



Community Health Needs Assessment

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**Department of
Community Health & Preventive Medicine**

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I. St. Luke's Warren CHNA

A. Community Health Needs Assessment (CHNA) Background

As part of the Patient Protection and Affordable Care Act, all non-profit hospitals are required to conduct a Community Health Needs Assessment (CHNA) every three years in order to remain a tax-exempt organization under section 501(c)(3) of the Internal Revenue Code. The goal of the assessment is to identify critical health disparities faced amongst residents within the community. The needs assessment must state every health priority addressed by community stakeholders, hospital professionals, or public health experts. Additionally, campus specific implementation plans will be crafted for each of the St. Luke's University Health Network (SLUHN) campuses in order to determine how resources will be allocated to address the specified health needs.

If you have questions regarding any of these reports, please contact the Community Health Department at (484) 526-2100.

B. Summary of the Needs Assessment Methodology

Our CHNA is comprised of both primary and secondary data. The primary data was collected through our community health surveys, where approximately 3,000 surveys were conducted in our seven campus geographic region. Primary data was also collected through campus specific key stakeholder focus groups, where the main priority health needs were identified for each entity. Secondary data included the use of hospital network, county, state and national level data obtained via the U.S. Census, the Robert Wood Johnson Foundation, Vital Statistics, Community Commons, the American Community Survey, U.S. Department of Labor, the Behavioral Risk Factor Surveillance System as well as other data sources, which can be found at the end of this report. The needs identified in the focus groups were supplemented by the survey data and secondary data to provide us with a more comprehensive picture of the needs in the community and what factors are affecting these health issues.

C. About St. Luke's University Health Network Warren Campus

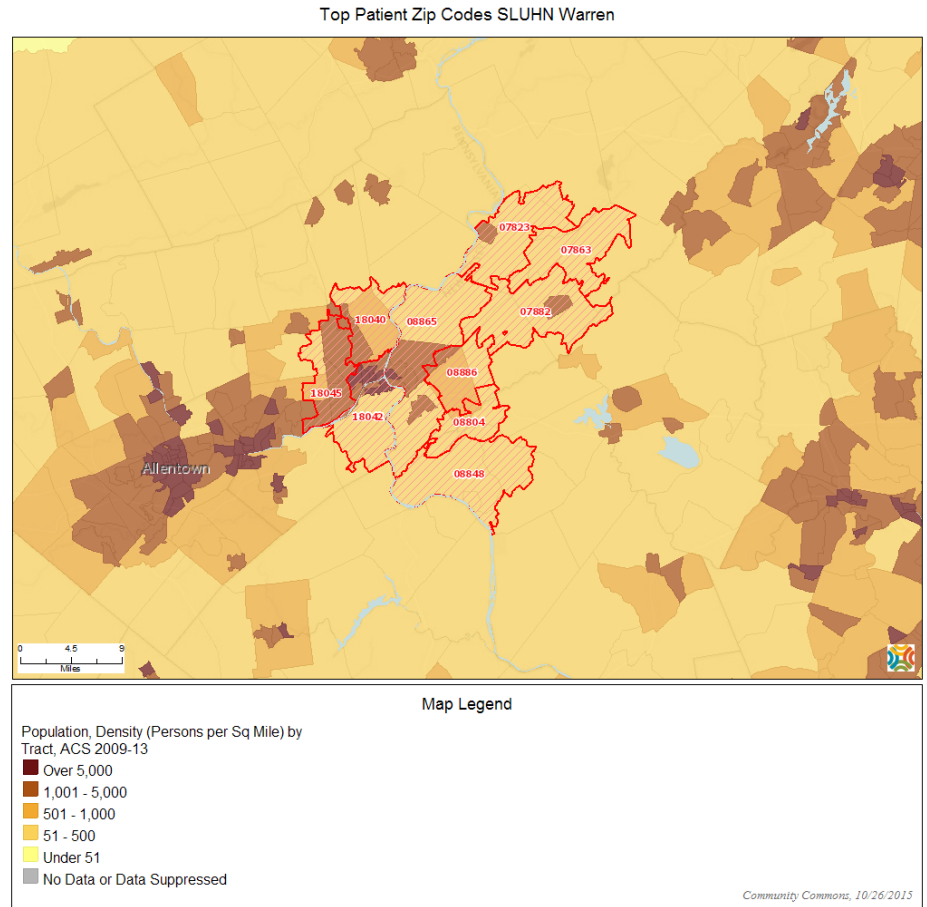
St. Luke's University Health Network's (SLUHN) Warren campus is a community-based, integrated system of health care services located in Phillipsburg, New Jersey. St. Luke's Warren works closely with its physician colleagues to ensure the highest quality care for its patients. Phillipsburg is located just 30 minutes from the Pocono Mountains, and midway between Philadelphia and New York City. St. Luke's Warren hospital offers a wide variety of medical

and non-medical services such as radiology, diabetes management, cancer care through the cancer center, speech pathology services, vascular and cardiovascular care, amongst many others.

D. Geographic Description of Medical Service Area and Community Served

A total of 158,046 people live in the 223.43 square mile report area defined for this assessment according to the U.S. Census Bureau American Community Survey (2009-13) 5-year estimates. The population density for this area, estimated at 707.35 persons per square mile, is greater than the national average population density of 88.23 persons per square mile. According to the U.S. Census Bureau Decennial Census, between 2000 and 2010 the population in the report area grew by 18,229 people, a change of 13.02%. This change in population is greater than that seen in New Jersey (4.49%), Pennsylvania (3.43%) and in the U.S. as a whole (9.74%).

We defined our service area by determining the top patient zip codes of our residents who receive services from St. Luke's Warren. We defined the top zip codes as those that make up 80% of the population served by this hospital. This report will refer to this area as the "St. Luke's Warren service area". The top three counties served by St. Luke's Warren include Warren County and Hunterdon County in New Jersey, and Northampton County in Pennsylvania. There are a total of 10 zip codes that were included. The map above identifies the areas served.



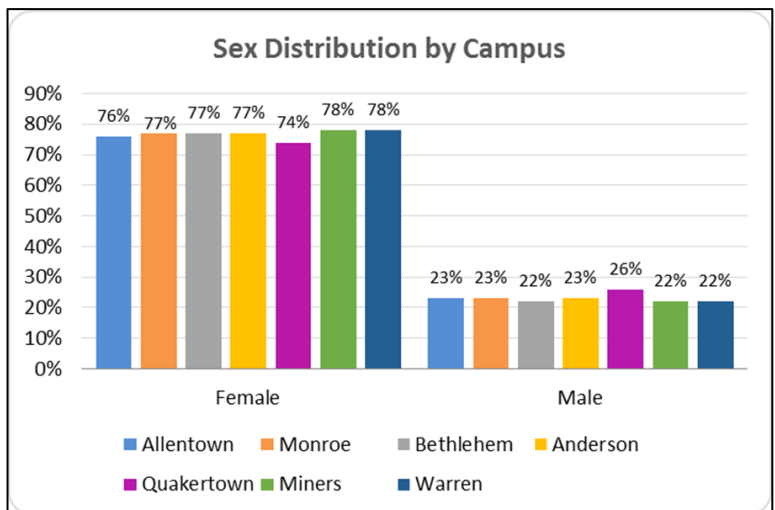
Analysis of Top Patient ZIP Codes, All Patients St. Luke's Warren 2014	
Facility	Zip Code
Warren	08865
Warren	07882
Warren	07823
Warren	08886
Warren	18042
Warren	18040
Warren	18045
Warren	07863
Warren	08848
Warren	08804

E. Demographic Profile of Community Served

The following sections give a brief overview of the population we serve. Having a sense of what the community looks like will be helpful when reviewing the five priority health categories later in the report.

i. Gender

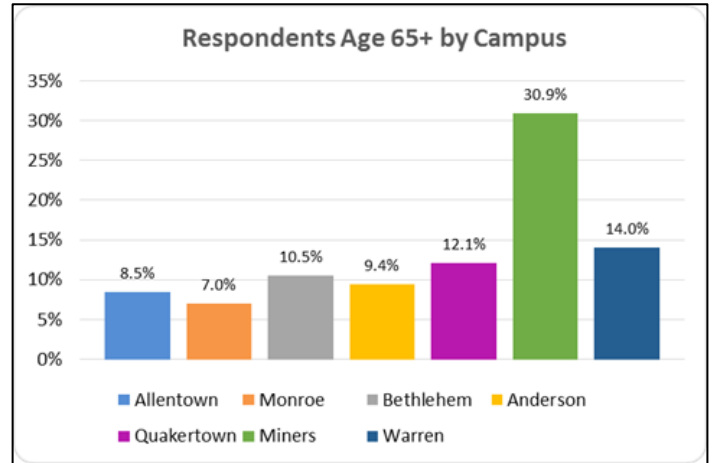
According to the American Community Survey (ACS, 2009-13), 51.41% of the population in the St. Luke's Warren service area are females, and 48.58% of the population are males. The percentage of females in our service area is slightly greater than the U.S. average of 50.81% and the percentage of males is lower than the national average of 49.19%. In our 2016 community survey, the majority of our respondents from all of the SLUHN campuses were female. In the St. Luke's Warren service area, 78% of respondents were female and 22% were male.



ii. Age

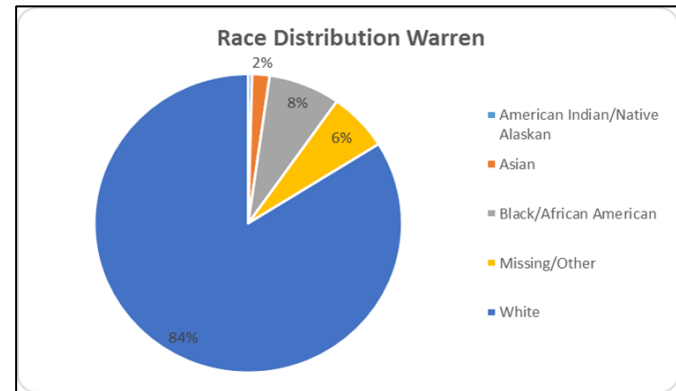
The percent of the population that falls under the age of 18 as reported by the ACS (2009-13) is 22.84% of the total population and the percent of the population over the age of 65 is 15.21%. This means that 61.95% of the population in the St. Luke's Warren service area falls between the

ages of 18 and 64. The age distribution of those who took the community survey yielded interesting results. Although the 65 and older population constitutes 15.21% of the total service area population, a slightly lower 14% of respondents who completed the survey were in this age bracket. One potential reason for a lower response rate from the post-retirement age population may be that the majority of surveys were conducted via iPad or on a computer, which could be prohibitive for people who are unfamiliar with how to use such technology as the elderly population often is.



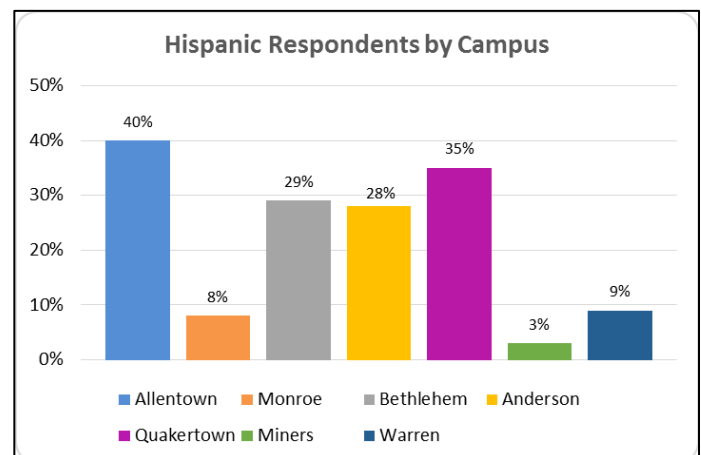
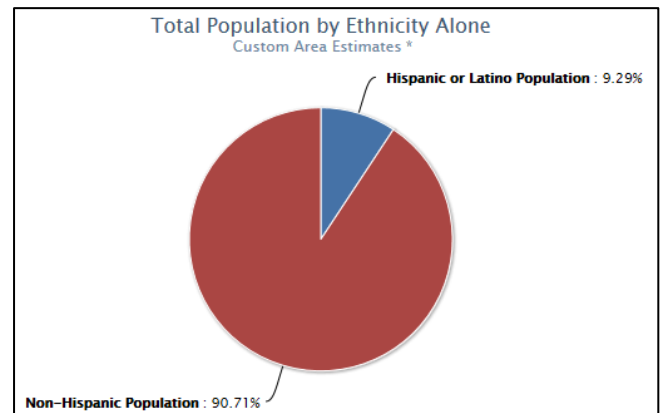
iii. Race

The majority of the people in the population served by St. Luke's Warren are white (84.56%), and the second largest race population in this service area are black (ACS, 2009-13). From our 2016 community survey, we found a similar pattern in the race of respondents as can be seen by the bottom pie chart. In the St. Luke's Warren service area, 84% of respondents were white, 8% were black, and 6% reported their race as Other.



iv. Ethnicity

By examining ethnicity we can better understand what the St. Luke's Warren population looks like. The data show that 90.71% of the population in the St. Luke's Warren service area identifies as non-Hispanic and 9.29% of the population identify as Hispanic/Latino (ACS, 2009-13). According to our 2016 community survey, 9% of the respondents from the St. Luke's Warren service area identified as Hispanic. This is approximately the same as the percentage of respondents in the total service area who report being Hispanic/Latino (9.29%), as seen in the pie chart. This is interesting because in most of the other SLUHN campuses Hispanics were



overrepresented in the survey data (in terms of their actual population in the service area).

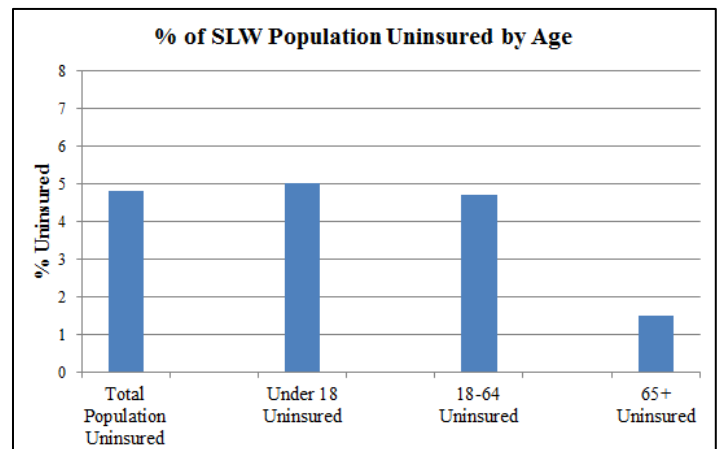
i. Language

From this chart we can see that there are a variety of languages spoken in the St. Luke's Warren service area. The most commonly spoken language besides English is Spanish, where 5.36% of the population in 08865 and 9.82% of the population in 18042 speak Spanish. The next most commonly spoken language is Italian, in the zip code 07882. Translators/interpreters are required in locations where either over 5% of the community speaks a different language or over 1,000 community members mainly speak that language. In the St. Luke's Warren service area, translation services are required because of the number of people speaking Spanish in 08865 and 18042.

Warren				
ZIP	% Facility	% Spanish Speaking in zip code	% of zip code who speaking Spanish but speak English less than "very well"	Next Frequent Language
08865	42.1%	5.36% (1491 people)	2.00% (557 people)	Italian (0.63% - 175 people)
07882	9.1%	4.14% (568 people)	1.38% (190 people)	Italian (2.83% - 389 people)
07823	7.3%	1.26% (92 people)	0.45% (33 people)	Polish (1.42% - 104 people)
08886	5.9%	1.38% (94 people)	0.16% (11 people)	Tagalog (3.55% - 242 people)
18042	5.5%	9.82% (3,885 people)	3.69% (1459 people)	Other Indic Languages (0.65% - 259 people)
18040	3.0%	5.86% (878 people)	1.90% (284 people)	Chinese (1.08% - 162 people)

ii. Health Insurance Plans

The graph to the right depicts the percentage of the total population uninsured (4.8%), under 18 uninsured (5%), 18-64 uninsured (4.7%), and over 65 uninsured (1.5%), according to internal reviews of the patient population at St. Luke's Warren campus (SLW on the graph refers to St. Luke's Warren), For those who are insured, according

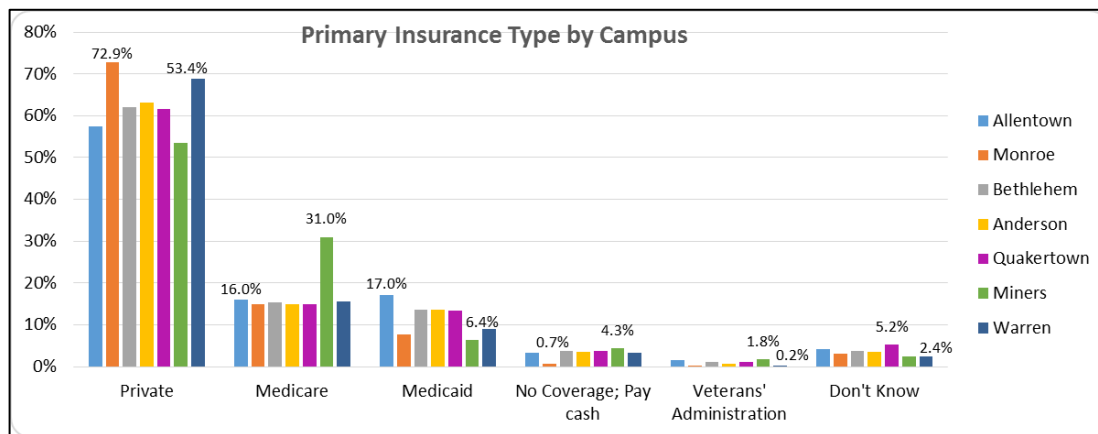


to the ACS (2009-13), 14.59% of the population in the St. Luke's Warren service area receive Medicaid, as compared to 15.43% of the population in New Jersey and 20.21% of the population in the U.S. as a whole.

When examining Warren County specifically (not the whole St. Luke's Warren service area), we can see that the majority of residents who are insured have private insurance (79.1%) and the rest have public insurance (22.7%), which follows the same pattern that is seen in the state of New Jersey as a whole. Warren County differs in that its percentage of those who are not insured is 3% lower than the state percentage (Warren County Community Health Improvement Plan, 2015).

Health Insurance Coverage ¹	Warren County	New Jersey
With health insurance coverage	90.7%	87.4%
With private health insurance	79.1%	72.8%
With public coverage	22.7%	25.3%
No health insurance coverage	9.3%	12.6%
Uninsured children	5.4%	5.8%

Our 2016 community survey revealed a similar pattern for the whole service areas, as compared to the above percentages seen for Warren County specifically. The graph below displays our 2016 survey data, where we can see that most respondents from the St. Luke's Warren service area reported using private insurance (68.8%). However, the percentage of respondents that reported no coverage (3.3%) was lower than that seen for just Warren County from the CHIP 2015 report (9.3%).

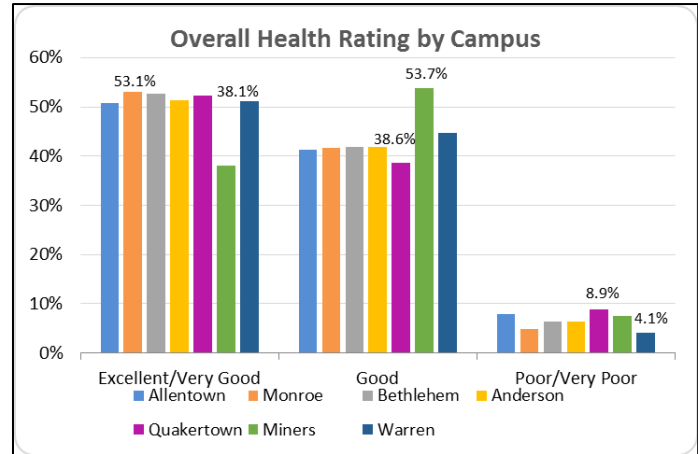


iii. Poverty

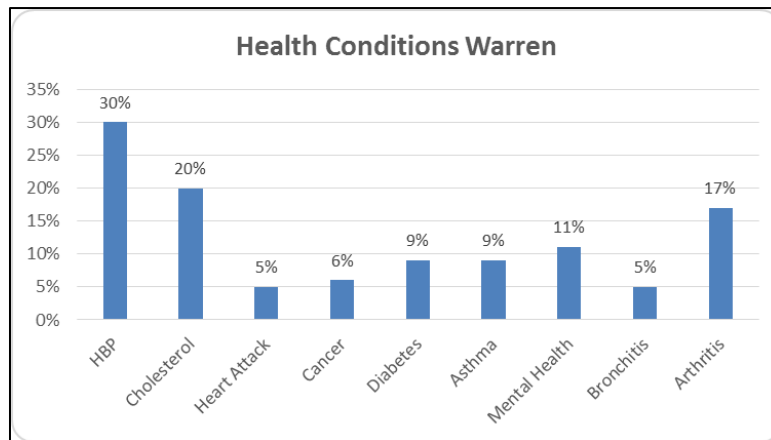
According to the ACS (2009-13), 22.76% of the population in the St. Luke's Warren service area is living with incomes at or below 200% of the Federal Poverty Level (FPL). This percentage is better than the percentage of the population at or below 200% of the FPL in New Jersey (24.07%), Pennsylvania (30.51%), and in the U.S (34.23%).

iv. Overall Health and Health Conditions

According to our 2016 survey data, most people in the St. Luke's Warren service area reported excellent or very good health, followed by good health and then poor or very poor health, which is similar to the pattern seen in other campuses. For the network as a whole, 93.4% of respondents rated their health as good or better.



After examining people's perceptions of their own health, it is important to look at the prevalence of specific health conditions reported by the respondents in order to assess the health status and needs of the community. According to our 2016 survey results, the highest percentage of respondents in our service area reported having high blood pressure (30%), high cholesterol (20%), and arthritis (17%).



v. Top Reasons for Hospitalization

The chart on the next page displays the top 10 reasons for inpatient hospitalization at St. Luke's Warren for 2014. Examining these reasons for hospitalization will help understand the priority health categories, which will be discussed in the next section. The top three causes for inpatient hospitalization were infectious disease, pulmonary medicine, and cardiovascular. Interestingly, the highest percentage of respondents from our 2016 community survey in the St. Luke's Warren service area reported high blood pressure and high cholesterol as conditions they had been diagnosed with, which are both risk factors for our third top reason for inpatient hospitalization, cardiovascular disease.

Top 10 Reasons for Hospitalization by Service Line, Inpatients St Luke's Warren 2014		
Service Line	Encounters	Rank
Infectious Disease	590	1
Pulmonary Medicine	564	2
Cardiovascular	531	3
Gastroenterology	423	4
General Medicine	414	5
General Surgery	195	6
Nephrology	172	7
Urology	170	8
Ortho - Major Joints	148	9
Oncology - Medical	145	10

vi. Leading Causes of Death

In 2012, the top three leading causes of death in New Jersey were heart disease, cancer, and chronic lower respiratory diseases (CDC National Center for Health Statistics). These were also the top three leading causes of death in the U.S., but in Pennsylvania, the third leading cause of death was cerebrovascular disease (Pennsylvania Department of Health- Bureau of Health Promotion and Risk Reduction, 2011).

F. Prioritized Health Categories

There are various socioeconomic, cultural, and environmental factors that constitute the social determinants of health, and they undoubtedly influence the health and well-being of our population, as can be seen from the previous discussion of the demographics of the community that St. Luke's Warren serves. We can see that we live in an area where poverty is a prevalent issue, there are some language barriers to care, and a large portion of our patients utilize Medicaid to cover their healthcare costs. During the 2013-2016 CHNA cycle, we focused on healthy lifestyles and chronic disease, healthy birth outcomes for expectant mothers, availability and access to behavioral health services, access to dental health services, and elder health. Through reviewing our primary data, including input from community stakeholders and public health professionals and our community wide survey, as well as our secondary data analyses, we were able to categorize the identified health needs into five major categories for the 2016-2019 CHNA cycle. These priority health categories include improving access to care (reducing health disparities), promoting healthy living and preventing chronic disease, improving mental/behavioral health, improving child and adolescent health and improving elder health. We will expand upon the health needs within each priority health category individually. The focus group summary and list of focus group participants can be found in appendix A and B respectively. Implementation plan strategies will be written for the 2016-2019 timeframe with attention to the specific priority categories reviewed.

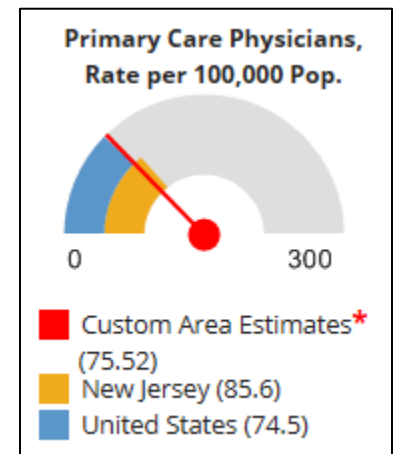
II. Health Category Profiles

1. Improving Access to Care and Reducing Health Disparities

This section will discuss issues related to improving access to care and reducing health disparities in our service area. While this category title is specific, we are actually examining the broader category of the social determinants of health. Social determinants of health include the economic, environmental, and social conditions in which people live that influence their access to basic needs, healthcare services, education, health behaviors, amongst other factors that shape a person's health status (Healthy People 2020, 2014). When reading this section, please take into consideration this more comprehensive idea of addressing the social determinants of health, which have an enormous influence on issues related to accessing healthcare and disparities seen in health outcomes.



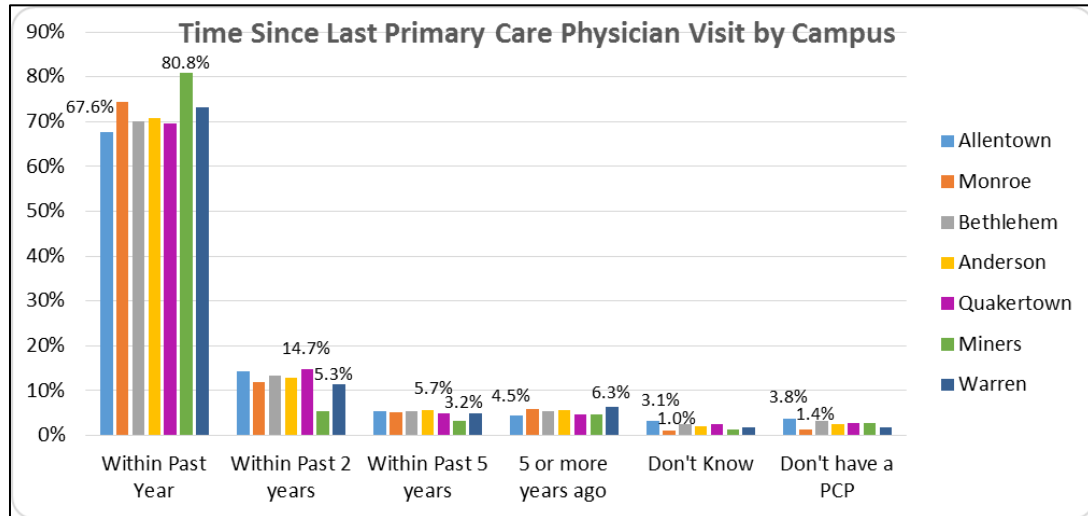
Primary care physicians (PCP's) are generally the first point of contact for individuals who have a medical issue, and many times PCP's are the ones who identify major health problems such as chronic disease or mental health issues. They also provide preventive services to help reduce the likelihood of chronic disease. If there is a lack of access to primary care doctors, people may be put at a disadvantage in terms of their present and future health. Doctors classified as "primary care physicians" by the AMA include: General Family Medicine MDs and DOs, General Practice MDs and DOs, General Internal Medicine MDs and General Pediatrics MDs. According to the Area Source Resource File (2012), the rate of PCP's per 100,000 population in the St. Luke's Warren service area is 75.52, which is worse than the rates seen in New Jersey (85.6) and Pennsylvania (80), but better than the rate of PCP's per 100,000 population nationally (74.5).



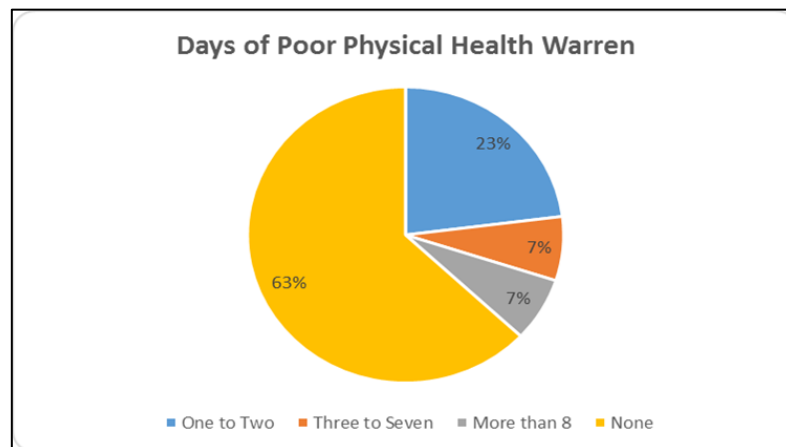
The social determinants of health such as poverty, education, and unemployment may all be reasons why people are not accessing care even if it is available. From our 2016 community survey we found that most respondents in the St. Luke's Warren service area had visited their PCP within the past year (73.3%).

For SLUHN as a whole we found interesting relationships between the type of insurance the respondent had and the last time they visited their PCP. 69.2% of respondents with private

insurance saw their PCP within the last year compared to 41.1% with no insurance coverage. However, 80.9% of the people with Medicaid saw their PCP in the last year along with 83.5% of respondents with Medicare. 14.4% of people with no insurance coverage did not have a primary care doctor compared to 1.7% of those with private insurance and 2.1 % of those with Medicaid.



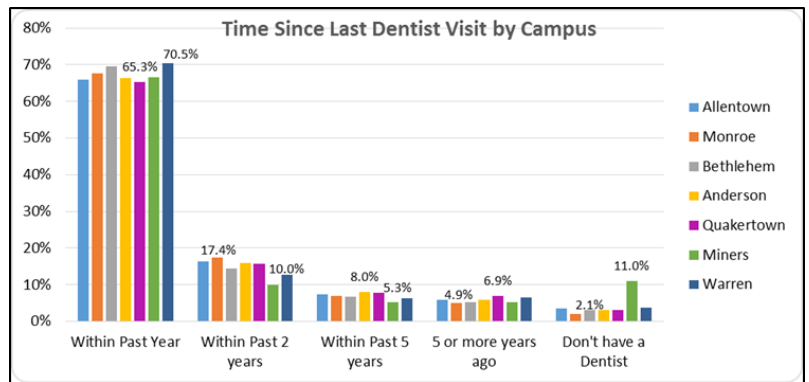
If an individual has not visited their primary care physician for a routine checkup within the past year, their overall health status could be impacted due to conditions not being treated. We can examine a piece of health status by examining the number of days of work missed due to poor physical health in the St. Luke's Warren service area. From our 2016 community survey, we found that 37% of respondents reported missing one or more days in which they could not perform daily functions due to poor physical health. Interestingly, St. Luke's Warren had the highest percentage of respondents who reported having no poor physical health days in the past month out of all of the SLUHN campuses, even though they had the highest percentage of respondents who had not seen their PCP for a checkup in 5 years or more.



Another barrier to accessing care is access to dentists. Lack of preventative and restorative dental services can result in higher chance for heart disease or stroke, gum disease, tooth decay,

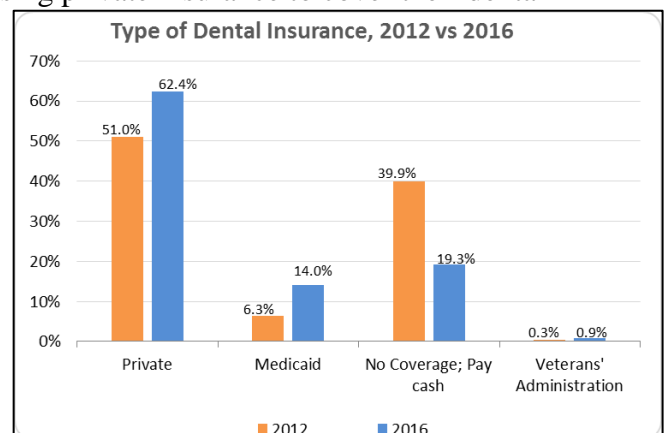
diabetes, and some types of cancer. In the St. Luke's Warren service area, the rate of dentists per 100,000 population is 59.54. This rate is lower than those seen in New Jersey (80.7), Pennsylvania (62.5), and the U.S. as a whole (63.2). The stakeholder focus group members discussed the lack of dental providers as a major barrier to accessing care. The access problem results from the low number of dentists per population as well as the limited evening and weekend hours that the dentists in the area provide. The focus group participants also said that community members who do not have dental insurance have to pay out of pocket which is extremely costly. Strengths to build upon mentioned by the focus group members included improving access to dental health and the promotion of dental health for children by Horizon Insurance, as well as the St. Luke's screening of third graders for dental health problems at the schools. The members also emphasized the need for more education about dental health services.

Since it seems that access to dentists may be limited due to availability and insurance coverage, we examined when was the last time respondents visited the dentist, as well as the type of dental insurance that they used in our 2016 community survey. As evidenced by the graph, the majority of respondents throughout the network had seen their dentist within the past year.



For SLUHN as a whole, we found a pattern between income and time since last dentist visit. Our 2016 survey results showed us that for the network, 51.3% of respondents who reported making less than \$24,999 saw a dentist in the past year as compared to 82.3% of respondents who reported making over \$60,000. Additionally, 8.0% of those making less than \$24,999 did not have a dentist compared to 1.0% of those making more than \$60,000.

We also examined type of dental insurance respondents used in the network as a whole, comparing data from our community survey in 2012 to our present survey from 2016. The percentage of respondents throughout the network using private insurance to cover their dental care increased to 62.4%, the percentage using Medicaid more than doubled (from 6.3% to 14%), and the percentage of those who had no coverage or paid cash greatly decreased. This is a great improvement because the data show us that more people have become insured and less people are uninsured or having to pay with cash, which ultimately should help boost access to dental care. Although these results are promising, we found



interesting disparities when examining type of dental insurance used in relation to income for SLUHN as a whole. 22.9% of respondents who reported making less than \$24,999 used private insurance to pay for dental care as compared to 86.8% of respondents who reported making more than \$60,000. Additionally, 30.7% of respondents who reported making less than \$24,999 did not have a dentist as compared to 10.5% respondents who reported making more than \$60,000.

Lack of insurance is one of the largest barriers to accessing healthcare. If people are not covered by health insurance they may either have to pay out of pocket or forgo receiving care because it is too expensive. Either way, individuals who are not covered by insurance suffer financial and physical burdens. Approximately 8.51% of the population in the St. Luke's Warren service area are uninsured, as compared to 12.84% in New Jersey, 9.81% in Pennsylvania, and 14.87% in the U.S. as a whole (ACS, 2009-13). Looking at the percentage of the population with insurance who are enrolled in Medicaid (or other types of public health insurance) is important because Medicaid enrollees are a vulnerable population of individuals since they are likely to have lower incomes and may have more barriers to receiving care. In the St. Luke's Warren service area, 14.59% of the insured population is receiving Medicaid, as compared to 15.43% of the insured population in New Jersey, 18.24% in Pennsylvania, and 20.21% of the insured population in the U.S. as a whole (ACS, 2009-13).

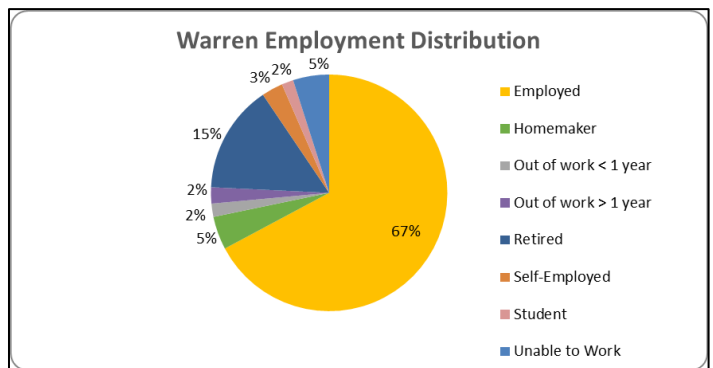
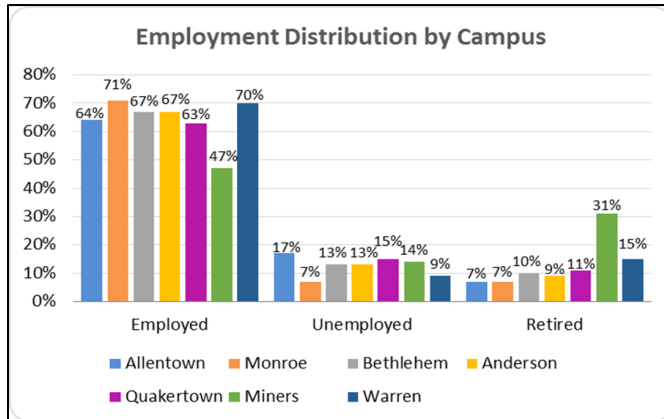
Our survey showed that when asked to choose the reasons why they missed a medical appointment, many respondents chose responses that revolved around insurance coverage. In terms of the St. Luke's Warren service area, out of the top 5 reasons for postponing care, 11.2% of the responses were that they postponed care because that their share of the cost was too high, and 9% said they didn't have insurance. This shows that lack of insurance or coverage for certain services poses a significant challenge to receiving care.

Top Five reasons for Postponement of Care at St. Luke's Warren

Reason for Postponement of Medical Care at Warren	Percentage of Responses
My share of the cost was too high (deductible/copay)	11.2%
Didn't think problem was serious	10.0%
Didn't have health insurance	9.0%
Couldn't get time off from work	6.9%
Insurance didn't cover what I needed	5.3%

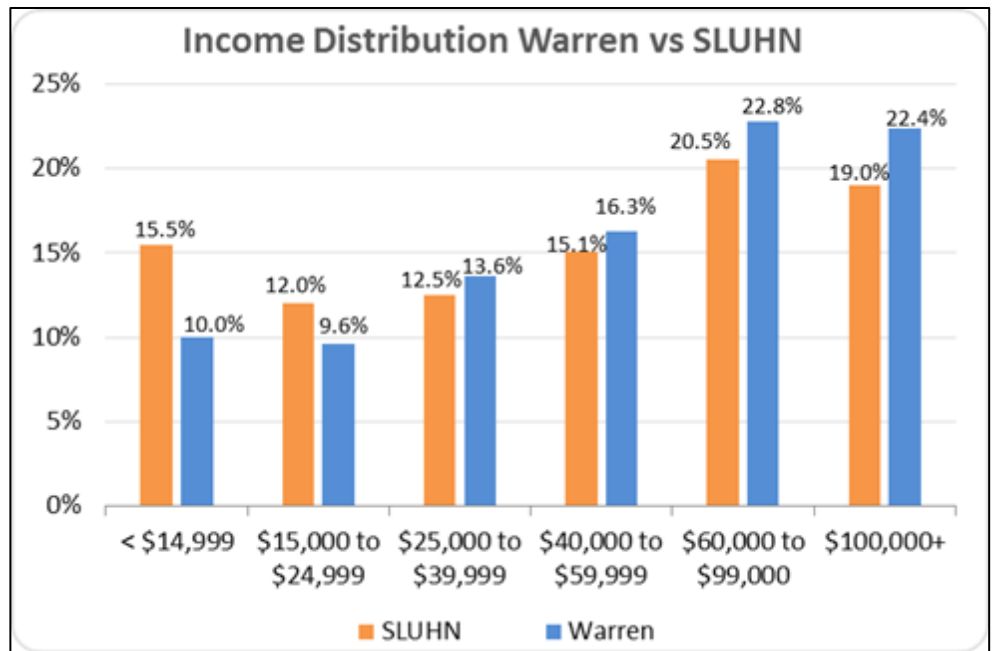
Besides some of the more visible barriers to care such as lack of PCP's or health insurance, unemployment and poverty are two additional important indicators of access to care, because if people are unemployed, they are less likely to be covered by some type of health insurance and may be more likely to have to pay for health services out of pocket. In the St Luke's Warren service area, 6.1% of the population is unemployed, which was lower than the rate seen in New Jersey (6.6%), the same as the rate in Pennsylvania and slightly lower than the rate in the U.S. (6.3%) (Bureau of Labor Statistics- August 2015). We can look at our 2016 community survey

results to better understand what unemployment looks like in our service area. The survey revealed that 9% of respondents in the St. Luke's Warren service area are unemployed. This percentage is higher than the unemployment rate for the St. Luke's Warren service area as a whole (6.1%). The employment distribution shows the breakdown of employment status for respondents in our service area, where we can see that the majority of respondents are employed or self-employed (70%), but collectively there is still a higher unemployment rate from our respondents than what was seen for the unemployment rate from the service area from the Bureau of Labor Statistics.



Poverty is linked to unemployment because if a person does not have a job they likely have no income, which means may not be able to pay for out of pocket healthcare services or have insurance. In the St. Luke's Warren service area, 22.76% of the population is living with incomes at or below 200% of the FPL. We can also examine per capita income, median income, and household income to better understand what poverty looks like in our service area. Per capita income includes all reported income from wages and salaries as well as income from self-employment, interest or dividends, public assistance, retirement, and other sources. According to the ACS (2009-13), the per capita income in the St. Luke's Warren service area is \$31,459. This per capita income is higher than that seen in Pennsylvania (\$28,502) and nationally (\$28,154), and is lower than that seen in New Jersey (\$36,027). We can also look at median household income as an indicator of people's ability to access care and as a source of possible health disparities, because lower median income may be indicative of a lower likelihood of being able to pay for the costs of healthcare. In Warren County, the median household income from 2010-2014 was \$70,934, as compared to the median household income in New Jersey which was \$72,062 and in the U.S. which was \$53,482 (U.S. Census Bureau- Quick Facts). As evidenced by this data we can see that the median household income for Warren County is slightly lower than the New Jersey median and is much higher than the U.S. median. This median household income reported by the U.S. Census Bureau for Warren County is interesting when examining our 2016 community survey results.

This graph compares the distribution of incomes reported by respondents in the St. Luke's Warren service area to those reported from respondents in SLUHN as a whole. This chart shows that St. Luke's Warren has respondents who reported higher incomes than those in SLUHN as a whole, with the percentage of respondents generally increasing with each bracket. This pattern is different than what was seen for the other SLUHN campuses, where most saw high percentages of respondents at both the lower and higher income brackets, whereas with St. Luke's Warren the distribution is skewed towards the higher income brackets. Overall, this shows that this campus has respondents who have higher incomes, which could be related to a greater ability to access health services.

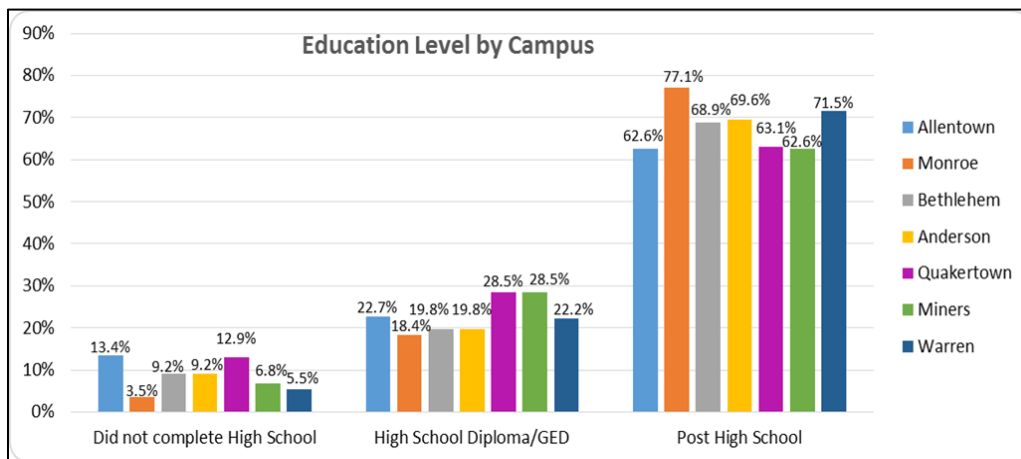


Even with the reported higher incomes from respondents in this service area, the focus group members discussed the large population in the area living below the FPL and the lack of job opportunities in the region. The community stakeholders mentioned the Highland Act, which has increased land preservation by preventing corporate development, and in turn has driven jobs out of the community. The members also discussed the possibility of installing a rail service, which would improve access to employment and transportation to jobs. From these two discussions about unemployment and poverty, we can see that both are social determinants of health that are important to understand when addressing the health status of our community.

Education is another very important social determinant of health that must be addressed in order to reduce health disparities. Higher education has been tied to fewer risky health behaviors and better overall health status. According to the 2015 Warren County Community Health Improvement Plan (CHIP), only 10.7% of the individuals living in Warren County have less than a high school diploma, which is a better percentage than what is seen in the state of New Jersey as a whole (12.1%). Additionally, 60.3% of Warren County residents have a high school diploma and have finished some college and 29% have a bachelor's degree or above. In Warren County there are two colleges: Centenary College and Warren Community College.

Educational Quick Facts (2008-2012)	Warren County	New Jersey
Population 25 years and over	74,388	5,969,516
Less than a High School Diploma	10.7%	12.1%
High School Diploma to some college	60.3%	52.5%
Bachelor's Degree or Higher	29%	35.4%
Number of Colleges or Universities	2	44

Our 2016 community survey data revealed that the highest percentage of respondents in the St. Luke's Warren service area either reported receiving education after high school (71.5%) or receiving a high school diploma or GED (22.2%). These percentages are likely different from the percentages from the 2015 Warren County CHIP report since the levels of educational attainment were broken down differently. As evidenced by the distribution below, we can see that across the St. Luke's Warren service area there is considerable variability in educational attainment. This is important to take into consideration when addressing the health needs of our service area, since education has been noted to influence health behaviors and health status.



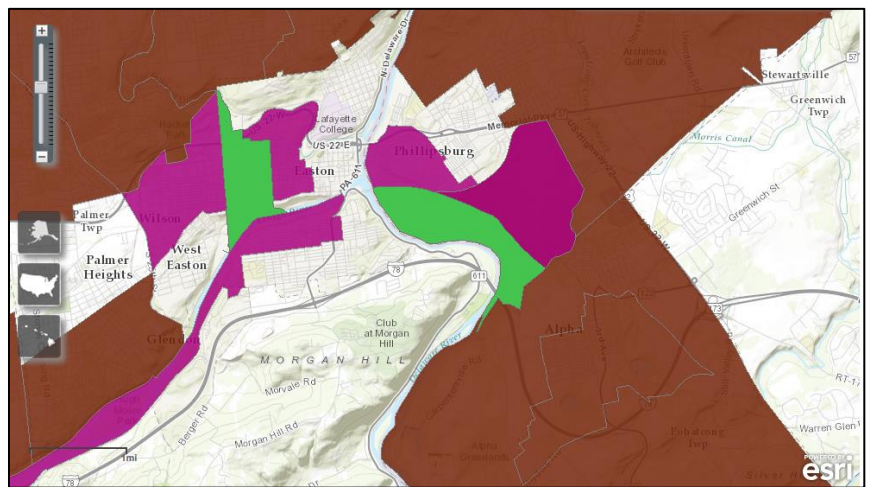
Lastly, the focus group members discussed another challenge faced by the St. Luke's Warren service area, the lack of Spanish speaking physicians. We can look at the percent of the population with Limited English Proficiency (LEP), or the percentage of the population aged 5 and older who speak a language other than English at home speak English less than "very well", to see if there are a lot of people facing language barriers to care. In the St. Luke's Warren service area, 3.71% of the population have LEP, which is lower than the percentages seen in

New Jersey (12.38%), Pennsylvania (3.92%), and in the U.S. as a whole (8.63%) (ACS, 2009-13).

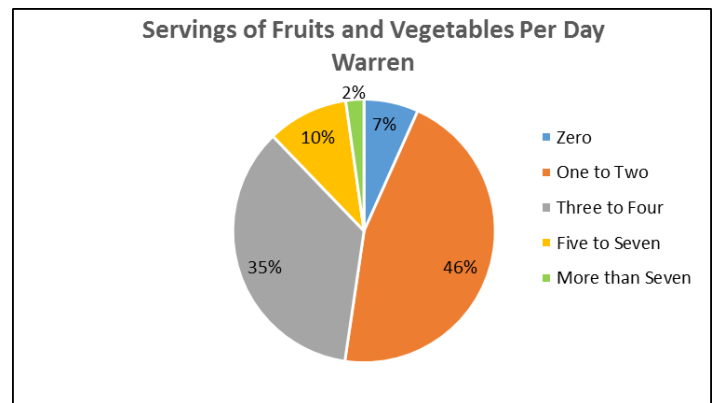
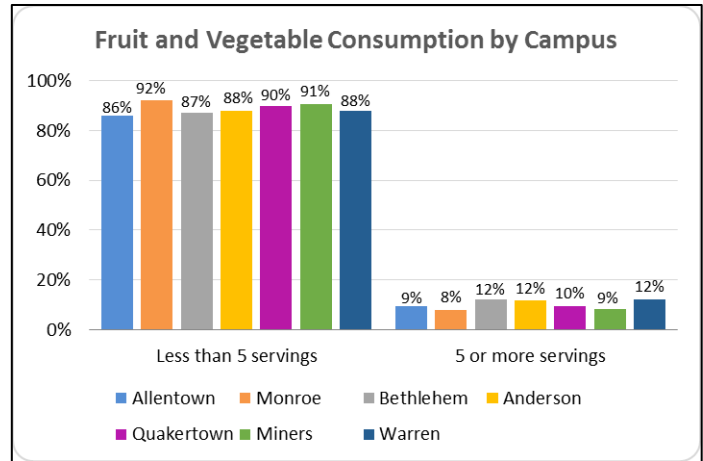
2. Promoting Healthy Lifestyles and Preventing Chronic Disease

Access to healthy foods is important in order to promote healthy lifestyles and prevent chronic disease, because eating healthy food promotes positive physical and mental health. We can look at access to healthy food issues by examining access to grocery stores. The rate is expressed as the number of grocery stores per 100,000 in the population from the U.S. Census Bureau's County Business Patterns. In the St. Luke's Warren service area, the rate of grocery establishments per 100,000 population is 21.07, which is slightly lower than the rate in Pennsylvania (21.4) and in the U.S. (21.2), and is much lower than the rate in New Jersey (30.5).

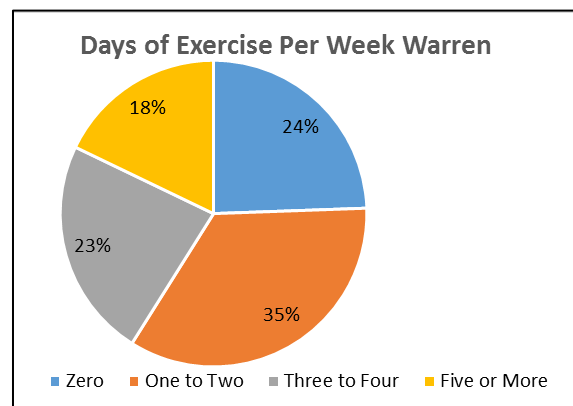
According to the U.S. Department of Agriculture (USDA), a food desert is a place in which people do not have easy access to fresh and healthy food, and the most of their food likely comes from fast food restaurants and convenience stores. On the map to the right of Warren County, the green areas show the low income census tracts where a large portion of the residents live 1 mile away (for urban areas) or 10 miles away (for rural areas) from a grocery store. The purple represents areas where a significant number of families do not have a car and live more than half of a mile from the closest grocery store. The brown shows areas where at least 1/3 of the population lives greater than 1 mile (for urban areas) or 20 miles (for rural areas) from the closest grocery store. As can be seen from the map, in the St. Luke's Warren service area, there are large pockets of areas where people live 1 or 20 miles from the closest grocery store, surrounded by areas where people also have low vehicle access. This represents a huge barrier to promoting healthy lifestyles because if people do not have access to grocery stores, they will likely get their food from fast food restaurants or convenience stores. This in turn may contribute to the high obesity rates. We can also examine food insecurity, which reports people's ability to access food and to be able to live a healthy lifestyle. Food insecurity may also represent an inability to provide all necessities for one's family; therefore they may have to resort to buying fast food instead of healthy foods such as fruits and vegetables. In Northampton County 11.4% of the population is food insecure, in Warren County 10.4% of the population is food insecure, and in Hunterdon County 7.2% of the population is food insecure (Feeding America, 2013).



After examining access to grocery stores, food deserts, and food insecurity, it is important to look at fruit and vegetable consumption in our service area, since the previously mentioned factors may be limiting people's ability to meet the FDA recommendations for fruit and vegetable consumption. The bar graph from our 2016 survey data shows the breakdown by each SLUHN campus in regards to respondents meeting the FDA recommended consumption of fruits and vegetables (five or more servings per day). In terms of the St. Luke's Warren service area, 12% of respondents are reaching the FDA recommended consumption of fruit and vegetables per day, which is one of the highest percentages seen across the SLUHN campuses. The bar graph shows that 88% of respondents reported consuming less than five servings per day, where we can then see in the pie chart that the largest percentage reported consuming one to two servings of fruits and vegetables per day (46%). Although fruit and vegetable consumption is high compared to the other campuses, 12% is still a low number, and this could possibly be attributed to access to grocery stores or presence of food deserts that were previously discussed.



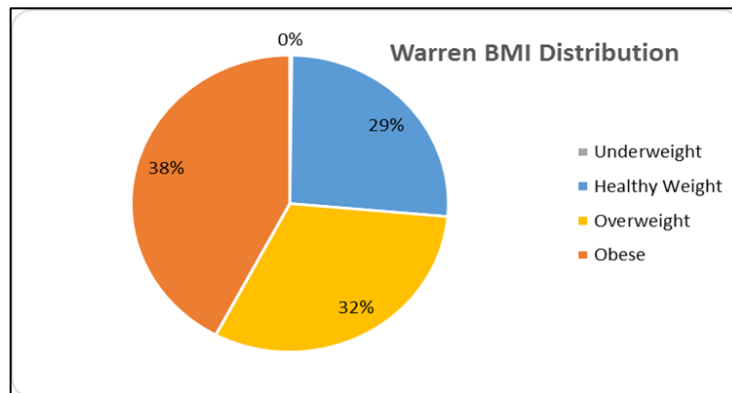
Lack of physical activity among community members is a major barrier in promoting healthy lifestyles and preventing chronic disease. Active lifestyles with consistent exercise have been shown to improve physical and mental health, while also being important in decreasing rates of obesity and cardiovascular problems. In the St. Luke's Warren service area, percentage of the population with no leisure time or physical activity in Warren County (23.1%) and Northampton County (24.6%) were similar to the percent of the population with no physical activity in Pennsylvania (22.9%) and New Jersey (23.6%) (National Center for Chronic Disease Prevention and Health Promotion, 2012). From our 2016 survey data, we found similar results, showing that 24% of respondents in the St. Luke's Warren service area reported exercising no days per week. We can see that 41% of respondents in our service area reported exercising three or more times per week (including three to four times and five or more), but this leaves a large percentage of respondents who are likely not



participating in enough physical activity to remain healthy. The Healthy People 2020 target recommends that adults should be exercising 150 minutes per week, an average of 30 minutes per day for five days a week. The target for 2020 is that 47.9% of adults reach this benchmark and currently, only 16% of survey respondents in the whole SLUHN service area are exercising at least five times per week.

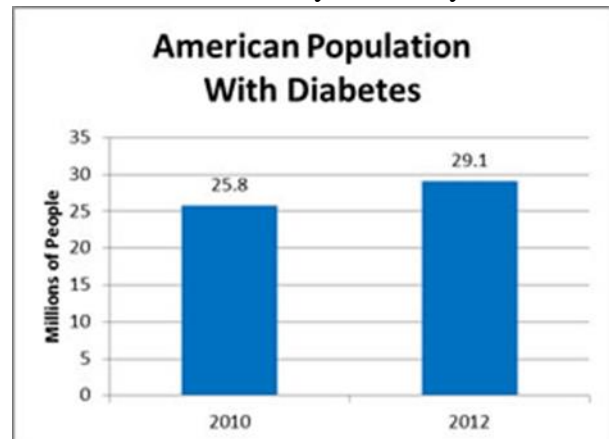
To increase the number of people participating in physical activity, the focus group members recommended providing community members with affordable whole foods and exercise programs as a way to promote healthy lifestyles. In terms of exercising, the focus group members said that there are trails in which people could exercise in a safe environment but community members may not know about them. They also discussed schools as an important asset to utilize in teaching students how to live healthy lives in order to prevent chronic disease.

Another important topic within the health category of promoting healthy lifestyles and preventing chronic disease is obesity. Obesity is a very prevalent health issue in our community, and according to the State of Obesity (a project of the Trust for America's Health and the Robert Wood Johnson Foundation), rates in Pennsylvania are on the rise. Pennsylvania is ranked 20th and New Jersey is ranked 41st amongst the 50 states (where 1 is the most obese state and 50 is the least obese state). Due to the limited access to grocery stores that serve healthy fresh foods and the poverty levels, which points families toward buying cheap and convenient fast food, obesity is growing quickly. Obesity is a risk factor for type II diabetes, coronary heart disease, stroke, high blood pressure and some breathing conditions. Obesity is determined by Body Mass Index (BMI), which is an indirect measure of an individual's body fat. For a person who has a normal weight the BMI range is from 18.5-24.9, for someone who is overweight the range is 25-29.9, and for someone who is obese the BMI is 30.0 or more (CDC, 2015). According to the Robert Wood Johnson County Health Rankings (2015), the rate of adult obesity in New Jersey is 24% and in Warren County specifically, the rate is 27%. According to our 2016 survey data, 38% of respondents in the St. Luke's Warren service area were obese and 32% were overweight. This means that 70% of respondents were either considered overweight or obese, which represents a large portion of the total respondents.

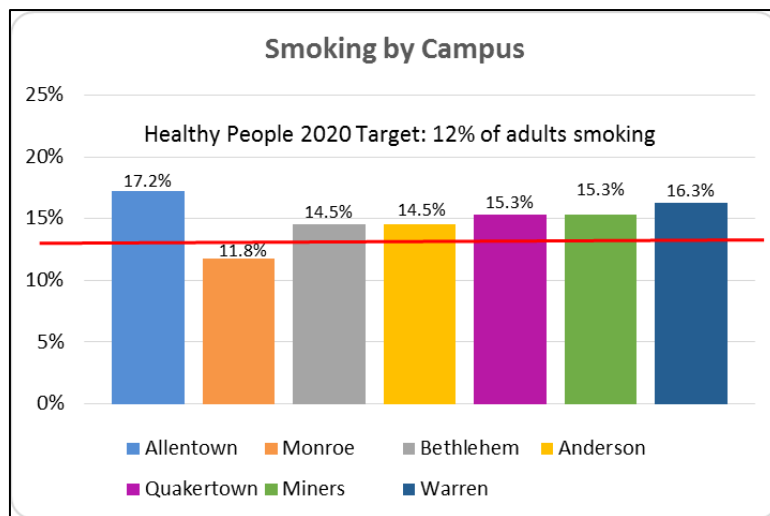


While focusing on programing is important in reducing levels of obesity, results from our 2016 community survey identified several demographic characteristics that were linked with a respondent's BMI. For SLUHN as a whole, amongst all respondents with a morbidly obese BMI, the largest percentage was evident among those earning less than \$14,999 per year (19.8%). Conversely, only 8.9% of the morbidly obese respondents reported making more than \$100,000 per year. The income range with the highest percentage obesity was \$15,000 - \$24,999 at 44.3%, while the lowest percentage of obesity was in the \$100,000 or more range at 31.0%. This is interesting because it shows us that there is an association between level of income and BMI, which reaffirms that the social determinants of health (such as income) must be taken into consideration when determining how to improve the health of our community. We also examined education, where 45.9% of those who did not receive a high school degree reported BMIs in the obese category and 41.7% of those who attained a high school diploma or GED reported BMIs in the obese category. 36.5% of those who completed education beyond high school fell into the obese category. This shows us that lower levels of educational attainment may be related to obesity. Making connections to the social determinants of health related to obesity is important so that a multifaceted approach can be taken to reduce rates of obesity in our service area.

Diabetes is a prevalent chronic health condition strongly tied to obesity, so it is important to examine it in more detail. Diabetes is a disease where a person's blood glucose levels are too high. Type I diabetes is generally found in children under the age of 20, where the pancreas does not produce enough insulin. Type II diabetes is of great concern in our community served, because type II can be caused by being overweight or obese. Diabetes can also cause other health issues such as blindness, kidney disease, foot problems, and heart disease. There are treatments for type II diabetes including medications, better diet, and exercise, but some people with type II diabetes have it for life. In the St. Luke's Warren service area, the percent of the adult population over the age of 20 diagnosed with diabetes ranges from 5.3% (Hunterdon County) to 8.8% (Northampton County) (National Center for Chronic Disease Prevention and Health Promotion, 2012). The percentage of adults with diabetes in New Jersey is 8.21%, in Pennsylvania is 8.86%, and nationally is 9.11%. According to the National Diabetes Statistics Report (2014), diabetes was the 7th leading cause of death in the United States in 2010, but it is likely that many more deaths resulted from diabetes but were not reported as such. This happens because of the various co-morbid conditions associated with diabetes. From 2010 to 2012, the rate of diabetes in the United States has risen from 25.8 million to 29.1 million people, this current percentage represents 9.3% of the U.S. population. The number of people in the U.S. over the age of 20 who had prediabetes also increased from 2010 to 2012, from 79 to 86 million people (National Diabetes Statistics Report, 2014).



Tobacco usage is another important factor to consider when discussing promoting healthy lifestyles and preventing chronic disease, because smoking contributes to illnesses such as cardiovascular disease, cancer, and asthma. In order to promote healthy living, cutting down on tobacco usage within the community is a necessity. For the adult population over the age of 18 in the St. Luke's Warren service area, 13.2% of the population in Hunterdon County, 19.3% of the population in Warren County, and 18.1% of the population in Northampton County reported that they currently smoke. According to our 2016 survey data, referring to the bar graph below, 16.3% of respondents in the St. Luke's Warren service area reported that they currently smoke. This is the second highest percentage across the SLUHN campuses, and the Healthy People 2020 goal is to have only 12% of adults smoking, so there are improvements to be made in terms of reducing smoking in our service area.



Transportation was a major barrier to promoting healthy lifestyles discussed by the focus group members. They said that the lack of public transportation, the reliance upon cars, and inadequate physical activity all contributed to unhealthy lifestyles. They mentioned the fact that the city is not walkable, which is a problem because transportation has to be taken to get anywhere. According to the Robert Wood Johnson 2015 County Health Rankings, in Warren County, 81% of the working individuals drive to work by themselves and 53% of the working population have a commute time longer than 30 minutes. Both of these indicators have implications for health because driving to work alone has consequences for decreasing physical activity and increasing air pollution, while long commutes have been tied to exercising less and greater BMI in these individuals (Robert Wood Johnson 2015 County Health Rankings).

The focus group members discussed the need to understand and respect cultural norms of others, in order to help address healthy lifestyle practices. Since there is a sizeable population of Hispanic/Latino individuals in the St. Luke's Warren service area, there may be a need for

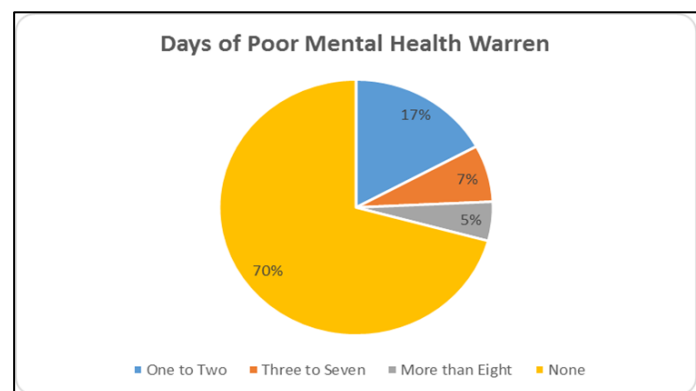
different cultural approaches in addressing issues of healthy eating, promoting exercise, receiving preventive services, and discussions of positive health behaviors.

In general, the focus group members discussed how Warren's diversity, rising poverty level, increasing transiency, and growing immigrant population cued a realization of the need to improve how SLUHN communicates its available health resources, so that all people can receive the care they need. The focus group members mentioned that it would be a good idea to team up with local health departments in order to improve education about disease prevention and promote healthy lifestyles. Additionally, they mentioned the Mayors' Wellness Campaign program as another asset that could be built upon, especially since involvement numbers have not been rising since statewide implementation of the program. The Mayors' Wellness Campaign is an initiative that provides mayors with strategy ideas and information necessary to improve the state of health of their individual communities.

3. Improving Mental/Behavioral Health

In 2008, 13.4% of adults in the U.S. received care to treat a mental health issue (National Institute of Mental Health). This percentage was higher than in past years, but it still means that not all adults who have a mental health issue are receiving treatment for it. Additionally, greater than half of those who have problems with drugs and one third of those with a substance abuse problem have some sort of mental health problem (National Alliance on Mental Illness- Dual Diagnoses). In this section we will examine what mental health and substance abuse looks like in the St. Luke's Warren service area, and what is being done or can be done to improve the mental well-being of community members.

By first examining the number of days of poor mental health people report, we can begin to assess the mental health status of the St. Luke's Warren service area. According to our 2016 survey data, in the St. Luke's Warren service area, 29% of respondents reported missing one or more days of normal activity in the past month due to poor mental health. Those who are missing days of normal activity due to poor mental health may not be receiving any type of treatment for their condition, which is important to take into consideration when reading the rest of this section about the other issues related to mental health within our service area.



Access to mental health professionals is a significant barrier to improving mental health within the population. If there is a shortage of mental health professionals in the area, people will be unable to obtain treatment and will continue to suffer. The mental health providers indicator

from the Robert Wood Johnson 2015 County Health Rankings analyzes ratio of the county population to the number of mental health providers including psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, advanced practice nurses specializing in mental health care, and mental health providers who treat alcohol and other drug abuse. A good ratio is represented by a small number of people in the population to one mental health provider. In Warren County the ratio was 651:1 as compared to 623:1 in the state of New Jersey as a whole, and in Northampton County the ratio was 592:1 as compared to 623:1 in the state of Pennsylvania. The top performing counties in the U.S. have a ratio of 386:1. The focus group members said that the behavioral health services that are currently available in the St. Luke's Warren service area can be improved through educating community members and healthcare professionals about mental health and substance abuse issues. Additionally, they discussed the stigma associated with attending mental health and substance abuse programs, which may dissuade community members from accessing these services. Lastly, the stakeholders said there is a pressing need for behavioral health case managers to help guide patients through the system and connect them to the appropriate resources.

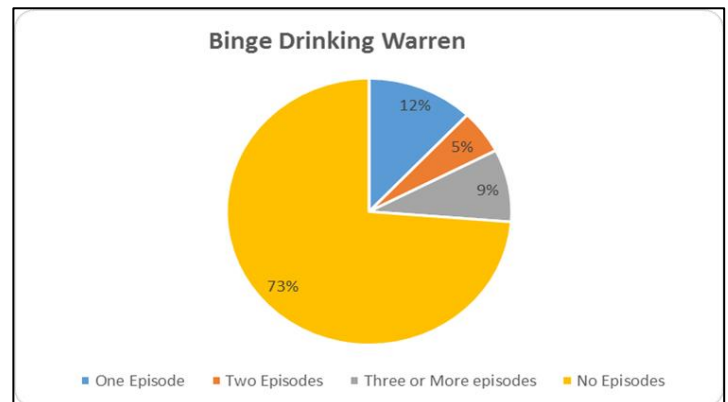
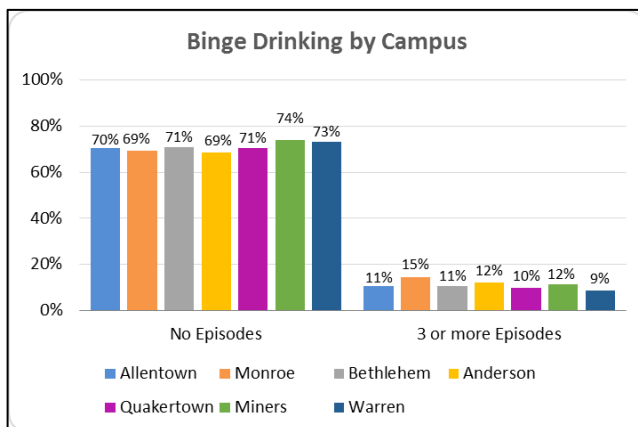
Unemployment and poverty were discussed earlier as influencing access to care, but they are also important social determinants of health to take into consideration when examining issues of mental health. They are important to examine because not having a stable job and the stress of providing for oneself and one's family are risk factors for poor mental health. As mentioned earlier, in the St. Luke's Warren service area 6.1% of the population is unemployed, which is lower than the rate seen in New Jersey (6.6%), and is similar to the rate in Pennsylvania (6.1%) and in the U.S. (6.3%) (Bureau of Labor Statistics, 2015). In terms of poverty, 22.76% of the population in the St. Luke's Warren service area is living with incomes at or below 200% of the Federal Poverty Level (FPL), which is better than the percentage of the population at or below 200% of the FPL in New Jersey (24.07%), Pennsylvania (30.51%), and in the U.S (34.23%). However, this data shows us that approximately one in four people are living at or below 200% of the FPL. Both unemployment and poverty should be addressed simultaneously in order to help improve the mental wellbeing of our population.

It is important for community members to have social or emotional support in order to feel confident getting through everyday problems; more importantly, social and emotional support is vital to maintaining positive mental health. This indicator looks at the lack of social or emotional support for adults over the age of 18 who expressed that they do not receive enough support the majority of the time. In Warren County, 19.6% of the adult population reported not receiving enough emotional support and in Northampton County 21.9% reported not receiving enough emotional support (BRFSS, 2006-12). These percentages are similar to the national percentage of 20.7%.

Since 8.51% of the total population in the St. Luke's Warren service area is uninsured, this means the majority of our population is utilizing some type of insurance to cover their healthcare

needs (ACS, 2009-13). Insurance plans sometimes become complicated with the types of care they cover and the types they do not, which presents a barrier to care for those with mental health issues. The focus groups members discussed the major issue with insurance companies in regards to addiction coverage, where many companies will only pay for a few weeks of treatment, which is not enough time for someone to overcome an addiction. Partial treatment of an addiction problem is more likely to lead to relapse than if an individual was able to finish the whole program. The focus group members also mentioned that insurance companies generally will not cover for someone who experiences a relapse. The members suggested that St. Luke's Warren help patients file an insurance appeal if their claim for addiction treatment coverage is denied.

Excessive alcohol consumption and substance abuse disorders are likely to be recognized as comorbidities with mental health issues. There are also many cases where mental health problems go undetected because alcoholism and substance abuse issues may be overshadowing these issues. According to the Robert Wood Johnson 2015 County Health Rankings, 16% of the adult population reported excessive drinking in Warren County and similarly, 17% of the adult population in Northampton County reported excessive drinking. These percentages of excessive alcohol consumption are similar to those seen in Pennsylvania (17%) and in New Jersey (16%). The top performing U.S. counties have 10% of their adult populations that report excessive alcohol consumption. According to our 2016 community survey, in the St. Luke's Warren service area, 73% of respondents reported no episodes of binge drinking in the past month, however, 26% reported having one or more episodes of binge drinking in the past month. For the network as a whole, we examined the association of gender to binge drinking. We found that among those who reported no episodes of binge drinking, 74.4% of the respondents were female and 63.2% were male.



In general, regarding improving mental health, one resource mentioned by the stakeholders that can be built upon is the current database systems. They said the data should be used to track trends to see where resources should be allocated, as well as identify the strongest issues in the care continuum that could be used to enhance intervention strategies.

4. Improving Child and Adolescent Health

If children are living in poverty they are more likely to have more trouble accessing healthcare and pursuing healthy lifestyles, especially if they do not have the bare necessities to live. In the St. Luke's Warren service area, 27.49% of children under the age of 18 are living in households where the family income is at or below 200% of the Federal Poverty Level (FPL). This percentage is better than the percentage of children in poverty seen in New Jersey (30.86%), Pennsylvania (38.97%), and in the U.S. as a whole (43.81%) (ACS, 2009-13).

If children are living in poverty they are likely not covered by private insurance. If children are uninsured or covered by government insurance they may face more barriers to accessing healthcare, thereby contributing to poorer health status. In the St. Luke's Warren service area, 5.23% of children under the age of 18 are uninsured, as compared to 5.58% of the under 18 population in New Jersey and 7.51% of the under 18 population in the U.S. as a whole (ACS, 2009-13).

Education is a very important social determinant of health that must be addressed in order to improve health outcomes for children and adolescents. In Warren County there are a total of 8 high schools and 42 kindergartens as well as elementary and middle schools (Warren County Community Health Improvement Plan, 2015). Sex education in schools was discussed by focus group members as an important avenue by which to lower rates of teen pregnancy. Additionally, they said when teens or first time moms become pregnant, it would be important to educate them about how to stay healthy during their pregnancy, especially during the first trimester. According to the Robert Wood Johnson 2015 County Health Rankings, the teen birth rate is represented as the number of births per 1,000 female population ages 15-19. In Warren County the teen birth rate is 15 as compared to the rate of 22 in the state of New Jersey. In Northampton County the teen birth rate is 22 as compared to the rate of 28 in the state of Pennsylvania.

The focus group members brought up the issue of alcohol abuse during pregnancy. Low birth weight can be a consequence of alcohol or illicit drug use during pregnancy, births from teen moms, or poor prenatal care. According to the National Vital Statistics System (2006-12), in the St. Luke's Warren service area, 8.34% of the total births in the area were low weight births, as compared to 8.4% in New Jersey, 8.3% in Pennsylvania, and 8.2% in the U.S. The Healthy People 2020 target is to decrease the percentage of low weight births to 7.8%. A study done by the Morbidity and Mortality Weekly Report showed that in the United States, 1 out of 10 pregnant women consumed alcohol in the past month, and 1 out of 33 said they had an episode of binge drinking. Interestingly, the highest rates of binge drinking amongst pregnant women were seen in women ages 35-44 who were college educated and unmarried. To address issues of alcohol abuse during pregnancy the focus group members discussed the fetal alcohol prevention program that has been ongoing in the past few years. Although this is a great program, the focus group members said Warren County has still seen expectant mothers abusing alcohol.

Free or reduced lunch eligibility is determined based on income eligibility guidelines set forth by the USDA. If children are eligible for free or reduced lunch this means their family income is sufficiently low, which may mean there may not be enough income to buy enough food at home or to pay for other things such as healthcare. 36.04% of students in the St. Luke's Warren service area are eligible for free and reduced lunch, as compared to 38% of the students in New Jersey and 52.35% of U.S. students (NCES Common Core of Data, 2013-14).

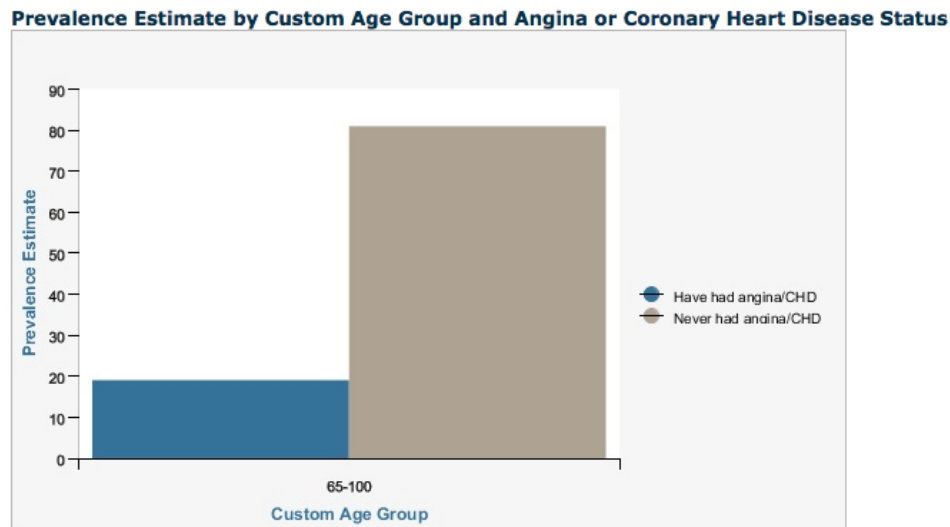
One general challenge discussed by focus group members is that the current system is too fragmented. They said that there should be a focus on increasing the number of partnerships to improve and expand upon existing programs for pregnant and new mothers, rather than creating new ones. They also mentioned the importance of sharing information so that each organization or partnership can know what aspects of maternal health they are focusing on. This change would provide quality programs in order to improve the health of expectant mothers and their babies.

5. Improving Elder Health

Elder health is important to address because the elderly represent a very vulnerable population, who may have trouble navigating the healthcare system. In New Jersey, the population over the age of 65 constitutes 14.7% of the population, and in Warren County specifically, this age group represents 16% of the population (U.S. Census Quick Facts). We can see through America's Health Rankings that New Jersey ranks 26th and Pennsylvania ranks 25th out of the 50 states for elderly health, placing them squarely in the middle of all of the states within the U.S. The main challenges that New Jersey faces in preserving the health of the elderly are the high rates of Intensive Care Unit (ICU) utilization and the large population of seniors that are underweight (America's Health Rankings, 2015). The main challenges that Pennsylvania faces in preserving the health of the elderly are the high prevalence of obesity, the lack of physical activity, and the low prevalence of high quality nursing homes (America's Health Rankings, 2015). One general barrier to improving elder care that the stakeholders mentioned is the issue of pride, where many elderly may not want to accept the help of others even when it is readily available. Younger senior citizens may still be physically able, and will not accept the services even if they need them. Additionally, the focus group members mentioned the lack of transportation for seniors, poor access to communication about health services available and limited funding for senior centers as issues in improving elder health. There are other demographic and socioeconomic health issues that influence elder health, which will be discussed below.

According to the U.S. Census Bureau, as the elderly population ages they tend to face more chronic diseases. Last year, the Department of Health for the State of New Jersey introduced a five year plan to address preventing chronic disease and improving current health, which includes the following seven calls to action: improving environmental health, promoting physical activity, improving upon patient self-management, improving access to health care, eradicating use of tobacco, fostering better eating habits, and providing early detection of chronic disease.

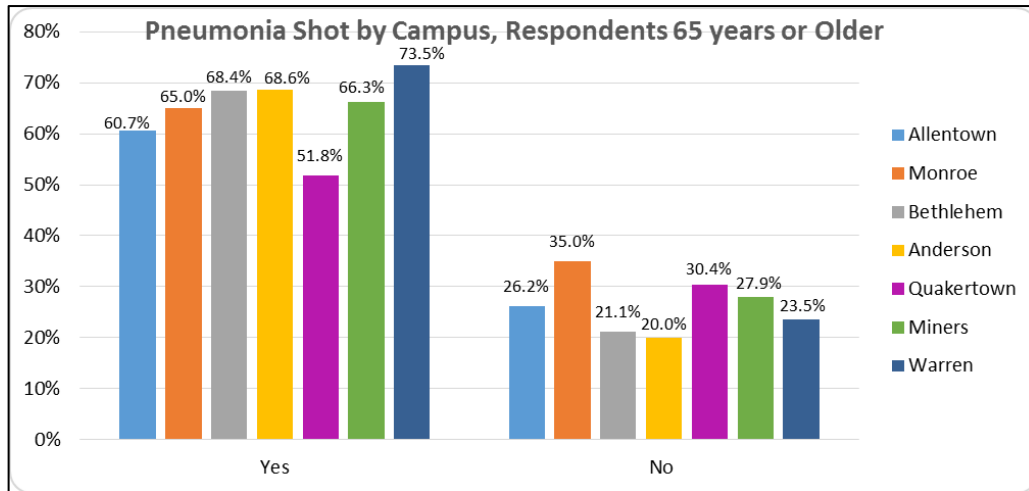
One chronic disease that is particularly important to examine is diabetes, especially because of the rising rates of obesity in the country. In the St. Luke's Warren service area, 28.64% of Medicare beneficiaries within the population served have diabetes, which is lower than the percentage in New Jersey (31.97%) but higher than that seen in Pennsylvania (26.66%) (Centers for Medicare and Medicaid Services, 2012). Another important chronic disease to examine is coronary heart disease, considering it is the number one leading cause of death in the United States. In Warren County, 19% of the population ages 65-100 reported having had angina or coronary heart disease (New Jersey Behavioral Risk Factor Survey, 2011-2012). In terms of cancer diagnoses, 22.7% of the population aged 65-100 in Warren County reported being diagnosed with any type of cancer (New Jersey Behavioral Risk Factor Survey, 2011-2012). These statistics show that there are a significant number of seniors who are suffering from chronic diseases, and it is possible that they are suffering from more than one at the same time.



The prevalence of multiple chronic illnesses amongst the elderly also calls for more medications to help manage these conditions. The stakeholders recommended that St. Luke's Warren should continue and expand upon their pharmaceutical committee, which asks pharmacists and dieticians to look at the multiple medications the elderly are taking to make sure that they are not over-medicated and that there are no complications with the medications or with certain foods. Additionally, the focus group members discussed problems regarding multiple medications in general; it is difficult for seniors to keep track of what medications they are taking, the dosage for each medication, and when to take them. They also said that there may be issues with seniors not filling the prescription in the first place, or on the other end of the spectrum issues with addiction or abuse of medications.

In our 2016 community survey we looked at the variety of different health conditions present within each of the SLUHN hospital campuses (discussed in the introduction), but this was not broken down by age. A high prevalence of elevated blood pressure, high cholesterol, and arthritis were identified in the St. Luke's Warren service area (for the whole respondent population-not

broken down by age). In our 2016 community survey, we looked at preventive health services utilized by respondents. In particular for the elderly, we examined whether or not they received their pneumonia shot. The graph below shows that 73.5% of respondents over the age of 65 in the St. Luke's Warren service area reported receiving their pneumonia shot



Mental illness is an important yet often overlooked issue within the elderly population. According to the Center for Medicare and Medicaid Services (2012), the percentage of Medicare beneficiaries with depression in the St. Luke's Warren service area is 16.19%. This percentage is higher than that seen in New Jersey (12.7%) and nationally (15.4%), and is essentially the same as the percentage in Pennsylvania (16.2%). Social and emotional support likely play an important role in lessening these rates of depression, so focus on providing social opportunities for seniors is imperative. The focus group members emphasized the importance of senior centers as a place of socialization for the elderly, where events are held for the seniors to interact and enjoy the company of others. Some senior centers have even partnered with schools, where student volunteers come and spend time with the seniors.

Seniors living in poverty is important to examine because many times older adults must be able to cover costs of living and cover medical costs on their own. Additionally, as they age they may encounter more health issues, which results in greater healthcare costs. According to the Kaiser Family Foundation's June 2015 issue brief, the national poverty rate for the population over the age of 65 is 15% under the Supplemental Poverty Measure (SPM) as compared to 10% poverty rate for the over 65 population using the Federal Poverty Level (FPL). (The SPM was created by the Census Bureau to take into account modern factors affecting level of income, such as information about financial resources and regulating of poverty threshold depending on geographical differences in the prices of homes). In 2013, the percentage of the 65 and older population that were positioned below 200% below the SPM was 45%. Addressing the issues of seniors living in poverty will be important in order to address issues of health disparities and access to care.

One important resource the focus group members said should be built upon is St. Luke's medical daycare, because it reaches elderly community members who do not have a caregiver living with them around the clock (they might be living with family or not be ready to go to assisted living). One barrier to improving elderly health discussed by the focus group was that many of the community members do not know about the services or do not believe they are eligible for them. Additionally, they said that there should be improvements in the protocols and collaboration of home health agencies and visiting nurses, hopefully this would decrease the number of emergency room encounters.

III. Conclusion

Improving access to care/reducing health disparities, promoting healthy lifestyles and preventing chronic disease, improving mental/behavioral health, improving child and adolescent health, and improving elder health are the five main health categories that were identified as areas for improvement through our community survey, our key stakeholder focus groups, and secondary data analyses. We already have many great services available to help improve health in our region, but a concentrated and sustained effort will be necessary amongst all those who contribute to our community's health to create new programs and continue existing programs to try even harder to address the current concerns. The needs discussed within the health categories will serve as our guide in creating a campus specific implementation plan to best address the needs of the St. Luke's Warren service area.

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Appendix A: Warren Focus Group Overview

Warren Campus Priority Areas

1. Healthy Lifestyles and Chronic Disease
2. Healthy Birth Outcomes for Expectant Mothers
3. Availability and Access to Behavioral Health Services
4. Access to Dental Health Services
5. Elder Health

I. Priority Area Specific Questions

1) Healthy Lifestyles & Chronic disease

a. What strengths & resources can be built upon and utilized to *promote healthy lifestyles and reduce chronic disease*?

The stakeholders felt that it was vital to coordinate and partner with local health departments to increase education on prevention to promote healthy lifestyles. One of the best ways to fight chronic disease is to promote health education programs in schools. One individual stated that they remember being taught healthy lifestyle practices in grade school, which encouraged good hygiene, visiting a health professional on a regular basis, and taking care of oneself with oral and personal hygiene. Outside of the school district, employee wellness programs are an excellent resource for targeting adults.

In addition to promoting health education programs, Warren County can enhance health by providing individuals with the ability to access affordable whole foods as well as affordable exercise programs. The capacity to access an affordable exercise program means that individuals will not necessarily have to pay the high fees that accompany joining a gym.

Lastly, it was noted that at the municipal level, the mayor's wellness program is a resource that can be significantly built upon. The wellness program has been initiated statewide, however, involvement rates are not increasing, and better communication of the program is required for the program to be successful in improving healthy lifestyle practices.

b. What are the barriers & challenges that our community faces in *promoting healthy lifestyles and reducing chronic disease*?

Warren County has a diverse population, a rising poverty level, an increase in transiency, and an emerging immigrant population. SLUHN must increase awareness and communication regarding its resources so that these people in need can receive the care that SLUHN and other organizations have to offer.

Additionally, meeting people's needs at a cultural level will be important; specifically in regards to understanding and respecting different cultural norms. This will help break down barriers when addressing and promoting healthy lifestyle practices to reduce chronic disease.

Warren County contains the highest percentage of individuals living below the federal poverty level in the state of New Jersey. Additionally, the Highland Act, which increases land preservation by preventing corporate development, has hindered the percentage of jobs available

to community members. When addressing this issue, it was mentioned that a rail service would be beneficial towards increasing jobs and transportation in the area.

To improve overall health (physical and mental) an increase in employment opportunities is pivotal so that individuals can feel good about themselves. To empower community members it was suggested that professionals address individuals one-on-one. For example, the health department has been conducting home visits to improve not only the individuals' health, but also the physical environment in which they live. Along the lines of empowerment, trust is essential in promoting healthy practices. Trust has been an underlying issue in the promotion of healthy lifestyles, particularly among individuals with various cultural backgrounds, who have recently moved to the area.

In addition to the aforementioned barriers, a lack of transportation, reliance upon cars, and physical inactivity all diminish one's overall health. Many individuals are unable to afford a vehicle, so they must rely upon public transportation. On the other hand, there is a heavy reliance upon using cars for transportation, because many places are not within walking distance. The inability to get around without a vehicle is a problem in the area. The county does not provide enough public walkways to further incorporate daily activity. Moreover, a lack of promotion of local trails has also left the community unaware of safe areas conducive for physical activity.

2) Healthy Birth Outcomes

a. What strengths & resources can be built upon and utilized to *improve healthy birth outcomes for expectant mothers*?

A fetal alcohol prevention program has been running in the community for the past few years. Unfortunately, expectant mothers abusing alcohol through their pregnancy is still a major issue in Warren County.

Sex education within schools will be important to expand upon in order to lower rates of teenage pregnancies. Once women are pregnant education is necessary, especially during the first trimester, in order to improve healthy birth outcomes for expectant mothers.

b. What are the barriers & challenges that our community faces in successfully promoting *healthy birth outcomes for expectant mothers*?

One of the barriers to better birth outcomes is the current system of working in silos. Increasing partnerships that focus on existing programs instituted, as opposed to increasing the amount of programs, will improve the health of expectant mothers and will improve the quality of these programs. This will involve extensive communication, which is not necessarily an easy task. In addition to working together, it is important that each organization knows what other organizations are doing, so that information can be shared and it can be easily distinguished which organization is covering specific aspects of an issue.

Another challenge is outreach and communication; since children and young adults are influenced by social media (i.e. Facebook, Twitter, Instagram), it was suggested that social media be utilized as a tool when promoting education regarding sex education and parenthood.

3) **Behavioral Health Services**

a. What strengths & resources can be built upon and utilized in *improving the availability and access to behavioral health services?*

One way to improve strengths and resources to behavioral health services is through better educating community members and healthcare professionals about mental health and substance abuse issues. There is stigma associated with attending mental health and substance abuse programs, which makes community members less likely to try to access these services. The problem is not as much about access to programs as it is eliminating the stigma that is attached to the diseases. Stigma can be targeted through specific education programs.

A resource that can be built upon to address behavioral health issues is the database systems. Data should be more effectively utilized to track trends; tracking data trends on a monthly basis will help to manage where resources should be allocated. It will also help identify what the major issues, which may help inform intervention strategies.

b. What are the barriers & challenges that our community faces in *improving the availability and access to behavioral health services?*

A challenge stems from the insurance companies, who have recently changed their policies in regards to addiction. Reimbursement is one major issue. Another issue is that insurance companies will pay for only a few weeks of treatment, which is not sufficient to move past an addiction. This is making it so that a patient only receives part of a treatment they need, and then may not ever return, which will likely lead to a relapse. We need to make sure that we help patients so that they can file an insurance appeal if their claim is denied. Additionally, insurance companies do not pay for individuals who experience a relapse.

A huge barrier is that there is a lack of providers within the behavioral health sector. There is a need for behavioral health case managers to help patients navigate the system and to connect patients to the right services. There should be a doubling of the number of current behavioral providers, so that other sectors of the healthcare system (i.e. PCP's and emergency rooms) are not handling this huge influx of patients for which they either do not have the time or resources to serve.

Lastly, advocacy will help to improve behavioral health and substance abuse. Once the illness is identified, advocating for families to get the services that they need will improve the individuals overall health and well- being.

4) **Access to Oral Health Services**

a. What strengths & resources can be built upon and utilized to *improve access to dental health services for needy families?*

Education about dental health services, whether it occurs in schools or by primary care doctors should be expanded and must begin to stress the importance of dental health and hygiene. One important strength to build upon is health insurance companies, such as Horizon Insurance, who are promoting dental health beginning with children ages 1 and up. Another resource to build

upon, which was provided by SLUHN this year, was the screening of third graders for dental health problems at local schools.

b. What are the barriers & challenges that our community faces in providing access to dental health services for needy families?

An important barrier to recognize is the lack of dental providers, considering that there is not a sufficient number of dentists per population for the region. The low amount of providers, in conjunction with limited evening and weekend hours, creates an access problem. Additionally, individuals who do not have dental insurance or have high co-pays both face limitations financially when it comes to paying for dental care. It was suggested that adopting a dental component within St. Luke's would address the lack of providers and limited office hours by granting individuals the opportunity to access dental services through the hospital.

5) Elder Health

a. What strengths & resources can be built upon and utilized to improve the health and well-being of elder residents?

One important resource to build upon is St. Luke's adult medical daycare. This program is highly effective because it reaches those who most need help: elderly community members who are living alone or do not have fulltime caregivers. Although this is a valuable resource, many senior citizens are not aware of the programs benefits or believe that they are too old to receive the needs offered through St. Luke's program. St. Luke's must think about what daily routines entail for the elderly, so that they can initiate activities, events, and resources that fit within their lifestyle.

SLUHN has established the pharmaceutical committee, which is a program that started a few years ago at Warren Campus and now is hospital wide. The committee asks pharmacists and dieticians to check the medications and determine how multiple prescriptions affect individuals. The program also identifies if the senior citizens are inpatients. Furthermore, if individuals are physically able, the program has an initiative to keep elder patients from falling by helping them stay active.

Many senior centers in the area have programs and events in the downstairs lobby to provide resources and social interaction for the elder community. Additionally, the senior centers have partnered with schools, asking young volunteers to come in and help at the centers.

b. What are the barriers & challenges that our community faces in successfully improving the health and well-being of elder residents?

Some of the barriers and challenges faced are a lack of transportation for seniors, access and communication, and funding for community senior centers. In regards to transportation, New Jersey has faced a drop in revenue to fund public transportation services limiting older individual's access to events, resources, and care. Additionally, the funding of community senior centers is an issue because currently, they are funded internally. Communication is also a large issue because seniors are not aware of all of the services available to them.

Another issue is pride, especially when it comes to accepting help of the resources present. Many younger senior citizens (65 years old) are often still employed, and at times feel they do not need to accept the health services offered, even if they are suffering from an illness or chronic disease.

One challenge lies in the arena of home health. Home and health agencies need nurses to begin establishing specific protocols, specifically, more collaboration between visiting nurses, home health, specialists, and doctors. Hopefully these protocols and collaborations would significantly reduce the proportion of older adults seen in the emergency room.

Lastly, a barrier to successfully improving the health of elder residents resides in medication issues. Many times elderly patients have been prescribed an enormous number of different medications, and for seniors it may be hard to keep track of these medications. On the other hand, they may even be resistant and decide to not even fill them in the first place. There is also an issue with addiction to certain medications.

II. Non-Priority Specific Questions

1. Do you see any additional emerging community health needs especially among underserved populations?

An important issue that must be addressed in order to tackle all of these major health issues is the lack of sense of community. There is a need for social cohesion since Warren County reaches so many different areas.

In the schools, the situations faced are vastly different than they were 15 years ago. There are many students entering the school system whose language skills are not up to grade level, students with disabilities, and an increasing population of students with psychiatric issues. There are currently 7 mental health counselors at Phillipsburg high schools. There has been a start in developing protocols for as young as 3 and 4 year olds. Although these school services are necessary and highly beneficial, there need to be services that schools can refer students out to because they cannot handle all of the cases that come their way.

Ready access to power supply is necessary for a large number of patients who are on home therapy for oxygen. A major issue is that some residents didn't have power so they could not do the O2 therapy at home, which meant they would go to the hospital for treatment.

Tobacco is still a big issue; not as popular any more, but we have a higher use rate than the state average. Smoking leads to a variety of chronic diseases (one of the priority issues).

Additional emerging health needs discussed were the lack of Spanish speaking physicians and bilingual materials available to community members, the absence of a formal shelter in Phillipsburg (for possible natural disasters), high percentage of children living in poverty, and increased incidences of lung cancer, COPD, and asthma.

2. Do you feel that people in the community are fully aware of the healthcare services/options that are available to them? How do they receive information about health care services?

People may possess awareness of healthcare services available, but even if they know what is offered it is still difficult for families in need to navigate the system. There must be a greater promotion of cost effective resources such as community parks, so that people realize they can utilize the parks and trails for exercise rather than thinking they have to pay \$30 a month to exercise at a gym.

Some agencies utilize schools to get health information out into the community, especially if the information is centered on children's health. This is accomplished through e-mail blasts and fliers.

Warren County lies between Philadelphia and New York, which is where the major media comes from. All of the media content seen in our community is based on news from those two cities, so people are unable to access local news from the networks available.

3. Are there groups who have been identified as underserved with regard to receiving vital information about healthcare services?

Groups that have been identified as underserved in regards to receiving health information are individuals facing disabilities, migrant farm workers, undocumented individuals, and individuals with low literacy levels.

4. What do you think St. Luke's role should be in improving health and quality of life in the community?

SLUHN should provide continued leadership and forge coalitions with individuals and groups so that there is not overlap and the most amount of people possible are being served. Working together will lead to a more cohesive strategy in confronting the major health issues in the community. Additionally, state and local legislators may be more amenable to listening to what we have to say if we address them as a collaborative group.

SLUHN should continue to promote hospitals being advocates for community health, so that people do not see the hospital as a place just to go to when you are sick. This change in mindset will hopefully help people realize that SLUHN is here to help the community stay healthy and that they will advocate for their needs.

The hospital could become a hub for different organizations to be able to come to and collect information, share data, and discuss programs that different agencies offer. In return, SLUHN can promote their services and resources, which the organizations can bring back to their members. There could also be some type of education center for community members and outreach workers to help inform patients about services available.

The Community Health Needs Assessment must be the backbone of improving health and quality of life in the community. It will be important for SLUHN to put plans into action in order to best serve the needs of the community.

5. What do you see as the top three most important needs within our community? Please rank these needs in order from most to least important, with one being the

most important need and three being important, but perhaps not quite as critical a need.

1. Substance Abuse/Treatment and Economic Development in the Community (tied for first)
2. Women's Health
3. Siloing in the System/Community Cohesion and Changing Behaviors (tied for third)

6. What makes a need greater than the others?

A need is greater than another because of how close it lies to the root cause of other health issues. Another consideration is time: what is achievable in the short term versus the long term.

Appendix B. Stakeholder Focus Group Synopsis
Warren Campus- Community Health Needs Assessment

Priority Area	Strengths	Challenges	Suggestions
Encourage healthy lifestyles to decrease chronic disease	<ul style="list-style-type: none"> -School curricula and employee wellness programs -NJ mayor's wellness program -DSRIP program for diabetes & hypertension -Community programs, health fairs and free screenings 	<ul style="list-style-type: none"> -Rising poverty level (highest in NJ) -Increased transiency -Cultural barriers -poor public transportation 	<ul style="list-style-type: none"> -Better communication about available programs -Sharing among institutions and agencies about what is being done. -build and promote more public walkways and trails
Promote healthy birth outcomes	<ul style="list-style-type: none"> -Existence of a fetal alcohol program -NFP and NORWESCAP Healthy Families programs available through Coventry Medical Center -Sex education programs in schools 	<ul style="list-style-type: none"> -Alcohol abuse by pregnant women remains a major issue. -Teen pregnancy rates are not declining at the same speed in Warren County as in the rest of the state. 	<ul style="list-style-type: none"> -Better communications about existing sex education and support program. -Add more women's health services and physicians.
Improve Access to Behavioral Health Services	<ul style="list-style-type: none"> -Family Guidance Center of Warren County -Agreements with Psych units in NJ and our Network in PA. 	<ul style="list-style-type: none"> -Stigma attached to mental health and drug abuse issues -No resources for children and adolescents. -Lack of providers within the behavioral health sector—all fields 	<ul style="list-style-type: none"> -Develop a database that will enable tracking of trends to better allocate resources and identify major issues. -Advocate for families to get the outpatient services they need.
Access to oral health services	<ul style="list-style-type: none"> -Good relationship with School District-screening performed in 2015. -Two full service dental vans owned by Network -Follow-up care through Adaptive Dental. 	<ul style="list-style-type: none"> -Not enough dentists in the area -Cost of services and/or insurance premiums 	<ul style="list-style-type: none"> Work with insurers, i.e., Horizon, to promote dental health.
Elder health and well-being	<ul style="list-style-type: none"> -SLW Medical Daycare (Comfort Zone) -SLW Senior Assessment Service -Pharmaceutical committee to assess multiple scripts for inpatients -SLW Express Ride 	<ul style="list-style-type: none"> -Lack of transportation for seniors -Reduced funding for senior centers -Younger seniors are reluctant to accept help 	<ul style="list-style-type: none"> -Strengthen Home Health services -More collaboration between home health, visiting nurses and physicians

Warren Focus Group Participant List: Community Stakeholders and Public Health Professionals
Thursday, April 30, 2015
8:00-10:00 AM

	Name	Affiliation/Organization
1.	Judy Leone	Warren County Health Department
2.	Cynthia Wildermuth	Abilities of Northwest Jersey, Inc.
3.	Scott Burdm	Warren County Division of Aging & Disability
4.	Bob Frankenfield	Family Promise of Warren County
5.	Mary Jane Deutsch	Phillipsburg Area School District
6.	Paulette Hussey	Neighborhood Health Services Corp. (FQHC)
7.	Pete Summers	Warren County Health Department
8.	Sarah Shoemaker	Warren County Health Department
9.	Mary Jo Harris	Coalition for Healthy & Safe Communities
10.	Shannon Brennan	Warren County Mental Health Board
11.	Georgjean Trinkly	NORWESCAP (Northwest New Jersey Community Action Partnership)
12.	Yvette Day	Community Prevention Resources of Warren County
13.	Mary Jane Tanner	Warren County Educational Specialist
14.	Eileen O'Dea	United Way of Northern New Jersey
15.	Robert Pruznick	The Arc of Warren County
16.	Judith Wiegand	Hackettstown Regional Medical Center
17.	Maria Chervenak	Hackettstown Regional Medical Center
18.	Jack Chambers	SLUHN Warren- DO, Medical Director, Emergency Department
19.	Ayn Carey	SLUHN Warren- Director of Business Development
20.	Anne Grogan	SLUHN Warren- Network Director Senior Services and Geriatric Institute
21.	Scott R. Wolfe	SLUHN Warren- President
22.	Gerard Delmonico	SLUHN Warren- MD, Medical Director, New Jersey Physicians Group

Appendix C. Community Resources and Programs St. Luke's Warren Campus

The following is a list of community resources, which include current partners as well as potential partners or organizations for our implementation plan:

Alcoholics Anonymous meetings and groups
Adaptive Dental Associates
American Cancer Society
American Diabetes Educators Association
American Heart Association
American Red Cross, North Jersey Region
Anna Havens (Chronic Pain Support Group leader)
Catholic Charities
Community Prevention Resources of Warren County
DaVita Dialysis (Kidney disease education)
Depression & Bipolar Support Alliance of New Jersey
Family Guidance Center of Warren County
Local Advisory committee on Alcoholism and Drug Abuse
Local Mental Health Counselors
Local Psychiatrists Warren County Department of Human Services
Warren County Mental Health Board
Warren County Division of Aging and Disability
Local Restaurants participating in St. Luke's Heart Smart program
New Jersey Hospital Association NJ.com
NORWESCAP (Northwest New Jersey Community Action Partnership)
NORWESCAP Family Success program
NORWESCAP Food Bank
Phillipsburg Area School District
Phillipsburg Education Foundation
Phillipsburg Leadership Team
Phillipsburg School-Based Youth Services
Project Self Sufficiency (Nurse-Family Partnership administrators)
Public Health Nursing Agency
Senior Nutrition and Activity Centers
ShopRite of Greenwich
The ARC of Warren County
The Express-Times
The Hunterdon Democrat
The Morning Call
The St. Luke's University Health Network Dental Van
The Warren Reporter
The Washington Messenger
Tobacco-Free for a Healthy New Jersey
United Way of Northern New Jersey
Warren County Department of Education

Warren County Health Department
Warren Hills Regional School District
WFMZ