Indiana University Health Arnett Hospital
Community Health Needs Assessment

2015-2016

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1   INTRODUCTION

1.1   Purpose

This report provides the findings from a community health needs assessment (CHNA) conducted on behalf of Indiana University Health Arnett Hospital (IU Health Arnett) in order to identify the leading health needs in Tippecanoe County, the area defined as the community served by the hospital. The purpose of the CHNA is to identify the leading health needs in Tippecanoe County, to describe the leading needs IU Health Arnett will address by developing effective implementation strategies to address such needs, and to respond to the regulatory requirements of the Patient Protection and Affordable Care Act of 2010 (PPACA), which requires that each tax-exempt hospital facility conduct a CHNA.

1.2   Objectives

The 2015 IU Health Arnett Hospital CHNA has three main objectives:

1. Identify the priority health needs within Tippecanoe County, Indiana.
2. Serve as a foundation for developing implementation strategies that can be utilized by healthcare providers, communities, and policy makers in order to improve the health status of people living in Tippecanoe County.
3. Supply public access to the CHNA results in order to inform people in the community and provide assistance to those invested in the transformation of the community's health.

2   EXECUTIVE SUMMARY

IU Health Arnett's primary service area (PSA) is Tippecanoe County. This hospital also provides support to the surrounding counties including: Clinton, White, Carroll, Benton, Fountain, Montgomery, and Jasper.

> This assessment identified the priority needs across the entire community served by the hospital. These problems affect most of the community service area counties, but particularly apply to the PSA of Tippecanoe County.

 Access to Healthcare

 Nutrition and Active Living

 Behavioral Health

 Chronic Disease Management

To identify these needs, IU Health Arnett Hospital collected comments to the prior CHNA, surveyed residents of the county through an online portal and using paper surveys, conducted a focus group which included a public health official and representatives of the medically underserved, and reviewed available resources about health status indicators. From these sources, the Hanlon Method was used to identify the priority needs:

- Access to Healthcare.
- Nutrition and Active Living.
- Behavioral Health.
- Chronic Disease Management.

IU Health Arnett Hospital is one of three hospitals in Tippecanoe County. In addition to hospitals and physician practices, Tippecanoe County has a Federally Qualified Health Center, Riggs Community Health Center, which also provides care for some priority health needs.

2.1 Primary Service Area

Tippecanoe County comprises the majority of the IU Health Arnett community. It accounts for all of the PSA's total population. In addition, of 6,904 inpatient discharges from IU Health Arnett in 2014, 87% had an address in Tippecanoe County.

3   STUDY METHODS

3.1   Analytical Methods

In order to identify the community's leading health needs, both quantitative and qualitative data were utilized. For this CHNA, quantitative analysis assessed the health needs of the population through data abstraction, and qualitative analyses were conducted by gathering input from community members through a survey. Qualitative responses were also collected through a focus group with community leaders in Tippecanoe County.

3.2   Data Sources

CHNAs seek to identify priority health needs and assess issues for particular geographic areas and populations. Accordingly, the following topics and data are assessed:

- Demographics, e.g., population, age, sex, race
- Economic indicators, e.g., poverty and unemployment rates
- Health status indicators, e.g., causes of death, physical activity and chronic conditions
- Health access indicators, e.g., insurance coverage, ambulatory care sensitive condition (ACSC) discharges
- Availability of healthcare facilities and resources

Data sets for quantitative analyses included:
- Centers for Disease Control and Prevention
- Centers for Medicare & Medicaid Services
- Community Health Status Indicators Project
- Dignity Health—Community Needs Index
- Indiana Department of Workforce Development
- Indiana Hospital Association Database
- Kaiser Family Foundation
- Robert Wood Johnson Foundation—County Health Rankings
- STATS Indiana data—Indiana Business Research Center, IU Kelley School of Business
- United Health Foundation– America's Health Rankings
- US Bureau of Labor Statistics
- US Census Bureau
- US Department of Commerce, Bureau of Economic Analysis
- US Health Resources and Services Administration

While quantitative data can provide insights into an area, these data need to be supplemented with qualitative information to develop a full picture of a community's heath and health needs. For this CHNA, qualitative data were gathered from responses collected online to the prior Community Health Needs Assessment, through surveys of members of the public, and through a focus group with health leaders and public health experts.

3.3   Process for Determining Priorities

The quantitative, secondary data sources identified health needs for which Indiana or Tippecanoe County is above or below average in comparison with other regions. Qualitative information from survey results, which included responses from under-served or underrepresented groups, supplemented the secondary data. Survey results and secondary data findings were shared with a focus group of community health leaders. This group prioritized leading health needs. The priorities from the focus groups, plus survey results and health indicator data were compiled. IU Health Arnett Hospital representatives used the Hanlon Method to identify the top needs.

The Hanlon Method seeks ratings from 0 to 10 on three criteria: size of the health problem based on the percentage of the population affected, seriousness or magnitude of the health problem, and

the effectiveness of potential interventions.[1] With the ratings compiled, analysts identify specific health problems that can feasibly be addressed by the community served. From that list, priority scores are calculated, where the seriousness of the problem is given the most weight. Ranks are assigned based on the priority scores.

3.4   Information Gaps

To the best of our knowledge, no information gaps have affected IU Health Arnett's ability to reach reasonable conclusions regarding community health needs. While IU Health Arnett has worked to capture quantitative information on a wide variety of health conditions from a wide array of sources, IU Health Arnett realizes that it is not possible to capture every health need in the community and there will be gaps in the data captured.

Because secondary data sources do have gaps, IU Health Arnett conducted a focus group with public health experts and community health leaders to attempt to close the information gap qualitatively. IU Health Arnett also conducted community surveys to gather input from general and underserved community members. However, it should be noted that there are limitations to these methods. If an organization from a specific group was not present during the focus group (such as seniors or injury prevention groups), then health needs among people from that group could be underrepresented in the focus group. Further, due to the community survey's distribution method and small sample size, survey results may not be generalizable to the entire community.

3.5   Collaborating Organizations

The IU Health system collaborated with other organizations and agencies in conducting this needs assessment for the IU Health Arnett community. These collaborating organizations are as follows:

Area IV Agency on Aging

Indiana University Bloomington

IU Fairbanks School of Public Health

IU Health Arnett

Indiana Youth Institute

Mental Health America of Tippecanoe County

North Central Health Services

Purdue Extension of Tippecanoe County

Salvation Army

Riggs Community Health Center

The Springs at Lafayette Health Campus

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[1] The Hanlon Method is one of the possible prioritization methods presented in material from the National Association of County and City Health Officials. For more information, please see http://www.naccho.org/topics/infrastructure/accreditation/upload/Prioritization-Summaries-and-Examples.pdf.

Tippecanoe County Board of Commissioners

United Way of Greater Lafayette

Tippecanoe County Health Department

Wabash Center

YMCA

YWCA

4   DEFINITION OF COMMUNITY ASSESSED

This section identifies the community assessed by IU Health Arnett. The community was defined as Tippecanoe County, the county where IU Health Arnett is located, with people in seven counties around Tippecanoe County also receiving some services, as shown in *Figure 1*. In 2014, of IU Health Arnett's inpatient discharges, approximately 59% originated from the PSA and 34% from the SSA.

Figure 1: Counties in IU Health Arnett Service Area
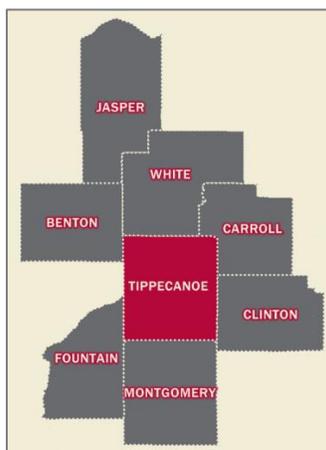
5   SECONDARY DATA ASSESSMENT

5.1   Demographics

IU Health Arnett Hospital is located in Tippecanoe County in northwest Indiana. Tippecanoe County includes ZIP codes within the towns of Battle Ground, Clarks Hill, Dayton, Lafayette, Romney, West Lafayette and West Point. Based on the most recent Census Bureau (2014) statistics, Tippecanoe County's population is 183,074 persons. Approximately 49% are female and 51% male. The total population for the PSA is 183,074 and the total for surrounding counties is 174,131, as illustrated in *Table 1* below. This yields a total population in the Community Service Area of 357,205.

Table 1: Service Area Population, 2014

Service Area	County	Population	Percent of Total
Primary	Tippecanoe	183,074	51.2%
	Subtotal	**183,074**	**51.2%**
Secondary	Clinton	32,776	9.2%
	White	24,453	6.8%
	Carroll	19,923	5.6%
	Benton	8,700	2.4%
	Fountain	16,658	4.7%
	Montgomery	38,146	10.7%
	Jasper	33,475	9.4%
	Subtotal	**174,131**	**48.7%**
Total Service Area		**357,205**	**100.0%**

Source: County Characteristics Datasets: Annual County Resident Population Estimates by Age, Sex, Race and Hispanic Origin: April 1, 2010 to July 1, 2014

Primary Service Area Demographics

In Tippecanoe County population estimates by race are 85.4% White, 8.04% Hispanic or Latino, 7.2% Asian, 4.9% Black, 0.3% American Indian or Alaska Native and 2.0% persons reporting two or more races.

Tippecanoe County has relatively moderate levels of educational attainment. Among residents ages 25 and up, 28.3% ended their formal education with a high school diploma or equivalent. Another 26.7% have some college, including those with an associate's degree and 36.7% earned a bachelor's degree or higher. About 8.5% ended their education before finishing high school.

5.2   Economic Indicators

The following topics were assessed to examine various economic indicators with implications for health: (i) Employment, (ii) Household Income and People in Poverty and (iii) Uninsured.

5.2.1   Employment

In 2010, the share of jobs in Tippecanoe County was highest within the areas of manufacturing, healthcare and social assistance, retail trade, accommodation and food services, administrative and support for waste management and remediation services, and professional, scientific and technical services. Tippecanoe County has a diverse group of major employers reported by the Indiana Department of Workforce Development, including: Purdue University of West Lafayette, Subaru-Indiana Automotive, Caterpillar Incorporated, Franciscan St. Elizabeth, Oerlikon Fairfield, Wabash National, Alcoa—Lafayette, State Farm Operations Center and Lafayette Venetian Blind Incorporated.

Tippecanoe County reported a slightly lower unemployment rate than most surrounding counties, the state of Indiana, and the national average. *Table 2* summarizes unemployment rates at December 2013 and December 2014.

Table 2: Unemployment Rates, December 2013 and December 2014

Service Area	County	Dec-13	Dec-14	% Change from 2013-2014
Primary	Tippecanoe	5.2%	4.6%	-0.6%
Secondary	Clinton	5.9%	4.9%	-1.0%
	White	6.0%	5.1%	-0.9%
	Carroll	5.7%	5.0%	-0.7%
	Benton	5.7%	5.2%	-0.5%
	Fountain	7.7%	6.6%	-1.1%
	Montgomery	5.9%	5.2%	-0.7%
	Jasper	7.1%	6.9%	-0.2%
Indiana		6.3%	5.7%	-0.6%
USA		6.5%	5.4%	-1.1%

Source: US Bureau of Labor Statistics, 2015.

5.2.2   Household Income and People in Poverty

Areas with higher poverty rates tend to have poorer access to healthcare, lower rates of preventive care, higher rates of preventable hospital admissions and poorer health outcomes in general. According to the US Census, in 2013, the national poverty rate was at 14.8%, down from 15.0% in 2012. In Indiana, 15.8% of the state population lived in poverty, a 0.3% increase from the 2012 poverty rate (15.5%).

For Tippecanoe County, a poverty rate of 19.6% was reported in 2013, lowering from 20.4% in 2012 (-0.8%). Comparatively for Indiana, Hamilton County had the lowest poverty rate at 5.5% and Monroe County had the highest poverty rate at 24.0%. *Table 3* below illustrates the poverty rates for the IU Health Arnett service area by year between 2011 and 2013.

Table 3: Percentage of People in Poverty, 2011-2013

Service Area	County	2011	2012	2013	% Change from 2012-2013
Primary	Tippecanoe	21.4%	20.4%	19.6%	-0.8%
Secondary	Clinton	16.2%	13.8%	14.4%%	0.6%
	White	11.9%	12.1%	12.4%	0.3%
	Carroll	11.6%	10.7%	10.9%	0.2%
	Benton	13.0%	11.3%	11.9%	0.6%
	Fountain	11.4%	12.3%	13.8%	1.5%
	Montgomery	14.8%	16.5%	12.5%	-4.0%
	Jasper	10.6%	10.2%	10.7%	0.5%
Indiana		15.8%	15.5%	15.8%	0.3%
USA		15.0%	15.0%	14.8%	-0.2%

Source: US Census Bureau, 2014

Income level is an additional economic factor that has also been associated with the health status of a population. Based on the US Census Bureau (2013), Tippecanoe County's per capita personal income was estimated to be $23,691 with a median household income of $44,246. Both of these are the state values: per capita income of $24,635 and median household income of $48,248. For the same year, the US per capita income of$28,155 was higher than in Indiana, and US median household income was $53,046, also above Indiana's median.

5.2.3   Insurance Coverage
National statistics on health insurance indicate that 10% of the United States population is uninsured. Of the US population that is insured, 49% are insured through an employer, 6% through individual providers, 19% through Medicaid, 13% through Medicare and 2% through other public providers.

In Indiana, it is estimated that 11% of the population are uninsured. Of Indiana residents who are insured, 17% are insured through Medicaid, 15% through Medicare, 51% through their employer, 5% through individual providers and 1% through other public providers.[2]   US Census information from 2013 indicates 17% of individuals under age 65 in Tippecanoe County were uninsured, slightly higher than the state estimate and above the comparable figure for the US (12% in 2013).

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2. Kaiser State Health Facts 2015, Kaiser Family Foundation. http://www.statehealthfacts.org.

5.3   County Level Health Status and Access Indicators

5.3.1   County Health Rankings
The Robert Wood Johnson Foundation, along with the University of Wisconsin Population Health Institute, created County Health Rankings to assess the relative health of county residents within each state. These assessments are based on measures of health outcomes, specifically length and quality of life indicators, as well as health factors that include indicators related to health behaviors, clinical care, economic status and the physical environment.

With 92 counties in Indiana, a county may be ranked from 1 to 92, where 1 represents the highest ranking and 92 represents the lowest. *Table 4* on the next page summarizes County Health Ranking assessments for Tippecanoe and White County in Indiana; rankings for counties were converted into quartiles to indicate how each county ranks compared with others in the state. White County is similar in some ways to Tippecanoe County demographically and is also part of the IU Arnett Health Community Service Area.

Table 4: Relative Health Status Indicators for Tippecanoe County and White County

Indicator	Tippecanoe	White	Average Ranking for Service Area
Health Outcomes	18	36	27
Length of Life	16	36	26
Quality of Life	26	33	29.5
Health Factors	11	35	23
Health Behaviors	5	31	18
Clinical Care	18	71	44.5
Social and Economic Factors	36	33	34.5
Physical Environment	50	25	37.5

Source: County Health Rankings, 2015.

Tippecanoe County ranked 18th in the state for overall health outcomes (length and quality of life). In preventable health factors, Tippecanoe County ranked 11th in terms of overall health-related factors (determinants of health). However, Tippecanoe County ranked 50th for physical environment and 36th for social and economic factors. Individual scores for Tippecanoe County and neighboring White County are displayed in *Table 5*.

Table 5: Detail for Relative Health Status Indicators

Indicator	Tippecanoe	White	Average Ranking for Service Area
Health Outcomes	18	36	27
Length of Life	16	36	26
Premature death per 100,000	6380	7493	6,936.5
Quality of Life	26	33	29.5
Poor or fair health	16%	14%	15%
Poor physical health days reported in the past 30 days	3.2	3.7	3.45
Poor mental health days reported in the past 30 days	3.9	3.3	3.6
Low birth weight (<2500 grams)	7%	7.7%	7.35%
Health Factors	11	35	23
Health Behaviors	5	31	18
Adult smoking	15%	22%	18.5%
Adult obesity (BMI of 30 or more)	26%	32%	29%
Food environment index 0 (worst) 10 (best)	6.4	8	7.2
Physical inactivity age 20 and over	25%	27%	26%
Access to exercise opportunities	73%	37%	55%
Excessive drinking	17%	11%	14%

Table 5, Continued

Indicator	Tippecanoe	White	Average Ranking for Service Area
Alcohol-impaired driving deaths	32%	14%	23%
Sexually transmitted infections (chlamydia) per 100,000	497	344	420.5
Teen female births ages 15-19 per 1,000	25	47	36
Clinical Care	**18**	**71**	**44.5**
Uninsured (under the age of 65)	17%	18%	17.5%
Primary care physicians ratio of population to primary care physicians	1479 to 1	2221 to 1	1850 to 1
Dentists ratio of population to dentists	2310 to 1	3058 to 1	2684 to 1
Mental health providers ratio of population to mental health providers	748 to 1	2224 to 1	1486 to 1
Preventable hospital stays per 1,000	65	86	75.5
Diabetic monitoring of Medicare enrollees ages 65-75 that receive HbA1c	85%	87%	86%
Mammography screening ages 67-69 of female Medicare enrollees	64.8%	59.6%	62.2%
Social and Economic Factors	**36**	**33**	**34.5**
High school graduation	86%	88%	87%
Some college ages 25-44	70.6%	57%	63.8%
Unemployment population ages 16 and older	6.80%	7.5%	7.2%
Children in poverty (under the age of 18)	19%	19%	19%
Income inequality ratio at the 80th percentile to income at the 20th percentile	5.3	3.6	4.45
Children in single-parent households	30%	28%	29%
Social associations per 10,000	10.1	14.3	12.2
Violent crime per 100,000	274	129	201.5
Injury deaths per 100,000	44	70	57
Physical Environment	**50**	**25**	**37.5**
Air pollution - particulate matter in micrograms per cubic meter (PM2.5)	13.5	13.4	13.45
Drinking water violations during the past year	0%	0%	0%
Severe housing problems with at least 1 of 4 problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	20%	12%	16%
Driving alone to work	76%	83%	79.5%
Long commute - driving alone for more than 30 minutes	13%	32%	22.5%

Source: County Health Rankings, 2015

Tippecanoe County ranked 5th in health behaviors, compared with White County, which ranked 31st. The two counties share some demographic characteristics such as income and education.

Not shown on the table are changes since 2014. Specific indicators that improved between 2014 and 2015 included mental health providers, who fell from an 888: 1 ratio to a 748: 1 ratio. In addition, alcohol-impaired driving deaths fell from 36% of all driving deaths in 2014 to 32% in 2015. Preventable hospital stays decreased from 68 to 65 in 2015.

Even as some areas improved, others worsened in Tippecanoe County. The number of violent crimes increased from 260 reported violent crimes in 2014 to 274 in 2015 and the number of sexually transmitted infections increased from 429 in 2014 to 497 new diagnoses in 2015.

5.3.2 Community Health Status Indicators

The Community Health Status Indicators (CHSI) Project of the US Department of Health and Human Services compares many health status and access indicators to both the median US rates and to rates in "peer counties" across the US. Counties are considered "peers" if they share common characteristics such as population size, poverty rate, average age and population density.

Tippecanoe County has 43 designated peer counties in 25 states, including LaPorte County in Indiana, McLean and Sangamon counties in Illinois, and Greene, Lake, Licking, Portage, Warren and Wood counties in Ohio. *Table 6* below demonstrates the analysis of CHSI health status indicators with highlighting in cells for topics on which Tippecanoe County compares favorably or unfavorable both to the US as a whole and to its peer counties. Indicators are found to be worse for a county when its rates are higher than those of the entire nation and designated peer counties. Indicators are considered better when the rates for the county are lower than those of the US or peer counties.

Table 6: Favorable and Unfavorable Health Status Indicators for Tippecanoe and White Counties

Key

Favorable: Lower rate than comparison counties	
Moderate: Rate similar to that in comparison counties	
Unfavorable: Higher rate than in comparison counties	

Indicator	Tippecanoe	White
Mortality		
Alzheimer's Disease		
Diabetes		
Cancer		
Chronic Kidney Disease		
Chronic Lower Respiratory Disease		
Coronary Heart Disease		
Female Life Expectancy		
Male Life Expectancy		
Motor Vehicle		
Stroke		
Unintentional Injury (including motor vehicle)		

Table 6 - Continued

| Indicator	Tippecanoe	White
Morbidity		
Adult Diabetes	🟨	🟨
Adult Obesity	🟨	🟨
Adult Overall Health Status	🟥	🟨
Alzheimer's Disease/Dementia	🟥	🟥
Cancer	🟨	🟨
Gonorrhea	🟨	🟥
HIV	🟨	🟨
Older Adult Asthma	🟥	🟥
Older Adult Depression	🟥	🟩
Preterm Births	🟨	🟥
Syphilis	🟨	🟩
Health Care Access and Quality		
Cost Barrier to Care	🟨	🟨
Older Adult Preventable Hospitalization	🟥	🟥
Primary Care Provider Access	🟥	🟨
Uninsured	🟨	🟥
Health Behaviors		
Adult Binge Drinking	🟨	🟩
Adult Female Routine Pap Tests	🟨	🟨
Adult Physical Inactivity	🟥	🟨
Adult Smoking	🟨	🟨
Teen Births	🟥	🟥
Social Factors		
Children in Single-Parent Households	🟨	🟨
High Housing Costs	🟨	🟩
Inadequate Social Support	🟨	🟥
On-Time High School Graduation	🟨	🟨
Poverty	🟨	🟨
Unemployment	🟥	🟨
Violent Crime	🟨	🟨
Physical Environment		
Access to Parks	🟥	🟨
Annual Average PM2.5 Concentration	🟨	🟨
Housing Stress	🟨	🟨
Limited Access to Healthy Food	🟨	🟨
Living Near Highways	🟩	🟥

Source: Community Health Status Indicators Project, Department of Health and Human Services, 2015.

Several indicators related to teen births and senior health were unfavorable for Tippecanoe County. Tippecanoe County compared unfavorably for benchmarks for two chronic health conditions: chronic lower respiratory disease and stroke. However, indicators for diabetes were favorable (where rates and percentages for the indicators in Tippecanoe County are lower than those for the entire nation or for peer counties). Other favorable indicators for Tippecanoe County include percentage of the population living near highways.

5.4   ZIP Code-Level Health Access Indicators

The Community Need Index (CNI) was created in 2005 by Dignity Health (formerly Catholic Healthcare West) in collaboration with Thomson Reuters. CNI identifies the severity of health disparities related to housing, English as a second language (ESL), and education level for ZIP codes in the United States. In addition to health indicators, CNI includes economic and structural indicators in its assessment of the overall health of a community. Scores are assigned on a scale of one to five, with one indicating the least amount of community need and five indicating the most (see *Figure 2*). The CNI assessments illustrate correlations between high need/high scores and high hospital utilization in specific ZIP codes.

### Figure 2: Community Need Index Rating Scale
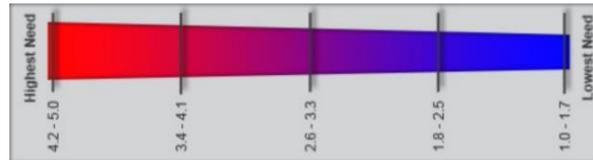
Table 7: CNI Scores by County, 2013

County	City	ZIP Code	Rank
Tippecanoe	Lafayette	47901	4.6
		47904	4.6
		47909	3.6
		47905	4.0
	Dayton	47941	2.8
	West Lafayette	47906	3.6
		47907	3.6
	Clarks Hill	47930	2.4
	Battle Ground	47920	2.0
	Romney	47981	2.0
	West Point	47992	2.0
White	Monon	47959	4.0
	Monticello	47960	2.4
	Reynolds	47980	2.0
	Wolcott	47995	2.2
	Idaville	47950	2.2
	Chalmers	47929	1.8
	Brookston	47923	1.8
	Burnettsville	47926	2.2

Source: Community Need Index, 2013.

Figure 3: CNI Color-Code Scores for ZIP Codes in Tippecanoe County
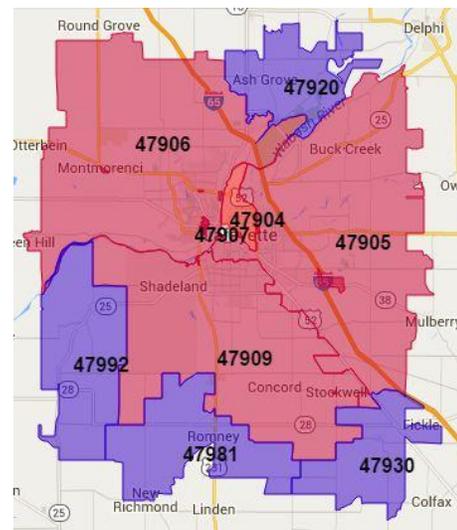
Within Tippecanoe County, CNI scores indicate needs are relatively high in ZIP codes 47901, 47904 and 47905 (all in Lafayette). Community needs are lowest in ZIP codes 47981 (Romney), 47930 (Clarks Hill) and 47992 (West Point).

5.5 Medically Underserved Areas and Populations

The U.S. Health Resources and Service Administration (HRSA) has calculated an Index of Medical Underservice (IMU) score for communities across the US. The IMU score calculation includes the ratio of primary medical care physicians per 1,000 persons, the infant mortality rate, the percentage of the population with incomes below the poverty level and the percentage of the population older than 64. IMU scores range from zero to 100, where 100 represents the least underserved and zero represents the most underserved.

Any area or population receiving an IMU score of 62.0 or below qualifies for Medically Underserved Area (MUA) or Medically Underserved Population (MUP) designation. Federally Qualified Health Centers (FQHCs) may be established to serve MUAs and MUPs. Populations receiving an MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. When a population group does not qualify for MUP status based on the IMU score, Public Law 99-280 allows MUP designation if "unusual local conditions which are a barrier to access to or the availability of personal health services exist and are documented, and if such a designation is recommended by the chief executive officer and local officials of the State where the requested population resides."[3] *Table 8* below illustrates the areas that have been designated as MUAs or MUPs in the IU Health Arnett Hospital community.

Table 8: MUAs and MUPs in the IU Health Arnett Hospital Community

Key
	County Does not contain an MUP or MUA designation

Service Area	County	Medically Underserved Areas		Medically Underserved Populations	
		IMU Score	Detail	IMU Score	Detail
Primary	Tippecanoe	47.0	Tippecanoe Service Area		
Secondary	Clinton	61.9	Ross Service Area (Ross Township)		
		59.4	Warren Service Area (Warren Township)		
	White	N/A	Honey Creek Service Area (Honey Creek Township)		
		49.3	Liberty/Lincoln Service Area (Liberty and Lincoln Townships)		
	Carroll			66.8	Entire County*
	Benton				
	Fountain	60.6	Entire County		
	Montgomery			58.8	Low-income population, Crawfordsville Service Area- 3 Census Tracts (CTs)
	Jasper				

Source: Health Resources and Services Administration, US Department of Health and Human Services, 2015.

* Indicates a Government MUP, which is designation made at the request of a State Governor based on unusual local conditions and barriers to accessing personal health services

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3. Guidelines for Medically Underserved Area and Population Designation. US Department of Health and Human Services, Health Resources and Services Administration. http://bhpr.hrsa.gov/shortage/.

Tippecanoe County is recognized as a Medically Underserved Area with an IMU score of 47.0. Counties in the IU Health Arnett community service area containing designated MUPs included Carroll and Montgomery.

5.6   Health Professional Shortage Areas

An area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary care, dental care, or mental healthcare professionals is found to be present. HPSAs can be: "(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility." *Table 9* below lists the HPSAs in the IU Health Arnett community.

Table 9: HPSAs in the IU Health Arnett Hospital Community

Key

	County does not contain HPSA designation for category

Service Area	County	Primary Care HPSA	Dental Care HPSA	Mental Health HPSA
Primary	Tippecanoe	Riggs Community Health Center	Low-income population, entire county	Region 30 Mental health, entire county
			Riggs Community Health Center	Riggs Community Health Center
Secondary	Clinton			
	White	Monticello Medical Center LLC, a Rural Health Clinic. Purdue Family Health Clinic, Monon, (also called North Central Nursing Clinic), a Federally Qualified Health Center		Region 30 Mental Health, entire county. 1 Federally Qualified Health Center-Purdue Family Health Clinic-Monon (also called North Central Nursing Clinic).
	Carroll	Entire county. Purdue Family Health Clinic, Delphi (also called North Central Nursing Clinic)		Region 30 Mental Health, entire county. Purdue Family Health Clinic, Delphi (also called North Central Nursing Clinic)
	Benton	Low- income population, entire county		Region 30 Mental Health, entire county
	Fountain	1 rural health clinic: St. Vincent South Clinic		Region 30 Mental Health, entire county
	Montgomery	Low- income population, Crawfordsville Service Area - 3 Census Tracts (CTs)		Region 30 Mental Health, entire county
	Jasper	1 rural health clinic-Wheatfield Health Center	1 rural health clinic - Wheatfield Health Center	Region 30 Mental Health, entire county. 1 rural health clinic-Wheatfield Health Center

Source: Health Resources and Services Administration, US Department of Health and Human Services, 2015.

5.7 Description of Other Facilities and Resources Within the Community

The IU Health Arnett community contains a variety of resources that are available to meet the health needs identified through this CHNA. These resources include facilities designated as HPSAs, hospitals, FQHCs, public health departments and other organizations. *Table 10* below lists the other facilities and resources in the IU Health Arnett community.

Table 10: Resources in Tippecanoe and White Counties

Service Area	County	Public Health Department
Primary	Tippecanoe	Tippecanoe County Health Dept. (Lafayette, Indiana)
Secondary	White	White County Health Dept. (Monticello, Indian
	Benton	Benton County Health Dept. (Fowler, Indiana)
	Carroll	Carroll County Health Dept. (Delphi, Indiana)
	Clinton	Clinton County Health Dept. (Frankfort, Indiana)
	Fountain	Fountain & Warren County Health Dept. (Attica, Indiana)
	Jasper	Jasper County Health Dept. (Rensselaer, Indiana)
	Montgomery	Montgomery County Health Dept. (Crawfordsville, Indiana)
Service Area	County	FQHC
Primary	Tippecanoe	Riggs Community Health Center (Lafayette, Indiana)
Secondary	White	Monon Health Center (Monon, Indiana)
	Benton	No FQHC identified
	Carroll	Family Health Clinic of Carroll County/Purdue Family Health Clinic (Delphi, Indiana)
	Clinton	Clinton County WIC Program (Frankfort, Indiana)
	Fountain	No FQHC identified
	Jasper	Wheatfield Health Center (Wheatfield, Indiana)
	Montgomery	Crawfordsville Clinic (Crawfordsville, IN
Service Area	County	Hospital
Primary	Tippecanoe	Franciscan St. Elizabeth Health East Hospital
		IU Health Arnett Hospital
		Sycamore Springs (Lafayette, Indiana) – addictions recovery and behavioral health
		Lafayette Regional Rehabilitation (Layette, Indiana) – medical rehabilitation
		River Bend Hospital (West Lafayette, IN)
Secondary	White	IU Health White Memorial Hospital
	Benton	No hospital
	Carroll	No hospital
	Clinton	St. Vincent Frankfort Hospital (Frankfort, Indiana)
	Fountain	No hospital
	Jasper	Franciscan Healthcare (Rensselaer, Indiana)
	Montgomery	Franciscan St. Elizabeth Health (Crawfordsville, Indiana)

Sources: Health Resources and Services Administration, US Department of Health and Human Service; Indiana State Department of Health, Health Care Regulatory Service. Indiana Primary Health Care Association. All 2015.

6   PRIMARY DATA ASSESSMENT

IU Health Arnett's approach to gathering qualitative data for its CHNA consisted of a multiple components to identify and verify community health needs for the IU Health Arnett service area. This included the following:

1. Hosting a one-and-a-half to two-hour community conversation focus group with public health officials and community leaders to discuss the healthcare needs of the service area and what role IU Health Arnett could play in addressing the identified needs.
2. Surveying the community at large through the hospital's website and in paper surveys, with special attention paid to gathering input from low income, uninsured or minority groups.

6.1   Focus Group Findings

6.1.1   Identification of Persons Providing Input

Local leaders with a stake in the community's health were invited to attend a focus group session held at IU Health Arnett Hospital. Attendees who participated in the focus group are listed in below.

Table 11: Focus Group Participants

Title	Organization	Public Health Professional Yes	Public Health Professional No
Intern	IU Bloomington	✔	
Final Project Student	IU Fairbanks School of Public Health	✔	
MO / Health Officer	Tippecanoe Co. Health Dept.	✔	
Deputy Director of Aging Services	Area IV Agency on Aging		✔
Director	Mental Health America		✔
Director of Enrichment Services	Wabash Center		✔
HHS Educator	Purdue Extension Tippecanoe Co		✔
Patient Navigator	YWCA Women's Cancer Program		✔
CEO	YMCA		✔
Director of Marketing & Admissions	The Springs at Lafayette Health Campus		✔
Finance & Community Impact Director	United Way		✔
Epidemiologist	Tippecanoe Co. Health Dept.	✔	
Tippecanoe Co. Commissioner	Tippecanoe Co. Board of Commissioners		✔
CEO / President	Riggs Community Health Center	✔	
CEO / President	North Central Health Services		✔
Corps Officer, Pastor	Salvation Army		✔
Corps Officer, Pastor	Salvation Army		✔
IUHealth Plan – Insurance	IU Health Arnett		✔
IU Marketing Dept	IU Health Arnett		✔
IU Marketing Dept	IU Health Arnett		✔
Sr Public Relations Coordinator	IU Health Arnett		✔
IU Marketing Dept	IU Health Arnett		✔

6.1.2 Prioritization Process and Criteria

To obtain a more complete picture of the factors that play into the health of people living in Tippecanoe County, input from local health leaders was gathered through two separate focus group sessions. The session lasted two hours and was held live at IU Health Arnett Hospital. IU Health Arnett facilitators mailed letters and made follow-up telephone calls inviting public health officials and community leaders to attend the focus group discussion, paying special attention to include organizations that represent the interest of low-income, minority and uninsured individuals. The goal of soliciting these leaders' feedback was to gather insights into the quantitative data that may not be easily identified from the secondary statistical data alone.

Upon arrival at the focus group, participants were asked to identify and prioritize five health needs for the IU Health Arnett community that they believed to be most important. These responses were collected and aggregated into a comprehensive list of identified needs to be further discussed later in the session and ranked for severity of need within the community. IU Health Arnett facilitators then provided participants with a presentation featuring the mission of IU Health, current outreach priorities and local health data which included demographics, insurance information, poverty rates, county health rankings, causes of death, physical activity, chronic conditions, preventive behaviors and a community needs index.

Upon completion of the data presentation, IU Health facilitated a discussion on the comprehensive list of identified needs collected earlier in the session. The objective of this method was to inspire candid discussion. After the discussion, each participant again prioritized five health needs. The votes on the five prioritized health needs were tallied and final input from the group was encouraged during this process in order to validate the previously identified needs. Following additional discussion, participants were also asked to address what they thought the role of IU Health Arnett could be in meeting the local health needs.

6.1.3 Description of Prioritized Needs

The focus group identified the following five health needs as priorities for IU Health Arnett, after discussion and the second vote on priorities:

1. Behavioral Health – Mental Health.
2. Access to Health Care.
3. Substance Abuse.
4. Obesity.
5. Chronic Disease.

These prioritized needs are discussed in more detail below.

1. Behavioral Health - Mental Health was identified as a leading need because there are few mental healthcare providers (i.e., psychiatrists) in the community and there are limited inpatient facilities. The lack of inpatient facilities is especially burdensome because residents, including children, needing inpatient mental healthcare are forced towards Northern Indiana or Southern Indiana, making guest visits, costs and continuous support difficult. The group shared the need for a facility that would treat both mental health and physical health conditions in the community concurrently. Exacerbating the problem is the fact that primary care physicians are not usually comfortable addressing even mild to moderate cases of mental health concerns. Community leaders shared the need to launch an awareness and education campaign to stop the stigma around mental healthcare.

2. Access to healthcare was a prominent concern shared by leaders. An important policy issue emerged as leaders revealed that people have insurance, yet it does not cover all services or they can only get care in locations that are out-of-network. Because they are insured, they are not eligible for grant-funded care. This poses additional problems when specialty care is needed, such as for chronic hepatitis, GI and cardiology. Many community leaders shared how vital Riggs Community Health Center is to the Tippecanoe County community, as it offers the most resources for the underinsured or uninsured. School-based clinics were brought up as a potential way to shore up the gap in access to healthcare. Murdock Elementary was shared as a successful school-based clinic model, though its funding has since expired. Access to healthcare is especially limited in the Northwest region of the county, as it tends to be completely isolated from healthcare.

3. Substance abuse is closely linked with mental health, so community leaders shared the same lack of resources to treat substance abuse as they do mental health in their community. This is especially the case for resources to treat substance abuse and its co-occurrence with mental health. Another need is for specialty sites dealing with controlled substances, whether for pain management clinics, detox facilities, treatment centers and recovery centers. The closest resource currently for uninsured or underinsured clients is in Indianapolis. Sycamore Springs has some of those services but is expensive. Participants also shared a need to have a free source of medication disposal.

4. Obesity and lack of physical activity were strong concerns for the Tippecanoe County officials. General education around obesity and physical education is needed not only for the children, but for parents and older adults. United Way's Born Learning Program, with family engagement and education for parents about the nutrition and sleep needs of children ages 0 to 5 was mentioned. Many individuals recognized that even though more resources are needed, the county is improving in promoting physical activity, especially in promoting the community's trails and other newly launched recreational initiatives. The parks, for example, have been implementing walking trails, bike trails and park trails, while Purdue Extension is working on youth development and nutrition programs. The Food Finders Food Bank also offers a mobile food program to help participants gain access to healthier foods, such as produce. Participants noted that offering chicken at food distribution site improves the number of households served.

5. Chronic Disease was the fifth greatest need identified and encompasses a wide array of issues including tobacco cessation, cancer and diabetes. Focus group participants believe that many Tippecanoe County residents are in a lower income bracket and have difficulty managing chronic diseases. Diabetes was discussed in a general manner; it is a concern in terms of education, programs and lack of endocrinologists—dieticians often fill the role that endocrinologists would usually play.

Overall, Tippecanoe County has a shortage of resources and specialists to help people living with chronic disease/conditions. County residents do not receive the education, prevention and care they need. The focus group participants discussed a need to improve the availability of diabetes (nutrition) education and chronic disease management education.

6.2 Community Survey Findings

IU Health also solicited responses from the public regarding the health of the IU Health Arnett community through an online survey as well as paper versions of the survey. The survey consisted of approximately 20 multiple choice and open-ended questions that assessed community members' feedback regarding healthcare issues and barriers to access.

A link was made available on the hospital's Web site via an electronic survey tool from December 2014 through June 2015. A paper version was distributed to local community centers, health clinics, community health fairs and events, as well as within some hospital patient waiting areas. Additionally, surveys or survey links were e-mailed, direct-mailed or sent via newsletter. In addition to disseminating directly to the general public of the community, the survey was also sent via e-mail to participants in the needs assessment focus groups to provide an opportunity for these community leaders to pass them on to their local community members.

Respondent Demographics

326 people from the IU Health Arnett community participated in the survey. The majority of respondents represented by the survey were White/Caucasian (95%). About half of the respondents (51%) were older adults, defined as ages 45 to 64. The young adult age group, defined as ages 25 to 44, was significantly represented as well within Tippecanoe County (37%).

314 of the 326 respondents reported their average household income. Of the 314 people, 22% had an average household income within $25,000 - $49,999. About 20% earned $50,000 - $74,999 and 51% earned $75,000 or more. Only 6% of the respondents reported an average household income of below $24,999.

Survey respondents were asked to report how they pay for health needs. Of the 322 respondents who reported, the majority had employer provided insurance (61%). Private insurance was the second most reported payment (25%). A portion of the respondents (7%) used Medicare to cover health needs.

Given the reported demographics above, care should be taken with interpreting the survey results. The reported ages and ethnicities of the survey sample were disproportionate to Tippecanoe County's census demographics. The reported ethnicity of White/Caucasian as well as young adults (ages 25 to 44) and older adults (ages 45 to 64) were overrepresented.

6.2.1 Greatest Health Needs and Social Issues

Survey participants were asked to select the top five health needs in their community from a list of 12 options. By frequency of selected answer choices, Tippecanoe County considered the top five health needs to be:
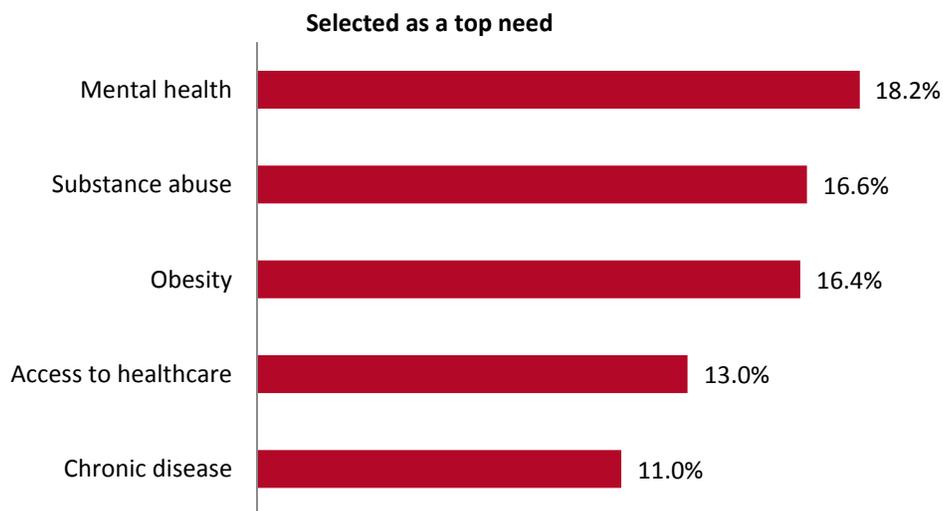
1. Mental health (18.2%)
2. Substance abuse (16.6)
3. Obesity (16.4%)
4. Access to healthcare (13.0%)
5. Chronic disease (11.0%)

Respondents were also asked to select the top three social needs in their community. By frequency of selected answer choices, Tippecanoe County considered the top three social needs to be:

1. Health (19.9%)
2. Hunger (14.6%)
3. Public safety (14.1%)

The top five health needs (Question 3) and top three social needs (Question 2) results are shown in *Figure 4* and *Figure 5*.

Figure 4: Health Needs Identified by Survey Participants

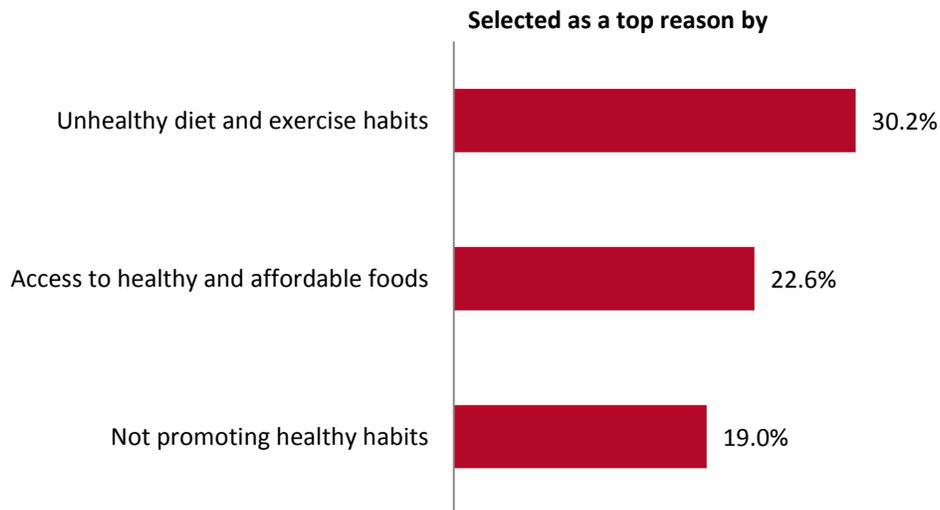**Selected as a top need**

Category	%
Mental health	18.2%
Substance abuse	16.6%
Obesity	16.4%
Access to healthcare	13.0%
Chronic disease	11.0%

Figure 5: Social Needs Identified by Survey Participants

Selected as a top need by

Need	Percentage
Health	19.9%
Hunger	14.6%
Public safety	14.1%
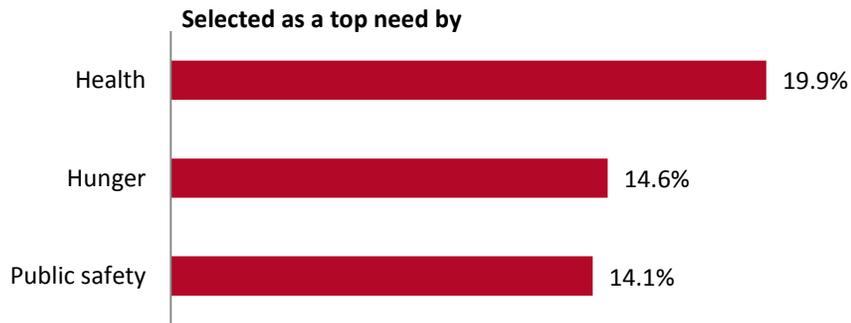
6.2.2   Perceptions of Health Issues

The survey included several questions about obesity and mental health issues within respondents' communities. When asked to select the top three reasons why obesity is an issue in their community (Question 4), the responses were as shown in *Figure 6*.
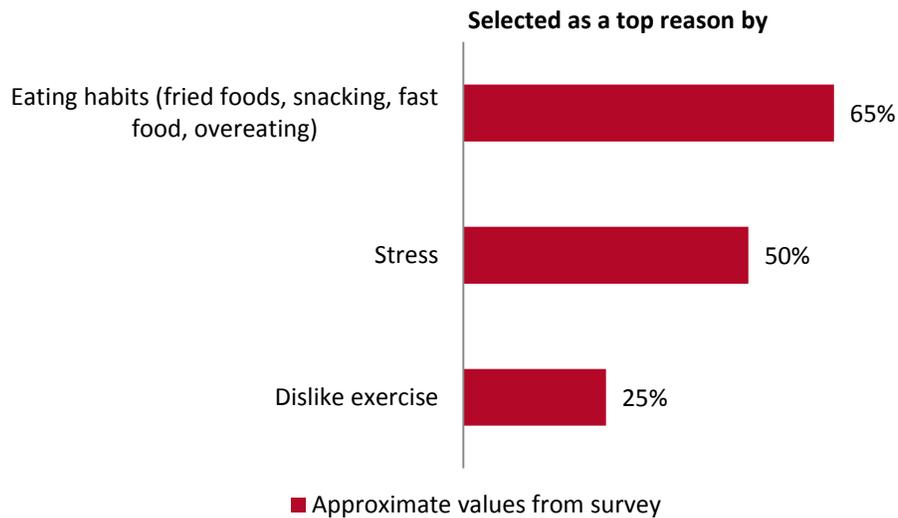
Figure 6: Reasons for Obesity in Community

Selected as a top reason by

Reason	Percentage
Unhealthy diet and exercise habits	30.2%
Access to healthy and affordable foods	22.6%
Not promoting healthy habits	19.0%

Respondents were also asked to select what kept them from their healthy weight (Question 9), choosing from a list of 8 options. About 71% thought their eating habits (fried foods, unhealthy snacking, fast food, overeating) kept them from their healthy weight. Almost 50% of respondents felt stress impacted their healthy weight, followed by about 29% not liking to exercise. Results are summarized   in
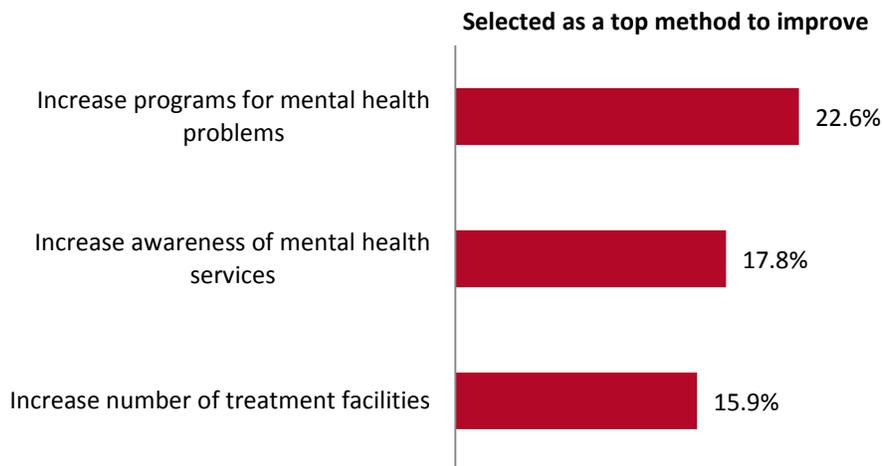
Figure 7.

Figure 7: Survey Responses About Weight

Selected as a top reason by

Eating habits (fried foods, snacking, fast food, overeating)	65%
Stress	50%
Dislike exercise	25%

■ Approximate values from survey

When asked to select the top three ways to improve mental health in their community (Question 5), respondents most often selected (**1**) increase programs for mental health problems; (**2**) increase awareness of mental health services; and (**3**) increase substance abuse programs and resources, as shown in *Figure 8*.

**Figure 8: Methods Identified to Improve Mental health in the Community**

Selected as a top method to improve

Increase programs for mental health problems	22.6%
Increase awareness of mental health services	17.8%
Increase number of treatment facilities	15.9%

6.2.3 Health Education and Access

A number of questions about health education and access to healthcare were asked in the survey. Question 10 asked participants to select all health topic doctors have discussed with them. About half of the respondents selected both diet or nutrition and exercise as health topics doctors have discussed. About one-third of the respondents thought the question did not apply.

Figure 9 below summarizes survey responses about access to care. Nearly half said there were no barriers. About one-third identified co-pay costs as a barrier to care and three in 10 said limited hours of service as provider offices present a barrier to care.

Figure 9: Most Frequent Response about Barriers to Access to Healthcare

No problems accessing care — 49%

Co-pay cost — 32%

Limited hours at provider office — 29%
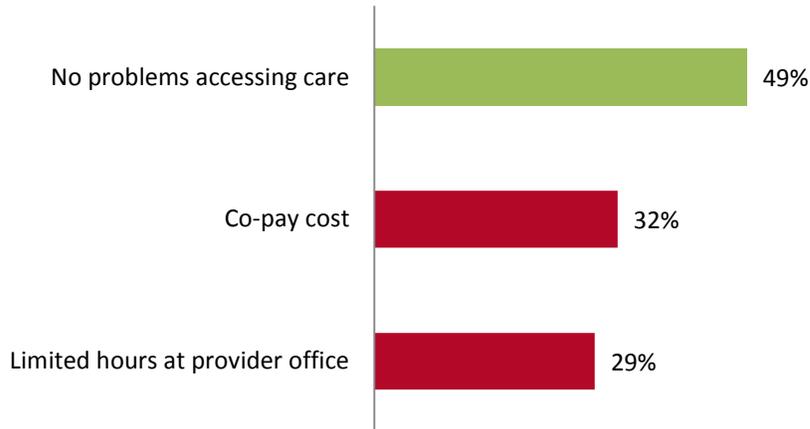
7   IU HEALTH ARNETT ACTIVITIES THAT ADDRESS PRIORITY NEEDS

IU Health Arnett takes seriously its commitment to serving the community. Access to care, nutrition and active living, access to mental health care and chronic disease management are needs identified by assessment and community survey results as priority areas. Some programs in these areas exist.

To promote access to care, our physicians and other care providers volunteer at Riggs Community Health Center and provide low-cost or no-cost sports physicals for area students. IU Health Arnett has new outreach efforts in partnership with Goodwill Industries of Central Indiana. Nursing Family Partnership will provide home-visitation for first-time mothers and babies. Our work with a Certified Patient Centered Medical home model promotes access to care.

In addition, IU Health Arnett has patient financial assistance programs for medical care and pharmacy costs. We also organize regular Blood Pressure & Cholesterol screenings. The hospital provides Plavix at discharge for patients hospitalized for stroke or heart attack. This helps prevent readmission, as the medication prevents blood clots.

A regular walking program provides mental health and weight management benefits for participants. School-based and community education opportunities help inform youth and adults about a healthy diet and exercise. These include Strong Schools, an on-going partnership with Meals on Wheels and nutrition programs in public settings such as farmer's markets, fairs, grocery stores and elsewhere. We also offer screenings for Body Mass Index (BMI) and blood pressure, to help individuals identify priorities in their own health care. IU Health Arnett also hosts health and safety fairs, as well as diabetes education classes to aid in obesity prevention and treatment.

IU Health Arnett is part of a continuum of care with Mental Health America Lafayette and Sycamore Springs for mental health needs in the area.

8 CONCLUSION

This study of Tippecanoe County assessed priority community health needs using qualitative data from numerous sources and survey responses from Tippecanoe County, as well as information derived from a focus group. The focus group included the CEO of Riggs Community Health Center, as well as members of IU Health Arnett, the Tippecanoe County Health Department and Mental Health America. Representatives from community groups such as the Salvation Army, North Central Health Services and the Wabash Center were also present.

To set priorities after receiving and compiling qualitative and quantitative data, IU Health Arnett used the Hanlon Method. The top identified needs after utilizing this process are:

- Access to Healthcare.
- Nutrition and Active Living.
- Behavioral Health.
- Chronic Disease Management.

IU Health Arnett Hospital has services that address some of these needs, including free or low cost sports physicals for students, financial assistance for medical care and pharmacy costs and several obesity prevention programs. Other sites in the county, including Riggs Community Health Center also address some of the identified priorities. Additional services will be developed as appropriate in response to this assessment.