River Bend Hospital & North Central Health Services

2018 Community Health Needs Assessment

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EXECUTIVE SUMMARY

On behalf of River Bend Hospital and North Central Health Services, Inc. (NCHS), a community health needs assessment (CHNA) was conducted in 2018 primarily to identify the major mental health needs, both met and unmet, within the surrounding community. The community's geographic area is comprised of the following 10 counties in Indiana: Benton, Carroll, Clinton, Fountain, Jasper, Montgomery, Newton, Tippecanoe, Warren, and White. The chief objectives of the CHNA were to 1) identify major health needs within the community to ultimately improve the health of the area's residents and 2) voluntarily satisfy the federal guidelines within the Patient Protection and Affordable Care Act (PPACA) of 2010.

Data for this CHNA was collected from primary and secondary data sources to identify key findings and gaps that may exist between health needs and services provided within the communities served within the River Bend Hospital and NCHS service areas. This CHNA sought to use a range of data collection methods in order to broadly identify health needs in the service area as perceived by the general community, organizational stakeholders and service providers, and public health, social service, and business leaders. Particular attention was devoted to ensuring that the voices of those most disenfranchised in our communities were heard.

Four methods of collection for primary data were used: 1) a survey that collected data from a random sample of over 2,000 of the community's residents, 2) a convenience survey that collected data from over 500 individuals seeking care and services at organizational partner agencies within the service area, 3) focus groups that solicited input from approximately 100 individuals within the service area, and 4) a survey of stakeholders from community partners related to the 2015 CHNA. Several secondary data sources were reviewed to identify key findings with strategic implications and for benchmarking.

Highlighted subsequently are important findings identified through the CHNA process:

- Access to mental health services is limited, particularly for at-risk populations; therefore, new or expanded mental health services is needed to effectively reach at-risk populations.
- The community suffers from a shortage of mental health professionals, particularly qualified psychiatrists, psychologists, social workers and primary mental health care providers.
- There continues to be a need for increasing financial resources and funding for mental health and related social services.
- Substance use and abuse are among the health-related issues that both community members and service providers perceive to be priorities that need to be addressed.
- Across the issues of substance use, substance abuse, and mental health, multiple co-morbidities are present including social factors such as poverty, homelessness, and food insecurity. These issues also share determinants related to limited access to primary care and the consequences of limited primary care for those facing chronic health conditions such as obesity and diabetes.

The resulting CHNA provides a foundation for the development and evaluation of community-based health and social service programs, provides a roadmap for philanthropic efforts, and results in the availability of extensive and comprehensive data about our communities that can be used by service organizations to inform decisions about the programs and care most likely to be of benefit in our communities.

ORGANIZATIONAL BACKGROUND

North Central Health Services

North Central Health Services (NCHS) was created in 1984 to serve as the parent company of a family of corporations which included Lafayette Home Hospital, Home Hospital Foundation, and Service Frontiers Incorporated. Today, NCHS has a primary responsibility to operate River Bend Hospital, which is a nonprofit inpatient psychiatric hospital, licensed and certified by the Indiana FSSA Division of Mental Health and Addiction and accredited by the Joint Commission. NCHS also is a grantmaking organization providing grants to 501(c)(3) organizations serving the citizens of Benton, Carroll, Clinton, Fountain, Montgomery, Tippecanoe, Warren, and White counties in Indiana for projects that relate to health and healthy communities.

River Bend Hospital

River Bend Hospital is nonprofit inpatient psychiatric hospital licensed and certified by the Indiana FSSA Division of Mental Health and Addiction and accredited by the Joint Commission. Inpatient care is provided to adults by behavioral medicine specialists including psychiatrists, psychologists, social workers, activity therapists, and nurse professionals. They are well supported by others in the health profession and together create a therapeutic environment designed for short-term intervention and mental health enhancement. River Bend Hospital accepts patients from throughout North Central Indiana and works cooperatively with others in behavioral health organizations to create a competent, caring environment for improving and restoring the mental health of our citizens.

Service Area and Community of the Hospital

The 2018 CHNA was conducted by North Central Health Services and River Bend Hospital for the approximate 379,711 residents of Benton, Carroll, Clinton, Fountain, Jasper, Montgomery, Newton, Tippecanoe, Warren, and White counties in Indiana. Figure 1 provides a map of the counties located in the service area. Table 1 provides a county by county summary of population, gender, age, race, and ethnicity characteristics of the service area based upon the U.S. Census Bureau's 2012-2016 American Community Survey (ACS) five-year estimates.

In section three (Review of Existing Health and Social Indicators) of this report, a more detailed description of the population characteristics of the service area are provided.

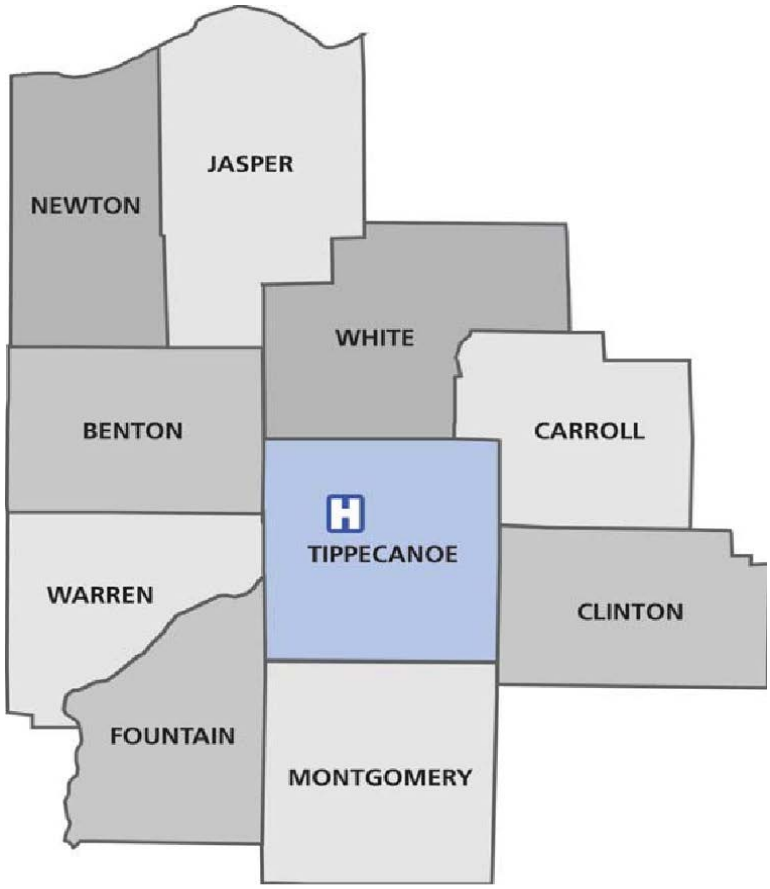


Figure 1. Service Area Counties

Table 1. Population Characteristics of Service Area

County	Total Population	% Men	% Women	Median Age	% Caucasian Race	% Hispanic Ethnicity
Benton	8709	49.8%	50.2%	40.5	85.6%	5.1%
Carroll	20007	49.8%	50.2%	42.3	97.0%	3.9%
Clinton	32692	49.4%	50.6%	38.6	94.8%	14.7%
Fountain	16741	50.2%	49.8%	42.5	97.7%	2.4%
Jasper	33461	49.5%	50.5%	39.1	95.6%	5.9%
Montgomery	38108	50.6%	49.4%	40.4	97.9%	4.6%
Newton	14022	50.5%	49.5%	42.7	96.0%	5.9%
Tippecanoe	183397	51.1%	48.9%	27.9	84.1%	8.0%
Warren	8309	49.6%	50.4%	44.5	98.9%	1.4%
White	24265	49.7%	50.3%	42.3	95.1%	7.6%

2018 CHNA PROCESS AND METHODS

CHNA Overview

North Central Health Services and River Bend Hospital worked with a range of community and academic partners to conduct a comprehensive community health needs assessment (CHNA) consistent with the requirements set forth in section 9007 of the Patient Protection and Affordable Care Act (PPACA) of 2010.

The CHNA requirements were effective starting taxable years beginning after March 23, 2012. On December 29, 2014, the Treasury Department and the IRS published the final regulations for section 501(r) located in 26 CFR parts 1, 53, and 602. The Hospital is licensed and certified by the Indiana FSSA Division of Mental Health and Addiction and accredited by the Joint Commission, and not licensed, registered or recognized by the state of Indiana as a hospital facility. River Bend is a nonprofit psychiatric facility that provides inpatient care to adults by behavioral medicine specialists including psychiatrics, psychologists, social workers, activity therapists and nurse professionals. The organization is not required to comply with Internal Revenue Code 501(r) per the definition defined in section 501(r)(2)(A)(i) for Hospital facilities. The Indiana Administrative Code Section 16-18-2-179(b) specifically excludes from the definition of Hospital "institutions included to diagnose, care, and treat individuals with a mental illness." However, in the best interest of the community, River Bend's management elected to have an assessment conducted in a good faith effort to support and improve the health of the community it serves.

The assessment was developed to identify the significant health needs in the community and gaps that may exist in services provided. It was also developed to provide the community with information to assess essential mental health care, preventive care, and treatment services. This endeavor represents NCHS's and the Hospital's efforts to share information that can lead to improved mental health care and quality of care available to the community, while reinforcing and augmenting the existing infrastructure of services and providers.

CHNA Activities and Methods

A comprehensive community health needs assessment was conducted beginning in 2017 and completed in 2018, the results of which are reflected in this report. Table 2 provides an overview of the overall process and specific methods related to each. Within each respective section of this report, additional details regarding methods, participants, and measures are provided.

Table 2. 2017-2018 Community Health Needs Assessment Methods

CHNA ACTIVITIES	DESCRIPTION OF ACTIVITIES
Identification of the Service Population	North Central Health Services and River Bend Hospital staff identified its community served through a review of patient-related data and other geographic boundaries

	related to the hospital's service area and determined that the geographic boundaries of a ten-county service area were to be included in the service population.
Review of Existing Health Indicator Data	North Central Health Services and River Bend Hospital, in collaboration with public health researchers, conducted a review of existing data and indicators relevant to this assessment. Subsequent to this review of data, a summary of key data to be considered during the CHNA process was developed.
Solicitation of Feedback on 2015 CHNA	In addition to posting the 2015 CHNA on public websites and providing contact information should community members have feedback, North Central Health Services and River Bend Hospital sought to collect information directly from stakeholders in the service area. A survey was used to collect feedback about the 2015 CHNA and how its priorities retained relevance for 2018 and also to solicit comments about the 2015 Implementation Plan.
Community Health Survey	In collaboration with nine other hospital systems, health department representatives, community organizations, and with faculty researchers from the University of Evansville and Indiana University Bloomington, North Central Health Services and River Bend Hospital developed and conducted a survey to collect data from residents of counties in the service area. The survey process included: a) a random sample that recruited proportionately from all zip codes in the ten-county service area and b) a convenience sample survey that sought to collect the same data from individuals seeking care and services at organizations in that same service area.
Community Focus Group Discussions	Four community focus group discussions were held in counties within the service area. The purpose of these focus group was to: a) discuss insights from the existing health indicator data summary, b) discuss the factors associated with ongoing health issues identified in that data, and c) to gather other local community input relevant to a comprehensive consideration of the health needs of those counties and the service area as a whole.
Health Needs Prioritization Session	North Central Health Services and River Bend Hospital held a meeting of key stakeholders and organizational leadership in order to review data from all activities conducted for the CHNA. Subsequent to a formal presentation and discussion of the data, attendees in the meeting participated in a nominal group process to identify the top health needs that would inform the development of the implementation plan.
Review of Resources and Partners	Based upon the results of the CHNA activities, North Central Health Services and River Bend Hospital developed a list of local resources and partnerships that would be relevant to addressing the needs identified via the CHNA and the subsequent implementation plan.

CHNA Partners

Conducting the CHNA necessitated collaboration with a range of public health and social service partners to ensure that diverse scientific and community-based insights were included throughout the process. Of particular importance was to ensure inclusion of individuals who directly or indirectly represented the needs of three important groups including: 1) those with particular expertise in public health practice and

research, 2) those who are medically underserved, low-income, or considered among the minority populations served by the hospital, and 3) the broader community at large and those who represent the broad interests and needs of the community served.

Key partner organizations included:

- *The University of Evansville*. Faculty, staff, and students in public health areas collaborated with the hospital on the data-oriented aspects of the project.

- *Indiana University School of Public Health*. Faculty and students collaborated with the hospital throughout the survey process.

- *Indiana University Center for Survey Research*. Faculty and staff provided in-depth technical assistance and guidance throughout the survey process and worked closely with NCHS and River Bend Hospital and the University of Evansville to field the community health survey.

- *Measures Matter, LLC*. Measures Matter is a community-based research consulting firm based in Bloomington, Indiana and Palm Springs, California. Measures Matter conducted an independent analysis of the survey data and also facilitated the prioritization process with the hospital and its partners.

- *County Health Departments.* Representatives of the Tippecanoe County Health Department were partners in the larger network of organizations and hospitals that worked to enhance consistency in statewide CHNA activities, particularly the CHNA Community Survey. The Clinton County Health Department was also involved in the CHNA and provided particular insights during the focus group discussion process.

- *Community Health and Social Service Organizations*. A wide range of community-based health and social service organizations collaborated throughout the CHNA process to consider data from the CHNA, make decisions regarding health priorities, and initiate considerations of subsequent actions based on the CHNA. In total, individuals representing 69 organizations supported the development of the CHNA. A list of those organizations from which community stakeholders participated is included as Appendix A.

2018 REVIEW OF EXISTING INDICATORS RELATED TO THE GEOGRAPHIC, POPULATION, HEALTH AND SOCIAL CHARACTERISTICS OF THE SERVICE AREA

Geographic Characteristics of the Service Area

NCHS and River Bend Hospital provide services to a ten-county service area encompassing Benton, Carroll, Clinton, Fountain, Jasper, Montgomery, Newton, Tippecanoe, Warren, and White counties. All data summarized in this section of the report were derived from U.S. Census Bureau (2018) and County Health Rankings and Roadmaps (2017) data for the years 2016 and 2017.

The combined service area spans roughly 4,429 square miles of the north-central and west-central regions of the state, including urban and rural areas. The economic base of the region is primarily supported by agricultural, industrial, and academic activities. The population per square mile is considerably lower than the state's average population and the majority of the population (49%) resides in Tippecanoe County.

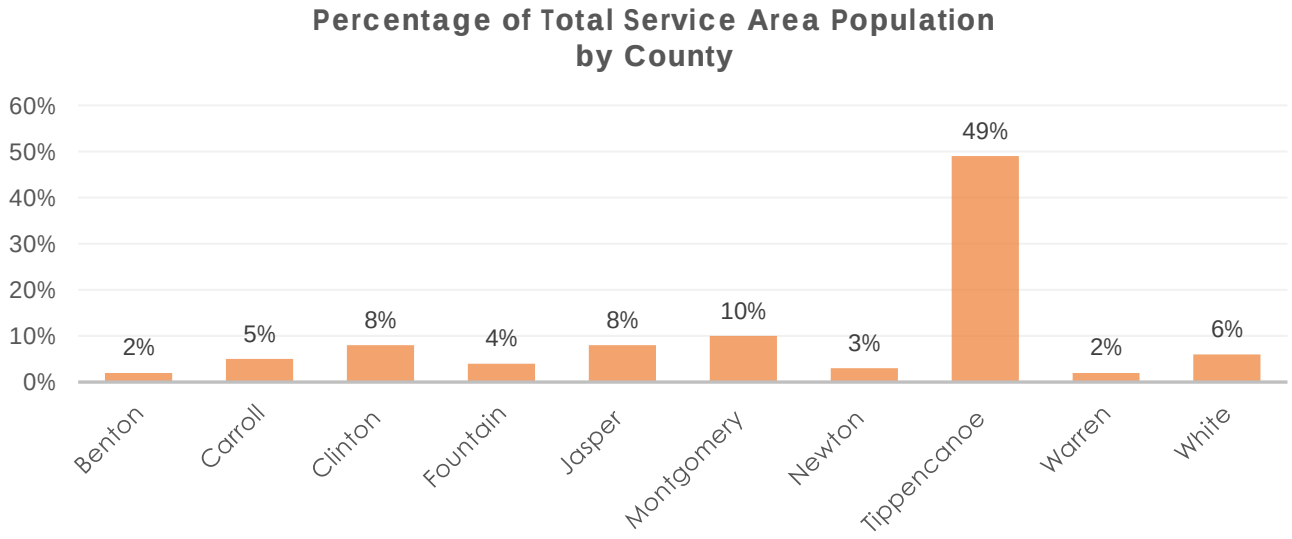


Figure 2. Percentage of total service area population by county.

Demographic Characteristics of the Service Area Population

The section below provides a summary of service area demographic characteristics including age, gender, race/ethnicity, education, poverty, and unemployment. Data indicate that the service area is slightly older, less racially diverse, has fewer residents that have completed a bachelor's degree, and fewer residents living in poverty when compared to the rest of the state. The distribution of service area residents by gender, ethnicity, and employment status is similar to state averages. Table 3 provides an overview of the demographic characteristics of the service area.

Age. The median age of service area residents is 40.37 years, with the majority being categorized as "older adults" between the ages of 45-64 years. The service area has a slightly older population when compared to the state's median age (37.5 years) and a higher percentage of residents that fall in the "older adult" age category (27.2% versus 26.1%, respectively). Across counties, children ages 0-4 years account for the smallest proportion of the population (5.9%), which is below the state average (6.4%). Figure 3 summarizes age.

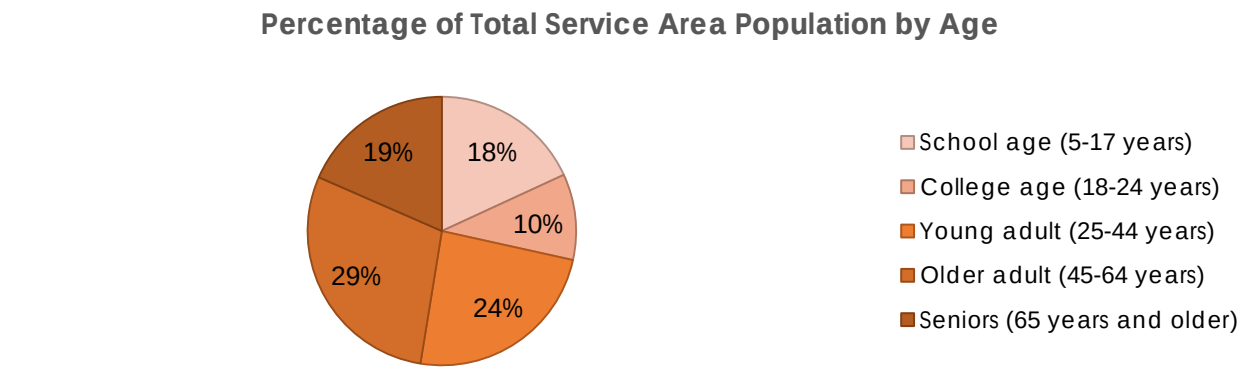


Figure 3. Percentage of total service area population by age.

Gender. Approximately half of residents (49.9%) identify as female and the distribution is similar to the state's overall population (50.7%). Figure 4 summarizes gender.

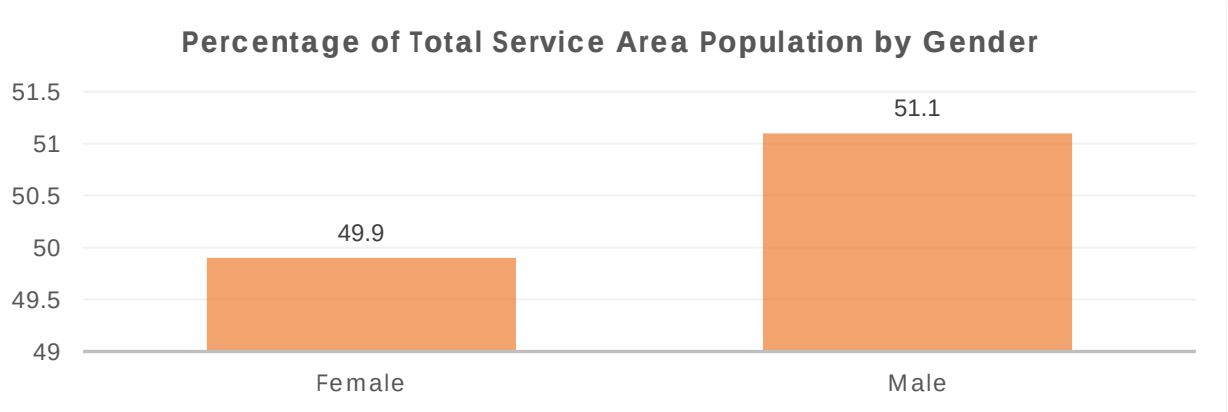


Figure 4. Percentage of total service area population by gender.

Race and ethnicity. Ninety-six percent of residents in the service area identify their race as White and 6.2% report their ethnicity as Hispanic or Latino origin. The largest proportion of non-whites (16%) resides in Tippecanoe County and the smallest proportion resides in Warren County (2.1%). State-level data indicate that 85.6% of Indiana residents identify as White and 6.8% identify as Hispanic or Latino, which suggests that the service area is less racially diverse in comparison. In particular, the percentage of service area residents that identify their race as "Black Alone" (1.2%) is significantly lower than the rest of the state's population (9.7%).

Education. As is summarized in Figure 5, slightly less than 42% of residents aged 25 years and older hold a high school diploma or the equivalent, which is significantly higher than the state average of 34.2%. With the exception of Tippecanoe County, the proportion of service area residents holding either a Bachelor's or graduate degree is lower than the state average.

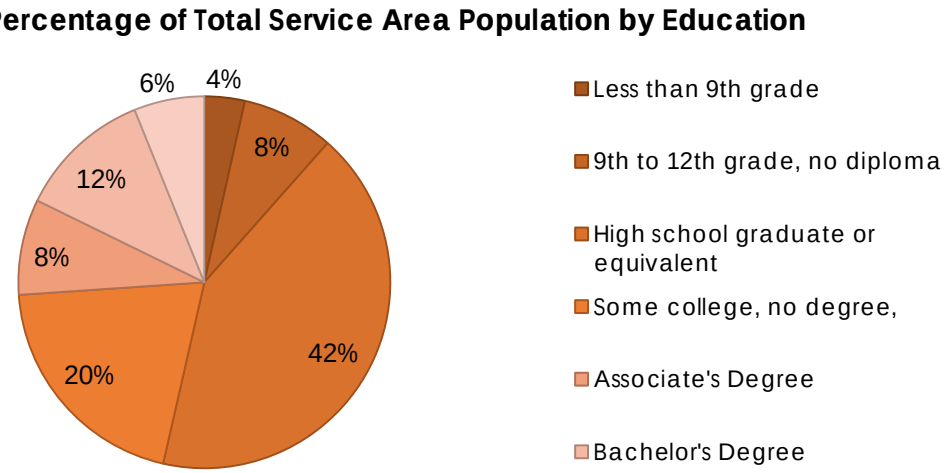


Figure 5. Percentage of total service area population by education.

Poverty and unemployment. As is articulated in Figure 6, the 2016 poverty rate across counties was 11.9% and is well below the state average of 14%. The county with the highest poverty rate was Tippecanoe (17.6%) and the county with the lowest rate was Warren (9.1%). The average annual unemployment rate for 2017 was 3.5%, which mirrors the overall state average (3.5%).

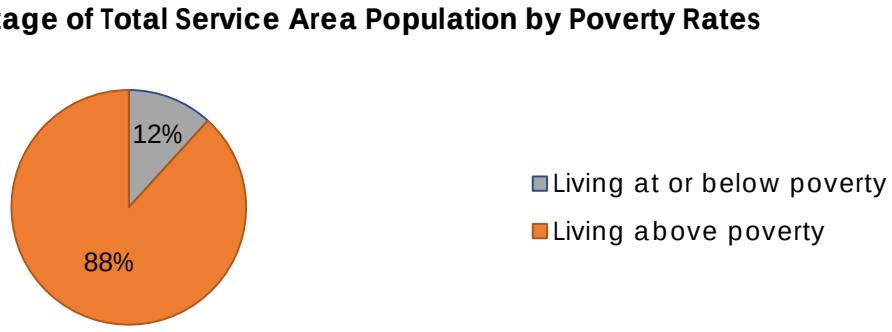


Figure 6. Percentage of total service area population by poverty rate.

Table 3. Service area demographic summary.

Demographic Characteristics	Percentage in Service Area	Percentage in State
Age		
Preschool (0-4)	5.9	6.4
School age (5-17)	17.0	17.4
College age (18-24)	9.7	10.0
Young adult (25-44)	22.6	25.2
Older adult (45-64)	27.2	26.1
Seniors (65 and older	17.3	14.8
Race		
American Indian/Native Alaskan Alone	0.4	0.4
Asian Alone	1.2	2.2
Black Alone	1.2	9.7
Native Hawaiian and other Pacific Asian Islander Alone	0.04	0.1
White	95.9	85.6
Two or More Race Groups	1.1	2.0
Ethnicity		
Non-Hispanic	93.5	93.2
Hispanic	6.5	6.8
Gender		
Female	49.9	50.7
Male	50.1	49.3
Education among Adults		
Less than 9th grade	3.5	3.9
9th to 12th grade, no diploma	8.0	8.0
High school graduate or equivalent	41.9	34.2
Some college, no degree	20.3	20.8
Associate Degree	8.3	8.4
Bachelor's Degree	11.6	15.7
Graduate Degree or more	6.1	8.9
Poverty Rate (2016)	11.9	14
Annual Unemployment Rate (2017)	3.5	3.5

LEADING HEALTH INDICATORS

Data Related to Mortality

The data describing leading causes of mortality in the service area are drawn from the Indiana State Department of Health, Indiana Mortality Report 2016 (ISDH, 2016). Table 4 summarizes data for selected leading causes of death classified by the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10) death code.

An examination of data from the service area suggests that malignant neoplasms (cancers) and major cardiovascular diseases were the two primary causes of mortality during 2016. These findings are consistent with national and state mortality data. The ten leading causes of death across the State of Indiana during the same timeframe were: (1) heart disease, (2) cancer, (3) chronic lower respiratory disease, (4) accidents, (5) stroke, (6) Alzheimer's disease, (7) diabetes, (8) kidney disease, (9) Septicemia, and (10) suicide (CDC, 2018). Modifiable lifestyle factors such as diet, physical activity, and alcohol and tobacco use are known to contribute to risk for many of the leading causes of morbidity within the service area and should be a focus of prevention and intervention efforts.

Table 4. Age adjusted death rate per 100,000 population by cause and county, 2016.

County	Malignant Neoplasms (Cancer)	Diabetes Mellitus	Alzheimer's Disease	Major Cardiovascular Diseases	Influenza and Pneumonia	Chronic Lower Respiratory Disease	Chronic Liver and Kidney Diseases	All other Diseases	Motor Vehicle Accidents	All Causes
Benton	187.26	8.22	24.55	201.48	8.16	32.8	36.54	142.16	8.22	698.10
Carroll	169.08	31.20	29.64	189.47	20.21	39.36	23.37	140.84	14.74	733.27
Clinton	184.99	20.0	40.13	226.07	11.29	52.19	18.54	181.06	27.29	837.42
Fountain	218.40	38.06	7.29	224.76	4.15	93.91	41.91	145.44	14.36	864.84
Jasper	165.98	20.84	26.42	273.11	18.45	28.59	25.63	145.54	13.48	819.99
Montgomery	163.15	23.62	38.35	254.28	16.38	48.82	15.75	141.87	12.33	802.77
Newton	170.22	4.36	22.22	209.82	8.73	95.40	12.80	221.73	34.78	890.05
Tippecanoe	166.10	10.52	35.43	228.34	9.96	48.84	28.39	148.24	4.88	741.49
Warren	208.88	7.34	24.01	310.10	8.95	64.83	6.99	116.44	31.16	845.77
White	191.35	21.44	41.06	227.89	10.21	70.01	27.43	180.94	14.20	824.89

Source: ISDH, Indiana Mortality Report, 2016.

Data Related to Morbidity

Chronic Disease

This section of the report provides an overview of the service area's data related to selected chronic diseases including asthma, diabetes, heart disease, high blood pressure, and high cholesterol.

Asthma prevalence. Table 5 reports the percentage of adults aged 18 and older who self-report that they have ever been told by a doctor, nurse, or other health professional that they had asthma. This indicator is relevant because asthma is a prevalent problem in the U.S. and is often exacerbated by environmental conditions such as poor air quality.

Rates of asthma in the majority of counties in the service area were lower than state and national averages. The only county that exceeded state and national benchmarks was Montgomery.

Table 5. Asthma prevalence by county.

Report Area	Survey Population (Adults Age 18+)	Total Adults with Asthma	Percent Adults with Asthma
Report Area	259,845	29,680	11.4%
Benton County, IN	no data	no data	no data
Carroll County, IN	19,961	2,603	13%
Clinton County, IN	22,575	1,801	8%
Fountain County, IN	14,277	1,484	10.4%
Jasper County, IN	25,493	3,401	13.3%
Montgomery County, IN	28,914	4,983	**17.2%**
Newton County, IN	14,716	1,276	8.7%
Tippecanoe County, IN	116,631	11,910	10.2%
Warren County, IN	no data	no data	no data
White County, IN	17,278	2,222	12.9%
Indiana	4,839,606	648,575	13.4%
United States	237,197,465	31,697,608	13.4%

Note: This indicator is compared with the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2011-12. Source geography: County

Diabetes prevalence. Table 6 summarizes the percentage of adults aged 20 and older who have ever been told by a doctor that they had diabetes. This indicator is relevant because diabetes is a prevalent problem in the U.S. and may indicate a lifestyle that places individuals at risk for premature morbidity as well as developing other health problems.

The prevalence of diabetes was higher in six of the ten service area counties when compared to state and national rates. White County had the highest prevalence rates (12.0%), while Tippecanoe had the lowest (7.7%). These findings indicate that there is a need for prevention across the service area.

Table 6. Diabetes prevalence by county.

Report Area	Total Population Age 20+	Population with Diagnosed Diabetes	Population with Diagnosed Diabetes, Crude Rate	Population with Diagnosed Diabetes, Age-Adjusted Rate
Report Area	276,994	27,263	9.84	9.45%
Benton County, IN	6,388	773	12.1	10.4%
Carroll County, IN	14,866	1,992	13.4	11.3%
Clinton County, IN	23,536	2,942	12.5	11%
Fountain County, IN	12,561	1,746	13.9	11.5%
Jasper County, IN	24,159	2,730	11.3	9.8%
Montgomery County, IN	28,127	3,319	11.8	10.2%
Newton County, IN	10,647	1,235	11.6	9.6%
Tippecanoe County, IN	132,246	9,125	6.9	7.7%
Warren County, IN	6,361	776	12.2	9.9%
White County, IN	18,103	2,625	14.5	12%
Indiana	4,803,191	533,877	11.12	10.18%
United States	236,919,508	23,685,417	10	9.19%

Note: This indicator is compared with the state average.
Data Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 2013. Source geography: County

Heart disease (adult) prevalence. This indicator is relevant because coronary heart disease is a leading cause of death in the U.S. and is associated with high blood pressure, high cholesterol, and heart attacks. Table 7 summarizes heart disease prevalence for the service area's counties.

The prevalence of heart disease exceeded state and national benchmarks in four counties (Carroll, Clinton, Fountain, Newton) in the service area. When examining rates, the prevalence of heart disease in Newton and Clinton counties was over four percentage points higher than the state average and five percentage points higher than the national average. Heart disease is a leading cause of mortality and morbidity and interventions to reduce rates in counties that are disproportionately affected are needed.

Table 7. Heart disease prevalence by county, 2011-2012.

Report Area	Survey Population (Adults Age 18+)	Total Adults with Heart Disease	Percent Adults with Heart Disease
Report Area	257,814	13,043	5.1%
Benton County, IN	no data	no data	no data
Carroll County, IN	19,961	1,243	**6.2%**
Clinton County, IN	22,773	2,176	**9.6%**
Fountain County, IN	14,202	1,082	**7.6%**
Jasper County, IN	25,493	1,227	4.8%
Montgomery County, IN	28,698	1,005	3.5%
Newton County, IN	14,251	1,370	**9.6%**
Tippecanoe County, IN	115,870	4,404	3.8%
Warren County, IN	no data	no data	no data
White County, IN	16,566	536	3.2%
Indiana	4,815,238	247,073	5.1%
United States	236,406,904	10,407,185	4.4%

Note: This indicator is compared with the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2011-12. Source geography: County

High blood pressure (adult) prevalence. This indicator is relevant because it is often associated with heart disease and stroke. Table 8 summarizes data related to high blood pressure in the service area's counties.

The data suggest that four counties (Carroll, Jasper, Tippecanoe, White) in the service area demonstrate a higher prevalence of individuals with high blood pressure when compared to state and national averages.

Table 8. High blood pressure prevalence by county, 2006-2012.

Report Area	Total Population (Age 18+)	Total Adults with High Blood Pressure	Percent Adults with High Blood Pressure
Report Area	284,808	80,274	**30.03%**
Benton County, IN	6,529	no data	suppressed
Carroll County, IN	15,208	5,079	**33.4%**
Clinton County, IN	24,290	5,490	22.6%
Fountain County, IN	13,130	3,650	27.8%
Jasper County, IN	24,729	7,740	**31.3%**
Montgomery County, IN	29,050	6,769	23.3%
Newton County, IN	10,930	no data	suppressed
Tippecanoe County, IN	135,711	44,513	**32.8%**
Warren County, IN	6,493	1,487	22.9%
White County, IN	18,738	5,546	**29.6%**
Indiana	4,848,923	1,415,886	29.2%
United States	232,556,016	65,476,522	28.16%

Note: This indicator is compared with the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US Department of Health & Human Services, Health Indicators Warehouse. 2006-12. Source geography: County

High cholesterol (adult) prevalence. This indicator reports the percentage of adults aged 18 and older who self-report that they have ever been told by a doctor, nurse, or other health professional that they had high blood cholesterol. High cholesterol has relevance because it can be a marker of risk for heart disease. Table 9 summarizes this data.

Five counties in the service area surpassed state and national averages for the percentage of adults with high cholesterol. Counties of particular concern include Fountain, Jasper, Newton, and White, where nearly half of adults or more report high cholesterol.

Table 9. High cholesterol prevalence by county, 2011-2012.

Report Area	Survey Population (Adults Age 18+)	Total Adults with High Cholesterol	Percent Adults with High Cholesterol
Report Area	188,250	71,230	37.84%
Benton County, IN	no data	no data	no data
Carroll County, IN	15,658	3,478	22.22%
Clinton County, IN	18,976	7,500	**39.52%**
Fountain County, IN	7,374	3,678	**49.88%**
Jasper County, IN	12,084	6,976	**57.73%**
Montgomery County, IN	22,954	6,582	28.67%
Newton County, IN	13,020	6,536	**50.20%**
Tippecanoe County, IN	85,028	29,004	34.11%
Warren County, IN	no data	no data	no data
White County, IN	13,156	7,476	**56.82%**
Indiana	3,555,280	1,390,393	39.11%
United States	180,861,326	69,662,357	38.52%

Note: This indicator is compared with the state average.
Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. 2011-12. Source geography: County

Infectious Disease

The subsequent section (and Table 10) summarizes data from the Indiana State Department of Health Epidemiology Resource Center's Annual Report of Infectious Diseases, 2016. Diseases are categorized in the following ways: (1) Vaccine Preventable (i.e. Mumps, Pertussis, Pneumococcal Disease), (2) Vector Borne (i.e. Lyme Disease), (3) Viral Hepatitis (i.e. Hepatitis C), and (4) Enteric (i.e. Salmonellosis). The categorization of disease has implications for prevention efforts and each will be discussed in the section on prevention. Sexually transmitted disease (STD) data are reported separately.

Table 10. Cases per 100,000 population by disease and county, 2016.

County	Mumps (Vaccine Preventable)	Pertussis (Vaccine Preventable)	Pneumococcal Disease (Vaccine Preventable)	Lyme Disease (Vector Borne)	Hepatitis C (Chronic)	Salmonellosis (Enteric)
Benton	< 5	< 5	< 5	0	92.50	< 5
Carroll	< 5	< 5	< 5	5.00	105.20	< 5
Clinton	< 5	< 5	< 5	3.10	107.80	< 5
Fountain	< 5	< 5	< 5	6.10	84.90	< 5
Jasper	< 5	< 5	< 5	9.00	83.70	23.90
Montgomery	< 5	< 5	< 5	10.50	173.30	< 5
Newton	< 5	< 5	13.10	0	71.80	< 5
Tippecanoe	21.80	< 5	9.60	3.20	73.40	7.40
Warren	< 5	< 5	< 5	0	85.70	< 5
White	< 5	< 5	25.00	4.20	91.70	20.80
Indiana State	4.42	2.68	10.37	2.29	123.11	12.05

Source: ISDH, Infectious Diseases Report, 2016

Many infectious diseases are vaccine-preventable, including Mumps, Pertussis, and Pneumococcal Disease. During 2016, Tippecanoe County reported a higher incidence rate of Mumps (21.80 per 100,000) when compared to the rest of the service area and significantly exceeded the state rate (4.42). An examination of the incidence of Pneumococcal Disease in the service area indicates that residents of Newton, Tippecanoe, and White counties demonstrated higher incidence (range 9.60-25.00 per 100,000 population) when compared to the rest of the service area (< 5 cases). Further, Newton and White counties exceeded the state average (10.37 cases per 100,000). Combined, these findings suggest that residents of Newton, Tippecanoe, and White counties may be under-vaccinated. Efforts to improve vaccination uptake may contribute to reduced disease incidence.

Lyme Disease is categorized as a vector-borne disease and is transmitted through tick bites. While ticks are most active in warmer months (April-September), preventative measures should be taken year-round. Measures include: (1) avoiding contact with ticks, (2) repelling ticks on skin and clothing, and (3) finding and removing ticks from the body. Because seven of the ten counties in the service area reported higher incidence rates of Lyme Disease when compared to the state average, community health specialists should consider providing education that includes a focus on prevention within the service region.

Chronic Hepatitis C is most common among baby boomers and younger people that use injection drugs. Historically, the virus was transmitted though medical procedures, poor infection control practices, blood transfusions, and tissue/organ transplants. Today, common routes of transmission include the sharing of syringes or other equipment to inject drugs, perinatal exposures, workplace exposures (i.e. healthcare

workers), and exposures resulting from tattooing and body piercing. In the service area, Montgomery County was the only county to exceed the average state incidence rate for Hepatitis C during 2016. These results suggest that prevention and control efforts are most needed in Montgomery County. While routine testing is one recommended form of prevention and control, additional efforts might include interventions that focus on reducing exposure via the mechanisms described above.

Salmonellosis is classified as an enteric disease and transmission is often associated with poor hygienic and food preparation practices. When examining the incidence rates across the service area, Jasper, Tippecanoe, and White counties had the highest rates. In comparison to the state average, both Jasper and White counties reported a higher incidence of new infections. These data suggest that ongoing prevention is needed. Recommended interventions include those that emphasize practicing good hygienic practices, separating raw and cooked foods, maintaining safe food temperatures, eating safe foods and drinking clean water, and safely handling animals.

Sexually transmitted diseases. The following section describes the reported cases of Chlamydia, Gonorrhea, and Syphilis in the service area. Counts present the raw number of incidence and rates reflect the incidence per 100,000 population. Tables 11, 12, and 13 provide data summaries by county for Chlamydia, Gonorrhea, and Syphilis, respectively.

Table 11. Reported Chlamydia cases and rates by county.

County	2012		2013		2014		2015		2016	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Benton	19	215.6	27	309.6	32	368.3	23	265.2	32	368.9
Carroll	32	159.0	37	184.0	23	115.4	56	281.5	68	341.9
Clinton	99	300.5	86	261.5	116	355.7	128	393.0	116	356.2
Fountain	45	263.1	40	237.0	52	311.3	62	347.9	56	388.7
Jasper	66	197.2	66	197.5	48	143.4	83	247.8	97	289.5
Montgomery	108	282.9	104	273.1	105	276.0	163	427.1	156	408.7
Newton	26	184.9	19	135.4	21	149.1	24	171.4	19	135.7
Tippecanoe	848	475.3	836	461.3	834	454.5	1128	607.3	997	536.8
Warren	18	214.5	19	226.8	20	240.1	13	157.0	10	120.8
White	84	344.4	57	234.3	57	233.8	72	297.2	84	346.8
Indiana State	29546	449.8	28023	424.9	28519	431.3	28886	435.5	30847	465.0

Source: ISDH, Sexually Transmitted Diseases, 2016

Table 12. Reported Gonorrhea cases and rates by county.

County	2012		2013		2014		2015		2016	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Benton	*	*	*	*	5	57.5	*	*	7	80.7
Carroll	*	*	*	*	*	*	*	*	11	55.3
Clinton	6	18.2	5	15.2	9	27.6	10	30.7	23	70.6
Fountain	*	*	*	*	5	29.9	*	*	5	30.2
Jasper	*	*	5	15.0	*	*	*	*	11	32.8

Montgomery	14	36.7	14	36.8	10	26.3	39	102.2	24	69.2
Newton	*	*	*	*	*	*	0	0.0	*	*
Tippecanoe	174	97.5	175	96.6	156	85.0	237	127.6	227	122.2
Warren	*	*	*	*	*	*	*	*	0	0.0
White	10	41.0	*	*	*	*	6	24.8	13	53.7
Indiana State	7346	111.8	7144	108.3	7289	110.2	7843	118.2	9451	142.5

Source: ISDH, Sexually Transmitted Diseases, 2016
* Cell counts <5 were suppressed for confidentiality

Table 13. Primary and secondary Syphilis cases and rates by county.

County	2012		2013		2014		2015		2016	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Benton	0	0.0	0	0.0	0	0.0	0	0.0	*	*
Carroll	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clinton	*	*	*	*	*	*	*	*	0	0.0
Fountain	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Jasper	*	*	*	*	*	*	*	*	*	*
Montgomery	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Newton	*	*	*	*	*	*	*	*	*	*
Tippecanoe	6	3.4	*	*	5	3.0	11	5.9	11	6.3
Warren	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
White	*	*	*	*	*	*	*	*	5	20.4
Indiana State	225	3.4	215	3.3	168	2.5	285	4.3	326	5.0

Source: ISDH, Sexually Transmitted Diseases, 2016
* Cell counts <5 were suppressed for confidentiality
N/A – no data were reported

All counties in the service area had lower rates of Chlamydia and Gonorrhea across all years when compared to state rates, with the exception of Tippecanoe, which exceeded the state Chlamydia rate during 2013 and 2014 and the Gonorrhea rate in 2015. Incidence of primary and secondary Syphilis was low across the majority of the service area for all reported years. However, Tippecanoe County met or surpassed state rates for all years except 2013. The data suggest that sexual health, as measured by incidence of disease, is comparatively better in the service than the state overall. The elevated rates in Tippecanoe County indicate that intervention to reduce STD transmission is warranted.

STDs disproportionately impact adolescents, women, and racial, ethnic, and sexual minority groups. Risk factors include substance use/abuse; unprotected oral, anal, and vaginal intercourse; having a new sexual partner, having multiple sexual partners, and/or having partners of unknown STD status; and exchanging sex for money, drugs, or other resources. Often, individuals that have an STD are unaware due to their asymptomatic (i.e. showing no signs or symptoms) nature, which is particularly true for females. As a result, prevention efforts should include interventions that encourage routine testing; provide education about STD risks, signs and symptoms, and their asymptomatic nature; emphasize the importance of using male condoms and other barriers; and convey the importance of communication between sexual partners.

Health Indicators and Service Area County Health Rankings

The data presented in the health indicators section of the report summarizes population health outcomes; health factors and health behaviors; clinical care; and social, economic, and physical environment factors for the service area, Indiana State, and the top US performers (i.e. top 10th percentile). The 2017 and 2018 data were drawn from county-level reports compiled by County Health Rankings and Roadmaps (2018), which utilizes a variety of original data sources and measures.

Health Rankings

County Health Rankings are based on a conceptual model of population health that includes both Health Outcomes (length and quality of life) and Health Factors (determinants of health) (see Figure 7). These Outcomes and Factors are broken down into a number of components that are broken down further into subcomponents called Focus Areas.

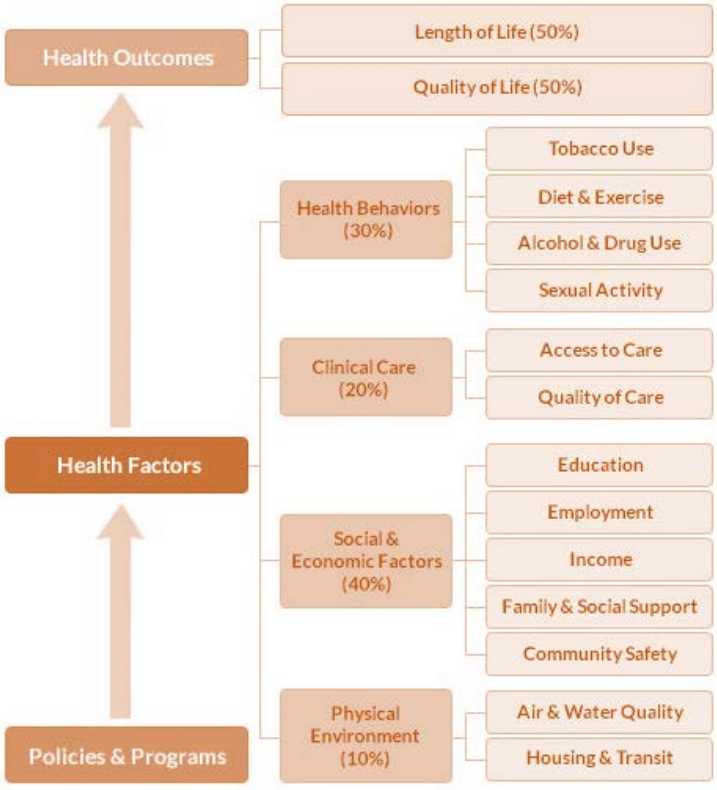


Figure 7. County Health Ranking Model ranking system.

The County Health Ranking Model provides the foundation for the ranking process. Counties in each of the 50 states are ranked according to summaries of a variety of health measures and those with high ranks, e.g. 1 or 2, are considered to be the "healthiest." Counties are ranked relative to the health of other counties in the same state, which allows for comparisons between counties. Rankings are based on the calculation of eight summary composite scores:

1. Overall Health Outcomes
2. Health Outcomes – Length of life
3. Health Outcomes – Quality of life
4. Overall Health Factors
5. Health Factors – Health behaviors
6. Health Factors – Clinical care
7. Health Factors – Social and economic factors
8. Health Factors – Physical environment

These data provide context to help communities understand the factors that contribute to population health outcomes. The health outcomes of any community are determined by multiple behavioral, social, economic, and environmental factors as well as access to health care services. Collectively, the factors that contribute to health outcomes are referred to as the social determinates of health (SDOH). According to the US Centers of Disease Control and Prevention (CDC), the application of information gained from assessments of community-level SDOH can improve individual and population health outcomes as well as advance health equity (CDC, 2018).

It is important to recognize that each community has unique strengths and challenges. County-level data provides communities the opportunity to identify and capitalize on strengths that promote community health as well as identify and address challenges that threaten community health outcomes. Therefore, if a county's overall health outcomes rank is better than the health factors rank, it suggests that the health outcomes rank may decline in the future if no action toward improvement is taken. If a county's health outcomes rank is worse than its health factors rank, the health outcomes rank may improve in the future with appropriate intervention.

The data and comparisons presented in this section of the report provide important information that can be used to identify areas of strength as well as challenges and, in doing so, provide opportunities for the development and implementation of strategies that support improved community health outcomes across the service area.

State and Service Area County Rankings. The map below (see Figure 8) depicts the distribution of rankings by county across all 92 counties in the state for the year 2018.

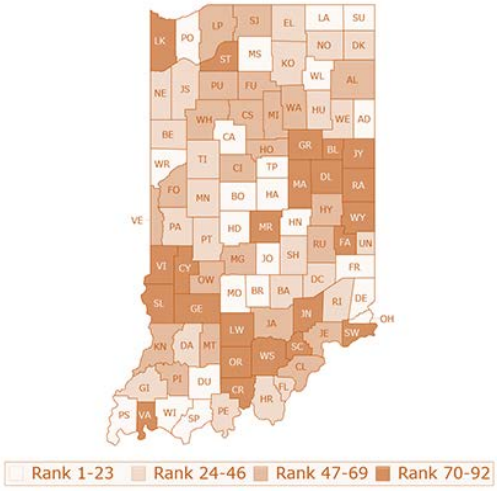


Figure 8. Indiana county rankings, 2018.

Rankings indicate significant variability among the ten counties in the service area, with Warren ranking 3rd in the state and Clinton ranking 58th (see Table 14). The majority of counties in the service area were ranked within the top 50th percentile and only three counties (Clinton, Fountain, and White) ranked in the 75th percentile.

Table 14. Service area overall rankings by county.

County	Rank	Percentile
Benton	32	50th
Carroll	19	25th
Clinton	58	75th
Fountain	50	75th
Jasper	36	50th
Montgomery	27	50th
Newton	37	50th
Tippecanoe	24	50th
Warren	3	25th
White	49	75th

Source: County Rankings and Road Maps.

Health Outcomes

Population health outcome rankings for the service area are formulated from composite scores that are calculated by measuring of a variety of factors, including those that contribute to length and quality of life. While the service area did not exceed the benchmarks set by the top US performers, the summative data indicate that the service area's overall performance is above the state average for all indicators except the percentage of residents reporting poor/fair health. Table 15 summarizes this data.

Table 15. Summary of service area health outcomes.

Health Outcomes	Service Area Average	Indiana State	Top US Performers	Data Source	Years
Length of life					
Premature death	7360	7800	5300	NVSS	2014-2016
Premature age-adjusted mortality	373	390	270	NVSS	2014-2016
Quality of life					
Poor physical health days	3.8	3.9	3.0	BRFSS	2016
Poor mental health days	4.3	4.3	3.1	BFRSS	2016
Poor/fair health	18.3%	18.0%	12.0%	BFRSS	2016
Frequent physical distress	11.4%	12.0%	9.0%	BFRSS	2016
Frequent mental distress	11.9%	13.0%	10.0%	BFRSS	2016
Low birth weight	6.8%	8.0%	6.0%	NVSS	2010-2016

Source: County Rankings and Road Maps.

Length of Life. A county by county comparison of length of life rankings indicates that Warren ranked the best at 3rd in the state, while Clinton performed the worst and was ranked 63rd among the 92 Indiana counties (see Table 16). Three counties (Carroll, Tippecanoe, and Warren) ranked in the top 25th percentile and five (Benton, Clinton, Fountain, Jasper, and White) ranked in the 75th percentile for the state.

Table 16. Length of life rankings by county.

County	Rank	Percentile
Benton	52	75th
Carroll	16	25th
Clinton	63	75th
Fountain	50	75th
Jasper	49	75th
Montgomery	24	50th
Newton	33	50th
Tippecanoe	15	25th
Warren	3	25th
White	59	75th

Source: County Rankings and Road Maps.

Quality of Life. A county by county comparison of quality of life rankings indicates that Warren ranked the best at 5th in the state, while Clinton performed the worst and was ranked 44th among the 92 Indiana counties (see Table 17). Three counties (Benton, Jasper, and Warren) ranked in the top 25th percentile and none of the counties ranked in the 50th percentile.

Table 17. Quality of life rankings by county.

County	Rank	Percentile
Benton	12	25th
Carroll	32	50th
Clinton	44	50th
Fountain	41	50th
Jasper	17	25th
Montgomery	37	50th
Newton	40	50th
Tippecanoe	36	50th
Warren	5	25th
White	27	50th

Source: County Rankings and Road Maps.

Health Outcome Strengths and Challenges for the Service Area

Strengths

- Premature death and age-adjusted premature mortality rates were lower in the service area when compared to the state average.
- The number of poor physical health days reported by service area residents was slightly lower than the state average.
- The percentage of service area residents reporting frequent physical distress was lower than the state average.
- The percentage of service area residents reporting frequent mental distress was lower than the state average.
- The percentage of service area residents that gave birth to a low-birth-weight infant was lower than the state average.

Challenges

- The number of poor mental health days reported by residents in the service area was equal to the state average.
- The percentage of service area residents reporting fair to poor health was slightly higher than the state average.

Population Health Factors

Population health factor rankings for the service area were formulated using composite scores that were calculated by measuring of a variety of factors, including: (1) health behaviors, (2) clinical care, (3) social and economic factors, and (4) physical environment factors. Summative population health outcome rankings are described in this section of the report and each individual contributing factor is presented and discussed in subsequent sections.

A county by county comparison of combined population health factor rankings indicates that Carroll ranked the best at 14th in the state, while Newton performed the worst and was ranked 81st among the 92 Indiana counties (see Table 18). Four counties (Benton, Carroll, Montgomery, and Tippecanoe) ranked

in the top 25th percentile, while three counties (Clinton, Fountain, and Newton) ranked in the 75th percentile or below.

Table 18. Population health factors ranking by county.

County	Rank	Percentile
Benton	17	25th
Carroll	14	25th
Clinton	50	75th
Fountain	61	75th
Jasper	40	50th
Montgomery	22	25th
Newton	81	100th
Tippecanoe	18	25th
Warren	26	50th
White	17	25th

Source: County Health Rankings and Road Maps.

Health Behaviors. Health behavior outcome rankings for the service area are formulated from composite scores that are calculated by measuring of a variety of factors, including adult smoking, adult obesity, drug overdose mortality, excessive drinking, alcohol-impaired driving deaths, food insecurity, physical inactivity, access to opportunities to exercise, sexually transmitted infection rates, and teen birth rate. While the service area did not exceed the benchmarks set by the top US performers, the summative data indicate that the service area's overall performance is above the state average for all indicators except the percentage of residents reporting physical inactivity, opportunities to exercise, and teen birth rate.

Adult smoking and obesity rates (see Table 19) among service area residents were below the state average and above the top national performers. The percentage of physically inactive adults (29.1%) was higher in the service area when compared to the state average (27.0%) and the top national performers (20%). Further, only 55% of service area residents indicated that they had opportunities to exercise; the percentage is well below the state average of 77% and well below the US top performers, which average 91%.

The mortality rate for drug overdoses was well below the state average however data were not reported for Benton, Carroll, Fountain, and Warren counties. Among the counties with available data, Tippecanoe had the highest raw number of overdose deaths (n=92) and Clinton and Jasper had the fewest (n=14). All counties with reported data exceeded the national top performers in drug overdose mortality rate.

Excessive drinking was reported by 17.6% of the service area residents, compared to 19.0% of Indiana residents as a whole. The percentage of the population that reported excessive drinking in the service area was well above the 13% rate documented among the national top performers. The percentage of alcohol-impaired driving deaths was slightly lower in the service area (20%) when compared to the state average (22%), but well-exceeded the national top performers (13%). It is worthy to note that there was significant variability across the service area, with Benton County reporting zero alcohol-impaired driving

deaths and Warren reporting that 30% of driving deaths were alcohol-impaired during the measurement period.

Food insecurity among service area residents was below the state average but above the national top performers.

The total Chlamydia rate among the service area was 321.9 per 100,000 population, which is substantially lower than the state average (437.9) but significantly higher than the top national performers (145.1). It is important to note that rates varied significantly across the service area, with Tippecanoe County demonstrating the highest rates (616.1 per 100,000) and Warren showing the lowest rate (155.7).

The number of births per 100,000 female population aged 15-19 years in the service area was 32.5 and exceeds both the state and national top performers. The county with the fewest teen births was Tippecanoe (20 per 100,000 population) and the county with the most births was Fountain (41 per 100,000 population).

Table 19. Summary of health behaviors.

Health Factors and Health Behaviors

	Service Area Average	Indiana State	Top US Performers	Data Source	Years
Adult Smoking	19.0%	21.0%	14.0%	BRFSS	2016
Adult Obesity	31.6%	32.0%	26.0%	BRFSS	2014
Mortality Rate for Drug Overdose	13.1	20.0	10.0	CMF	2014-2016
Excessive Drinking	17.6%	19.0%	13.0%	BRFSS	2016
Alcohol-Impaired Driving Deaths	20.0%	22.0%	13.0%	FARS	2012-2016
Food Insecurity	12.0%	14.0%	10.0%	Feeding America	2015
Physical Inactivity	29.1%	27.0%	20%	NDSS	2014
Access to Opportunities to Exercise	58.0%	77.0%	91.0%	Business Analyst, Delorme map data, ESRI, & US Census Tigerline Files	2010 population, 2016 SIC, 2016 parks
Sexually Transmitted Infections	321.9	437.9	145.1	NCHHSTP	2015
Teen Birth Rate	32.5	30	15	NVSS	2010-2016

Source: County Health Rankings and Road Maps.

A county by county comparison of combined health behavior factor rankings indicates that Carroll ranked the best at 11th in the state, while Newton performed the worst and was ranked 67th among the 92 Indiana counties (see Table 20). Five counties (Carroll, Jasper, Tippecanoe, Warren, and White) ranked in the top 25th percentile, while one county (Newton) ranked in the 75th percentile.

Table 20. Population health behaviors ranking by county.

County	Rank	Percentile
Benton	30	50th
Carroll	11	25th
Clinton	43	50th
Fountain	41	50th
Jasper	22	25th
Montgomery	40	50th
Newton	67	75th
Tippecanoe	17	25th
Warren	20	25th
White	23	25th

Source: County Health Rankings and Road Maps.

Health Behavior Strengths and Challenges for the Service Area

Strengths

- Adult smoking rates were lower in the service area when compared to state averages.
- Adult obesity rates were lower in the service area when compared to state averages.
- Drug overdose mortality rates were lower in the service area when compared to state averages.
- Excessive drinking rates were lower in the service area when compared to state averages.
- Alcohol-impaired driving deaths rates were lower in the service area when compared to state averages.
- Food insecurity rates were lower in the service area when compared to state averages.
- Sexually transmitted infections rates were lower in the service area when compared to state averages.

Challenges

- Physical inactivity rates were higher among service area residents when compared to state averages.
- The percentage of service area residents reporting access to opportunities to exercise was significantly lower when compared to the state average.
- The teen birth rate was higher in the service area when compared to the state rate.

Clinical Care. Clinical care rankings for the service area are formulated from composite scores that are calculated by measuring of a variety of factors, including health care costs, percentage of uninsured children and adults, ratio of healthcare providers to the total population, preventable hospital stays, diabetes monitoring, and mammography screening.

The summative data indicate that the service area's overall performance was better than the state average for healthcare costs, uninsured adults, and diabetes monitoring. The service area performed lower than the rest of the state on percentage of uninsured children, ratio of healthcare providers to the total population, preventable hospital stays, and mammography screening. The service area did not exceed US top performers on any indicator for which data were available. Table 21 provides a summary of the clinical care indicators.

The average annual health care costs among residents of the service ($9,833) region was slightly lower than the state average ($9,992) and no national data were available for comparison. While the percentage of uninsured adults (12%) in the service area was lower than the state average (13%), the percentage of uninsured children was higher (8.5% versus 7%, respectively). Both percentages were notably higher than the top national performers.

The ratio of population to total primary care physicians across the service area was 4,950:1. Data were not available for Benton County and there was significant variability in ratios within the service area. Of the nine counties with reported data, Newton had the highest population to provider ratio (14,010:1) and Tippecanoe had the lowest population to provider ratio (1,410:1). The service area average ratio was significantly higher than both the state and top performer averages (1,500:1 and 1,030:1, respectively).

The ratio of population to total dentists (3,840:1) across the service area was notably lower than the state average (1,850:1) and the nation's top performers (1,280:1). There was significant variability across counties within the service area, with Montgomery County reporting the lowest population to provider ratio (2,120:1) and Warren County reporting the highest (8,170:1).

The ratio of population to total mental health providers across the service area was 3,503:1. Data were not available for Warren County and there was significant variability within the service area. Among the nine counties with reported data, Newton had the highest population to provider ratio (13,920:1) and Tippecanoe had the lowest (790:1).

The number of preventable hospital stays in the service area (61.5) was higher than both the state average (57) and the national performance benchmark (35). The county with the highest number of preventable stays was Warren (88) and the county with the lowest was Benton (33).

Nearly 85% of diabetic fee-for-service Medicare patients age 65-75 years in the service area reported having their blood sugar control monitored in the past year using a test of their glycated hemoglobin levels. The service area falls slightly below the state average and well below the top national performers.

The percentage of female fee-for-service Medicare patients age 67-69 year in the service area that had received at least one mammogram in the past two years was 60.3%, which falls below the state average (62%) and the national benchmark (71%).

Table 21. Summary of clinical care indicators.

Clinical Care	Service Area Average	Indiana State	Top US Performers	Data Source	Years
Health Care Costs	$9,833	$9,992	No data available	Dartmouth Atlas of Health Care	2015
Uninsured Adults	12.0%	13.0%	7.0%	SAHIE	2015
Uninsured Children	8.5%	7.0%	3.0%	SAHIE	2015
Primary Care Physicians	4,950:1	1,500:1	1,030:1	Area Health Resource File	2015
Dentists	3,840:1	1,850:1	1,280:1	Area Health Resource File	2016
Mental Health Providers	3,503:1	700:1	330:1	CMS, NPI	2017
Preventable Hospital Stays	61.5	57.0	35.0	Dartmouth Atlas of Health Care	2015
Diabetes Monitoring	84.7%	85.0%	91.0%	Dartmouth Atlas of Health Care	2014
Mammography Screening	60.3%	62.0%	71.0%	Dartmouth Atlas of Health Care	2014

Source: County Health Rankings and Road Maps.

A county by county comparison of combined clinical care factor rankings indicates that Tippecanoe ranked the best at 16th in the state, while Newton performed the worst and was ranked 89th among the 92 Indiana counties (see Table 22). Two counties (Benton and Tippecanoe) ranked in the top 25th percentile, while six counties (Clinton, Fountain, Jasper, Newton, Warren, and White) ranked at or below the 75th percentile.

Table 22. Population clinical care ranking by county.

County	Rank	Percentile
Benton	19	25th
Carroll	44	50th
Clinton	68	75th
Fountain	77	75th
Jasper	67	75th
Montgomery	32	50th
Newton	89	100th
Tippecanoe	16	25th
Warren	85	100th
White	64	75th

Source: County Health Rankings and Road Maps.

Clinical Care Strengths and Challenges for the Service Area

Strengths

- Health care costs were lower in the service area when compared to state averages.
- The percentage of uninsured adults was lower in the service area when compared to state averages.
- The percentage of adults receiving diabetes monitoring was higher in the service area when compared to state averages.

Challenges

- The percentage of children that were uninsured was higher in the service area when compared to state averages.
- The ratio of health care providers to residents was significantly lower in the service area when compared to state averages.
- The number of preventable hospital stays was higher in the service area when compared to state averages.
- The percentage of service area residents that received mammography screening was lower when compared to the state averages.

Social and Economic Factors. Social and economic rankings for the service area are formulated from composite scores that are calculated by measuring of a variety of factors, including high school graduation rates, the percentage of residents that have some college education, unemployment rates, percentage of children living in poverty, income inequality, percentage of children living in single-parent households, percentage of residents reporting membership in social associations, violent crime rates, and the injury death rate.

Additional factors that contribute to social and economic health but are not included in the data used to calculate summative rankings are reported below (see Table 23). These include median household income and percentage of disconnected youth in the service area.

While the median household income ($51,340) in the service area was below the state average ($52,300), there was no difference in the income inequality ratio. A comparison between the income inequality ratio for the service area and the national top performers suggested that the area scored below the national benchmark.

The service area unemployment rate was roughly equivalent to the rest of the state (4.5% versus 4.4%, respectively), but higher than the national top performers (3.2%). Clinton and Montgomery counties had the lowest rates of unemployment (3.9%), while Fountain had the highest rate (5.8%).

In the service area, fewer children lived in poverty and single-parent households when compared to state averages; however, the percentages were higher than the national benchmarks. The percentage of disconnected youth was well below the state average, but exceeded the national top performers. It is important to note that percentages were based on data from seven counties and that no data were available for Carroll, Newton, and Warren counties.

The high school graduate rate for the service area was notably higher (91.9%) when compared to the state average (87%), but lower than the national benchmark (95%). However, fewer residents in the service area (56.4%) had completed some college when compared to the state average (62%) and national benchmarks (72%).

Within the service area, there was significant variability in the percentage of residents reporting some college education. Tippecanoe County had the highest percentage of residents with some college education (71%) and Clinton County had the lowest percentage (45%).

While the violent crime rate in the service area was well below the state average rate, it was significantly above the national performance benchmark. Five counties (Benton, Carroll, Fountain, Jasper, and Warren) were excluded from the analysis because data were not available.

The most notable difference in social and economic health factors was the service area injury death rate (100.0), which well exceeded both the state average (70.0) and the national benchmark (55.0).

The rate of social associations in the service area was slightly above the state rate, but well below the national top performance rate.

Table 23. Summary of social and economic factors.

Social and Economic Factors	Service Area Average	Indiana State	Top US Performers	Data Source	Years
Median Household Income	$51,340	$52,300	No data available	SAIPE	2016
Income Inequality Ratio	4.4	4.4	3.7	ACS	2012-2015
Unemployment	4.5%	4.4%	3.2%	Bureau of Labor Statistics	2016
High School Graduation	91.9%	87.0%	95.0%	EDFacts	2014-2015
Some College	56.4%	62.0%	72.0%	ACS	2012-2016

Children in Poverty	16.6%	19.0%	12.0%	SAIPE	2016
Children in Single-Parent Households	28.5%	34.0%	20.0%	ACS	2012-2015
Disconnected Youth	16.2%	20.0%	10.0%	Measure of America	2010-2014
Violent Crime Rate	208.2	356.0	62.0	UCR	2012-2014
Injury Death Rate	100.0	70.0	55.0	CMF	2012-2016
Social Associations Rate	13.7	12.3	22.1	County Business Patterns	2015

Source: County Health Rankings and Road Maps.

A county by county comparison of combined social and economic factor rankings indicates that Carroll ranked the best at 18th in the state, while Newton performed the worst and was ranked 69th among the 92 Indiana counties (see Table 24). Three counties (Benton, Carroll, and Montgomery) ranked in the top 25th percentile, while four counties (Clinton, Fountain, Jasper, and Newton) ranked in the 75th percentile.

Table 24. Social and economic factors ranking by county.

County	Rank	Percentile
Benton	23	25th
Carroll	18	25th
Clinton	52	75th
Fountain	64	75th
Jasper	48	75th
Montgomery	21	25th
Newton	69	75th
Tippecanoe	44	50th
Warren	26	50th
White	36	50th

Source: County Health Rankings and Road Maps.

Social and Economic Factor Strengths and Challenges for the Service Area

Strengths

- The high school graduation rate in the service area was significantly higher than the state average.
- The percentage of children living in poverty in the service area was significantly lower than the state average.
- The percentage of children living in single-parent households in the service area was significantly lower than the state average.
- The percentage of disconnected youth in the service area was significantly lower than the state average.
- The violent crime rate in the service area was significantly lower than the state average.
- Residents of the service area participate in more social associations when compared to the state average.

Challenges

- The median household income in the service area was lower than the state average.
- The percentage of service area residents reporting some college education was lower in the service area when compared to the state average.
- The injury death rate in the service area was higher than the state average.

Physical Environment. Physical environment rankings for the service area are formulated from composite scores that are calculated by measuring of a variety of factors, including air pollution, severe housing problems, drinking water violations, percentage of residents that report driving to work alone and those having a long commute. Because there were no water violations reported for any of the counties in the service area, those data have been omitted from the summary provide in Table 25.

Air pollution, as measured by particulate matter, in the service area was nearly equal to the state average (11 versus 11.1, respectively) and well above the national top performers (6.7).

While the service area average for severe housing problems fell below the state average, it was above the national top performance benchmark. It is important to note that there was significant variability across the service area, with 19% of the population in Tippecanoe County experiencing severe housing problems compared to 7% of the population in Warren County.

The service area average percentage of residents that reported driving to work alone was below the state average and above the national top performers. The service area exceeded both the state and national top performers in the percentage of residents that reported a long commute while driving alone. There was significant variability by county, with 50% of Newton County residents reporting a long commute compared to 14% of Tippecanoe County residents.

Table 25. Summary of physical environment factors.

Physical Environment Factors	Service Area Average	Indiana State	Top US Performers	Data Source	Years
Air Pollution – Particulate Matter	11.0	11.1	6.7	CDC – National Environmental Public Health Tracking Network	2012
Severe Housing Problems	10.9%	14.0%	9.0%	CHAS	2010-2014
Driving Alone to Work	81.5%	83.0%	72.0%	ACS	2012-2016
Long Commute – Driving Alone	36.1%	31.0%	15.0%	ACS	2012-2016

Source: County Health Rankings and Road Maps.

A county by county comparison of combined physical environment factor rankings indicates significant variability in rankings across the service area. Warren ranked the best at 2nd in the state, while Jasper performed the worst and was ranked 51st among the 92 Indiana counties (see Table 26). Four counties (Benton, Fountain, Montgomery, and Warren) ranked in the top 25th percentile, while the remaining counties ranked in either the 50th or 75th percentile.

Table 26. Physical environment factors ranking by county.

County	Rank	Percentile
Benton	5	25th
Carroll	43	50th
Clinton	30	50th
Fountain	8	25th
Jasper	51	75th
Montgomery	19	25th
Newton	35	50th
Tippecanoe	25	50th
Warren	2	25th
White	38	50th

Source: County Health Rankings and Road Maps.

Physical Environment Strengths and Challenges for the Service Area

Strengths

- The service area had no reported drinking water violations.
- The percentage of severe housing problems in the service area was significantly lower than the state average.
- The percentage of service area residents that reported driving to work alone was lower than the state average.

Challenges

- The percentage of service area residents that reported a long commute was higher than the state average.

Mental Health and Substance Abuse

Mental health status and substance use/abuse are important determinants of the overall health and well-being of community members. As such, indicators of mental health and substance use/abuse can provide information that helps communities identify areas of strength as well as challenges to overall population health outcomes.

Mental health and substance abuse indicators include: (1) serious mental illness (SMI); (2) any mental illness (AMI); (3) suicidal ideation and attempts; (4) alcohol use, abuse, and dependence; (5) substance use, abuse, and dependence; (6) access and utilization of treatment services; and (7) the availability of alcohol, illicit drugs, and prescription drugs with the potential for abuse. Data drawn from these indicators can be applied to the development and implementation of community-based interventions that improve population health outcomes.

This section of the report summarizes behavioral health indicators for the state and, when available, the service area. The data presented were drawn from the following sources: the Substance Abuse and Mental Health Services Administration's (SAMSHA, 2015) Behavioral Health Barometer, Indiana 2015 (SAMSHA, 2015); the Indiana State Department of Health's (ISDH) Suicide in Indiana Report 2011-2015 (ISDH, 2017); and the ISDH's Indiana Epidemiological Resource Center (IPRC) data (ISDH, 2018).

Mental Health. According to Healthy People 2020, the burden of mental illness in the United States is among the highest of all diseases, and mental disorders are among the most common causes of disability (USDHHS, 2018). Mental health is essential to an individual's well-being, healthy family and interpersonal relationships, and the ability to live a full and productive life. Mental health disorders have a serious impact on physical health and are associated with the prevalence, progression, and outcome of some of today's most pressing chronic diseases, including diabetes, heart disease, and cancer. Early diagnosis and treatment can decrease the disease burden of mental health disorders as well as associated chronic diseases. Efforts to improve the nation's mental health is a top priority.

State-level data suggest that the percentage of Indiana adults over the age of 18 years that report past-year serious mental illness (SMI) and past-year serious thoughts of suicide is higher than the national average (SAMSHA, 2015). Between 2010 and 2014, a higher percentage of Indiana adults reported receiving treatment or counseling for any mental illness (AMI) in the past year when compared to the national average. However, 2014 data indicate that a lower percentage reported improved functioning as the result of treatment received in the public mental health system when compared to the national average.

Among adults served in Indiana's public mental health system in 2014, 47.4% of those aged 18–20, 56.1% of those aged 21–64, and 92.6% of those aged 65 or older were not in the labor force. Further, 2016 BRFSS data examining depression among state residents found that 15.9% had been told they had depression at some point. Table 27 summarizes this data.

Table 27. Summary of Indiana state-level and national-level mental health data for adults aged 18 years and above.

	State-level %	National-level %	Data Years
Past-Year Serious Mental Illness (SMI)	4.8	4.2	2013-2014
Past-Year Serious Thoughts of Suicide	4.1	3.9	2013-2014
Any Mental Illness (AMI) that Received Treatment/Counseling in the Past Year	43.6	42.7	2010-2014
Consumers that Reported Improved Functioning from Treatment Received in the Public Mental Health System in the Past Year	66.3	70.9	2014

Source: SAMSHA (2015).

Adolescent Mental Health. The available state-level data indicate that the percentage of Indiana youth aged 12-17 years that experienced a major depressive episode during 2013-2014 was similar to the national average (12.2% versus 11%, respectively) (SAMSHA, 2015). Of those who experienced a major depressive episode between 2010 and 2014, 62.4% did not receive treatment. The percentage of children and adolescents aged 17 years and younger living in Indiana that received treatment in the public health system that reported improved functioning as a result of treatment was lower than the national average (64.3% versus 69.5%, respectively).

Poor Mental Health Days. Table 28 presents the average number of reported mentally unhealthy days per month on the BRFSS. An examination of the data indicates that there were slightly fewer poor mental health days reported in the service area during 2016 when compared to the state average, but a higher number reported in Benton, Clinton, Fountain, Montgomery, Newton, Tippecanoe, and White counties when compared to the national average during the same time period. The 2017 trend was similar and none of the counties in the service area showed a reduction in poor mental health days during the reporting period. These data suggest that poor mental health days remained the same in Benton and White counties and had slightly increased in the remainder of the service area.

Table 28. Past 30-day poor mental health days 2016 and 2017.

County	Poor Mental Health Days Past 30 Days 2016 (#)	Poor Mental Health Days Past 30 Days 2017 (#)	Poor Mental Health Days Change Past 30 Days 2016-2017 (+ shows improvement)
Benton	4.0	4.0	0.0
Carroll	3.7	3.8	- 0.1
Clinton	3.9	4.0	- 0.1
Fountain	3.8	3.9	-.0.1
Jasper	3.6	3.7	- 0.1
Montgomery	3.9	4.0	- 0.1
Newton	4.0	4.1	- 0.1
Tippecanoe	4.1	4.1	0.0
Warren	3.6	3.7	- 0.1

White	3.8	3.8	0.0
Indiana State	4.3	4.1	0.2
National	3.7	3.7	0.0

Source: County Health Rankings, 2017; Primary Data Source: CDC, BRFSS

Frequent Mental Distress and Insufficient Sleep. Table 29 presents the percentage of service area residents that reported frequent mental distress and the percentage that reported insufficient sleep on the Behavioral Risk Factor Survey in 2014, as published in the County Health Rankings, 2016. According to the CDC, persons getting insufficient sleep are "more likely to suffer from chronic diseases such as hypertension, diabetes, depression, and obesity, ..." (CDC, Insufficient Sleep Is a Public Health Problem, 2015). All counties in the service area had slightly lower percentage rates of frequent mental distress and insufficient sleep when compared to the state average.

Table 29. Percentage of population reporting frequent mental distress and insufficient sleep by county, 2014-2015.

County	Frequent Mental Distress (%)	Insufficient Sleep (%)
Benton	12	35
Carroll	11	33
Clinton	12	35
Fountain	12	34
Jasper	11	34
Montgomery	12	35
Newton	12	34
Tippecanoe	12	37
Warren	11	34
White	11	34
Indiana State	13	38

Source: County Health Rankings, 2017; Primary Data Source: Behavioral Risk Factor Surveillance System

Mental Health Providers. The availability of mental health care providers (e.g. psychiatrists, psychologists, clinical social works, counselors) is an indicator of access to health care. All of the counties in the service area had significantly fewer providers when compared to state and national rates and ratios. For example, Newton County reported a ratio of 14,008 residents per every one provider and only seven providers per 100,000 population. These data suggest that the area population is critically underserved. Improving access to mental health care has the potential to reduce poor population health outcomes and should be a top priority for the service area. Table 30 summarizes mental health provider data by county.

Table 30. Number, rate, and ratio of mental health care providers by county.

County	Number	Rate Per 100,000 Population	Ratio

Benton	1	12	8681:1
Carroll	12	60	1655:1
Clinton	8	25	4076:1
Fountain	9	54	1843:1
Jasper	15	45	2231:1
Montgomery	33	86	1158:1
Newton	1	7	14008:1
Tippecanoe	237	128	784:1
Warren	N/A	N/A	N/A
White	10	41	2429:1
Indiana State	9011	136	735:1
National	N/A	N/A	500:1

Source: County Health Rankings, 2017;
Primary Data Source: CMS, National Provider Identification;
N/A – No data were reported

Suicide. Suicide is considered a leading indicator of mental health and remains a significant public health concern. Suicide affects people of all ages, racial and ethnic backgrounds, and genders. Risk for suicide includes depression, other mental disorders, or substance abuse disorders; certain medical conditions; chronic pain; a prior suicide attempt; family history of a mental disorder or substance abuse; family history of suicide; family violence, including physical or sexual abuse; having guns or other firearms in the home; having recently been released from prison or jail; and being exposed to others' suicidal behavior, such as that of family members, peers, or celebrities. Reducing suicide rates is a goal of Healthy People 2020 and should be prioritized in communities with rates that exceed state and national averages.

The combined suicide death rate for the years 2011-2015 across the service area was 15.3 per 100,000 population (ISDH, 2017). In comparison, the overall suicide death rate for the state was 14.1 per 100,000 population during the same time period. The total raw number of hospitalizations resulting from a suicide attempt in the service area was 769 and accounted for 4% of the inpatient hospitalizations resulting from a suicide attempt in the state during the 2011-2015 time period. The raw number of emergency department (ED) visits resulting from a suicide attempt in the service area was 958 during 2011-2015 and accounted for 4% of the ED visits in the state during that time period.

An examination of service area suicide death rates for the years 2011-2015 indicate that rates were highest in Benton County (25.1 per 100,000 population) and lowest in Jasper County (10.8 per 100,000 population) (ISDH, 2017). The raw number of hospitalizations related to a suicide attempt during 2011-2014 was highest in Tippecanoe County (n=329) and lowest in Newton County (n=5). Likewise, the raw number of emergency department (ED) visits resulting from a suicide attempt was highest among the residents of Tippecanoe County (n=564) and lowest among the residents of Newton County (n=7). When interpreting the raw data, it is important to consider the wide variability in county population size within the service area. For example, while Tippecanoe County had the largest number of both hospitalizations and ED visits during the assessment period, it also accounts for 49% of the total population of the service area.

Table 31. Suicide deaths (2011-2015), hospitalizations and ED visits (2011-2014) by county of residence.

County	Suicides (Rate)	Hospitalizations (#)	ED Visits (#)
Benton	11 (25.1)	16	32
Carroll	16 (16.0)	31	56
Clinton	19 (11.6)	146	298
Fountain	15 (17.8)	43	100
Jasper	18 (10.8)	44	38
Montgomery	27 (14.4)	84	175
Newton	14 (19.9)	5	7
Tippecanoe	96 (11.4)	329	564
Warren	6 (14.4)	17	33
White	15 (12.3)	54	141

Source: ISDH

Substance Use and Abuse. Healthy People 2020 (USDHHS, 2018) reports that substance abuse is associated with a range of destructive social conditions, including family disruptions, financial problems, lost productivity, failure in school, domestic violence, child abuse, and crime. Further, both social attitudes and legal responses to the consumption of alcohol and illicit drugs make substance abuse one of the most complex public health issues. Substance abuse contributes to a number of negative health outcomes and public health problems, including cardiovascular conditions; pregnancy complications; teenage pregnancy; human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS; sexually transmitted diseases (STDs); domestic violence; child abuse; motor vehicle crashes; homicide; and suicide. Reducing the prevalence of substance abuse is among the nation's leading public health priorities.

Past year alcohol dependence and abuse during 2013-2014 among people aged 12 years and older in Indiana was similar to the national percentage (6.7% versus 6.5%, respectively). Only 10.4% of Indiana residents aged 12 and older with alcohol dependence or abuse issues received treatment between 2010 and 2014 (SAMSHA, 2015). Likewise, past year illicit drug dependence and abuse among the same group during the same time period showed no significant differences in percentages. Among adults 21 and older, the state percentage of individuals reporting heavy alcohol use was consistent with the national percentage rate. Of the Indiana residents aged 12 years and older with illicit drug dependence or abuse, 13.6% reported receiving treatment between 2010 and 2014.

Among Indiana youth aged 12-17 years, 8.5% reported past-month illicit drug use and 5.0% reported the non-medical use of pain relievers during 2013-2014. The percentage was not significantly different from the national percentage of 9.1% and 4.7%, respectively. Similarly, the percentage of Indiana youth 12-17 years who reported past-month cigarette use during 2013-2014 showed no significant differences when compared to the national average (6.6% versus 5.2%, respectively). The percentage of Indiana youth aged 12-20 years that reported past-month binge alcohol use between 2013-2014 was nearly identical to the national average (14.1% and 14.0%, respectively).

Table 32 summarizes the substance abuse treatment incidence rate for the service area between the years 2011-2015 (ISDH, 2018). The incidence rate for treatment across the state as a whole was 590.9 per 100,000 population during the years 2011-2015 and the service area average was 472.9 per 100,000 population. An examination of the treatment rates by county suggests that Montgomery had the highest incidence rate of individuals in treatment for substance abuse (901.5 per 100,000 population) and ranked 17th among the 92 Indiana counties, while Tippecanoe had the lowest observed rate (260.2 per 100,000 population) in the service area and ranked 88th in the state. Only two counties in the service area exceeded state rates: Montgomery and White.

Table 32. Substance abuse total treatment incidence rate per 100,000 population 2011-2015 by county.

County	Incidence Rate per 100,000 population	State Rank
Benton	515.9	64
Carroll	564.1	58
Clinton	512.1	66
Fountain	413.2	76
Jasper	333.7	81
Montgomery	901.5	17
Newton	291.0	84
Tippecanoe	260.2	88
Warren	296.6	83
White	640.9	44
Indiana State	590.9	n/a

Source: ISDH, IPRC

Treatment for Specific Substances. The data provided in Table 33 summarizes treatment rates for selected drugs (alcohol, heroin, marijuana/hashish, methamphetamine, and other opioids and synthetics) in the service area during 2015. The data represents episodes where services were received from state-funded substance abuse treatment programs and can include multiple admissions for an ongoing drug problem. An episode is defined as the period between the beginning of treatment (admission) for a drug or alcohol problem and the termination of services. An episode can span an indeterminate period of time. The episode date is state fiscal year. The provider determines when treatment is terminated for a given episode. If the problem reoccurs in the future and treatment is initiated again, a new treatment episode would begin.

While data were not available for the majority of counties, rates for alcohol treatment did not exceed the state average in any of the counties reporting. Montgomery and Newton counties surpassed the state average treatment rate for heroin, and Montgomery County significantly exceeded the state treatment rate for marijuana/hashish. Treatment rates for other opiates and synthetics in the counties reporting data were higher than the state average in Fountain and Jasper. The data suggest that among the counties reporting treatment rates, intervention may be needed.

Table 33. Treatment rates by drug per 100,000 population, 2015.

County	Alcohol		Heroin		Marijuana/ Hashish		Methamphetamine		Other Opiates and Synthetics	
	Rate	**Rank**	**Rate**	**Rank**	**Rate**	**Rank**	**Rate**	**Rank**	**Rate**	**Rank**
Benton	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carroll	N/A	N/A	30	47	N/A	N/A	60.4	41	N/A	N/A
Clinton	N/A	N/A	N/A	N/A	N/A	N/A	30.7	61	N/A	N/A
Fountain	66.3	88	30.1	64	48.2	83	N/A	N/A	60.3	53
Jasper	116.5	76	N/A	N/A	N/A	N/A	N/A	N/A	50.8	66
Montgomery	N/A	N/A	149.1	10	282.5	2	N/A	N/A	N/A	N/A
Newton	N/A	N/A	85.7	27	N/A	N/A	N/A	N/A	N/A	N/A
Tippecanoe	103.3	82	36.6	56	57	76	20.8	65	29.6	78
Warren	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
White	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40.53	69
Indiana	197.1		74.2		118.8		54		71.6	

Source: ISDH, IPRC

Drug Overdose Deaths. Table 34 presents a summary of drug overdose counts and rates per 100,000 population between 2013 and 2015. In many cases, county level data were not reported and other data sources suggest that the service area fell below the state average for drug overdose deaths (see table summarizing health behaviors). Among the counties reporting data, only White County surpassed the state incidence rate during the reporting period, which may indicate the need for targeted intervention.

Table 34. Number and rate of drug overdose deaths by county, 2013-2015.

County	Count	Incidence Rate per 100,000 population
Benton	N/A	N/A
Carroll	N/A	N/A
Clinton	15	15
Fountain	N/A	N/A
Jasper	11	11
Montgomery	17	15
Newton	N/A	N/A
Tippecanoe	86	16
Warren	N/A	N/A

White	14	19
Indiana State	3481	18

Source: County Health Rankings, 2017; Primary Data Source: CDC WONDER mortality data

Drug and Alcohol Availability

The section below provides summative alcohol and drug availability data for the service area. Availability serves as a marker of risk and should be considered when examining the rates of use and abuse. One mechanism of preventing substance use and abuse is limiting access in the community.

Alcohol Outlet Density. This indicator is defined as the number of alcohol sales outlets in relation to the total population for 2016 and 2017. The total state population in 2017 was 6,658,140. In 2016 the number of alcohol licenses in the state was 11,691 and rose to 12,999 in 2017. The state alcohol outlet density per 100,000 population was 1.76 in 2016 and increased to 1.95 in 2017. Across the ten-county area, Benton County had the highest density of alcohol outlets per 100,000 residents in 2016 and 2017, while Warren had the lowest, 0.84 and 0.98 respectively. Seven of the counties exceeded the state density average.

Table 35. Alcohol Outlet Density per 100,000 population.

County	Alcohol Licenses 2016	Alcohol Licenses 2017	Alcohol Outlet Density per 100,000 2016	Alcohol Outlet Density per 100,000 2017
Benton	22	26	2.55	3.01
Carroll	28	31	1.41	1.57
Clinton	58	64	1.78	1.97
Fountain	38	41	2.32	2.50
Jasper	63	66	1.88	1.97
Montgomery	67	77	1.76	2.01
Newton	33	32	2.32	2.29
Tippecanoe	309	326	1.66	1.72
Warren	7	8	0.84	0.98
White	68	68	2.78	2.81

Source: Nielsen, Pop Facts, 2017 est.; ATC, Indiana, June 2016 & Sep. 2017; IPRC, 2016, 2017

Meth Lab Seizures. The presence of methamphetamine labs indicates the presence of crystal methamphetamine for sale and use in the community. While many people manufacture methamphetamine for personal use, some proportion may be sold to other members of the community and contribute to addiction as well as poor mental and physical health outcomes. The table below presents the total number of lab seizures by county between 2011 and 2015. The highest number of lab seizures occurred in 2013 (N=116) and accounted for nearly 15% of the total seizures in the state that year. Table 36 summarizes this data.

Table 36. Meth lab seizures by county, 2011-2015.

County	2011 Lab Seizures	2012 Lab Seizures	2013 Lab Seizures	2014 Lab Seizures	2015 Lab Seizures
Benton	2	2	1	2	5
Carroll	4	2	1	2	3
Clinton	16	10	15	11	7
Fountain	4	8	15	7	4
Jasper	8	11	5	9	13
Montgomery	7	27	28	23	12
Newton	3	1	2	0	2
Tippecanoe	28	38	33	32	45
Warren	0	1	8	2	3
White	4	8	8	13	14
Total	76	108	116	101	112
Indiana State	1,363	1,663	1,723	1,488	1,530

Source: ISP, 2012-2016; N/A – No data were reported

Opioid Prescription Dispensations. Opioid prescription dispensations to Indiana residents were collected from the Indiana Scheduled Prescription Electronic Collection and Tracking Program (INSPECT). Dispensation data includes three opioid prescription categories: opioid analgesics, opioid antidiarrheals/antitussives, and opioid antagonists and treatment addiction medications. Data is reported by county of residence of the patient who received the dispensation, and may or may not be where the prescription was written or filled.

While data were unavailable for many counties in the service area, the available information indicates that Fountain and Jasper had significantly higher rates of opioid prescription dispensation when compared to the state average. Because data were not adjusted for age or terminal illness, findings should be interpreted with caution. However, the risk of developing dependence associated with certain types of opioid medications is high even when used as prescribed. Therefore, education and monitoring may be warranted.

Table 37. Prescription rate per 1,000 by county 2018, not adjusted for age or terminal diagnosis status.

County	Rate	State Rank
Benton	N/A	N/A
Carroll	N/A	N/A
Clinton	N/A	N/A
Fountain	245.5	46
Jasper	268.2	32
Montgomery	N/A	N/A
Newton	N/A	N/A
Tippecanoe	153.9	89
Warren	N/A	N/A

White	205.9	73
Indiana State	218.4	

Source: Indiana State Department of Health, Division of Trauma and Injury Prevention, INSPECT
Variable ID: 'SACA040'; N/A – No data were reported

Mental Health and Substance Abuse Service Area Strengths and Challenges

The service area had a lower rate of individuals receiving treatment for substance abuse during the years 2011-2015 (ISDH, 2018). While this may suggest that fewer service area residents had issues with substance abuse, it is also possible that fewer residents with substance abuse issues were receiving needed services and the data should be interpreted with caution. The death rate for suicides was higher in the service area when compared to the state average and suggests that prevention and intervention is needed (ISDH, 2017).

Summary

While many health and social service providers are well informed on the major data that guides their delivery, implementation, and evaluation of community-based services, the purpose of an extensive review of data for the CHNA process is to provide a foundation for the consideration of newly collected data and to help guide the decision-making process that will influence the allocation of resources in future years.

While NCHS and River Bend Hospital serve a large and complex geographic region of the state of Indiana, there are some apparent trends in the data that were used collectively with the other data gathered during the CHNA.

Mortality Indicators. Data suggest that cancers and cardiovascular diseases continue to be the top causes of mortality in the region, consistent with state and national trends. These and other mortality causes are largely related to modifiable lifestyle factors; those that are of priority for NCHS and River Bend Hospital include the use of substances and overall health maintenance through diet and physical activity.

Morbidity Indicators. The region continues to observe disproportionate rates of diabetes and heart disease in several counties within the service area. Most chronic diseases can be prevented through behavioral modifications such as maintaining a healthy diet, engaging in regular physical activity, avoiding excessive alcohol consumption, avoiding tobacco, and receiving regular health screenings. In addition to modifying individual behaviors, chronic disease prevention efforts can be supported within communities by providing community members opportunities to make healthier choices.

Infectious Disease. The majority of the service area had low recorded incidence rates of preventable infectious disease. Newton, Tippecanoe, and White were the only counties in the service area with more than five cases of any of the three selected diseases (Lyme Disease, Hepatitis C, and Salmonellosis) during the reporting period. All counties in the service area had lower rates of Chlamydia and Gonorrhea across all years when compared to state rates, with the exception of Tippecanoe, which exceeded the state Chlamydia rate during 2013 and 2014 and the Gonorrhea rate in 2015. Incidence of primary and secondary Syphilis was low across the majority of the service area for all reported years. However, Tippecanoe County met or surpassed state rates for all years except 2013. The data suggest that sexual health, as measured by incidence of disease, is comparatively better in the service than the state overall. The elevated rates in Tippecanoe County indicate that intervention to reduce STD transmission is warranted.

Health Rankings. Rankings indicate significant variability among the ten counties in the service area, with Warren ranking 3rd in the state and Clinton ranking 58th in the state. The majority of counties in the service area were ranked within the top 50th percentile. Only three counties (Clinton, Fountain, and White) ranked in the 75th percentile.

Health Outcomes. Population health outcome rankings for the service area are formulated from composite scores that are calculated by measuring of a variety of factors, including those that contribute to length and quality of life. While the service area did not exceed the benchmarks set by the top US performers, the summative data indicate that the service area's overall performance is above the state average for all indicators except the percentage of residents reporting poor/fair health.

Health Behaviors. Health behavior data for the region considered a variety of factors, including adult smoking, adult obesity, drug overdose mortality, excessive drinking, alcohol-impaired driving deaths, food insecurity, physical inactivity, access to opportunities to exercise, sexually transmitted infection rates, and teen birth rate. While the service area did not exceed the benchmarks set by the top US performers, the summative data indicate that the service area's overall performance is above the state average for all indicators except the percentage of residents reporting physical inactivity, opportunities to exercise, and teen birth rate.

Clinical Care. Clinical care considerations for the region included a variety of factors, including healthcare costs, percentage of uninsured children and adults, ratio of healthcare providers to the total population, preventable hospital stays, diabetes monitoring, and mammography screening. The summative data indicate that the service area's overall performance was better than the state average for healthcare costs, uninsured adults, and diabetes monitoring. The service area performed lower than the rest of the state on percentage of uninsured children, ratio of healthcare providers to the total population, preventable hospital stays, and mammography screening.

Social and Economic Factors. Social and economic considerations included high school graduation rates, the percentage of residents that have some college education, unemployment rates, percentage of children living in poverty, income inequality, percentage of children living in single-parent households, percentage of residents reporting membership in social associations, violent crime rates, and the injury death rate. Median household income and percentage of disconnected youth in the service area were also reviewed. The most notable observations among the social and economic health factors were the service area injury death rate (100.0), which well exceeded both the state average (70.0) and the national benchmark (55.0).

Physical Environment. Physical environment factors reviewed included those related to air pollution, severe housing problems, drinking water violations, percentage of residents that report driving to work alone and those having a long commute. Air pollution, as measured by particulate matter, in the service area was nearly equal to the state average. While the service area average for severe housing problems fell below the state average, it was above the national top performance benchmark. It is important to note that there was significant variability across the service area, with some counties having more housing challenges than others. Similar variability also existed with residents across counties who reported driving alone for long commutes.

Mental Health and Substance Abuse. There were slightly fewer poor mental health days reported in the service area when compared to the state average, but a higher number reported in Benton, Clinton, Fountain, Montgomery, Newton, Tippecanoe, and White counties when compared to the national average during the same time period. All counties in the service area had slightly lower percentage rates of frequent mental distress and insufficient sleep when compared to the state average. The region remains underserved with regard to mental health providers, with all counties below the state and national averages. Characteristics of suicide and suicide attempts, the use of specific substances, and treatment for substance abuse varied considerably across the counties in the region but remain at levels of concern and reinforce the need for the specific substance abuse and mental health services of NCHS and River Bend Hospital.

Using Existing Indicators for Prioritization Process

During the prioritization process (see Section 7 of this report), data from this report were considered along with data from the other CHNA activities. While participants in the prioritization process had the opportunity to review the data presented in this section of the report (section 3), a summary of this data was prepared and presented in the format of a "Status Review of Indicators." The purpose of this was to articulate a summary "risk" level for health issues considered in this data review by situating that data within the context of a range of factors including: prevalence/incidence, co-morbidity factors, situational and structural considerations, health infrastructure considerations, and variance across the counties in the service area. Issues were assigned one of three levels, including: reduced risk (green), critical for monitoring (yellow), and urgent (red). Below are the summaries of these data as shared with stakeholders during the prioritization process.

Mortality	Cancer and Cardiovascular Disease	
	Preventable Factors Known	

Morbidity	Asthma	
	Diabetes	
	Heart Disease	
	High Blood Pressure	
	High Cholesterol	
	Infectious Disease	
	STI	

Health Outcomes	Length of Life	
	Poor Physical Health Days	
	Poor Mental Health Days	
	Poor Overall Health	
	Quality of Life	
	Low Birth Weight	

Clinical Care	Costs of Care	
	Uninsured Adults	
	Uninsured Children	
	Primary Care Providers	
	Mental Health Providers	
	Dental Care Providers	
	Preventable Hospital Stays	
	Diabetes Monitoring	
	Mammography Screening	

Health Behaviors	Smoking	
	Physical Inactivity	
	Obesity	
	Drug Overdose	
	Excessive Drinking	
	Alcohol Driving Deaths	
	Food Insecurity	
	Teen Birth	

Substance Abuse	Drug Overdose	
	Treatment	
	Alcohol Density	
	Meth Lab Seizures	
	Opioid Dispensations	

Mental Health	Poor Mental Health Days	
	Frequent Mental Distress	
	Mental Health Providers	
	Suicide	
	Suicide Attempts/Hospitalizations	

2015 CHNA FEEDBACK

The previous CHNA conducted by North Central Health Services (NCHS) and River Bend Hospital was published in 2015, and since that time, the document has been available to the public on the organizations' websites. At the beginning of the 2018 CHNA, no comments had been received based upon those posted documents.

To ensure that those providing services in the region were given an opportunity to provide feedback on the most recent CHNA and its relations to priorities in 2018, NCHS and River Bend Hospital developed a survey to collect feedback about the 2015 CHNA. The survey was distributed to a range of service-providing organizations in the ten-county area covered by this CHNA. Following is a description of the results of the survey.

Participants

A total of 18 completed surveys were received. Individuals completing the survey were asked to describe the nature of their affiliation with a service-providing organization. Most participants indicated that they were staff at an organization (38.9%, n = 7), 22.2% indicated that they volunteered at an organization (n = 4), two participants indicated that they were not formally affiliated with an organization (11.1%) and five individuals chose "other affiliation" with no further description.

Participants were also asked to indicate the extent to which they provided services in the ten-county area. As is the case in the broad service area, most organizations serve more than one county. Table 38 provides an overview of the extent to which participants in this review described themselves as being affiliated with an organization that provides services in the ten counties.

Table 38. Counties served by organizations represented by participants (n = 18).

Counties Served	Number	Percent
Benton	7	38.9
Carroll	8	44.4
Clinton	8	44.4
Fountain	7	38.9
Jasper	1	5.6
Montgomery	8	44.4
Newton	2	11.1
Tippecanoe	15	77.8
Warren	6	44.4
White	8	44.4

Engagement in CHNA Activities

Participants were asked to describe whether they had participated in any activities that they knew were related to the 2015 CHNA and the 2018 CHNA. Half of the participants (50%, n = 9) reported participating in the 2015 CHNA activities and 61.1% (n = 11) reported participating in the 2018 CHNA activities.

Perceptions of the 2015 CHNA Priorities

The 2015 CHNA resulted in the establishment of eight "priority needs." Participants in the survey were provided each of those priorities and asked "whether the need reflected an issue that was important to prioritize in 2015." Additionally, given the same list of prioritized needs from 2015, participants were asked to respond to "whether the need reflects an issue that remains important to prioritize in 2018." All participants (100%, n = 18) completed each item. Table 39 provides an overview of responses.

Table 39. Perceptions of 2015 CHNA priority needs (n = 18).

2015 Priority Needs	Important for 2015 (%)	Important for 2018 (%)
Need 1: Increase the number of mental healthcare providers.	83.30%	94.4
Need 2: Increase acccess to mental health care.	83.3	94.4
Need 3: Increase access to mental health care and increase awareness for mental health services and resources.	83.3	94..4
Need 4: Access to programs and care to address specific needs identified in the 2015 CHNA (obesity, chronic disease, substance abuse, etc.).	77.8	83.3
Need 5: Lack of housing for chronically mentally ill and recovering individuals.	72.2	94.4
Need 6: Resources for obesity prevention.	55.6	66.7
Need 7: Increase access to dental care.	50.0	50.0
Need 8: Areas within the NCHS service area lack access to health care.	61.1	66.7

Additional Feedback on 2015 CHNA Priority Needs

Participants were given the opportunity to provide additional feedback about the needs that were prioritized during 2015. Of the participants, six (33.3%) provided additional feedback. Open-ended responses are summarized below.

Ongoing Needs. Two participants described the 2015 priority needs as representing "ongoing health challenges that are long term" and that "will continue throughout the period covered by the 2018 CHNA."

Need for Collaboration. One participant described the situation as being one where "access" is not the issue, but that the lack of collaboration among providers could use improvement in order to facilitate care for individuals across the care spectrum.

Opioids. One participant suggested that increases in opioid use are contributing to the other health issues that individuals are facing in the community.

Other. One participant noted that NCHS and River Bend have brought "focus and awareness" to the lack of services locally and that the 2015 priorities provided a "roadmap for grantmaking." One participant commented on a lack of knowledge about dental care needs in the community.

Feedback on the 2015 Implementation Plan

Participants were given the opportunity to review the Implementation Plan developed by NCHS and River Bend Hospital as a result of the 2015 CHNA and invited to offer any additional comments about their community's progress toward the plan's objective and opinions about any changes that might need to be made to the strategies going forward. Only five (27.7%) participants provided feedback. Verbatim responses of participants are included below:

> *"Clinton County access to healthcare is improving through the increase in available providers for medical care. Dental care service providers are more than adequate. Mental health providers are still lacking in numbers and availability. Progress is being made in more persons having healthcare insurance through local efforts of Healthy Communities of Clinton County as they provide navigators in Clinton and several other counties and provide one on one follow through for application through payments. They have acquired a partnership with the Clinton County Center Township Trustee's office to pay for the individual portion of such healthcare coverage as needed. There is still a huge lack of providers for in house mental health and drug addiction rehabilitation as well as a lack of providers available at a moment's notice to persons in crisis that want to start rehab programming. There have been many strategies to reduce obesity in Clinton County including biking and walking trails and encouragement activities. There is still need for facilities on the southwest corner of Frankfort and in some of the small unincorporated towns for outdoor activities."*
>
> *"NCHS has been a great resource in the mental health/substance abuse discussion. After reviewing the implementation plan, it is impressive how much has been accomplished."*
>
> *"The 2015 community health implementation plan shows a lot of thought and strategic choices. There Is a real impact on at risk individuals. The choice of partners gives the most bang for the*

buck. My only recommendation is it's more than the "usual suspects" (that are touching many at risk lives) there are grassroots programs that specialize in a particular at-risk group and do phenomenal work and they struggle for funding. It would probably be a logistical nightmare to track many more little organizations doing good work passionately in the community. If there was ever a way to find, listen, and financially help some of the little grass roots groups it would improve the collaborative attitude in the community. It would also improve the morale of these small groups as they receive acknowledgement that their work is also important."

"The Implementation Plan does a good job of addressing the identified needs. I also like the progress the current NCHS leadership is making with forming partnerships to have greater impact. Do we need an advocacy goal or metric with governmental leaders. In addition to having awareness goals and activities, it would seem that governmental funding should be increased to help address the huge gap we have between needs and services provided locally and state-wide."

"The Mental Health Forum was incredibly valuable when it first became active. They have accomplished significant goals but activity seems to be waning. There are still countless mental health challenges to tackle and it seems that the Forum is losing its momentum. LTHC's new Engagement Center should make a significant difference in housing of the homeless."

Additional Comments

Participants were also given the opportunity to provide any additional comments. Two participants took the opportunity to express appreciation for the work of NHCS and its partners and for the generosity of the funding that is available through the grantmaking initiatives of NCHS.

2018 COMMUNITY CHNA SURVEY

Survey Methods

Purpose of the Survey

To collect primary data from the Hospital's service area population, a survey was designed, fielded, and analyzed. To ensure that the perspectives of the residents of the service area were included in this assessment, a rigorous population-based methodological approach to coverage of the service area was pursued.

Further, to ensure that the perspectives of those in service-receiving communities (particularly those engaged with community-based health and social service organizations) were also considered, the Hospital also used a convenience sample design to collect additional supplemental data.

This section of the CHNA document includes a description of the survey methods and the results of the responses to the survey by the participants in the service area of North Central Health Services (NCHS) and River Bend Hospital.

Survey Development

To develop the survey used for the CHNA, NCHS and the Hospital partnered with faculty from Indiana-based universities who had particular expertise in community-based survey research. Dr. William McConnell of the University of Evansville served as the lead researcher on the project, in partnership with Dr. Michael Reece and Dr. Catherine Sherwood-Laughlin, both of the Indiana University School of Public Health. The University of Evansville contracted with the Center for Survey Research (CSR) at Indiana University to administer this survey in two phases: phase I was conducted as a paper survey mailed to a random address-based sample and phase II was conducted as a paper survey administered by the hospitals to a convenience sample of their choosing. The survey was conducted with approval of the Institutional Review Board (IRB) of the University of Evansville.

Planning and development for the survey began in the winter of 2017. The university faculty joined a collaborative of eight major hospital systems that served populations in Indiana and Illinois. A goal of the collaborative was to align survey activities in order to increase cost-efficiency and to work toward the development of a data infrastructure that would be useful across the systems and also of enhanced utility to the health and social service organizations with which those hospitals partner on initiatives to improve health in their respective local communities.

Using a construct-based approach that identified the leading areas to be included on the survey, the hospitals and faculty developed a survey. The survey included measures that had been validated for use in similar projects by other researchers and additional measures that were developed by the partners for specific needs of this CHNA. The survey covered ten major areas. Table 40 provides an overview of the

constructs covered in the survey and a description of the measures associated with each construct. A copy of the survey is included as Appendix B.

Table 40. Survey constructs and measures.

SURVEY CONSTRUCTS	DESCRIPTION OF MEASURES
Demographics	This section included measures related to the socio-demographics of the survey participants, including: county of residence, age, gender, ethnicity, race, education, household income, employment, and number of adults and children in household.
Perceived Health and Well-Being	This section included a revised version of the U.S. Centers for Disease Control and Prevention's Health-Related Quality of Life measure. Items included the single-item HRQOL assessment of perceived overall health and additional assessments of physical health, mental health, and social well-being. Also included was a measure of overall life satisfaction and a measure of current level of life stress.
Health Care Coverage and Relationships	This section included a single measure of whether the participant had health insurance or some other type of coverage for health care and a single measure of whether they had a current personal health care provider.
Health Care Engagement	This section included a measure related to the types of care with which the participant had engaged in the previous 12 months. A total of 14 specific types of health care engagement were assessed.
Health-Related Behaviors	This section included a measure that asked participants to self-report their participation in a range of health-related behaviors. A total of 11 health behaviors were assessed.
Health Care Resource Challenges	This section included measures related to the extent to which participants had found themselves in need of avoiding care due to a lack of fiscal resources. Specifically assessed was the extent to which participants had to forego three types of health care, including seeing a medical provider, filling a prescription, and securing transportation for a health purpose or appointment.
Felt Social Determinants	This section included measures to assess the extent to which participants felt the impact of ten specific social determinants, including economics, education, community cohesion, policy, environment, housing, psychosocial, transportation, social ecological, and employment.
Perceived Priority Health Needs	This section included a measure to assess participants' perceptions of the importance of 21 health issues to their local community.
Perceived Resource Allocation Priorities	This section included a measure to assess participants' perceptions of the extent to which 21 health issues were of priority for the allocation of resources in their local community.
Perceived Importance of Social and Health Services	This section included a measure to assess the extent to which participants perceived 20 different health and social service programs to be of importance to their community.

Sample Development

To collect data, two separate samples were accessed. One sample, described below, included a random sample of individuals representative of the service area. Additionally, NCHS and the Hospital collaborated

with health and social service organization partners to form a convenience sample that included those engaged in services.

Phase One Random Sample. The target population for Phase I of the 2018 Community Health Needs Assessment Survey consisted of noninstitutionalized adult residents, aged 18 years or older, in the catchment areas of the participating hospitals. Sampling was performed on a household basis using an address-based sample.

The faculty collaborated with the hospitals to determine catchment areas using county and zip code boundaries. Geographic areas that were shared between hospitals were reduced such that each geographic area was sampled one time.

Sampling was determined using a multistage sampling design. At the first stage, sample units were drawn randomly from an address-based sampling frame of each area. Sample frames were limited to residential addresses excluding P.O. boxes (unless marked in the sample frame as 'only way to get mail'), seasonal, vacant, throwback, and drop-off point addresses. At the second stage, a within-household respondent was selected by asking the adult with the most recent birthday to complete the survey.

To develop the sample area, a set of address-based records representing the hospital's service population were purchased from Marketing Systems Group (MSG). MSG used proprietary sampling methods and provided assurance of appropriate and accurate coverage for the target population. The sample list delivered by MSG included postal address information, FIPS code (county designator), and appended demographic information for age, gender, Hispanic surname, Asian surname, number of adults at address, number of children at address, household income class, marital status, ethnicity, and home ownership status. Upon receipt of the sample, it was stored in a secure database created and maintained by the CSR and was reviewed and corrected for any clerical errors. Using these records, a recruitment sample was constructed for the hospital's service population. A total of 18,106 households were included in the sample for North Central Health Services and River Bend Hospital.

Phase Two Convenience Sample. A Phase II sample was also constructed by the hospital and its community-based partners for purposes of collecting data from those likely to be missed in address-based recruitment. The hospital partnered with community-based organizations that provide health and social services to individuals in their service area who agreed to assist with the collection of data from program participants on a specific date in a specific location.

Data Collection

Phase One Random Sample. The questionnaire was printed as a four-page booklet on a single 11" x 17" sheet with a fold in the center. Each questionnaire was printed with a unique, numeric survey identifier that matched a record in the sample. A separate sheet was folded over the questionnaire and printed with a cover letter, study information sheet, and return mailing instructions. The questionnaire packet was assembled in a 9" x 12" windowed envelope and included an 8¾" x 11½" postage-paid, business reply envelope for survey returns.

The field period for the 2018 Community Health Needs Assessment Survey was April 2, 2018, through June 29, 2018. Each sampled address received up to two questionnaire attempts. The addresses were divided into four batches based on USPS pre-sort, and each batch was mailed one at a time over the

course of a two-week period. The second questionnaire for each address was mailed approximately 4 weeks after the first questionnaire. The addresses of returned questionnaires were excluded from the lists for the second questionnaire attempt.
After the second questionnaire attempt, a postcard follow-up was reintroduced in hopes of increasing response. In addition to reminding people to mail in their completed questionnaires, the postcard also provided a website address that allowed people to take the survey online as a member of the secondary convenience sample.

Paper questionnaires were returned to CSR in postage-paid, business reply envelopes provided in the questionnaire packet. Completed survey returns were counted, checked for unclear marks, batched in groups of 50 surveys, and scanned into ABBYY FlexiCapture OCR software for data processing. CSR's scanning partner, DataForce (dba MJT, US), received the scanned survey images electronically and reviewed the data via ABBYY FlexiCapture data verification software to ensure quality control. Missing responses and multiple responses to a single item were flagged. The compiled data was transmitted back to CSR via a secure file transfer protocol (SFTP) server.

Phase Two Convenience Sample. The collection of data in the convenience sample phase utilized the same survey used in the random sample. For this phase of data collection the survey was available both in English and Spanish. Additionally, an online version of the questionnaire was programmed in the Qualtrics survey platform. During data collection at community-based organizations, the hospital had the choice to use the online version of the survey (using a phone or tablet) or the paper-based survey. Once collected, data were shipped to CSR for scanning.

Data Management

All surveys were returned to CSR for scanning and organization. Data files were stored by CSR on a secure file server and processed using R statistical programming software. Respondent-provided counties and zip codes were cross-checked against the sample file. Discrepancies and misspellings were verified against the original scanned image of the response and, if reasonably similar, corrected prior to final data submission. After data processing, identifiers to allow filtering by hospital catchment area and weighting variables were added (only for the random sample). The final dataset was converted to a format for analysis in STATA statistical analysis software and transmitted to the researchers via Slashtmp, Indiana University's secure file transfer system.

Weighting of Samples

This section provides an overview of weighting activities for the 2018 Community Health Needs Assessment and applies only to the random sample. Two weighting adjustments were made to enhance consistency between the survey sample and the characteristics of the hospital's service population. The first was a base weight adjustment to account for unequal probabilities of selection within household. The second was a post-stratification adjustment to U.S. Census Bureau 2012-2016 American Community Survey five-year population estimates. The two weighting adjustments were multiplied to calculate a preliminary final weight for each hospital's catchment area. These preliminary weights were then trimmed and scaled so that the final weights summed to the number of respondents in each catchment area.

Survey Response Patterns

Regarding the random sample, 18,106 households received recruitment materials by mail. Of those households, a total of 2,234 returned a completed survey. The response rate for the NCHS and River Bend Hospital survey was thus 12.34%. Table 41 provides an overview of the weighted sample with the number of completed surveys received from each county and their corresponding % of the total sample.

Table 41. Summary of completed surveys received by county (random sample).

SERVICE COUNTIES	COMPLETED SURVEYS (N = 2,234)	% OF TOTAL SAMPLE
BENTON	59	2.7
CARROLL	129	5.8
CLINTON	213	9.5
FOUNTAIN	109	4.9
JASPER	215	9.6
MONTGOMERY	236	10.6
NEWTON	97	4.4
TIPPECANOE	810	36.2
WARREN	59	2.7
WHITE	152	6.8
Other	7	0.3
Not Provided	142	6.4

Regarding the convenience sample, North Central Health Services and partner organizations in the service area collaborated to collect 542 surveys from individuals engaged in care and services. Table 42 summarizes surveys received by county in the convenience sample.

Table 42. Summary of completed surveys received by county (convenience sample).

SERVICE COUNTIES	COMPLETED SURVEYS (N = 542)	% OF TOTAL SAMPLE
BENTON	0	0.0
CARROLL	11	2.0
CLINTON	0	0.0
FOUNTAIN	4	0.7
JASPER	4	0.7
MONTGOMERY	3	0.6
NEWTON	1	0.2
TIPPECANOE	509	93.9
WARREN	2	0.4
WHITE	8	1.5

Data Analyses

Data analyses were conducted by Measures Matter, LLC, a research consulting group with expertise in community-based participatory research. Prior to analysis, Measures Matter staff consulted with NCHS and River Bend Hospital to develop a preliminary plan for the analysis of data and the presentation of results.

To retain the integrity of the phase one random sample and the methodological rigor offered by that sample, analyses were conducted separately for the phase one random sample and the phase two convenience sample.

Survey Results

The summary of the survey results primarily reflects the phase one random sample unless otherwise stated. Throughout the summary, descriptions of participants in the phase two convenience sample are also included where appropriate. In those cases, selected data are presented in colored text.

Description of Participants

A total of 2,234 participants returned a completed survey from the phase one random sample. Additionally, a total of 542 individuals completed a survey during the convenience sample phase of the project. In this section of the survey, the primary presentation of results includes those 2,234 individuals from the random sample and where appropriate, commentary is provided in each section to highlight similarities and differences between the random and convenience sample data. Throughout, additional comparisons are presented based on gender or the extent to which the participants were characterized as living in poverty.

County of Residence. Of the 2,234 participants, 95.2% (n = 273) indicated that their primary residence was located in the ten-county area served by NCHS and River Bend Hospital. Although all households receiving the survey were located in the service area, some participants (6.7%, n = 149) either refused to provide their county of residence or indicated that it was located in an adjacent county. Figure 9 provides an overview of the participants' reported county of residence.

> Those in the convenience sample represented nine of the ten counties in the NCHS service area. The vast majority were from Tippecanoe County (93.9%, n = 509). Carroll County was represented by 2.0% of the sample (n = 11) and White County was represented by 1.5% of the sample (n == 8). Six of the counties were represented by less than one percent of the total sample each (Fountain, Jasper, Montgomery, Newton, and Warren).

Adults and Children in Household. Participants were asked to indicate the number of adults (18 years and over) and children (under 18 years) who lived in their household. Of the participants providing data related to adults in the home, 79.9 % (n = 1,785) indicated that two or fewer adults lived in the household. Of those providing a response to the question about children in the household, the majority (62.7%, n = 1,400) indicated no children under the age of 18 years in the home. Some participants did report children in the home, with most (25.8%, n = 578) indicating two or fewer children and the

remainder (8.3%, n = 120) reporting three or more children in the home. Figure 10 provides a summary of this data.

Participants in the convenience sample were largely similar to those in the random sample regarding adults in the household, however there were differences with regard to children. In the convenience sample, 50% (n = 271) of the participants indicated having a child under the age of 18 in the home, with 28.3% having two or fewer children and 18.1% (n = 105) reporting three or more children.

Gender. Participants were asked to report their gender. More women participated in the survey than did men, and few refused to respond to the question about gender. Figure 11 provides an overview of participant gender. Most participants in the convenience sample were also women.

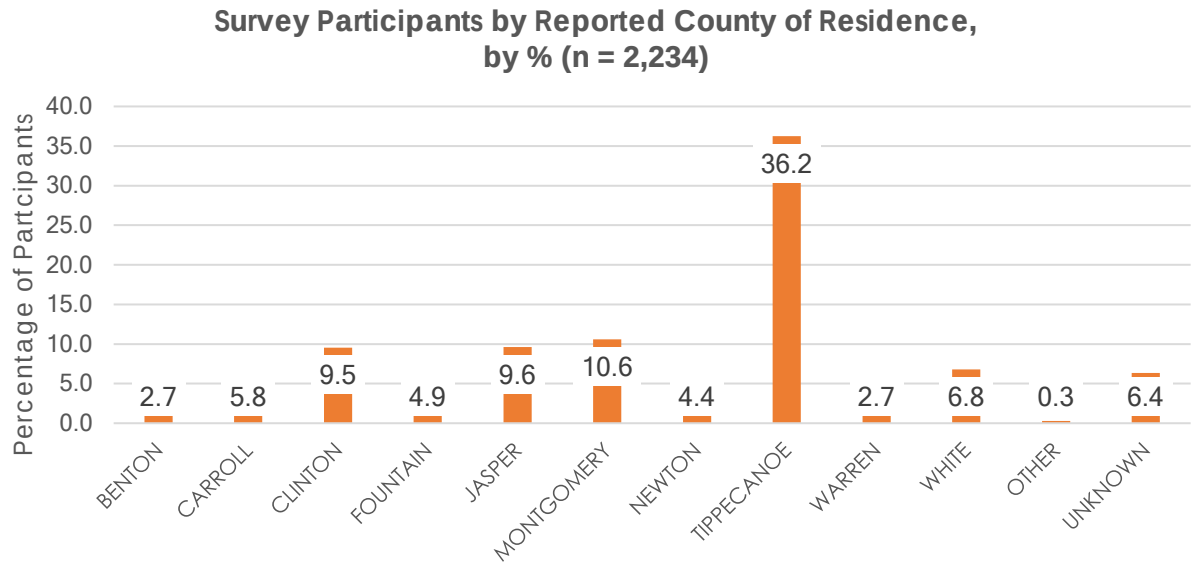


Figure 9. Participant's reported county of residence, by % of participants.

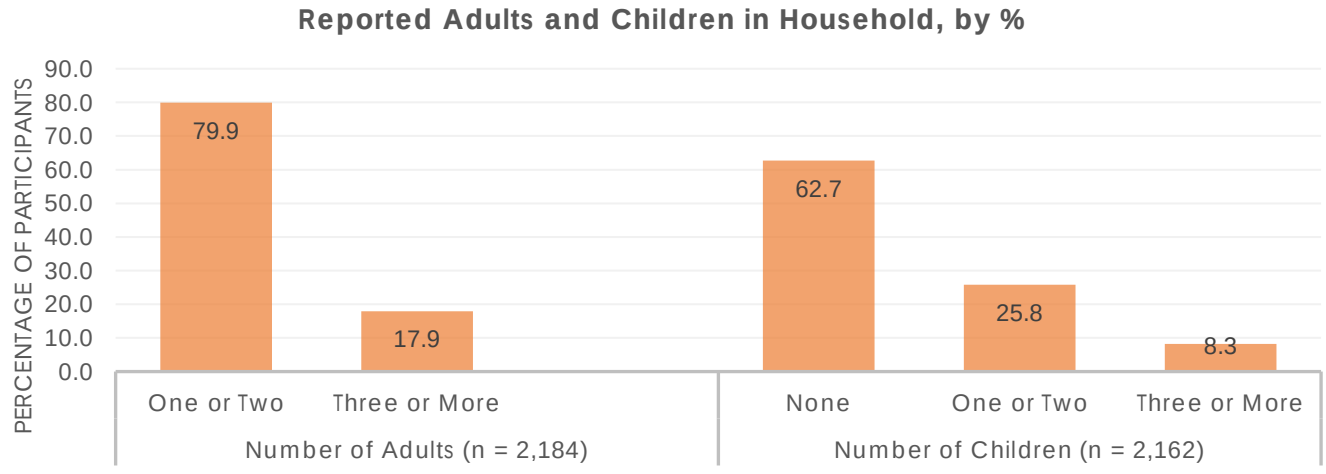


Figure 10. Reported adults and children in household, by % of participants.

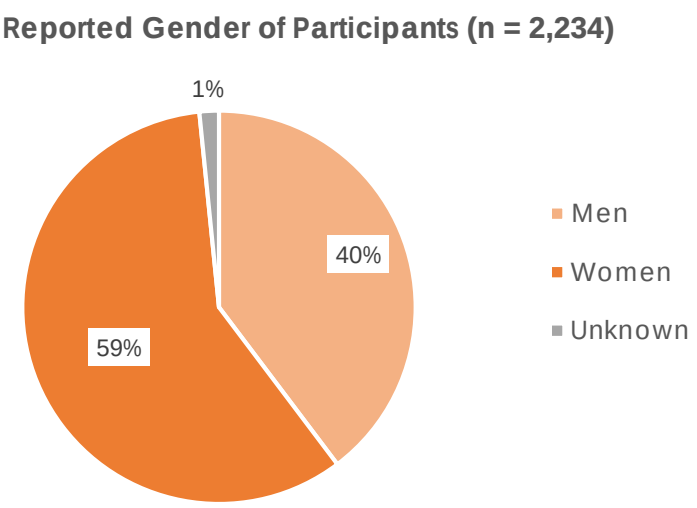


Figure 11. Reported gender of survey participants, by % of participants.

Participants in the convenience sample were similar to those in the random sample in terms of reported gender, with 71.6% (n = 388) being female and 25.8% (n = 140) being male. Slightly more participants in the convenience sample chose not to report a gender (2.6%, n = 14). The age distribution of those participants in the convenience sample was largely similar to that of those in the random sample with no notable differences.

Age. Participants were asked to provide the year in which they were born. Those data were subsequently analyzed to compute the estimated age of the individual at the time the survey was returned. Figure 12 provides a categorical overview of the age of participants.

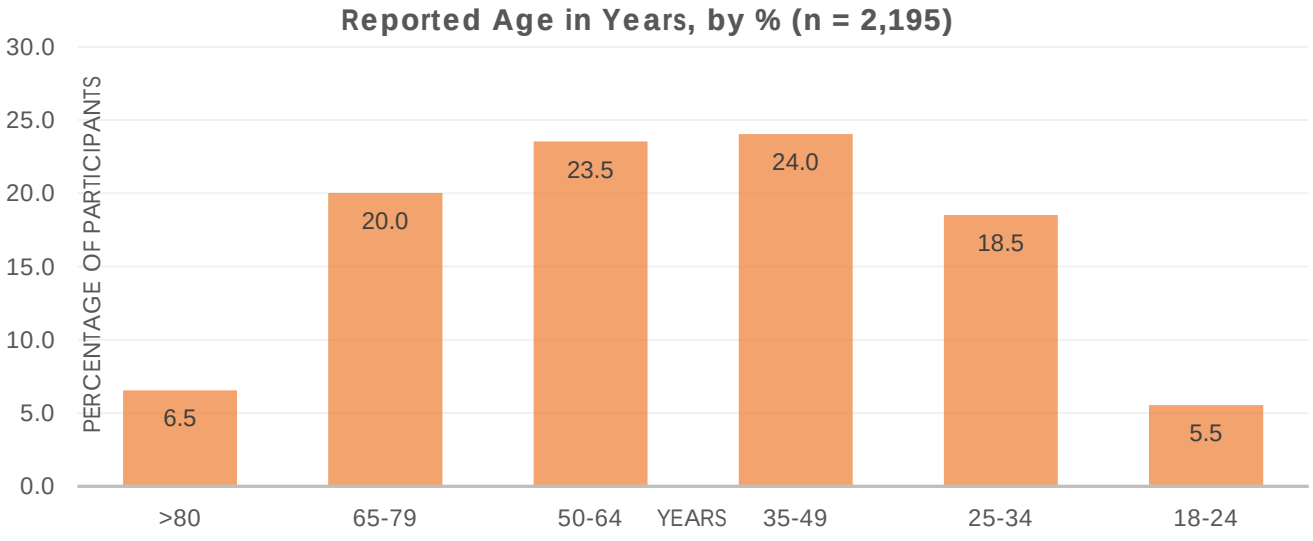


Figure 12. Reported age of participants, by % in years.

Race. Participants were asked to respond to a question regarding the race with which they identify. Participants were invited to select more than one race. The vast majority (94.3%, n = 2,107) indicated that they were of "Caucasian/White" race, with participants choosing other races in smaller proportions, including "Black or African-American" (0.8%, n = 17), "American Indian or Alaska Native" (0.7%, n = 15), and "Asian" (2.0%, n = 44). Some participants chose to indicate "other" as their race (2.2%, n = 49).

Ethnicity. Participants were asked whether they were of Hispanic, Latino, or Spanish origin. A small proportion of participants (2.8%, n = 63) responded in the affirmative. A small portion of participants (2.1%) chose not to respond to the question about ethnicity. Figure 13 provides an overview of participant responses to race and ethnicity items.

There were important differences between the random sample and the convenience sample with regard to ethnicity and race. Of those in the convenience sample, 11.3% reported their ethnicity as Hispanic (n = 61). Eighteen of those individuals completed the survey in Spanish when given the opportunity (all of whom were from Tippecanoe County). Participants in the convenience sample were also more diverse in terms of reported race. Approximately three-fourths (74.0%, n = 401) reported their race as White or Caucasian, 18.3% reported their race as Black or African-American (n = 99), thirty-one participants reported their ethnicity as Asian, Native Hawaiian or Pacific Islander ,or American Indian or Alaska Native (5.7%), and an additional number of participants chose to describe their race in other terms (3.3%, n = 18).

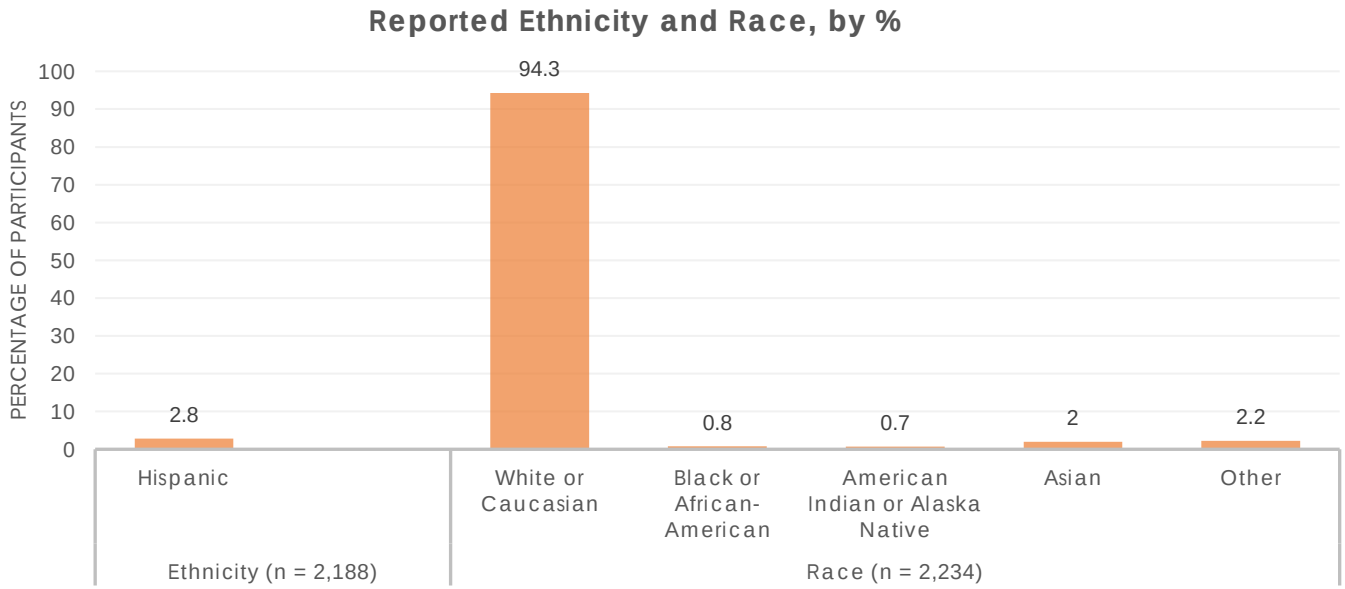


Figure 13. Reported ethnicity and race of survey participants, by category %.

Household Income. Participants were asked to respond to a question regarding the total income of the household in which they lived (including all sources). One hundred and three participants did not provide a response to this question. Slightly more than one-tenth of participants indicated that their total

household income was less than $25,000 (13.5%, n = 300). These individuals were further categorized into a category of "poverty" for specific analyses that are included later in this summary.

In total, 22.9% (n = 488) reported total household income of less than $35,000.00, approximately one-third (32.7%, n = 730) reported income of between $35,000.00 and $74,999.00, with the largest percentage of participants (39.8%, n = 913) reporting total household income of over $75,000.00. Figure 14 provides a categorical summary of the reported household income of participants.

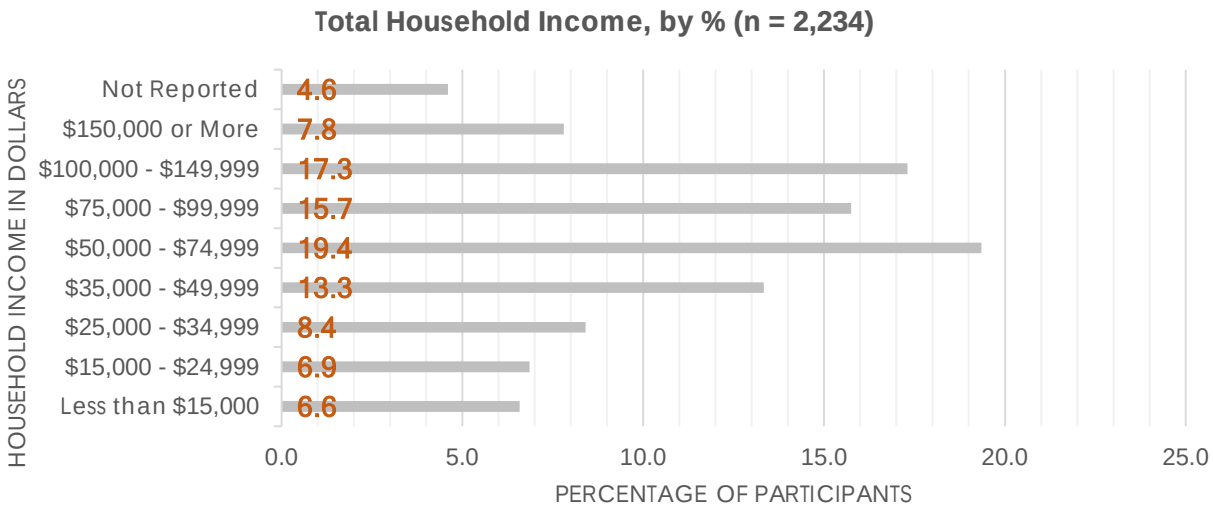


Figure 14. Reported total household income, by category %.

Reported household income among those in the convenience sample was markedly lower, with 69.4% of those in the sample (n = 376) reporting their income as less than $25,000 per year, with over half of the total sample reporting their income as less than $15,000 per year (51.7%, n = 280). Accordingly, fewer participants reported incomes in the other income categories, with only 11% (n = 60) reporting an income over $75,000.

Employment Status. Participants were asked to select from categories of employment or unemployment and given the option to select more than one category. The majority of participants indicated that they were employed, with 50.4% (n = 1,125) reporting that they work full time and 9.0% (n = 202) reporting part time employment. Some participants indicated that they were unemployed (6.1%, n = 135), and others reported their status as retired (24.0%, n = 536), or as being a student (2.3%, n = 52) or a homemaker (4.8%, n = 108). Seventy-five participants (4.0%) reported multiple categories of employment or chose to not respond to the item. Figure 15 provides a summary of this data.

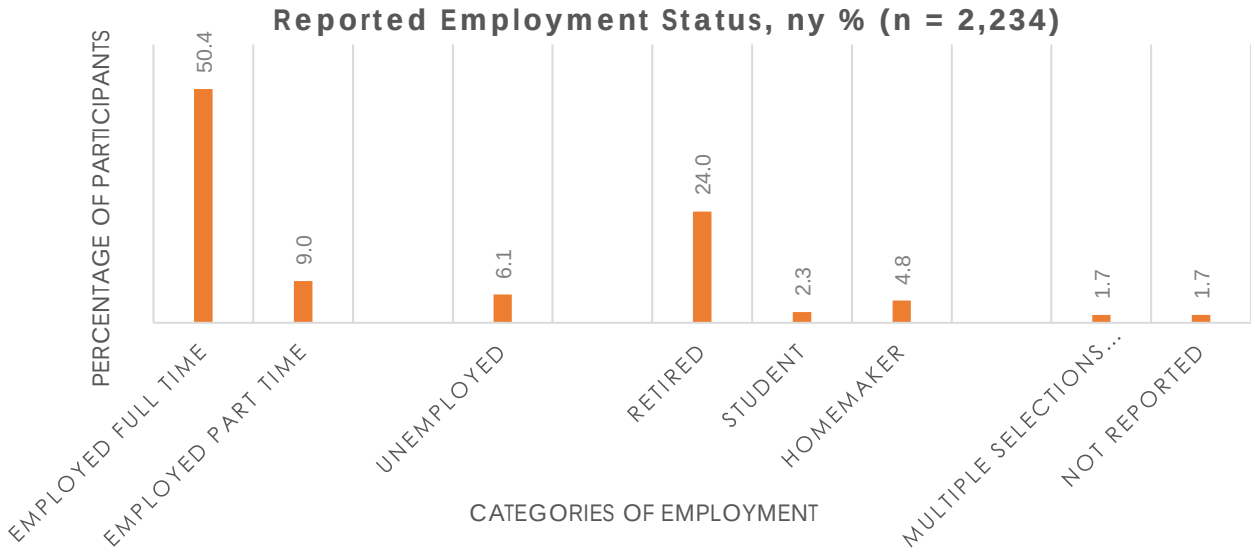


Figure 15. Reported employment status of participants, by category %.

Significantly more participants in the convenience sample described themselves as being unemployed (36.9%, n = 200).

Level of Education. Participants were asked to report their highest level of attained education based on specific categories. Approximately one-third of participants (31.3%, n = 698) reported having completed an associate or bachelor's degree from a college or university and 20.8% (n = 465) reported having attained a graduate or professional degree. A small proportion of participants (6.1%, n = 137) indicated that they had a diploma or certificate from a technical or vocational school or that they had completed some college. In larger proportions, 19.6% (n = 438) reported having received a high school diploma or GED, and only 2.1% (n = 47) reported that they had some high school education but had not graduated. Approximately 6% of individuals (n = 126) chose "other" without useful clarification, marked multiple categories, or chose not to respond to the question. Figure 16 provides a summary of this educational level data.

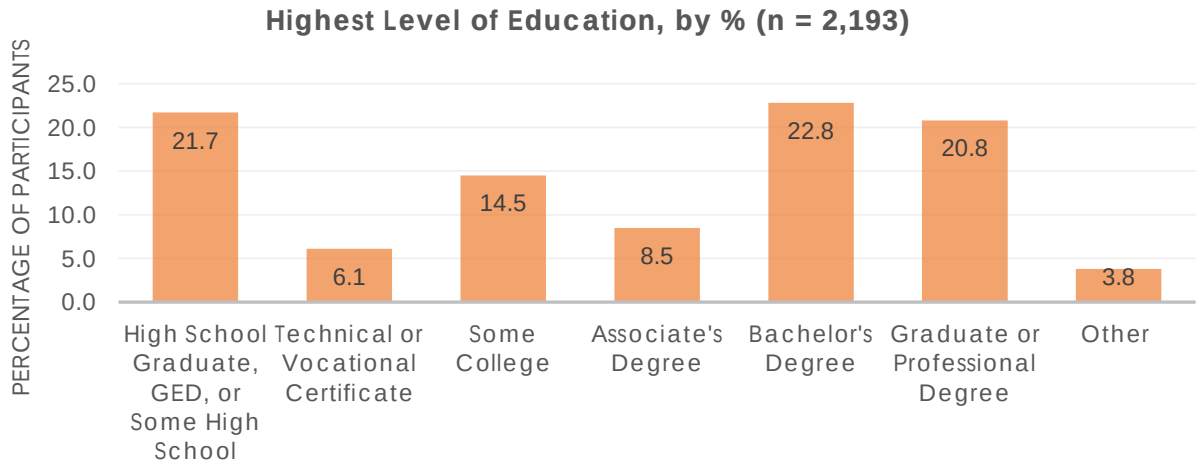


Figure 16. Reported highest level of education, by category %.

Close to half of participants in the convenience sample (46.2%, n = 250) described their highest level of education as being high school graduate or less. Only 11.8% reported having a bachelor's degree (n = 64) and fewer reported a graduate or professional degree (5.7%, n = 31).

Participants' Perceptions of Health and Well-Being

Participants were asked to respond to four questions that sought to capture their perceptions of their current health status. Participants were asked to provide an assessment of their overall health, their physical health, their mental health, and their social well-being. Additionally, participants were asked about their overall life satisfaction and their level of stress. While responses to each area assessed are described below, Figures 17, 18, 19, and 20 provide a summary of the participant responses.

Overall Health. Participants were asked "Would you say that in general, your overall health is…" with five response options ranging from poor to excellent. Some participants did not respond to this question or marked multiple responses (2.6%). The vast majority of participants rated their overall health as very good (38.5%, n = 861), excellent (11.7%, n = 262), or good (32.5%, n = 726). The remainder assessed their overall health as being fair (11.8%, n = 263) or poor (2.7%, n = 61).

Physical Health. Participants were asked "Would you say that in general, your physical health is…" with five response options ranging from poor to excellent. Only five participants opted not to respond (0.2%). Despite the vast majority who reported their overall health as being positive, participants differentiated their level of health more when being specific to their physical health. Less than half of individuals collectively rated their physical health as very good (14.3%, n = 319) or excellent (3.6%, n = 80). The largest proportion of participants rated their health as good (36.4%, n = 814), with the remaining participants perceiving their health as being fair (35.0%, n = 783) or poor (10.4%, n = 232).

Mental Health. Participants were asked "Would you say that in general, your mental health is…" with five response options ranging from poor to excellent. Twenty-four participants did not respond to this question (1.0%). The majority of participants rated their overall health as very good (40.5%, n = 905), excellent (20.9%, n = 467), or good (27.4%, n = 611). The remainder assessed their overall health as being fair (8.7%, n = 195) or poor (10.4%, n = 232).

Social Well-Being. Participants were asked "Would you say that in general, your social well-being is…" with five response options ranging from poor to excellent. Only eight participants did not respond to this question (0.9%). The majority of participants perceived their overall social well-being to be less than good, with the largest proportion of all participants responding fair (41.8%, n = 935) and approximately 1/5th of participants (19.6%, n = 437) responding with poor. Approximately 1/3rd of participants rated their social well-being as good (27.8%, n = 621), with the remainder responding with very good (8.6%, n = 191) or excellent (1.4%, n = 30).

Participants in the convenience sample perceived their overall health and physical health as being "good to excellent" in higher proportions than did those in the random sample, which could be a reflection of the fact that they were engaged in some health or social service at the time of the data collection. Participants in the convenience sample also tended to rank their social well-being as better than did those in the random sample, perhaps also related to their connection to a

service. However, those in the convenience sample were more likely to report their mental health as being worse than those in the random sample.

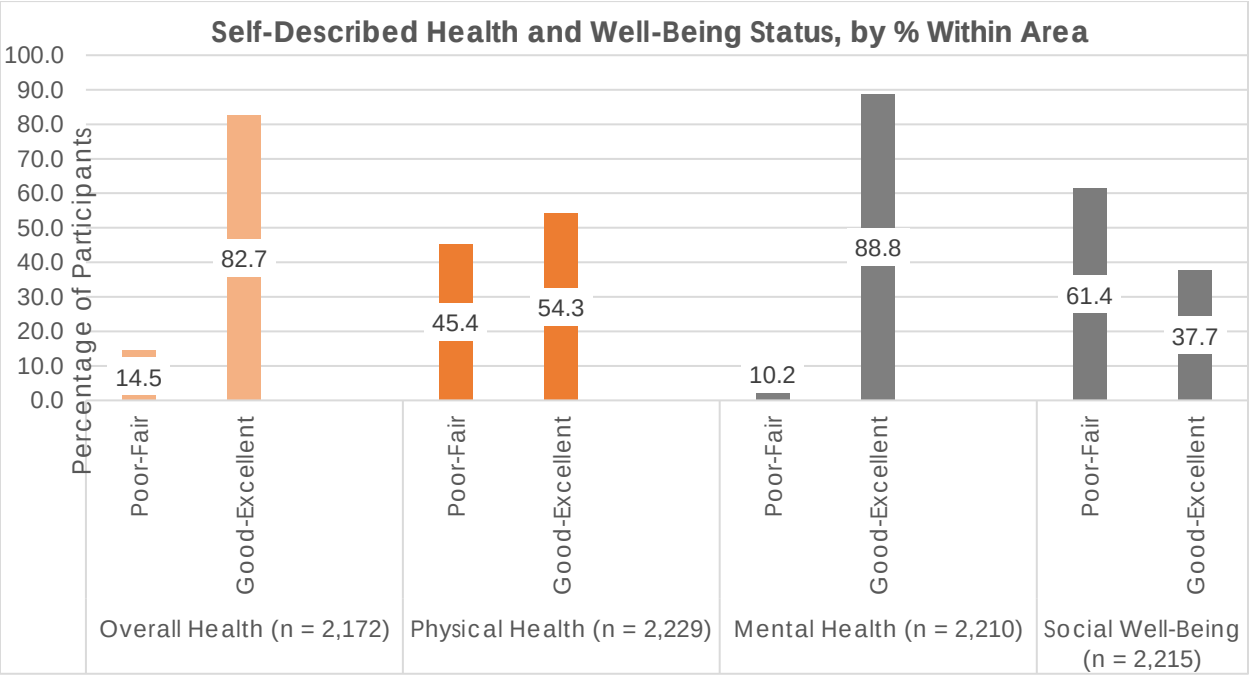


Figure 17. Participants' perceptions of health and well-being.

Interesting trends were present in the self-described health and well-being of those in the convenience sample. In terms of overall health, twice as many participants described it as being "poor or fair" (28.1%, n = 152), however participants in the convenience sample rated their physical health as being better than those in the random sample, with about half as many (24.9%) describing it as "poor or fair." About twice as many participants in the convenience sample did rate their mental health as being "poor or fair" (28.6%, n = 155) yet far fewer in the convenience sample described their social well-being as "poor or fair" (36.4%, n =197).

Poverty and Perceptions of Health. Because poverty is often associated with an individual's personal perception of their health and well-being, data were further considered to assess relations between poverty and these measures. Individuals whose total combined household income was less than $25,000.00 were categorized as the "poverty" group and compared to those with all other incomes. For all analyses, those participants for whom an income was not provided were excluded from the analyses.

Analyses indicated that poverty did share some associations with participants' rankings of their health and well-being. As is summarized in Figure 18, those in the poverty category were approximately three times more likely to report their overall health as being "fair" or "poor" than their higher-income counterparts. The same was the case with mental health, with those in the poverty category rating it as "fair" or "poor" in significantly higher proportions than those in the higher-income category. On the other hand, those in the poverty category reported their physical health and social well-being as more positive than those in the higher-income categories. Figure 18 provides an overview of this data.

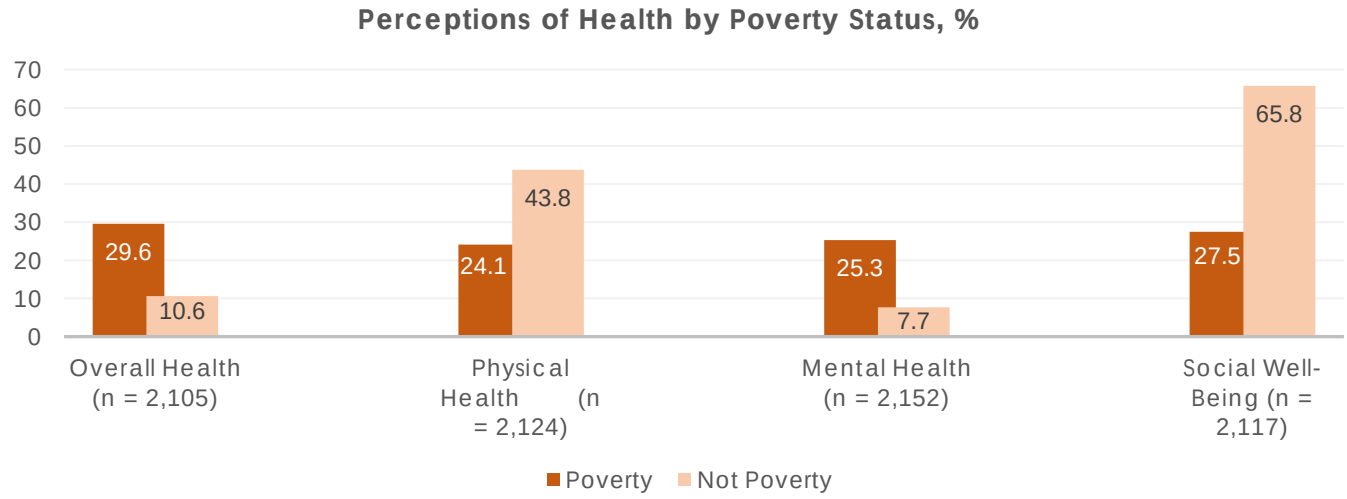


Figure 18. Perceptions of health by poverty status.

Overall Life Satisfaction. Participants were asked to respond to a single question that asked them to respond to the statement "overall I am satisfied with my life" with five response options ranging from strongly disagree to strongly agree. Only eight participants refused an answer to this question (0.4%). The majority of participants agreed with the statement, with 42.4% (n = 947) responding "strongly agree" and 34.5% (n = 772) responding "agree." Some participants (7.8%, n = 174) responded "neutral." Those indicating less overall life satisfaction responded with "somewhat disagree" (8.1%, n = 180) or "strongly disagree" (6.8%, n = 153). Figure 19 provides an overview of responses to this item.

Level of Life Stress. Participants were asked to rank their current level of life stress by responding to a single item "Please rank yourself on a scale of 1 to 10, where 1 means you have 'little or no stress' and 10 means you have 'a great deal of stress.'" The majority of participants (53.3%, n = 1,190) responded with scores in the top half of the options (a score of six or higher), and over one-quarter (26.8%, n = 598) responded with a score in the top third of possible responses (eight or higher) indicating that a relatively significant proportion of the participants identify with what would be considered an elevated (or greater) level of stress. Figure 20 provides the percentage of respondents who ranked themselves on this measure.

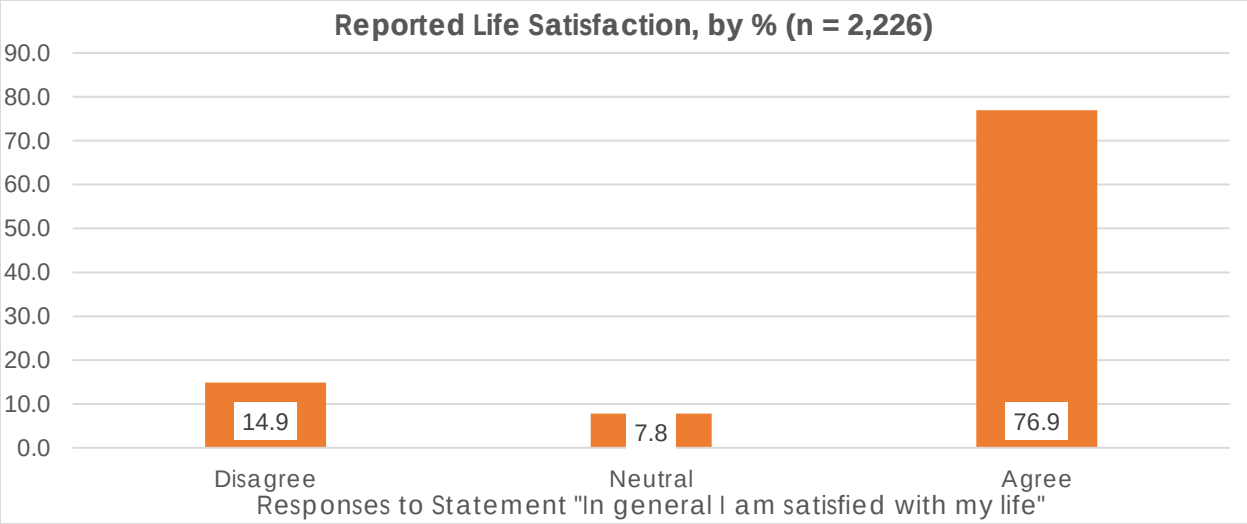


Figure 19. Participants' agreement with life satisfaction item.

Participants in the convenience sample reported higher levels of stress, similar to those in the random sample; yet more were in the top quarter of high stress (43.2%, n = 234) and also tended to disagree more (26.0%, n = 141) that they are generally satisfied with their life.

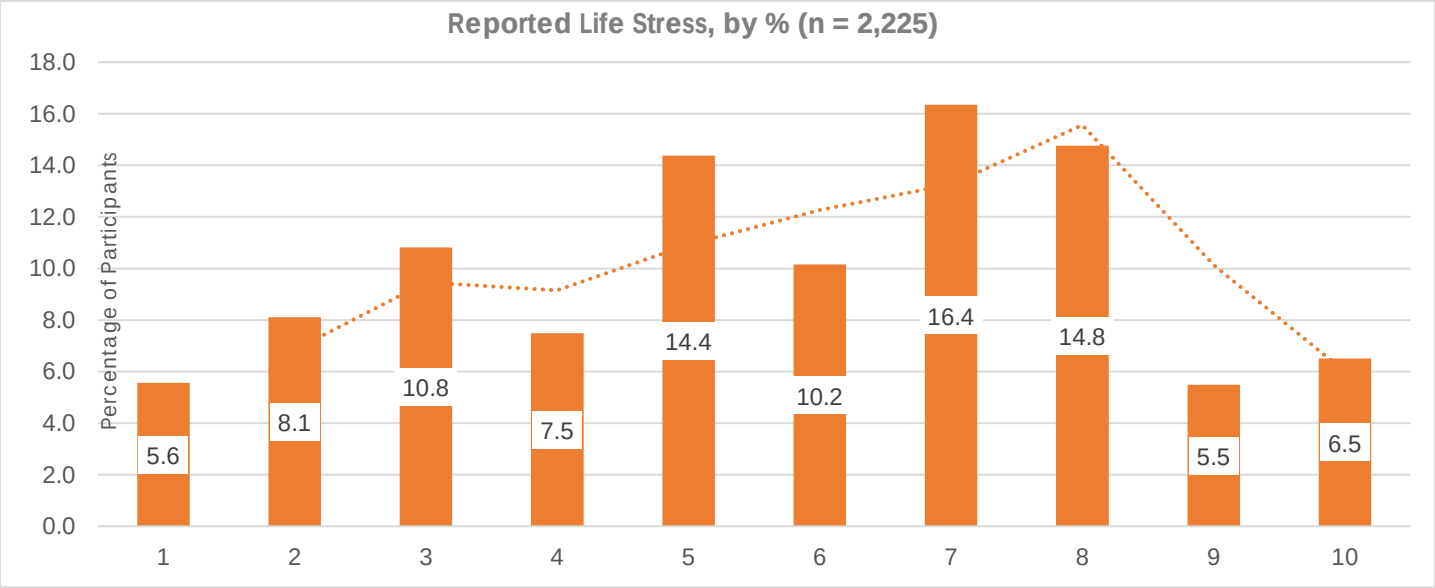


Figure 20. Ranking of level of life stress (1 = low level of stress; 10 = great deal of stress).

Health Care Access and Engagement

Participants were asked to respond to a range of questions related to their current level of healthcare coverage and also asked to describe the types of engagement they had with the healthcare system in their community within the 12 months prior to the survey. Also assessed was whether participants had found themselves in situations within the past year that made it necessary to forego some level of healthcare based on a lack of financial resources or because they had to prioritize other matters.

Insurance or Healthcare Coverage. Participants were asked "Do you currently have insurance or coverage that helps with your healthcare costs?" Of the participants, the vast majority (95.5%, n = 2,133) reported that they did have such coverage or insurance, while 4.1% (n = 91) responded "no" and two participants (0.1%, n = 2) indicated that they were "unsure" about such coverage. A small portion of participants (0.4%, n = 8) did not respond to this item.

Current Personal Provider. Participants were asked "Do you currently have someone that you think of as your personal doctor or personal healthcare provider?" Most participants indicated that they did have such a personal provider (80.9%, n = 1,807), while 17.8% (n = 398) responded "no" and twenty-

six participants (1.2%) indicated that they were "unsure" as to whether they had such a personal provider. Only three participants did not provide a response to this question (0.1%, n = 3).

These items were further analyzed by the poverty status category; no significant differences were found. While there were slightly fewer individuals in the poverty category who reported having insurance or healthcare coverage (93.3%), it was the case that slightly more individuals in the poverty category (83.4%) reported having a personal healthcare provider. Figure 21 provides an overview of the responses to the questions about insurance or healthcare coverage and the presence of a personal healthcare provider.

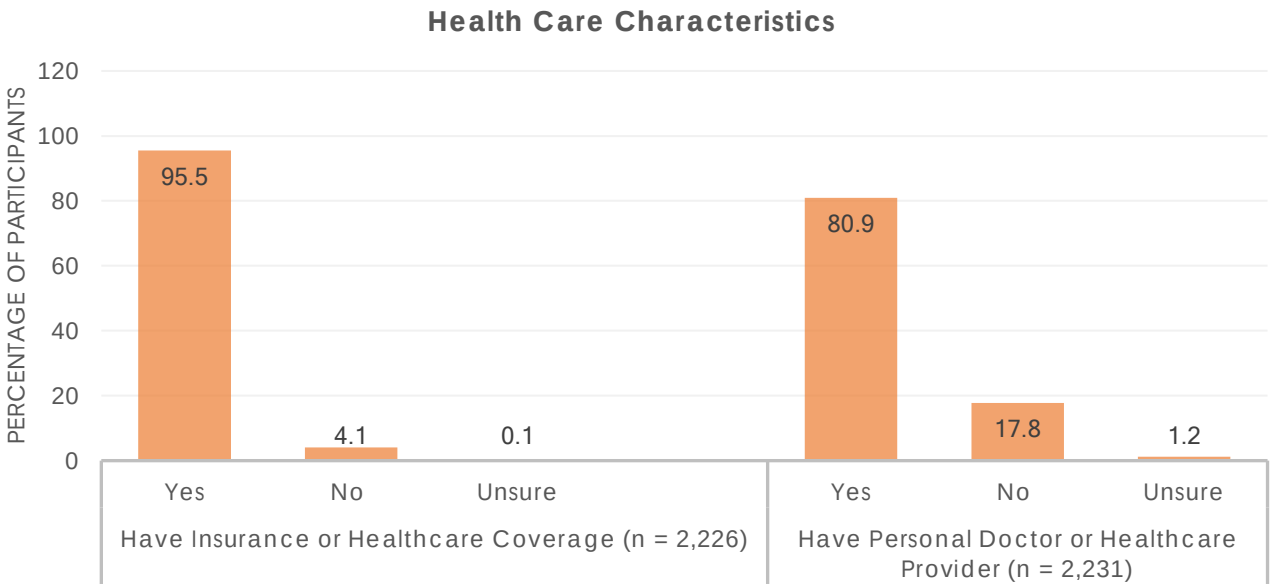


Figure 21. Participants' reported insurance and personal provider characteristics.

Of those participating in the convenience sample, higher proportions of participants (14.6%, n = 79) reported a lack of insurance or other healthcare coverage and also a lack of a personal healthcare provider (24.5%, n = 133).

Healthcare Engagement. Participants were provided a list of 14 health-related services and types of healthcare engagement and asked whether they had received or utilized each of those within the past 12 months. Table 43 provides a summary of the participants' responses to this question, with a side by side presentation of the reported healthcare engagement by those in the convenience sample and those in the random sample.

These data were also analyzed by gender and poverty status for the random sample. Regarding poverty status, there were some minor differences (e.g., those in the poverty category reported slightly elevated rates of family planning care and chronic disease care and reported slightly lower rates of dental care), yet none were at a level of significance. Figure 22 also provides a comparison of the types of health care services reported between genders. Women reported significantly higher rates of access for four types of care, including filling a prescription, receiving dental care, and receiving care at an acute care or urgent care facility.

Table 43. Participants' reported types of healthcare engagement (n = 2,234).

Health Care Engagement (n = 542)	Convenience Sample		Random Sample	
	% Received	% Not Received	% Received	% Not Received
Filled Prescription	53.5	46.5	69.8	30.2
Physical Exam	36.0	64.0	59.4	40.6
Dental Care	31.0	69.0	59.1	40.9
Immunizations or Preventive Care	20.3	79.7	38.0	62.0
Acute Care	21.6	78.4	25.6	74.4
Urgent Care	19.2	80.8	21.4	78.6
Chronic Care	22.7	77.3	17.7	82.3
Care at Emergency Room	26.2	73.8	16.9	83.1
Screened for Anxiety or Depression	17.7	82.3	11.4	88.6
Mental Health Treatment	17.3	82.7	9.7	90.3
Hospital Inpatient Care	9.6	90.4	9.1	90.9
Prenatal Care	8.9	94.6	4.5	95.5
Family Planning Care	5.4	94.6	4.1	95.9
Addiction Treatment	5.5	94.5	1.2	1.2

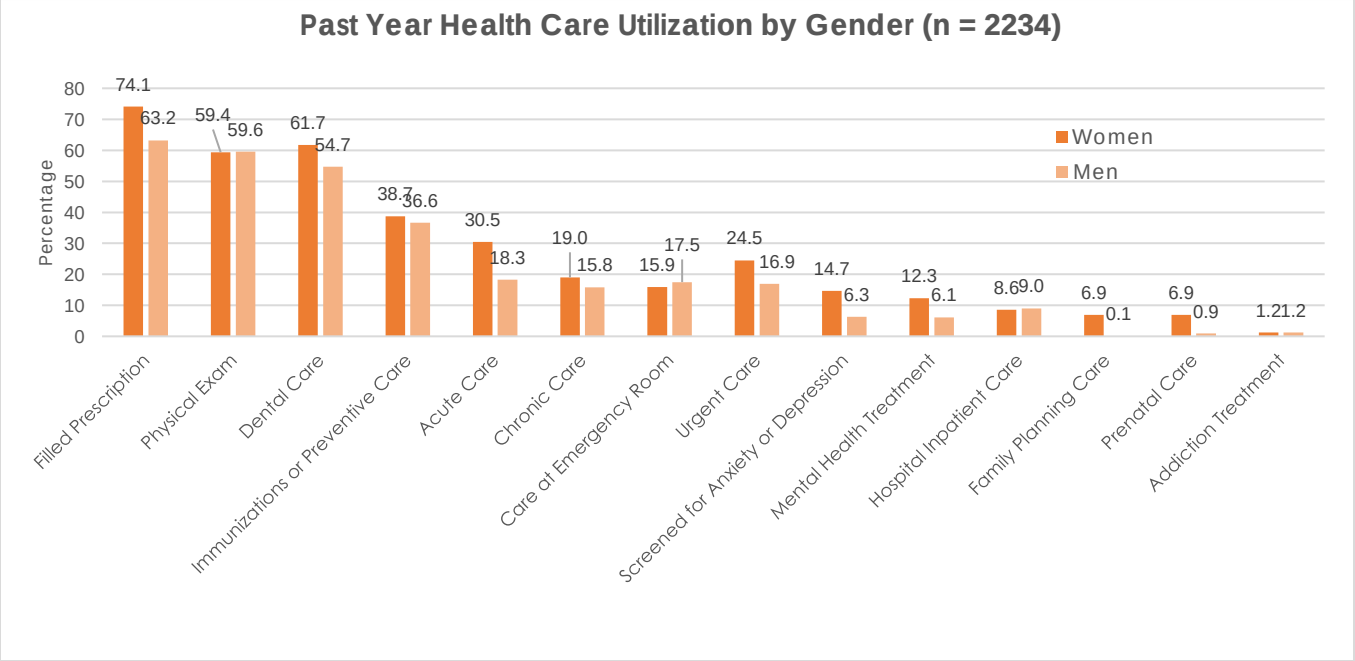


Figure 22. Healthcare engagement by gender.

Resources and Healthcare Engagement. Participants were provided a list of three types of healthcare engagement needs including seeing a provider, filling a prescription, and finding transportation for care and asked to indicate whether there had been a time within the past 12 months that they could not act upon that need because "they couldn't afford it or had to prioritize spending money on something else." Less than 20% of participants indicated that it had been the case that they prioritized something over their healthcare across the three types assessed.

Regarding **seeing a medical provider**, 19.3% of participants (n = 430) indicated they had a need to see a provider but did not due to other needs and 1.0% (n = 22) indicated they were unsure whether that had been the case. Most participants (76.2%, n = 1,702) reported they had not found themselves in a situation to avoid seeing a provider and a small number of participants (3.5%, n = 79) chose not to provide a response to this question.

Regarding **needing to fill a prescription**, 14.7% (n = 329) indicated they had a need to avoid filling a prescription due to other needs and a small number (1.0%, n = 22) indicated they were unsure whether that had been their situation. Most participants (80.6%, n = 1,801) reported they had not found themselves in a situation to avoid filling prescription due to a lack of resources and a small number of participants (3.7%, n = 82) chose not to provide a response to this question.

Regarding **needing transportation for healthcare**, only 6.1% of participants (n = 135) indicated they had not been able to access transportation due to other needs and a small number (1.0%, n = 23) indicated they were unsure. The vast majority of participants (88.0%, n = 1,966) reported they had not found themselves in this situation while 4.9% of participants (n = 110) chose not to provide a response to this question.

> Across all three areas, participants in the convenience sample reported higher incidence of needing to forego care due to the need to prioritize other resources. Over one-third (38.2%, n = 207) reported foregoing seeing a provider, 36.0% (n = 195) reported not filling a prescription, and 28.6% (n = 155) reported foregoing transportation for care due to other needs. Being in the poverty category was strongly influential on these resource challenges, with over 75% of those making less than $25,000 indicating the need to forego each of these, and 100% of those making less than $15,000 reporting the same.

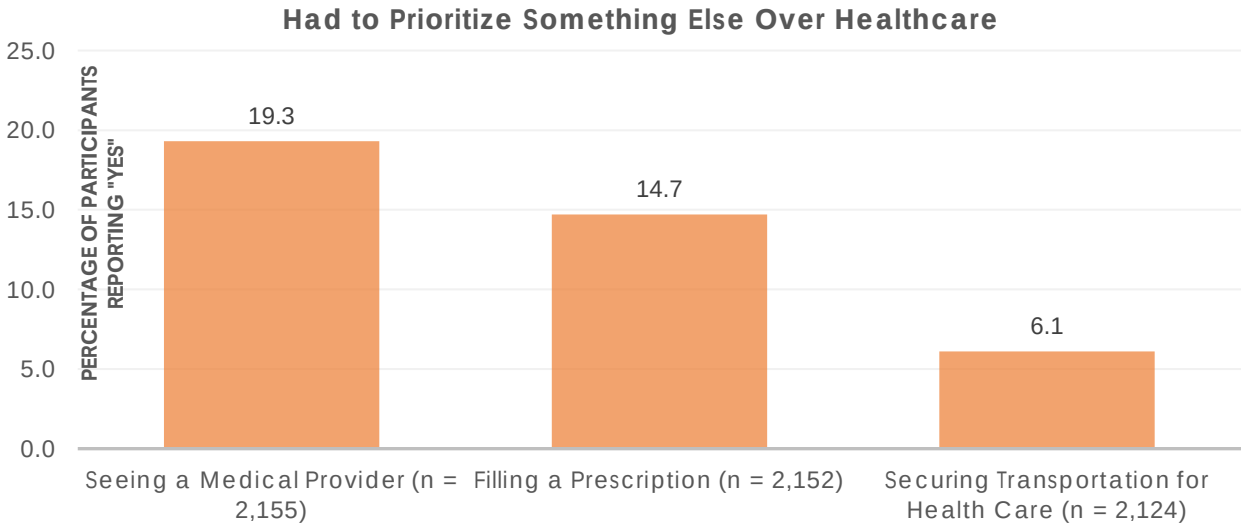


Figure 23. Participants' reports of resource and healthcare challenges.

Further analyses were conducted to assess the extent to which those in the poverty category (when compared to those in the higher-income category) reported the need to prioritize something else over care. For all three types of care, individuals in the poverty category reported elevated rates of foregoing care. Figure 24 provides a summary of these comparisons.

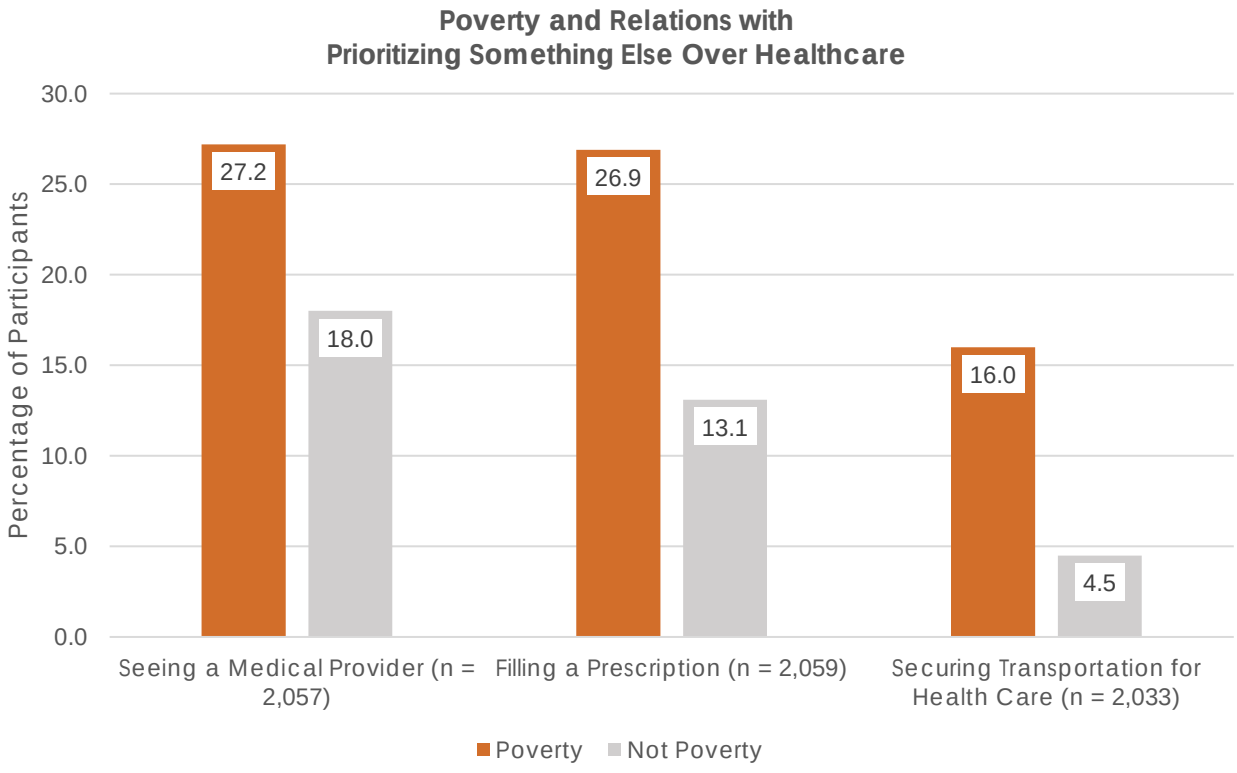


Figure 24. Poverty status and need to prioritize something over healthcare.

Personal Health-Related Behaviors

NCHS and River Bend Hospital were interested in a general understanding of the extent to which participants had participated in certain behaviors within the past 30 days. Of particular interest were behaviors that were conceptualized as health promoting (e.g., behaviors perceived to be supportive of one's health and well-being) or health challenging (e.g., behaviors perceived to be challenging to one's health and well-being).

Given that some health-related programs focused on behavior tend to differentiate services between men and women, the data are presented by gender in Figure 25 (health promoting behaviors) and Figure 26 (health challenging behaviors).

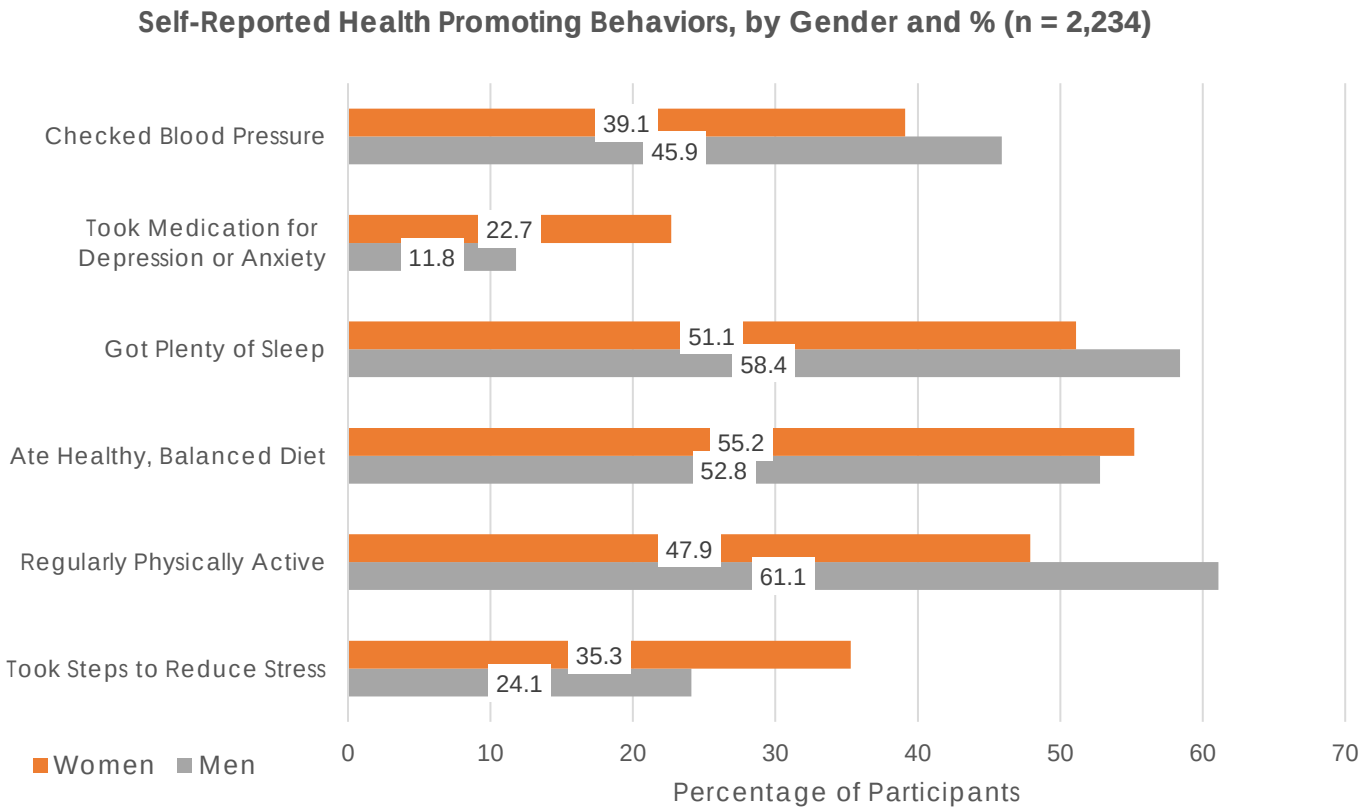


Figure 25. Self-reported health promoting behaviors, by gender.

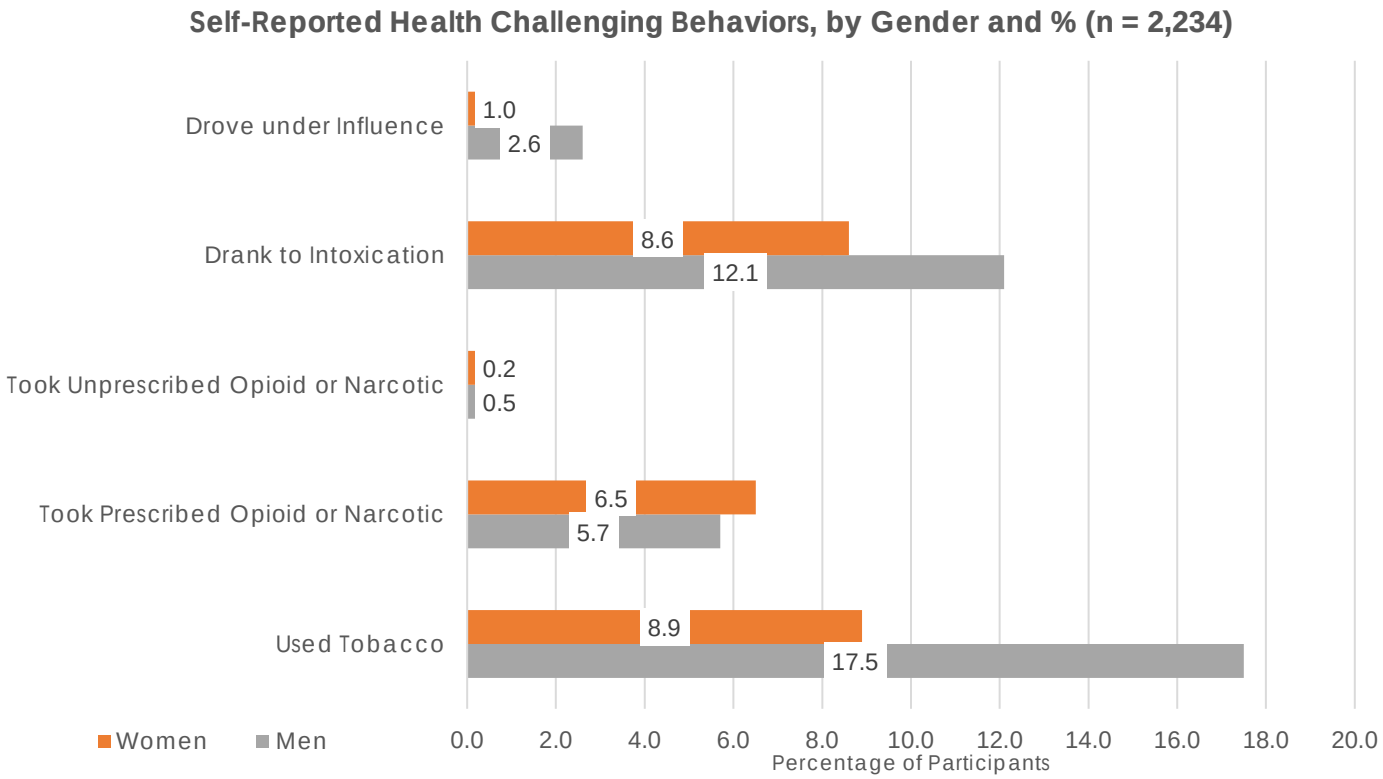


Figure 26. Self-reported health challenging behaviors, by gender.

There were some differences between reports of both health promoting and health challenging behaviors when compared across the random sample and the convenience sample. Table 44 provides a side by side comparison of the two samples by gender.

Table 44. Comparison of random and convenience samples on health behavior items.

Health Behaviors	**Random Sample (n = 2,234)**		**Convenience Sample (n = 542)**	
Health Promoting	Men %	Women %	Men %	Women %
Took Steps to Reduce Stress	24.1	35.3	27.9	31.7
Regularly Physically Active	61.1	47.9	41.4	41.2
Ate Healthy, Balanced Diet	52.8	55.2	31.4	39.4
Got Plenty of Sleep	58.4	51.1	33.6	39.9
Took Medication for Depression or Anxiety	11.8	22.7	20.7	25.5
Checked Blood Pressure	45.9	39.1	32.1	38.7
Health Challenging	Men %	Women %	Men %	Women %
Used Tobacco	17.5	8.9	47.1	31.7
Took Prescribed Opioid or Narcotic	5.7	6.5	11.4	10.1
Took Unprescribed Opioid or Narcotic	0.5	0.2	2.9	1.5
Drank to Intoxication	12.1	8.6	12.1	5.9
Drove under Influence	2.6	1.0	1.4	1.8

Social Determinants of Health

NCHS and River Bend Hospital were particularly interested in a better understanding of whether participants perceived that certain social issues (often considered to be determinant of health status) were impacting their lives. Participants were provided with a list of 10 statements and asked to report the extent to which that statement applied to them. Each statement reflected a particular social determinant of health.

The purpose of these items was to assess the extent to which participants "felt" specific characteristics of social factors known to influence health outcomes. To assess these, some items were worded positively. For example, "I feel safe in the place where I live" is a positively worded item and those reporting "never" or "seldom" to that item are among those who have identified a social factor that could be acted upon in the health and social services infrastructure. Negatively worded items like "I worry about being able to pay my rent or mortgage" are considered at the other end of the response options, with those responding "sometimes," "often," or "always" being among those who might benefit from economic or employment assistance.

Because social determinants are among those types of items more likely to be assessed among lower-income populations (particularly in care and social service settings), these items were additionally analyzed by poverty category. Table 45 provides a summary of the overall sample responses and those compared by poverty category.

Table 45. Participants' reports of felt social determinants.

Social Determinant	Item Assessed	Total Sample Responses	Responses by Poverty Status	
			Poverty (14.1%)	*Non-Poverty (85.9%)*
Positively Worded Social Determinant Items		**Percent Reporting "Never" or "Seldom" Applies to Me**	**Percent Reporting "Never" or "Seldom" Applies to Me**	
Social Ecology (n = 2,186)	I feel those around me are healthy	4.9	4.4	4.5
Education (n = 2,211)	I am satisfied with my education	10.1	19.0	8.4
Community Cohesion (n = 2,188)	I make efforts to get involved in my community	31.6	46.3	30.0
Policy (n = 2,193)	I vote when there is an election in my town	16.5	31.0	14.6
Environment (n = 2,202)	I feel that my town's environment is healthy (air, water, etc)	9.2	16.4	7.9
Housing (n = 2,200)	I feel safe in the place where I live	2.8	8.3	1.9
Psychosocial (n = 2,156)	I try to spend time with others outside of work	14.8	19.7	14.1
Transportation (n = 2,203)	I have access to safe and reliable transportation	2.2	7.3	1.1
Negatively Worded Social Determinant Items		**Percent Reporting "Sometimes," "Often" or "Always" Applies to Me**	**Percent Reporting "Sometimes," "Often" or "Always" Applies to Me**	
Economy (n = 2,211)	I worry about my utilities being turned off for non-payment	10.7	25.9	7.9
Employment (n = 2,211)	I worry about being able to pay my rent or mortgage	18.2	39.7	13.6

Those in the convenience sample responded to the social determinant items in ways that differed substantially from those in the random sample. On every item except for one (community cohesion), those in the convenience sample responded at levels that were twice as high in terms of the extent to which they could be considered challenging social determinants. In

Table 46, a summary of the data from the convenience sample are presented, and highlighted boxes of scores indicate that the proportion of participants in the convenience sample felt this determinant at a rate that was at least twice as high as those in the random sample.

Table 46. Convenience sample participants' reports of felt social determinants.

Social Determinant	Item Assessed	Total Sample Responses
Positively Worded Social Determinant Items		**Percent Reporting "Never" or "Seldom" Applies to Me**
Social Ecology (n = 517)	I feel those around me are healthy	12.2
Education (n = 502)	I am satisfied with my education	21.8
Community Cohesion (n = 508)	I make efforts to get involved in my community	33.4
Policy (n = 504)	I vote when there is an election in my town	37.6
Environment (n = 509)	I feel that my town's environment is healthy (air, water, etc)	20.5
Housing (n = 509)	I feel safe in the place where I live	9.8
Psychosocial (n = 499)	I try to spend time with others outside of work	22.9
Transportation (n = 510)	I have access to safe and reliable transportation	11.9
Negatively Worded Social Determinant Items		**Percent Reporting "Sometimes," "Often" or "Always" Applies to Me**
Economy (n = 506)	I worry about my utilities being turned off for non-payment	35.5
Employment (n = 510)	I worry about being able to pay my rent or mortgage	44.0

Importance of Community-Based Health and Social Service Programs

Participants were asked to provide their perspectives on the extent to which health and social service programs are important to their local community. During the survey, participants were provided with a list of 20 different programs that are often present in many communities. Participants were inconsistent in the extent to which they provided an assessment of each program type.

Results from the 2,234 participants were used to calculate rankings of program endorsement, although the number of participants responding to the items varied throughout the list. Of the twenty programs, 100% were ranked as being either moderately or very important by more than 50% of participants. While these results do provide some insight into the types of programs perceived as most important in their local community, across the board these data do suggest that in general most community members perceive the general network of health and social service programs to be important overall. Figure 27 provides a list of the extent to which participants rated a program type as "moderately" or "very" important, presented in order of highest to lowest endorsement. Responses from the convenience sample also indicated strong support for all programs reflected in the list.

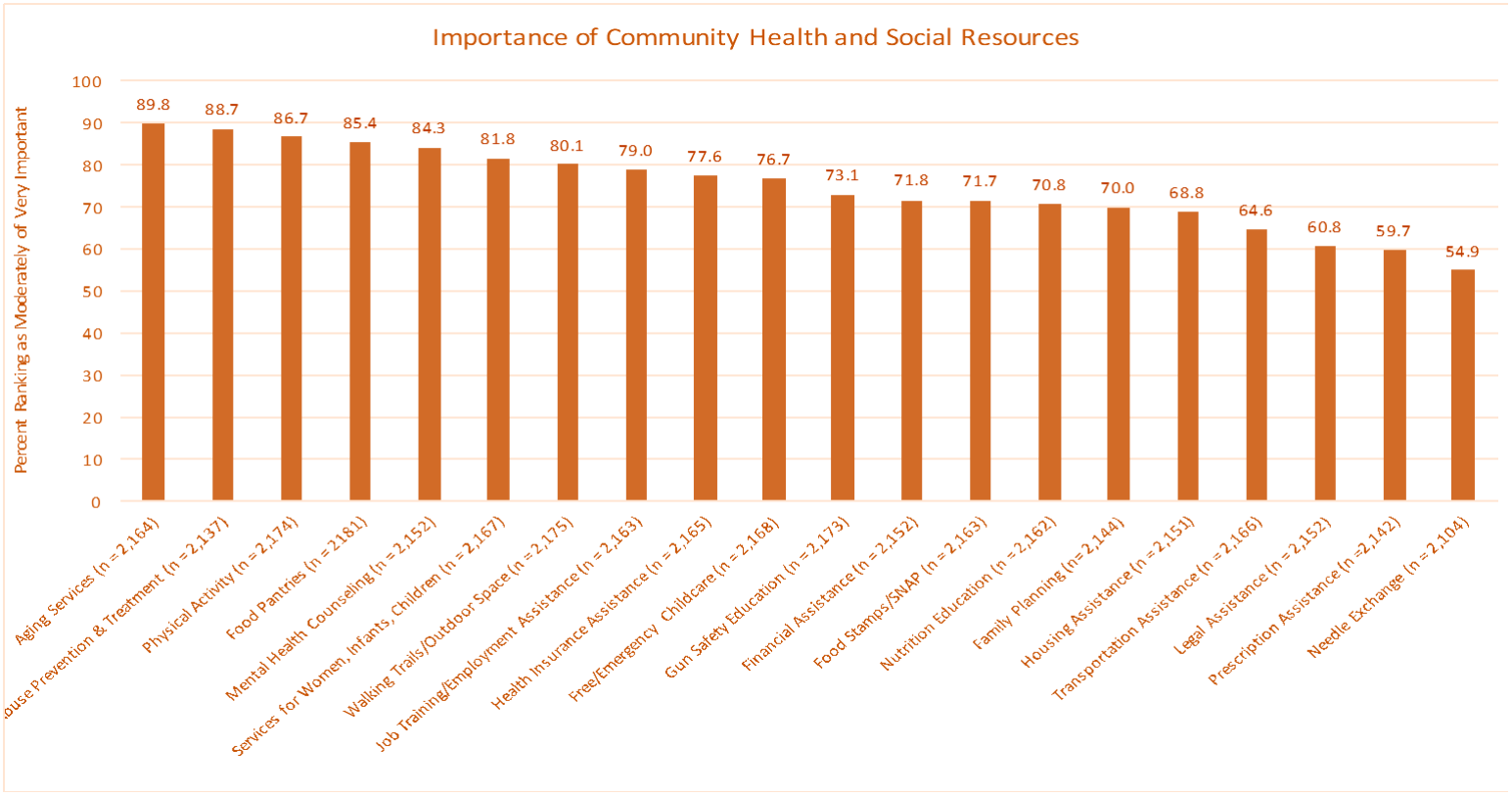


Figure 27. Participant ratings of the importance of community resources.

However, given the strong general endorsement of these programs, the data presented in Figure 27 may offer less insight than may be helpful for community-based health providers given that the two highest importance categories were combined. Therefore, to better illustrate those services for which there was the strongest endorsement of importance, the data are further characterized by differentiating between "moderately important" and "very important." Those distinctions are presented in Table 47. In this table, further highlighted are the items for which there were stronger endorsements in the "very" category than the "moderate" category.

Table 47. Breakdown of intensity of the importance rating of community resources.

Community Programs	Moderately/Very Important %	Moderately Important %	Very Important %
Aging Services (n = 2,164)	89.8	43.1	46.7
Substance Abuse Prevention & Treatment (n = 2,137)	88.7	25.2	63.5
Physical Activity (n = 2,174)	86.7	45.7	41.0
Food Pantries (n = 2181)	85.4	38.8	46.6
Mental Health Counseling (n = 2,152)	84.3	36.6	47.7
Services for Women, Infants, Children (n = 2,167)	81.8	43.4	38.4
Walking Trails/Outdoor Space (n = 2,175)	80.1	35.7	44.4
Job Training/Employment Assistance (n = 2,163)	79.0	44.8	34.2
Health Insurance Assistance (n = 2,165)	77.6	42.4	35.2
Free/Emergency Childcare (n = 2,168)	76.7	35.6	41.1
Gun Safety Education (n = 2,173)	73.1	36.7	36.4
Financial Assistance (n = 2,152)	71.8	48.4	23.4
Food Stamps/SNAP (n = 2,163)	71.7	42.0	29.7
Nutrition Education (n = 2,162)	70.8	49.9	20.9
Family Planning (n= 2,144)	70.0	42.6	27.4
Housing Assistance (n = 2,151)	68.8	46.8	22.0
Transportation Assistance (n = 2,166)	64.6	42.1	22.5
Legal Assistance (n = 2,152)	60.8	42.6	18.2
Prescription Assistance (n =2,142)	59.7	40.0	19.7
Needle Exchange (n = 2,104)	54.9	30.6	24.3

Participants in the convenience sample similarly rated 100% of the community programs to be among those that they perceived as being important to their community. However, the level of endorsement among those in the convenience sample was stronger than those in the random sample on each program; for every program, over 40% of participants in the convenience sample rated it as "very important" to their community. Some programs were rated as "very important" by those in the convenience sample at very high levels, including free/emergency childcare (59.0%); food pantries (65.1%); food stamps or SNAP (58.7%); services for women, infants, and children (57.9%); insurance assistance (55.7%); housing assistance (58.5%); mental health counseling (64.2%); and substance abuse prevention and treatment (63.1%).

Community Perceptions of Priority Health Needs

Important to the development of the CHNA and its subsequent Implementation Plan was to assess the local health issues which community members perceived to be of importance. NCHS and River Bend Hospital developed a list of 21 different health needs that are common in many communities similar to those in the service area. Survey participants were asked to select five of those community health issues that they perceived to be among the most important to address.

Accompanying the list of health issues was a statement that guided survey participants in their selection. The statement read "Below is a list of health issues present in many communities. Please pick the five that you think pose the greatest health concern for people living in your community."

Data related to priority health needs are presented first for those in the random sample. At the end of this section, additional tables are provided that offer comparisons of selected data between the random sample and the convenience sample.

While participants were able to select from the full list of 21 health issues during the survey, the priority issues were narrowed down to the top 50% during the community prioritization session. Figure 28 provides a graphical presentation of the top health issues shared during community meetings for purposes of informing future initiatives.

Table 48 provides a summary of the extent to which each health issue was selected as one of the top five issues by survey participants.

Those in the convenience sample selected many of the same priority needs as did those in the random sample. Important patterns to note however included that participants in the convenience sample ranked substance abuse, alcohol use, mental health, poverty and suicide in much higher proportions than did those in the random sample. Additionally, those in the convenience sample ranked assault and violence as being among their top 10 issues.

Figure 28. Most frequently endorsed health issues as priority for action.

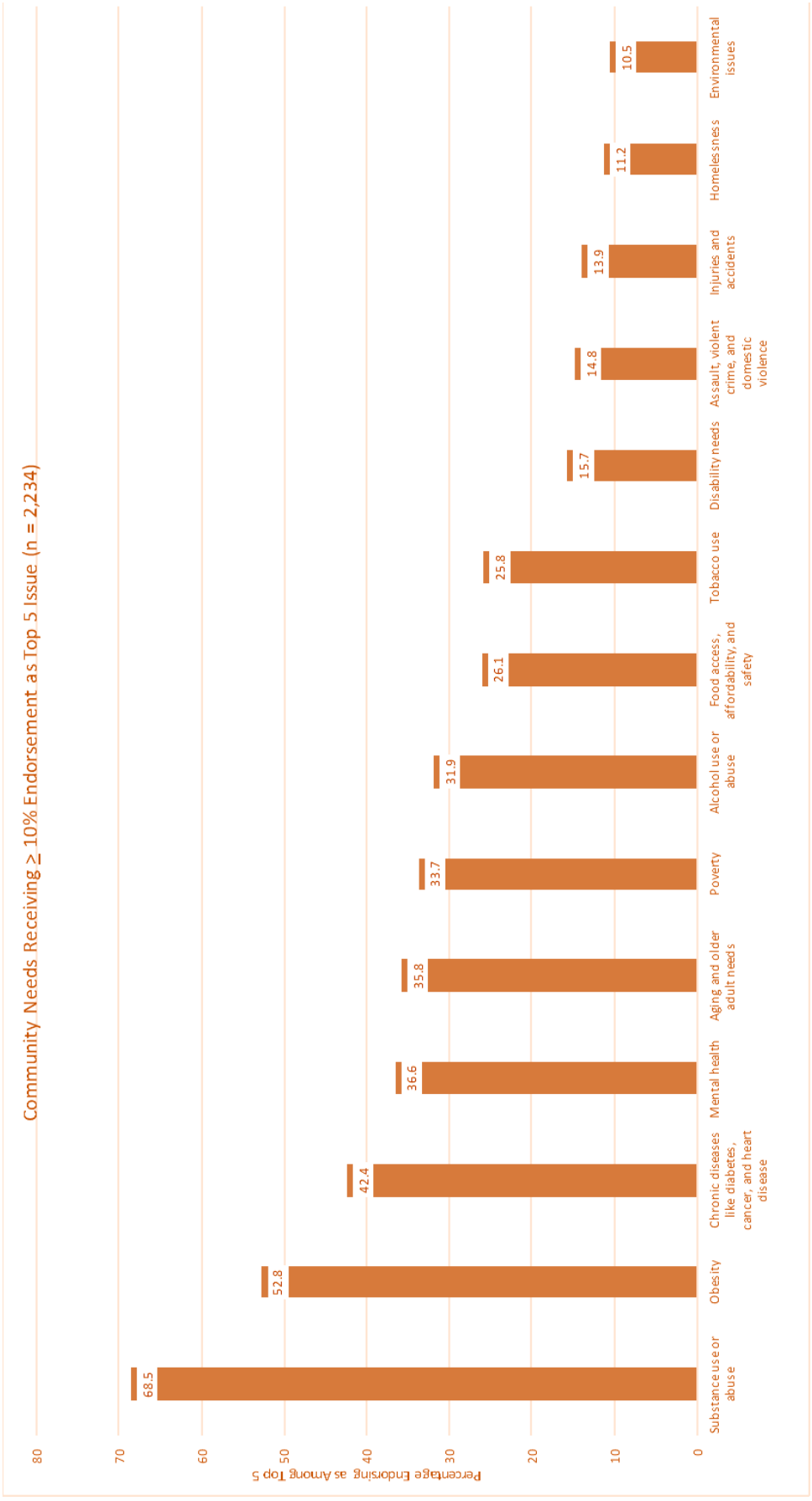

Community Needs Receiving ≥ 10% Endorsement as Top 5 Issue (n = 2,234)
Percentage Endorsing as Among Top 5
0
10
20
30
40
50
60
70
80
68.5
52.8
42.4
36.6
35.8
33.7
31.9
26.1
25.8
15.7
14.8
13.9
11.2
10.5
Substance use or abuse
Obesity
Chronic diseases like diabetes, cancer, and heart disease
Mental health
Aging and older adult needs
Poverty
Alcohol use or abuse
Food access, affordability, and safety
Tobacco use
Disability needs
Assault, violent crime, and domestic violence
Injuries and accidents
Homelessness
Environmental issues

Table 48. Priority health issues selected by participants as being among the top 5 most in need of attention in the NCHS and River Bend Hospital service population (n = 2,234).

Health Issue	% Selecting Issue as One of Top 5 Needing Attention
Substance use or abuse	68.5
Obesity	52.8
Chronic diseases like diabetes, cancer, and heart disease	42.4
Mental health	36.6
Aging and older adult needs	35.8
Poverty	33.7
Alcohol use or abuse	31.9
Food access, affordability, and safety	26.1
Tobacco use	25.8
Disability needs	15.7
Assault, violent crime, and domestic violence	14.8
Injuries and accidents	13.9
Homelessness	11.2
Environmental issues	10.5
Suicide	9.7
Dental care	9.6
Sexual violence, assault, rape, or human trafficking	7.3
Reproductive health and family planning	6.7
Infectious diseases like HIV, STDs, and hepatitis	4.7
Child neglect and abuse	2.7
Infant mortality	0.5

Community Perceptions of Health Issues Needing Priority Resource Allocation

In addition to assessing the extent to which participants perceived specific needs as being among the most important for action in their community, participants were also asked to provide their perceptions of the extent to which those same 21 issues were also priorities for the allocation of resources in the local community. Participants were given a statement to consider prior to indicating their perceptions. The statement read "Previously you were asked to pick issues that pose the greatest health concern in your community. If you had $3 and could give $1 to help solve some of these, which are the three to which you would give $1?" Table 49 provides a summary of the extent to which participants selected an issue as one of the top three for the allocation of resources.

Table 49. Ranking of health issues selected by participants as being among the top 3 to which they would allocate resources (n = 2,234).

Health Issue	% Selecting Issue as Priority for Resource Allocation
Substance use or abuse	39.9
Mental health	29.1
Child neglect and abuse	28.2
Food access, affordability, and safety	26.9
Aging and older adult needs	25.6
Chronic diseases like diabetes, cancer, and heart disease	24.6
Poverty	20.8
Obesity	18.6
Alcohol use or abuse	10.4
Disability needs	10.2
Homelessness	10.0
Suicide	7.8
Assault, violent crime, and domestic violence	7.3
Tobacco use	7.0
Sexual violence, assault, rape, or human trafficking	6.4
Environmental issues	6.1
Reproductive health and family planning	6.0
Dental care	4.3
Injuries and accidents	4.0
Infectious diseases like HIV, STDs, and hepatitis	1.8
Infant mortality	1.0

As was the case with the health issues selected as priorities for action, these were narrowed down to the top 50% during the community prioritization session. Figure 29 provides a graphical presentation of the top ranked issues that survey participants selected as priorities for the allocation of resources.

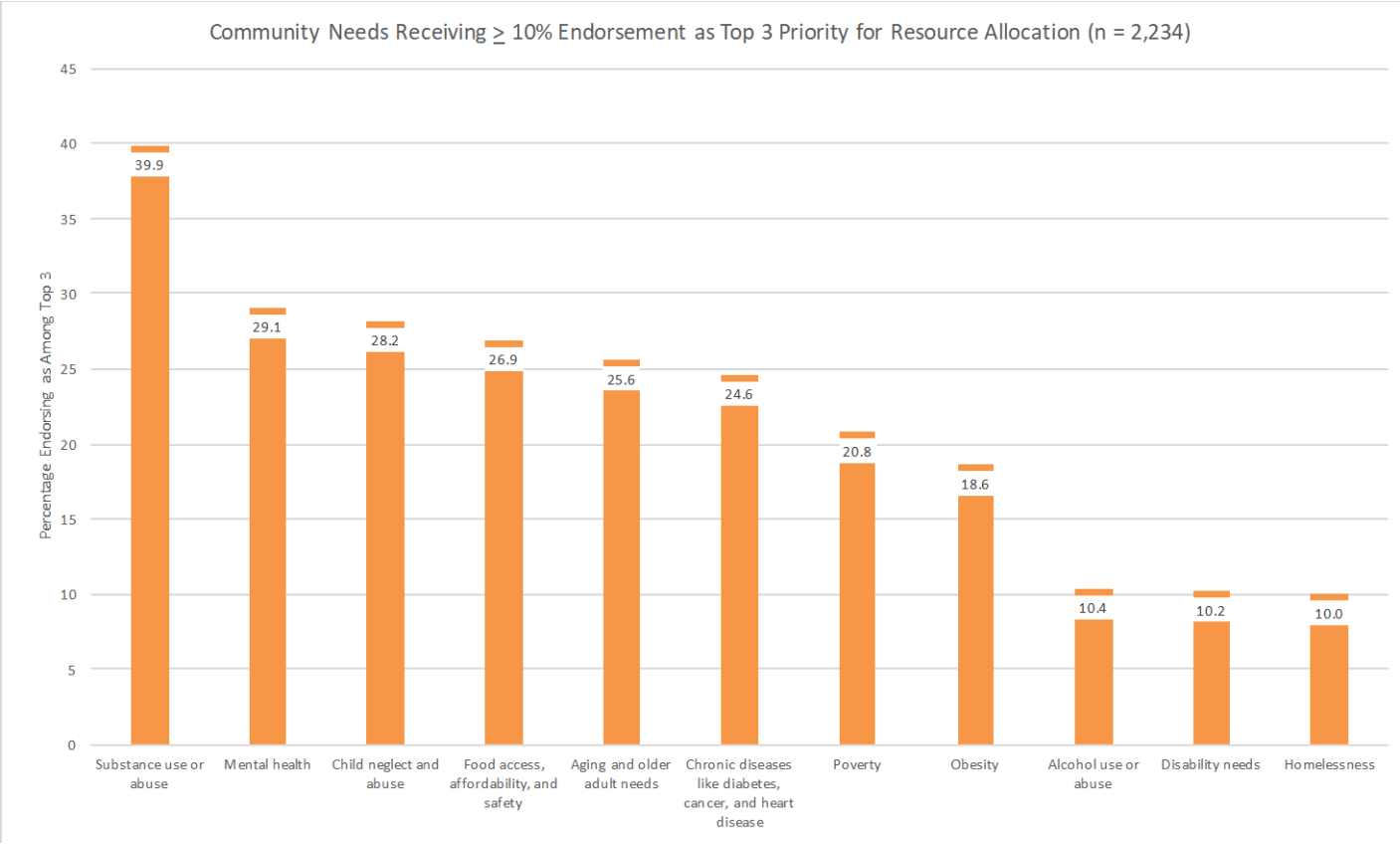
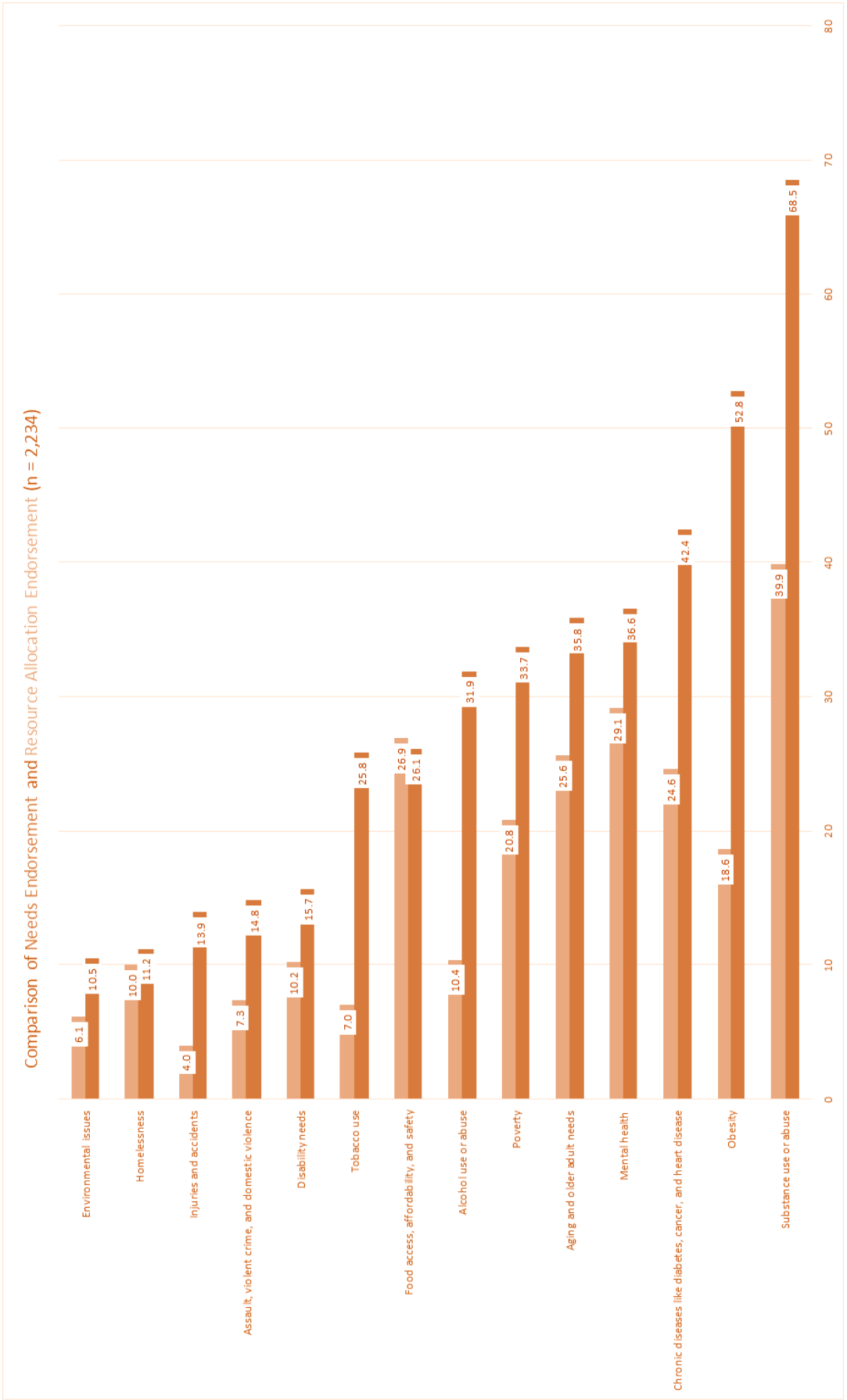


Figure 29. Most frequently endorsed health issues as priority for resource allocation.

Comparison of Needs and Resource Priorities

While participants were asked to provide an assessment of priority needs and priorities for resource allocation as separate survey items, a comparison of those priority rankings provides helpful insights into the extent to which there is consistency between the two. Figure 30 provides such a comparison and highlights some inconsistencies between health issues that community members believed were a priority needing to be addressed and those that they believed should be a priority for the allocation of resources.

Figure 30. Comparison of priority needs and resource priorities.


Comparison of Needs Endorsement and Resource Allocation Endorsement (n = 2,234)
0
10
20
30
40
50
60
70
80
6.1
10.5
10.0
11.2
4.0
13.9
7.3
14.8
10.2
15.7
7.0
25.8
26.9
26.1
10.4
31.9
20.8
33.7
25.6
35.8
29.1
36.6
24.6
42.4
18.6
52.8
39.9
68.5
Environmental issues
Homelessness
Injuries and accidents
Assault, violent crime, and domestic violence
Disability needs
Tobacco use
Food access, affordability, and safety
Alcohol use or abuse
Poverty
Aging and older adult needs
Mental health
Chronic diseases like diabetes, cancer, and heart disease
Obesity
Substance use or abuse

Priority Needs and Resources: A Comparison of the Random and Convenience Samples

Participants in the convenience sample were also asked to provide their perceptions of the health issues that were of priority for attention by the health infrastructure in their community and the extent to which those same issues were among their priorities for the allocation of resources. Table 50 provides a side by side comparison of how participants in each sample responded to these items.

Table 50. Comparison of needs and allocation priorities by random and convenience samples.

Health Issue	% Selecting Issue as One of Top 5 Needing Attention		% Selecting Issue as Priority for Resource Allocation	
	Random Sample (n = 2,342)	Convenience Sample (n = 542)	Random Sample (n = 2,342)	Convenience Sample (n = 542)
Substance use or abuse	68.5	49.8	39.9	23.8
Obesity	52.8	23.6	29.1	26.8
Chronic diseases like diabetes, cancer, and heart disease	42.4	20.5	28.2	23.1
Mental health	36.6	38.0	26.9	40.8
Aging and older adult needs	35.8	15.3	25.6	8.7
Poverty	33.7	27.9	24.6	10.7
Alcohol use or abuse	31.9	24.4	20.8	18.1
Food access, affordability, and safety	26.1	43.9	18.6	10.9
Tobacco use	25.8	21.8	10.4	8.3
Disability needs	15.7	21.0	10.2	13.1
Assault, violent crime, and domestic violence	14.8	26.8	10.0	28.0
Injuries and accidents	13.9	4.6	7.8	13.7
Homelessness	11.2	38.4	7.3	11.6
Environmental issues	10.5	10.1	7.0	5.4
Suicide	9.7	19.9	6.4	12.9
Dental care	9.6	14.9	6.1	2.8
Sexual violence, assault, rape, or human trafficking	7.3	15.5	6.0	2.4
Reproductive health and family planning	6.7	4.4	4.3	6.1
Infectious diseases like HIV, STDs, and hepatitis	4.7	9.6	4.0	0.7
Child neglect and abuse	2.7	24.9	1.8	3.9
Infant mortality	0.5	2.2	1.0	2.4

2018 COMMUNITY CHNA FOCUS GROUP DISCUSSIONS

To provide for additional opportunities for community members to provide valuable insights into the decisions made during the 2018 CHNA process, North Central Health Services (NCHS) and River Bend Hospital, in collaboration with partner organizations and hospitals, held a series of focus group discussions.

These focus group discussions provided opportunities to gather community members, providers of local health and social services, and other stakeholders to review information, have open conversations about local health needs, and to offer suggestions for priority health topics that should be considered as NCHS and River Bend Hospital make decisions about their priorities and subsequent implementation plan.

This section of the report provides an overview of the focus group discussions and the recommendations emerging from those discussions. Appendix C includes the detailed meeting notes from each of the focus group discussions.

Focus Groups

On 4 different dates in April and May 2018, four focus group discussions were held. Those discussions were held in four counties in the hospital's service area, including Clinton County, Carroll County, Tippecanoe County, and White County.

Participants

A total of 96 community members participated in the focus group discussions. Additionally, each focus group included observers and facilitators from the hospitals and other organizations convening the meetings. Below is a summary of the number of participants and observers for each focus group discussion, by the county of interest for each.

County	Community Members	Observers/Facilitators
Carroll County	21	2
Tippecanoe County	22	3
Clinton County	21	6
White County	32	2

Methods

To conduct the focus group discussions, the facilitators applied a great deal of consistency in both the approach, process, and types of information shared with the community members. The process for the focus group discussions included the following activities:

- Introductions.
- A description of the purpose of the discussion and ground rules.
- A presentation of secondary data and existing indicators related to health issues within the county.
- An open discussion of the data by participants, including opportunities to clarify any data points and to discuss county-specific factors related to health and well-being.
- The development of a list of health needs that the community members perceived as priorities based upon the data presented.
- An expansion of the list of health needs derived from the data presented, in order to ensure the inclusion of health needs and other issues perceived as important by the community members. (A list of topics added during each group is provided in the detailed meeting summaries available in Appendix C.)
- A voting process that sought to provide insight into the relative priority of each of the health issues from the perception of community members. (Details of the total votes endorsing each issue is provide in the detailed meeting summaries available in Appendix C.)

Outcomes

Each focus group discussion led to a final list of recommended priorities that are described below.

Clinton County. After the discussion and voting process in Clinton County, the participants identified the following as the top health needs for that county:

- Substance abuse and treatment
- Mental health/suicide
- Food access/knowledge
- Primary care providers and mental health providers

Carroll County. After the discussion and voting process in Carroll County, the participants identified the following as the top health needs for that county:

- Supply of primary care physicians and mental health providers
- Physical inactivity and access to exercise opportunities
- Opioid use

White County. After the discussion and voting process in White County, the participants identified the following as the top health needs for that county:

- Mental health
- Obesity, physical inactivity, and access to exercise opportunities
- Drugs

Tippecanoe County. After the discussion and voting process in Tippecanoe County, the participants identified the following as the top health needs for that county:

- Diabetes/obesity
- Opioid abuse
- Supply of primary care physicians
- Supply of mental health providers

Regional Outcomes

Based on the outcomes of the four focus groups, there were four leading issues for which there was some consistency in terms of their endorsement as priorities for further consideration during the CHNA process. As is described later in this document, these regional consistencies were described and incorporated into the priority setting process conducted for this CHNA (see Report Section 6). Table 51 provides a summary of the outcomes and the extent to which there was consistency for their endorsement across the four counties.

Table 51. Regional overview of focus group outcomes.

Priority Health Issues and Related Factors	Carroll County	Clinton County	Tippecanoe County	White County
Substance Abuse, Opioids and Drug Use	✔	✔	✔	✔
Obesity, Diabetes, Physical Activity and Nutrition	✔	✔	✔	✔
Mental Health		✔		✔
Provider Availability (Primary Care Physicians & Mental Health Providers)	✔	✔	✔	

2018 PRIORITIZATION PROCESS

To identify the most urgent health issues that would guide the NCHS and River Bend Hospital Implementation Plan, a comprehensive process was undertaken. The prioritization process took place in two phases.

Process

Representatives of NCHS and River Bend Hospital participated in a meeting to review data collected for the CHNA. A list of attendees is included as Appendix D and a copy of the slides used during the presentation of data is included as Appendix E. That data included findings from the review of existing health indicators, perspectives provided during the community review of the 2015 CHNA, data from the CHNA survey, and data from the community focus group discussions.

The session process was as follows:

NCHS and River Bend Hospital leadership provided a review of the purpose of conducting the CHNA and reflections on decisions and actions taken in response to the 2015 CHNA.

A review of data was presented by a representative of Measures Matter, LLC. That data review included a summary of the existing health indicators, feedback from the review of the 2015 CHNA, data from the CHNA survey, and outcomes of the focus group discussions.

The data presentation culminated in a discussion of the overlapping health issues for which all CHNA data sources indicate need, support, or endorsement. Those issues are summarized in Figure 31. This table summarizes the leading indicators from the review of existing data, the outcomes of the focus group discussions, the extent to which the review of the 2015 CHNA had agreement with the categories from the other data, and the issues endorsed as highest priority from the survey.

A group discussion was held to decide upon the priority health issues from the CHNA based on the information presented during the meeting.

A creative strategy session was facilitated by Measures Matter, LLC. The purpose of the session was to elicit broad ideas and suggestions that could be considered by NCHS and its partners as they develop the implementation plan, develop programmatic activities, and make decisions about the future directions of grant-related programs and funding.

Resulting Priorities

As a result of both phases of the prioritization process, three issues received endorsement for prioritization. Those issues received unanimous support from the participants and included:

- Mental health
- Substance use and abuse
- Overall health and well-being

Existing Indicators	Focus Group Discussions	2015 CHNA Review	Community Survey
Mental Health Providers Poor Mental Health Days	Mental Healthcare Provider Availability Mental Health	✓	Mental Health
Excessive Drinking Alcohol Driving Deaths Alcohol Density Meth Lab Seizures Opioid Dispensations	Substance Abuse Opioids Drug Use	✓	Alcohol Use or Abuse Substance Use or Abuse
Preventable Hospital Stays Physical Inactivity	Primary Care Provider Availability Obesity Physical Inactivity Nutrition Diabetes	✓	Obesity Chronic Disease
Teen Births Uninsured Children			Food Access Poverty Homelessness Violence & Assault Tobacco Use

Figure 31. Overlapping health issues emerging as priorities across all data sources.

Strategy Session

Subsequent to the decision by the participants to establish the three priority areas, a strategy session was conducted to elicit broad ideas and suggestions that could be considered by NCHS and its partners as they develop the implementation plan, develop programmatic activities, and make decisions about the future directions of grant-related programs and funding.

During this activity, participants were asked to think creatively and progressively about the issues or ideas that would be likely to have a maximum impact on community health outcomes.

In each area, ideas emerged across three core categories, including:

- ***Structural Considerations***. Ideas related to community and organizational infrastructure.
- ***Program Considerations***. Ideas that could be prioritized in program directions or specific program types or strategies.
- ***Individual, Community, and Societal Considerations***. Ideas related to individual psycho-social factors, community-related factors, or general aspects of society.

Below is a list of the ideas generated through this activity. In each of the three priority areas, those ideas are organized based on the three categories of consideration that emerged through the activity.

Mental Health

Structural Considerations
Employment
Prescription affordability
Provider availability and access
Funding
Role of social media (as co-morbid factor and as a program strategy)
Access to services for rural communities

Program Considerations
Maximize available resources across programs
Focus on childhood trauma and parenting
Education
School-based initiatives

Individual, Community, and Societal Considerations
Social conceptualizations of "mental health"
Stigma of a mental health issue, diagnosis, and treatment
Isolation
Quality of life
Stage of life and its influence on mental health
Self-acceptance
Social support

Substance Use & Abuse

Structural Considerations
Access to treatment facilities
Funding
Employment
Access to prevention and treatment programs for rural communities
Reducing access to prescriptions
Prescription monitoring and disposal

Program Considerations
Maximize available resources across programs
Transitional treatment pre/post-incarceration
Strengthen the continuum of care
Enhance the diversity of program types
Prevention-focused programs
Education about prescription use
Evidence-based programs
Focus on youth-oriented counseling programs

Focus on childhood trauma and parenting
School-based initiatives

Individual, Community, and Societal Considerations
Acceptance of diagnosis
Social networks and social support

Overall Health & Well-Being

Structural Considerations
Access to care
Access to recreational opportunities
Funding for services
Resources for homelessness
Affordable housing

Program Considerations
Evidence-based programs
Education-based initiatives
Maximize available resources across programs

Individual, Community, and Societal Considerations
Individual's perceived lack of opportunities for active living
Community and familial support
Social support

APPENDIX A CHNA PARTNERS

Community Meeting Partners

Adkev, Inc
AHEC
Ball Corporation
Bauer Family Resources
Boys & Girls Club of White County
Carroll County Chamber
Carroll County Council
Carroll White REMC
Carroll White REMC
Center Township of Clinton County
City of Frankfort
City of Lafayette
City of Monticello
Clinton County Health Department
Clinton County WIC Program
Clinton County YMCA
Coach Kids of Clinton County Inc.
Community Foundation of White County
Community Howard Regional Health Community Counseling Center
Delphi Community School Corporation
Family Health Clinics
Family Health Clinics of Monon & Wolcott
Food Finders Food Bank
Frontier School Corporation
Girtz Industries
Hanna Community Center
Healthy Communities of Clinton County
Heartford House
IU Health Arnett
IU Health Frankfort
IU Health Plans
IU Health White Foundation
IU Health White Memorial Hospital
Lafayette Family YMCA
Learning Network
LTHC Homeless Services
Monticello Chamber of Commerce

Monticello Healthcare
Monticello Spring Corporation
Monticello-Union Township Public Library
North White School Corporation
Open Door Clinic
Paul Phillippe Resource Center
Premier Advertising
Purdue Extension
Purdue University Nutrition Education Program
Riggs Community Health Center
Sycamore Springs
Tippecanoe Arts Federation
Tippecanoe County
Tippecanoe County CASA
Tippecanoe Health Department
Twin Lakes High School
United Against Opioids
United Way of Clinton County
United Way of Greater Lafayette
Wabash Heartland Innovation Network
White County
White County Council
White County Council on Aging/Public Transit
White County Economic Development
YWCA of Greater Lafayette
YWCA of Greater Lafayette Foundation Board

Convenience Sample Partners

Bauer Family Resources
Food Finders Food Bank
Habitat for Humanity of Lafayette
Lafayette Urban Ministry
Latino Center for Wellness and Education
LTHC Homeless Services
Mental Health America Wabash Valley Region
North Central Nursing Clinics
Onyx Styling & Braiding Salon
Tippecanoe County Women, Infants, & Children
Wabash Center

APPENDIX B COMMUNITY SURVEY

To collect primary data from the Hospital's service area population, a survey was designed, fielded, and analyzed. A copy of the survey follows.

MY Community Health Needs Assessment

Because a Healthier Community Means a Healthier Me

Who should fill out this questionnaire? We ask that the **adult (18 years of age or older) in your household who had the most recent birthday** complete this questionnaire.

Instructions: Please mark your answers clearly in the boxes using pencil or dark pen. Examples: ■ ☒ ☑

1 In which county do you live?
(Please print one letter in each box.)

2 What is the zip code of your residence?
(Please print one number in each box.)

3 How many adults (18 years or older) live in your household, INCLUDING YOURSELF?
INCLUDE everyone who is living or staying here for more than 2 months. DO NOT include anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment.

4 How many children younger than 18 years of age live in your household?

5 What is your gender? (Select only one.)

☐ Male ☐ Female

6 In what year were you born? (Please print a 4-digit year.)

Please answer both Question 7 about Hispanic origin and Question 8 about race.

7 Are you of Hispanic, Latino, or Spanish origin?

☐ Yes ☐ No

8 What is your race? (Select all that apply.)

☐ White
☐ Black or African-American
☐ American Indian or Alaska Native
☐ Asian
☐ Native Hawaiian or other Pacific Islander
☐ Other, please specify:

9 Considering all sources, which of the following best describes your total household income before taxes for 2017? (Select only one.)

☐ Less than $15,000
☐ $15,000-$24,999
☐ $25,000-$34,999
☐ $35,000-$49,999
☐ $50,000-$74,999
☐ $75,000-$99,999
☐ $100,000-$149,999
☐ $150,000 or more

10 Which of the following best describes your current employment status? (Select only one.)

☐ Employed full time
☐ Employed part time
☐ Unemployed looking for work
☐ Unemployed not looking for work
☐ Unable to work due to disability
☐ Homemaker
☐ Retired
☐ Student

11 Which of the following best describes the highest level of education you completed? (Select only one.)

☐ Some high school
☐ High school diploma or GED
☐ Some college
☐ Technical or vocational school diploma or certificate
☐ Associate's degree
☐ Bachelor's degree
☐ Graduate or professional degree or beyond
☐ Other, please specify:

12 Would you say that in general: (Select only one.)

	Excellent	Very good	Good	Fair	Poor
Your overall health is...	☐	☐	☐	☐	☐

13 **Regarding different areas of your health and life, you would say that in general:** (Select one answer for EACH row.)

	Excellent	Very good	Good	Fair	Poor
Your physical health is...	☐	☐	☐	☐	☐
Your mental health is...	☐	☐	☐	☐	☐
Your social well-being is...	☐	☐	☐	☐	☐

14 **How much do you agree or disagree with the following statement: "In general, I am satisfied with my life."** (Select only one.)

- ☐ Strongly disagree
- ☐ Somewhat disagree
- ☐ Neither agree nor disagree
- ☐ Somewhat agree
- ☐ Strongly agree

15 **On a scale of 01 to 10 where 01 means you have "little or no stress" and 10 means you have "a great deal of stress," how would you rate your average level of stress during the past month?** (Please print a 0 in the first box for numbers less than 10.)

☐☐

16 **Do you currently have insurance or coverage that helps with your healthcare costs (including private or employer-sponsored insurance or public coverage like Medicare or Medicaid)?** (Select only one.)

☐ Yes ☐ No ☐ Do not know

17 **Do you currently have someone that you think of as your personal doctor or personal healthcare provider?** (Select only one.)

☐ Yes ☐ No ☐ Do not know

18 **Within the past 12 months, which of the following health services have you received?** (Select all that apply.)

- ☐ Chronic care for a disease like diabetes or a disability
- ☐ Acute care, like for an infection or injury
- ☐ Immunizations or other preventive care
- ☐ Routine physical exam
- ☐ Prenatal or well-baby care
- ☐ Care related to family planning
- ☐ Care at a hospital emergency room
- ☐ Care at an urgent care facility
- ☐ Inpatient care at a hospital
- ☐ Filling a prescription
- ☐ Dental care
- ☐ Screening for anxiety or depression by a medical provider
- ☐ Treatment for a mental health diagnosis
- ☐ Treatment for addiction

19 **Thinking about the past month, which of the following behaviors have you participated in regularly (at least 3 days per week on average)?** (Select all that apply.)

- ☐ I smoked cigarettes or used other tobacco
- ☐ I was physically active on a regular basis
- ☐ I ate a healthy balanced diet
- ☐ I got plenty of sleep
- ☐ I took an opioid or narcotic that was prescribed to me
- ☐ I took an opioid or narcotic that was NOT prescribed to me
- ☐ I took a medication for anxiety, depression, or other mental health challenge that was prescribed to me
- ☐ I had my blood pressure checked
- ☐ I drank alcohol to the point of intoxication
- ☐ I drove while under the influence of alcohol or drugs
- ☐ I took steps to reduce my level of stress

20 **During the past 12 months, was there ever a time that you or the family members you live with needed one of the following but couldn't afford it or had to prioritize spending money on something else?** (Select one answer for EACH row.)

	Yes	No	Do not know
Seeing a medical provider	☐	☐	☐
Filling a prescription	☐	☐	☐
Transportation for a health purpose or appointment	☐	☐	☐

21 **How often would you say that the following statements apply to you?** (Select one answer for EACH row.)

	Never	Seldom	Sometimes	Often	Always
I feel those around me are healthy (family, friends, and co-workers)	☐	☐	☐	☐	☐
I worry about my utilities being turned off for non-payment	☐	☐	☐	☐	☐
I feel satisfied with my education	☐	☐	☐	☐	☐
I make efforts to get involved in my community	☐	☐	☐	☐	☐
I vote when there is an election in my town	☐	☐	☐	☐	☐
I feel that my town's environment is healthy (air, water, etc.)	☐	☐	☐	☐	☐
I feel safe in the place where I live	☐	☐	☐	☐	☐
I try to spend time with others outside of work	☐	☐	☐	☐	☐
I have access to safe and reliable transportation	☐	☐	☐	☐	☐
I worry about being able to pay my rent or mortgage	☐	☐	☐	☐	☐

22 **Below are some issues present in many communities. Please pick FIVE that you think pose the greatest health concern for people who live in your community.** (Select only five out of all options 1 - 21.)

1 ☐ Food access, affordability, and safety
2 ☐ Environmental issues
3 ☐ Tobacco use
4 ☐ Substance use or abuse
5 ☐ Alcohol use or abuse
6 ☐ Assault, violent crime, and domestic violence
7 ☐ Child neglect and abuse
8 ☐ Sexual violence, assault, rape, or human trafficking
9 ☐ Obesity
10 ☐ Chronic diseases, like diabetes, cancer, and heart disease
11 ☐ Suicide
12 ☐ Infectious diseases, like HIV, STDs, and hepatitis
13 ☐ Poverty
14 ☐ Homelessness
15 ☐ Reproductive health and family planning
16 ☐ Infant mortality
17 ☐ Injuries and accidents
18 ☐ Mental health
19 ☐ Aging and older adult needs
20 ☐ Dental care
21 ☐ Disability needs

23 **Previously, you were asked to pick issues that pose the greatest health concern in your community. If you had $3 and could give $1 each to help solve some of these, which are the THREE to which you would give $1.** (Select only three out of all options 1 - 21.)

1 ☐ Food access, affordability, and safety
2 ☐ Environmental issues
3 ☐ Tobacco use
4 ☐ Substance use or abuse
5 ☐ Alcohol use or abuse
6 ☐ Assault, violent crime, and domestic violence
7 ☐ Child neglect and abuse
8 ☐ Sexual violence, assault, rape, or human trafficking
9 ☐ Obesity
10 ☐ Chronic diseases, like diabetes, cancer, and heart disease
11 ☐ Suicide
12 ☐ Infectious diseases, like HIV, STDs, and hepatitis
13 ☐ Poverty
14 ☐ Homelessness
15 ☐ Reproductive health and family planning
16 ☐ Infant mortality
17 ☐ Injuries and accidents
18 ☐ Mental health
19 ☐ Aging and older adult needs
20 ☐ Dental care
21 ☐ Disability needs

24 Below is a list of programs or services in many communities. Please mark how important these programs or services are for your community. (Select one answer for EACH row.)

	Not at all important for my community	Not very important for my community	Moderately important for my community	Very Important for my community
Nutrition education, like healthy cooking classes	☐	☐	☐	☐
Physical activity programs	☐	☐	☐	☐
Substance abuse prevention and treatment	☐	☐	☐	☐
Needle exchange programs	☐	☐	☐	☐
Mental health counseling and support	☐	☐	☐	☐
Gun safety education	☐	☐	☐	☐
Family planning services	☐	☐	☐	☐
Walking trails and other outdoor spaces	☐	☐	☐	☐
Aging and older adult services	☐	☐	☐	☐
Assistance with filling a prescription	☐	☐	☐	☐
Housing assistance	☐	☐	☐	☐
Financial assistance	☐	☐	☐	☐
Legal assistance	☐	☐	☐	☐
Help getting health insurance	☐	☐	☐	☐
Job training or employment assistance	☐	☐	☐	☐
Transportation assistance	☐	☐	☐	☐
Services for women, infants, and children (WIC)	☐	☐	☐	☐
Food stamps or SNAP	☐	☐	☐	☐
Food pantries	☐	☐	☐	☐
Free or emergency child care	☐	☐	☐	☐

APPENDIX C COMMUNITY DISCUSSIONS

This appendix includes the detailed meeting notes from each of the focus group discussions.

Carroll County Community Conversation

April 16, 2018
Wabash & Erie Canal Conference Center

EXECUTIVE SUMMARY

On April 16, 2018, twenty-one community members and three observers gathered at the Wabash & Erie Canal Conference Center in Delphi, Indiana for lunch and a conversation about Carroll County's priority health needs.

After being presented with the secondary data, the group had much discussion about several different topics. Based on the secondary data, the following list of priority health needs was presented to the group:

- Cancer incidence and mortality
- Diabetes
- Physical inactivity and access to exercise opportunities
- Physically and mentally unhealthy days
- Preventable hospital stays
- Sexually transmitted diseases
- Smoking, including during pregnancy
- Supply of primary care physicians and mental health providers

The group decided to add the following to the list before voting:

- Opioid use
- Pharmacy care
- Urgent/Emergency care

After one round of voting, the participants identify the following as the top health needs for this county:

- **Supply of primary care physicians and mental health providers (6)**
- **Physical inactivity and access to exercise opportunities (5)**
- **Opioid use (4)**
- Urgent/Emergency Care (3)
- Physically and mentally unhealthy days (3)
- Pharmacy Care (2)
- Cancer Incidence and Mortality (2)
- Diabetes (1)

MEETING NOTES

Melissa Dexter, program manager for IU Health's West Central Region Community Outreach and Engagement, opened the meeting and introduced herself. The purpose of the meeting is to understand the most significant health needs in the community.

Each community member introduced themselves. In addition to the community members, the following were present for observation or facilitation:

- Melissa Dexter, IU Health WCR
- Rhonda Jones, IU Health WCR
- Stephanie Long, North Central Health Services

Melissa reviewed the purpose and the process of the meeting. She explained the secondary and primary data collection, including 2,200 surveys being mailed in each IU Health county.

The secondary data was reviewed (see attached slide show). Population is showing a slow decline overall, the 65+ population is increasing. The poverty rate is lower than the state average. The presentation included a list of peer counties from the county health rankings. The average daily PM2.5 is an indicator of air pollution.

The County Health Rankings indicators showed Carroll County in the bottom quartile for physical inactivity, uninsured, primary care physicians, diabetes monitoring, air pollution and long commutes. Carroll County is ranked at the bottom half of the state in access to exercise opportunities, alcohol-impaired driving deaths and mental health providers.

Carroll County was ranked in the bottom for 20 out of 24 health status indicators (see slide 17 and 18 for full list).

Looking at the top causes of death from the Indiana State Department of Health—Carroll County's influenza and pneumonia is almost double the state average. The assault/homicide rate is almost 3 times the state average. The congenital malformations, deformations and chromosomal abnormalities is also almost 3 times the state average. Carroll County's maternal and child health indicators had 2 indicators in the bottom—21% of mothers smoked during pregnancy and only 77.1% of mothers were exclusively breastfeeding.

Carroll County has high cancer mortality rates, specifically for colon, rectum and anus cancers, pancreas, breast, cervix uteri, corpus uteri and ovary, non-Hodgkin's lymphoma and leukemia.
Carroll County is designated a health professional shortage area for primary care physicians and mental health providers, as well as a medically underserved area.

Findings from other CHNA reports identified the following needs: mental/behavioral health, access to basic/primary care, chronic disease management, drug/substance abuse, housing issues/homelessness, access to dental care, access to mental health services, home health care service, nutrition/access to healthy food, obesity, physical inactivity/lack of exercise and tobacco use and smoking.
Based on the secondary data, the following list of priority health needs was presented to the group:

- Cancer incidence and mortality
- Diabetes
- Physical inactivity and access to exercise opportunities
- Physically and mentally unhealthy days
- Preventable hospital stays
- Sexually transmitted diseases
- Smoking, including during pregnancy
- Supply of primary care physicians and mental health providers

Discussion – Secondary Data

- Thought we were poorer—from looking at our students, you would think we had more poverty.
- Cancer rates are 2 or 3 times the state average. Is there something in the water? Is it screenings? It's hard to get people in to get screened. Maybe these numbers will scare people into getting their screenings. Carroll County is heavily ag-based—chemicals could cause it? Nobody ever said it was a problem. Also a more senior community—with older residents those numbers could be higher.
- Treatable and preventable PQI – why are people not getting their care? It's time for this checkup—maybe they need incentives. If they have a high deductible, they won't go.
- Transportation is a problem – Senior Family Services in Delphi and Flora has vans. Medicaid offers transportation but it needs scheduled.
- Diabetes – challenging to get people to manage it.
- I don't know where people go to exercise. Is there anywhere for families to go? Things may be offered but it's not well-known. Where seniors live—not a lot of walking areas. Trails are not paved. Silver Sneakers attendance 3 times a week.
- There really are no places to exercise.
- Surprised by smoking. 1/3 patients are smokers.
- Opioids – On April 3, conversation at the library—it just hasn't hit us as hard like others. Are we just lucky? There was an incident where parents were in the middle of the road and overdosed with children in the car.
    - EMS has seen an increase in the number of runs and Narcan uses.
    - 2-3 years ago, there was a bag of heroin dropped in the clinic. Police acted like it was no big deal. No expected in my small town!
    - Behavioral, mental and physical health—addiction touches on all of them.
    - Vivitrol – very expensive to help ease addiction. There are new methodone clinics, but that's also an abused drug.
    - Is there a local task force? There is one, but can't figure out who to talk to. United Way is starting to lead campaigns and conversations. Partnership for a Drug Free Carroll County meets every 1st Tuesday of the month at 10:00 AM in a classroom. Maybe this is something we could utilize and bring back to the surface.
    - Local employers can't hire people because they can't pass a drug test.
- There's only one pharmacy in town. CVS does not accept MDWise so people have to drive to Lafayette or Logansport or go without medication.
- Follow-up care—people have to travel so far to get it. The clinics have seen a rise in patients since the doctor's office closed. The Medicare population has increased. Many will travel to Lafayette.

The clinic is adding exam rooms to increase capacity. Monon office with double when it opens in July.

- Doctors are leaving, and people are getting older—the clinic is trying to prepare for that.
- STD numbers jumped out—we're stellar! What are we doing that makes it better?
- Physical inactivity – what could we bring here? Intramural basketball at schools—we don't do that here. Used to have men's softball league too. Don't know if it's facility usage. We have a lot of parks.
- Compared to other rural areas, we're good. We only have to go 20 miles to a nice hospital. We need urgent care of immediate care. The clinic is open 7-7 – trying to expand. If there were ways to keep our doors open longer, we would look at that.
- Working poor population – hard time making ends meet. HIP 2.0 has been helpful for many patients. We are just underserved in all these aspects: pharmacy, transportation.
- Clinic said they had a meeting with the USDA about their new building. It will be open 7A-7P—if we could get a partner to run it 7P-7A with an ambulance and physician. Use whatever already exists. Turn your building over to increase access. Could we use telemedicine? We need to think outside the box and be creative.
    - Monon has an ambulance service and they would be on board.
- Opioid forum—jails are full. We need a recovery home for men. This is a much cheaper option than sending them to jail. Would this investment pay off? Recovery homes in IN are not licensed. Churches often offer these services.
    - Instead of investing millions in a new jail, let's invest in this stuff. It's not all criminal, not all hard crime.
    - New jail report – not that many drug arrests. Numbers on report don't correlate with the stories. Maybe they're being arrested for something else.
    - Are the homes in Flora federally funded? Police spend a lot of time there.
    - Wasn't there something in the most recent legislative session about recovery homes?
- We have a shortage of providers. Period.
- Did the state relax the # of hours necessary to get behavioral health license? I think it went through but it would take years to see the impact of that ruling.

The group decided to add the following needs to the list before voting:

- Opioid use
- Pharmacy care
- Urgent/Emergency care

After one round of voting, the participants identified the following as the top health needs in Carroll County:

- Supply of primary care physicians and mental health providers (6)
- Physical inactivity and access to exercise opportunities (5)
- Opioid use (4)
- Urgent/Emergency Care (3)
- Physically and mentally unhealthy days (3)
- Pharmacy Care (2)
- Cancer Incidence and Mortality (2)
- Diabetes (1)

There was some discussion that there should be something about children or youth on the list. The school representatives said they read the top priorities to include children, and not to be limited to adults. They talked about anxiety becoming an increasing concern in schools. There is a lot more "trauma informed" learning. Active partnerships with local churches for mentors or food bags. My story has made me stronger. Active grant writing from the schools—they've given a 4-year commitment to the Habits of Highly Effective People that all the kids and staff will learn these. They will also implement "The Leader in Me" program.

No after-school care. All the child care is in town.

It's also difficult to get parents to understand it's a big deal and to get them to make the appointment for children with anxiety or mental health issues.

The group agreed that the first-round voting results were the priority health needs in Carroll County.

Clinton County Community Conversation

April 9, 2018
4H Building, Clinton County Fairgrounds

EXECUTIVE SUMMARY

On April 9, 2018, twenty-one community members and six observers gathered at the 4H Building at the Clinton County Fairgrounds for lunch and a conversation about Clinton County's priority health needs. After being presented with the secondary data, the group had much discussion about several different topics. Based on the secondary data, the following list of priority health needs was presented to the group:

- Education attainment levels
- Mental illness and suicide
- Mortality from motor vehicle accidents and other injuries
- Physical environment and air pollution
- Physical activity and access to exercise opportunities
- Preventable hospitalizations
- Supply of primary care physicians and mental health providers
- Teen birth rates

The group decided to add the following to the list before voting:

- Substance abuse disorder

- # of residents who suffer from chronic disease
- Food access and food knowledge
- Insurance literacy

After one round of voting, the participants identify the following as the top health needs for this county:

- Substance abuse and treatment (14)
- Mental health/suicide (13)
- Food access/knowledge (12)
- Primary care providers and mental health providers (11)

MEETING NOTES

Melissa Dexter, program manager for IU Health's West Central Region Community Outreach and Engagement, opened the meeting and introduced the facilitator for the meeting, Keith Hearle of Verite Healthcare Consulting. The purpose of the meeting is to understand the most significant health needs in the community.

Each community member introduced themselves. In addition to the community members, the following were present for observation or facilitation:

- Melissa Dexter, IU Health WCR
- Rhonda Jones, IU Health WCR
- Amanda Pabody, IU Health
- Stephanie Long, North Central Health Services
- Keith Hearle, Verite Healthcare Consulting
- Alex Wallace, Verite Healthcare Consulting

Keith reviewed the purpose and the process of the meeting. He explained the secondary and primary data collection, including 2,200 surveys being mailed in each IU Health county. A community member asked if the survey results would be shared in a community meeting like this one? Another asked if the survey was available in Spanish. There were concerns with the survey only being available online in Spanish because residents will not receive the English version and then go online to complete it in Spanish. This is important because of the large Spanish-speaking population in Clinton County.
The secondary data was reviewed (see attached slide show). Population is showing a slow decline overall, the 65+ population is increasing. The poverty rate is lower than the state average. The highest poverty area is close to the hospital in Frankfort. Clinton County's community need index score is 3.6, compared to the national average score of 3. The presentation included a list of peer counties from the county health rankings. The average daily PM2.5 is an indicator of air pollution.

Looking at the top causes of death from the Indiana State Department of Health—suicide is twice the state average. Clinton County is a health professional shortage area. There was discussion about financial incentives for new providers to practice in Clinton County. The participants were asked if there were other assessments that have been done that also need reviewed in the needs assessment process.

Maternal and Child Health Indicators graded Clinton County as a B- compared to state of IN

- Infant mortality rate – 8.5 – higher than Indiana rate

- Health professional shortage areas
  - Primary care physicians and mental health providers

        - Financial incentives as an incentive to practice in Clinton Co.

- Findings from other CHNA reports
    - Are there any other assessments that have been done that we can factor in to this work?
    - Drug/substance abuse
    - Obesity
    - Access to primary care/mental care

- Preliminary secondary data findings
    - Put all secondary data into blender and identified what could be significant health issues in Clinton Co. (ONLY based on data work)

The secondary data was used to create a list of the top health needs for Clinton County. These needs were:

- Education attainment levels
- Mental illness and suicide
- Mortality from motor vehicle accidents and other injuries
- Physical environment and air pollution
- Physical activity and access to exercise opportunities
- Preventable hospitalizations
- Supply of primary care physicians and mental health providers
- Teen birth rates

The participants were asked to discuss the identified needs. Did the list look accurate? Is there anything missing?

Discussion: What are we missing?

- Don't see anything for substance use disorder
    - We don't have good data on rates of opioid use
    - We found ER data for opioid admissions

- Chronic diseases

- Is there data on how suicides are carried out?
    - Verite – we don't have this detail
    - Believe many are unintentional/substance overdoses
        - Police keep track of how much narcan they use

- Preventable hospitalizations
    - Is this behavior driven? Readmissions?
    - We are analyzing PQI (prevention quality indicators) data at a high level of data
    - Higher readmission rates correlate with mental health issues

- Data on reasons for motor vehicle accidents?
    - Indicator for alcohol impaired driving deaths

- Looking at opening a primary care clinic
    - Can we get comparable data with communities that implement this type of program and how is that impacting health?

- Teen birth rates
    - Teen birth rate has declined significantly (to 26.4) over 2 years
    - We may not want to address this

- Preventable hospitalizations

- Access to primary care
    - Not an issue that anybody in this room is going to be able to resolve
    - Huge issue with capacity
    - State has turned to nurse practitioner program
    - We need more doctors but it's not that simple and it's years out before there is any resolutions
    - Very challenging to recruit and keep doctors in a rural community

- Food access and food knowledge
    - Doing a good job changing school lunch and educating students but we need to educate parents as well
    - FSSA office – how are we educating people that come to this office?
    - Using local resources like food pantries
        - They give whatever food they have, but they also need to make sure they are providing healthy options
    - Community garden project – in pilot phase
        - Need city and county support in order to replicate
    - Physicians can play a role in this as well
        - The shortage results in no time to do this
    - Utilize WIC and community partners, healthy families, head start (root of the problem)

- Substance abuse w/ treatment options
    - We are lacking treatment component
        - People are purposefully going to jail to get MAT
    - What about prevention?
        - They are working on this
        - Believe they can handle with model they have
        - Insurance literacy

The following needs were identified to be added to the list before voting:

- Substance abuse disorder
- # of residents who suffer from chronic disease
- Food access and food knowledge
- Insurance literacy

After one round of voting, the participants identify the following as the top health needs for this county:

- Substance abuse and treatment (14)
- Mental health/suicide (13)
- Food access/knowledge (12)
- Primary care providers and mental health providers (11)

Discussion on results

- Are you surprised?

    - No
- We need to revisit getting data from Hispanic population
- Not a lot we can do on physician problems, but we are looking to bring in more mental health providers
    - Provided funding for Purdue mental health nurse practitioner program
- Many of these items are connected
- Getting supporting data from state department of health on opioid usage
- Requiring coroners to make more specific determinations on cause of death
- Would like to see age segments on needs

Tippecanoe County Community Conversation

May 8, 2018
IU Health Administrative Office Building Board Room

EXECUTIVE SUMMARY

On May 8, 2018, twenty-two community members and three observers gathered at IU Health's Administrative Office Building for lunch and a conversation about Tippecanoe County's priority health needs.

After being presented with the secondary data, the group had much discussion about several different topics. Based on the secondary data, the following list of priority health needs was presented to the group:

- Cancer incidence and mortality
- Diabetes
- Physical inactivity and access to exercise opportunities
- Physically and mentally unhealthy days
- Preventable hospital stays
- Sexually transmitted diseases
- Smoking, including during pregnancy
- Supply of primary care physicians and mental health providers

The group decided to add the following to the list before voting:

- Obesity (decided to add with diabetes for voting)
- Opioid abuse
- Uninsured
- Childhood trauma
- Suicide

After one round of voting, the participants identify the following as the top 3 health needs for this county:

- Diabetes/Obesity: 20 votes
- Opioid abuse: 18 votes
- Supply of primary care physicians and mental health providers: 17 votes

After some discussion, it was decided to separate the top 3 health needs into 4 by specifying the type of health professional shortage.

- Diabetes/Obesity
- Opioid abuse
- Supply of primary care physicians
- Supply of mental health providers

MEETING NOTES

Melissa Dexter, program manager for IU Health's West Central Region Community Outreach and Engagement, opened the meeting and introduced herself. The purpose of the meeting is to understand the most significant health needs in the community.

Each community member introduced themselves. In addition to the community members, the following were present for observation or facilitation:

- Melissa Dexter, IU Health WCR
- Rhonda Jones, IU Health WCR
- Heather Burns, North Central Health Services

Melissa reviewed the purpose and the process of the meeting. She explained the secondary and primary data collection.

The secondary data was reviewed (see attached slide show). Population is showing an increase overall, especially in the 65+ population is increasing. The poverty rate is higher than the state average. There was discussion about how this data includes the large amount of Purdue University students and how that can skew the data. The presentation included a list of peer counties from the county health rankings. The average daily PM2.5 is an indicator of air pollution.

The County Health Rankings indicators showed Tippecanoe County in the bottom quartile for physical environment, poor or fair health, poor physical health days, food environment index, excessive drinking, alcohol-impaired driving deaths, sexually transmitted infections, high school graduation, income inequality, social associations and severe housing problems.

Tippecanoe County was ranked in the bottom half for 24 out of 34 health status indicators (see slide 17 and 18 for full list).

Looking at the top causes of death from the Indiana State Department of Health—Tippecanoe County's rate of "other diseases of heart", Alzheimer's disease and chronic liver disease and cirrhosis were above the Indiana average. Tippecanoe County's maternal and child health indicators had 1 indicator in the bottom half: infant mortality rate of 7.7, compared to the Indiana 7.2 rate.

Tippecanoe County has high cancer mortality rates, specifically for stomach, pancreas, non-Hodgkin's lymphoma and leukemia.

Tippecanoe County is designated a health professional shortage area for primary care physicians, dentists and mental health providers, as well as a medically underserved area.

Top reasons for preventable hospitalizations in the IU Health Arnett community include COPD or asthma in older adults, heart failure admission and community-acquired pneumonia admission.

Findings from other CHNA reports identified the following needs: mental/behavioral health, access to basic/primary care, chronic disease management, drug/substance abuse, housing issues/homelessness, access to dental care, access to mental health services, home health care service, nutrition/access to healthy food, obesity, physical inactivity/lack of exercise and tobacco use and smoking.

Based on the secondary data, the following list of priority health needs was presented to the group:

- Cancer incidence and mortality
- Diabetes
- Physical inactivity and access to exercise opportunities
- Physically and mentally unhealthy days
- Preventable hospital stays
- Sexually transmitted diseases
- Smoking, including during pregnancy
- Supply of primary care physicians and mental health providers

Discussion – Secondary Data

- Looking at this list of needs, obesity is the underlying cause of many of these. Surprised that obesity was only on one other assessment as an identified need.
- Need to include access to healthy food.
- No data yet, but opioid abuse is an issue to discuss.
- The Indiana Youth Institute has numbers that 3 of 7 local counties have high child abuse rates. This is preventable. The ACE (Adverse Childhood Experiences) study shows that children with higher rates of childhood trauma are more likely to suffer health-wise as adults.
- Suicide is not on the list.
    - Suicide is a real concern. The health department has noticed across Indiana a rise in suicide, not including overdose. But this is intentional suicide. “There’s a real rise like we’ve never seen before.”
- Drug and substance abuse is #1 in the Tippecanoe County community health assessment.
- The suicide issue should focus on youth.
- Did we look at uninsured rates? It should be included in the list.
- Chronic disease and prevention – This aligns closely with the PQI rates. If someone is insured, they’ll probably be able to get the access they need to prevent hospitalizations. PQI drives costs. Re-admission is also an issue that needs addressed. Follow-up care or home health care is something that needs addressed.
- Teen pregnancy is trending down. It’s still too high. And it’s preventable.

The group decided to add the following needs to the list before the vote:

- Obesity (decided to add with diabetes for voting)
- Opioid abuse
- Uninsured

- Childhood trauma
- Suicide

After one round of voting, the participants identify the following as the top 3 health needs for this county:

- Diabetes/Obesity: 20 votes
- Opioid abuse: 18 votes
- Supply of primary care physicians and mental health providers: 17 votes

After some discussion, it was decided to separate the top 3 health needs into 4 by specifying the type of health professional shortage.

- Diabetes/Obesity
- Opioid abuse
- Supply of primary care physicians
- Supply of mental health providers

One attendee brought up the effects of screen time and the growing dependence on young people. As a parent of teens, he's concerned with depression and anxiety among teenagers. This creates challenges for parents.

Pauline Chen encouraged the participants to complete the community survey and provide it at their organizations in order to reach the vulnerable and needy populations who will be using the services that come as a result of the CHNA process.

Participants asked to see the results from the other community conversations.

White County Community Conversation

April 23, 2018
IU Health White Memorial Hospital, Hibner Conference Room

EXECUTIVE SUMMARY

On April 23, 2018, thirty-two community members and 2 observers gathered in the Hibner Conference Room at the IU Health White Memorial Hospital for lunch and a conversation about White County's priority health needs.

After being presented with the secondary data, the group had much discussion about several different topics. Based on the secondary data, the following list of priority health needs was presented to the group:

- Cancer incidence and mortality
- Education attainment levels
- Low birth weight and teen births
- Motor vehicle accidents, injuries and resulting mortality
- Obesity, physical inactivity and access to exercise opportunities
- Physical environment and air pollution
- Preventable hospitalizations

The group decided to add the following to the list before voting:

- Mental health
- Drugs
- Occupational medicine
- Spanish-speaking services
- Nutrition

After one round of voting, the participants identify the following as the top health needs for this county:

- Mental Health = 29
- Obesity, Physical Inactivity, and Access to Exercise Opportunities = 20
- Drugs = 28
- Occ. Med = 13
- Nutrition = 12
- Spanish-speaking = 10
- Cancer Incidence and Mortality= 9
- Low Birth Weight and Teen Births = 6
- Educational Attainment Levels = 5
- Preventable Hospitalizations = 2
- Motor Vehicle Accidents, Injuries, and Resulting Mortality = 1
- Physical Environment and Air Pollution = 1

MEETING NOTES

Melissa Dexter, program manager for IU Health's West Central Region Community Outreach and Engagement, opened the meeting and introduced herself. The purpose of the meeting is to understand the most significant health needs in the community.

Each community member introduced themselves (please see attached sign-in sheet for attendance roster). In addition to the community members, the following were present for observation or facilitation:

- Melissa Dexter, IU Health WCR
- Stephanie Long, North Central Health Services

Melissa reviewed the purpose and the process of the meeting. She explained the secondary and primary data collection, including 2,200 surveys being mailed in each IU Health county.

The secondary data was reviewed (see attached slide show). Population is showing a slow decline overall, the 65+ population is increasing. The Community Need Index for White County showed the highest need in the Monon area. The daily PM2.5 is an indicator of air pollution.

The County Health Rankings indicators showed White County in the bottom quartile for all the health measures (see slide 11 for full list). White County is ranked at the bottom half of the state in everything but % of excessive drinking, % of alcohol-impaired driving deaths, primary care physician rate, % mammography screening, % unemployed and income ratio (see slide 13 and 14 for full list).
Looking at the top causes of death from the Indiana State Department of Health—White County's rates for cancer, all other diseases, other diseases of heart, Alzheimer's disease, motor vehicle crashes, chronic liver disease and cirrhosis and pregnancy, childbirth and the puerperium.

White County has high cancer mortality rates, specifically for all cancers, colon, rectum and anus cancers, prostate, urinary tract, non-Hodgkin's lymphoma, leukemia and other forms of cancer. White County has

higher cancer incidence rates for all cancers, uterus, bladder, leukemia, pancreas, thyroid and oral cavity and pharynx.

White County has higher rates in 7 of 10 maternal and child health indicators (see slide 18 for full list). White County is designated a health professional shortage area for primary care physicians and mental health providers. White County has a higher preventable hospitalization rate compared to other IU Health communities.

Findings from other CHNA reports identified the following needs: access to basic/primary care, chronic disease management, drug/substance abuse, housing issues/homelessness, access to mental health services, mental/behavioral health and obesity.

Based on the secondary data, the following list of priority health needs was presented to the group:

- Cancer incidence and mortality
- Education attainment levels
- Low birth weight and teen births
- Motor vehicle accidents, injuries and resulting mortality
- Obesity, physical inactivity and access to exercise opportunities
- Physical environment and air pollution
- Preventable hospitalizations

Discussion – Secondary Data

- Homeless people have to get to Logansport for services.
- Schools – mental health education is a piece that's missing, as well as access to services. We have parents who don't believe their kids need services. In the first semester of school, averaged 1 hospitalization every 2 weeks.
- Lower socioeconomic status increases health risks. Economics plays a part.
- Drugs are a big thing—meth, in particular.
- Meth, opiates, marijuana are all issues.
- There's a growing interest in the area to make White County a "Safe Place" for children. It's a national program. You identify places children can go (library, etc.) that is safe to get help. There are 5-6 interested organizations currently looking into this.
- Mary Minier provided an overview of the Safe2Talk teen texting program that IU Health supports to provide an outlet for teens to help reduce the risk of suicide.
- Occupational medicine for businesses – including drug screens. Full services are needed. We have to go out of town for these services now. We are going elsewhere and building relationships. The longer we do this, the more likely we are to stay with these other companies offering the services, which is not in our county.
- Why I send them to other places: you find a doctor to actually look at them and address the issue and not just write them off work.

- The clinic in Wolcott does CDL physicals.
- Drugs – North White – We see drug use by the parents, not the students. There are lots of DCS calls due to neglect. This leads to mental health issues. We have the highest poverty rate in the county. Our parents can't get the resources in Monticello.
- County schools are seeing a significant deficit in mental health services. There needs to be something mobile to Brookston and Monon because people can't make it to Monticello.
- Probation department and sheriff are seeing the same things with the drugs.
- Tri-County – We have the luxury of being in town. We are trying to collaborate.
- Transportation and Spanish-speaking services are something we need as well.
- 40% Spanish-speaking population. Lots are undocumented. There needs to be a sliding fee scale—there is one.
- Wabash Valley – not much offered here. Much more successful with Four County – we need something like this local or transportation to these services.
- We are seeing kids and parents using drugs together. There are lots of pills.
- People aren't shy to say they won't pass a drug screen. The kids can't pass them either.
- Also, prescription drugs are an issue. Older people get them stolen by their kids/grandkids.
- IU Health has been a supporter of Kindergarten Camp. Need to address these at younger levels. Engage the parents before they are in the school corporation.
- Adult obesity is 36%. This is directly related to food access. The quality of food available is not healthy. Children skip breakfast and eat anything they're given.
- Besides sports, there are no programs for kids to be active. If they're not competitive, they have nothing.
- The Boys and Girls Club serves 167 kids each night.
- I had a heart attack—now I pay attention to these things. I hate seeing that for the kids.
- There is a lack of knowledge of how to prepare healthy food. We don't have community gardens.
    - We do have community gardens.
    - What about Monon and Chalmers? There used to be a program that gave $2 tokens for fresh produce.
- One school organized a food pantry. We have someone preparing fresh food to show people how to do that. People didn't know how to use sausage to make a meal.
- I see unsettling information in maternal and child health. We need more STI data.

- Have we looked at who is leaving home to get health services elsewhere? Why are they going elsewhere?

- Maybe it's just education and awareness for people.

The group decided to add the following needs to the list before voting:

- Mental health
- Drugs
- Occupational medicine
- Spanish-speaking services
- Nutrition

After one round of voting, the participants identified the following as the top health needs in White County:

- Mental Health = 29
- Obesity, Physical Inactivity, and Access to Exercise Opportunities = 20
- Drugs = 28
- Occ. Med = 13
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- Cancer Incidence and Mortality= 9
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- Motor Vehicle Accidents, Injuries, and Resulting Mortality = 1
- Physical Environment and Air Pollution = 1

APPENDIX D CHNA PRIORITIZATION SESSION ATTENDEES

Representatives of NCHS and River Bend Hospital participated in a meeting November 15, 2018, to review data collected for the CHNA. A list of attendees is included below.

NCHS Corporate Board

Gary Lehman, Chair
Rick Davis, Vice Chair
David Cooper, Treasurer
Marjorie T. Roberts
David McGaughey
Jeffrey P. Brown, M.D.
Lori Rogers, M.D.
Stephanie Long, President & CEO

NCHS Grants Board

Julie Schleck, M.D., Chair
Tony Albrecht
Brad Cohen
Ed Eiler
Steve Habben
Courtney Henchon
Gregory Kapp
Laurel Strasburger

NCHS Staff

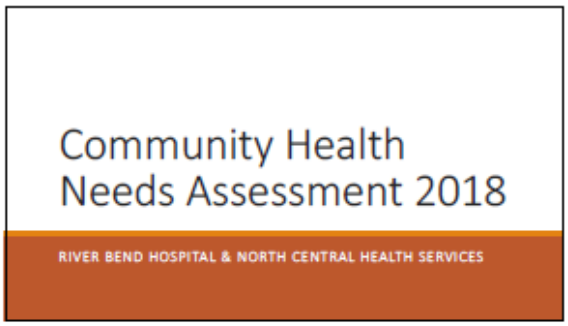
Jeffrey R. Nagy, CFO
Virginia Vought, Director of Community Benefit Grantmaking

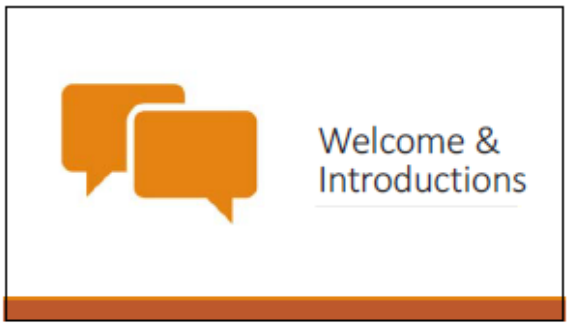
Measures Matter, LLC

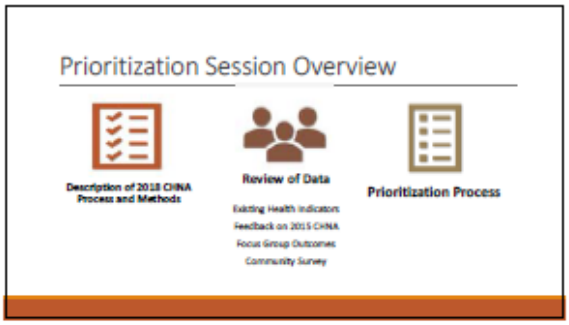
Michael Reece, Principal Consultant
William McConnell, Principal Consultant

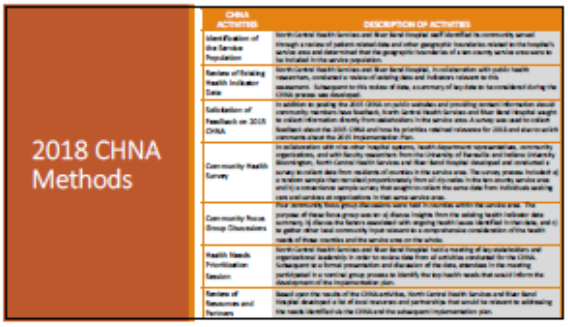
APPENDIX E CHNA PRIORITIZATION PRESENTATION

Representatives of NCHS and River Bend Hospital participated in a meeting to review data collected for the CHNA. A copy of the slides used during the presentation of data is below.









Review of Data

Health Indicators

Review of Existing Indicator Data

- Mortality and Morbidity Data
- Infectious Diseases
- Health Rankings
- Health Outcomes & Health Behaviors
- Clinical Care Characteristics
- Social & Economic Factors and Physical Environment Factors
- Mental Health
- Substance Abuse

County	Rank	Percentile
Benton	32	50th
Carroll	19	25th
Clinton	58	75th
Fountain	50	75th
Jasper	36	50th
Montgomery	27	50th
Newton	37	50th
Tippecanoe	24	50th
Warren	3	25th
White	49	75th

Service Region Health Rankings

Status Review of Indicators

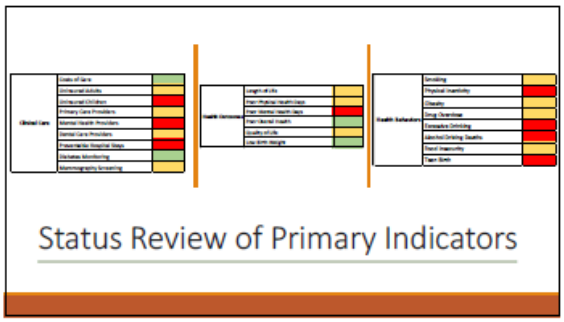
Review of indicator data led to determination of "risk" level for the service area.

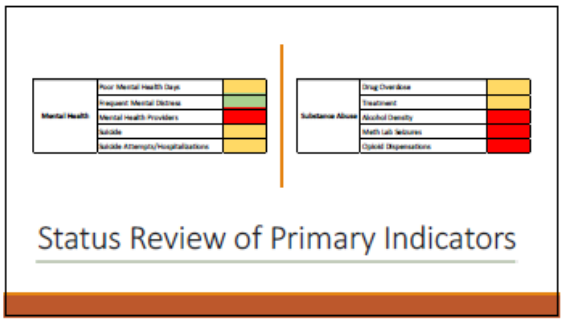
Risk Determination

- prevalence/incidence
- co-morbidity factors
- situational and structural considerations
- health infrastructure considerations
- variance across the counties in the service area

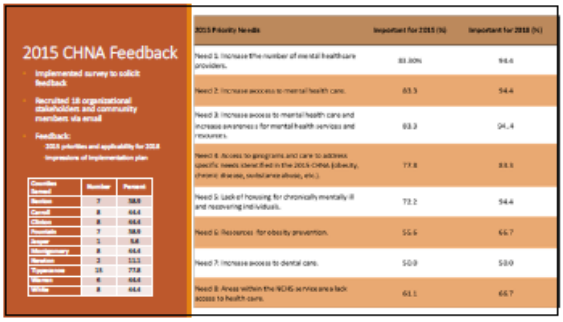
Reduced	
Critical for Monitoring	
Urgent	

Status Review of Primary Indicators


Status Review of Primary Indicators


Status Review of Primary Indicators

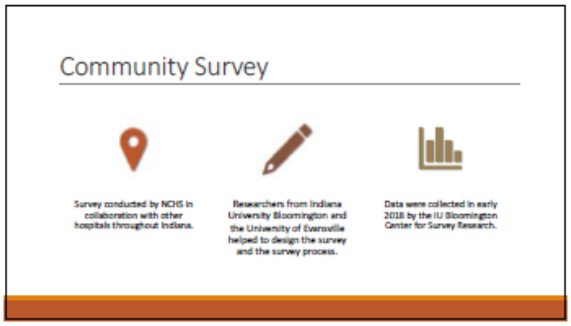

2015
CHNA
Feedback

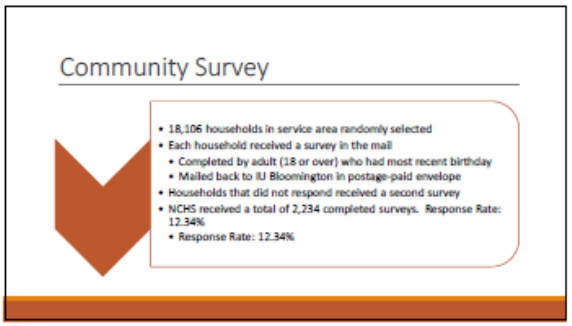

2015 CHNA Feedback
Implemented survey to solicit feedback
Recruited 18 organizational stakeholders and community members via email
Feedback:

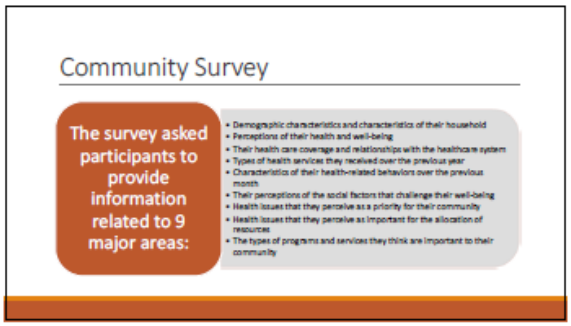

Focus
Group
Discussions

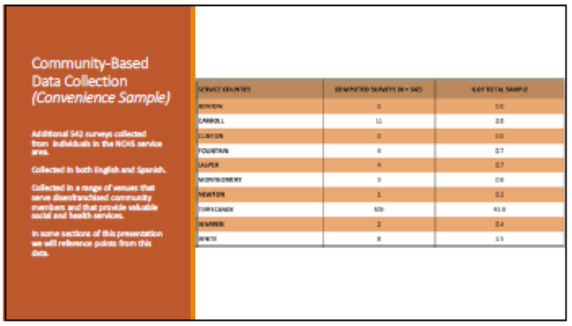

Focus Group Discussions
-Carroll, Clinton, Tippecanoe, and White counties
-96 community participants
-Reviewed health indicator data
-Discussed data and health factors
-"Voted" to identify priority issues


Community
Survey


Community Survey
Survey conducted by NCHS in collaboration with other hospitals throughout Indiana.
Researchers from Indiana University Bloomington and the University of Evansville helped to design the survey and the survey process.
Data were collected in early 2018 by the IU Bloomington Center for Survey Research.

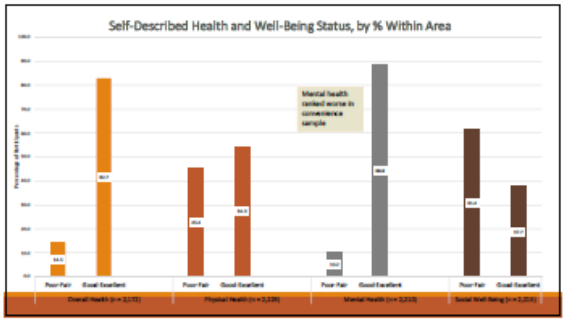

Community Survey
• 18,106 households in service area randomly selected
• Each household received a survey in the mail
• Completed by adult (18 or over) who had most recent birthday
• Mailed back to IU Bloomington in postage-paid envelope
• Households that did not respond received a second survey
• NCHS received a total of 2,234 completed surveys. Response Rate: 12.34%
• Response Rate: 12.34%

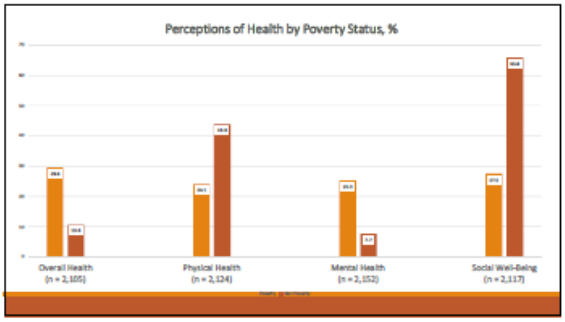

Community Survey
The survey asked participants to provide information related to 9 major areas:
• Demographic characteristics and characteristics of their household
• Perceptions of their health and well-being
• Their health care coverage and relationships with the healthcare system
• Types of health services they received over the previous year
• Characteristics of their health-related behaviors over the previous month
• Their perceptions of the social factors that challenge their well-being
• Health issues that they perceive as a priority for their community
• Health issues that they perceive as important for the allocation of resources
• The types of programs and services they think are important to their community

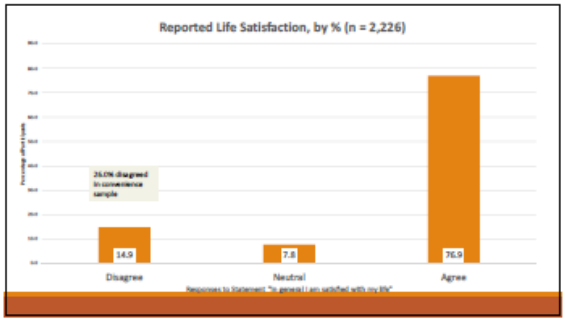

Community-Based Data Collection
(Convenience Sample)
Additional 543 surveys collected from individuals in the NCHS service area.
Collected in both English and Spanish.
Collected in a range of venues that serve disenfranchised community members and that provide valuable social and health services.
In some sections of this presentation we will reference points from this data.

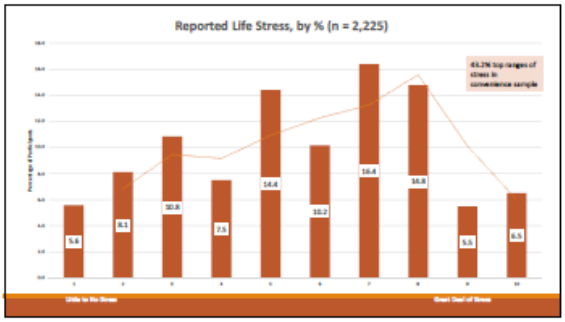

Description of Survey Participants


Participant's Descriptions of Health & Well-Being

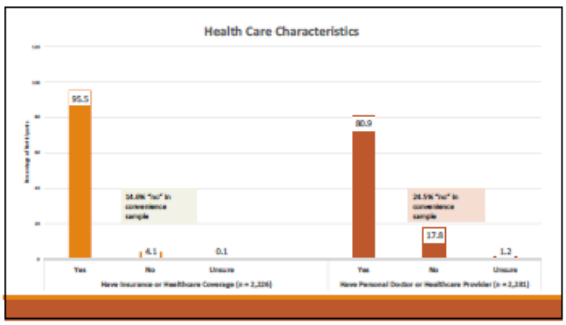

Self-Described Health and Well-Being Status, by % Within Area

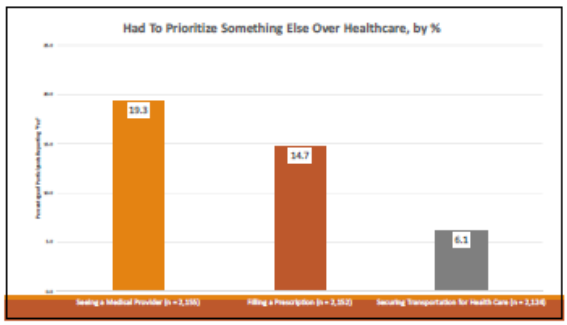

Perceptions of Health by Poverty Status, %
Overall Health (n = 2,105)
Physical Health (n = 2,124)
Mental Health (n = 2,152)
Social Well-Being (n = 2,117)

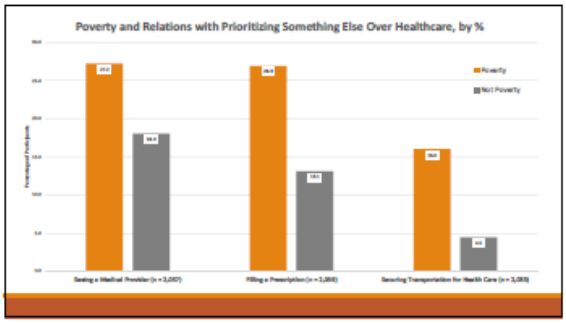

Reported Life Satisfaction, by % (n = 2,226)
14.9
7.8
76.9
Disagree
Neutral
Agree

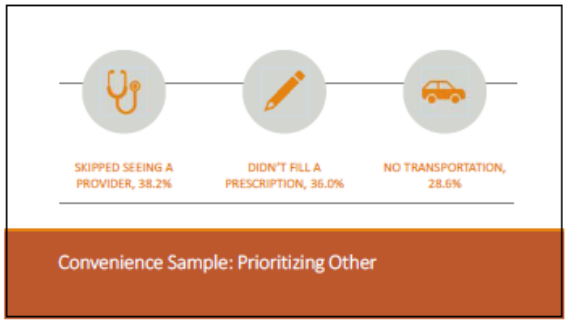

Reported Life Stress, by % (n = 2,225)


Participants' Descriptions of Health Care Characteristics

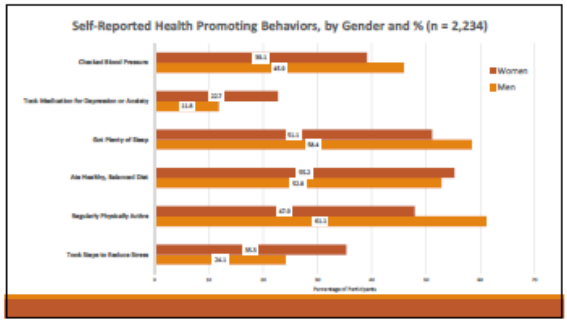

Health Care Characteristics
95.5
4.1
0.1
80.9
17.8
1.2
Yes
No
Unsure
Yes
No
Unsure

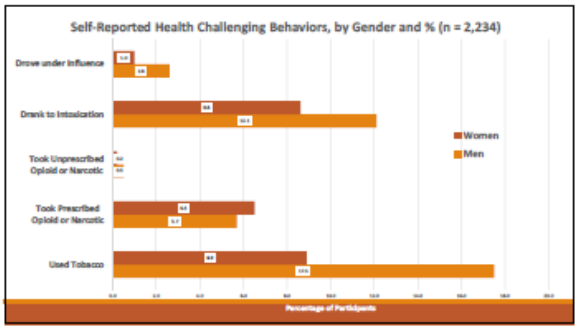

Had To Prioritize Something Else Over Healthcare, by %
19.3
14.7
6.1


Poverty and Relations with Prioritizing Something Else Over Healthcare, by %
Poverty
Not Poverty


SKIPPED SEEING A PROVIDER, 38.2%
DIDN'T FILL A PRESCRIPTION, 36.0%
NO TRANSPORTATION, 28.6%
Convenience Sample: Prioritizing Other


Reported Health Behaviors


Self-Reported Health Promoting Behaviors, by Gender and % (n = 2,234)
Women
Men



Health Behaviors	Random Sample (n = 2,234)		Convenience Sample (n = 542)	
Health Promoting	Men %	Women %	Men %	Women %
Took Steps to Reduce Stress	24.1	35.3	27.9	31.7
Regularly Physically Active	61.1	47.9	41.4	41.2
Ate Healthy, Balanced Diet	52.8	55.2	31.4	39.4
Got Plenty of Sleep	58.4	51.1	33.6	30.9
Took Medication for Depression or Anxiety	11.8	22.7	20.7	25.5
Checked Blood Pressure	45.9	39.1	32.1	38.7
Health Challenging	Men %	Women %	Men %	Women %
Used Tobacco	17.5	8.9	47.1	31.7
Took Prescribed Opioid or Narcotic	5.7	6.5	11.4	10.1
Took Unprescribed Opioid or Narcotic	0.5	0.2	2.9	1.5
Drank to Intoxication	12.1	8.6	12.1	5.9
Drove under Influence	2.6	1.0	1.4	1.8

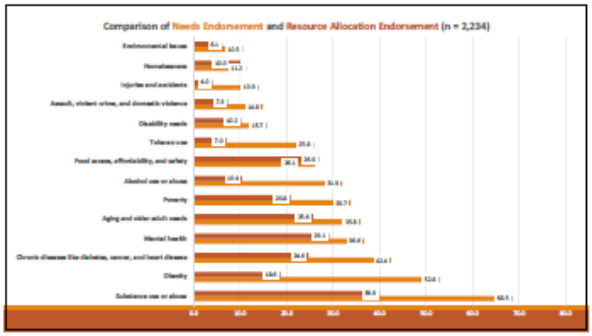
Insights Regarding Social Determinants of Health

Social Determinant	Item Assessed	Total Sample Responses	Responses by Poverty Status	
			Poverty (14.1%)	*Non-Poverty (85.9%)*
Positively Worded Social Determinant Items		Percent Reporting "Never" or "Seldom" Applies to Me	Percent Reporting "Never" or "Seldom" Applies to Me	
Social Ecology (n = 2,188)	I feel those around me are healthy	4.9	4.4	4.5
Education (n = 2,211)	I am satisfied with my education	18.1	18.0	8.4
Community Cohesion (n = 2,184)	I make efforts to get involved in my community	31.6	48.3	30.0
Policy (n = 2,261)	I vote when there is an election in my town	16.5	21.0	14.6
Environment (n = 2,202)	I feel that my town's environment is healthy (air, water, etc)	9.2	16.4	7.9
Housing (n = 1,200)	I feel safe in the place where I live	7.8	8.3	1.9
Psychosocial (n = 2,156)	I try to spend time with others outside of work	14.8	19.7	10.1
Transportation (n = 2,205)	I have access to safe and reliable transportation	2.2	7.3	1.1
Negatively Worded Social Determinant Items		Percent Reporting "Sometimes," "Often" or "Always" Applies to Me	Percent Reporting "Sometimes," "Often" or "Always" Applies to Me	
Economy (n = 2,211)	I worry about my utilities being turned off for non-payment	10.7	25.9	7.9
Employment (n = 2,211)	I worry about being able to pay my rent or mortgage	18.2	28.7	13.6

Perceptions of Community-Based Health & Social Services

Community Programs	Moderately/Very Important %	Moderately Important %	Very Important %
Aging Services	89.8	43.1	46.7
Substance Abuse Prevention & Treatment	88.7	25.2	63.5
Physical Activity	86.7	45.7	41.0
Food Pantries	85.4	38.8	46.6
Mental Health Counseling	84.3	36.6	47.7
Services for Women, Infants, Children	81.8	43.4	38.4
Walking Trails/Outdoor Space	80.1	35.7	44.4
Job Training/Employment Assistance	79.0	44.8	34.2
Health Insurance Assistance	77.6	42.4	35.2
Free/Emergency Childcare	76.7	35.6	41.1
Gun Safety Education	73.1	36.7	36.4
Financial Assistance	71.8	48.4	23.4
Food Stamps/SNAP	71.7	42.0	29.7
Nutrition Education	70.8	49.9	20.9
Family Planning	70.0	42.6	27.4
Housing Assistance	68.8	46.8	22.0
Transportation Assistance	64.6	42.1	22.5
Legal Assistance	60.8	42.6	18.2
Prescription Assistance	59.7	40.0	19.7
Needle Exchange	54.9	30.6	24.3

Community Perceptions of Priority Health Needs & Resource Allocation



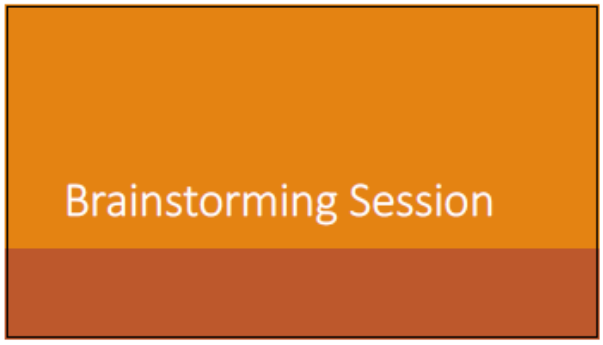
Priorities Across All Data Sources

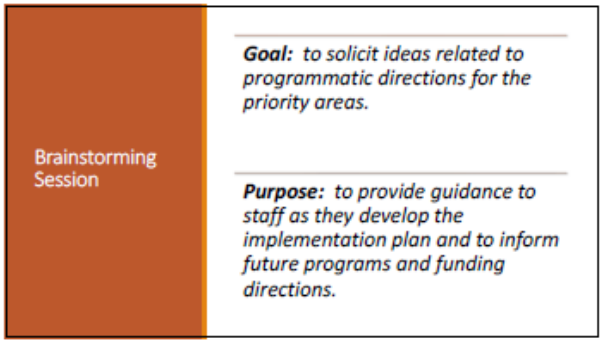
Existing Indicators	Focus Group Discussions	2015 CHNA Review	Community Survey
Mental Health Providers Poor Mental Health Days	Mental Healthcare Provider Availability Mental Health	✓	Mental Health
Excessive Drinking Alcohol Driving Deaths Alcohol Density Motor Veh Seizures Opioid Dispensations	Substance Abuse Opioids Drug Use	✓	Alcohol Use or Abuse Substance Use or Abuse
Preventable Hospital Stays Physical Inactivity	Primary Care Provider Availability Obesity Physical Inactivity Nutrition Diabetes	✓	Obesity Chronic Disease
Teen Births Uninsured Children			Food Access Poverty Homelessness Violence & Assault Tobacco Use

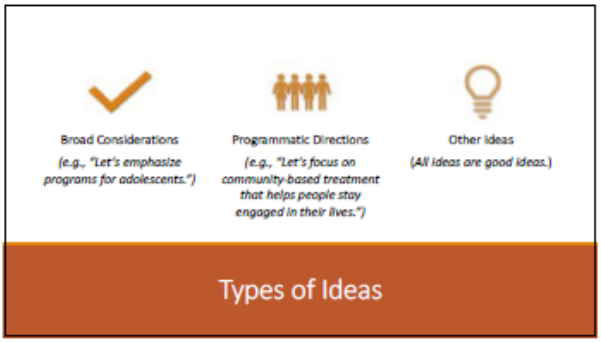
Priorities Across All Data Sources

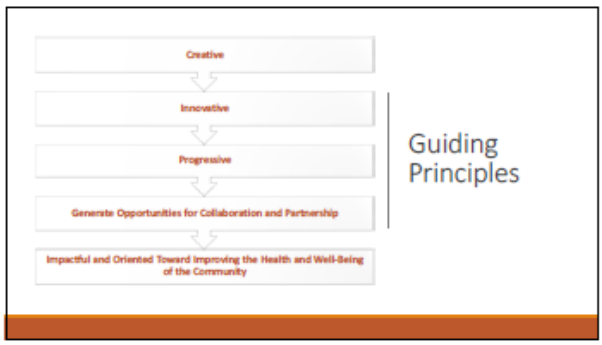
Priority Endorsement

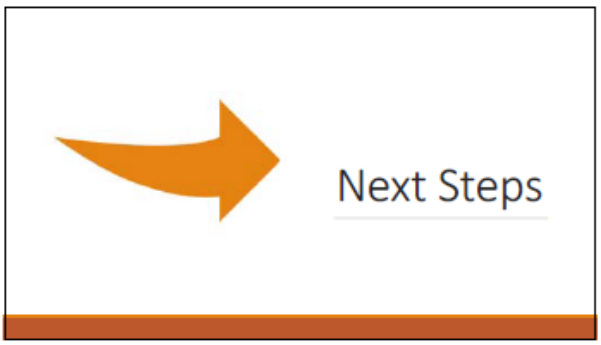

Existing Indicators
Focus Group Discussions
2015 CHNA Review
Community Survey
Mental Health Providers
Poor Mental Health Days
Mental Healthcare Provider Availability
Mental Health
Mental Health
Excessive Drinking
Alcohol Driving Deaths
Alcohol Density
Adult Lab Seizures
Opioid Dispensations
Substance Abuse
Opioids
Drug Use
Alcohol Use or Abuse
Substance Use or Abuse
Preventable Hospital Stays
Physical Inactivity
Primary Care Provider Availability
Obesity
Physical Inactivity
Nutrition
Diabetes
Obesity
Chronic Disease
Teen Births
Uninsured Children
Food Access
Poverty
Homelessness
Violence & Assault
Tobacco Use


Brainstorming Session


Brainstorming Session
Goal: to solicit ideas related to programmatic directions for the priority areas.
Purpose: to provide guidance to staff as they develop the implementation plan and to inform future programs and funding directions.


Broad Considerations
(e.g., "Let's emphasize programs for adolescents.")
Programmatic Directions
(e.g., "Let's focus on community-based treatment that helps people stay engaged in their lives.")
Other Ideas
(All ideas are good ideas.)
Types of Ideas


Creative
Innovative
Progressive
Generate Opportunities for Collaboration and Partnership
Impactful and Oriented Toward Improving the Health and Well-Being of the Community
Guiding Principles


Next Steps

APPENDIX F 2015 CHNA IMPACT

This appendix discusses the impact of community benefit activities taken by NCHS to address the significant community health needs identified by the 2015 NCHS and River Bend Hospital Community Health Needs Assessment (CHNA). The impacts, both expected and achieved, of each activity are listed below.

Access to Mental Health Care

Behavioral Health Services Renovation. NCHS awarded funding to address the need to increase access to mental health care by assisting in the renovation of a space to house new offices for Riggs Community Health Center's expanding behavioral healthcare services. The project helps Riggs Community Health Center better serve more than 1,000 unique behavioral healthcare patients annually.

Crisis & Suicide Intervention Program Expansions. NCHS awarded funding to address the need for youth crisis and suicide intervention and prevention by expanding the Mental Health America Wabash Valley Region SAFE2TALK crisis texting service, crisis phone service, and ASIST and QPR suicide prevention trainings throughout the NCHS service area. To date, SAFE2TALK has launched in Benton, Carroll, Clinton, Tippecanoe, and White county schools and has provided 528 text interventions; one in seven conversations served individuals who expressed suicidal ideation. A total of 440 school employees have been trained in QPR suicide prevention so far.

Mental Health Care for Individuals with Intellectual or Developmental Disorders. NCHS awarded funding to help expand mental health care and after-school programming for individuals with intellectual or developmental disorders through the purchase and renovation of the new Grant's House facility. The project will expand dedicated program space from just a few classrooms to 44,000 square feet and is expected to impact approximately 500 children annually.

Mental Health Care Single-Point-of-Entry Program Pilot. NCHS awarded funding to improve mental health service coordination through a three-year Mental Health Navigator pilot program at Mental Health America Wabash Valley Region. The program provides a single point of entry for high-risk individuals and families seeking mental health care to seven partnering mental healthcare organizations.

Psychiatric-Mental Health Nurse Practitioner Program Launch. NCHS awarded funding to address mental health workforce development gaps through the launch of a Psychiatric-Mental Health Nurse Practitioner Program at the Purdue University School of Nursing. When the program reaches full capacity, it will nearly double the number of psychiatric-mental health nurse practitioners trained annually in Indiana. Already, the community has responded to the new program's availability; North Central Nursing Clinics has allocated funding to support one provider at each of 4 rural sites to complete the program, which will greatly enhance medical and mental health integration and expand mental health accessibility for Family Health Clinic patients in Carroll and White counties.

Psychiatry Residency Program Expansion. NCHS awarded funding to address mental health workforce development gaps by helping to sustain expansion of the Indiana University School of Medicine's general psychiatry residency program, triple board (psychiatry, child-adolescent psychiatry,

pediatrics) residency program, and child and adolescent psychiatry, addictions psychiatry, geriatric psychiatry, and consultation-liaison fellowships. In this first of year of the grant, nine general residents and five fellows were matched. NCHS funding also sustained the program's rural psychiatric resident rotation and will help establish the first consult-liaison psychiatry fellowship in Indiana.

Psychiatry Residency Program Launch. NCHS awarded funding to address mental health workforce development gaps through the launch of a new psychiatry residency program at Community Health Network, now one of only two such programs in the state. NCHS grant funding supports the placement and education of psychiatry residents in Indiana, rotation of psychiatry residents and medical students in rural Indiana communities, and retainment of graduating psychiatry residents in the state's underserved areas. In the first three years of the grant, Community Health Network has matched 11 psychiatric residents with strong Midwest and Indiana ties.

Awareness of Mental Health Services and Resources

Crisis Intervention Training. NCHS awarded funding to increase the number of professionals certified to conduct Crisis Intervention Training programs. Funding provided to the National Alliance on Mental Illness West Central Indiana's program has trained 65 law enforcement officers.

Mental Health Resource Awareness Support. NCHS awarded sponsorships to Mental Health America Wabash Valley Region and the National Alliance on Mental Illness West Central Indiana to bolster the organizations' resources to sustain mental health resource awareness services. The organizations each conduct approximately 4,000 service hours annually.

Mental Health Summit. NCHS awarded funding to increase awareness of mental health resources through support for Mental Health America Wabash Valley Region's annual Mental Health Summit (formerly the Child Psychiatric Conference) for professionals who work with individuals with mental health needs, including physicians, nurses, school personnel, juvenile justice personnel, and therapists. The first summit served 62 attendees.

Access to Programs and Care to Address CHNA-Identified Needs

CATCH Child Fitness Collaboration. In support of the new CATCH after-school programming collaboration with Franciscan Health and IU Health Arnett to prevent childhood obesity through physical activity and nutrition education, NCHS awarded funding toward the construction of the new Intersection Connection YMCA Child Care Center. The new facility is expected to expand affordable child care from approximately 170 children to 270 children annually. The CATCH program is expected to expand daily exercise time and nutritional education for over 280 children annually.

Food Insecurity Capital Grants. To increase access to healthy produce and bolster efforts to improve food security, NCHS awarded funding for food pantry capital projects in Clinton, Montgomery, Tippecanoe, and White counties. In the first year following the completion of Food Finders Partner Agency capital subgrant projects, healthy produce distribution increased 15% and overall food distribution increased 44% in the Montgomery County pantry; in two Clinton County pantries, overall distribution increased 46% and 79%. In the first two years in new warehouse and education center facilities, Food Finders Food Bank has served 12,692 unique households through its pantry, 561 unique

clients through educational workshops, and 1,804 unique clients through resource coordination; on average, clients who access at least 4 instances of resource coordination increase their food security scores 32% and self-sufficiency scores 42%.

Medication-Assisted Substance Dependency Treatment. To increase access to substance dependency treatment, NCHS awarded Riggs Community Health Center funding to launch a medication-assisted treatment program for opioid use disorder. In the program's pilot year, Riggs Community Health Center screened 35 patients for alcohol dependency; screened 1,500 patients for drug dependency; enrolled 44 patients in treatment; and retained 56% of patients in treatment in 2017.

Prescription Drug Safety Course. To prevent prescription drug misuse and abuse among adolescents, NCHS sponsored the Prescription Drug Safety Course, an online module available to any interested middle and high schools in the NCHS service area to educate students on prescription drug safety. Three schools in Tippecanoe and Fountain counties have incorporated the course into their curriculums to date.

Resilient Youth Initiative. To prevent substance use and improve mental health among youth, NCHS has launched the Resilient Youth request for proposals. The initiative supports school corporations in researching and implementing evidenced-based substance use prevention and social-emotional learning curriculums.

Homelessness and Housing

Coordinated Homeless Services. To improve access to health care for the homeless and enhance opportunities for coordination and collaboration among the organizations that serve them, NCHS awarded funding to LTHC Homeless Services to acquire land and build a 21,000-square-foot coordinated entry, multi-agency engagement center. When the center opens, it is expected to provide service space for 13 partner organizations and serve over 1,300 clients annually.

Housing for Homeless Families. To increase access to housing for individuals with chronic housing stability barriers such as mental illness, NCHS awarded funding to LTHC Homeless Services to renovate supportive housing for families with severe barriers to housing stability in Tippecanoe County, to Family Promise of Greater Lafayette to build an emergency shelter for families experiencing housing crises in Tippecanoe County, and to Pam's Promise Transitional Housing Center to purchase a transitional housing facility for families in Montgomery County. The facilities are expected to increase housing capacity to serve approximately 120 individuals annually.

Recovery Housing Support. To increase the capacity of organizations housing individuals recovering from substance dependencies, NCHS awarded funding for strategic planning to Home with Home in Tippecanoe County and for transportation to Half Way Home in Montgomery County. The projects are expected to improve services for the nearly 300 clients the organizations serve annually.

Obesity

Children's Fitness Promotion. To enhance fitness opportunities for children, NCHS awarded funding to the Clinton County Family YMCA to create a children's fitness center, add new features to the

existing aquatic center and outdoor areas, and create a mobile fitness and outreach bus. The projects have the potential to reach up to 2,000 children annually.

Early Learning and Nutrition Workshops for Parents. To increase nutrition knowledge among parents of young children, NCHS awarded funding to the United Way of Greater Lafayette and the Community Commitment to Education to launch Born Learning early learning and nutrition academies. The academies served 250 families in 2015, 291 families in 2016, and 117 families in 2017.

Opportunities for Active Living. To increase access to evidence-based active living interventions, NCHS awarded funding to the Wabash River Enhancement Corporation for long-term planning, land acquisition, development, and research aligned with the *Master Plan for the Wabash River Urban Corridor*. From 2015 to date, two new studies have been published, three studies are being conducted, seven properties have been acquired, and a riverside promenade is under construction.

Safe and Accessible Walking Paths. To enhance access to opportunities for physical activity, NCHS awarded funding to Heartland Heritage, NICHES, and the Wabash and Erie Canal Association. The projects enhanced the safety of existing trails in Carroll County, established a new trailhead in Carroll County, and established one new trail in Tippecanoe County.

Access to Health and Dental Care

Dental Care Expansion. To increase access to dental care for underserved communities, NCHS awarded Riggs Community Health Center funding to expand their dental care center. In the new dental care center, unique dental patients have increased 15% and patient visits increased 30%.

Family Clinic Launch. To increase access to primary care for underserved communities, NCHS awarded funding to the Remington-Wolcott Community Development Corporation to purchase medical equipment for the Wolcott Family Health Clinic in White County. The clinic served 817 unique patients in its first year.

Medical Respite for the Homeless. To increase access to health care among the homeless, NCHS awarded funding for two LTHC Homeless Services staff to attend the National Health Care for the Homeless Council's Medical Respite Training Symposium and complete training that will inform the launch of the LTHC Engagement Center multi-agency medical respite program.

Parish Nurse Training. To increase access to health care among underserved populations, NCHS awarded scholarship funding for ten volunteers to be trained and certified as parish or faith community nurses.

Rural Health Provider Education. To support rural healthcare access, NCHS awarded funding for rural healthcare staff to attend the Indiana Rural Health Association annual conference; twenty-one scholarships have been awarded.