressed through other community partnerships or hospital resources. The following health needs were not selected however many of these health needs are being addressed through current hospital programs and community partnerships.

### **Substance Abuse**

Substance abuse was included in the top three health needs but was not selected as a priority at this time. Good Samaritan Hospital recognizes the need to address substance abuse in the community and has dedicated multiple resources to addressing the issue. The hospital's Detox Center serves patients with addiction issues and provides a safe environment for substance abuse withdrawal. In addition, the hospital received a grant to implement a Linkage to Care Program, which employs a Community Linkage Specialist to link discharged Detox Unit patients to community support services and to follow-up with patients at 30, 60, 90 and 180 days to check-in on progress and provide additional support if needed. The hospital also provides resources for community partners such as Alcohol Anonymous (AA) and Narcotics Anonymous (NA). Both AA and NA support groups hold regular meetings at Good Samaritan Hospital.

### **Asthma**

Asthma was identified as a health need but was not selected as a priority due to the lack of community partners and the ineffectiveness/availability of asthma prevention programs. The majority of asthma programs within the county are focused on asthma attack prevention and treatment. The CHC also identified hospitalization and ED visit rates due to asthma as a potential access to health care issue. Taking this into consideration, the Community Health Manager along with the CHC identified several hospital programs that addressed access to health care including support services for ED overutilization due to lack of primary care for chronic conditions like asthma. Through hospital partnerships, such as Good Samaritan's partnership with Engage DuPage, asthmatic patients who are in need of primary care will receive support from program staff that provide linkages to primary care and insurance coverage.

### **Access to Health Care Services**

The CHC acknowledges access to health care services as a critical need for the hospital's PSA. This need was not prioritized due to several programs and partnerships that are currently being implemented to address access to health care among patients at Good Samaritan Hospital. The hospital has a financially significant long standing partnership with Access DuPage, which works with uninsured and underinsured patients to get health care coverage and primary care services. The hospital serves many Access DuPage clients and will continue to work with the organization to link vulnerable populations to effective health care coverage and services. The hospital also partners with Engage DuPage, which is a program that works with patients who over utilize the hospital's ED and are uninsured or underinsured. The program's primary goal is to identify and solidify health care coverage for those patients who are uninsured. Program staff also work within the hospital's ED to link patients to community support services including emergency food, housing and social services.

The hospital is engaging in strong partnerships with Engage DuPage and Access DuPage to improve health outcomes in the PSA and ED utilization within the hospital. The Community Health Manager will continue to track progress of both programs and report program outcomes to the CHC.

### **Cancer**

Cancer was identified as a health need for the hospital's primary service area due to high incidence and prevalence rates of the disease. The CHC did not select this need as a priority due to the myriad of cancer services and support groups the hospital currently offers to patients within the PSA. An array of cancer treatments and support services are offered through the hospital's Cancer Care Center, which includes a state-of-the-art surgical pavilion. Cancer Care Center staff also conduct a community needs assessment,



which includes collection and analysis of demographic and cancer data for the hospital's PSA. Cancer Care Center staff utilize this data to develop the service line's strategic plan and evaluate the impact of cancer treatments and services. The hospital's Cancer Care Center also partners with many community organizations that offer support services for cancer patients and survivors. Organizations such as Wellness House offer support groups to cancer patients at Good Samaritan Hospital free of charge.

The hospital has also partnered with the American Cancer Society to sign the 80 by 2018 Pledge, which aims to screen 80 percent of individuals aged 50 and older in the PSA for colorectal cancer by the year 2018. The hospital's Cancer Care Center, in partnership with the Community Health Department, is working to increase screenings through education in the community.

#### **Immunization-Preventable Pneumonia and Influenza**

The CHC recommended that immunization-preventable disease not be selected as a priority health need at this time due to current efforts being implemented to address this need. Throughout DuPage County, the retail and nonprofit sectors are effectively addressing the need for vaccinations. The retail sector (Walgreens, CVS, Osco Drug) consistently and heavily advertise vaccination services, which they offer for a low-cost to the community. In addition, the DuPage County Health Department offers vaccinations to children and adults with no health insurance for a minimal fee. Vaccines are readily available to all DuPage County residents therefore the CHC could not identify a gap in services.

#### **Senior Health**

The hospital recognizes the importance of senior health; therefore, the CHC chose to continue the implementation of the Matter of Balance (MOB) program, but did not select this need as a priority for the 2016 CHNA. Fall rates were not significantly high but the seriousness of falls for seniors is noteworthy hence the continuation of the MOB program. In addition to the MOB program the hospital also offers an array of senior services and programs including an annual senior health fair.

#### **Domestic Violence**

The CHC acknowledges the seriousness of domestic violence; however, due to a lack of detailed data, the Council was not able to understand the full scope and magnitude of this health need resulting in the decision to not select domestic violence as a priority. Although prevalence rates of domestic violence were high, the details of the type of domestic violence and affected populations were not available for the CHC to review.

Good Samaritan Hospital currently addresses this health need including: domestic violence training for ED nurses, community physicians and parish nurses, and provision of support groups and individual therapy for victims of domestic violence. In addition, the hospital is a member of the 18th Judicial Court Domestic Violence Coordinating Council.

#### **Heart Disease and Stroke**

The CDC reports that at least 200,000 deaths from heart disease and stroke each year are preventable. Obesity increases the risk of heart disease and is a major risk factor for high blood pressure, which is also a symptom of heart disease. After careful analysis of data, the CHC decided not to prioritize heart disease and stroke because of the impact obesity prevention has on heart disease. The CHC will address heart disease and stroke through the healthy lifestyles priority. As a result of the healthy lifestyles Implementation Plan, the hospital will address one of the main causes of heart disease.

### **Approval of CHNA by Governing Council**

The Community Health Manager provided a copy of the CHNA to each Governing Council member in advance of the November 2016 Council meeting in preparation for full approval of the document. The Community Health Manager, along with one of the Governing Council members who is also a CHC member, presented the 2016 CHNA document including data and priorities to the hospital's Governing Council. Following the presentation, Council members were given the opportunity to ask questions and comment. On November 18, 2016, the Good Samaritan Hospital Governing Council fully approved the 2016 Good Samaritan Hospital CHNA.

## V. 2017 Implementation Planning

The Community Health Manager will lead the process in creating and developing the 2017 CHNA Implementation Plan. The plan will outline how the hospital will address the selected health priorities and include program goals/objectives, measurements and indicators. It is essential that the hospital consider the needs of the more vulnerable communities within the PSA; therefore the CHC will further examine the higher socioeconomic need communities in consideration of the Implementation Plan target populations and communities. Implementation Plan progress reports completed by the Community Health Manager will enable CHC members to track and evaluate the progress on Implementation Plans.

### Healthy Lifestyles

Obesity prevention is a multifaceted health issue; therefore, the CHC was sure to encompass the multiple causes of obesity by defining the priority area as healthy lifestyles. The Community Health Manager along with the CHC will utilize hospital resources and collaborate with community partners to address healthy lifestyles. In an effort to not duplicate programs or services, the Community Health Manager and CHC identified some community organizations and programs working to address obesity in the hospital's PSA.

### *FORWARD*

The hospital has a long-standing relationship with FORWARD, an organization in DuPage County solely focused on obesity. FORWARD has a robust network of community organizations with connections to many healthy lifestyles programs. The organization also collects primary data regarding obesity rates in DuPage County, which will support the CHC in identifying target communities. The hospital will work with FORWARD to incorporate best practices into the Implementation Plan and utilize data to determine target communities/populations within the hospital's PSA.

### *University of Illinois Extension*

The University of Illinois Extension is a state-wide nonprofit organization that offers educational programs in five broad areas, including: energy and environmental stewardship, food safety and security, economic development and workforce preparedness, family health and financial security and youth development. The hospital has identified the University of Illinois Extension particularly for its Supplemental Nutrition Assistance Program Ed program, which provides nutrition education to low-income vulnerable populations in the state of Illinois. As indicated in previous sections, lower income populations/communities within the PSA experience higher rates of obesity, which makes the University of Illinois Extension's SNAP Ed program suitable to address healthy lifestyles in the PSA.

### *Northern Illinois Food Bank*

The Northern Illinois Food Bank works to solve hunger in northern Illinois by providing nutritious meals to low-income and food insecure individuals and families. The organization works with many community organizations including food pantries in the hospital's PSA. In addition to providing nutritious food to the northern Illinois community, the organization has many healthy lifestyle programs. The diabetes prevention program specifically focuses on maintaining a healthy lifestyle through physical activity, healthy eating habits and stress management. The program consists of 10 sessions and utilizes many best practices of obesity prevention programming.

### *Food Pantries*

Food pantries are also an effective way to reach low-income populations to address obesity prevention, and health and wellness. There are two food pantries within the hospital's PSA, which include People's Resource Center and West Suburban Food Pantry. Both pantries have multiple initiatives and/or programs that focus on creating a healthy lifestyle through providing nutrition education and healthy foods. In consideration of the vulnerable populations within the PSA, food pantries provide an ideal space for community programs that serve vulnerable populations.

## *Hospital Resources*

In addition to community partnerships, the hospital will also utilize internal resources to address the healthy lifestyles priority. The Community Health Manager will work with the hospital's Health and Wellness Center Dietician to identify any opportunities for health education in the community. Specifically, the hospital will explore a collaboration between the Dietician and select community partners to provide nutrition education to vulnerable residents within the hospital's PSA.

## **Mental Health**

Mental health is a broad health issue with many areas of need. Considering the excessive amount of need within this one priority, the CHC has decided to focus on community programs that address coping skills, identification of mental illness and crisis management. These programs focus more on mental health crisis prevention and as a result decrease the ED visitation and hospitalization rates due to mental illness.

## *NAMI*

As described in the Collaboration with Partners section, NAMI is one of the leading mental health organizations in DuPage County. Through many community programs and support services, NAMI is working to address the mental health need in DuPage County. The organization implements innovative programming such as peer support groups and counseling, employment and training, Ending the Silence (a school-based mental health program) and The Living Room (a community space providing support services for those with mental illness). The Community Health Manager along with the Council will explore opportunities to partner with NAMI to address mental health in the hospital's PSA.

In addition to NAMI, Metropolitan Family Services and The DuPage County Health Department offer multiple mental health services and programs in some of the hospital's PSA communities. The Council along with the Community Health Manager will reach out to each of the organizations to identify any opportunities for collaboration and program support.

## *Hospital Resources*

The Community Health Manager will work with the hospital's Manager of Behavioral Services to identify hospital resources available to address mental health in the community. The Behavioral Health Services Department will continue to attend the CHC meetings to assist the council in developing an effective Implementation Plan that not only utilizes community partners and programs but also hospital resources and expertise.

## **VI. Vehicle for Community Feedback**

We welcome your feedback regarding the Community Health Needs Assessment (CHNA) Report. If you would like to comment on this report, please click on the link below to complete a CHNA feedback form. We will respond to your questions/comments within thirty days. Your comments will also be considered during our next CHNA assessment 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-CHNAReportCmtFeedback@advocatehealth.com](mailto:AHC-CHNAReportCmtFeedback@advocatehealth.com)

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

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

### **Other Communication and Feedback Opportunities**

In addition to the opportunity to provide feedback through the means described above, the Good Samaritan Hospital Community Health Manager will also present the 2016 CHNA to hospital service lines, parish nurses and community partners. Feedback from the community will be collected verbally and electronically through the comments and questions component of the presentation. Additional presentations will be scheduled as requested.

## VII. Appendices

### Appendix 1: 2014-2016 Community Health Needs Assessment Data Sources

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

Advocate Good Samaritan Hospital, Behavioral Health Department, 2015.

Advocate Good Samaritan Hospital, Cancer Care Center, 2013-2016.

Advocate Good Samaritan Hospital, Top ICD-9 Diagnosis, 2011-2014.

Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2001-2013.  
[http://www.cdc.gov/brfss/data\\_tools.htm](http://www.cdc.gov/brfss/data_tools.htm)

DuPage County Community Needs Assessment, DuPage Federation on Human Services Reform, 2010.  
[http://www.dupagefederation.org/uploads/3/1/3/4/31349373/\\_dupage\\_community\\_assessment\\_111910\\_web.pdf](http://www.dupagefederation.org/uploads/3/1/3/4/31349373/_dupage_community_assessment_111910_web.pdf)

Escarce, Jose, J. Kapur, Kanika. Access to and Quality of Health Care, NCBI Bookshelf, 2006.  
<https://www.nap.edu/read/11539/chapter/11>

Healthy Communities Institute, 2016. Website unavailable to the public.

**The following data sources were accessed through Healthy Communities Institute:**

American Community Survey, 2010-2014. <https://www.census.gov/programs-surveys/acs/>

Center for Medicare and Medicaid Services, 2014. <https://www.cms.gov/>

Claritas, 2016. Website unavailable to the public.

County Health Rankings, 2014. <http://www.countyhealthrankings.org/>

Illinois Hospital Association, COMPdata, 2013-2015. Data unavailable to the public.

U.S. Department of Agriculture, Food Environment Atlas, 2009-2011.  
<http://www.ers.usda.gov/data-products/food-environment-atlas.aspx>

Illinois Behavioral Risk Factor Surveillance System, 2014-2015. <http://app.idph.state.il.us/brfss/>

Illinois Department of Public Health, 2015. <http://www.dph.illinois.gov/data-statistics>

Impact DuPage Community Assessment, 2010-2015.  
<http://www.impactdupage.org/index.php?module=htmlpages&func=display&pid=5011>

Illinois Hospital Association, 2012-2014. <http://www.team-iha.org/>

National Association of County and City Health Officials, 2015. <http://www.naccho.org/>

National Adult and Influenza Immunization Summit, Adult Immunization Disparities, 2015.  
[http://www.izsummitpartners.org/content/uploads/2016/01/NAIIS\\_Adult\\_Immunization\\_Disparities-4-01-2015.pdf](http://www.izsummitpartners.org/content/uploads/2016/01/NAIIS_Adult_Immunization_Disparities-4-01-2015.pdf)

National Institutes of Health, 2010-2015. <https://www.nih.gov/>

### The Hanlon Method<sup>vi</sup>

Developed by J.J. Hanlon, the *Hanlon Method for Prioritizing Health Problems* is a well respected technique which objectively takes into consideration explicitly defined criteria and feasibility factors. **Though a complex method, the Hanlon Method is advantageous when the desired outcome is an objective list of health priorities based on baseline data and numerical values.**

#### Step-by-Step Instructions:

1. **Rate against specified criteria** – Once a list of health problems has been identified, on a scale from zero through ten, rate each health problem on the following criteria: *size of health problem, magnitude of health problem, and effectiveness of potential interventions*. It is important to remember that this step requires the collection of baseline data from the community such as from a community health assessment. **Table 4.1** illustrates an example numerical rating system for rating health problems against the criteria.

**Table 4.1**

The Hanlon Method: Sample Criteria Rating			
Rating	Size of Health Problem (% of population w/health problem)	Seriousness of Health Problem	Effectiveness of Interventions
9 or 10	>25% (STDs)	Very serious (e.g. HIV/AIDS)	80% - 100% effective (e.g. vaccination program)
7 or 8	10% - 24.9%	Relatively Serious	60% - 80% effective
5 or 6	1% - 9.9%	Serious	40% - 60% effective
3 or 4	.1% - .9%	Moderately Serious	20% - 40% effective
1 or 2	.01% - .09%	Relatively Not Serious	5% - 20% effective
0	< .01% (Meningococcal Meningitis)	Not Serious (teen acne)	<5% effective (access to care)
<b>Guiding considerations when ranking health problems against the 3 criteria</b>	<ul style="list-style-type: none"> <li>• Size of health problem should be based on baseline data collected from the individual community.</li> </ul>	<ul style="list-style-type: none"> <li>• Does it require immediate attention?</li> <li>• Is there public demand?</li> <li>• What is the economic impact?</li> <li>• What is the impact on quality of life?</li> <li>• Is there a high hospitalization rate?</li> </ul>	<ul style="list-style-type: none"> <li>• Determine upper and low measures for effectiveness and rate health problems relative to those limits.</li> <li>• For more information on assessing effectiveness of interventions, visit <a href="http://www.communityguide.org">http://www.communityguide.org</a> to view CDC's Guide to Community Preventive Services.</li> </ul>

*\*Note: The scales in Table 1 are arbitrary models of how numerical scales are established and are not based on real epidemiological data; LHDs should establish scales that are appropriate for the community being served.*

2. **Apply the 'PEARL' test** - Once health problems have been rated by criteria, use the 'PEARL' Test, to screen out health problems based on the following feasibility factors:

- **Propriety** – Is a program for the health problem suitable?
- **Economics** – Does it make economic sense to address the problem? Are there economic consequences if a problem is not carried out?
- **Acceptability** – Will a community accept the program? Is it wanted?
- **Resources** – Is funding available or potentially available for a program?
- **Legality** – Do current laws allow program activities to be implemented?

Eliminate any health problems which receive an answer of "No" to any of the above factors or proceed with corrective action to ensure that potential health priorities meet all five of the feasibility factors.

3. **Calculate priority scores** – Based on the three criteria rankings assigned to each health problem in Step 1 of the Hanlon Method, calculate the priority scores using the following formula:

$$D = [A + (2 \times B)] \times C$$

Where: D = Priority Score  
A = Size of health problem ranking  
B = Seriousness of health problem ranking  
C = Effectiveness of intervention ranking

*\*Note: Seriousness of health problem is multiplied by two because according to the Hanlon technique, it is weighted as being twice as important as size of health problem.*

4. **Rank the health problems** – Based on the priority scores calculated in Step 3 of the Hanlon Method, assign ranks to the health problems with the highest priority score receiving a rank of '1,' the next high priority score receiving a rank of '2,' and so on.





## Landscape Review

The Impact DuPage Landscape Review Committee<sup>1</sup> (Committee) was charged with the collection of contextual information that would help Impact DuPage understand DuPage County residents' perception of well-being. Using qualitative research methods, the Committee sought to answer the following questions:

1. What is important to the community?
2. How is quality of life perceived?
3. What assets can be used to improve community well-being?

### Existing Qualitative Data Sources

The Committee met between June 2014 and November 2014 to review potential sources of qualitative data, discuss and select data collection methods, develop strategies for participant recruitment, and implement data collection. Members explored existing sources of data and discussed how that information might be incorporated into the Landscape Review process. Data sources included People's Resource Center's (PRC) All Client Survey, Community Health Needs Assessments (CHNAs) completed by local hospitals, and other assessments completed by health and human service organizations, schools districts, municipalities, and local collaborations.

Ultimately, members decided it was best to design a data collection tool that would capture resident perspectives regarding community well-being. Existing data sources were viewed as complementary. Committee members selected survey research as the primary method to capture resident perspectives. In addition to the survey, the Committee decided to pilot a secondary data collection method called Photovoice. Photovoice asks participants to use photography to record and reflect on their community's strengths and needs. This approach was chosen due to its interactive nature and its capability of engaging underrepresented populations - populations who might be less likely to provide input through a traditional survey.

### Survey Methodology

#### *Survey Design*

The Community Themes and Strengths Assessment (CTSA), a component of the Mobilizing for Action through Planning and Partnerships (MAPP) process, was a valuable resource for the Committee. The CTSA is often used by public health systems to evaluate community health by answering questions such as: *What is important to our community? How is quality of life perceived in our community?* and *What assets do we have that can be used to improve community health?*

After consulting several MAPP Community Themes and Strengths Assessment surveys from other communities, the group selected one survey used by the Partnership for a Healthier Fairfax to serve as a template. Survey questions were adapted to make them applicable to DuPage County.

The paper survey was piloted at the well-attended Annual Back to School Fair on August 6, 2014, hosted by Catholic Charities. The Back to School Fair helps prepare children from low-income DuPage County households for a new school year by providing a variety of services and resources, including free school supplies, immunizations, physicals, dental



exams and more. Several committee members participated in the event and collected 124 surveys from attendees. The opportunity allowed committee members to gain valuable insights to improve the survey. Based on feedback regarding the pilot survey, the final survey answer selections were shortened and the overall literacy level was adjusted to make the survey more accessible.

Once the survey was finalized (Appendices II and III), countywide roll out details were determined. An electronic version of the survey was created in SurveyMonkey. A paper version was created for respondents who may not have access to a computer or who may be uncomfortable with technology. Prior to the survey launch, communication tools were developed to promote the survey. Tools included an Impact DuPage flyer, an e-mail template, and social media messages (Appendices IV and V). The survey was administered in the community from September 10th – October 31, 2014.

The survey contained questions on DuPage County's greatest strengths, important health concerns, risky behaviors, community and personal health, and where the community should focus its attention to make things better in DuPage County. The survey collected respondent demographic information including zip code, sex, age, marital status, children living in home, DuPage County residency, household income, level of education, race, ethnicity, where respondents receive healthcare and how they pay for healthcare. The survey was available in both English and Spanish.

### *Survey Distribution*

Using the networks of Committee members, information regarding the launch of the survey was distributed via:

- An e-blast to villages sent by the DuPage Mayors and Managers Conference (notices were then placed in their village newsletters and/or sent to residents);
- Behavioral Health Services listserv;
- Benedictine student listserv;
- Bensenville Early Childhood Collaborative (40 providers);
- Boards of local non-profit organizations (DuPage Federation, DuPage Board of Health, etc.);
- Chambers of commerce;
- Child care providers (504 providers);
- Church congregations (LOVE Christian Clearinghouse – 100+ congregations, Feeding The Soul Christian Ministries);
- CommunityPoint (308 community members that provide human services to DuPage County residents);
- DuPage County Community Resource Information System (CRIS) Account Users;
- DuPage Chiefs of Police Association (38 DuPage County Police Agencies);
- DuPage Community Foundation donors, agency contacts, and professional advisors (2,495 constituents);
- DuPage County PTAs (10,000+ DuPage County parents);
- DuPage Homeless Continuum (104 members);
- Early Childhood Collaborative (85 key leaders in early childhood field);
- Food pantries (Community Hunger Network);
- Hospitals;
- Latino Service Provider Network;
- NAACP of Naperville;
- Public libraries;





*(Survey distribution continued)*

- Staff of local non-profit organizations (DuPage Federation, DuPage County Health Department, People's Resource Center, etc.)
- Townships (Winfield, Wayne and Naperville); and
- Virtual Backpacks (DuPage County school districts)

Paper surveys were located at People's Resource Center, DuPage PADS, Adventist Hinsdale and Glen Oaks hospital waiting rooms, HCS Community Services food pantry, multiple Federally Qualified Health Clinic (FQHC) sites, DuPage County Health Department, Family Shelter Service, Outreach Community Ministries, and 360 Youth Services.

The survey was featured in village newsletters and various agency websites and social media accounts. An article regarding the survey written by Kim Perez at People's Resource Center was featured in mySuburbanLife.com. A press release went out in early September as well.

### *Challenges*

Due to the fact that the survey was opt-in, the Committee focused on capturing a representative sample of DuPage County residents rather than concentrate on a response rate. During September – October, weekly updates were sent to members tracking the demographics of respondents. The spreadsheet compared Census data of the larger DuPage County population to respondent demographics so that underrepresented populations could be targeted for survey participation.

Committee members were mindful of the sample size's margin of error and confidence level. According to several survey research sources, a population of 1,000,000 (DuPage County total population estimate) requires at least 384 respondents for a 5% margin of error (answers reflect the view of the population) and at least 664 respondents for a 99% confidence level (the sample accurately samples the population). Both of these thresholds were surpassed with the survey's total of 2,164 responses.

Paper surveys were more difficult to administer than those in the electronic format. The electronic survey forced respondents to follow the instructions (e.g., select three choices). If a respondent checked more or less choices than asked, our protocol was to not include the survey. As a result, there were a total of 241 paper surveys that were excluded.

Although it is difficult to determine if an individual took the survey multiple times, communication tools were crafted to emphasize the importance of hearing from every DuPage County resident and to thank individuals if they had already taken the survey.

### **Survey Findings**

A total of 2,164 responses were collected from DuPage County residents. Of those, 2,111 completed the survey in English and 53 completed the survey in Spanish. A summary of the respondent demographics can be found in Appendix VI. The summary below contains the ten highest ranking selections with the three highest ranking selections bolded for most questions. For a complete list of rankings for all selections, see the Final Analysis including comments in Appendices VII and VIII.



## Survey Findings (continued)

*What are the three greatest strengths of DuPage County?*

- **Good Schools (58%)**
- **Low Crime/Safe Neighborhoods (42%)**
- **Parks and Recreation (30%)**
- Police, Fire, Rescue Services (21%)
- Friendly Community (20%)
- Access to Healthcare (20%)
- Clean Environment (18%)
- Good Jobs & Healthy Economy (14%)
- Walkable, Bikeable Community (12%)
- Access to Affordable, Healthy Food (9%)

*What do you think are the three most important health concerns in DuPage County?*

- **Alcohol/Drug Abuse (41%)**
- **Mental Health Problems (37%)**
- **Obesity (Overweight) (26%)**
- Housing that is Safe and Affordable (25%)
- Aging Problems (e.g., arthritis, hearing/vision loss) (20%)
- Too Much Screen Time/Technology Use (18%)
- Cancers (17%)
- Domestic Violence (14%)
- Bullying (13%)
- Heart Disease and Stroke (12%)

*What are the top three risky behaviors in DuPage County?*

- **Alcohol/Drug Abuse (70%)**
- **Being Overweight (40%)**
- **Poor Nutrition/Eating Habits (38%)**
- Lack of Exercise (30%)
- Too Much Screen Time/Technology Use (26%)
- Tobacco Use/Smoking (24%)
- Lack of Care Safety (e.g., car seats, seat belts, cell phone use) (19%)
- Unfairness towards other Races/Cultures (15%)
- Dropping Out of School (13%)
- Not Getting "Shots"/Vaccines to Prevent Disease (11%)



## Survey Findings (continued)

*How would you rate the health of our community?*

- **Somewhat Healthy (50%)**
- Healthy (39%)
- Unhealthy (6%)
- Very Healthy (3%)
- Very Unhealthy (1%)

*How would you rate your personal health?*

- **Healthy (49%)**
- Somewhat Healthy (31%)
- Very Healthy (14%)
- Unhealthy (6%)
- Very Unhealthy (1%)

*Where should the community focus its attention to make things better in DuPage County?*

- **Good Jobs and Healthy Economy (35%)**
- **Affordable Housing (28%)**
- **Access to Mental Health Treatment (23%)**
- Low Crime/Safe Neighborhoods (22%)
- Access to Alcohol/Drug Abuse Treatment (18%)
- Schools (15%)
- Public Transportation (15%)
- Homeless Services (14%)
- Access to Healthcare (13%)
- Senior Services (11%)

## Photovoice

The Photovoice method of collecting feedback involves participants using photography to share what they see as important in their community. Photovoice was considered a pilot for purposes of this assessment and not included as part of the final assessment findings. However, committee members viewed the method as innovative and appreciated its potential to engage populations that did not participate in the survey. Further, its ability to be used in print and electronic media seemed useful for the Impact DuPage website and launch. Photovoice has four overall goals, including (1) help people record and think about their community's strengths and problems; (2) identify important issues through group discussion and photographs; (3) get the attention of community decision makers; and (4) work toward positive change in our community.

### *Photovoice Design*

Committee members selected three questions for participants to answer using photography:

- What are the greatest strengths of DuPage County?
- What do you love about DuPage County and/or what makes you proud of your community?
- What does wellness (or well-being) mean to you?

Orientation materials were developed for participants (Appendices IX). The orientation contained basic information about Impact DuPage, Photovoice questions and process, guidelines, brainstorming ideas, and consent form details.

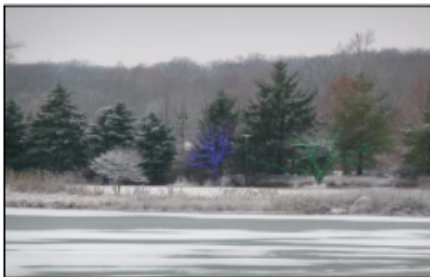
### *Photovoice Participants*

Due to time constraints, logistics, and capacity, the committee felt it most effective to pilot Photovoice with several existing groups. Members emphasized the need to engage underrepresented populations. As a result, the following groups were selected for Photovoice participation:

- **Community High School District 94, West Chicago**  
Two English as a Second Language (ESL) classes, 28 students
- **People’s Resource Center, Wheaton**  
Kid’s Art Junior High (5<sup>th</sup> – 7<sup>th</sup> graders), 15 participants
- **People’s Resource Center, Wheaton**  
Volunteers – Announcement sent out via web-based newsletter which reaches about 2,500 individuals

### **Photovoice Findings**

A total of 10 participants submitted photos to Impact DuPage, answering the three questions above. These photos included grocery stores, libraries, police stations, medical/dental clinic, and faith communities. Below are two examples of photos submitted by Photovoice participants.



*“One of the greatest strengths of DuPage County is the Morton Arboretum. We are blessed to have this lovely preserved piece of land and beautiful landscape for all to view. It is a wonderful ‘get away’ place in the midst of our busy county.”*



*“One of the strengths in DuPage County is having school. School is really important in my life and in others because it helps me learn and prepares me for my career in the future.”*

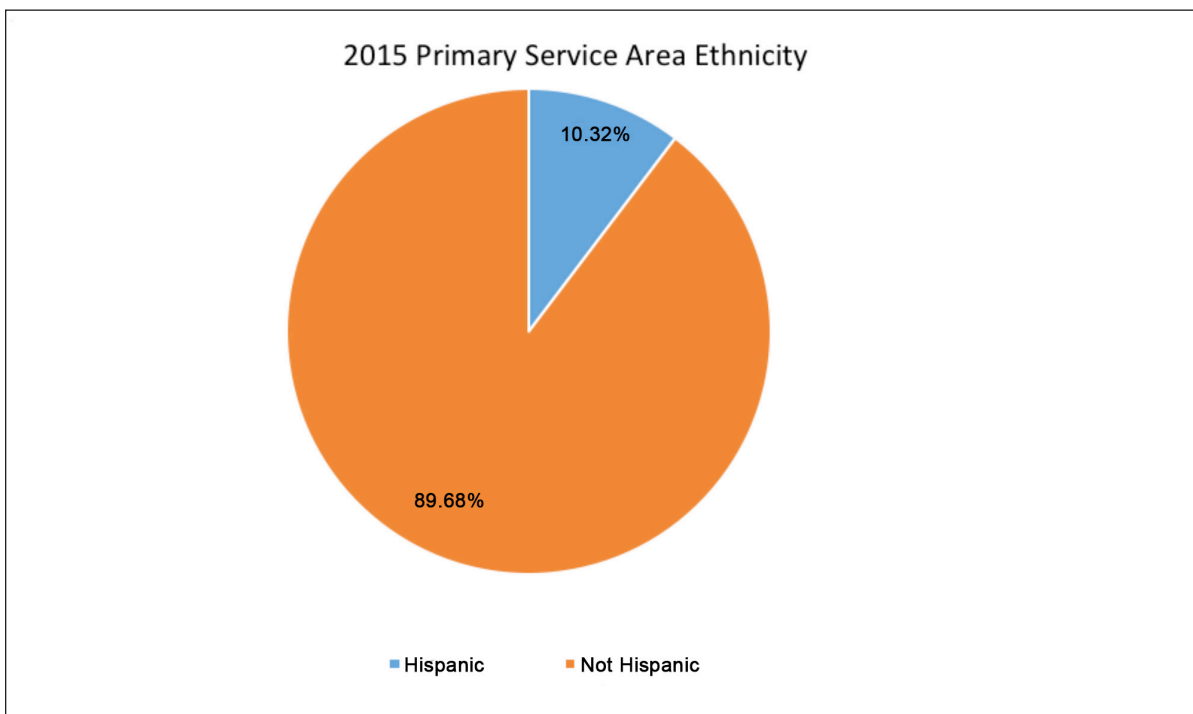
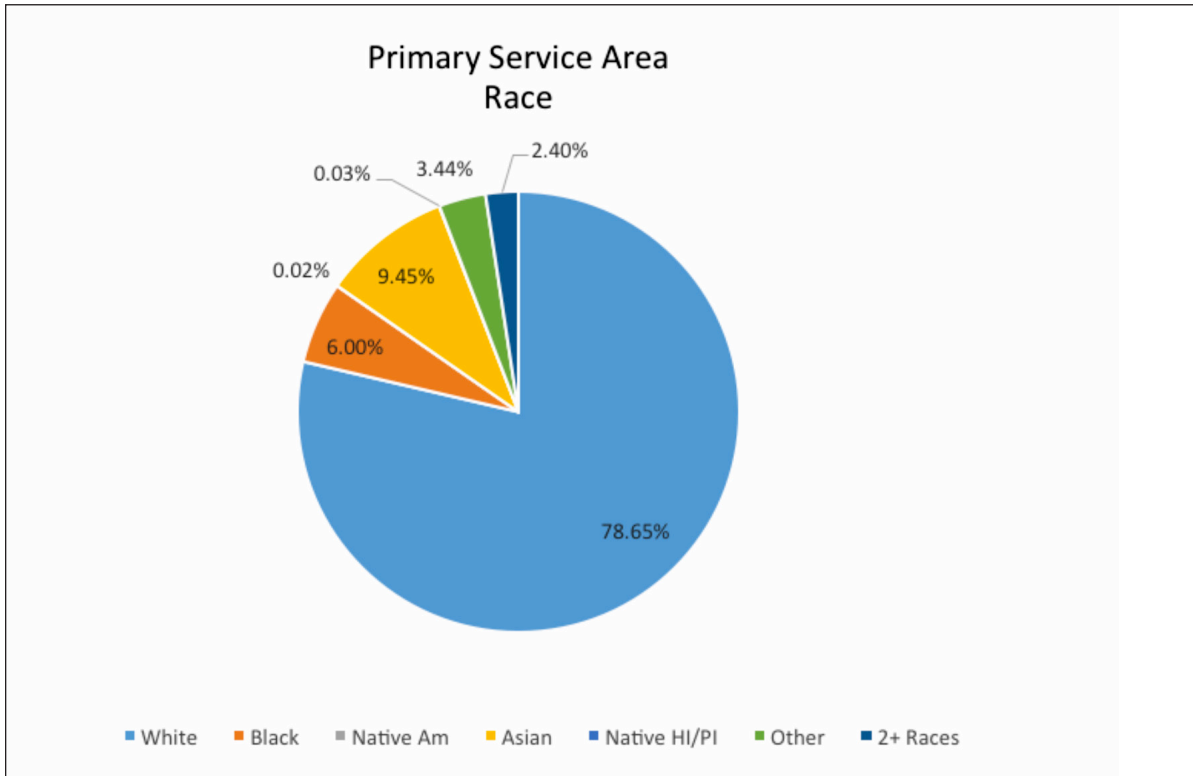
Because of the limitations of the information collected through the Photovoice pilot, this information was not included in the review of key findings with the Impact DuPage Steering Committee. However, committee members plan to use Photovoice as a way to engage underrepresented populations in future Impact DuPage activities.

# Appendix 4: Advocate Good Samaritan Hospital Community Health Council Data Presentation

## Advocate Good Samaritan Hospital Data Presentation

### Primary Service Area (PSA) Demographic Data

2015 Primary Service Area Population: 653,410 (Healthy Communities Institute, 2016)



**PSA and DuPage County Ethnicity Key Findings:**

- For DuPage County and the PSA the fastest growing race/ethnicity is the Hispanic population. In DuPage County between 1990 and 2013 the Hispanic population increased by 275.4 percent (DuPage County IPLAN 2020, 2015).

**PSA Population by age (HCI, 2016)**

Age	Population	Percent
Age < 18	148,418	22.7%
Age 18-24	59,120	9%
Age 25- 64	345,889	52.9%
Age 65+	99,992	15.3%

**PSA Population by Age Key Findings:**

- 22.7 percent of the PSA is under the age of 18 while 9 percent is between the ages of 18-24. The largest age group was 25-64 year olds with 52.9 percent of the population belonging in this age bracket. The senior population came in third with 15.3 percent of the PSA being above the age of 65.

*DuPage County Population percent by Age and Race/Ethnicity (DuPage County IPLAN, 2015)*

**White**

Age	2000	2010	2013
0-4	79.0	73.7	73.2
5-9	81.8	73.2	75.0
10-14	82.2	79.3	76.4
15-19	81.1	77.3	79.5
20-24	78.6	79.8	77.9
25-34	79.1	77.0	75.3
35-44	85.4	76.9	77.0
45-54	86.5	84.7	83.5
55-64	88.1	85.7	85.2
65-74	92.4	87.5	84.8
75-84	95.1	89.4	89.2
85+	96.9	98.9	93.9
<b>Total</b>	<b>84.0</b>	<b>77.9</b>	<b>80</b>

**Black**

Age	2000	2010	2013
0-4	3.6	6.1	5.2
5-9	4.0	6.2	5.9
10-14	3.8	6.5	6.2
15-19	3.6	5.1	4.8
20-24	3.7	6.7	7.6
25-34	4.0	5.6	4.7
35-44	3.2	5.3	5.3
45-54	2.6	3.4	4.1
55-64	1.8	3.6	3.4
65-74	1.0	1.1	2.4

**Black...continued**

Age	2000	2010	2013
75-84	0.6	0.6	1.6
85+	0.8	0.8	0.6
<b>Total</b>	<b>3.1</b>	<b>4.6</b>	<b>4.6</b>

**Asian**

Age	2000	2010	2013
0-4	8.5	11.8	11.4
5-9	7.4	9.4	12.1
10-14	7.9	10.5	10.3
15-19	8.3	8.6	10.1
20-24	8.7	9.2	9.4
25-34	9.9	12.2	12.7
35-44	7.5	12.3	13.3
45-54	8.2	8.7	9.7
55-64	8.0	10.0	9.4
65-74	5.1	10.3	11.1
75-84	3.3	5.8	7.5
85+	1.9	3.9	4.6
<b>Total</b>	<b>7.9</b>	<b>10.1</b>	<b>10.8</b>

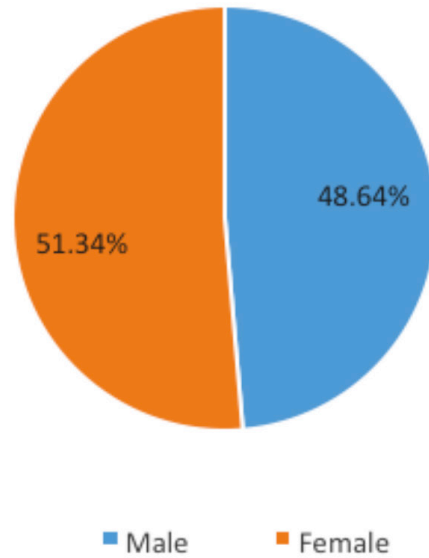
**Hispanic**

Age	2000	2010	2013
0-4	14.5	23.6	23.8
5-9	11.7	21.4	23.0
10-14	9.9	16.8	18.9
15-19	12.2	16.0	17.8
20-24	18.0	19.2	17.8
25-34	13.4	19.1	17.7
35-44	7.3	14.9	16.5
45-54	4.6	8.2	10.0
55-64	3.7	5.3	6.1
65-74	3.0	5.1	4.8
75-84	1.5	3.1	4.9
85+	1.2	0.7	2.1
<b>Total</b>	<b>9.0</b>	<b>13.3</b>	<b>13.9</b>

**DuPage County Race/Ethnicity Key Findings:**

- The minority population has increased in almost all age groups since 2000 while the White population has decreased in every age group. The highest increase in percentage from 2000 to 2013 is among 5-9 year old Hispanics, which made up 11.7 percent of the DuPage County population in 2000 to 23 percent in 2013.

## Primary Service Area by Gender



### PSA by Gender Key Findings:

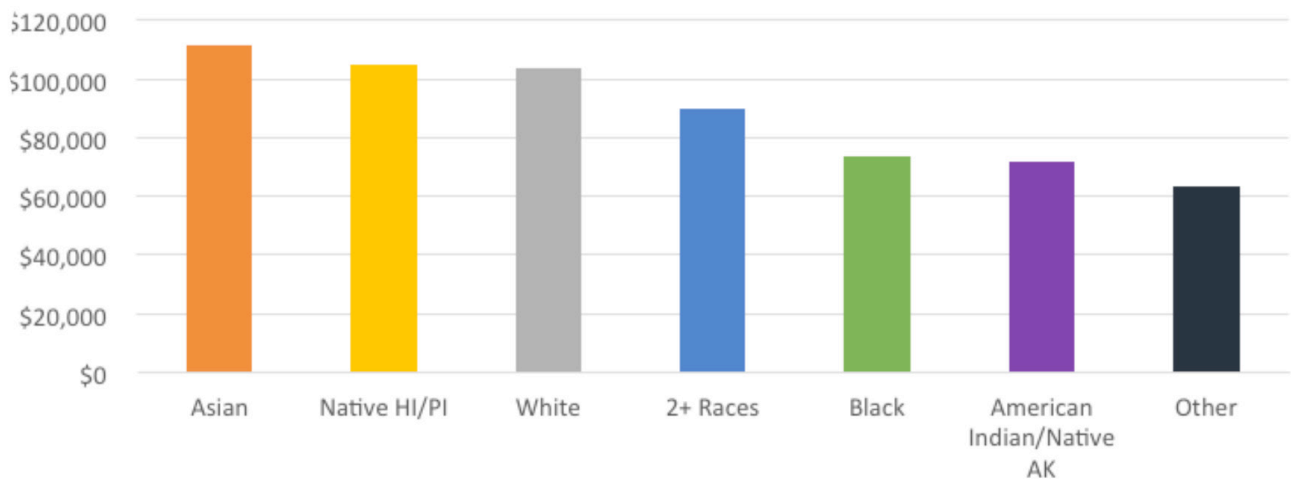
- Good Samaritan Hospital's PSA is made up of 48.64 percent male and 51.34 percent female.

### PSA Income

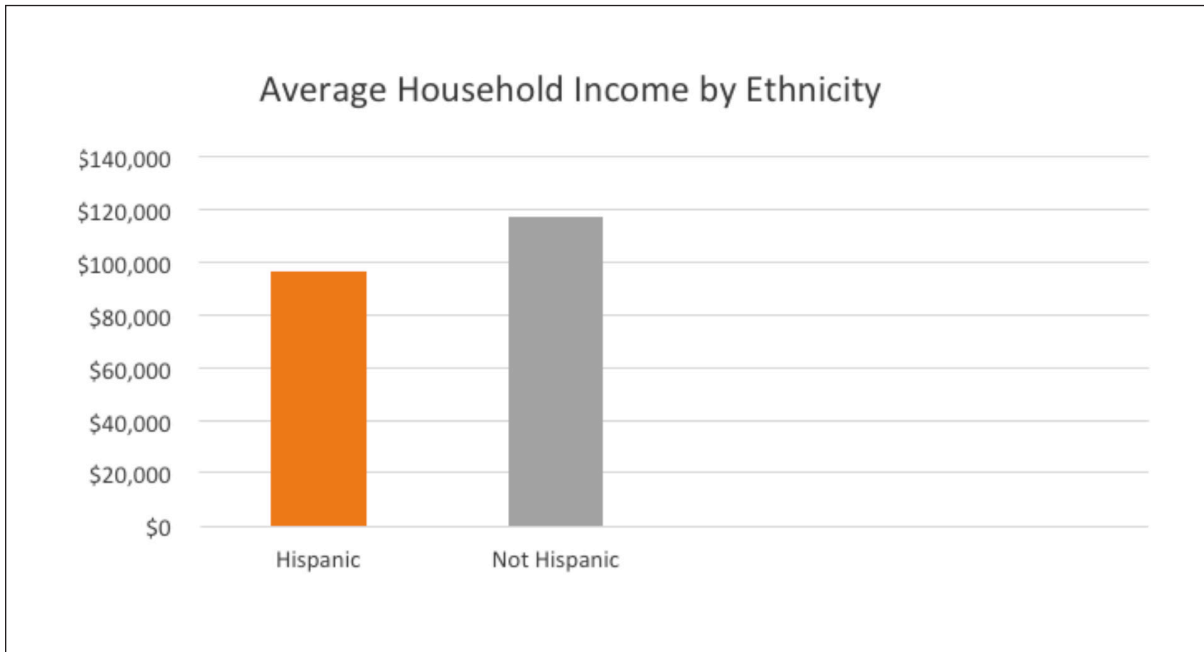
PSA Average Household Income (HCI, 2016) – \$115,956

Number of Families in PSA Below Poverty Level (HCI, 2016) – 7,526 (4.3%)

## Average Household Income by Race

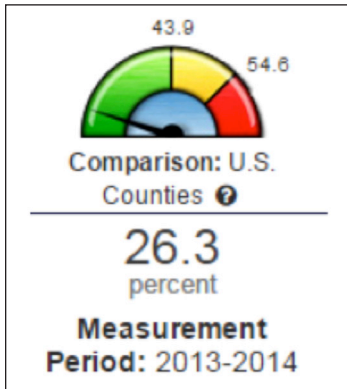






*DuPage County – Students Eligible for the Free Lunch Program*

**Data Summary:** 26.3 percent of children living in DuPage County are eligible for the free lunch program.



**Key Findings:**

- The percentage of children living in DuPage County that are eligible for the free lunch program has more than doubled from 2009 to 2014, going from 10.6 to 26.3.

**Disparities:**

- Higher percentages of children eligible for the free or reduced lunch program can be seen in 4- 5 communities (Westmont, Lombard, Woodridge, Villa Park), all with higher numbers of minority populations.

**PSA Insurance Coverage**

Insurance	Percent of PSA	Number of People in PSA
Medicaid	14.2%	93,496
Medicare	14.3%	94,155
Uninsured	2.9%	19,094

Advocate Health Care Services Planning Department, Population Statistics 2015

## Education and Employment

### PSA Key Findings (Advocate Planning Department, 2015):

- 5.4 percent of the population over the age of 25 do not have a high school diploma, which is 7.6 percent lower than the state (Illinois) rate.
- The unemployment rate is 6.5 percent (16+ years old), which is 0.8 percent lower than the state (Illinois) unemployment rate.

### DuPage County Educational Attainment

Educational Attainment	2013
Less than high school diploma	7.5%
High school diploma	19.10%
Some college or associates degree	26.50%
College degree	28.68%
Graduate or professional degree	18.22%

(DuPage County IPLAN 2020, 2015)

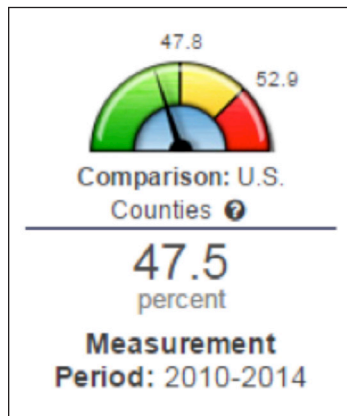
## Housing

### PSA Key Findings:

- The average home value in the Good Samaritan PSA is \$415,782, which is \$168,813 more than the average home value in Illinois.

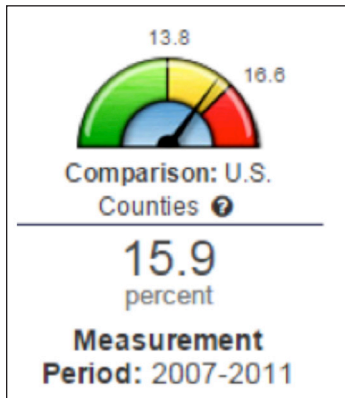
### *DuPage County – Renters Spending 30% or More of Household Income on Rent (HCI, 2015)*

**Data Summary:** 47.5 percent of renters in DuPage County spent more than 30 percent of their income on rent.



## Severe Housing Problems (HCI, 2015)

**Data Summary:** 15.9 percent of DuPage County residents have severe housing problems as measured by the following factors: overcrowding, high housing costs, lack of kitchen or lack of plumbing facility.



## Substance and Alcohol Abuse

### Good Samaritan Hospital

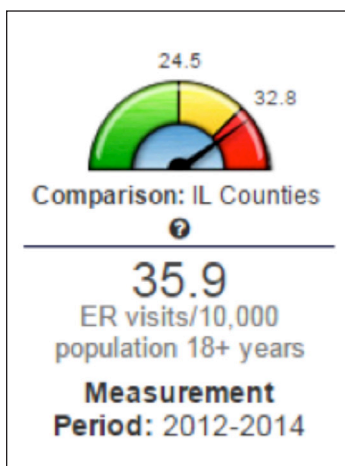
#### Key Findings:

- The largest racial/ethnic group utilizing the Good Samaritan Detox Center are Non-Hispanic (96%) Whites (94%).
- Detox patients tend to be middle aged with 28 percent of patients aged 50-59, followed by 40-49 year olds at 27 percent and 30-39 year olds at 21 percent.
- The majority of detox patients are male (80%)
- 33 percent of Detox Center patients use Medicaid Managed Care as their primary insurance, followed by Public Aid at 16 percent.
- Alcohol abuse was the number one reason for admission with 69 percent of patients being admitted due to alcohol withdrawal, alcohol dependence and alcohol with drawl delirium.

## PSA

### Age-Adjusted ER Rate due to Alcohol Abuse (HCI, 2015)

**Data Summary:** The rate of ER visits due to alcohol abuse per 10,000 people aged 18 and older is 35.9.



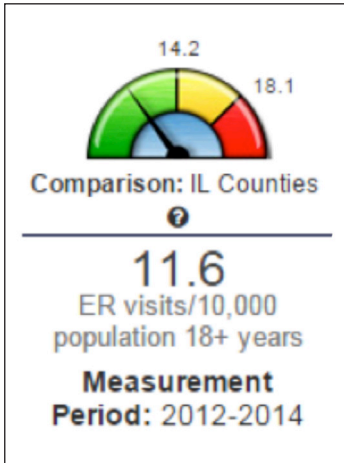
#### Key Findings:

- The rate of ER visits due to alcohol abuse among those 18 or older has increased from 2009 (20.5) to 2014 (35.9).

**Disparities:** N/A

### Age-Adjusted ER Rate due to Substance Abuse (HCI, 2015)

**Data Summary:** The emergency room visit rate due to substance abuse is 11.6 per 10,000 population aged 18 and older.



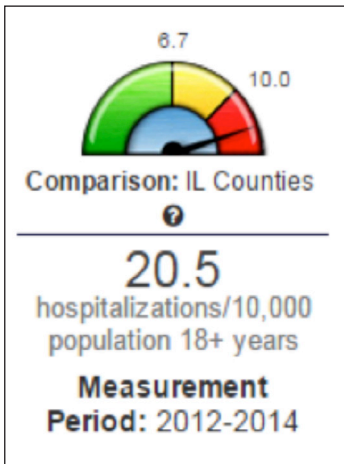
**Key Findings:**

- The rate of ER visits from substance abuse increased from 7.8 in 2009 to 11.6 in 2014.

**Disparities:** N/A

### Age-Adjusted Hospitalization Rate due to Alcohol Abuse (HCI, 2015)

**Data Summary:** The rate of hospitalization due to alcohol abuse is 20.5 per 10,000 aged 18 years and older.



**Key Findings:** N/A

**Disparities:** N/A

### PSA Communities with Highest Rates of Alcohol and Substance Abuse (HCI, 2015)

**Age-Adjusted Hospitalization Rate due to Alcohol Abuse:**

Downers Grove (60515) 36.4

Wheaton (60187) 35.9

Westmont 33.7

**Age-Adjusted ER Rate due to Substance Abuse:**

Westmont 18.3

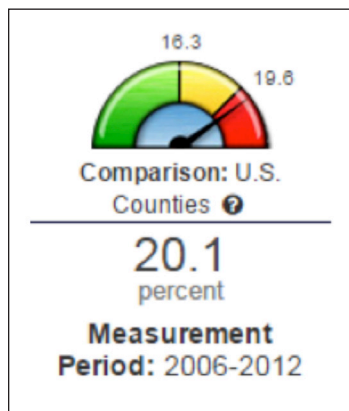
Downers Grove (60515) 14.8

Wheaton (60187) 14.8

## DuPage County

### Adults who Drink Excessively (HCI, 2015)

**Data Summary:** 20.1% of adults in DuPage County drink excessively.

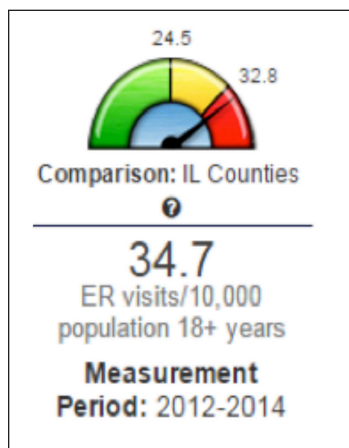


**Key Findings:** N/A

**Disparities:** N/A

### Age-Adjusted ER Rate due to Alcohol Abuse (HCI, 2015)

**Data Summary:** The annual age-adjusted ER visit rate due to alcohol abuse is 34.7 per 10,000 population aged 18 years and older.



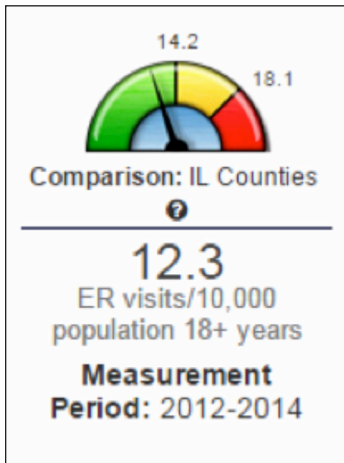
**Key Findings:** N/A

**Disparities:**

- The emergency room visit rate due to alcohol abuse was highest amongst 18-24 year olds, with a rate of 57.85 per 10,000 population and lowest amongst 85+ with a rate of 2.1.
- Males have a higher rate of ER visits from alcohol abuse (46 per 10,000) than females (23.8 per 10,000).
- ER visits due to alcohol abuse are higher among Native Americans and Whites in DuPage County.

### Age-Adjusted ER Rate due to Substance Abuse (HCI, 2015)

**Data Summary:** The rate of ER visits due to substance abuse is 12.3 per 10,000 population aged 18 and older.



#### Key Findings:

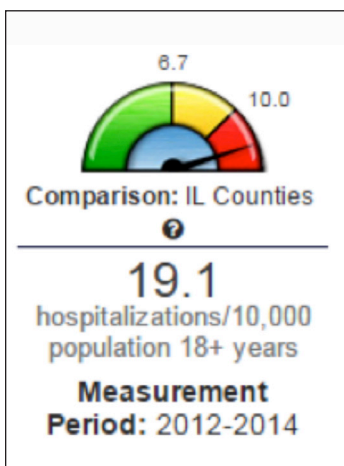
- From 2009 to 2014 ER visit rates due to substance abuse have increased from 2009 (8.6) to 2014 (12.3).

#### Disparities:

- The highest rates of ER visits due to substance abuse can be seen in the 18 to 24 year old age group at a rate of 35 ER visits per 10,000, followed by the 25 to 34 year old age group at 22.2 per 10,000.
- Males have higher ER visitation rates (15.9 per 10,000) compared to females (8.5 per 10,000).
- Hospital ER visitation rates due to substance abuse are higher among Native Americans/Alaskan Natives (22.6) and Whites (15.0).

### Age-Adjusted Hospital Rate due to Alcohol (HCI, 2015)

**Data Summary:** The rate of hospitalization due to alcohol is 19.1 per 10,000 population aged 18 years and older.



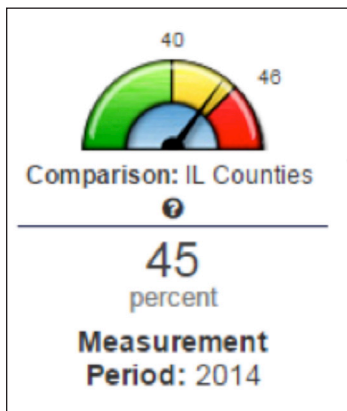
**Key Findings:** N/A

#### Disparities:

- Hospitalization rates due to alcohol use are highest in the 45 to 64 year old age group (26.9) and lowest in the 18 to 19 year old age group (4.6)

## Teens who Use Alcohol (HCI, 2015)

Data Summary: 45% of 12th graders consumed alcohol 30 days prior to the survey.

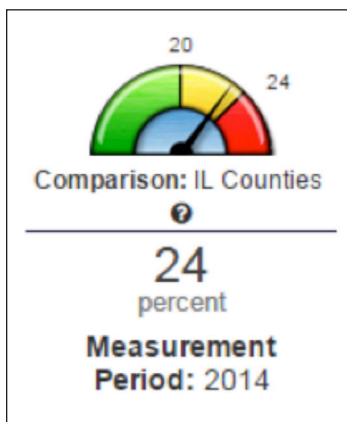


Key Findings: N/A

Disparities: N/A

## Teens who Use Marijuana (HCI, 2015)

Data Summary: 24% of teens used marijuana one or more times 30 days prior to the survey



Key Findings: N/A

Disparities: N/A

### Additional Alcohol and Substance Abuse Key Findings:

- The DuPage County Health Department's Community Themes and Strengths Survey results reported alcohol and drug abuse as the most important health concern in DuPage County.
- Percent of DuPage County adults (25.8) meeting the criteria for binge drinking exceeds the state (21.8) and national (22.9) percentage (DuPage County IPLAN 2020, 2015).

### Risk Factors for Alcohol and Substance Abuse (SAMSHA, 2015)

- Family history of addiction
- Mental health disorders
- Lack of family involvement
- Anxiety, depression, loneliness
- Taking a highly addictive drug

### National Trends and Disparities

- Hispanics and Blacks have a higher risk for developing alcohol-related liver disease than whites (National Institute on Alcohol Abuse and Alcoholism, 2015).
- Heavy drinking is most prevalent among White and Hispanic men and lowest for Asian-American women (National Institute on Alcohol Abuse and Alcoholism, 2015).

- White adolescents (12-17) have the highest prevalence rate for binge drinking (National Institute on Alcohol Abuse and Alcoholism, 2015).
- Alcohol-related traffic deaths are more frequent among Native Americans or Alaska Natives than any other minorities.
- Between 2001 and 2005, alcohol played a role in 11.7 percent of all Native American deaths, which is more than twice the rate of the general American public.
- Men have higher drug use rates than women (PBS, 2015).
- African Americans face higher rates of death from major diseases and higher rates of HIV infection caused by substance abuse than their White counterparts (SAMHSA, 2015).

## Asthma

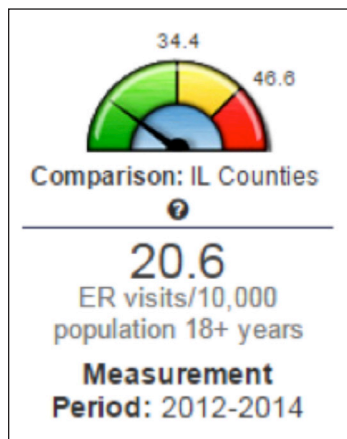
### Good Samaritan Hospital

- In 2015 there were 438 ER patients with an ICD9/10 diagnosis code for asthma.

## PSA

### Age-Adjusted ER Rate due to Adult Asthma (HCI, 2015)

**Data Summary:** The average annual age-adjusted emergency room rate due to adult (18+) asthma is 20.6 per 10,000 population.



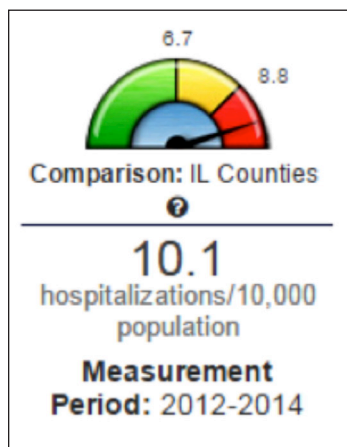
#### Key Findings:

- From 2009 to 2015 the age-adjusted ER rate due to adult asthma has slightly increased from 18.3 to 20.6.

**Disparities:** N/A

### Age-Adjusted Hospitalization Rate due to Asthma (HCI, 2015)

**Data Summary:** The average age-adjusted hospitalization rate due to asthma in Good Samaritan's primary service area is 10.1 per 10,000.





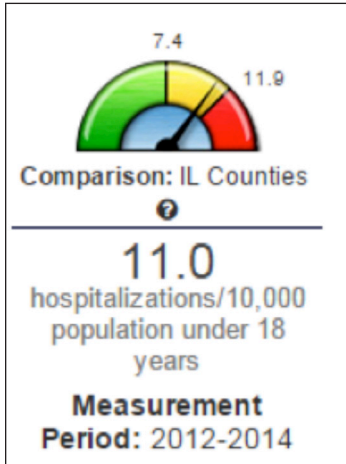
**Key Findings:**

- There has been no change (decrease nor increase) over the last 5 years in age-adjusted hospitalization rates due to asthma.

**Disparities:** N/A

*Age-Adjusted Hospitalization Rate due to Pediatric Asthma (HCI, 2015)*

**Data Summary:** The age-adjusted hospitalization rate due to pediatric asthma is 11.0 per 10,000 population.



**Key Findings:**

- The rate of hospitalization due to pediatric asthma has slightly decreased since 2009, going from 13.9 to 11.0 in 2014.

**Disparities:** N/A

*Primary Service Area Communities with High Hospitalization and ER rates due to Asthma*

**Age-Adjusted Hospitalization Rate due to Adult Asthma:**

Wheaton (60187) 18.5

Bolingbrook 16.6

Romeoville 16.6

**Age-Adjusted Hospitalization Rate due to Asthma:**

Wheaton (60187) 18.2

Bolingbrook 15.3

Romeoville 15.3

**Age-Adjusted Hospitalization Rate due to Pediatric Asthma:**

Naperville (60540) 19.8

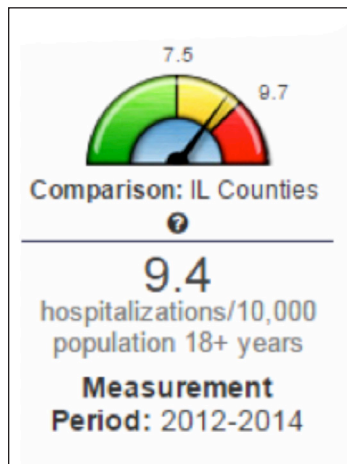
Wheaton (60187) 17.3

Woodridge 17.0

## DuPage County

### Age-Adjusted Hospitalization Rate due to Adult Asthma (HCI, 2015)

**Data Summary:** The age-adjusted hospitalization rate due to adult asthma is 9.4 per every 10,000 population aged 18 and over in DuPage County.



#### Key Findings:

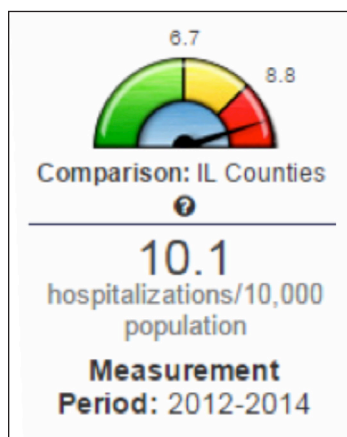
- Those aged 85 and older have the highest rate of hospitalization due to adult asthma at 34.4 followed by the 65 to 84 year olds at a rate of 20.3. Lowest rates of hospitalization due to adult asthma were seen in the 18 to 19 year old age group.
- Hospitalization rates due to adult asthma have remained consistent over time. No large increase or decrease was observed from 2009-2014.

#### Disparities:

- Females have a higher rate of hospitalization due to adult asthma at 12.7 versus men who had a rate of 5.6.
- African Americans have the highest rates of hospitalization due to adult asthma with over 36 per 10,000, followed by Hispanics at 8.8 then Whites at 8.6.

### Age-Adjusted Hospitalization Rate due to Asthma

**Data Summary:** The average age-adjusted annual hospitalization rate due to asthma is 10.0 per 10,000 population.



#### Key Findings:

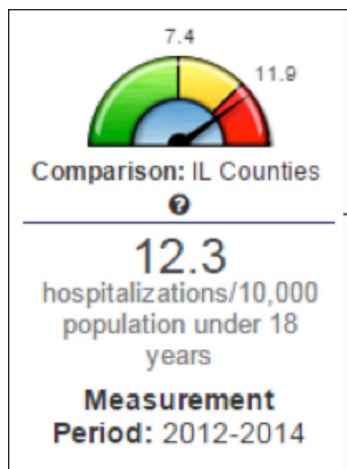
- From 2009 (10.3) to 2014 (10.1) there has been minimal decrease in the rates of hospitalization due to asthma.

**Disparities:**

- The highest rate of hospitalization due to asthma was seen in the 85 and older age group at a rate of 34.4, followed by children 0 to 4 with a rate of 23.0.
- Females have a higher rate of hospitalization due to asthma at 11.9 than men at 8.0.
- African Americans had the highest rate of hospitalization due to asthma at 38.9, followed by American Indians/Alaskan Natives at 11.8.

### *Age-Adjusted Hospitalization Rate due to Pediatric Asthma*

**Data Summary:** The average annual age-adjusted hospitalization rate due to pediatric asthma is 12.3 per 10,000 population under 18 years old.

**Key Findings:**

- Hospitalization due to pediatric diabetes has slightly decreased from 2009, going from 13.4 to 12.3.
- The age group with the highest rates of hospitalization due to pediatric asthma was the 0 to 4 year old group at a rate of 23.0, followed by the 5 to 9 year old age group at 13.1.

**Disparities:**

Unlike the adult asthma hospitalization rates, males have a rate of 14.8 for hospitalization due to pediatric asthma compared to females with a rate of 9.6.

The highest rates of hospitalization due to pediatric asthma can be seen in African Americans with almost quadruple the rate of any other race/ethnicity (44.9), followed by Hispanics with a rate of 10.6.

**Risk Factors for Asthma (CDC, 2015):**

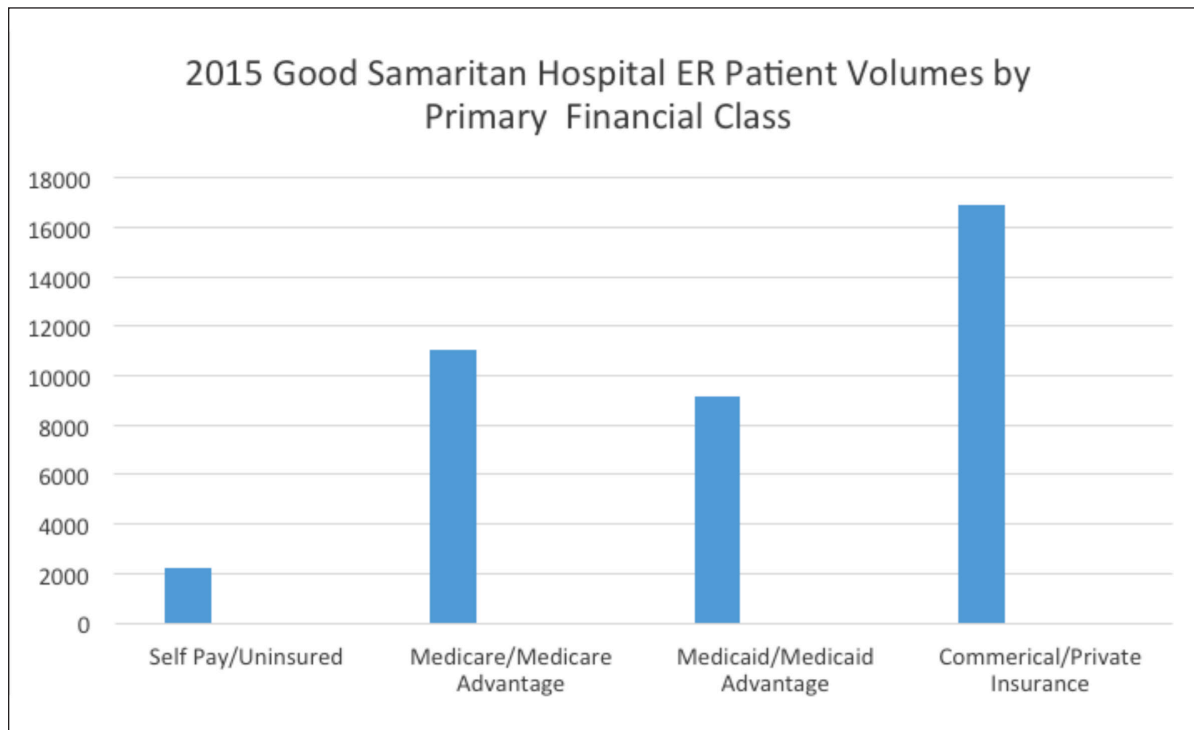
- Occupation
- Smoking
- Obesity
- Air Pollution
- House Dust Mites

**National Trends and Disparities:**

- The rates of hospitalizations and deaths due to asthma are both 3 times higher among African American than among Whites (National Institute of Health, 2012).
- Children have two times the rate of emergency department visits and hospitalizations for asthma as adults (National Institute of Health, 2012).
- Women account for nearly two-thirds of all deaths due to asthma in the United States.
- The percentage of people with asthma taking daily medicine to control asthma is lower among Hispanics (23.2%) and African Americans (25.1%) than Whites (35.1%) (National Institutes of Health, 2012). This indicates an issue with access to Health Care Services.

## Access to Health Care Services

### Good Samaritan Hospital



#### Key Findings:

- 5.2 percent of the 2015 ED patient volume was classified as self-pay, which is equivalent to 2,247 patients.
- 21.4 percent of the 2015 ED patient volume was classified as Medicaid or Medicaid Advantage, which is equivalent to 9,141 patients.
- 40 percent of the 2015 ED patient volume was classified as Medicare or Medicare Advantage, which is equivalent to 13,627 patients.
- 41.3 percent of the 2015 ED patient volume was classified as commercial/private insurance, which is equivalent to 17,616.

#### PSA

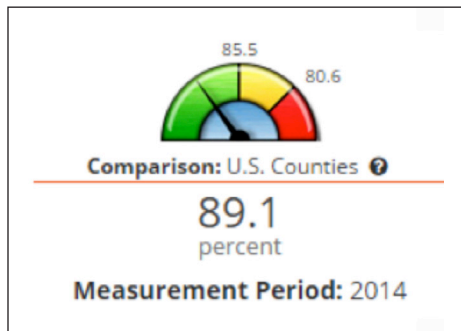
Primary Service Area Medicaid, Medicare and Uninsured Populations (Advocate Planning, 2014)

Insurance	Percent of PSA
PSA 2014 Medicaid Population	75,561 (11.5%)
PSA 2014 Medicare Population	88,045 (13.4%)
PSA 2014 Uninsured Population	28,910 (4.4%)
Total Population: 653,410	

## DuPage County

### Adults with Health Insurance (HCI, 2015)

**Data Summary:** 89.1 percent of adults living in DuPage County have some form of health insurance, leaving 10.9 percent of adults without health insurance.



#### Key Findings:

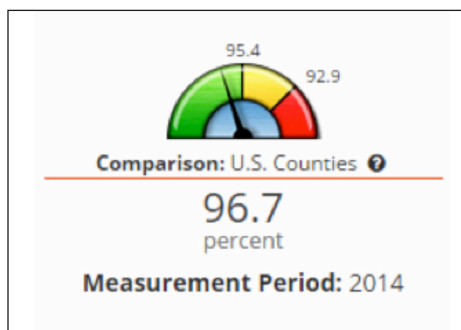
- DuPage County is 10.9 percent short of achieving the Healthy People 2020 goal, which is 100 percent of adults covered.
- Health insurance coverage among the adult population in DuPage County has slightly increased from 2009 to 2014, going from 87.0 to 89.1.
- In 2014 DuPage County Health Department conducted a community survey in efforts to learn more about issues that were important to the community, how quality of life was perceived and assets that could be used to improve community well-being. In this survey 13 percent of survey respondents said the community should focus on access to Health Care Services to improve quality of life in DuPage County.

#### Disparities:

- The race category of "Other" has the largest number of people uninsured at 30.3 percent. 70.4 percent of Hispanic adults are insured, leaving 29.6 percent without health insurance. The White population has the highest rate of health insurance coverage at over 93 percent of adults being covered.

### Children with Health Insurance (HCI, 2015)

**Data Summary:** 96.7 percent of children in DuPage County have some form of health insurance, leaving 3.3 percent of children without health insurance.



#### Key Findings:

- Although 89.1 percent of adults and 96.7 percent of children have some form of insurance the Healthy People 2020 goal has still not been met, which requires 100 percent of adults and children to have some form of health insurance.
- Insurance coverage among children in DuPage County has had ample change from 2009 to 2014, going from 96.4 to 96.7.

#### Disparities:

- The racial category of "Other" has the lowest rate of child coverage with only 83.9 percent covered compared to Whites with 98.2 percent of children covered.

**Barriers to Health Care Services (National Institutes of Health- Hispanics and the Future of America, 2006):**

- Low educational attainment
- Low socioeconomic status
- Low income
- Underemployment/unemployment
- Immigration status
- Language
- Lack of or no health insurance
- Transportation (prevalent among senior Medicare and low-income populations)

**National Trends and Disparities:**

- Hispanics particularly those of Mexican origin are more likely to be uninsured compared to non-Hispanic Whites and Blacks (National Institutes of Health- Hispanics and the Future of America, 2006).
- Although insurance rates are higher among Blacks than Hispanics, overall Blacks have higher rates of uninsured than the White population (Center for Disease Control and Prevention, 2014).
- Blacks, Hispanics and many other lower income minorities are much less likely to be referred to and utilize preventative health care services (vaccinations, smoking cessation, screenings, etc.) (National Healthcare Disparities Report, 2003).

## Cancer

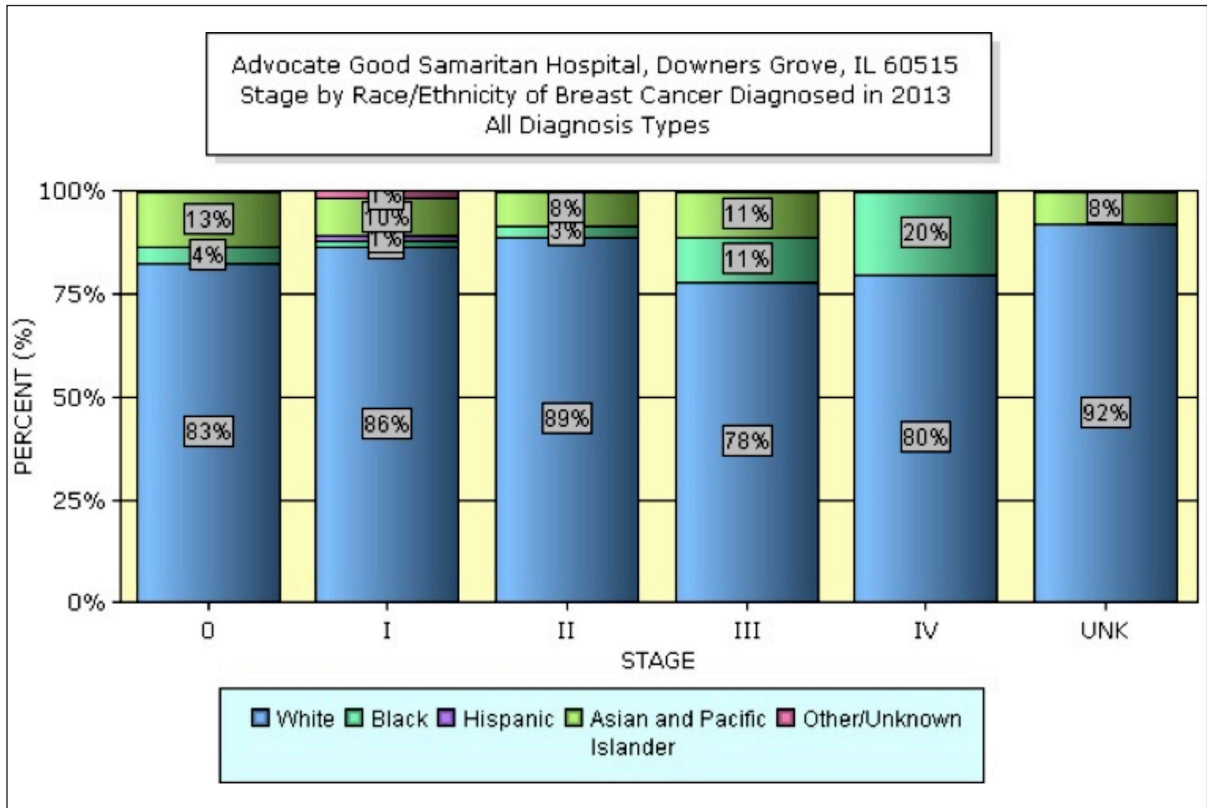
### Good Samaritan Hospital

**2014 Top Four Cancers at Good Samaritan Hospital (Good Samaritan Hospital, 2015):**

Cancer Type	Percentage of Good Samaritan Hospital Cancer Cases	Number of Patients Affected
Breast	38.3%	204
Lung	16.5%	88
Colo-rectal	14.7%	78
Bladder	10.5%	56
Total # of 2014 Good Samaritan Hospital Cancer Patients: 662		

**Breast Cancer**

- 67 percent of breast cancer diagnosis at Good Samaritan Hospital are in the pre-cancerous or stage one phase compared to the national hospital average of 60 percent.
- 18 percent of breast cancer cases are diagnosed at stage two at Good Samaritan Hospital compared to the national hospital average of 24 percent.
- 10 percent of breast cancer diagnosis at Good Samaritan Hospital are diagnosed at stage three or four compared to the national hospital average of 13 percent.



**Lung Cancer (non-small cell carcinoma)**

- 16 percent of lung cancer diagnosis at Good Samaritan Hospital are in stage one compared to the national hospital average of 20 percent.
- 8 percent of lung cancer diagnosis at Good Samaritan are in stage two compared to the national hospital average of 9 percent.
- 60 percent of lung cancer diagnosis at Good Samaritan Hospital are in stages three or four compared to the national hospital average of 66 percent.

**Primary Service Area**

*May 2015 Good Samaritan Hospital Community Needs Assessment  
(Advocate Planning Department)*

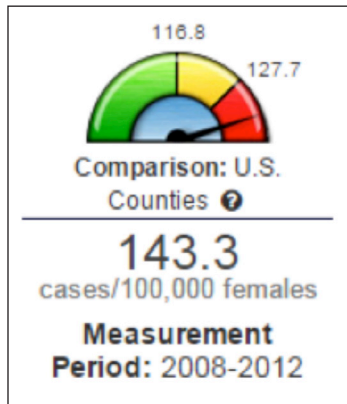
**Key Findings:**

- Cancer incidence rates were significantly higher in the PSA than in Advocate PSA and DuPage County.
- In 2014 there were 3,485 people in the PSA that were affected by some type of cancer.
- Breast cancer had the highest prevalence rate in the PSA, affecting 541 people annually.

## DuPage County

### Breast Cancer Incidence Rate (HCI, 2015)

**Data Summary:** The breast cancer incidence rate for DuPage County is 143.3.



#### Key Findings:

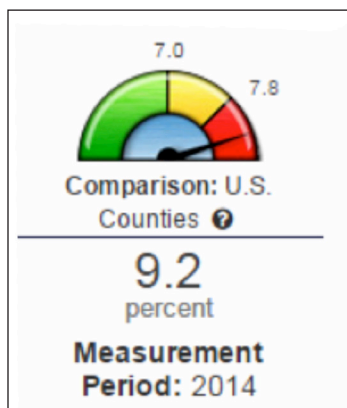
- The incidence rate of breast cancer slightly increased from 2015 to 2012, going from 138.1 to 143.3.

#### Disparities:

- Breast cancer incidence rates are higher among White women in DuPage County at a rate of 147.6 compared to their Black counterparts at 126.6.

### Cancer: Medicare Population (HCI, 2015)

**Data Summary:** 9.2 percent of Medicare beneficiaries in DuPage County were treated for cancer in 2014.



#### Key Findings:

- The percentage of Medicare beneficiaries in DuPage County that have been treated for cancer has slight increased from 2010 to 2014, going from 8.7 to 9.2.

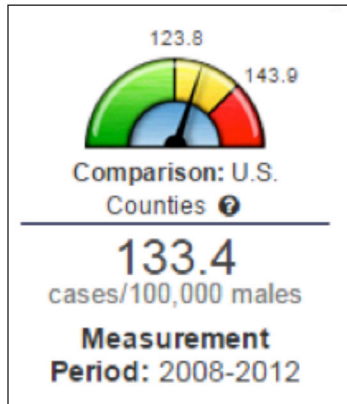
#### Disparities:

- Medicare beneficiaries younger than 65 had a significantly lower rate of cancer (2.8) than those over the age of 65 (9.8).



## Prostate Cancer Incidence Rate (HCI, 2015)

**Data Summary:** Males have an age-adjusted incidence rate of 133.4 per 100,000 males in DuPage County.



### Key Findings:

- Prostate cancer incidence rates have slightly decreased from 2005 (157.6) to 2012 (133.4).

### Disparities:

- Black males have a significantly higher incidence rate of prostate cancer at 235.7 than white males at a rate of 133.5.

### Additional Cancer Key Findings:

- The age-adjusted death rate (22.2) due to breast cancer is slightly higher than the Healthy People 2020 goal, which is 20.7.
- 17 percent of the 2014 Community Themes and Strengths Survey respondents indicated that cancer is one of the most important health concerns in DuPage County.

### Cancer Risk Factors (CDC, 2015):

- Obesity
- Poor Nutrition
- Physical Inactivity

### National Trends and Disparities (National Cancer Institute, 2015):

- African American women have a higher incidence of a particularly aggressive form of breast cancer compared to women in other racial/ethnic groups.
- African American men have higher rates of prostate cancer.
- American Indian/Alaskan Natives have higher rates of kidney cancer.
- Asian and Pacific Islanders have higher rates of liver cancer.
- African American and Hispanic women have higher incidence rates of cervical cancer.
- Breast cancer incidence rate is higher in White women however the risk of dying from breast cancer is greater in African American women

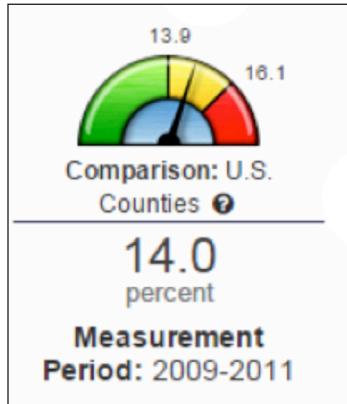
## Obesity and Nutrition

### DuPage County

#### Childhood Overweight and Obesity

##### *Low-Income Preschool Obesity (HCI, 2015)*

**Data Summary:** 14 percent of children aged 2-4 participating in federally funded health and nutrition programs are obese.

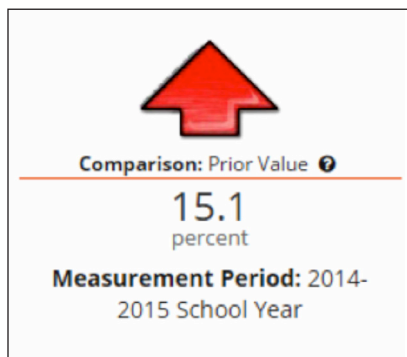


**Key Findings:** N/A

**Disparities:** N/A

##### *Children and Adolescents who are Obese (HCI, 2016)*

**Data Summary:** 15.1 percent of kindergartners, sixth and ninth grade DuPage County public school students are obese.

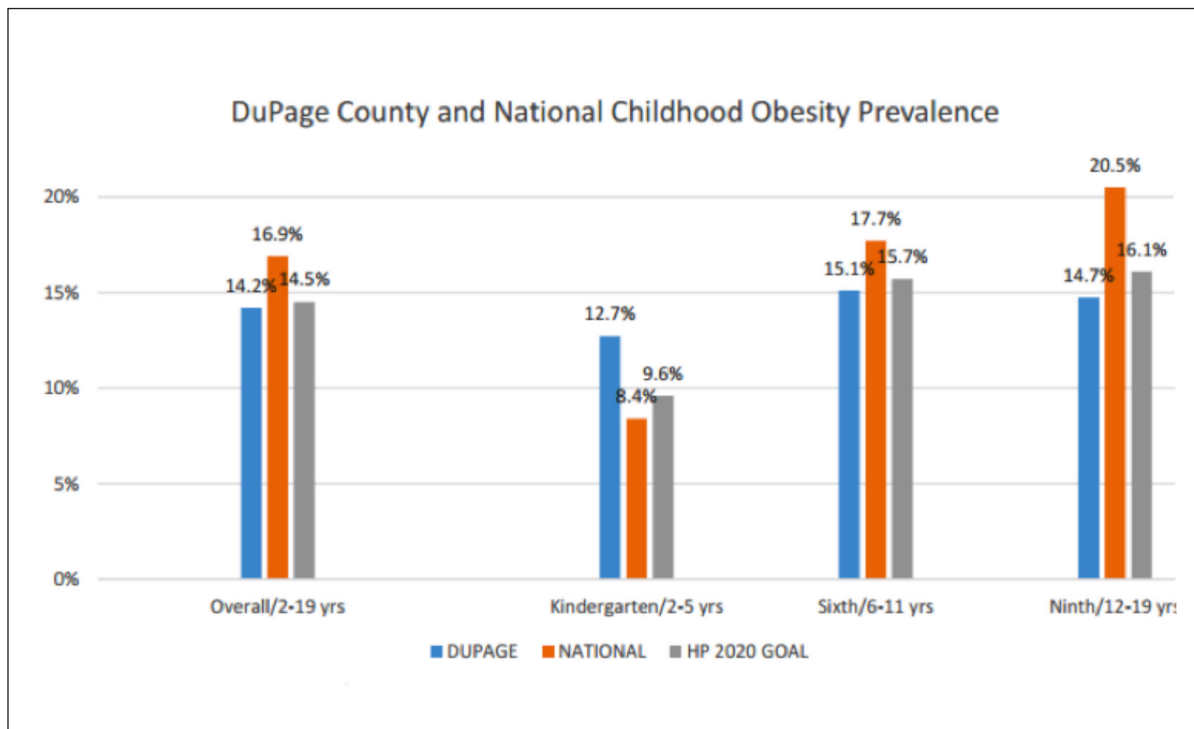


#### **Childhood Obesity Key Findings:**

- 30.8 percent of DuPage County kindergartners, sixth graders and ninth graders are obese or overweight.
- The DuPage kindergartner obesity rate (14.3%) exceeds the national rate for 2-5 year olds (8.4%).

#### **Childhood Obesity Disparities:**

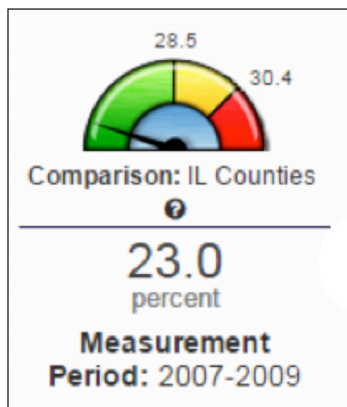
- Females have lower rates of obesity (12.7%) compared to their male counterparts (17.3%).
- One in five 2-4 year olds enrolled in WIC living in DuPage County are obese, which is a significantly higher rate than obesity rates (one in seven) among all children in DuPage County.
- Communities within DuPage County with higher percentages of low-income and minority populations tend to have higher rates of obesity. For example, some of the highest rates of childhood obesity in DuPage County can be found in **Lombard**, **Westmont** and **Villa Park**, which all have a large minority population and lower average household incomes.



## Adult Overweight and Obesity

*Adults who are Obese (HCI, 2015)*

**Data Summary:** 23 percent of adults living in DuPage County are obese as measured by their Body Mass Index (BMI) scores.

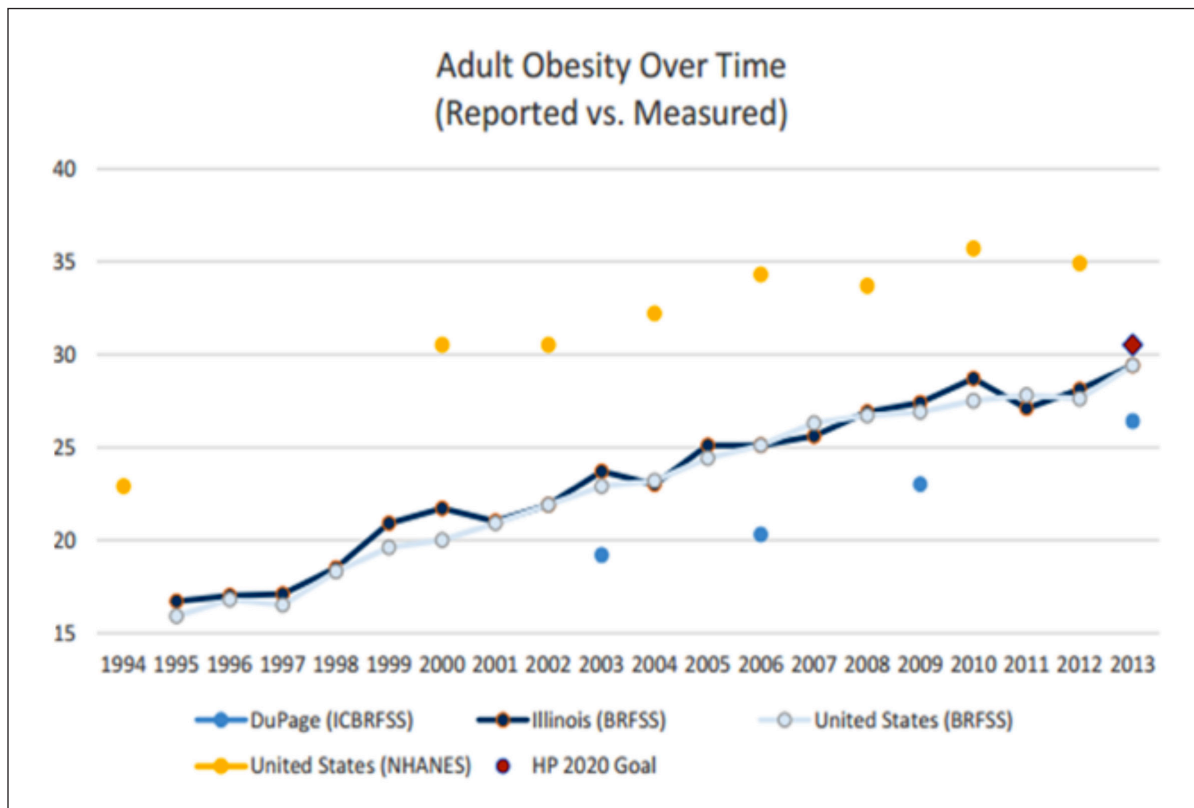


**Key Findings:** N/A

**Disparities:** N/A

### Additional Obesity and Nutrition Key Findings:

- One in three adults living in DuPage County identified as overweight (FORWARD of DuPage, 2015).
- Obesity/overweight was reported as one of the three top health concerns in DuPage County Community Themes and Strengths Survey.
- Poor nutrition and eating habits were the third most risky behaviors in DuPage County as indicated by 38 percent of Community Themes and Strengths Survey respondents.



**Overweight/Obesity Risk Factors (CDC, 2015):**

- Diet
- Physical inactivity
- Family factors
- Community environment (healthy food affordability, healthy food access, etc.)
- Lack of breastfeeding support

**National Trends and Disparities:**

- Latino and African American children and adults tend to have higher rates of obesity (Hispanic adults 42.5%, children 22.4%; African American adults 47.8%, 20.2%) compared to their white counterparts (White adults 32.6%, children 14.3%) (The state of Obesity Report, 2014).

**Consequences of Obesity (CDC, 2015):**

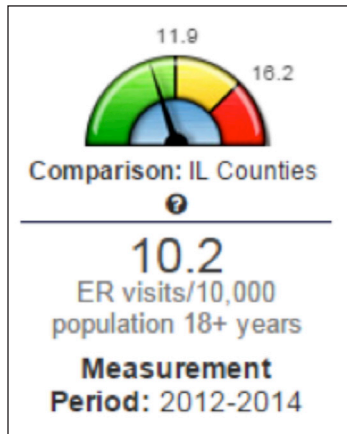
- High blood pressure
- High cholesterol
- Diabetes
- Decreased mental health (depression, decreased confidence, issues in school)
- Stroke
- Some cancers
- Coronary heart disease

## Immunization-Preventable Pneumonia and Influenza

### Primary Service Area

#### *Age-Adjusted ER Rate due to Immunization-Preventable Pneumonia and Influenza (HCI, 2015)*

**Data Summary:** The average annual age-adjusted emergency room visit rate for immunization preventable pneumonia and influenza is 10.2 per 10,000 population.



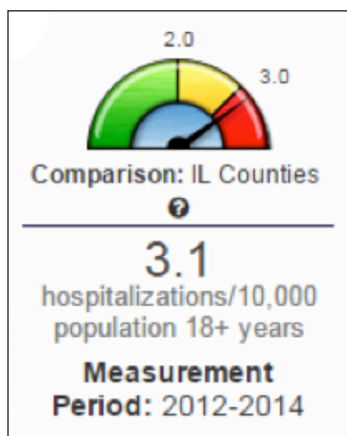
#### **Key Findings:**

- Since 2009 the ER rate due to immunization-preventable pneumonia and influenza has increased significantly from 5.9 to 10.2.

**Disparities:** N/A

#### *Age-Adjusted Hospitalization Rate due to Immunization-Preventable Pneumonia and Influenza (HCI, 2015)*

**Data Summary:** The average annual age-adjusted hospitalization rate for immunization-preventable pneumonia and influenza is 3.1 per 10,000 population.



#### **Key Findings:**

- The hospitalization rate for immunization-preventable pneumonia and influenza increased from 1.3 in 2009 to 3.1 in 2014.

**Disparities:** N/A

## *PSA Communities with the Highest Rates of ER Visits and Hospitalizations due to Immunization-Preventable Pneumonia and Influenza (HCI, 2015)*

### **Age-Adjusted ER Rate due to Immunization-Preventable Pneumonia and Influenza**

Bolingbrook 22.4

Romeoville 18.3

Wheaton (60187) 13.3

### **Age-Adjusted Hospitalization Rate due to Immunization-Preventable Pneumonia and Influenza**

Romeoville 6.2

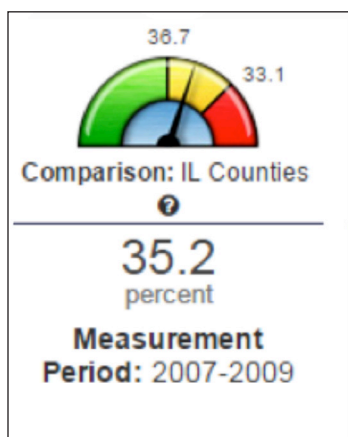
Elmhurst 4.4

Willowbrook 4.4

## **DuPage County**

### *Adults with Influenza Vaccination (HCI, 2015)*

**Data Summary:** From 2007-2009 35.2 percent of adults received an influenza vaccination in the last year.



#### **Key Findings:**

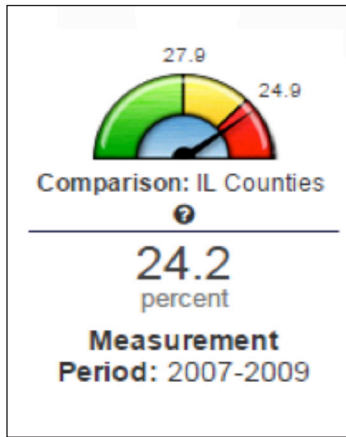
- From 2004 to 2009 adults with the influenza vaccinations slightly increased from 30.3 to 35.2.
- DuPage County is significantly below the Healthy People 2020 goal, which aims to immunize 70 percent of adults with the influenza vaccination.

#### **Disparities:**

- The highest rate of influenza vaccination among adults is the 65 and older population (61%) followed by those 45 to 64 years of age (39.6%). The lowest rates of vaccinations are among those adults aged 25 to 44 years old (27.8%).
- Adult males have higher rates of influenza vaccinations (39.2%) compared to their female counterparts (31.4).

### *Adults with Pneumonia Vaccination (HCI, 2015)*

**Data Summary:** For the years of 2007-2009 24.2 percent of adults living in DuPage County had a pneumonia vaccination in the last year.



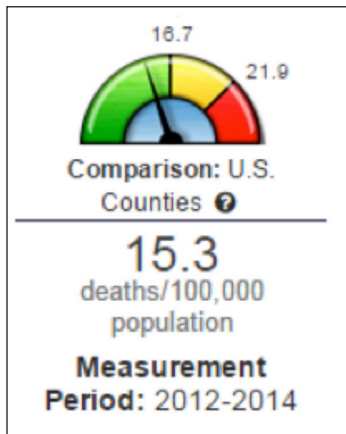
**Key Findings:** N/A

**Disparities:**

- The highest rates of pneumonia vaccinations were among adults aged 65 and older (69.9), while the lowest rates were among adults aged 45 to 64 years of age (12%).
- Adult males have a significantly higher rate of pneumonia immunizations (30.3) than adult females (18.4).

*Age-Adjusted Death Rate due to Influenza and Pneumonia (HCI, 2015)*

**Data Summary:** The age-adjusted death rate due to influenza and pneumonia is 15.3 per 100,000 population.



**Key Findings:**

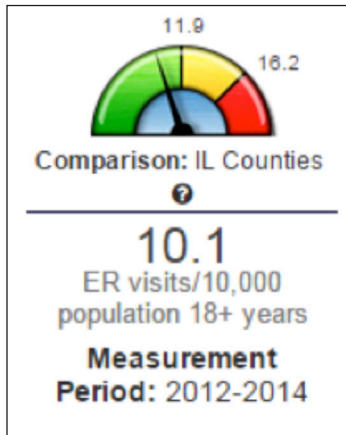
- The age-adjusted death rate due to influenza and pneumonia has slightly decreased from 16.1 in 2007 to 15.3 in 2014.

**Disparities:**

- More men die of influenza and pneumonia (17.8) compared to females (13.7), despite the higher rates of vaccinations among adult males.

*Age-Adjusted ER Rate due to Immunization-Preventable Pneumonia and Influenza (HCI, 2015)*

**Data Summary:** The age-adjusted ER rate due to immunization-preventable pneumonia and influenza is 10.1 per 10,000 population aged 18 years and older.



**Key Findings:**

- The age-adjusted (18+) ER rate due to immunization-preventable pneumonia and influenza has significantly increased from 2009 to 2014, going from 5.7 to 10.1.

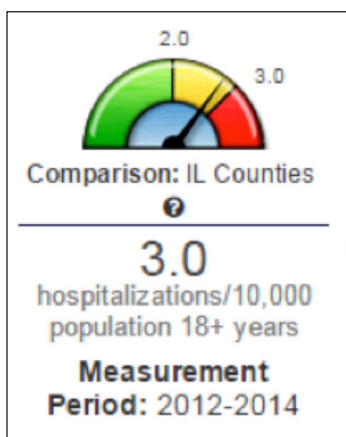
**Disparities:**

The highest ER rates for immunization preventable pneumonia and influenza is among those 25-44 years of age (13.5) while the lowest rates are among those 45 to 64 years of age (6.5).

- Females have higher ER rates due to immunization-preventable pneumonia and influenza (11.7) compared to males (8.5).
- African Americans have the highest ER rates due to immunization-preventable pneumonia and influenza (35.1), followed by Native Americans/Alaskan Natives (29.5). Whites have the lowest rate (7.3) compared to all other races and ethnicities.

*Age-Adjusted Hospitalization Rate due to Immunization-Preventable Pneumonia and Influenza (HCI, 2015)*

**Data Summary:** The average annual age-adjusted hospitalization rate due to immunization-preventable pneumonia and influenza is 3.0 per 10,000 population aged 18 years and older.



**Key Findings:**

- The age-adjusted hospitalization rate due to immunization-preventable pneumonia and influenza has almost tripled from 2009 to 2014, going from 1.3 in 2009 to 3.0 in 2014.

**Disparities:**

- The highest rates of hospitalization due to immunization-preventable pneumonia and influenza are among those aged 85 and older (35.9) and the lowest rates are among those aged 25 to 44 years old (.5).
- African Americans have the highest rates of hospitalization due to immunization-preventable pneumonia and influenza (7.4) followed by Hispanics (3.9). The White and Asian populations had an equally low rate of 2.8.



### Additional Immunization-Preventable Pneumonia and Influenza Key Findings:

- According to the 2014 Community Themes and Strengths Survey 11 percent of survey respondents indicated that not getting shots/vaccines to prevent disease was one of the three most risky behaviors in DuPage County.

### National Trends and Disparities:

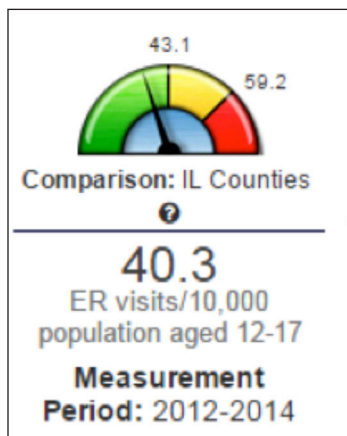
- Adults: Racial/ethnic gaps in immunization coverage have been shown for seven major vaccines: Pneumococcal, hepatitis A, hepatitis B, herpes zoster (shingles), influenza, human papillomavirus (HPV) and the tetanus/pertussis/diphtheria vaccines (National Adult and Influenza Immunization Summit, 2013).
- Those who are uninsured have lower rates of immunizations than those who are insured (National Adult and Influenza Immunization Summit, 2013).

## Mental Health

### PSA

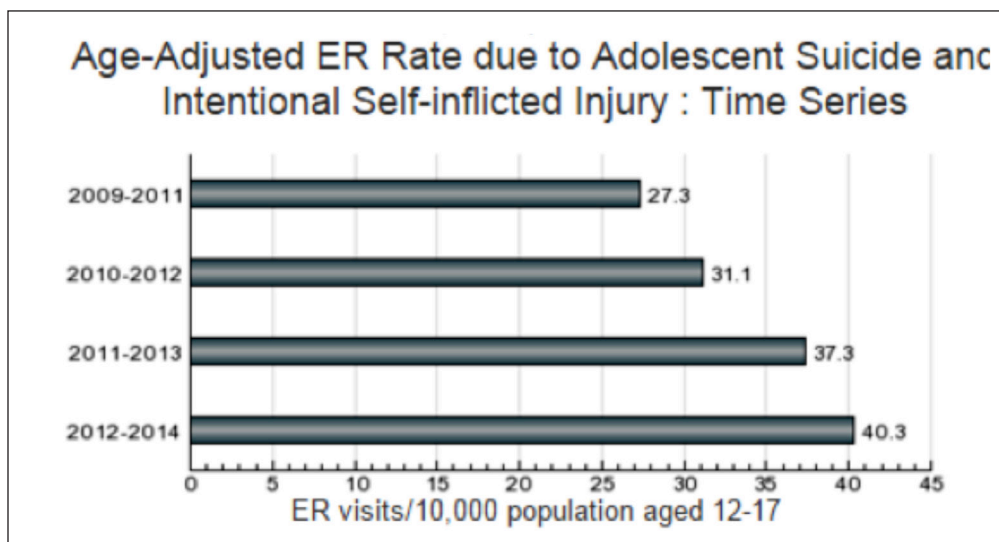
#### *Age-Adjusted ER Rate due to Adolescent Suicide and Intentional Self-inflicted Injury (HCI, 2015)*

**Data Summary:** The average annual age-adjusted emergency room visit rate due to suicide or intentional self-inflicted injury per 10,000 population aged 12-17 years is 40.3. (The data for this indicator were updated in HCI in August 2016 to reflect definitional changes in the ICD-10 classification system.)



### Key Findings:

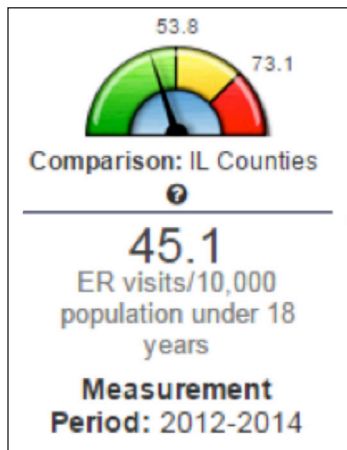
- Since 2009 the rate of ER visits due to adolescent suicide and intentional self-inflicted harm has steadily increased (see graph below).



Disparities: N/A

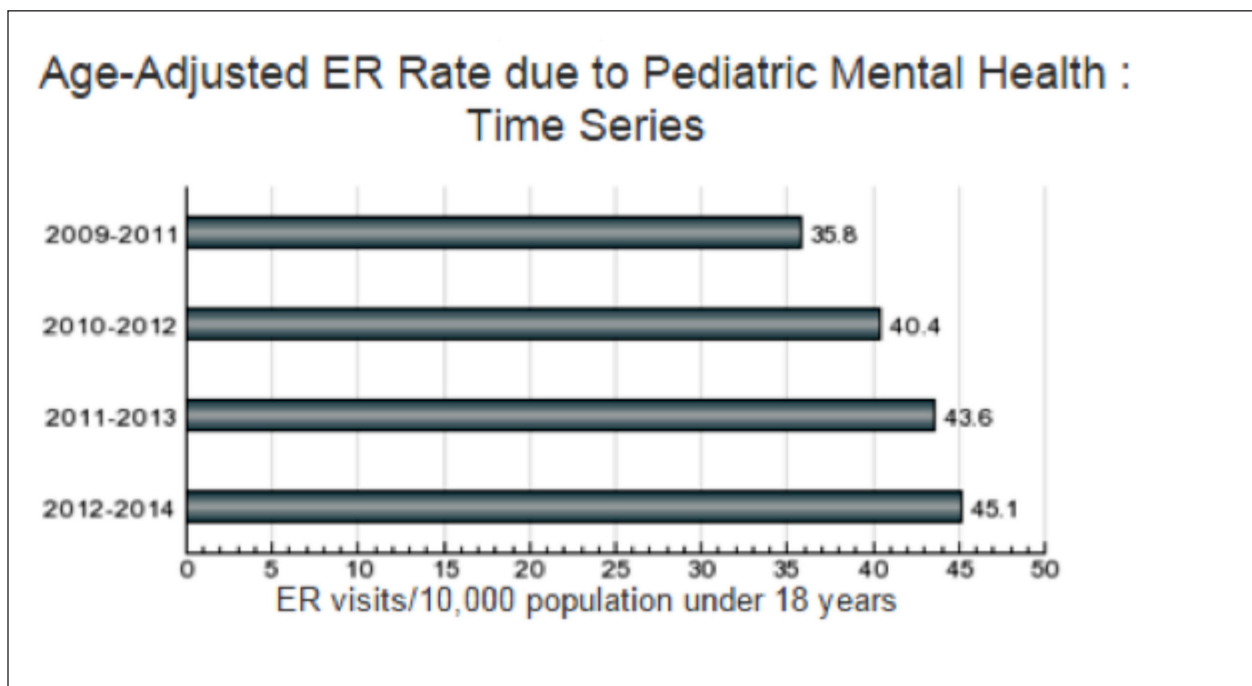
## Age-Adjusted ER Rate due to Pediatric Mental Health (HCI, 2015)

**Data Summary:** The average annual age-adjusted ER visit rate due to pediatric mental health per 10,000 population under 18 years of age is 45.1.



### Key Findings:

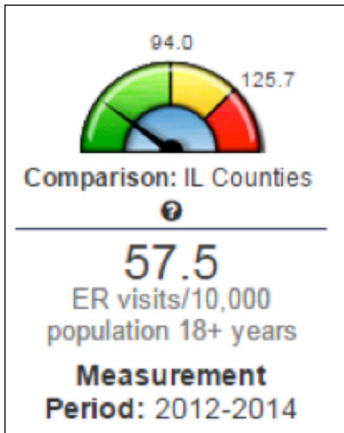
- The ER visit rate due to pediatric mental health has been on a steady incline since 2009 (see graph below).



Disparities: N/A

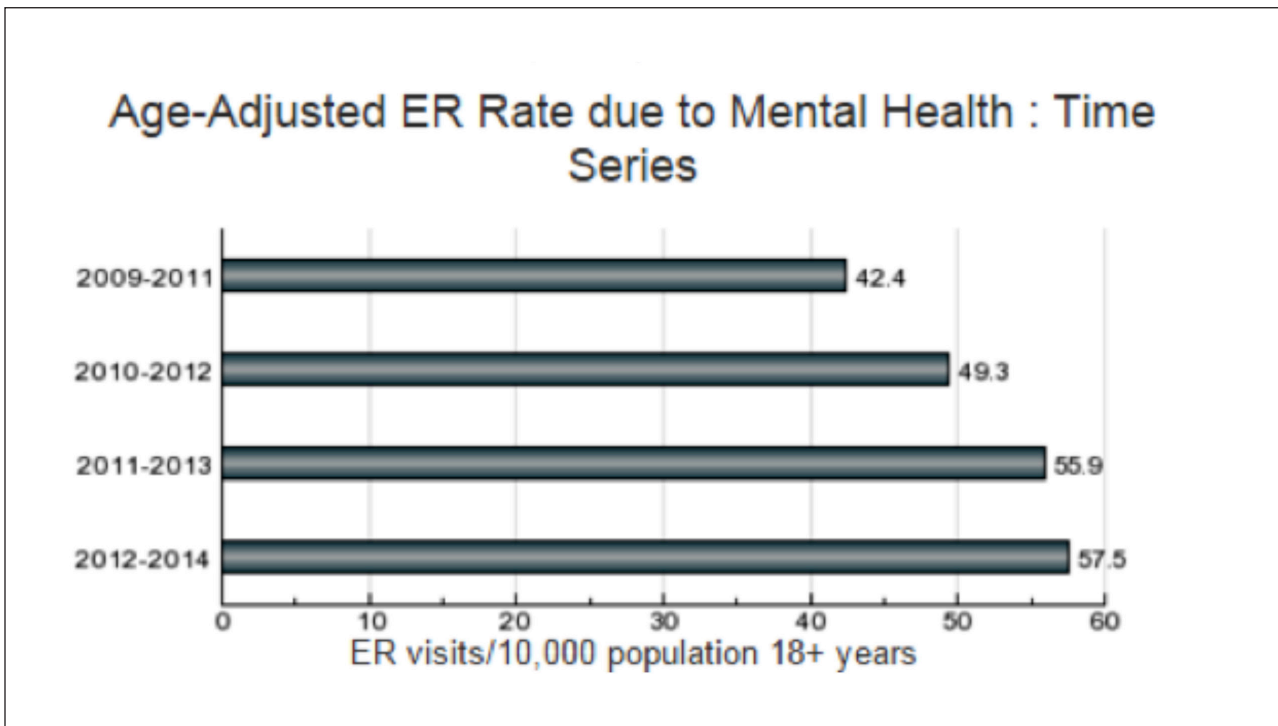
## Age-Adjusted ER rate due to Mental Health (HCI, 2015)

**Data Summary:** In 2012-2014 the average annual age-adjusted ER rate due to mental health per 10,000 population aged 18 years and older is 57.5.



### Key Findings:

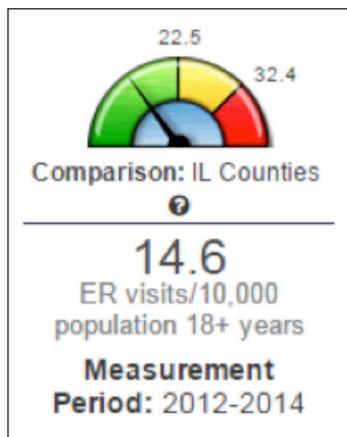
- Similar to the adolescent and pediatric mental health trends, the rate of ER visits due to mental health among those aged 18 and older has been on a consistent incline since 2009 (see graph below).



Disparities: N/A

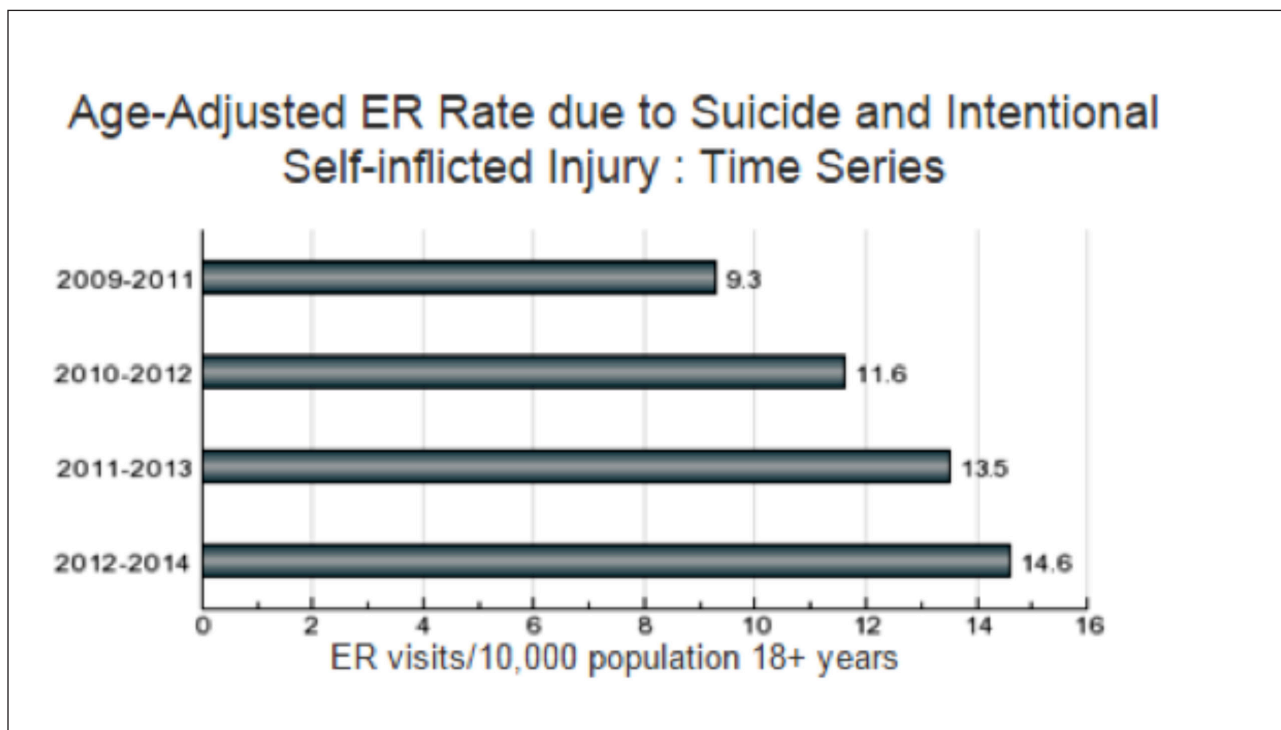
## Age-Adjusted ER Rate due to Suicide and Intentional Self-inflicted Injury (HCI, 2015)

**Data Summary:** The age-adjusted average annual ER visit rate due to suicide and intentional self-inflicted injury was 14.6 per 10,000 population aged 18 years and older. (The data for this indicator were updated in HCI in August 2016 to reflect definitional changes in the ICD-10 classification system.)



### Key Findings:

- Consistent with the other mental health indicators, the age-adjusted ER rate due to suicide and intentional self-inflicted injury among those aged 18 and older had increased since 2009 (see graph below).



**Disparities:** N/A

### PSA Communities with the Highest ER rates due to Pediatric Mental Health

Bolingbrook 81.1

Villa Park 65.9

Romeoville 61.4

## PSA Communities with the Highest ER rate due to Mental Health

Wheaton (60187) 100

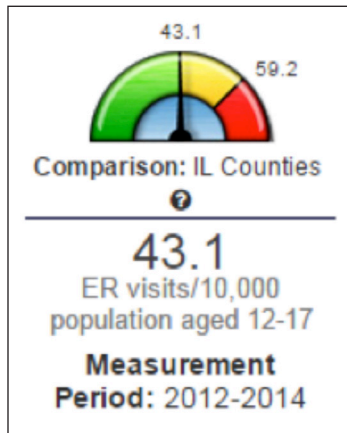
Bolingbrook 81.1

Villa Park 78.3

## DuPage County

### *Age-Adjusted ER Rate due to Adolescent Suicide and Intentional Self-Inflicted Injury (HCI, 2015)*

**Data Summary:** The average annual age-adjusted ER visit rate due to suicide or intentional self-inflicted injury per 10,000 population aged 12-17 years is 43.1. (The data for this indicator were updated in HCI in August 2016 to reflect definitional changes in the ICD-10 classification system.)



#### Key Findings:

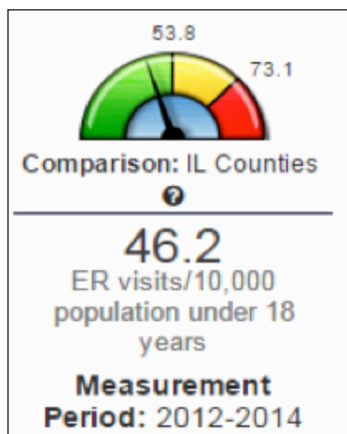
- Since 2009 the ER visit rate due to adolescent suicide and intentional self-inflicted injury has steadily increased from 26.0 in 2009 to 43.1 in 2014.
- The highest ER visit rate is seen in the 15-17 year old age group, which is 55.3.

#### Disparities:

- Females have a higher rate (56.7) than their male counterparts (30.2).
- African American adolescents have the highest rate of ER visits due to suicide and self-inflicted injury at 63.6, followed by White adolescents at 45.3. The lowest rate of ER visits due to suicide and self-inflicted injury is among Asian adolescents.

### *Age-Adjusted ER Rate due to Pediatric Mental Health (HCI, 2015)*

**Data Summary:** The average annual age-adjusted ER visit rate was 46.2 per 10,000 population aged 18 and older.



### Key Findings:

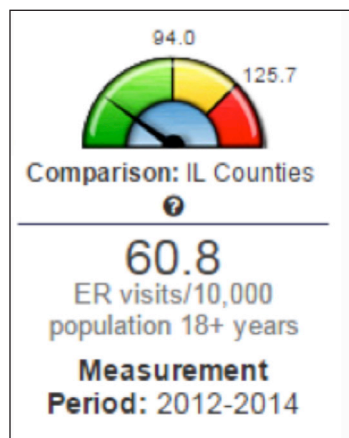
- Consistent with the other mental health trends the rate of ER visits due to pediatric mental health has been on an incline since 2009 (38.5) to 2014 (46.2).

### Disparities:

- Females had a higher rate of ER visits due to pediatric mental health (51.8) than their male counterparts (41.0).
- American Indians/Alaskan Natives had the highest rate of ER visits due to pediatric mental health (107.0), followed by African Americans (103.7). The Asian population had the lowest rates at 13.2.
- The 15-17 year olds have the highest rate of ER visits due to pediatric mental health at 147.2 followed by 12-14 year olds at 85.5.

### *Age-Adjusted ER Rate due to Mental Health (HCI, 2015)*

**Data Summary:** The rate of ER visits among those aged 18 and older due to mental health was 60.8 per 10,000 population.



### Key Findings:

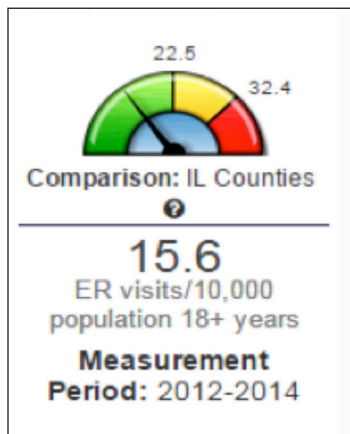
- The ER visit rate due to mental health has increased from 2009 (46.3) to 2014 (60.8).

### Disparities:

- African Americans had the highest rate of ER visits at 116.4, followed by Whites with a rate of 63.5. The Asian population had the lowest rate at 18.4.
- The age group with the highest rate of ER visits due to mental health is the 18-24 year old age group with a rate of 117.3.
- Females have slightly higher rates (63.6) than males (57.8).

## Age-Adjusted ER Rate due to Suicide and Self-inflicted Injury (HCI, 2015)

**Data Summary:** The average annual age-adjusted ER visit rate is 15.6 per 10,000 population aged 18 and older. (The data for this indicator were updated in HCI in August 2016 to reflect definitional changes in the ICD-10 classification system.)

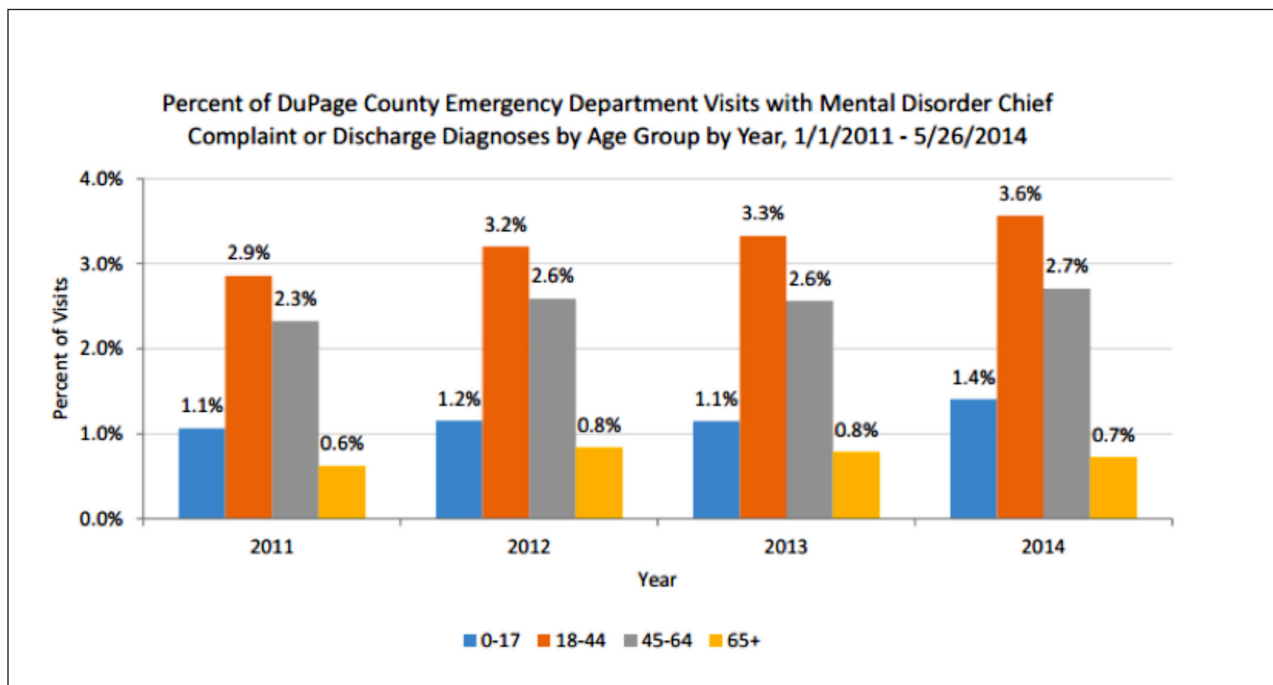


### Key Findings:

- The rate of ER visits due to suicide and self-inflicted injury among those aged 18 and older has increased from 2009 (9.8) to 2014 (15.6).

### Disparities:

- Highest ER visit rate was among those aged 18-24 while the lowest was among those aged 85 and older, indicating younger adults are experiencing more mental health issues than older in DuPage County.
- Higher ER rates are seen among minority populations in DuPage County (African Americans- 27.3, American Indians/Alaskan Natives- 22.6). Asians have the lowest ER rate at 3.7.



### Additional Mental Health Key Findings:

- 37 percent of the DuPage County Community Themes and Strengths Survey respondents reported mental health as one of the most important health concerns in DuPage County. Overall, mental health was in the top three most important health concerns of the county across all survey responses.
- The DuPage County Community Themes and Strengths Survey indicated that access to mental health services was the third most important health need that the community should focus on to make things better in DuPage County.

### Risk Factors for Poor Mental Health (youth.gov, 2015):

- Family factors
- Social isolation
- Stressful life events
- Emotional trauma
- Poor connection with family
- Discrimination
- Socioeconomic disadvantage
- Lack of access to support services

### National Trends and Disparities:

- Low levels of socioeconomic status are estimated to be about 2 to 3 times more likely to have a mental health disorder (Mental Health Disparities, Safran et al, 2009).
- African Americans are 20 percent more likely to experience serious mental health problems than the general population (NAMI, 2016).
- The suicide rate is highest in the American Indian/Alaskan Natives population for both males and females (34.3 and 9.9 deaths per 100,000 population, respectively) (CDC, 2015).

## Senior Health

### Good Samaritan Hospital

#### Key Findings:

- 46-48 percent of Good Samaritan Hospital inpatients are aged 65 and older (Good Samaritan Hospital, 2015).

#### Top 3 Reasons for Hospitalization for those aged 65 and older at Good Samaritan Hospital

- Pneumonia
- Respiratory
- Cardiac

\*Sepsis (number one reason for readmission)

## PSA

### PSA Senior Population Statistics (HCI, 2016)

Age	Primary Service Area	DuPage County	Illinois
65+	99,992 (15.3%)	132,631 (14.16%)	1,863,519 (14.46%)

#### Key Findings:

- The percentage of seniors in the PSA is not significant compared to the county or state.
- Falls in people aged 70 and older are greater than the Advocate system index in Elmhurst, Glen Ellyn, Wheaton, Romeoville and Oak Brook (Advocate Planning Department, 2014).



## PSA Communities with the Largest Population of Seniors aged 70+ (Advocate Planning Department, 2014)

- Oak Brook (23.6%)
- Darien (13.4%)
- Willowbrook (12.9%)

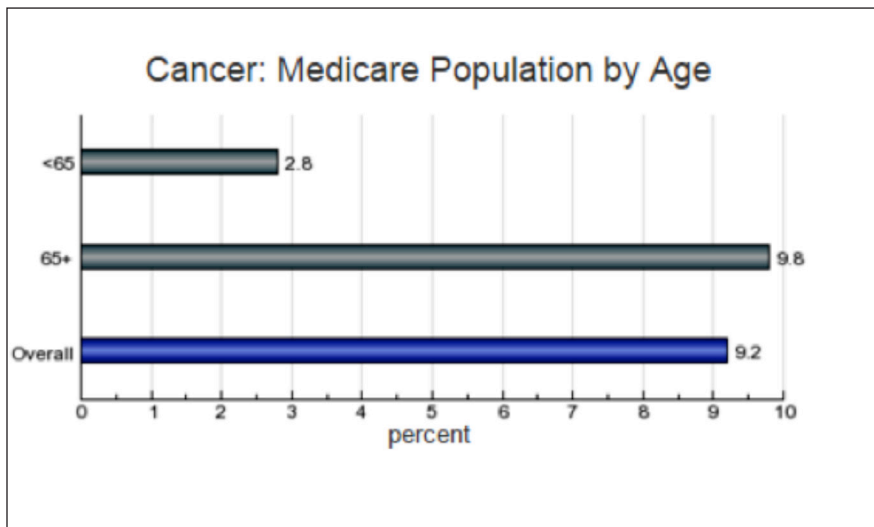
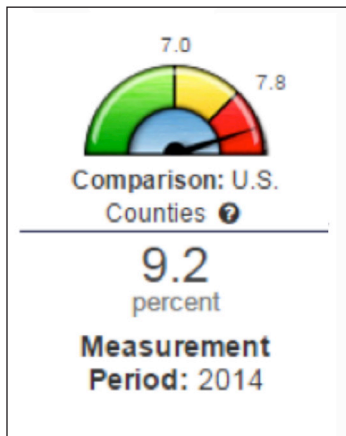
## DuPage County

### Key Findings:

- The percentage of seniors in the county is not significant however, DuPage County Medicare population dashboards indicate that the Medicare population's quality of life needs improvement compared to other counties.
- The DuPage County Community Themes and Strengths Survey lists aging problems as the fourth most important health concern for DuPage County with 20 percent of survey respondents indicating the issue as one of the most important health concerns.

## Cancer: Medicare Population (HCI, 2015)

**Data Summary:** In 2014, 9.2 percent of Medicare beneficiaries were treated for cancer. The majority of the affected Medicare population is over the age of 65 (see graph below).

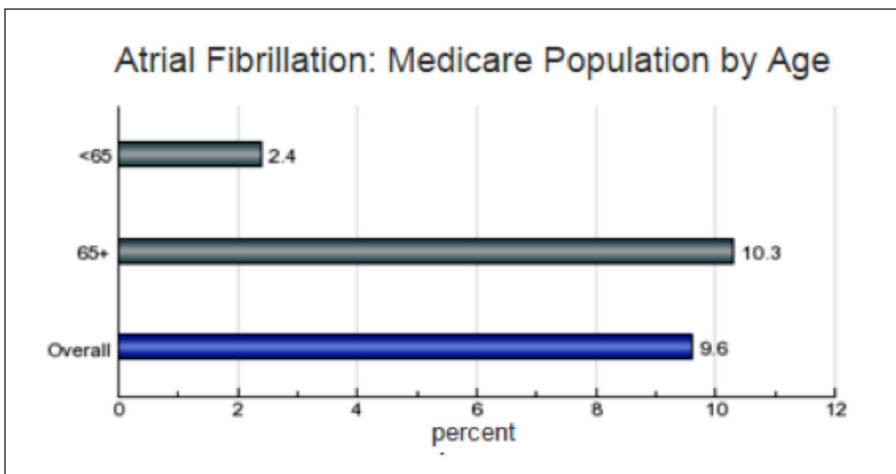
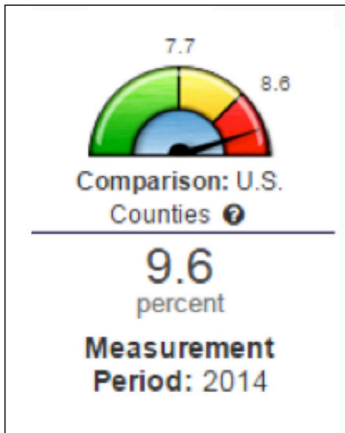


**Key Findings:** N/A

**Disparities:** N/A

### Atrial Fibrillation: Medicare Population (HCI, 2015)

**Data Summary:** In 2014, 9.6 percent of Medicare beneficiaries were treated for atrial fibrillation. The majority of these Medicare beneficiaries treated were over the age of 65 (see graph below).

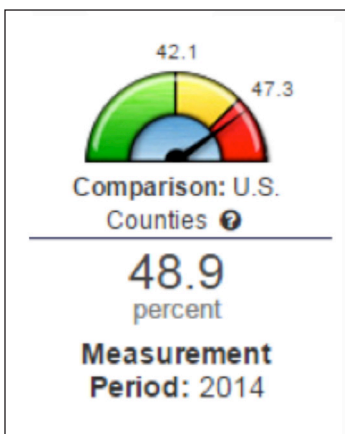


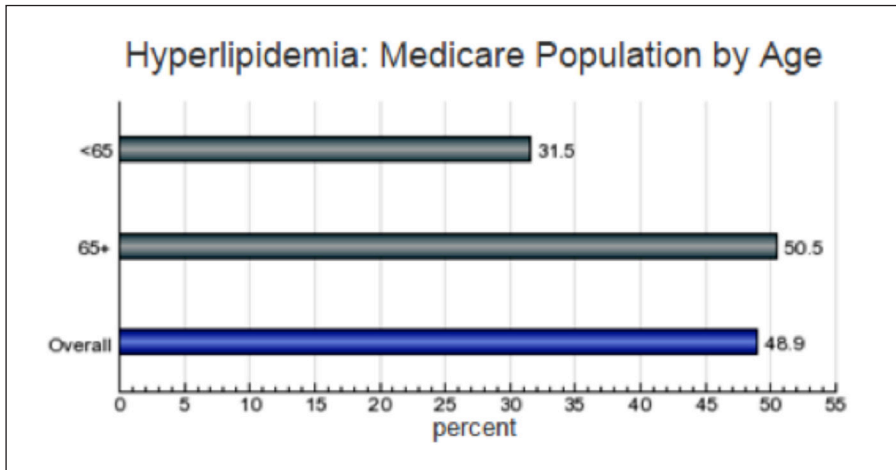
**Key Findings:** N/A

**Disparities:** N/A

### Hyperlipidemia: Medicare Population (HCI, 2015)

**Data Summary:** In 2014 48.9 percent of Medicare beneficiaries were treated for hyperlipidemia. The majority of the Medicare beneficiaries treated were over the age of 65 (see graph below).



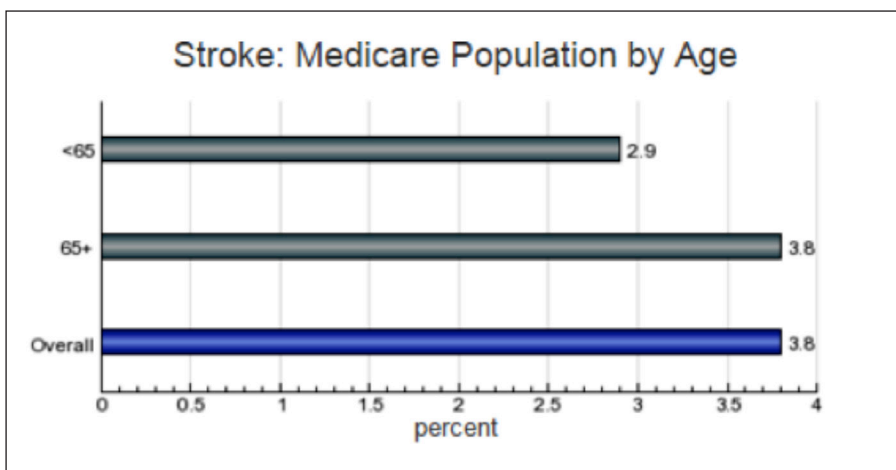
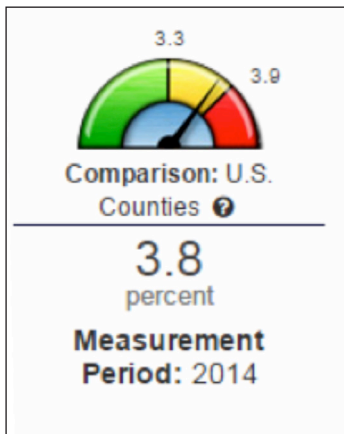


**Key Findings:** N/A

**Disparities:** N/A

### *Stroke: Medicare Population (HCI, 2015)*

**Data Summary:** In 2014, 3.8 percent of Medicare beneficiaries were treated for stroke. Although the age gap was less significant, the majority of those treated for stroke were over the age of 65 (see graph below).

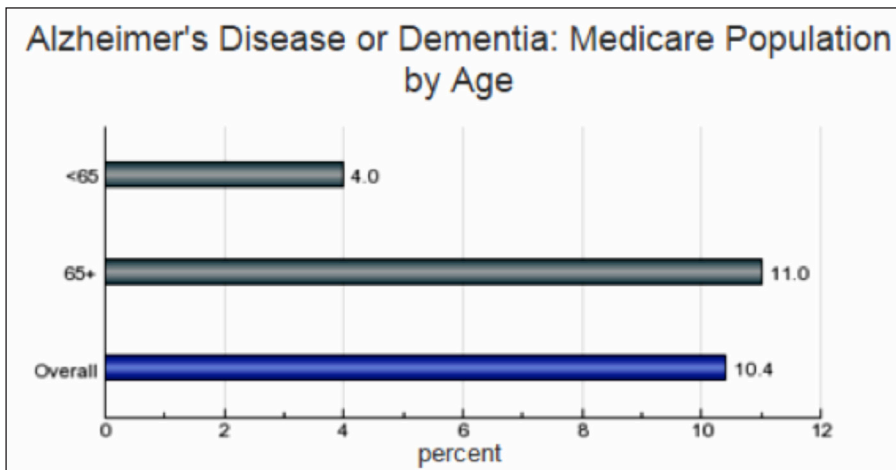
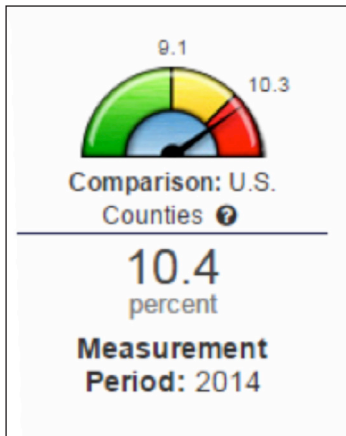


**Key Findings:** N/A

**Disparities:** N/A

### *Alzheimer's Disease or Dementia: Medicare Population (HCI, 2015)*

**Data Summary:** In 2014, 10.4 percent of Medicare beneficiaries were treated for Alzheimer's. The majority of those treated were over the age of 65 (see graph below).

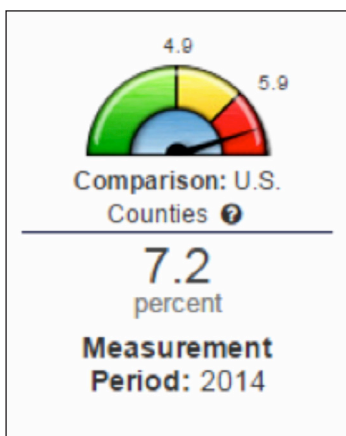


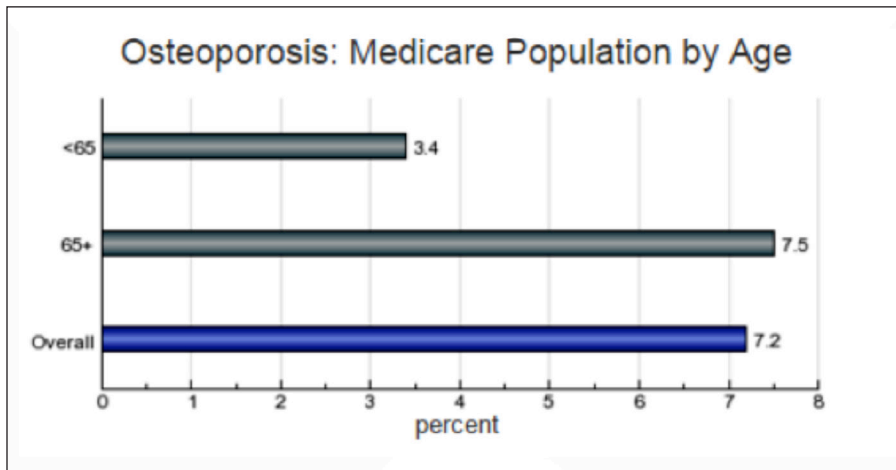
**Key Findings:** N/A

**Disparities:** N/A

### *Osteoporosis: Medicare Population (HCI, 2015)*

**Data Summary:** In 2014 7.2 percent of the Medicare beneficiaries were treated for osteoporosis. The majority of those treated were over the age of 65 (see graph below).





**Key Findings:** N/A

**Disparities:** N/A

**Top Health Concerns for Seniors (National Institute on Aging, 2016)**

- Arthritis
- Cancer
- Respiratory disease
- Alzheimer’s disease
- Osteoporosis
- Influenza and pneumonia
- Falls
- Depression
- Poverty

**Domestic Violence**

**Good Samaritan Hospital**

*Domestic Violence (DV) Resources, Programs and Services*

- DV training provided to nurses in ER
- Support group(s)
- Individual therapy for DV clients
- DV training for doctors in the community
- Member of the 18th Judicial Court DV Coordinating Council
- DV work with community parishes

**PSA**

**Key Findings (Advocate Planning Department, 2015)**

- Domestic violence affects 6,472 people in the PSA annually. This issue affects more people than cancer (3,485 people annually) and was identified as a key need in the 2015 Community Assessment, which was completed by Advocate Health Care Services Planning Department.
- ED visits for domestic violence were above the Advocate system index for Clarendon Hills (1,883.6), Hinsdale (2,424.8) and Willowbrook (2,024.4). The Illinois rate for domestic violence and accidents is 1,773.4 per 100,000.
- The overall rate of domestic violence and accidents for the primary service area is slightly higher than DuPage County at 982.1 compared to the PSA at 985.0.

## DuPage County

### Key Findings:

- Domestic Violence was reported as the 8th most important health concerns in the DuPage County Community Themes and Strengths Survey with 14 percent of respondents indicating it as an important health concern.
- In 2012 202.6 per 100,000 population Orders of Protection were obtained in DuPage County (DuPage County IPLAN 2020, 2015).
- In 2011, the rate of domestic offenses reported to the police was 304.9 per 100,000 people in DuPage County (DuPage County IPLAN 2020, 2015).

## Heart Disease and Stroke

### Good Samaritan Hospital

#### Key Findings:

- Cardiac is one of the top three reasons for those aged 65 and older to be hospitalized at Good Samaritan Hospital (Good Samaritan Hospital, 2015).

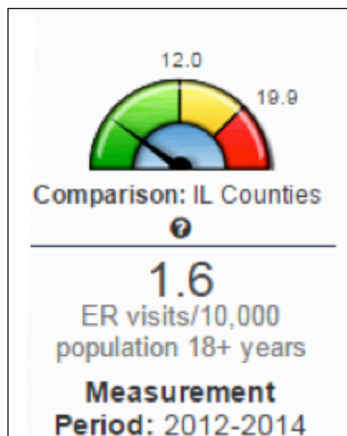
## PSA

### PSA Communities with the Highest Rates of Inpatient Discharge for Stroke (per 100,000)

- Oak Brook 316.3
- Downers Grove (60515) 276.2
- Lemont 270.7

### *Age-Adjusted ER Rate due to Heart Failure (HCI, 2015)*

**Data Summary:** The age-adjusted ER visit rate due to non-hypertensive heart failure, including rheumatic heart failure is 1.6 per 10,000 population.

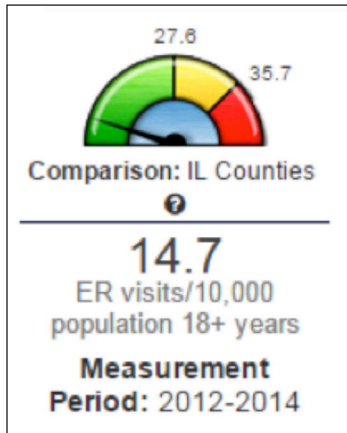


**Key Findings:** N/A

**Disparities:** N/A

### Age-Adjusted ER Rate due to Hypertension (HCI, 2015)

**Data Summary:** The average annual age-adjusted ER visit rate due to hypertension or high blood pressure is 14.7 per 10,000 population.



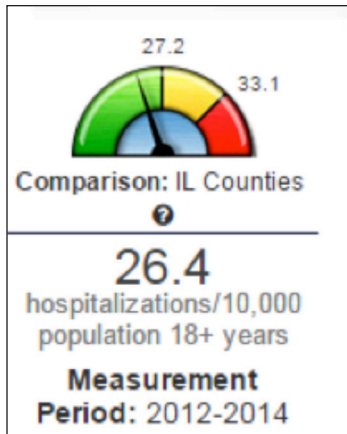
#### Key Findings:

- Since 2009 the rate of ER visits due to hypertension has increased from 10.4 to 14.7 in 2014.

**Disparities:** N/A

### Age-Adjusted Hospitalization Rate due to Heart Failure (HCI, 2015)

**Data Summary:** The average age-adjusted hospitalization rate due to non-hypertensive heart failure, including rheumatic heart failure is 26.4 per 10,000 population.

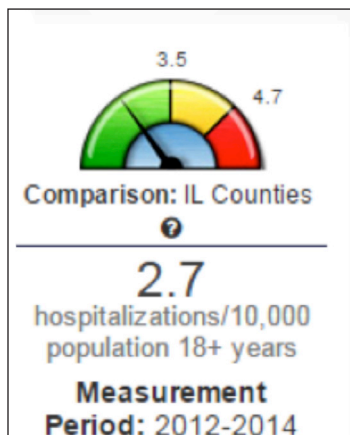


**Key Findings:** N/A

**Disparities:** N/A

### Age-Adjusted Hospitalization Rate due to Hypertension (HCI, 2015)

**Data Summary:** The average annual age-adjusted hospitalization rate due to hypertension or high blood pressure is 2.7 per 10,000 population.



**Key Findings:** N/A

**Disparities:** N/A

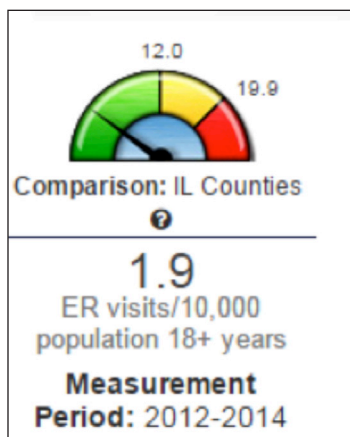
#### Additional PSA Heart Disease and Stroke Key Findings:

- The rate of inpatient discharge for stroke is 207.7 per 100,000 population, which is higher than the county (194.7) and state (203.5) (IHA COMPdata, 2014).
- Stroke affects approximately 1,365 people in the PSA annually (Advocate Planning Department, 2014).

### DuPage County

#### Age-Adjusted ER Rate due to Heart Failure (HCI, 2015)

**Data Summary:** The average annual age-adjusted ER rate due to non-hypertensive heart failure, including rheumatic heart failure is 1.9 per 10,000 population.



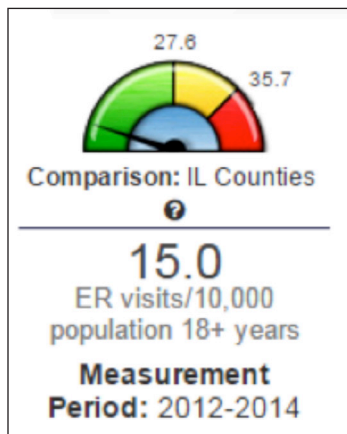
**Key Findings:** N/A

**Disparities:** N/A



### Age-Adjusted ER Rate due to Hypertension (HCI, 2015)

**Data Summary:** The average annual age-adjusted ER visit rate due to hypertension or high blood pressure is 15.0 per 10,000 population.



#### Key Findings:

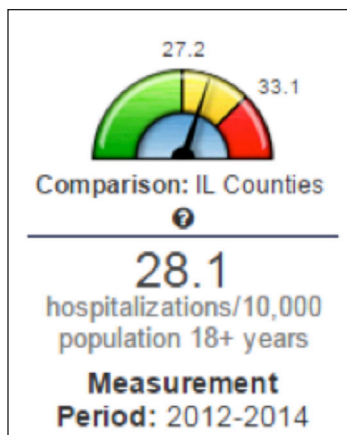
- The age-adjusted ER rate due to hypertension/high blood pressure went from 10.6 in 2009 to 15.0 in 2014.

#### Disparities:

- Those aged 85 and older in DuPage County have the highest rate of ER visits due to hypertension/high blood pressure (59.2).

### Age-Adjusted Hospitalization Rate due to Heart Failure (HCI, 2015)

**Data Summary:** The age-adjusted average annual hospitalization rate due to non-hypertensive heart failure is, including rheumatic heart failure is 28.1 per 10,000 population.



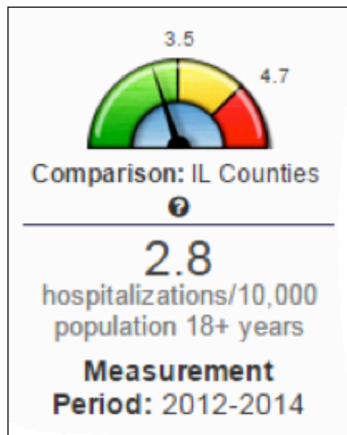
**Key Findings:** N/A

#### Disparities:

- The 85 and older age group had the highest rate of hospitalization due to heart failure at 419.8.
- American Indians/Alaskan Natives (72.3) and African Americans (67.9) have the highest rates of hospitalization due to heart failure. The Asian population has the lowest rate (15.3).

### Age-Adjusted Hospitalization Rate due to Hypertension (HCI, 2015)

**Data Summary:** The average annual age-adjusted hospitalization rate due to hypertension or high blood pressure is 2.8 per 10,000 population.



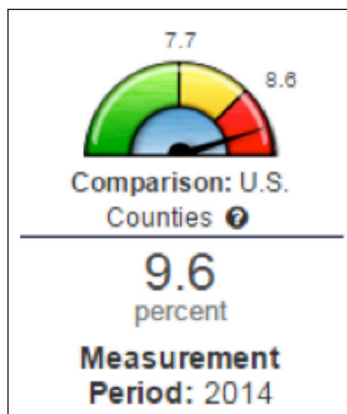
**Key Findings:** N/A

#### Disparities:

- The age group with the highest rate of hospitalization due to hypertension/high blood pressure is those aged 85 and older (17.9).
- African Americans have the highest rate of hospitalization due to hypertension/high blood pressure at 16.1, followed by the White population at a rate of 2.3. The Hispanic population has the lowest rate (1.7).

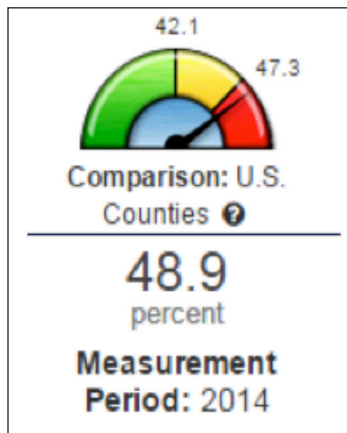
### Atrial Fibrillation: Medicare Population (see Senior Health pg. 25)

**Data Summary:** In 2014 9.6 percent of Medicare beneficiaries were treated for atrial fibrillation. The majority of these Medicare beneficiaries were over the age of 65.



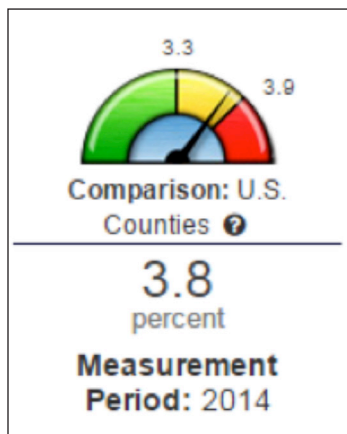
### *Hyperlipidemia: Medicare Population (see Senior Health pg. 78)*

**Data Summary:** In 2014, 48.9 percent of Medicare beneficiaries were treated for hyperlipidemia. The majority of the Medicare beneficiaries were over the age of 65.



### *Stroke: Medicare Population (see Senior Health pg. 57)*

**Data Summary:** In 2014, 3.8 percent of Medicare beneficiaries were treated for stroke. Although the age gap was less significant, the majority of those treated for stroke were over the age of 65.



#### **Other DuPage County Heart Disease and Stroke Key Findings:**

- 12 percent of the Community Themes and Strengths Survey respondents indicated that heart disease and stroke were two of the most important health concerns in DuPage County.
- The percent of DuPage County adults who have been told they have high blood pressure has increased over time going from 22.2 percent in 2003 to 30.7 percent in 2013 (DuPage County IPLAN 2020, 2015).

#### **Risk Factors for Heart Disease and Stroke (CDC, 2016)**

- Unhealthy diet
- Physical inactivity
- Obesity
- Too much alcohol
- Tobacco use
- High blood pressure

### **National Trends and Disparities**

- Minority populations are more likely to have higher rates of heart disease and hypertension (CDC, 2014).
- Inpatient mortality rates due to heart attack tend to be higher in the low-income populations (CDC, 2014).
- African Americans, Asians, Hispanics and American Indians/Alaskan Natives are more likely to experience a stroke and its related disability (National Institutes of Health, 2013).

 **Advocate Good Samaritan Hospital**

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