



2019 Community Health Needs Assessment Parkview Ortho Hospital, Allen County







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Indiana Partnership for Healthy Communities

The Indiana Partnership for Healthy Communities (IN-PHC) is a collaboration between the Polis Center at IUPUI (Polis) and the Indiana University Richard M. Fairbanks School of Public Health (FSPH). Formed with support from the Indiana Clinical and Translational Sciences Institute (I-CTSI), its mission is to help build the capacity of hospitals, local health departments, and community-based organizations to improve the health of Indiana communities. IN-PHC does this by translating knowledge generated by the academy and by communities into improved and sustainable processes for understanding and effecting community health.

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Executive Summary

To assist Parkview Health in completing its 2019 community health needs assessment (CHNA), the Polis Center and the Richard M. Fairbanks School of Public Health designed and conducted both primary and secondary data collection and analysis activities for the seven counties in northeast Indiana that compose Parkview's primary service area, including: Allen, Huntington, Kosciusko, Lagrange, Noble, Wabash, and Whitley. This report is particular to **Allen County**.

The CHNA team assessed the health needs of the Parkview Health region as a whole, as well as the needs of the individual counties. A preliminary list of community health needs was identified using secondary data from the Healthy Communities Institute database as well as other state and national data sources. This list of community health needs was augmented with local input collected via a community phone survey and a local provider survey.

The Parkview service area includes relatively large Amish and Hispanic populations. Because these populations are often underrepresented in online and telephone surveys, a paper survey was conducted in the Amish Community and a focus group in the Hispanic community to better understand their community health concerns.

The assessment team objectively prioritized the identified community health needs using the Hanlon Basic Priority Rating Method recommended by the National Association of County and City Health Officials (*Guide-to-Prioritization-Techniques.pdf*, n.d.). This method rates health concerns based on: 1) size of the health problem, 2) seriousness of the health problem, and 3) availability of evidence-based interventions.

The top five health concerns for Allen County are **cardiovascular disease** (heart disease and stroke), **diabetes** (Adults 20+ with Diabetes), **obesity** (adults 20+ who are obese), **substance abuse and mental health** (non-fatal ED visits due to opioid overdose), and **aging** (Alzheimer's disease).

As the next step in selecting health priorities for its community health improvement planning efforts, the CHNA team recommended that Parkview screen the identified health concerns based on feasibility of available public health interventions. Feasibility includes the suitability and community acceptability, availability of resources, cost-benefits ratio, and legality of potential interventions. Based on a consideration of these factors, Parkview Ortho Hospital selected obesity as its top priority.

Organization of the Report

This CHNA report was designed to support Parkview Health's community benefit programming efforts and to fulfill its IRS reporting requirements. As such, it provides a description of the following:

- **1. Description of Service Area** (The hospital primary service area)
- **2. The Community** (Socio-demographics of the populations residing in the primary service area and availability of social services relevant to public health)
- **3. Data Sources** (Primary and secondary data sources used to conduct the CHNA)
- **4. Identification of Community Health Needs** (The process for identifying community health needs and social determinants of health via primary and secondary data analysis)
- 5. Ranking of Identified Community Health Needs (The process and criteria used for scoring and ranking the identified community health needs and the results (the top ranked needs). The full set of indicator rankings is included in Appendix B: Scoring of Community Health Needs.)
- **6. Priority Selection** (Priorities selected by Parkview Health)
- **7. Data Limitations** (Data limitations and information gaps)

INTRODUCTION

The IRS requires all nonprofit hospitals to complete a Community Health Needs Assessment (CHNA) every three years. Parkview Health partnered with The Polis Center at IUPUI (Polis) and the Indiana University Richard M. Fairbanks School of Public Health (FSPH) to design and conduct a 2019 CHNA for each of its seven hospitals. This report provides an overview of the CHNA processes and methods used to identify and prioritize significant health needs of the community served by the Parkview Health region.

DESCRIPTION OF SERVICE AREA

There are two facilities located in Allen County. These two facilities serve most of the Fort Wayne area (*Figure 1*: Primary Service Area of Parkview Hospitals).



Figure 1: Primary Service Area of Parkview Hospitals in Allen County

THE COMMUNITY

DEMOGRAPHICS

Population Size

The seven-county Parkview Health service area comprises about 10% of the total population in Indiana (*Table 1*). Based on population density, Allen County is considered urban. The rest of the counties are considered either rural/urban mixed or rural (Ayres, Waldorf, & McKendree, n.d.).

	Parkview Health	Indiana	US
Population	634,457	6,614,418	321,004,407

Table 1: Population

Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Allen County has the highest population in the service area (367,747) followed by Kosciusko (78,720) (*Table 2*). While Allen, Kosciusko, LaGrange, and Whitley Counties all experienced population growth between 2014 and 2017, Huntington, Noble, and Wabash each experienced some population decline.

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
2017	367,747	36,520	78,720	38,720	47,421	31,848	33,481
2014	360,990	36,959	77,790	37,759	47,497	32,492	33,307

Table 2: Population in Parkview Counties

Source: Stats Indiana

Age

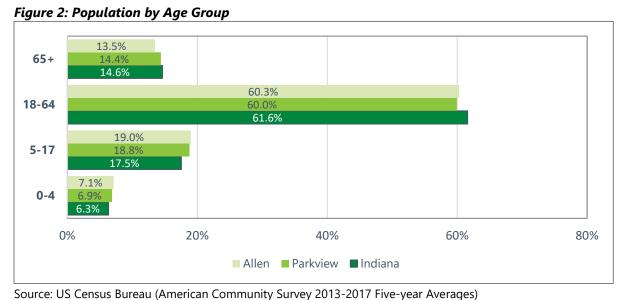
The median age ranges from 31.5 years in LaGrange County to 42 years in Wabash County (Table 3). The median age in LaGrange County is notably lower than the other counties as well as the state and nation, while the median ages in Wabash and Whitley Counties are notably higher. The median age in Allen County is 35.7 years.

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	35.7	40.3	38.0	31.5	38.5	42.0	41.0	36.8	37.5
2014	35.6	39.9	38.0	30.9	37.6	42.3	40.6	36.6	37.2

Table 3: Median Age in Years

Source: US Census Bureau (American Community Survey Five-year Averages)

Allen County has a similar population age makeup to the Parkview Health service area, as well as the rest of Indiana. About two-thirds of the population belong to the 18-64-year-old age group and only seven percent belonging to 0-4-year-old age group (Figure 2: Population by Age Group).



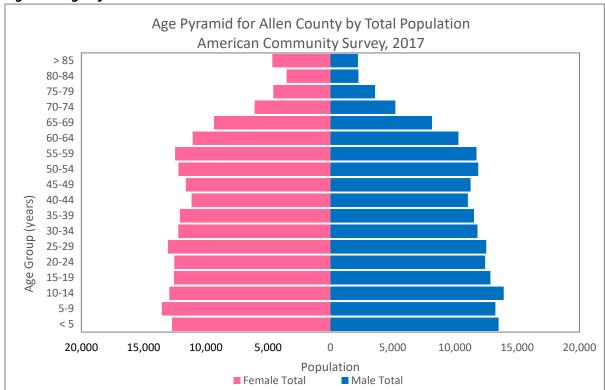


Figure 3: Age Pyramid

The age-sex distribution (or pyramid) of Allen County (*Figure 3*: Age Pyramid) is similar to that of any developed country in the world. The age pyramid is considered to be in the late stage 3, where population birthrate and death rate are slowly declining. The pyramid's almost square-like shape indicates that the population is growing at a very slow rate. This is also referred to as the stable or stationary pyramid ("From Population Pyramids to Pillars – Population Reference Bureau," n.d.).

In the pyramid for Allen County, the number of people in their 20s of both genders is almost the same as the infants and children aged 0-5 years, but, lower than the children in age group 5-9 years. Similar to the US pyramid, there is a large bump in the 50-59 years age groups. This large segment of the population is the post-World War II baby boom. As this population ages and climbs the pyramid, there will be a much greater demand for medical and other geriatric services. However, there are fewer young people to provide care and support for the aging baby boom generation.

Because different age groups require different levels and types of care, strategies for improving community health outcomes should incorporate the needs of each generation. The percentage of the population under 18 years hovers below 30% for Allen County (*Figure 4*: Child and Senior Population). At the other end of the age spectrum are individuals age 65 years and older. *Figure 4* demonstrates that the age 65 and older population is below 14%. Adequate health care is critical to allow the senior population to age in place and maintain their quality of life as they grow older.

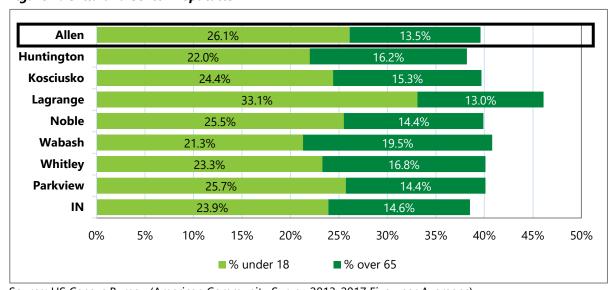


Figure 4: Child and Senior Population

Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Race and Ethnicity

Many racial and ethnic groups experience disparities in health and healthcare. These groups may face unique challenges in accessing healthcare due to linguistic, social, or cultural differences. Therefore, it is important to be cognizant of the racial and ethnic makeup of the hospital service area and to design and implement culturally competent healthcare services.

As illustrated by *Table 4* and *Figure 5*, the racial composition of Allen County is predominantly non-Hispanic White, which is similar to the Parkview region as a whole as well as the rest of Indiana. However, some racial diversity exists in Allen County as it has the third highest Hispanic population (7.2%) among the other six counties. Noble County has the highest Hispanic population (10.2%) in the region, followed by Kosciusko County (7.9%).

Table 4: Percent of Population by Race and Ethnicity

	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
White	2017	74.6%	95.2%	88.6%	94.4%	87.6%	94.5%	95.7%	81.8%	79.8%
wnite	2014	75.6%	95.8%	89.2%	94.8%	88.2%	95.0%	96.0%	82.7%	80.8%
Black/	2017	11.3%	0.8%	0.7%	0.1%	0.4%	0.9%	0.4%	6.8%	9.1%
Black	2014	11.5%	0.6%	0.7%	0.1%	0.3%	0.5%	0.3%	6.8%	9.0%
Hispanic/	2017	7.2%	2.2%	7.9%	3.9%	10.2%	2.5%	1.9%	6.5%	6.7%
Latino	2014	6.8%	1.9%	7.7%	3.8%	9.8%	2.2%	1.8%	6.2%	6.3%
Other	2017	6.9%	1.8%	2.8%	1.6%	1.8%	2.1%	2.0%	4.9%	4.4%
Race or Ethnicity	2014	6.1%	1.7%	2.4%	1.3%	1.7%	2.3%	1.9%	4.3%	3.9%

Source: US Census Bureau (American Community Survey Five-year Averages)

Allen County has had a slight increase in the Hispanic population since 2014. Blacks - make up 11.3% of the population in Allen County, but less than 1% in each of the other six counties. People of other races and ethnicities are most numerous in Allen County (6.9%) (*Table 4*).

Other Race or Ethnicity

4.9%
4.4%
7.2%
6.5%
6.5%
6.8%
9 11.3%
Non-Hispanic Black
Non-Hispanic White

74.6%
Non-Hispanic White

74.6%
Non-Hispanic White

81.8%
79.8%

0%
20%
40%
60%
80%
100%
■ Allen
■ Parkview
■ Indiana

Figure 5: Race and Ethnicity

Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Northeast Indiana is home to a large Amish population. According to the 2010 US Religion Census, more than 14,000 Amish lived in LaGrange County, accounting for 37.9% of its total population, making it the second largest county (by population) for the Amish in the United States. Less than 1% of the 2010 population of Allen County was Amish. The map included as *Figure 6* shows the Amish population by county in the seven-county region in Northeast Indiana.

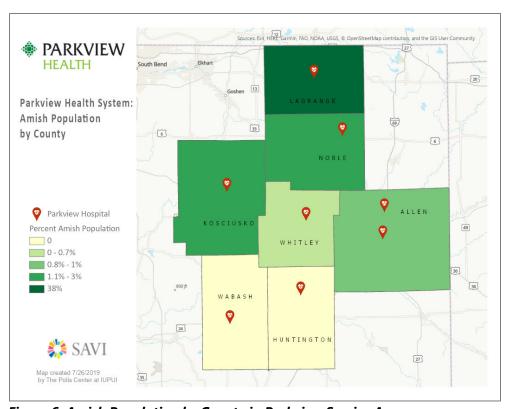


Figure 6: Amish Population by County in Parkview Service Area

Source: Association of Religion Data Archives, 2010 US Religion Census

SOCIOECONOMIC STATUS

Socioeconomic status (SES) is a powerful determinant of health outcomes. SES refers to one's access to financial, educational, and social resources. SES underlies three major determinants of health, including environmental exposure, health behavior, and health care. In addition, chronic stress associated with lower SES may increase morbidity and mortality. When using socioeconomic factors to understand potential health risks, income, poverty, employment status and educational status are typically considered.

Median Household Income

The median household income in Allen County is \$51,091, which is lower than the Indiana average (\$52,182) (*Table 5*). Since 2014, the median household income increased 4.0% in Allen County.

Table 5: Median Household Income

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	\$51,091	\$50,063	\$57,190	\$58,336	\$52,393	\$49,052	\$57,041	\$52,540	\$52,182
2014	\$49,124	\$47,356	\$52,706	\$49,112	\$49,102	\$45,657	\$54,023	\$49,540	\$48,737

Source: US Census Bureau (American Community Survey Five-year Averages)

Racial disparities regarding median household income are evident in *Figure 7*. The median household income for Black households is much lower than White and even lower than the median household income for Blacks in the state. For the Asian population, the median household income in the service area is lower than the median household income for Asians in the state. These gaps in income among different racial groups ultimately effect lifestyle and neighborhood choices, ability to afford health insurance, and access to health care.



Figure 7: Median Household Income by Race and Ethnicity

Poverty

The percentage of the population living below poverty in Allen County (14.7%) is similar to the state percentage (14.6%) (*Table 6*).

Table 6: Percentage of Population below Poverty Line

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	14.7%	11.6%	11.2%	9.1%	9.3%	13.3%	9.5%	13.0%	14.6%
2014	15.5%	11.6%	12.4%	15.3%	12.8%	14.9%	8.9%	14.3%	15.5%

Source: US Census Bureau (American Community Survey Five-year Averages)

Racial disparities exist for the percentage of population living under poverty level. Racial disparities in poverty result from cumulative disadvantage over the life course, as the effects of hardship in one domain spill over into other domains. With lower median income than Whites, it is no surprise that the highest percentage of population living under poverty is the Black population (33.7%).

Figure 8 shows how the Hispanic population also has a higher percentage than Whites and Asians living under poverty. For the most part, this is consistent with statewide trends, but a higher percentage of Black population living under poverty than the state.

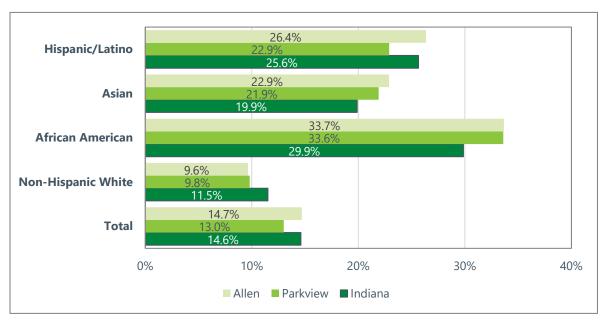


Figure 8: Population below the Federal Poverty Level by Race/Ethnicity

Unemployment

Unemployment is another important indicator for assessing social and economic status of a geographic area or population. Unemployment in Allen County is also similar to the state overall (*Table 7*).

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	6.3%	3.9%	4.6%	2.9%	5.7%	5.5%	3.6%	5.6%	6.1%
2014	9.0%	8.7%	7.7%	7.1%	10.0%	7.4%	6.4%	8.6%	8.8%

Table 7: Percentage of Population Unemployed

Source: US Census Bureau (American Community Survey Five-year Averages)

While the median income in Allen County falls around the average for the region (*Table 5*), unemployment is relatively high at 6.3%. (*Table 7*)

However, the racial disparities visible in income and poverty level are also seen with unemployment. The Black population has the highest unemployment rate (15.3%), higher than the unemployment rate for Black population in the state (*Figure 9*).

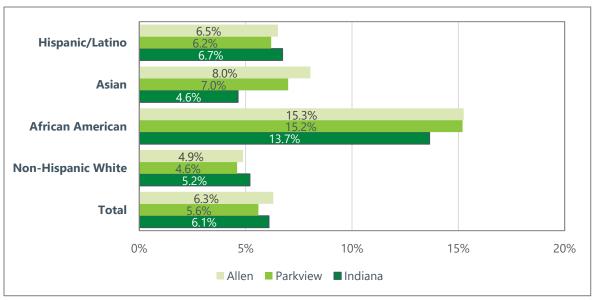


Figure 9: Unemployment Rate by Race/Ethnicity

Education

Education is a powerful predictor of other social measures. Education leads to higher incomes and lower poverty and unemployment, which in turn lead to greater economic stability. Identifying populations with limited education may help to identify areas of special health service needs.

Table 8 and Figure 10 shows the percentage of population without a high school diploma or equivalent. Allen County has a lower proportion of the population without a high school diploma (10.6%) compared to the entire Parkview Health service area (12.7%). The Amish do not usually attain high school educations and instead pursue other economic endeavors in their communities. Some portions of Allen, Kosciusko, and Noble Counties also have a relatively higher proportion of the population without a high school diploma.

Table 8: Population without High School Diploma

Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
2017	10.6%	9.5%	15.2%	36.7%	15.0%	11.3%	8.9%	12.7%	11.7%
2014	10.7%	11.1%	14.9%	36.9%	16.0%	12.0%	8.9%	13.0%	12.4%

Source: US Census Bureau (American Community Survey Five-year Averages)

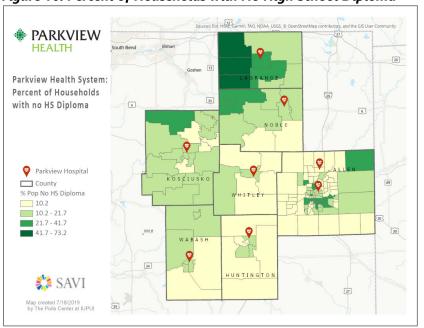


Figure 10: Percent of Households with No High School Diploma

Overall, the Parkview Health region has a similar percentage of population without a high school diploma as the rest of the state. However, racial disparities are still seen with educational attainment (*Figure 11*: Population without a High School Diploma by Race/Ethnicity). A little less than 40% of the total Hispanic population are those without a high school diploma. Almost a third of the Asian population is without a high school diploma. With racial minorities already at a disadvantage in terms of income and poverty, this added inequity can reduce further the chances of attaining good health outcomes.

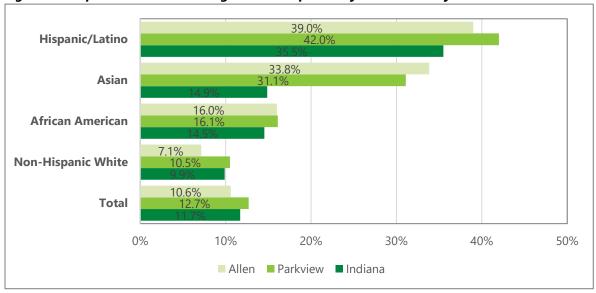


Figure 11: Population without a High School Diploma by Race/Ethnicity

Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

ACCESS TO HEALTHCARE

Access to healthcare is another important social determinant of health. It is commonly measured by lack of access to primary care services and by lack of health insurance.

Medically Underserved Areas and Populations

Medically underserved areas and medically underserved populations identify geographic areas and populations with a lack of access to primary care services. The Health Resources and Services Administration identified several medically underserved *areas* (*Figure 12*, *light green*) in the south-west end of the Parkview Health region. The percentage of medically underserved *populations* were identified mainly in Wabash County

(Figure 12, darker green) as well as in the central, downtown area of Allen County.

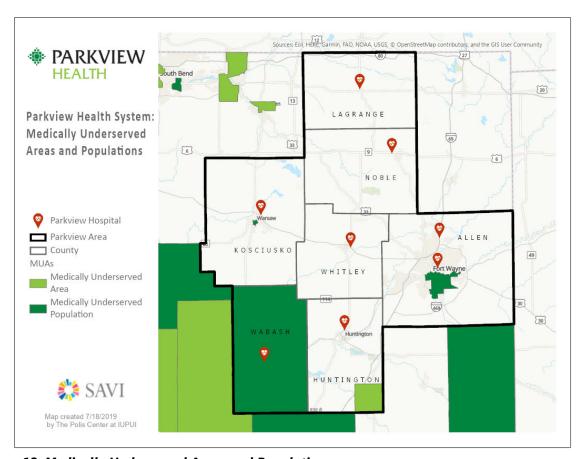


Figure 12: Medically Underserved Areas and Populations

Source: Health Resources & Services Administration, 2019

Health Insurance

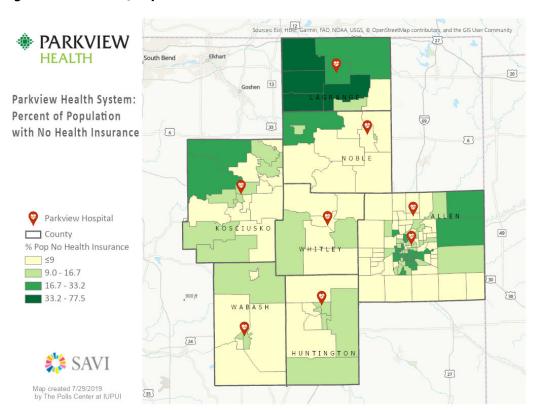
The percentage of the population without health insurance in Allen County is 10.8% which is lower than the county-wide total of 12.3% (*Table 9*). *Figure 13* presents this information at the census tract level to illustrate the geographic distribution of those without health insurance. Allen County has pockets of geographic areas where the population without health insurance is relatively higher (16.8 -33.2 %). The overall percentages for population without health insurance for Allen County is 10.8% (*Table 9*).

Table 9: Health Insurance

Demographic	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Parkview	IN
Population without	2017	10.8%	9.4%	11.8%	39.7%	9.2%	9.3%	7.6%	12.3%	10.3%
health insurance	2014	14.5%	11.8%	15.6%	44.5%	14.8%	10.3%	9.1%	15.8%	13.8%
Adults without	2017	14.7%	12.2%	15.1%	37.7%	12.1%	13.3%	10.9%	15.4%	14.0%
health insurance	2014	19.7%	16.4%	20.2%	45.0%	19.7%	15.0%	12.7%	12.3%	18.9%
Children without	2017	7.5%	8.3%	10.5%	53.1%	7.1%	6.4%	4.4%	11.2%	7.0%
health insurance	2014	9.1%	6.9%	12.8%	56.6%	10.5%	5.6%	5.1%	12.9%	8.2%

Source: US Census Bureau (American Community Survey Five-year Averages)

Figure 13: Percent of Population with No Health Insurance



Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

Transportation

Transportation is a critical factor that influences people's health and the health of a community. As six of the seven counties in the service area are rural or mixed urban/rural, having a personal vehicle is of utmost importance as lower population density in rural areas often leads to lower ridership for fixed transit routes and a smaller tax base to fund maintenance and repair of transportation systems. It is evident from the map in *Figure 14* most of the counties have ≤ 5.4 households without a vehicle. Lagrange County shows a different picture. We can assume that due to high Amish population in LaGrange County, the percentage of houses with no vehicle is higher i.e., 35 - 76 %. The Amish population usually relies on horse carriages and wagons for their transport purposes. A slightly higher percentage of homes without a vehicle is also seen in the northeast and some central areas of Allen County.

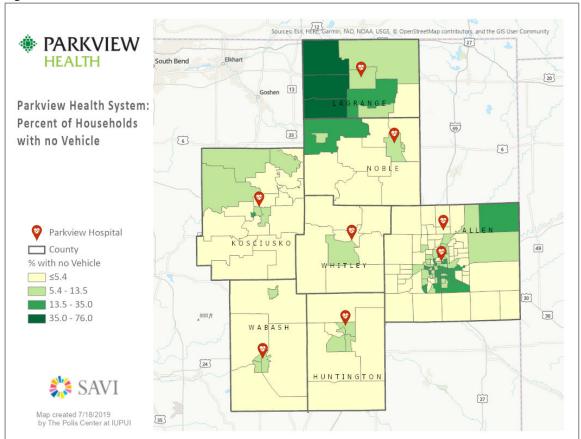


Figure 14: Households with No Vehicle

Source: US Census Bureau (American Community Survey 2013-2017 Five-year Averages)

DATA COLLECTION

The identification of health needs for Allen County was carried out using two types of data: 1) secondary data from the Healthy Communities Institute (HCI) dashboard and other local and national agencies (e.g., County Health Rankings, etc.) and 2) primary data obtained through an online survey of Parkview healthcare providers (e.g., physicians, nurses, social workers, etc.) and a survey of community residents in each Parkview Health county. To supplement these data, a focus group was conducted with Hispanic community members in Kosciusko County and a survey of the Amish community was conducted in LaGrange County. These data sources are described in the following sections.

SECONDARY DATA

The Parkview Health Community Dashboard developed by HCl was used as a primary source of secondary data. This dashboard includes data from the Indiana Hospital Association as well as the Indiana State Department of Health, National Cancer Institute, Centers for Disease Control and Prevention, Centers for Medicaid and Medicare Services, the National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, Institute for Health Metrics and Evaluation, County Health Rankings website, US Census Bureau, US Department of Agriculture, and other sources. Additional state and national secondary data sources were accessed by the CHNA team for more recent and geographically specific information, including the following:

- American Community Survey: The American Community Survey (ACS) helps local
 officials, community leaders, and businesses understand the changes taking place in their
 communities. It is the premier source for detailed population and housing information
 about our nation.
- Annie E. Casey Foundation: The Annie E. Casey Foundation is a private philanthropic
 organization that works to build a brighter future for disadvantaged children in the
 United States. The KIDS COUNT Data Book offers a national look at the well-being of
 America's children and families by exploring how states are performing on key data
 indicators.
- **Center for Disease Control and Prevention:** As a federally-funded agency, CDC serves as a great resource for mortality and morbidity data for all the infectious and chronic diseases and other conditions.
- **County Health Rankings:** A Robert Wood Johnson Foundation program implemented by the University of Wisconsin Population Health Institute that releases new estimates annually measuring health across all US counties. These data are compiled from a variety

- of providers and typically combines data across multiple years to release estimates for areas with small populations, such as rural counties.
- Centers for Medicare & Medicaid Services: The Centers for Medicare and Medicaid Services (CMS) provides health coverage to more than 100 million people through Medicare, Medicaid, and the Children's Health Insurance Program, and the Health Insurance Marketplace. The CMS seeks to strengthen and modernize the nation's health care system to provide access to high quality care and improved health at lower costs.
- **Feeding America:** A nonprofit organization working to feed America's hungry through foodbanks. Data are compiled from the Current Population Survey, American Community Survey, and Bureau of Labor Statistics to produce food-insecurity reports.
- **Indiana INdicators:** A free data resource providing current Indiana health-related data at the state and county levels and developed by the Indiana State Department of Health, Indiana Hospital Association, and Indiana Business Research Center.
- Indiana State Department of Health (ISDH): The ISDH's annual natality report includes information on live births in Indiana as well as a mortality report compiling information on the deaths of Indiana residents.
- **National Cancer Institute:** The National Cancer Institute (NCI) is the federal government's principal agency for cancer research and training. NCI maintain large registries of information about people diagnosed with cancer to help identify important issues that affect cancer patients and survivors.
- National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention: The National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention is one of the larger centers at CDC and a federal source of data about sexually transmitted infections and diseases.
- The National Environmental Public Health Tracking Network: The Tracking Network brings together health data and environment data from national, state, and city sources and provides supporting information to make the data easier to understand.
- **US Census Bureau:** A leading source of data on the people and economy of the US.
- 2018 Indiana Association of Adult Day Services (IAADS) Survey: The 5th Annual Indiana Adult Day Center Survey was conducted during the summer of 2018 by the Member Relations Committee of the IAADS Board of Directors. Results were tabulated based on individual survey data.

Results of the secondary data analysis are presented in **Secondary Data Analysis** section.

PRIMARY DATA

This assessment used four sources of community input: 1) an online survey of healthcare and social service providers; 2) a phone survey of the broader community; 3) a paper survey of the Amish community; and 4) a Hispanic focus group. The associated data collection efforts are described below. Results of the provider survey are included in **Provider Survey Results**.

Parkview Provider Survey

An online survey of health and social service providers in the seven-county area was conducted in January 2019 to collect provider perceptions about community health needs and concerns. The survey was designed by Polis and FSPH in partnership with Parkview Health and implemented using Qualtrics, an online survey service. The Parkview Community Benefits team collaborated with the leadership team in each hospital to distribute the survey to health and social service providers in their county. A total of 83 providers from Allen County responded to the survey. The survey covered aspects of the provider's work including the setting in which they practiced, the duration of time in practice in the region/county, and their perception of the chief public health concerns, barriers to care, and available resources in their communities. The majority of respondents primarily practiced in Allen County (31.3%), followed by Huntington County (29.1%) (*Table 10*).

Table 10: Provider Survey Respondents

County	Count	% of Respondents
Allen	83	31.3%
Huntington	77	29.1%
Kosciusko	8	3.0%
LaGrange	27	10.2%
Noble	24	9.1%
Wabash	26	9.8%
Whitley	20	7.5%
Total	265	

Providers were asked about the duration for which they had been in practice in Allen County. About 40% of the respondents had been in practice for more than 20 years. This suggests that a good proportion of the responding providers had spent most of their careers in Allen County and so likely were aware of the community's needs and concerns. More than one third (1/3) (36%) of providers were relatively new in the county with five or fewer years of practice in this county (*Figure 15*).

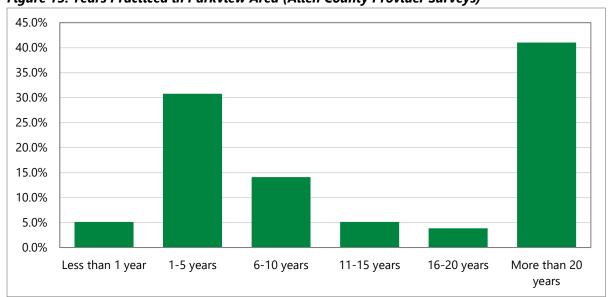


Figure 15: Years Practiced in Parkview Area (Allen County Provider Surveys)

In Allen County, physicians made up the highest proportion of provider survey respondents (27.7%), followed by nurse practitioners (25.3%) (*Table 11*).

Table 11: Respondents by Provider Type

Profession	Allen (n=83)	Huntington (n=77)	Kosciusko (n=8)	LaGrange (n=27)	Noble (n=24)	Wabash (n=26)	Whitley (n=20)	All (265)
Physician	27.7%	10.4%	12.5%	11.1%	8.3%	11.5%	10.0%	15.8%
Physician's Assistant	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.8%
Nurse Practitioner	25.3%	2.6%	0.0%	0.0%	0.0%	7.7%	0.0%	9.4%
Registered Nurse	3.6%	11.7%	0.0%	22.2%	16.7%	11.5%	15.0%	10.6%
Mental/Behavioral Health	7.2%	1.3%	0.0%	3.7%	0.0%	3.8%	0.0%	3.4%
Nutritionist	0.0%	2.6%	0.0%	0.0%	8.3%	0.0%	0.0%	1.5%
Wellness Practitioner	1.2%	9.1%	0.0%	3.7%	4.2%	0.0%	0.0%	3.8%
Public Health/Community Health Practitioner	3.6%	5.2%	0.0%	3.7%	4.2%	7.7%	5.0%	4.5%
Social Worker/Case Management	10.8%	11.7%	25.0%	3.7%	16.7%	15.4%	15.0%	12.1%
Educator/Counselor	0.0%	6.5%	25.0%	18.5%	8.3%	7.7%	10.0%	6.8%
First Responder	0.0%	5.2%	0.0%	0.0%	4.2%	3.8%	0.0%	2.3%
Other Health	3.6%	9.1%	0.0%	0.0%	0.0%	7.7%	0.0%	4.5%
Other Social Services	3.6%	3.9%	0.0%	3.7%	8.3%	3.8%	0.0%	3.8%
Other	4.8%	9.1%	12.5%	18.5%	8.3%	15.4%	25.0%	10.6%
No response to this question	7.2%	11.7%	25.0%	11.1%	12.5%	3.8%	15.0%	10.2%

Community Survey

A community phone survey was conducted from April through June 2019 by the Survey Research Lab at the School of Public Health at the University of Alabama School, a partner of the Richard M. Fairbanks School of Public Health. The survey was designed to collect community perspectives on the top community health issues in the Parkview Health service area. A random, population sample of 700 individuals was selected from the seven-county Parkview Health service area (*Figure 16*).

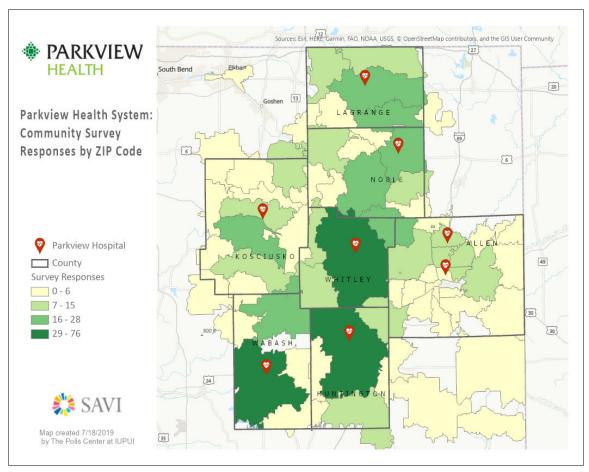


Figure 16: Community Survey Respondents by ZIP Code

One question asked respondents to choose what they perceived as top health concerns in their community. A second question asked respondents to indicate how important listed health and community services were for their community.

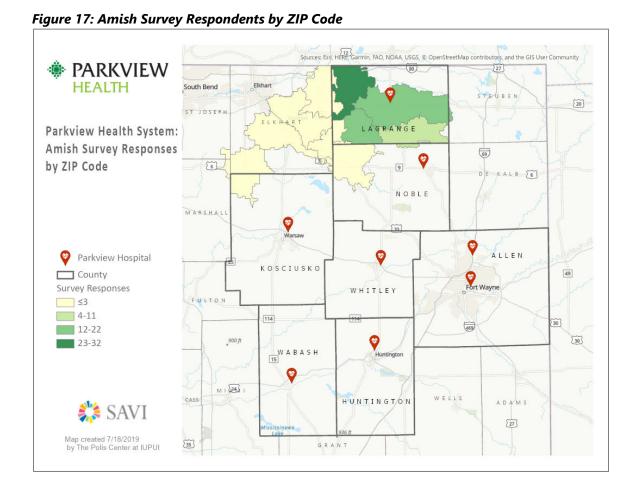
The survey results were algorithmically weighted to control for differences in the demographic makeup of survey participants compared to the total population of each region. Results of the community survey are included in **Community Survey Results.**

Amish Community Survey

A written Amish Community survey was administered from February through April 2019 to a convenience sample of 1) people who patronized the Topeka Pharmacy, which is highly trusted in the Amish community, 2) Amish members of the LaGrange Hospital Board of Directors, and 3) Amish members of the Parkview Health LaGrange Hospital Patient & Family Advisory Council.

The survey asked respondents to select five health issues from a list of 15; items were not ranked, nor were responders asked to add to the list provided or provide comments. One hundred and fifteen (115) Amish individuals completed the survey. *Figure 17* shows the distribution of the survey respondents by ZIP Code.

Results of the community survey are included in **Amish Community Survey Results** section. A detailed report, including comparison of the survey results from 2016 and 2019, was produced as a companion to this CHNA report.



Hispanic Focus Groups

A focus group with thirteen (13) Hispanic community members from Kosciusko County was conducted on March 24, 2019. *Table 12* shows the demographic characteristics of the participants. The focus group representation from both the younger age group (46%) and older (54%) members of the community. The gender distribution was also almost equal between males and females, 46% and 54% respectively. The majority of the participants (62%) had been residents of Kosciusko County for more than 30 years. The education level in the group was on the lower side with only seven percent of members having completed college but more than one-third of the group had a high school diploma.

Table 12: Hispanic Focus Group Participants (n=13)

Participa	ant Characteristic	Count	% of Participants
A	Adult (25-45 years)	6	46%
Age	Senior Adult (>45 years)	7	54%
	0 – 12 years	2	15%
Length of Time Lived in Kosciusko County	13-20 years	4	23%
Roseiusko County	30+ years	7	62%
	Completed elementary school	6	46%
Education	Completed middle school	1	7%
Education	Completed high school	5	38%
	Completed college or university	1	7%
Sex / Gender	Male	6	46%
Sex / Gender	Female	7	54%

Focus group participants were asked to indicate 1) the community health issues of greatest concern for the people living in their community, 2) which services were most important in addressing the need, and 3) whether there were any existing programs or service in the community to help address the identified needs.

The Hispanic Community Focus Group was conducted in Spanish translated, transcribed, and analyzed in English.

Results of the focus group are included in the **Hispanic Focus Group Results** section. In addition, a detailed report was produced as a companion to this CHNA report.

SECONDARY DATA ANALYSIS

COMMUNITY HEALTH ISSUES

Based on the review of more than two hundred (200) HCI indicators, *Table 13*: County Health Indicators Performing in the Bottom Quartile of the State lists the health outcomes and behavior for which any county in the Parkview Health primary service area was in the lowest performing quartile of Indiana counties. Each of these indicators was included in the assessment of community health problems and potential community health priorities.

Thirty-six (36) HCI health indicators were in the bottom performing quartile. Some HCI health indicators relate to the same health condition (e.g., incidence rate and age-adjusted death rate for breast cancer). If at least one indicator for a specific health condition was in the bottom quartile, then that condition was considered a potential community health concern for Parkview Health. For example, breast cancer incidence rate was not in the bottom quartile for Kosciusko County, but the age-adjusted rate of breast cancer was. As such, breast cancer is considered a health concern for Kosciusko County. Indicators that were duplicative in terms of identifying a health condition as being of concern were removed, thus reducing the number of health indicators used for the CHNA to 28 indicators. The 28 indicators were categorized into 15 general health concerns, as shown in *Table 13: County Health Indicators Performing in the Bottom Quartile of the State*.

Associated rates for each of these indicators are included in **Appendix B** in the Size of Health Problem column.

Table 13: County Health Indicators Performing in the Bottom Quartile of the State

Health Issue (in alphabetical order)	Health Indicator	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Aging	Alzheimer's Disease or Dementia *						Х	
	Osteoporosis*		Χ					
Alcohol Use	Alcohol-Impaired Driving Deaths	Χ					X	
Asthma	Asthma*	Х	Χ	Х			Х	
Cancer	Breast Cancer‡			Х			Χ	
	Oral Cavity and Pharynx Cancer+							Х
	Prostate Cancer‡					Х	Х	Х
Cardiovascular Disease	Cerebrovascular Disease (Stroke) ‡					Х		
	Coronary Heart Disease‡						X	
	Hyperlipidemia: Medicare Population		Χ				X	
Chronic Kidney Disease	Chronic Kidney Disease*		Χ					
Respiratory Diseases	Chronic Lower Respiratory Diseases‡		Χ			Χ		
Diabetes	Diabetes‡						X	
Drug Use	Controlled Substances Dispensed				X			
	Non-Fatal ED Visits due to Opioid Overdoses						Χ	
Infectious Diseases	Salmonella Infection+		Χ	Χ		Х	Х	Х
	Influenza and Pneumonia‡		Χ				Χ	
	Gonorrhea+	Х						
	Chlamydia+	Χ						
	Hepatitis C Prevalence						Χ	
Maternal/Child Health	Mothers Who Did Not Receive Early Prenatal Care	Χ		X	X	Х		
	Child Abuse Rate						Χ	
	Babies with Low Birth Weight		Χ					
Mental Health	Depression*	Х						
Obesity	Adults 20+ who are Obese			X	Х			
Tobacco Use	Adults who Smoke		Χ					
	Mothers who Smoked During Pregnancy						Χ	
Unintentional Injuries	Unintentional Injuries‡						Χ	
	County	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
# Indicators in	the Lowest Quartile in the State	6	9	5	3	5	15	3

^{*}Medicare population. †Incidence Rate. ‡Age-Adjusted Death Rate. Data Source: Parkview Health Community Dashboard, 2019.

Aging

Alzheimer's disease is a chronic, incurable, progressive disorder that affects and disrupts cognition and eventually renders the patient unable to perform basic tasks. Most people with Alzheimer's begin to present symptoms in their 60s. Osteoporosis is an incurable disease that causes bones to become brittle leading to bone fracture and other complications ("FastStats - Osteoporosis," n.d.). It is most common in post-menopausal women. *Table 14* shows that Allen County had the third highest percentage of Alzheimer's disease or dementia (36.6%) in 2017.

Table 14: Aging

*Medicare population. ‡Age-Adjusted Death Rate

rabte 14. Aging		Predictive population. Tage Adjusted Beatin Nate							
Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	
Alzheimer's Disease‡	2017	36.6	24.5	27.2	37.3	30.3	46.0	23.9	
(per 100,000)	2014	30.1	23.1	33.3	25.5	38.9	25.8	20.0	
Alzheimer's Disease or	2017	11.4%	11.1%	10.3%	10.7%	9.7%	12.7%	10.2%	
Dementia* (%)	2014	11.0%	10.5%	9.5%	8.3%	7.9%	10.4%	9.0%	
Ostoonovosis* (9/)	2017	5.9%	7.1%	4.9%	4.9%	4.8%	6.3%	5.1%	
Osteoporosis* (%)	2014	5.7%	6.5%	4.5%	4.7%	5.2%	6.4%	4.6%	

Cancer

Cancer (the suite of diseases resulting in abnormally and often uncontrollable growth of malignant cells) collectively forms the second leading cause of death in the United States. Although overall mortality due to cancer continues to decline, it is still the second leading cause of death ("Cancer Data and Statistics | CDC," 2019). Table 15 compares the rates of cancer in each county. In 2015, Allen County had a decrease in age adjusted death rates for breast and colorectal cancer from 2014 to 2015 but the rates for prostate cancer showed a slight increase.

Table 15: Cancer (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Breast Cancer‡	2015	23.2	21.4	28.3	18.8	23.8	25.7	17.9
breast Caricer	2014	25.9	25.7	28.0	16.9	22.5	24.3	19.3
Colorectal	2015	14.8	17.5	18.6	12.0	15.7	15.4	12.3
Cancer‡	2014	15.6	17.0	16.2	10.9	16.9	13.2	13.1
Oral Cavity	2015	11.6	7.7	11.2	11.2	12.7	11.7	17.4
and Pharynx†	2014	11.3	9.1	10.9	N/A	11.3	13.8	8.1
Prostate	2015	22.2	17.3	23.1	22.7	26.4	27.0	31.5
Cancer [‡]	2014	21.4	24.8	23.8	N/A	31.0	28.5	39.9

[†]Incidence Rate. ‡Age-Adjusted Death Rate.

Cardiovascular Disease

Heart disease is the leading cause of death according to the CDC ("Heart Disease Facts & Statistics | cdc.gov," 2018). The most common of these is coronary artery disease, which can lead to heart attack ("Heart Disease Facts & Statistics | cdc.gov," 2018). Heart disease affects populations of all races and genders, and usually occurs in middle age. Between 2014 and 2017, cardiovascular disease fell, with the exception of stroke among the Medicare population (*Table 16*).

Table 16: Cardiovascular Disease (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Coronary Heart	2017	85.1	99.6	93.0	92.7	96.1	120.1	90.6
Disease‡	2014	90.7	101.7	92.7	77.1	119.3	97.6	98.0
Stroke‡	2017	36.5	42.6	38.3	34.8	46.2	45.5	37.9
Stroker	2014	39.2	63.2	41.9	54.1	46.8	35.5	27.3
Heart Attacks‡	2016	61.5	62.0	68.9	57.7	55.7	99.3	60.9
Healt Attacks	2014	69.4	69.1	71.5	62.6	62.0	96.8	68.8
Hyperlipidemia	2017	39.4%	44.4%	42.1%	37.4%	35.3%	44.5%	39.2%
* (%)	2014	42.8%	43.5%	45.1%	41.0%	41.3%	41.1%	41.0%
Stroke* (%)	2017	3.9%	3.4%	3.6%	2.2%	3.2%	3.3%	2.8%
30 ORC (70)	2014	3.9%	3.2%	3.1%	2.6%	2.8%	3.2%	3.1%

^{*}Medicare Population. ‡Age-Adjusted Death Rate.

Chronic Kidney Disease

Chronic kidney disease is a gradual loss of kidney function. In the early stages of this disease, it is possible that very few signs or symptoms will be present, but the disease can lead ultimately to kidney failure and death (*National Chronic Kidney Disease Fact Sheet, 2017*, n.d.). *Table 17* shows that Allen County had the second highest chronic kidney disease percentage in Medicare population for 2017, when compared to the other six counties.

Table 17: Chronic Kidney Disease

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Chronic Kidney	2017	24.7%	28.8%	23.6%	21.4%	23.8%	24.4%	22.2%
Disease*	2014	18.0%	21.8%	16.1%	14.0%	14.9%	17.5%	16.3%
Kidney Disease‡	2017	21.8	27.6	13.1	N/A	23.4	16.3	20.6
(per 100,000)	2014	24.9	31.2	15.1	N/A	18.5	15.5	N/A

^{*}Medicare population. ‡Age-Adjusted Death Rate.

Diabetes

Diabetes is a group of diseases which affect the way the body uses blood sugar. A diabetes diagnosis means a person has too much blood sugar, which can lead to other more serious health complications ("Diabetes and Prediabetes | CDC," n.d.) (*Table 18*).

Table 18: Diabetes

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Diabetes‡	2017	27.2	30.8	30.2	26.3	29.9	28.9	22.0
(per 100,000)	2014	21.8	18.1	30.3	25.9	32.4	45.3	26.2
Diabetes*(%)	2017	26.3	27.8	27.4	26.5	27.2	29.4	26.7
	2014	25.3	26.5	27.4	25.8	26.6	27.2	24.4

[‡]Age-Adjusted Death Rate. *Medicare population.

Drug and Alcohol Abuse and Addiction

Drug use and dependence can cause accidental death, unintentional injury, or other health problems. Substance abuse is preventable and may be treatable. According to the CDC, excessive alcohol use can lead to an increased risk of health problems, such as liver disease and unintentional injuries. Allen County had the highest percentage of adults who drink excessively at 18.7% in 2016 as well as the highest percentage of alcohol-impaired driving deaths at 33.3% for 2017 (*Table 19*). There was also a large increase in the non-fatal opioid overdose emergency department visits for Allen County in 2017 (88.8 per 100,000).

Table 19: Substance Abuse

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Adults who Drink	2016	18.7%	17.7%	17.3%	18.2%	17.8%	16.9%	18.0%
Excessively (%)	2014	16.2%	15.6%	16.3%	16.4%	15.8%	14.9%	16.1%
Alcohol-Impaired	2017	33.3%	17.4%	16.7%	15.0%	9.4%	29.0%	22.2%
Driving Deaths (%)	2014	30.2%	4.6%	36.6%	34.2%	11.1%	23.7%	29.2%
Non-Fatal ED Visits -	2017	88.8	107.3	98.5	N/A	56.7*	159.0	137.5*
Opioid Overdoses ^	2014	13.9	65.5**	28.0	N/A	N/A	77.8**	N/A
Controlled	2016	0.8	1.0	0.9	3.3	0.9	1.2	1.0
Substances Dispensed ^^	2014	1.5	1.9	1.6	0.9	1.7	2.0	1.9
Substance Abuse	2015	198.9	122.9	165.4	172.6	184.4	329.8	110.8
Treatment Rate: Alcohol ^	2014	197.9	92.6	113.3	179.5	182.7	257.3	104.8

^{*2016} data. **2015 data. ^per 100,000. ^^per capita

Food Safety

Salmonellosis is an infection with salmonella bacterium. Salmonella are usually transmitted to humans by eating foods contaminated with animal feces. Contaminated foods are often of animal origin, such as beef, poultry, milk, or eggs, but any food, including vegetables, may become contaminated. Most persons infected with salmonella develop diarrhea, fever, and abdominal cramps 12 to 72 hours after infection ("Salmonella Homepage | CDC," 2019). The illness usually lasts four to seven days, and most persons recover without treatment. *Table 20 indicates* that the lowest rate of salmonella infection in 2017 was in Allen County at 13.1 per 100,000 population.

Table 19: Food Safety (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Salmonella	2017	13.1	16.5	20.2	15.3	16.9	22.3	23.7
Infection†	2014	7.9	24.7*	17.8	28.1*	21.0	15.7*	23.9**

^{*2016} data. **2015 data. †Incidence Rate.

Infectious Disease

Hepatitis C and influenza are types of infectious diseases caused by viruses. Hepatitis C is a contagious liver disease ranging from mild to severe illnesses transmitted primarily from the sharing of needles. Influenza is a contagious disease that in most cases causes the complication of pneumonia. Allen County had a prevalence rate of Hepatitis C in 2017 of 83.1. In 2017, Allen County had the lowest age-adjusted death rate of influenza and pneumonia (9.3 per 100,000) among the counties for which data was available (*Table 21*).

Table 20: Infectious Disease (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Hepatitis C	2017	83.1	82.6	72.0	N/A	48.5	194.0	N/A
Prevalence	2014	65.6	54.5	39.5	N/A	52.5	77.5	N/A
Influenza/	2017	9.3	27.7	17.0	N/A	15.7	19.3	N/A
Pneumonia‡	2014	12.4	18.7	16.5	N/A	18.0	17.0	20.6*

^{*2012} data. ‡Age-Adjusted Death Rate.

Maternal, Infant, and Child Health

Maternal, infant, and child health care is a broad category which encompasses a variety of health indicators related to pregnancy, birth, and complications at the time of and immediately following birth. Affected populations include mothers and their children. Although all county percentages decreased for mothers who did not receive prenatal care during the first trimester of pregnancy, Allen County had a high percentage at 41.6% (*Table 22*).

Table 21: Maternal, Infant and Child Health

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Babies with Low Birth	2017	8.8%	9.7%	6.7%	6.9%	5.7%	7.9%	5.8%
Weight (%)	2014	9.4%	7.0%	7.6%	5.6%	6.2%	9.1%	7.3%
Child Abuse Rate§	2015	10.3	16.6	8.4	10.2	18.1	26.3	13.3
Cilid Abuse Rates	2014	8.9	20.7	6.8	11.6	11.5	26.9	10.2
Mothers with no prenatal	2017	41.6%	23.6%	55.7%	56.2%	37.7%	28.2%	30.8%
care in 1 st trimester (%)	2014	45.2%	32.2%	63.8%	62.1%	38.4%	36.1%	32.8%
Mothers who Smoked	2017	10.3%	21.5%	15.1%	6.2%	16.7%	26.3%	14.1%
During Pregnancy (%)	2014	10.3%	16.8%	15.6%	6.7%	19.0%	25.2%	17.5%
Preterm Births (%)	2017	9.6%	11.1%	8.4%	7.7%	6.5%	10.1%	9.2%
Freterin births (%)	2014	10.1%	7.2%	9.0%	5.6%	8.7%	9.4%	8.7%

§Cases per 1,000 children.

Mental Health

Depression is a serious illness that affects an individual's ability to perform daily tasks or cope with daily life. Individuals with depression are at higher risk for other mental illnesses, injury, or death ("NIMH» Depression," n.d.). Depression is also linked to economic and social burdens, which may perpetuate depressive episodes. Depression among the Medicare population was highest in 2017 and 2014 for Allen County, 21.2% and 20.7%, respectively (*Table 23*).

Table 22: Mental Health

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Depression*(%)	2017	21.2%	20.8%	18.4%	17.8%	19.8%	19.7%	18.1%
	2014	20.7%	18.2%	16.4%	16.7%	19.0%	15.4%	18.1%

^{*}Medicare population.

Obesity

Obesity (having a body mass index greater than 30.0) affects all age groups and disproportionately affects people of lower socioeconomic statuses and racial/ethnic groups. There are many complications that can occur as a direct or indirect result of obesity. *Table 24* shows the percentage of adults who are obese.

Table 23: Obesity

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Adults 20+ who	2015	31.6%	33.9%	36.4%	36.8%	33.2%	34.2%	35.4%
are Obese (%)	2014	28.7%	31.9%	34.3%	34.1%	33.9%	32.7%	36.6%

Respiratory Diseases

Respiratory diseases affect the lungs and other parts of the respiratory system. Chronic lower respiratory disease (CLRD) refers to a diverse group of disorders, such as asthma, emphysema, bronchitis, and chronic obstructive pulmonary disease. Asthma is a chronic, incurable disease which causes many symptoms that make breathing difficult ("CDC - Data and Statistics - Chronic Obstructive Pulmonary Disease (COPD)," 2019). The disease burden is high due to expensive and potentially life-long costs associated with managing symptoms of asthma.

Table 25 shows the percentage of the Medicare population with asthma. Since 2014, the percentage of asthma among the Medicare population has increased in four counties in the Parkview Health area, including Allen County.

Table 24: Respiratory Disease (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Acthma* (%)	2017	6.1%	6.6%	5.6%	3.5%	5.0%	5.7%	5.0%
Asthma* (%)	2014	5.6%	6.0%	4.5%	3.6%	5.5%	4.8%	5.5%
Chronic Lower Respiratory	2017	50.3	69.4	53.4	50.2	72.7	54.7	49.4
Diseases‡	2014	54.5	58.6	63.3	48.1	78.3	64.7	54.7

^{*}Medicare population. ‡Age-Adjusted Death Rate.

Sexually Transmitted Infections

Chlamydia and gonorrhea are two common sexually transmitted diseases (STD) that, in some cases, present no symptoms, but can lead to serious health problems if left untreated ("Chlamydia - STD information from CDC," 2019; "Gonorrhea - STD information from CDC," 2019) . Younger populations, those with multiple partners, and those who do not use a condom during sex are at high risk to contract these and other sexually transmitted infections. Those who have or have had sexually transmitted infections in the past are at even greater risk. Allen County had the highest incidence rates of chlamydia and gonorrhea in both 2017 and 2014 (*Table 26*).

Table 25: Sexually Transmitted Infections (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Chlomydia+	2016	597.9	294.8	281.1	118.5	331.0	227.1	317.3
Chlamydia [†]	2014	514.6	252.8	198.8	60.5	250.2	182.3	144.2
Gonorrhea†	2016	188.1	43.7	64.9	10.3	60.8	34.2	35.9
Gonormea	2014	151.8	19.0	62.9	7.9	46.2	12.4	15.0

[†]Incidence Rate.

Tobacco Use/Smoking

Smoking is the leading cause of preventable death (CDC Tobacco Free, 2017). People of all ages, races, and genders are susceptible to the effects of smoking and secondhand smoke. *Table 27* shows the adult smoking rate. Allen County had a 1.6% decrease in adult smoking rates from 2014 to 2016.

Table 26: Smoking

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Adults who	2016	18.8%	21.8%	18.7%	20.7%	20.8%	18.9%	18.6%
Smoke (%)	2014	20.4%	21.5%	18.5%	22.2%	20.4%	19.2%	18.1%

Prevention and Safety

Unintentional injuries are a leading cause of death for Americans of all ages, regardless of gender, race, or economic status. Major categories of unintentional injuries include motor vehicle collisions, poisonings, and falls. *Table 28* shows that Allen County had an unintentional injury age-adjusted death rate of 50.6 per 100,000 population.

Table 27: Prevention and Safety (per 100,000)

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Motor Vehicle	2017	10.2	N/A	14.1	N/A	N/A	28.7	N/A
Traffic Collisions‡	2014	8.7	N/A	12.0	19.2*	14.7*	34.6	N/A
Unintentional	2017	50.6	53.8	51.4	26.1	44.9	74.0	47.6
Injuries‡	2014	39.0	41.7	42.0	33.5	49.7	59.9	35.2

^{*2012} data. ‡Age-Adjusted Death Rate

SOCIAL DETERMINANTS OF HEALTH (SDOH)

Social determinants of health are the conditions in which people are born, grow, live, work and age. These indicators affect a wide range of health risks and outcomes (Artiga, May 10, 2018). SDOH include factors like socioeconomic status, education, neighborhood, physical environment, employment, and social support networks, as well as access to health care. The effect of individual social determinants of health is difficult to discern as these factors are interdependent and interconnected. Evidence shows that poverty limits access to food, safe neighborhoods, and better education. On the other hand, poorer neighborhoods are severely affected by food insecurities and lower educational status. These ultimately lead to poor health outcomes and reduced life expectancies. A person's ZIP Code can affect his or her health which ultimately leads to a concentration of health disparities in geographical locations identified as poor neighborhoods. Considering the Maslow's Hierarchy of Needs pyramid, it is evident that basic needs like food, shelter, safety, and security serve as the basis of better overall physical and mental health of individuals (Mcleod, n.d.). Focused social determinants of health, also referred to as "upstream" factors by the public health sector, decrease the risk of diseases and the predisposing behavioral and other risk factors (Booske, Athens, Kindig, Park, & Remington, n.d.). Table 29 and Table 30 list the social indicators and access indicators, respectively, for which indicators in Allen County are in the bottom-performing quartile.

Table 28: County Social Indicators in the Bottom-Performing Quartile of the State

Social Issue	Indicator	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Economy	Households with Cash Public Assistance Income						Х	
	Per Capita Income				X			
Education	4th Grade Proficiency in English/Language Arts					X		
	4th Grade Proficiency in Math						X	
	8th Grade Proficiency in English/Language Arts					X	Х	
	High School Graduation						Х	
	People 25+ w/ a Bachelor's Degree or Higher				Х			
	People 25+ w/ a High School Degree or Higher			Х	Х	X		
	Student-to-Teacher Ratio	Χ						Х
Employment	Female Population 16+ in Civilian Labor Force				Х			
	Total Employment Change			X				Х
Social Environment	Households w/ Internet Subscription				Х			
	Households w/ >=1 Types of Computing Devices				X			
	People 65+ Living Alone	Х						
	Voter Turnout: Presidential Election	Х				Х		
	County					Noble	Wabash	Whitley
# Ind	icators in Lowest Quartile in State	3	0	2	6	4	4	2

Data Source: Parkview Health Community Dashboard, 2019.

Table 29: County Access Indicators in the Bottom Performing Quartile of the State

Issue	Access Indicator	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Access to	Adults with Health Insurance: 18-64			Χ	Х	Χ		
Health Services	Persons with Health Insurance			Χ	Х	Χ		
	Children with Health Insurance			Χ	X			
	Clinical Care Ranking			Χ	X	Χ		
	Non-Physician Primary Care Provider Rate [†]				Χ	Χ	Χ	Χ
	Primary Care Provider Rate†				X	Χ		
	Dentist Rate [†]				Χ			
	Mental Health Provider Rate [†]				Х			
	Preventable Hospital Stays*					Х		
Food Access	Food Insecure Children Likely Ineligible for Assistance							Χ
	Food Insecurity Rate	Χ						
	Children with Low Access to a Grocery Store	Χ						
	Low-Income and Low Access to a Grocery Store	Χ	Х					
	People 65+ with Low Access to a Grocery Store	Χ	Х					
	People with Low Access to a Grocery Store	Χ	Х					
	Households w/o Car & Low Access to Grocery Store				Х			
	Fast Food Restaurant Density		Χ				X	
	SNAP Certified Stores				X	Χ		
Access to Safe and	Physical Environment Ranking			Χ		Χ		
Healthy Environment	Houses Built Prior to 1950		Х				Χ	
	Violent Crime Rate	Х						
	Access to Exercise Opportunities				Х			
Housing Affordability	Homeownership			Х				
and Supply	Spending >=30% Household Income on Rent		Х					
	Severe Housing Problems				Χ			
Transportation	Households without a Vehicle				Χ			
	Workers Commuting by Public Transportation			Х		Χ		
	Workers who Drive Alone to Work						Χ	Χ
	Workers who Walk to Work	Χ						Х
	County	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
# Indicato	rs in the Lowest Quartile in the State	7	6	7	13	9	4	4

^{*}Medicare population. †Providers per 100,000 population. Data Source: Parkview Health Community Dashboard, 2019.

Access to Health Services

Access to comprehensive, quality healthcare services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all Americans. Allen County had the highest incidence rate of adults who went to the dentist, non-physician primary care provider rate, and primary care provider rate (*Table 31*).

Table 30: Access to Health Services

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Adults with Health Insurance: 18-64 (%)	2017	89.0%	91.0%	87.0%	75.7%	88.0%	89.5%	90.3%
Children with Health Insurance (%)	2017	93.2%	95.0%	91.0%	74.7%	93.2%	94.3%	94.2%
Dentist Rate ⁺	2017	64	41	32	23	27	41	41
Mental Health Provider Rate [†]	2018	164	63	144	28	82	198	66
Non-Physician Primary Care Provider Rate [†]	2018	143	69	43	33	21	25	18
Persons with Health Insurance (%)	2017	90.3%	92.1%	88.2%	75.1%	89.6%	90.8%	91.4%
Preventable Hospital Stays* (per 1,000)	2015	52.5	67.0	59.2	55.6	79.2	50.7	40.8
Primary Care Provider Rate [†]	2016	65	63	40	26	27	41	54

^{*}Medicare population. †Providers per 100,000 population.

Built/Physical Environment

The built environment is the space in which we live, work, learn, and play. It includes workplaces and housing, businesses and schools, landscapes and infrastructure. Built environment influences the public's health, particularly in relation to chronic diseases.

Despite significant evidence that an active lifestyle along with proper nutrition and reduced exposure to toxic conditions can lower the burden of chronic disease, our built environments are not well-designed to facilitate healthy behaviors or create good health conditions. LaGrange County had the lowest access to exercise opportunities (26.4%) while Allen County had the highest (78.5%) (*Table 32*).

Table 31: Built/Physical Environment

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Access to Exercise Opportunities	2019	78.5%	76.3%	67.4%	23.4%	64.0%	67.7%	57.4%
Households Built Prior to 1950	2013-2017	19.6%	45.8%	22.8%	25.3%	30.5%	44.1%	28.0%

^{*}Households.

Economy

The lower one's income, the higher the risk of disease and premature death. As shown in *Table 33*, per capita income in Allen County was \$26,932 in 2013-2017. Among minorities, income is one of the driving forces behind health disparities. Racial health disparities observed among non-Hispanic Whites, Blacks, and Hispanics are minimized by the disparities due to income observed within each racial group. That is, higher-income Blacks, Hispanics, and Native Americans have better health than members of their groups with less income and this income gradient appears to be more strongly tied to health than their race or ethnicity.

Table 32: Economy

Indicator	Year	Allen	Huntington	Huntington Kosciusko		Noble	Wabash	Whitley
Asset Limited, Income Constrained, Employed*	2016	22.1%	26.5%	28.4%	29.3%	25.7%	25.0%	21.5%
Cash Public Assistance Income (%)*	2013-2017	2.2%	1.7%	1.8%	1.0%	1.5%	2.3%	0.9%
Per Capita Income (\$)	2013-2017	\$26,932	\$24,222	\$27,884	\$22,780	\$25,260	\$24,700	\$28,073

^{*}Households.

Education

Education has an indirect effect on the health of individuals. Education is important for higher-paid jobs, economic productivity and a healthier population. Educational attainment not only defines income status and job opportunities; it also affects life expectancy. Between 1990 and 2008, the life expectancy gap between the most and least educated Americans grew from 13 to 14 years among males and from 8 to 10 years among females (Rosoff & Lohoff, 2019). The gap has widened since the 1960s. Individuals with low educational attainment levels have a higher risk of heart disease, diabetes, and diminished physical abilities due to health reasons, or are disabled. They also tend to have higher rates of risky behaviors like smoking, drinking, and illicit drug use. *Table 34* shows educational attainment level in the Allen County. Allen County had the highest percentage of people with a bachelor's degree or higher (27.5%) and the highest student-to-teacher ratio (19 students per teacher).

Table 33: Education

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
4th Grade Students Proficient in English/Language Arts (%)	2017	63.2%	74.4%	65.0%	65.4%	58.0%	69.4%	64.2%
4th Grade Students Proficient in Math (%)	2017	56.9%	62.9%	62.9%	67.0%	57.7%	54.9%	60.3%
8th Grade Students Proficient in English/Language Arts (%)	2017	61.8%	70.7%	58.3%	63.9%	51.5%	55.7%	63.5%
High School Graduation (%)	2017	91.8%	91.8%	92.6%	92.3%	91.2%	87.1%	91.3%
People 25+ with a Bachelor's Degree or Higher (%)	2013- 2017	27.5%	18.1%	22.3%	9.9%	14.0%	18.7%	19.5%
People 25+ with a High School Degree or Higher (%)	2013- 2017	89.4%	90.5%	84.8%	63.3%	85.0%	88.7%	91.1%
Student-to-Teacher Ratio (Students per teacher)	2016- 2017	18.5	15.2	16.3	15.2	16.1	17.2	18.1

Employment

Employment has a multifaceted effect on the health of individuals. Well-paid jobs translate into better access to nutritious food, education, healthier/safer neighborhoods, and good health insurance benefits for individuals and their families. Conversely, low-paid jobs or job layoffs result in poor health and stress-related conditions such as stroke, heart attack, heart disease, or arthritis. Additionally, good health influenced by healthy and safe working conditions.

Allen County had the highest female population ages 16+ in the civilian labor force at 62.0% (*Table 35*).

Table 34: Employment

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	LaGrange Noble		Whitley
Female Population 16+ in Civilian Labor Force)	2013-2017	62.0%	59.6%	57.2%	47.1%	59.8%	55.3%	57.0%
Total Employment Change	2015-2016	2.4%	2.1%	-1.1%	4.4%	3.7%	2.2%	-2.7%

Food Security

Food security measures accessibility to and affordability of food. According to the World Health Organization (WHO), the three pillars of food security are availability, access, and use/misuse. On the other hand, food insecurity refers to the inability to afford enough food for an active, healthy life. Food insecurity is associated with adverse health outcomes in children and adults. It is linked to an increased risk of depression, cardiovascular disease, and peripheral arterial disease in older adults (Laraia, 2013). Access to healthy, nutritious food—including fruits and vegetables—is of utmost importance to live a healthy lifestyle.

Allen County has the highest rate of children with low access to a grocery store, the highest food insecurity rate, the greatest population with low-income and low access to a grocery store, the most people ages 65+ with low access to a grocery store, and greatest number of people with low access to a grocery store (*Table 35*: Access to Food).

Table 35: Access to Food

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Children w/ Low Access to a Grocery Store	2015	7.8%	5.4%	4.9%	0.0%	1.7%	1.9%	1.3%
Fast Food Restaurant Density*	2014	0.66	0.84	0.69	0.21	0.55	0.81	0.60
Food Insecurity Rate	2017	13.3%	11.4%	10.0%	9.2%	9.4%	11.9%	10.1%
Households w/ No Car and Low Access to a Grocery Store	2015	2.7%	2.1%	3.1%	21.4%	2.9%	2.6%	1.5%
Low-Income and Low Access to a Grocery Store	2015	9.8%	8.5%	5.6%	0.1%	2.1%	4.7%	1.9%
65+ with Low Access to a Grocery Store	2015	3.8%	3.6%	2.4%	0.0%	0.5%	1.1%	0.6%
Low Access to a Grocery Store	2015	30.4%	22.2%	18.3%	0.2%	5.7%	10.5%	5.1%
SNAP Certified Stores*	2016	8.0	0.8	0.8	0.5	0.7	0.9	0.8

^{*}Per 1,000 population

Homeownership and Housing Affordability

The net income and wealth of an individual affects homeownership. "Housing is commonly considered *affordable* when a family spends less than 30 percent of its income to rent or buy a residence ("How Does Housing Affect Health?" 2011). The shortage of affordable housing limits a family's options in choosing their place of residence. This ultimately leads to poor families living in subsidized housing in neighborhoods that are unsafe and lack the assets needed for healthier lifestyle e.g., parks, bike paths, walking tracks, recreational activities, and

grocery stores with healthy selections. The burden faced by families to afford housing affects their ability to meet other essential needs like nutrition and healthcare.

Allen County has the second least affordable rental housing in the Parkview Health region with nearly half of the renters spending more than 30% of their income (*Table 37*).

Table 36: Homeownership

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Homeownership	2013- 2017	62.5%	69.8%	59.5%	68.0%	66.4%	67.5%	73.4%
Renters Spending 30% or More of Household Income on Rent	2013- 2017	45.1%	47.3%	37.9%	32.0%	39.8%	45.0%	39.9%
Severe Housing Problems	2011- 2015	11.8%	10.6%	10.9%	15.1%	12.2%	10.9%	8.5%

Public Safety

Public safety is another important social determinant of health. Just as affordable housing is important in achieving positive health outcomes, the conditions/environment surrounding the housing affect health outcomes. High crime rates can lead to mental distress, a lower quality-of-life, an increase in negative health outcomes, premature death, or non-fatal injuries (Margolin, Vickerman, Oliver, & Gordis, 2010). An example of the negative effect of a high crime rate in the neighborhood is a reluctance of residents to walk outdoors or permit their children to play or bike outside, which encourages obesity and related health issues.

The violent crime rate was highest in Allen County at 295.9 per 100,000 population (*Table 38*).

Table 37: Public Safety

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Violent Crime Rate	2014-2016	295.9	33.0	159.3	103.5	158.0	50.7	45.5*

^{*2009-2011}

Social Environment

Social support and interaction are the most important factors in predicting one's physical health and well-being, regardless of age ("The importance of social interaction to human

health |," n.d.). Today, people socialize more often with others through technology. Social media has become the preferred method of making, maintaining, and communicating with friendships and filling leisure time. Individuals use the Internet for various day-to-day activities like banking, paying bills, shopping, studying, and more.

An aging population suffers from a higher risk of social isolation than a younger population as indicated by Americas Health Rankings. The percentage of individuals age 65 and older living alone ranges from 16.2% in LaGrange County to 30.4% in Allen County.

Table 38: Social Environment

Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Households with an Internet Subscription	2013-2017	78.9%	73.7%	75.3%	54.8%	76.1%	70.9%	76.0%
Households with >= 1 Type of Computing Device	2013-2017	88.1%	85.4%	85.5%	63.9%	85.5%	85.4%	88.0%
People 65+ Living Alone	2013-2017	30.4%	26.1%	24.4%	16.2%	28.1%	27.6%	25.7%
Voter Turnout: Presidential Election	2016	55%	63%	61%	71%	56%	61%	71%

Transportation

Transportation is often cited as a barrier to healthcare access, especially in rural areas. The consequences of this hurdle include rescheduled or missed appointments, delayed care, and missed or delayed medication use ("Traveling Towards Disease: Transportation Barriers to Health Care Access," n.d.), which leads to inadequate management of chronic illness and deficient health outcomes. In Indiana, a nonexistent comprehensive public transportation system contributes to this dilemma (*Table 40*). The percentage of households without a vehicle was 6.3% in Allen County in 2013-2017.

Table 39: Transportation

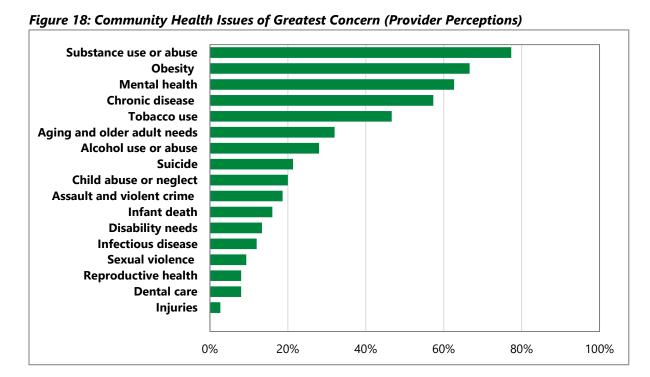
Indicator	Year	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley
Households without a Vehicle	2013- 2017	6.3%	4.8%	6.3%	27.8%	5.3%	4.5%	3.6%
Workers Commuting by Public Transportation	2013- 2017	0.8%	0.3%	0.1%	0.2%	0.0%	0.7%	0.3%

COMMUNITY PERCEPTIONS

PROVIDER SURVEY RESULTS

Top Community Health Concerns (Provider Perceptions)

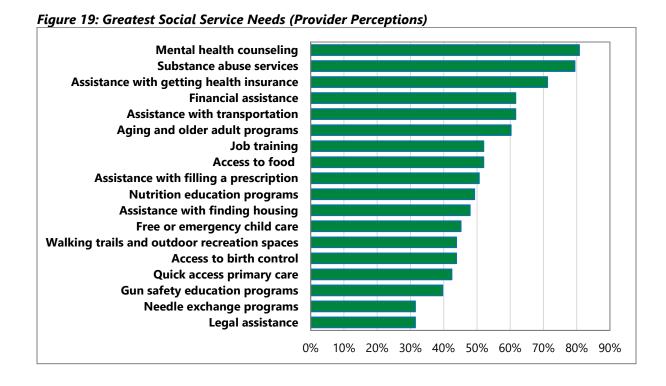
Providers in Allen County perceive that the top three greatest community health needs are **substance abuse services** (77.3%), **obesity** (66.7%), and **mental health** (62.7%) (*Figure 18*).



2019 Community Health Needs Assessment

Most Important Service Needs (Provider Perceptions)

The three most important service needs identified by providers in Allen County include mental health counseling (80.8%), substance abuse services (79.5%), and assistance with getting health insurance (71.2%) (*Figure 19*).



Top Barriers to Care/Service Access (Provider Perceptions)

Providers in Allen County identified **cost** as the biggest barrier faced by community members when accessing care/services (81.3%). Providers also identified **education/health literacy** (49.3%), **lack of insurance** (48.0%), and **transportation** (42.7%) as major concerns (*Figure 20*).

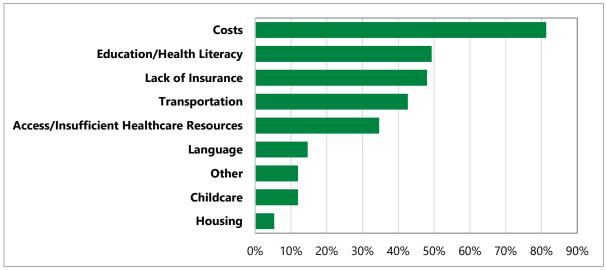


Figure 20: Top Barriers to Patients Accessing Care/Services (Provider Perceptions)

Top Barriers to Care/Service Delivery (Provider Perceptions)

Providers in Allen County identify the top barriers in care/service delivery as the **lack of** collaboration or communication in community member care (50%), insufficient healthcare resources (50%), and the relationship with the insurers (41.4%) (*Figure 21*)



Figure 21: Top Barriers to Providing Care/Services (Provider Perceptions)

COMMUNITY SURVEY RESULTS

Community Health Concerns

Public survey respondents in the Parkview region ranked **child abuse or neglect** as their top (80.6%) health concern, followed by **chronic disease** (70.8%) and **mental health** (67.7%) (*Figure 22*).

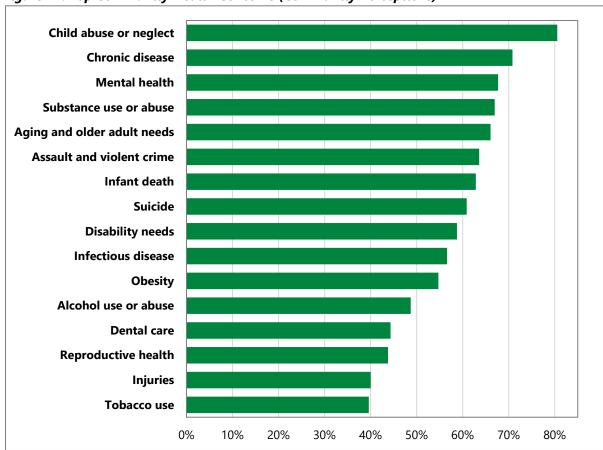


Figure 22: Top Community Health Concerns (Community Perceptions)

Social Issues Important to the Community

Substance abuse services is most frequently indicated by community respondents as a top social service issue for their community (67.0%), followed by **mental health counseling** (64.9%) and **access to food** (53.5%) (*Figure 23*).

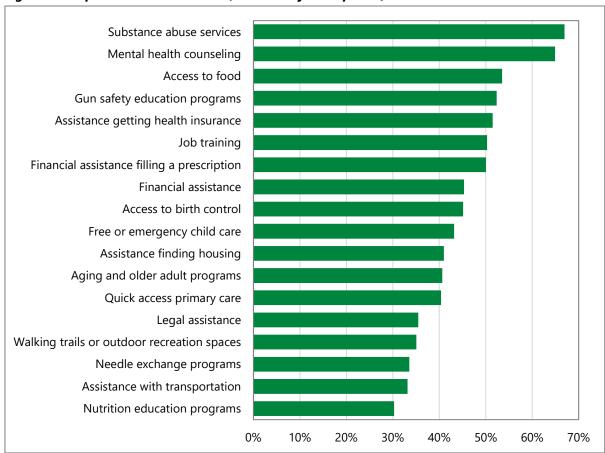


Figure 23: Top Social Service Needs (Community Perceptions)

AMISH COMMUNITY SURVEY RESULTS

The Amish community survey results indicate the top community health concerns are **chronic diseases** (67.8%), **alcohol use or abuse** (60%), **tobacco use** (57.4%**)**, **injuries** (55.7%), and **obesity** (53.9%). A detailed report comparing survey results from 2016 and 2019 serves as a companion piece to this CHNA report.

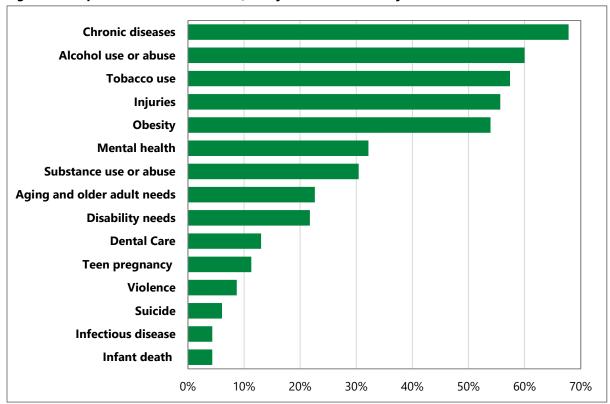


Figure 24: Top Health Concerns Identified by Amish Community

In the 2016 Parkview Health CHNA, the health issues perceived as "big problems" by the Amish community were **drug use** (72.4%), **overweight/obese** (65.5%), and **alcohol use** (60.3%). In 2019, **substance use** ("drug abuse" in 2016) ranked seventh among the top health issues, suggesting a decline in perceived importance. In 2019, the top three issues are **chronic diseases** (ranked first), **alcohol use/abuse** (ranked second), and **smoking** (ranked third).

HISPANIC FOCUS GROUP RESULTS

The Hispanic focus group participants identified the top five unmet service needs in Kosciusko County as **substance use or abuse** (54%), **alcohol use or abuse** (46%), and **chronic disease** (diabetes, cancer and heart disease etc. (38%).

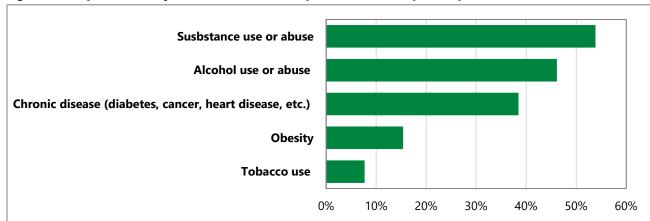


Figure 25: Top Community Health Concerns (Hispanic Focus Group Perceptions)

The group identified the highest priority unmet needs as **assistance with getting health insurance** (54%), **substance abuse services treatment** (prevention or treatment) (38%), and **legal assistance** (including for immigration status) (8%).

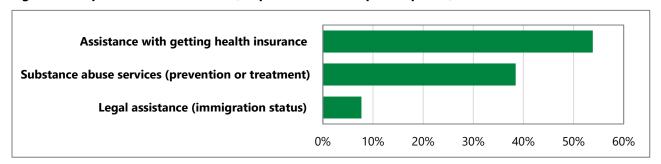


Figure 26: Top Social Service Needs (Hispanic Focus Group Perceptions)

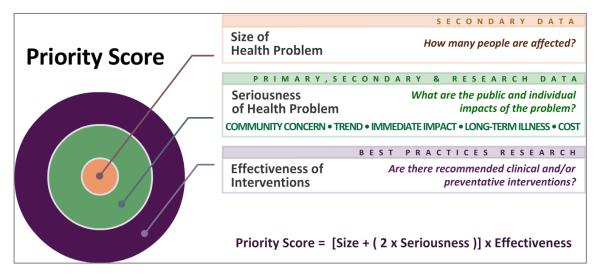
More details can be found in the Hispanic Focus Group Report, produced as a companion piece to this CHNA report.

RANKING COMMUNITY HEALTH NEEDS

PROCESS AND CRITERIA

A modified Hanlon Method prioritized health concerns for Parkview Health hospital communities. This method, also known as the Basic Priority Rating System (BPRS) 2.0, is recommended by the National Association of County and City Health Officials (NACCHO) for prioritizing community health needs (*Guide-to-Prioritization-Techniques.pdf*, n.d.). Although complex to implement, it is useful when the desired outcome is an objectively selected list. Explicit identification of factors must be considered to set priorities which enables a transparent and replicable process. As illustrated in Figure 27, priority scores (D) are calculated based on the size of the health problem (A), seriousness of the health problem (B), and the availability of effective health interventions (C).

Figure 27: Components of the Priority Score



SECONDARY DATA

Size of Health Problem

How many people are affected?

Population percentage estimates of each health problem are calculated and used to measure the **size** of a health problem following the recommendations of Neiger et al. (Neiger, Thackeray, & Fagen, 2011). The assigned size score of each health indicator is shown in column A of the scoring tables in Appendix B.

PRIMARY, SECONDARY & RESEARCH DATA

Seriousness
of Health Problem

What are the public and individual impacts of the problem?

COMMUNITY CONCERN • TREND • IMMEDIATE IMPACT • LONG-TERM ILLNESS • COST

The **seriousness** of each health problem was determined based on five questions.

- 1. Is there an immediate potential impact on the larger community?
 - Is there a **communicable nature** of the health problem?
 - Are there **behavioral effects** related to the health problem **on others**?
 - Is there **emotional and physical impact** of the health problem **on others** with respect to caregiving?
- 2. Is there a measurable **public health concern**?

(Measured using the Community and Provider Survey results)

3. Does the problem cause **long term illness**?

(Years of life lived with a disability and years lost due to premature death)

- 4. Is there an **increasing prevalence** of the problem in the community?
 - (Based on time trends of affected population)
- 5. Are there **high costs** associated with the problem?

(Healthcare spending associated with the health problem)

Seriousness scores are shown in column B of the scoring tables in Appendix B.

BEST PRACTICES RESEARCH

Effectiveness of Interventions

Are there recommended clinical and/or preventative interventions?

The final criterion, **effectiveness of interventions**, was calculated using two resources for systematic reviews: *CDC's Community Guide* and *HealthEvidence.org*. The *Community Guide* recommended by NACCHO was used as the main source ("Health Evidence," n.d.; "The Guide to Community Preventive Services (The Community Guide)," n.d.). The *Community Guide* conducts systematic reviews of interventions in many topic areas to learn what works to promote public health. The Community Preventive Services Task Force uses the results of these reviews to issue evidence-based recommendations and findings to the public health community. Only the Task Force's recommended interventions were considered in this report.

For health problems not found in the *Community Guide, Healthevidence.org* was used. *Healthevidence.org* is a registry of systematic reviews maintained by McMaster University in Canada to promote evidence-based public health. Interventions evaluated in high-quality studies and recommended by reviewers were used in this report.

Scores were assigned based on whether a policy or preventive and/or therapeutic intervention was recommended by either of these sources, as outlined below.

- At least one recommended policy, preventive, or therapeutic intervention = 1 point
- No recommended interventions = 0 points

For each health indicator, the effectiveness score, basic priority score, and resulting rank are shown in columns C, D, and E, respectively, of the table in Appendix B.

RANKING OF COMMUNITY HEALTH ISSUES

The 2019 top-ranking indicators for Allen County are shown in *Table 41*. For Allen County three of the top five health concerns—**cardiovascular disease**, **diabetes**, and **obesity**—are etiologically and clinically related health issues. If we consider the top 10 health concerns in the region, one other related need is identified: **drug and alcohol use and addiction**. Mental health disorders are one of the risk factors for developing substance use disorder. These rankings are indicative of interrelated and interconnected health conditions, providing a broader picture of the health issue experienced by the community and rendering credence to the methodology adopted for this purpose. Comparing the 2016 and 2019 CHNA rankings for the Parkview Region, we see that Cardiovascular Disease (Rank 6 to 1) and Aging (Rank 12 to 5) moved to the top five. Changes in the methodology for calculating "size of the health issue" and "effectiveness of intervention" may have contributed to this change.

						2019 Rank					2016
Hea	Ith Need / Concern	Health Indicator	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Avg Rank	Rank
1.	Cardiovascular	Stroke Hospitalizations	1	2	1	1	1	1	1	1.1	
	Disease	Heart Disease Hospitalizations	1	1	1	1	1	1	3	1.3	6
2.	Diabetes	Adults 20+ with Diabetes	1	2	1	1	1	1	3	1.4	3
3.	Aging	Alzheimer's Disease	5	4	4	1	4	4	3	3.6	12
4.	Obesity	Adults 20+ who are Obese	5	6	6	1	4	4	3	4.1	2
5.	Drug & Alcohol Use and Addiction	Non-Fatal ED Visits due to Opioid Overdoses	1	4	4	12	10	4	11	6.6	5
6.	Mental Health	Percent of Population with Frequent Mental Distress	7	7	7	10	6	7	7	7.3	10
	ug & Alcohol Use Addiction	Adults who Drink Excessively	8	7	8	6	6	10	9	7.7	5
7.	Tobacco Use	Adults who Smoke	8	7	12	8	8	8	7	8.3	1
8.	Maternal Child Health	Child Abuse and Neglect	10	10	17	6	8	8	1	8.6	4

Table 40: Top Ranking Indicators

SELECTING 2020-2022 PRIORITIES

PRIORITY SELECTION PROCESS

As part of its priority selection process, Parkview Health considered the availability of evidence-based interventions designed to address its top ranking health issues. The "PEARL" (Propriety, Economics, Acceptability, Resources, and Legality) test eliminates impractical or impracticable interventions (Vilnius & Dandoy, 1990).

The Indiana Partnership for Healthy Communities presented an overview of the Regional Community Health Needs Assessment (CHNA) findings on July 16, 2019 to a group of attendees representing the Parkview Health System. In total, over 60 individuals participated in the prioritization process, including representatives from hospital service lines, community hospitals, healthcare providers/physicians, executive leadership team, community health, and the board of directors. After a thorough review of the data and considerable discussion, the group used an electronic voting system to rank the various health needs identified in the CHNA. Ultimately, the group voted on Substance Use Disorder/Mental Health as the shared health priority across the Parkview System.

The Parkview Orthopedic (Ortho) Hospital's leadership team reviewed the results of the 2019 CHNA. Based on the scope of services provided by the Parkview Ortho Hospital, it was determined that obesity would remain the hospital's primary health priority for 2020-2022. The CHNA results and chosen health priority were presented to the Parkview Ortho Hospital board for approval on October 16, 2019.

SELECTED PRIORITIES

Parkview Ortho Hospital selected obesity as its top priority.

RESOURCES

Resources in the Parkview Ortho Hospital service area for addressing community health are mentioned in Appendix C.

DATA LIMITATIONS

Secondary Data: One of the most notable limitations of the secondary data is that different data sources applied different models to estimate community health indicators. Some indicators were based on administrative data while others were based on sample surveys. In addition, secondary data was sourced from different data years, based on data availability. The available data ranged from a 2010-2014 five-year average to 2018.

Another notable limitation is that when morbidity rates were not available, hospitalization rates and mortality rates were used. Hospitalization rates are available from state hospital associations and are often used as surrogate measures of community health need. Hospitalization rates typically are based on patient home address versus treatment location, which is appropriate when attempting to use these rates to measure community health. However, a limitation is that hospitalization rates and mortality rates may underreport the rate of a health condition because hospitalization rates only capture data from individuals who seek hospital care and do not capture data from individuals who have the health condition but do not receive associated hospital care. Another limitation is that populations with closer proximity to a hospital facility may be more likely to seek treatment for health conditions implying that a hospital facility has populations with higher rates of health conditions.

Provider Survey: The principal limitation of the provider survey is that it was not conducted using a random sampling technique and may reflect response bias. This means that the responses were not necessarily representative of the full population of Parkview providers. Another limitation is that respondents were asked to select from pre-defined lists of disadvantaged populations and potential concerns. While the list of possible concerns was developed based on expert knowledge, it is possible that there are other concerns that were not listed.

Community Survey: A general limitation of broad community surveys is that participation tends to be greater among retirees or those otherwise unemployed compared to younger, employed persons. To address this concern, statistical weighting is used by the Survey Research Laboratory of the School of Public Health at the University of Alabama at Birmingham. Also, although the size of the random population sample allowed for conclusions to be made for the Parkview Health System primary service area as a whole, a sufficient sample was not obtained in each county to allow for county specific statistics to be generated. This made the information obtained from the Provider Survey even more important.

THREE-YEAR IMPACT REPORT

PARKVIEW ORTHO HOSPITAL

Overview

The findings of the 2016 CHNA guided our decision to adopt obesity as the priority for our community. Parkview Ortho Hospital has invested both time and funding to support initiatives focused on the following strategic goals:

- 1. Increase physical activity levels among Allen County youth
- 2. Increase in knowledge related to the importance of healthy eating and physical activity in Allen County

Sample Highlights of Obesity Initiatives

Since the 2016 CHNA, Parkview Ortho Hospital has continued to focus on battling obesity through community outreach with athletic trainers in 26 area high schools, 5 universities and 10 clubs in the region. The Ortho Hospital has also implemented a sports performance division as well as funded a sports nutritionist to teach area children about healthy habits for life, both through exercise and eating choices. The division trains over 1,000 kids per year, between the ages 8 to 22, in several different sports.

Our integrated sports medicine team and well-being champions have also implemented the following initiatives:

- In-service nutrition talks, over 40 events with 2,000 lives covered
- Injury prevention classes at area schools, 7 schools with over 1,000 athletes
- Pre-op classes for procedures at hospital to assure better outcomes
- Recovery Station at Fort4Fitness, 8,000 participants annually
- Healthcare Screenings

In addition, Parkview Ortho Hospital has developed a partnership with the YMCA of Greater Fort Wayne to implement a new initiative for youth in their after-school care programming, called Active Science. Over 1,500 students participate weekly in the program, which is designed to pair physical activity with fun games and learning opportunities that challenge students both physically and academically, all while engaging them in their well-being. The Ortho Hospital hosts a celebration day at the end of the year for all children that participated in the program.

Conclusion

Parkview Ortho hospital has built strong relationships with community organizations over the last three years, and we have consistently promoted the health of both adults and children through community outreach events. Parkview Ortho Hospital remains committed to improving the health of our community, especially as it relates to the priorities outlined above, and we will continue to work diligently to address any further needs identified in the 2019 CHNA.

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APPENDIX A: PROVIDER SURVEY

Table 41: Most Urgent Community Needs Identified in Provider Survey

	Allen	Huntington	Kosciusko	LaGrange	Noble	Wabash	Whitley	Region
Community Need		% of Provid	ers Respondir	ng that Need	was Amo	ngst the Mo	ost Urgent	
Substance abuse services	79.5%	64.0%	66.7%	93.3%	81.3%	95.7%	87.5%	83.2%
Mental health counseling	80.8%	54.4%	66.7%	79.7%	75.7%	73.9%	68.8%	75.7%
Assistance with transportation	61.6%	54.4%	50.0%	74.5%	71.1%	73.9%	75.0%	62.4%
Financial assistance	61.6%	64.0%	50.0%	69.5%	58.8%	69.6%	81.3%	61.9%
Assistance with getting health insurance	71.2%	60.8%	33.3%	56.1%	64.3%	60.9%	68.8%	57.9%
Access to food	52.1%	73.6%	33.3%	64.7%	60.2%	65.2%	50.0%	55.4%
Aging and older adult programs	60.3%	76.8%	50.0%	46.3%	74.9%	52.2%	50.0%	54.0%
Job training	52.1%	67.2%	16.7%	42.0%	48.0%	52.2%	75.0%	52.5%
Free or emergency child care	45.2%	57.6%	50.0%	46.8%	43.3%	43.5%	56.3%	48.0%
Assistance with finding housing	47.9%	48.0%	66.7%	64.3%	43.6%	60.9%	31.3%	46.0%
Quick access primary care	42.5%	54.4%	33.3%	74.5%	80.1%	21.7%	37.5%	45.0%
Walking trails, outdoor recreation spaces	43.8%	51.2%	33.3%	60.4%	60.2%	30.4%	37.5%	43.1%
Nutrition education programs	49.3%	60.8%	50.0%	32.5%	49.7%	39.1%	31.3%	40.6%
Assistance with filling a prescription	50.7%	44.8%	33.3%	51.3%	32.5%	39.1%	43.8%	40.1%
Access to birth control	43.8%	41.6%	0.0%	32.0%	37.7%	21.7%	56.3%	34.7%
Needle exchange programs	31.5%	41.6%	0.0%	22.7%	21.1%	26.1%	25.0%	27.7%
Gun safety education programs	39.7%	28.8%	16.7%	9.1%	21.6%	30.4%	31.3%	26.2%
Legal assistance	31.5%	28.8%	16.7%	9.1%	32.2%	30.4%	0.0%	22.8%

APPENDIX B: SCORING OF COMMUNITY HEALTH NEEDS

Table 42: Priority Scores and Ranking

Tuble 42. Fitority Stores and Kanking						OVE	RALL				
HCI Health Indicator (Those in lowest performing quartile of Indiana counties for at least one county served by a Parkview Health hospital)	Size of He Problem			Serious	ness of (roblem		Effectiveness of Interventions (C)^^	Priority Score (D)	Rank
	Size of Health Problem (%)	Score	Q1	Q2	Q3	Q4	Q5	Score	Score		
Heart Disease Hospitalizations	0.91	4	0	3	2	0	2	7	1	18	1
Stroke Hospitalizations	0.27	3	0.5	3	2	0	2	7.5	1	18	1
Adults 20+ with Diabetes	11	7	0.5	3	0.5	0	1.5	5.5	1	18	1
Non-Fatal Emergency Department Visits due to Opioid Overdoses	0.09	2	2	3.5	0.5	2	0	8	1	18	1
Alzheimer's Disease or Dementia	1.64	5	2	2	1	0	1	6	1	17	5
Adults 20+ who are Obese	31.6	9	0	2.5	0.5	0	1	4	1	17	5
Percent of Population with Frequent Mental Distress	11.7	7	0.5	2	1	0	1	4.5	1	16	7
Adults who Drink Excessively	18.7	8	2	1	0.5	0	0	3.5	1	15	8
Adults who Smoke	18.8	8	1	1	0	0	1.5	3.5	1	15	8
Adult Asthma Prevalence	10	7	0.5	3	0	0	0	3.5	1	14	10
Breast Cancer Incidence Rate	0.12	3	0	3	2	0	0.5	5.5	1	14	10
Child Abuse and Neglect Rate	1.03	5	2	2.5	0	0	0	4.5	1	14	10
Mothers who did not Receive Early Prenatal Care	41.6	9	1.5	1	0	0	0	2.5	1	14	10
Osteoporosis: Medicare Population (Prorated)	0.8	4	0.5	2	1	0	1	4.5	1	13	14
Prostate Cancer Incidence Rate	0.1	2	0	3	2	0	0.5	5.5	1	13	14
Oral Cavity and Pharynx Cancer Incidence Rate	0.01	1	0	3	2	0	0.5	5.5	1	12	16
Salmonella Infection Incidence Rate	0.01	1	2	1	1	0	0.5	4.5	1	10	17
Hepatitis C Prevalence	0.08	2	2	1	0	0.5	0.5	4	1	10	17
Chlamydia Incidence Rate	0.6	4	2	1	0	0	0	3	1	10	17
Injury Emergency Department Visits Per 10k	7.41	6	0	0.25	0.5	0	1	1.75	1	9.5	20
Gonorrhea Incidence Rate	0.19	3	2	1	0	0	0	3	1	9	21
Age-Adjusted Death Rate due to Chronic Lower Respiratory Diseases	0.05	2	0	3	0	0	0	3	1	8	22

Age-Adjusted Death Rate due to Influenza and Pneumonia	0.01	0	1	1	0	0	0.5	2.5	1	5	23
Chronic Kidney Disease: Medicare Population (Prorated)	3.33	5	0	3	0	0	0	3	0	0	24

^ Size	(A)	[10]
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SIZE (A) [IU]					
Score	% of Population				
10	> = 50%				
9	25 to < 50%				
8	17.5 to < 25%				
7	10 to < 17.5%				
6	5 to < 10%				
5	1 to < 5%				
4	0.50 to < 1%				
3	0.10 to < 0.50%				
2	0.05 to < 0.10%				
1	0.01 - < 0.05%				
0	0-<0.01%				
	(1/100 of 1%)				

† Seriousness (B)

Includes Q1 - Q5, as follows:

Q1 Impact on Others

Three aspects of the health issue:

- 1. Communicable? 1 if Yes, 0 if No.
- 2. Behavioral effects on others? 1 if Yes, 0 if No. $\,$
- 3. Caregiving required? 1 if Constant, 0.5 if Periodic, 0 if None.

Impact value equals the sum of the above.

Q2 Level of Community Concern

Based on % of community survey respondents that indicated issue was a priority need. Possible values: 0, 0.5, 1, 1.5, 2. These were then combined with provider survey results with same possible values yielding total values from 0-4 A value of 4 represents the highest level of concern and 0 the lowest.

Q3 Severity (Disability)

Based on time lived with disability and time lost due to premature death [1] Possible values: 0, 0.5, 1, 1.5, 2. A value of 2 represents highest

level of disability and 0 the lowest.

Q4 Urgency

Based on rate of increasing trend as measured as a rolling rate of change for all years available in the time series.

Possible values: 0, 0.5, 1, 1.5, 2. A value of 2 represents highest rate of increase and 0 the lowest.

Q5 Economic Costs

Based on estimated % of total U.S. healthcare costs [2-17] Possible values: 0, 0.5, 1, 1.5, 2.

A value of 2 represents highest cost and 0 the lowest.

Score

Q1 + Q2 + Q3 + Q4 + Q5

"Effectiveness of Intervention (C)

Based on existence of at least one evidence-based intervention, as per evidence presented in the CDC Community Guide or

HealthEvidence.org (2019).

Evidence-based	Score
Interventions	
Yes	1
No	0

^^^Priority Score (D)

= [A + (2 x B)] x C

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P%5FC& Debug.

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APPENDIX C: RESOURCES

Name	City	ZIP Code	Service
OBESITY			
Turnstone	Fort Wayne	46805	Fitness Center
Central Branch YMCA	Fort Wayne	46802	Recreational Club
Jackson R Lehman YMCA	Fort Wayne	46835	Recreational Club
Jorgensen Family YMCA	Fort Wayne	46804	Recreational Club
Parkview Family YMCA	Fort Wayne	46825	Recreational Club
Renaissance Pointe YMCA	Fort Wayne	46803	Recreational Club
Skyline YMCA	Fort Wayne	46802	Recreational Club
Parkview Center for Healthy Living - FW	Fort Wayne	46816	Wellness Program
Parkview Center for Healthy Living - FW	Fort Wayne	46845	Wellness Program
TOBACCO USE			
Healthier Moms & Babies	Fort Wayne	46807	Baby & Me Tobacco Free
Parkview Hospital Randallia	Fort Wayne	46805	Baby & Me Tobacco Free
SCAN	Fort Wayne	46802	Baby & Me Tobacco Free
Cornerstone Connections Project - New Haven	New Haven	46774	VIVA
Cornerstone Connections Project - Woodlawn	Woodburn	46797	VIVA
Cornerstone Youth Center - CYC Monroeville	Monroeville	46773	VIVA
MATERNAL, INFANT, CHILD			
Parkview Regional Medical Center -			
Women and Children's Hospital	Fort Wayne	46845	Breastfeeding Support
Parkview Hospital Randallia	Fort Wayne	46805	Breastfeeding Support Group
Parkview Regional Medical Center - Women and Children's Hospital	Fort Wayne	46845	Breastfeeding Support Group
Lutheran Hospital	Fort Wayne	46804	Childbirth Classes
Fort Wayne-Allen County Department of Health	Fort Wayne	46802	Childhood Immunization
Super Shot	Fort Wayne	46806	Childhood Immunization
Super Shot	Fort Wayne	46845	Childhood Immunization
Super Shot	Fort Wayne	46805	Childhood Immunization
Super Shot	Grabill	46741	Childhood Immunization
Safe Families for Children - Northeast Indiana	Fort Wayne	46825	Crisis Child Care
Brightpoint	Fort Wayne	46802	Family Development
Neighborhood Health Clinics - South Calhoun Street	Fort Wayne	46802	Family Planning

Women's Care Center of Fort Wayne -			
East Wayne Street	Fort Wayne	46802	Family Planning
Women's Care Center of Fort Wayne -			
West Coliseum Boulevard	Fort Wayne	46808	Family Planning
Women's Care Center of Fort Wayne -			
West Jefferson Street	Fort Wayne	46804	Family Planning
Vocational Rehabilitation Services - Areas 7 & 8	Fort Wayne	46806	Family Planning Eligibility Program
Aleas / & o	FOIL Wayrie	40000	Human Growth and
Mcmillen Center for Health Education	Fort Wayne	46816	Development Education
Healthier Moms and Babies	Fort Wayne	46807	Mama Moods
Lutheran Hospital	Fort Wayne	46804	Mood Changes and Moms
A Hope Center - Grabill	Grabill	46741	Post Abortion Healing
A Hope Center - South Calhoun	Fort Wayne	46807	Post Abortion Healing
A Hope Center Pregnancy and			
Relationship Services	Fort Wayne	46815	Post Abortion Healing
A Hope Center - Grabill	Grabill	46741	Pregnancy Testing
A Hope Center - South Calhoun	Fort Wayne	46807	Pregnancy Testing
A Hope Center Pregnancy and			
Relationship Services	Fort Wayne	46815	Pregnancy Testing
Lafayette Street Family Health Clinic	Fort Wayne	46806	Women's Clinic
ABUSE/ADDICTION			
Salvation Army Adult Rehab Center	Fort Wayne	46802	Adult Rehab Center
AA - FW Intergroup	Fort Wayne	46815	Al-Anon / Alateen
AA - FW Intergroup	Fort Wayne	46815	Alcoholics Anonymous
Christian Community Health Care	Grabill	46741	Community Clinic
Park Center - E State Boulevard	Fort Wayne	46805	Crisis Line
			Drug Abuse Prevention
Mcmillen Center for Health Education	Fort Wayne	46816	Education
YWCA of Northeast Indiana	Fort Wayne	46816	Hope and Harriet
Park Center - Carew Street	Fort Wayne	46805	Inpatient Mental Health
			Living Free Recovery and
Connection Points Ministry - FW	Fort Wayne	46815	Counseling Services
Connection Points Ministry - Grabil	Grabill	46741	Living Free Recovery and Counseling Services
Connection Foints Willistry - Grabii	Grabili	40741	Mental Health Care,
VA of Northern Indiana - FW	Fort Wayne	46805	Veteran
St. Joseph Hospital	Fort Wayne	46802	Mental Health Services
			Needle
FW-Allen County Dept of Health -			Exchange/Distribution
Syringe Services	Fort Wayne	46806	Programs
Bowen Center - FW	Fort Wayne	46808	Substance Abuse Services
Park Center - Carew Street	Fort Wayne	46805	Substance Abuse Services
Hope Alive	Fort Wayne	46808	Support Groups
Vocational Rehabilitation Services -			Substance Abuse
Areas 7 & 8	Fort Wayne	46807	Treatment, Outpatient

The Thirteen Step House	Fort Wayne	46802	Substance Abuse, Residential
Freedom House	Fort Wayne	46802	Transitional Housing
Road to Recovery	Fort Wayne	46805	Transitional Housing
Shepherd's House	Fort Wayne	46805	Transitional Housing
The Rose Home	Fort Wayne	46803	Transitional Housing
MENTAL HEALTH	1 ore wayne	10003	Transitional Frodering
Center for Nonviolence	Fort Wayne	46807	Anger Management
center for Pronviolence	Tore wayne	10007	Batterer Intervention
Center for Nonviolence	Fort Wayne	46807	Program
Parkview Behavioral Health	Fort Wayne	46805	Behavioral Health Services
Healthvisions of Fort Wayne	Fort Wayne	46803	Bienvenido Program
Turnstone	Fort Wayne	46805	Caregiver Support Group
			Children's Mental Health
Park Center - E State Boulevard Vocational Rehabilitation Services -	Fort Wayne	46805	Initiative/Wraparound
Areas 7 & 8	Fort Wayne	46807	Counseling
Park Center - E State Boulevard	Fort Wayne	46805	Crisis Line
	. c.c.ray.ic	19995	Dialectical Behavioral
Park Center - E State Boulevard	Fort Wayne	46805	Therapy
Park Center - Carew Street	Fort Wayne	46805	Inpatient Mental Health
Mental Health America Northeast	5	46007	
Indiana	Fort Wayne	46807	Mental Health Association Mental Health Care,
VA of Northern Indiana - FW	Fort Wayne	46805	Veteran
St. Joseph Hospital	Fort Wayne	46802	Mental Health Services
			Outpatient Mental Health
Crossroad Child & Family Services	Fort Wayne	46805	Services
Park Center - Carew Street	Fort Wayne	46805	Outpatient Mental Health Services
Tark center Carew Street	Tore wayne	40003	Outpatient Mental Health
Park Center - E State Boulevard	Fort Wayne	46805	Services
			Outpatient Treatment
Bowen Center - FW	Fort Wayne	46808	Services Psychiatric Residential
Crossroad Child & Family Services	Fort Wayne	46805	Treatment Facility
Hope Alive	Fort Wayne	46808	Support Groups
We The Living	Fort Wayne	46814	Support Groups
	., .		Support Groups - Family
National Alliance on Mental Illness	Fort Wayne	46805	Support
National Alliance on Mental Illness	Fort Wayne	46805	Support Groups - Peer to Peer
ivational Amarice on Merital inness	Fort Wayne	40003	Support Groups - Special
National Alliance on Mental Illness	Fort Wayne	46805	Spousal Support
			Women's Violence
Center for Nonviolence	Fort Wayne	46807	Intervention Program
DIABETES			

Healthvisions of Fort Wayne	Fort Wayne	46803	Diabetes Education
St. Joseph Hospital	Fort Wayne	46802	Diabetes Support Group
			Health Fair - FW Rescue
Healthvisions of Fort Wayne	Fort Wayne	46802	Mission
CANCER			
American Cancer Society	Fort Wayne	46825	Appearance Enhancement Program
American Cancer Society	Fort Wayne	46825	Cancer Information and Referral
Cancer Services of Northeast Indiana	Fort Wayne	46825	Client Services
Francine's Friends	Fort Wayne	46845	Mobile Mammography
American Cancer Society	Fort Wayne	46825	Peer to Peer Breast Cancer Support
Cancer Services of Northeast Indiana	Fort Wayne	46825	Support Groups
AGING			
Aging and In - Home Services of NE Indiana	Fort Wayne	46805	Aging and Disability Resource Center
Turnstone	Fort Wayne	46805	Caregiver Support Group
Community Center	Fort Wayne	46802	Community Center
Brightpoint	Fort Wayne	46802	Covering Kids and Families
Brightpoint	Fort Wayne	46805	Covering Kids and Families
Neighborhood Health Clinics - South			J 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Calhoun Street	Fort Wayne	46802	Health Insurance
SSA-FW Field	Fort Wayne	46819	Medicare
Greater Indiana Chapter - FW	Fort Wayne	46804	Mental Health Information
Wellspring Interfaith Social Services	Fort Wayne	46802	Older Adult Program
STD TREATMENT			
Super Shot	Fort Wayne	46806	Adult Immunizations
Super Shot	Grabill	46741	Adult Immunizations
Super Shot	Fort Wayne	46845	Adult Immunizations
Medical Annex	Fort Wayne	46803	Adult/Adolescent Immunizations
Medical Annex	Fort Wayne	46803	Clinic
Neighborhood Health Clinics - South			
Calhoun Street	Fort Wayne	46802	Family Planning
Northeast Indiana Positive Resource	Fort Words	46906	LIIV Coro Consideration
Connection Northeast Indiana Positive Resource	Fort Wayne	46806	HIV Care Coordination
Connection	Fort Wayne	46806	Prevention Outreach
Northeast Indiana Positive Resource Connection	Fort Wayne	46806	
Connection	TOIL Wayne	40000	STD Testing