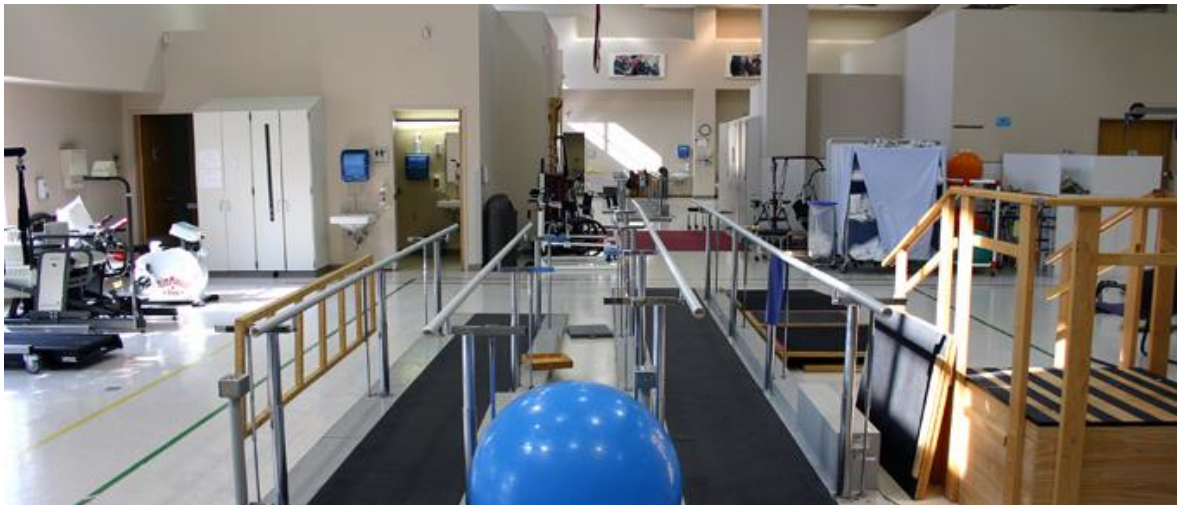


# Community Health Needs Assessment

*Prepared for*  
REHABILITATION HOSPITAL OF INDIANA

*By*  
VERITÉ HEALTHCARE CONSULTING, LLC



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<https://www.rhin.com/category/in-the-community>

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### EXECUTIVE SUMMARY

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#### Introduction

This Community Health Needs Assessment (CHNA) was conducted by the Rehabilitation Hospital of Indiana (RHI or the hospital) to identify significant community health needs and to inform development of an implementation strategy that addresses them.

RHI is an acute care rehabilitation hospital that provides inpatient and outpatient rehabilitation services. RHI, located in Indianapolis, specializes in brain injury, spinal cord injury, stroke, and comprehensive medical rehabilitation for injuries resulting in loss of function. RHI has 91 licensed beds and is a community collaboration between Indiana University Health (IU Health) and St. Vincent Health. For more information about RHI, see <https://www.RHIN.com/>.

RHI is dedicated to the community it serves. The hospital conducts a CHNA every three years to understand current community health needs and to inform strategies designed to improve community health. The CHNAs are conducted using widely accepted methodologies to identify the significant needs of the community served by the hospital. The assessments also are conducted to comply with federal laws and regulatory requirements that apply to tax-exempt hospitals.

RHI invites community members to review the Community Health Needs Assessments and provide comments to [info@rhin.com](mailto:info@rhin.com). The hospital's implementation strategy is scheduled to be published by May 15, 2019.

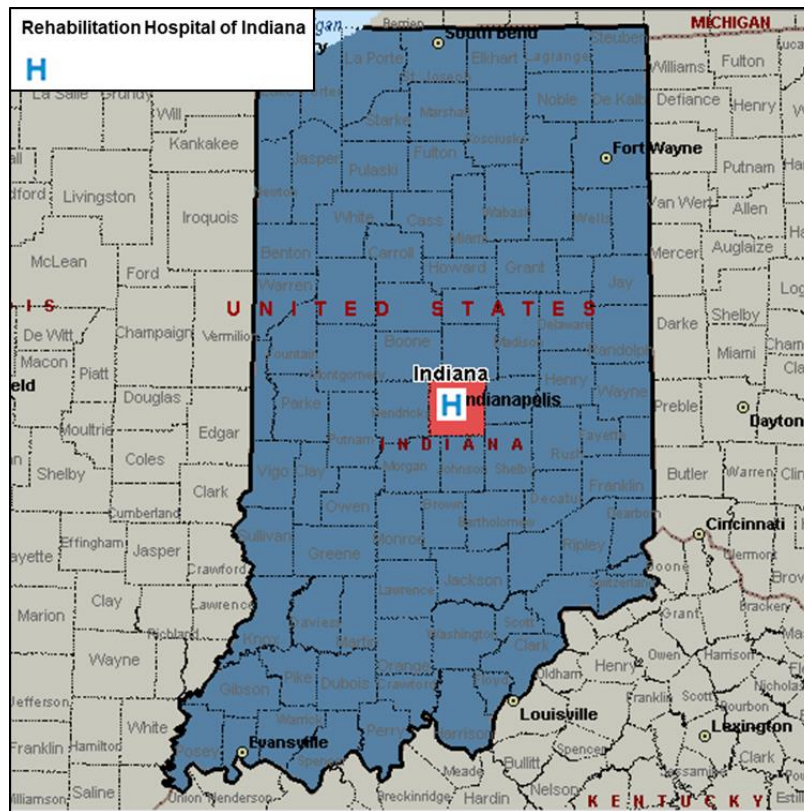
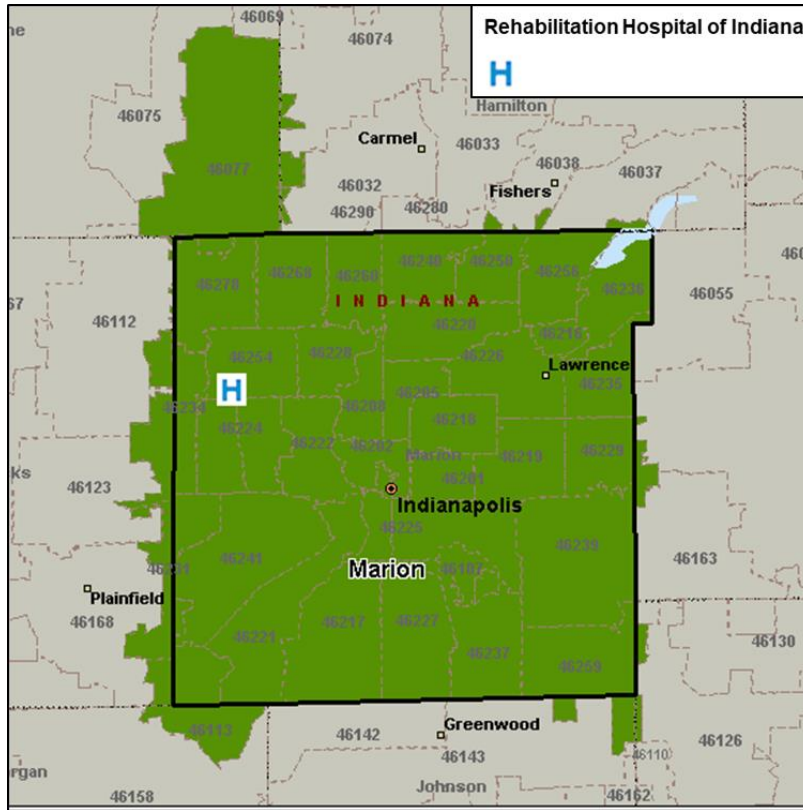
#### Community Definition

RHI provides a range of services for patients from central Indiana and across the State of Indiana. For purposes of this CHNA, RHI's "local community" is defined as Marion County, Indiana. Marion County accounted for approximately 47 percent of the hospital's inpatient cases in 2017. The total population of the county in 2015 was 938,058. RHI also serves the State of Indiana as a whole. Accordingly, this CHNA also considers relevant community health needs across the entire state. The total population of the state in 2015 was 6,612,768.

As permitted by federal regulations, this CHNA also focuses on community health issues relevant to rehabilitation services.

The following maps portray these communities. For the local community, the map shows county and ZIP code boundaries. Specific ZIP codes are included in analyses if any portion of the ZIP codes overlaps with Marion County.

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Source: Microsoft MapPoint and RHI, 2018

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### Significant Community Health Needs

Identifying *significant* community health needs is an important element of CHNAs. Several data sources were assessed to identify those needs, including:

- Secondary data<sup>1</sup> including demographics, health status, and access to care indicators,
- Findings from other community health assessments of areas served by the hospital and reports published by organizations like the Indiana State Department of Health that include information on injuries, strokes, and other issues that contribute to the need for rehabilitation services,
- Input obtained from individuals who participated in one or more community meetings,
- Input obtained from one or more key stakeholders who were interviewed,
- Input obtained from RHI staff who participated in a focus group meeting at the hospital, and
- A community survey conducted in collaboration with other Indiana health systems.

Based on the assessment of the above data sources, the following community health needs have been identified (in alphabetical order) as significant in the community served by RHI. References are made below to exhibits and findings presented in this report (e.g., whether certain needs were found to be significant based in part on findings from the community survey or community meetings).

#### Drug and Alcohol Abuse

- Both drug and alcohol abuse contribute to accidents and injuries (**Focus Group, Other Assessments**). Alcohol use is a contributing factor to one out of every four spinal cord injuries (**Other Assessments**).
- The opioid crisis, and other forms of drug and substance abuse, were identified by community members as particularly significant (**Community Survey, Community Meetings, Interviews**).
- Drug and substance abuse also have been identified as top concerns in Marion County and across Indiana in other assessments, including Indiana’s State Health Improvement Plan (**Other Assessments**).
- Drug overdoses are known to be a factor in Traumatic Brain Injury (**Focus Group, Other Assessments**).

#### Obesity and Diabetes

- Obesity and diabetes are known risk factors for stroke and also contribute to risks associated with falls and other injuries (**Other Assessments**).
- Individuals providing input identified obesity as a top concern (**Community Meetings, Community Survey, Interviews**).
- Marion County and Indiana obesity rates are comparatively high (**Exhibits 22, 34**).

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<sup>1</sup> “Secondary data” refers to data published by others, for example the U.S. Census and the Indiana Department of Health.



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- Marion County has a comparatively poor food environment index, indicating that access to healthy food is more challenging in the county than in the U.S. (**Exhibit 22**).
- According to *State of Obesity, 2017* (a Robert Wood Johnson Foundation Initiative) Indiana has the 12<sup>th</sup> highest adult obesity rate in the nation, and the ninth highest childhood obesity and overweight rate. About 12 percent of Indiana adults have diabetes, the 11<sup>th</sup> highest rate in the U.S. (**Other Assessments**).
- Physical inactivity, a lack of access to exercise opportunities, and food insecurity are contributing factors (**Exhibits 22, 23, Community Meetings, Interviews**).

### Smoking

- Smoking is a known risk factor for stroke (**Focus Group, Other Assessments**).
- Smoking rates in Marion County and Indiana as a whole are comparatively high, including among pregnant women and lower-income residents (**Exhibits 22, 25B**).
- Community survey respondents indicated that tobacco use is among the most significant community health needs in Marion County and across Indiana (**Community Survey**).
- Other assessments, including Indiana's State Health Assessment, have identified tobacco use as a significant concern (**Other Assessments**).

### Social Determinants of Health

- Marion County's poverty rate is above the Indiana average, and is particularly high for Black and Hispanic (or Latino) residents (**Exhibits 15, 16**). Poverty was identified as a significant community health problem by participants of all three Marion County community meetings (**Community Meetings**). Poverty also was described as a contributing factor to food insecurity (**Interviews, Focus Group**).
- Smoking, obesity, diabetes, physical inactivity and other risk factors for stroke are more prevalent in lower-income groups (**Exhibit 25**).
- Educational achievement (high school graduation rate) in Marion County is below the U.S. average (**Exhibit 22**). A lack of educational achievement complicates efforts to assure community members are aware of stroke and injury prevention strategies (**Focus Group**).

### Violence and Injuries

- Violence and crime have been identified as causal factors for injuries (including Traumatic Brain Injury and Spinal Cord Injury) (**Focus Group, Other Assessments**).
- Violent crime rates in Marion County are well above Indiana-wide averages (**Exhibits 20, 22**) and were identified as a top concern by community survey respondents (**Community Survey**) and during community meetings and interviews (**Community Meetings, Interviews**).
- Marion County's rate of mortality from injuries is above average (**Exhibits 22, 24**).
- Participants in one of three community meetings held in Marion County identified injury prevention as a top concern (**Community Meetings**).

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### Other State-wide Concerns

- The Indiana State Department of Health indicates that the state needs a better-integrated, statewide trauma system to help address increasing death rates from falls and problems posed by injury (e.g., motor vehicle accidents) particularly in rural areas (**Other Assessments**).
- Primary care physicians and hospitalists could use additional training regarding how to diagnose Traumatic Brain Injury and assure patients are referred to needed services (**Focus Group**).
- According to America's Health Rankings, Indiana ranks 44<sup>th</sup> (out of 50 states) for "high cholesterol" and 43<sup>rd</sup> for "cholesterol checks." These factors likely are contributing for Indiana's overall ranking for stroke, which is 41<sup>st</sup> in the nation (**Exhibit 37**).

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RHI provides a range of services for patients from central Indiana and from across the state. Recognizing the hospital’s local and state-wide roles, two communities have been assessed: Marion County (the “local community”) and the state.

### Community Assessed

The community assessed by RHI was defined by the geographic origins of patients discharged from the hospital. On that basis the “local community” was identified as Marion County, Indiana. RHI provides a range of services for patients from central Indiana and across the State of Indiana. Accordingly, this CHNA also considers relevant community health needs across the entire state.

Residents from Marion County accounted for approximately 47 percent of the hospital’s 2017 inpatient discharges (**Exhibit 1**).

**Exhibit 1: RHI Inpatient Discharges from Marion County, 2017**

County	Percent of Discharges (2017)
Marion County	47.5%

Source: Analysis of RHI Discharge Data, 2017

In 2017, the next highest number of RHI inpatients originated in Hendricks County (8.6 percent of discharges). Because the majority of inpatients originated from across Indiana and because RHI plays a state-wide role in providing rehabilitation services, this CHNA report also identifies and discusses state-wide community health concerns.

The estimated, total population of Marion County in 2015 was 938,058 persons (**Exhibit 2**).

**Exhibit 2: Local Community Population, 2015**

County	Estimated Population 2015
Marion County	938,058

Source: State of Indiana by the Indiana Business Research Center, March 2018

Federal regulations allow hospital facilities to define the community they serve based on “all of the relevant facts and circumstances,” including the “geographic location” served by the hospital facility, “target populations served” (e.g., children, women, or the aged), and/or the hospital

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facility's principal functions (e.g., focus on a particular specialty area or targeted disease).<sup>2</sup> Accordingly, this CHNA focuses on community health issues relevant to rehabilitation services.

In assessing community health needs relevant to RHI, the following statistics are important to understand:

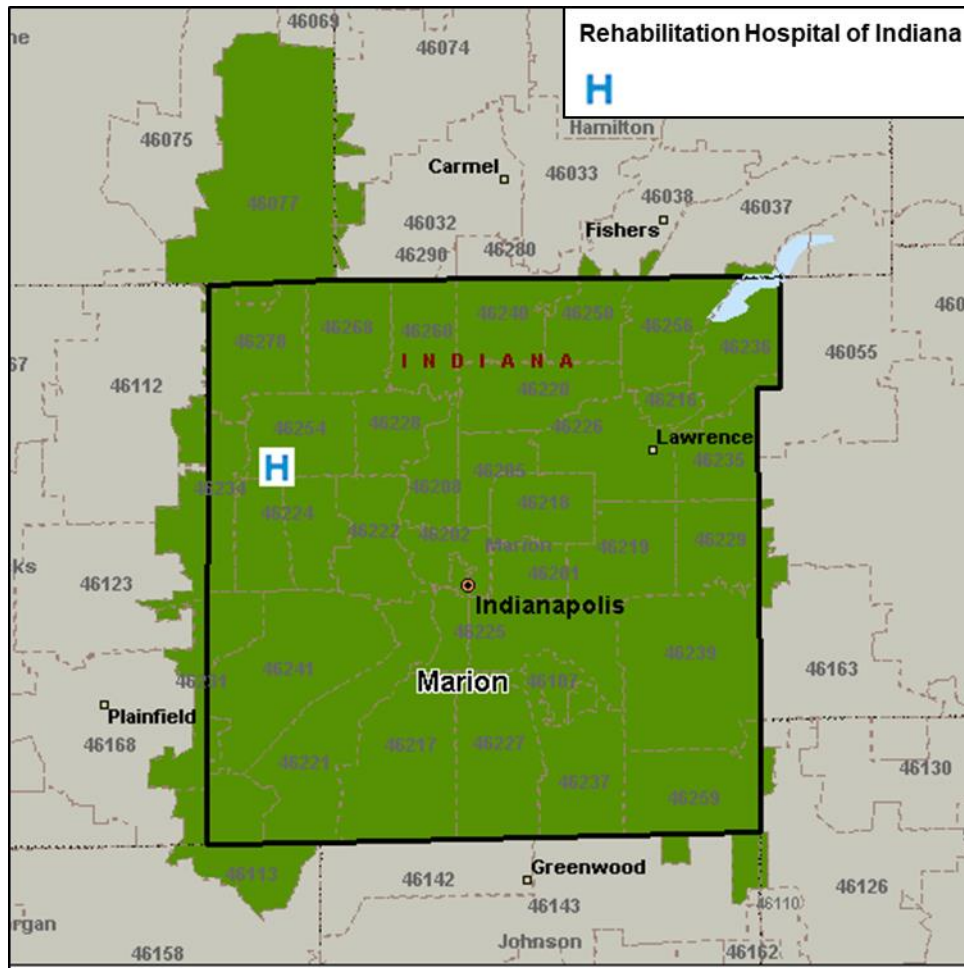
- Patients most often are admitted to RHI as a result of stroke, Traumatic Brain Injury (TBI), Spinal Cord Injury (SCI), major trauma, cardiac events, amputations, other orthopedic conditions, and other issues for which rehabilitation services are medically necessary.
- About 94 percent of admissions to RHI are for patients transferred from an acute medical/surgical hospital. Many patients first are seen in hospital emergency rooms and trauma centers, then are admitted to acute medical/surgical hospitals, and then are transferred to RHI to receive intensive rehabilitation services.
- RHI provides both inpatient and outpatient services. Outpatient care is provided at the main hospital site and at two other locations (Indianapolis and Carmel, Indiana).

**Exhibit 3** portrays the local community. The map shows county and ZIP code boundaries. Specific ZIP codes are included in the assessment if any portion of the ZIP code overlaps with Marion County.

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<sup>2</sup> 501(r) Final Rule, 2014.

**Exhibit 3: RHI Local Community (Marion County, Indiana)**



Source: Microsoft MapPoint and IU Health, 2018

The hospital is located in Marion County (City of Indianapolis, Indiana, ZIP code 46254).

### Secondary Data Summary (Marion County)

The following section summarizes findings from secondary data analysis for Marion County. See Appendix B for more detailed information.

#### Demographics

Population characteristics and trends directly influence community health needs. The total population of Marion County is expected to grow 2.7 percent from 2015 to 2020. Between 2016 and 2021, all 38 ZIP codes portrayed in **Exhibit 3** are projected to gain population. The populations of four community ZIP codes (46077, 46218, 46201, and 46208) are expected to grow by over five percent.

At 16.1 percent, the population aged 65 years and older is projected to grow at a faster rate than the population as a whole. This should contribute to growing need for health services (including

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rehabilitation services), since older individuals typically need and use more services than younger persons.

Residents without a high school diploma, with a disability, and experiencing linguistic isolation are more prevalent in the county than in Indiana as a whole.

### Economic Indicators

Many health needs have been associated with poverty. Data published by the Centers for Disease Control (Behavioral Risk Factors Surveillance System, *see Exhibit 25*) suggest that risk factors for stroke (e.g., smoking, obesity, and others) are greater for lower-income individuals. At 20.5 percent (over the 2012-2016 time period), Marion County's poverty rate has been above the Indiana average. Poverty rates for Black and Hispanic residents in Marion County were about double the poverty rate of White residents. Low income census tracts are prevalent in Marion County, including in areas proximate to the hospital.

In recent years, Marion County's unemployment rates have been at or above Indiana averages but below national averages. Crime rates in the City of Indianapolis consistently have been significantly higher than Indiana averages.

The percentage of people uninsured in Marion County has declined in recent years due to two primary factors:

- In recent years, unemployment rates have decreased significantly. Many receive health insurance coverage through their (or a family member's) employer.
- In 2010, the Patient Protection and Affordable Care Act (PPACA) was enacted, and Indiana was among the states that expanded Medicaid eligibility.

### Local Health Status and Access Indicators

Indiana has 92 counties. In the 2018 *County Health Rankings*, Marion County ranked 75<sup>th</sup> for overall health outcomes.

Marion County ranked in the bottom half of Indiana counties for 29 of the 42 indicators assessed. Of those, 25 were in the bottom quartile, including: overall health outcomes, length of life, quality of life, health behaviors, and others. Marion County ranked poorly on several measures associated with stroke and injury risks, including: smoking, obesity, excessive drinking, diabetes monitoring, high school graduation rates, violent crime, and injury deaths.

In the 2018 *Community Health Status Indicators* (which compares community health indicators for each county with those for peers across the United States), the following indicators were most problematic:

- Average Daily PM2.5 (the average daily density of fine particulate matter in micrograms per cubic meter, a measure of air quality and pollution)
- Mortality rate due to injuries

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- Percent of adults that are obese
- Percent of adults smoking
- Percent of adults physically inactive
- Percent of adults who drive alone to work
- Teen birth rate
- Violent crime rate
- Years of potential life lost

A number of these problematic indicators are associated with stroke and injury risks.

According to the Centers for Disease Control and Prevention (CDC), mortality rates for assault (homicide).

### **Community Need Index**

Dignity Health, a California-based hospital system, developed and published a *Community Need Index*<sup>TM</sup> (CNI) that measures barriers to health care access. The index is based on five social and economic indicators:

- The percentage of elders, children, and single parents living in poverty
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White
- The percentage of the population without a high school diploma
- The percentage of uninsured and unemployed residents
- The percentage of the population renting houses

A CNI score is calculated for each ZIP code. Scores range from “Lowest Need” (1.0-1.7) to “Highest Need” (4.2-5.0).

The weighted average CNI score for Marion County was 3.8 – well above the national median of 3.0. Fourteen of 38 ZIP codes scored in the “highest need” category.

### **Food Deserts**

The U.S. Department of Agriculture’s Economic Research Service identifies census tracts that are considered “food deserts” because they include lower-income persons without supermarkets or large grocery stores nearby. Several census tracts in Marion County have been designated as food deserts. RHI staff indicate that a lack of access to healthy food is problematic for discharged patients, contributes to stroke risks, and is a factor in poor health in the county.

### **Medically Underserved Areas and Populations**

Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) based on an “Index of Medical Underservice (Index).” The Index includes the following variables: ratio of primary medical care physicians

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per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over. Areas with a score of 62 or less are considered “medically underserved.”

Many census tracts throughout Marion County have been designated as Medically Underserved, particularly in areas around the hospital and throughout Indianapolis.

### **Health Professional Shortage Areas**

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present.

Areas throughout Marion County have been designated as Primary Care, Dental Care, and Mental Health HPSAs.

### **Relevant Findings of Other CHNAs**

This CHNA also has considered the findings of other recent, available assessments conducted by other hospital facilities, local health departments (LHDs), and the State of Indiana. These other assessments consistently have identified the following needs as significant for Marion County.

- Mental health
- Access to basic and primary health care
- Obesity
- Nutrition and access to healthy foods
- Drug and substance abuse
- Poverty

### **Problematic Indicators for Marion County**

Based on available secondary data alone, the most significant community health issues in Marion County appear to include:

- More years of potential life lost than the U.S. average (before age 75 per 100,000 population, on an age-adjusted basis)
- Growth in the population aged 65 years and older
- Social determinants of health, including poverty, educational achievement, and violent crime
- Maternal and child health problems (low birth weights, teen pregnancy, and infant mortality)
- Communicable diseases (e.g., chlamydia and HIV/AIDS)
- Obesity
- Smoking
- Cancer



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- Air pollution
- Admissions for certain ambulatory care preventable conditions

As described in the next section, many of the above issues are prevalent across Indiana, including air pollution, growth in the senior population, obesity and smoking, and others. Based on secondary data assessed, additional significant community health needs across Indiana include:

- An undersupply of primary care physicians, dentists, mental health providers, and other health professionals
- Mental health
- Comparatively low public health funding
- High cholesterol and rates of heart disease
- Diabetes

The above secondary data shows that risks of stroke and injury (and other conditions that contribute to the need for rehabilitation services) are higher in Indiana than elsewhere in the United States.

### Secondary Data Summary (State of Indiana)

RHI also assessed community health needs across Indiana. The following section summarizes findings from that analysis (*See Appendix C for more detailed information*).

#### Demographics

The total population of Indiana is expected to grow 1.9 percent from 2015 to 2020. However, the number of persons aged 65 years and older is projected to grow at a much faster rate (15.4 percent). This should contribute to a growing need for health services, since older individuals typically need and use more services than younger persons.

#### Indiana Health Status and Access Indicators

*County Health Rankings* contains health status and access indicators at a county, state, and national level. A majority of indicators for Indiana were worse than national averages, including (but not limited to):

- Adult obesity rates
- Percent of adults that currently smoke
- Rate of low birth weight births
- Teen birth rate
- Percent of adults reporting poor or fair health
- Percent of adults physically inactive and without access to exercise opportunities
- Per-capita supply of physicians/providers (primary care, dental, and mental health)
- Years of potential life lost

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*Community Health Status Indicators* (which compares indicators for each county with those for peer counties across the United States) were assessed for every county in Indiana. This analysis thus establishes the frequency with which certain community health problems benchmark unfavorably across Indiana's counties in comparison with peer counties across the United States. Based on this analysis, Indiana counties most frequently ranked in the lower quartile of their peers for the following community health problems:

- Average Daily PM2.5 (the average daily density of fine particulate matter in micrograms per cubic meter, a measure of air quality and pollution)
- Frequency of mentally unhealthy days
- Percent of adults who are physically inactive
- Percent of adults who drive alone to work
- Percent of adults who smoke
- Percent of adults with some college education
- Years of potential life lost

Indiana counties most frequently ranked in the bottom half of their peers for the following issues:

- Average Daily PM2.5 (the average daily density of fine particulate matter in micrograms per cubic meter, a measure of air quality and pollution)
- Per-capita supply of mental health professionals
- Frequency of mentally unhealthy days
- Percent of adults in fair or poor health
- Percent of adults who are physically inactive
- Percent of adults with some college education
- Percent of adults who drive alone to work
- Percent of adults who smoke
- Percent receiving mammography screening
- Percent uninsured
- Frequency of physically unhealthy days
- Years of potential life lost
- Teen birth rate

*America's Health Rankings* provides state rankings for a number of health and social issues. In the 2017 rankings, Indiana ranked in the bottom ten states nationally for the following indicators:

- Public health funding
- Air pollution
- Supply of dentists
- People with high cholesterol
- People having cholesterol checks
- Heart attacks
- Cancer deaths
- Infant mortality

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- Supply of mental health providers
- All health outcomes (composite measure)
- Clinical care (composite measure)
- Prevalence of preventable hospitalizations
- Smoking
- Stroke
- Health behaviors (composite measure)
- Obesity

America's Health Rankings thus indicates that Indiana is a comparatively unhealthy state. Notably for RHI, the state ranks poorly for people with high cholesterol, people having cholesterol checks, heart attacks, smoking, stroke, and obesity.

### Relevant Findings of Other Assessments and Publications

Several other health assessments were reviewed regarding health in Indiana.

In preparing its *State Health Assessment*, Indiana officials reviewed local health assessments conducted across the state to identify needs most frequently identified as significant. The ten needs most frequently identified were: access to care, mental and behavioral health, obesity, substance abuse disorders, nutrition and physical activity, diabetes, tobacco use, heart disease, cancer, and maternal and infant health.

The Indiana State Health Improvement Plan (ISHIP) subsequently was drafted that identified "final priorities," which were:

- Improve birth outcomes and reduce infant mortality
- Address the opioid epidemic
- Reduce rates of chronic disease
- Improve the public health infrastructure

*The State of Obesity*, a Robert Wood Johnson Foundation initiative, provides national and state-level information. Indiana was found to have the 12<sup>th</sup> highest adult obesity rate in the nation, and the ninth highest childhood obesity and overweight rate. Disparities were also found between racial groups (Black Indiana residents were found to have ten percent higher obesity rates than White residents).

The *Indiana Tobacco Control 2020 Strategic Plan* described the state of tobacco use in Indiana in 2015 and provided strategies to help lower tobacco use in the state by 2020. The Plan found that tobacco use is the most preventable cause of death and disease in Indiana, costing Indiana and its residents 11,100 lives and nearly \$3 billion in health care costs annually. Despite a recent decline in Indiana smoking rates, more than one million adults in the state still smoke cigarettes. Smoking rates among pregnant women, those with any mental illness, and those with low education levels were found to be higher than the rate of smoking in the general population.

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A number of studies and publications are informative regarding community health needs relevant to services provided by RHI. These include:

- *The Better Together Plan* (published by The Cardiovascular & Diabetes Coalition of Indiana), which highlights data on the prevalence of heart disease, stroke, and diabetes, risk factors such as hypertension, high cholesterol, smoking, obesity/overweight, and poor nutrition.
- *Fast Facts* published by ThinkFirst regarding Traumatic Brain Injury and Spinal Cord Injury, which include data on TBI and SCI prevalence, causal factors (e.g., falls, motor vehicle accidents, playing sports without appropriate helmets, alcohol use, and violence), and prevention tips.
- *Brain Basics: Preventing Stroke*, published by a division of NIH, which highlights risk factors for stroke (e.g., hypertension, smoking, heart disease, diabetes, high cholesterol, and physical inactivity) and suggests that the majority of strokes are preventable.
- *Indiana State Department of Health Trauma White Paper*, which calls for development of a statewide trauma system to help address increasing death rates from falls and problems posed by injury particularly in rural areas.
- *Indiana State Department of Health Special Emphasis Report: Fall Injuries Among Older Adults*, which states that falls are the leading cause of TBI in Indiana residents 65 years of age and older and describes federal and state prevention initiatives.
- *Indiana State Department of Health Special Emphasis Report: Traumatic Brain Injury*, which includes data on TBI prevalence in Indiana.
- *Indiana State Department of Health Division of Trauma and Injury Prevention Resource Guide*, which includes prevalence data, identifies risk factors, discusses prevention strategies, and seeks widespread adoption of initiatives to address ten “injury topics.”

This CHNA summarizes key points from these helpful publications.

### Indiana Workforce Issues

Several studies have shown that Indiana has a current and growing undersupply of health professionals.

- The Indiana Department of Workforce Development, for example, forecasts that Indiana will have a shortage of about 9,000 registered nurses by 2030.<sup>3</sup>
- America’s Health Insurance Plans (AHIP) issues reports regarding physician workforce supply, and found that Indiana’s per-capita supply of psychiatrists is 58 percent of the

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<sup>3</sup> <http://www.insideindianabusiness.com/story/35524534/to-meet-todays-health-care-needs-close-the-nursing-shortage>

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national rate.<sup>4</sup> Indiana is one of seven states to have an overall supply of physicians (primary care, psychiatry, OBGYN, and general surgeons) below 80 percent of the national rate.

- The Robert Graham Center also studies primary care physician workforce needs across the U.S.<sup>5</sup> Its most recent study indicates that Indiana will need 20 percent more physicians by 2030 to maintain “the status quo.” Population growth and aging, along with higher levels of insurance coverage are contributing to this need. Across the U.S., the ratio of population to primary care physicians is 1,463:1; Indiana’s ratio is 1,659:1 – indicating a comparatively low supply of these professionals.
- HRSA, however, projects that “there will be a sufficient supply of physical medicine and rehabilitation providers to meet the nation’s demand for physical medicine and rehabilitation services in 2025.”<sup>6</sup>

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<sup>4</sup> [https://www.ahip.org/wp-content/uploads/2016/07/Workforce\\_DataBrief\\_7.14.16.pdf](https://www.ahip.org/wp-content/uploads/2016/07/Workforce_DataBrief_7.14.16.pdf)

<sup>5</sup> <https://www.graham-center.org/content/dam/rgc/documents/maps-data-tools/state-collections/workforce-projections/Indiana.pdf>

<sup>6</sup> [https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/BHW\\_FS\\_Phy\\_Med\\_Rehab.pdf](https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/BHW_FS_Phy_Med_Rehab.pdf)

## DATA AND ANALYSIS

### Primary Data Summary

Primary data were gathered in four ways: community meetings, key stakeholder interviews, a community survey, and a focus group meeting held at RHI.

#### Community Meetings

Between May 7 and 9, 2018, three meetings of community representatives were held in Indianapolis, the county seat of Marion County. The meetings were sponsored by IU Health and Community Health Network to obtain community input and help identify significant community health needs in Marion County. Results of the community meetings (and of key stakeholder interviews and the community survey) were shared with RHI.

In total, the community meetings were attended by 42 individuals invited by IU Health in partnership with Community Health Network because they represent important community organizations and sectors such as: local health departments, police/fire departments, non-profit organizations, local businesses, health care providers, mayors/local policymakers, faith-based organizations, parks and recreation departments, and schools.

Through these meetings, IU Health sought a breadth of perspectives on the community's health needs. The specific organizations represented at the meetings are listed below.

Organizations Represented at Community Meetings	
Adult and Child Health	Indianapolis Metropolitan Police Department
All Senior Citizens Connect	Indy Hunger Network
Central Indiana Council on Aging (CICOA)	Indianapolis Parks and Recreation
City of Indianapolis	Irvington Development Organization
Coburn Place	Jump IN for Healthy Kids
Community Health Network	Lawrence Community Gardens
Genesaret Free Clinics	Marion County Public Health Department
Gleaners Food Bank	New Beginnings Church
Health by Design	Paramount Schools of Excellence
IU Health Methodist Hospital	Progress House
RHI	Purdue Extension
Indiana Youth Institute	The Polis Center
Indianapolis Fire Department	University of Indianapolis

Each meeting began with a presentation that discussed the goals and status of the CHNA process and the purpose of the community meetings. Then, secondary data were presented, along with a summary of the most unfavorable community health indicators. For Marion County, those indicators were (in alphabetical order):

- Air pollution
- Communicable diseases and STDs

## DATA AND ANALYSIS

- Crime
- Mental health and supply of mental health providers
- Obesity and lack of physical activity
- Poverty and high ‘Community Need Index’
- Smoking and tobacco use

Meeting participants then were asked to discuss whether the identified, unfavorable indicators accurately identified the most significant community health issues and were encouraged to add issues that they believed were significant. Several issues were added by each group, such as:

Group 1	Group 2	Group 3
High school graduation rates	Built environment	Access to primary care
Homelessness	Changed access to healthy food to food insecurity	Built environment
Needs of the growing senior community	Substance abuse	Dental care
Substance abuse		Disparities in access to basic, affordable needs
		Education
		Education on communicable diseases
		Nutrition and cooking education
		Teen pregnancy

During the meetings, a range of other topics was discussed, including the extent to which hospital organizations can address topics such as crime, poverty, and air pollution, the need for additional parks and to improve walkability, health disparities, and social determinants of health.

After discussing the needs identified through secondary data and adding others to the list, participants in each meeting were asked through a voting process to identify “three to five” they each consider to be most significant. From that process, each of the groups identified the needs shown in the following table as most significant for Marion County.

Group 1	Group 2	Group 3
1.Substance abuse	1.Food insecurity	1.Access to healthy food
2.Mental health and supply of mental health providers	2.(Tie) Obesity and lack of physical activity	2.(Tie) Disparities in access to basic, affordable needs
3.(Tie) Crime	2.(Tie) Poverty and high ‘community need index’	2.(Tie) Obesity and lack of physical activity
3.(Tie) Poverty and high community need index’	4.Mental health and supply of mental health providers	4.Poverty and high community need index’
5.(Tie) Needs of growing senior community	5.Substance abuse	5.Mental health and supply of mental health providers
5.(Tie) Public health funding		

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Food insecurity, substance abuse, mental health, social determinants of health, and obesity were frequently identified through the community meeting process.

### Interviews

An interview was conducted with two representatives of the Marion County Public Health Department. The interview was conducted to assure that appropriate and additional input was received from governmental public health officials. The results of the community meetings were discussed and insights were sought regarding significant community health needs, reasons why such needs are present, and how they can be addressed.

The interview was guided by a structured protocol that focused on opinions regarding significant community health needs, describing why such needs are present, and seeking ideas for how to address them.

- The interviewees confirmed that the needs identified by the community meeting participants were significant. These needs were:
  - Access to healthy food (food insecurity) and its relation to obesity
  - Poverty
  - Mental health
  - Disparities in access to basic needs (housing, transportation, etc.)
  - Substance abuse
- Poverty has increased significantly since 2005, from one out of every five households to one out of every three with children in poverty. This increased poverty level has created a large issue with food insecurity.
- While unemployment rates are low, wages are an issue for many in the community. The minimum wage is not a living wage and many people who have low paying jobs still struggle with food insecurity and other issues.
- Mental health status and access to mental health care is a significant issue, with a particular focus on the lack of providers, and issues surrounding suicide among children. Since many providers receive little in reimbursement from insurance for mental health treatment, finding providers and hospitals with a focus on mental health is difficult.
- There is a need for navigators who could help residents find needed services and sign up for state insurance plans.
- Substance abuse is a significant issue, as evidenced by drug overdose deaths. Additionally, while there were 500 ambulance trips for drug overdoses in 2013, this number is over 2,000 in recent years.
- Communicable disease linked to substance abuse is also an issue, as rates of hepatitis C and HIV have increased in part due to intravenous drug use.



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- Despite great progress and policy around the issue, smoking is still an issue that many are no longer paying attention to because of a misbelief that the issue is solved. The recent rise of e-cigarettes also may contribute to increased smoking due to attracting teenagers.
- Transportation is a barrier to care. While the city has options, the bus system is inefficient and can take a long time.
- Cancer is also an issue, with large disparities in incidence rates among different demographic groups. In particular the incidence rates of lung, colon, and prostate cancers are significant needs in the community.
- The interviewees also identified several other significant issues in the community, including:
  - Dental care and access to dental care providers
  - Violence and homicide
  - Infant mortality, especially with the disparities present among different racial groups
  - Childhood obesity
  - Chronic diseases, particularly diabetes

### Internal Focus Group Meeting

On November 16, 2018, a meeting of RHI staff was conducted at the hospital to discuss community health needs. The meeting was attended by 13 staff members, including representatives from hospital administration, clinical leadership, and support services. The meeting focused on identifying and discussing significant health issues that lead to the need for rehabilitation services.

The meeting began with a brief presentation that discussed the goals of the CHNA process and the purpose of the focus group discussion. Then, some secondary data were presented, along with a summary of the most unfavorable community health indicators for Marion County and Indiana.

Meeting participants then were asked their opinions regarding the most significant community health issues that contribute to the need for rehabilitation services (e.g., risk factors for injury, stroke, cardiac events, etc.) and that affect the ability of patients to be healthy post-discharge. The group identified many such issues, including:

- Crime was identified as a significant contributor to injuries that lead to the need for rehabilitation services.
- Drug and alcohol abuse, particularly the usage of opioids, is a significant health concern because it results in brain injuries (as a result of overdoses) and accidents.
- Several participants identified obesity as a significant concern. A lack of access to healthy foods is a contributing factor, with several food deserts present throughout

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Indianapolis and fresh food also being too expensive. Physical inactivity and sedentary lifestyles also are problematic.

- Transportation was identified as a significant barrier for achieving good health in the community, with a lack of public transportation options and a lack of funds for expanding services.
  - Transportation issues contribute to poor nutrition as it is often difficult for residents to get to where healthy food is being sold.
  - Transportation issues are particularly prevalent among lower income residents, older populations, and those with disabilities.
  - Food delivery services were identified as a significant need, as many residents could not access healthy foods due to transportation concerns.
- While the local supply of primary care providers was thought to be adequate, problems accessing primary care are present due mainly to cost and transportation barriers. Primary care physicians and hospitalists could use additional training regarding how to diagnose Traumatic Brain Injury and assure patients are referred to needed services.
- Many members of the community treat health in terms of crisis management rather than prevention, often only seeing providers in case of an emergency rather than as an effort to prevent a serious health issue. For many this is a financial issue, as residents cannot afford preventive care or cannot afford to miss work for appointments.
- Smoking remains a significant health concern, particularly among lower income populations.
- The lack of a cohesive family unit and issues surrounding guardianship of both young and elderly residents also is a significant issue that leads many not to receive proper support and care.
- A lack of education and health literacy also are significant issues.
  - Many residents, upon discharge, do not know how to follow up their treatment or comply with medication schedules.
  - Benefits, including health insurance, food stamps, and other social safety net systems, are highly complex and it is difficult for community members to understand their eligibility.
  - Outreach to middle and high schools to provide education regarding injury prevention, nutrition, and healthy lifestyles would be helpful.
- There are not enough neuropsychology providers in the community and those that are available are in high demand.

## DATA AND ANALYSIS

- The need for nurse navigators who would help discharged patients back home, explain medications and how to use them, and connect patients to social services was identified as a significant programmatic need.

The need for more free or low-cost clinics that provide both primary and preventive care was also identified as a significant programmatic need.

### Community Survey

To inform the CHNA, a community survey was conducted. The survey was sponsored by a cooperative of Indiana hospital systems (including IU Health and Community Health Network), under contract with the University of Evansville and the Indiana University School of Public Health-Bloomington. Researchers from Indiana University and University of Evansville contracted with the Center for Survey Research at Indiana University to administer the survey. Results were shared with RHI.

The survey was conducted in two phases, with Phase 1 conducted as a paper survey mailed to an address-based sample, and Phase 2 administered by some of the hospitals to a convenience sample they selected. IU Health participated in Phase 1.

A questionnaire was developed, with input provided by the Indiana hospital systems, and included a number of questions about general health status, access and utilization of services, personal behaviors, social determinants of health, and also respondent demographic information (e.g., ZIP code, income level, employment status, race and ethnicity, household size, gender, and age). The survey was mailed to approximately 82,000 households, and the “field period” was April 2, 2018 through June 29, 2018). The process included two mailings to each address; a postcard mailing also took place to encourage responses.

Overall, 9,161 completed questionnaires were received by all participating hospitals in the Indiana Hospital Collaborative, for an overall response rate of 11.6 percent; 5,030 questionnaires were received from the 17 Indiana counties served by one or more IU Health hospitals. A dataset was created from the IU Health survey responses, and the responses were adjusted for two factors:

- The number of adults in each household (i.e., a survey from a household with two adults received a base weight of “2” and a survey from a household with one adult received a base weight of “1”).
- A post-stratification adjustment designed to make the results more representative of the population in each community (i.e., female and older adults were overrepresented among survey respondents when compared to census data, and the adjustment made corrections).

For RHI, surveys were received from 359 community households. According to the responses, these households included 644 adults.

**Exhibit 4** portrays the community health needs considered most significant by survey respondents from Marion County.

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### Exhibit 4: Community Survey - Significant Health Needs

Community Health Need	RHI	
	Number of Responses	Percent of Respondents
Substance use or abuse	166	46.1%
Chronic diseases, like diabetes, cancer, and heart disease	163	45.5%
Obesity	160	44.6%
Mental health	146	40.6%
Assault, violent crime, and domestic violence	137	38.1%
Aging and older adult needs	121	33.7%
Poverty	114	31.9%
Food access, affordability, and safety	103	28.6%
Tobacco use	78	21.6%
Alcohol use or abuse	76	21.2%
Child neglect and abuse	71	19.8%
Homelessness	70	19.6%
Environmental issues	61	17.1%
Injuries and accidents	52	14.4%
Sexual violence, assault, rape, or human trafficking	42	11.8%
Disability needs	37	10.3%
Reproductive health and family planning	34	9.5%
Dental care	32	9.0%
Suicide	25	6.8%
Infant mortality	17	4.6%
Infectious diseases, like HIV, STDs, and hepatitis	12	3.4%

Source: Community Survey

The community survey indicates that substance use or abuse; chronic diseases; obesity; mental health; and assault, violent crime, and domestic violence represent top concerns in the community served by RHI.

**Exhibit 5** arrays survey responses regarding health factors across demographic and socioeconomic characteristics. The exhibit includes findings from surveys returned by adults living in the 17 counties served by IU Health.

**Exhibit 6** summarizes survey responses regarding health behaviors across demographic and socioeconomic characteristics. As frequently found in community health data, physical and mental health status (and tobacco use) tends to be worse for lower-income individuals and for

## DATA AND ANALYSIS

those without a high school diploma. Opioid misuse also appears to be more prevalent in these populations.

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### Exhibit 5: Community Survey, Health Factors

Measure	Total	Female	Male	White	Black	Asian	Hispanic	\$0 - \$25k	\$25 - \$75k	\$75k+	No High School Diploma
Total Number of Responses	8,885	5,694	3,137	8,487	133	111	148	1,480	3,659	3,328	329
Fair or Poor Health	16.6%	16.4%	16.8%	16.6%	33.1%	6.3%	18.2%	39.4%	16.7%	5.9%	39.2%
Physical Health - Fair or Poor	42.6%	42.8%	42.5%	42.7%	27.1%	60.4%	46.6%	17.4%	36.8%	60.8%	18.8%
Mental Health - Fair or Poor	8.2%	8.6%	7.5%	8.2%	18.0%	4.5%	5.4%	22.2%	8.0%	2.4%	20.4%
Social Well-being - Fair or Poor	61.2%	61.5%	61.2%	61.1%	52.6%	79.3%	62.2%	33.9%	57.8%	77.7%	37.4%
Are not satisfied with life	12.8%	12.3%	13.9%	12.6%	15.0%	23.4%	10.1%	19.0%	12.1%	11.2%	14.6%
Without Health Insurance	4.2%	4.2%	4.0%	4.1%	7.5%	0.9%	10.1%	6.6%	5.3%	2.1%	7.9%
Without Primary Care Physician	11.0%	10.5%	11.9%	10.9%	10.5%	20.7%	23.0%	11.2%	11.0%	12.0%	15.8%

### Exhibit 6: Community Survey, Health Behaviors

Measure	Total	Female	Male	White	Black	Asian	Hispanic	\$0 - \$25k	\$25 - \$75k	\$75k+	No High School Diploma
Total Number of Responses	8,885	5,694	3,137	8,487	133	111	148	1,480	3,659	3,328	329
Smoked cigarettes or used other tobacco	9.9%	8.8%	12.0%	9.9%	8.3%	1.8%	9.5%	17.9%	11.3%	5.6%	20.4%
Physically active on regular basis	52.9%	50.3%	57.9%	52.8%	45.1%	54.1%	52.7%	37.3%	51.0%	62.3%	37.7%
Ate a healthy balanced diet	57.5%	57.9%	57.0%	57.6%	41.4%	62.2%	59.5%	42.2%	54.7%	67.6%	34.0%
Got plenty of sleep	56.2%	55.5%	57.8%	56.8%	39.1%	36.9%	46.6%	46.8%	57.1%	59.7%	43.2%
Took an opioid or narcotic that was prescribed to me	8.3%	8.9%	7.4%	8.4%	7.5%	0.0%	2.7%	15.3%	9.0%	5.0%	12.8%
Took an opioid or narcotic that was not prescribed to me	0.6%	0.6%	0.4%	0.5%	0.0%	0.9%	0.0%	1.2%	0.5%	0.4%	0.0%
Took a medication for anxiety, depression, or other mental health challenge that was prescribed to me	18.2%	22.9%	9.6%	18.4%	15.8%	4.5%	10.8%	26.4%	17.4%	16.0%	19.8%
Had blood pressure checked	48.0%	46.4%	50.9%	48.3%	38.3%	32.4%	31.8%	53.7%	52.1%	40.8%	52.0%
Drank alcohol to the point of intoxication	6.1%	4.8%	8.5%	6.1%	7.5%	1.8%	12.2%	2.9%	5.5%	8.9%	1.8%
Drove while under the influence of alcohol or drugs	1.0%	0.7%	1.6%	1.1%	0.0%	0.0%	0.7%	1.0%	1.1%	1.1%	0.3%
Took steps to reduce level of stress	27.9%	32.2%	20.2%	27.8%	33.8%	25.2%	27.7%	24.1%	24.1%	34.5%	20.4%

## OTHER FACILITIES AND RESOURCES

### OTHER FACILITIES AND RESOURCES IN MARION COUNTY

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This section identifies other facilities and resources in Marion County that are available to address community health needs. The data sources identified below also have information about facilities and resources that are available statewide.

#### Federally Qualified Health Centers

Federally Qualified Health Centers (FQHCs) are established to promote access to ambulatory care in areas designated as “medically underserved.” These clinics provide primary care, mental health, and dental services for lower-income populations. FQHCs receive enhanced reimbursement for Medicaid and Medicare services and most also receive federal grant funds under Section 330 of the Public Health Service Act. FQHCs throughout the state can be found at: <https://www.findahealthcenter.hrsa.gov/>.

There currently are 87 FQHC sites operating in Marion County (**Exhibit 7**).

**Exhibit 7: Federally Qualified Health Centers (Marion County), 2018**

Facility	
Adult and Child Health #1	Jane Pauley Community Health Center at Gallahue
Adult and Child Health #2	Jane Pauley Community Health Center at Howe
Allison Elementary School	Jane Pauley Community Health Center at Madison Avenue
Arlington Community High School Based Clinic - IPS	Jane Pauley Community Health Center at Post
Aspire Indiana Health - Willowbrook	Jane Pauley Community Health Center at Shadeland
Avondale Meadows Academy School-Based Health Center	Jane Pauley Community Health Center Dental Clinic
Barrington Health Center	Julian Center Shelter
Care Center at the Tower	Kindezi Academy - Charter School
Charles W. Fairbanks IPS School 105	KIPP School Based Health Center
Dayspring Center	Martindale Brightwood Health Center
Enlace Academy	Meridian Health Services - Suite 102A
Eskenazi Health Center 1650 College Avenue	Newby Elementary School
Eskenazi Health Center Barton Annex	Northeast Health Center
Eskenazi Health Center Blackburn	Northwest Health Center
Eskenazi Health Center Cottage Corner	Peoples Health Center
Eskenazi Health Center Forest Manor	Phalen Academy
Eskenazi Health Center Grassy Creek	Ralph Waldo Emerson IPS School 58
Eskenazi Health Center North Arlington	Raphael Health Center
Eskenazi Health Center Pecar	Salvation Army Family Shelter Clinic (for women and children)
Eskenazi Health Center Primary Care	Salvation Army Harbor Light
Eskenazi Health Center Westside	Shalom 56th Street - New Access Point
Farrington Middle School	Shalom Health Care Center, Inc.
Fisher Elementary School	Shalom Primary Care Center

## OTHER FACILITIES AND RESOURCES

Facility	
Gambold Middle School	Shortridge High School
George Washington Community School	Southeast Health Center
Global Preparatory Academy - Charter School	Southwest Health Center
Harshman Middle School	Stephen Foster School #67
HealthNet Administration	Tech Teen Clinic
Holy Family Shelter	Thomas D. Gregg School 15
Homeless Initiative Program (HIP)	Tindley Accelerated Academy - Charter School
Indiana Health Centers, Inc.	Tindley Collegiate Academy (female) - Charter School
Indiana Math and Science Academy North	Tindley Genesis Academy - Charter School
Indiana Math and Science Academy West	Tindley Preparatory Academy (male) - Charter School
Interfaith Hospitality Network	Tindley Renaissance Academy - Charter School
IPS School 27 - Center for Inquiry	Tindley Summit Academy - Charter School
IPS School 34 - Eleanor Skillen	Vision Academy at Riverside School-Based Health Center
IPS School 43 - James Whitcomb Riley	Washington Irving School 14
IPS School 79 - Carl Wilde	West Health Center
IPS School 88 - Anna Brochhausen	Wheeler Elementary School
James Russel Lowell IPS School 51	Wheeler Shelter for Women and Children
Jane Pauley Community Health Center Administrative Offices	William McKinley School 39
Jane Pauley Community Health Center at 16th Street	Windrose Health Network - Countyline
Jane Pauley Community Health Center at Arlington	Windrose Health Network - Epler Parke
Jane Pauley Community Health Center at Brook Park	

Source: HRSA, 2018

### Hospitals

22 hospitals (including RHI) are located in the community (**Exhibit 8**). Hospitals throughout the state can be found at: <https://www.in.gov/isdh/reports/QAMIS/hosdir/>.



## OTHER FACILITIES AND RESOURCES

### Exhibit 8: Hospitals Located in Marion County, 2018

Facility
Assurance Health Psychiatric Hospital
Community Health Network Rehabilitation Hospital
Community Hospital East
Community Hospital North
Community Hospital South
Eskenazi Health
Fairbanks
Franciscan Health Indianapolis
Indiana University Health Methodist Hospital
Indiana University Health University Hospital
Kindred Hospital Indianapolis
Kindred Hospital Indianapolis North
Larue D Carter Memorial Hospital
Midland House Inc.
Neuropsychiatric Hospital of Indianapolis, LLC
Options Behavioral Health System
Orthoindy Hospital
Riley Hospital for Children at IU Health
Rehabilitation Hospital of Indiana Inc.
St Vincent Hospital
St Vincent Hospital & Health Services
St Vincent Seton Specialty Hospital, Indianapolis

Source: Indiana State Department of Health, 2018

A wide range of organizations provide rehabilitation services for Indiana residents following injury or illness, including:

- Community Rehabilitation Hospital North
- Community Rehabilitation Hospital South
- Rehabilitation Hospital of Indiana
- Rehabilitation Hospital of Chicago
- HealthSouth Deaconess
- Riverview Hospital
- Parkview Health
- Various skilled nursing facilities

#### Local Health Departments (LHDs)

**Exhibit 9** presents information on LHDs that provide services in the community served by RHI. LHDs throughout the state can be found at: <https://secure.in.gov/isdh/24822.htm/>.

## OTHER FACILITIES AND RESOURCES

### Exhibit 9: Local Health Departments, 2018

County	Public Health Department
Marion	Marion County Public Health Depart.

Source: Indiana State Department of Health, 2018

### Other Community Resources

A wide range of agencies, coalitions, and organizations that provide health and social services, is available in the region served by RHI. Indiana 211 Partnership, Inc. is a nonprofit 501(c)3 organization that provides the Indiana 2-1-1 information and referral service. By calling 2-1-1 or (866) 211-9966 (available 24/7), individuals receive referrals to service providers 24 hours a day. Individuals also can search for services using the organization's website, <https://www.in211.org/>.

The other organizations accessible through the Indiana 211 Partnership provide the following types of services and resources.

- Housing and utilities
- Food, clothing, and household items
- Summer food programs
- Health care and disability services
- Health insurance and expense assistance
- Mental health and counseling
- Substance abuse and other addiction treatment
- Support groups
- Tax preparation assistance
- Legal, consumer, and financial management services
- Transportation
- Employment and income support
- Family support and parenting
- Holiday assistance
- Disaster services
- Government and community services
- Education, recreation, and the arts
- Donations and volunteering opportunities

## APPENDIX A - OBJECTIVES AND METHODOLOGY

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### Regulatory Requirements

Federal law requires that tax-exempt hospital facilities conduct a CHNA every three years and adopt an Implementation Strategy that addresses significant community health needs.<sup>7</sup> In conducting a CHNA, each tax-exempt hospital facility must:

- Define the community it serves;
- Assess the health needs of that community;
- Solicit and take into account input from persons who represent the broad interests of that community, including those with special knowledge of or expertise in public health;
- Document the CHNA in a written report that is adopted for the hospital facility by an authorized body of the facility; and,
- Make the CHNA report widely available to the public.

The CHNA report must include certain information including, but not limited to:

- A description of the community and how it was defined,
- A description of the methodology used to determine the health needs of the community, and
- A prioritized list of the community's health needs.

### Methodology

CHNAs seek to identify significant health needs for particular geographic areas and populations by focusing on the following questions:

- **Who** in the community is most vulnerable in terms of health status or access to care?
- **What** are the unique health status and/or access needs for these populations?
- **Where** do these people live in the community?
- **Why** are these problems present?

The focus on **who** is most vulnerable and **where** they live is important to identifying groups experiencing health inequities and disparities. Understanding **why** these issues are present is challenging, but is important to designing effective community health improvement initiatives. The question of **how** each hospital can address significant community health needs is the subject of the separate Implementation Strategy.

Federal regulations allow hospital facilities to define the community they serve based on “all of the relevant facts and circumstances,” including the “geographic location” served by the hospital

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<sup>7</sup> Internal Revenue Code, Section 501(r).

## APPENDIX A - OBJECTIVES AND METHODOLOGY

facility, “target populations served” (e.g., children, women, or the aged), and/or the hospital facility’s principal functions (e.g., focus on a particular specialty area or targeted disease).<sup>8</sup>

This assessment was conducted by Verité Healthcare Consulting, LLC, in collaboration with IU Health. *See* Appendix F for consultant qualifications.

Data from multiple sources were gathered and assessed, including secondary data<sup>9</sup> published by others and primary data obtained through community input. *See* Appendix B and Appendix C for assessments of secondary data. Input from the community was received through key informant interviews, community meetings, and a community survey.

The informants participating in the community input process represented the broad interests of the community and included individuals with special knowledge of or expertise in public health. *See* Appendix D.

Considering a wide array of information is important when assessing community health needs to ensure the assessment captures a wide range of facts and perspectives and to increase confidence that significant community health needs have been identified accurately and objectively.

Certain community health needs were determined to be “significant” if they were identified as problematic in at least two of the following five data sources:

- Secondary data<sup>10</sup> including demographics, health status, and access to care indicators,
- Findings from other community health assessments of areas served by the hospital,
- Input obtained from individuals who participated in one or more community meetings,
- Input obtained from individuals who were interviewed, and
- A community survey conducted in collaboration with other Indiana health systems.

### **Collaborating Organizations**

For this assessment, RHI collaborated with all IU Health hospitals and also with other Indiana health systems on the community survey.

### **Data Sources**

Community health needs were identified by collecting and analyzing data from multiple sources. Statistics for numerous community health status, health care access, and related indicators were analyzed, including data provided by local, state, and federal government agencies, local community service organizations, IU Health, and RHI. Comparisons to benchmarks were made

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<sup>8</sup> 501(r) Final Rule, 2014.

<sup>9</sup> “Secondary data” refers to data published by others, for example the U.S. Census and the Indiana State Department of Health. “Primary data” refers to data observed or collected from first-hand experience, for example by conducting interviews.

<sup>10</sup> “Secondary data” refers to data published by others, for example the U.S. Census and the Indiana Department of Health.

## APPENDIX A - OBJECTIVES AND METHODOLOGY

where possible. Findings from recent assessments of the community's health needs conducted by other organizations (e.g., local health departments) were reviewed as well.

Input from persons representing the broad interests of the community was taken into account through community meetings and key informant interviews. Participants included: individuals with special knowledge of or expertise in public health; local public health departments; agencies with current data or information about the health and social needs of the community; representatives of social service organizations; and leaders, representatives, and members of medically underserved, low-income, and minority populations.

### **Community Survey Methodology**

To inform the CHNA, a community survey was conducted. The survey was sponsored by a cooperative of Indiana hospital systems, under contract with the University of Evansville and the Indiana University School of Public Health-Bloomington. Researchers from Indiana University and University of Evansville contracted with the Center for Survey Research at Indiana University to administer the survey.

The survey was conducted in two phases, with Phase 1 conducted as a paper survey mailed to an address-based sample, and Phase 2 administered by some of the hospitals to a convenience sample they selected. IU Health participated in Phase 1.

A questionnaire was developed, with input provided by the Indiana hospital systems, and included a number of questions about general health status, access and utilization of services, personal behaviors, social determinants of health, and also respondent demographic information (e.g., ZIP code, income level, employment status, race and ethnicity, household size, gender, and age). The survey was mailed to approximately 82,000 households, and the "field period" was April 2, 2018 through June 29, 2018. The process included two mailings to each address; a postcard mailing also took place to encourage responses.

Overall, 9,161 completed questionnaires were received by all participating hospitals in the Indiana Hospital Collaborative, for an overall response rate of 11.6 percent; 5,030 questionnaires were received from the 17 Indiana counties served by one or more IU Health hospitals. A dataset was created from the IU Health survey responses, and the responses were adjusted for two factors:

- The number of adults in each household (i.e., a survey from a household with two adults received a base weight of "2" and a survey from a household with one adult received a base weight of "1").
- A post-stratification adjustment designed to make the results more representative of the population in each community (i.e., female and older adults were overrepresented among survey respondents when compared to census data, and the adjustment made corrections).

For RHI, surveys were received from 359 community households. According to the responses, these households included 644 adults.

## APPENDIX A - OBJECTIVES AND METHODOLOGY

### Information Gaps

This CHNA relies on multiple data sources and community input gathered between February 2018 and August 2018. Several data limitations should be recognized when interpreting results. For example, some data (e.g., County Health Rankings, Community Health Status Indicators, mortality data, and others) exist only at a county-wide level of detail. Those data sources do not allow assessing health needs at a more granular level of detail, such as by ZIP code or census tract.

Secondary data upon which this assessment relies measure community health in prior years and may not reflect current conditions. The impacts of recent public policy developments, changes in the economy, and other community developments are not yet reflected in those data sets.

The findings of this CHNA may differ from those of others that assessed this community. Differences in data sources, geographic areas assessed (e.g., hospital service areas versus counties or cities), interview questions, and prioritization processes can contribute to differences in findings.

## APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

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This section presents an assessment of secondary data regarding health needs in Marion County, the “local community” for RHI.

### Demographics

**Exhibit 10: Percent Change in Community Population by County, 2015-2020**

County	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
Marion County	938,058	963,732	2.7%
Indiana Total	6,612,768	6,738,573	1.9%

Source: State of Indiana by the Indiana Business Research Center, March 2018

### Description

Exhibit 10 shows the total population for Marion County and for Indiana in 2015 and as projected in 2020.

### Observations

- Population growth is projected both for Marion County and for Indiana between 2015 and 2020.
- Population growth is anticipated in every Marion County ZIP code. Marion County ZIP code 46077 is anticipated to grow at the fastest rate (over 11 percent between 2015 and 2020).

**Exhibit 11: Percent Change in Population by Age/Sex Cohort, 2015-2020**

Age/Sex Cohort	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
<b>Marion County</b>	<b>938,058</b>	<b>963,732</b>	<b>2.7%</b>
0-17	232,778	239,764	3.0%
Male, 18-44	178,692	180,450	1.0%
Female, 18-44	188,637	191,660	1.6%
45-64	229,879	226,369	-1.5%
65+	108,072	125,489	16.1%
<b>Indiana State</b>	<b>6,612,768</b>	<b>6,738,573</b>	<b>1.9%</b>
0-17	1,578,079	1,571,356	-0.4%
Male, 18-44	1,178,486	1,187,607	0.8%
Female, 18-44	1,160,314	1,169,877	0.8%
45-64	1,729,765	1,695,267	-2.0%
65+	966,124	1,114,466	15.4%

Source: State of Indiana by the Indiana Business Research Center, March 2018

**Description**

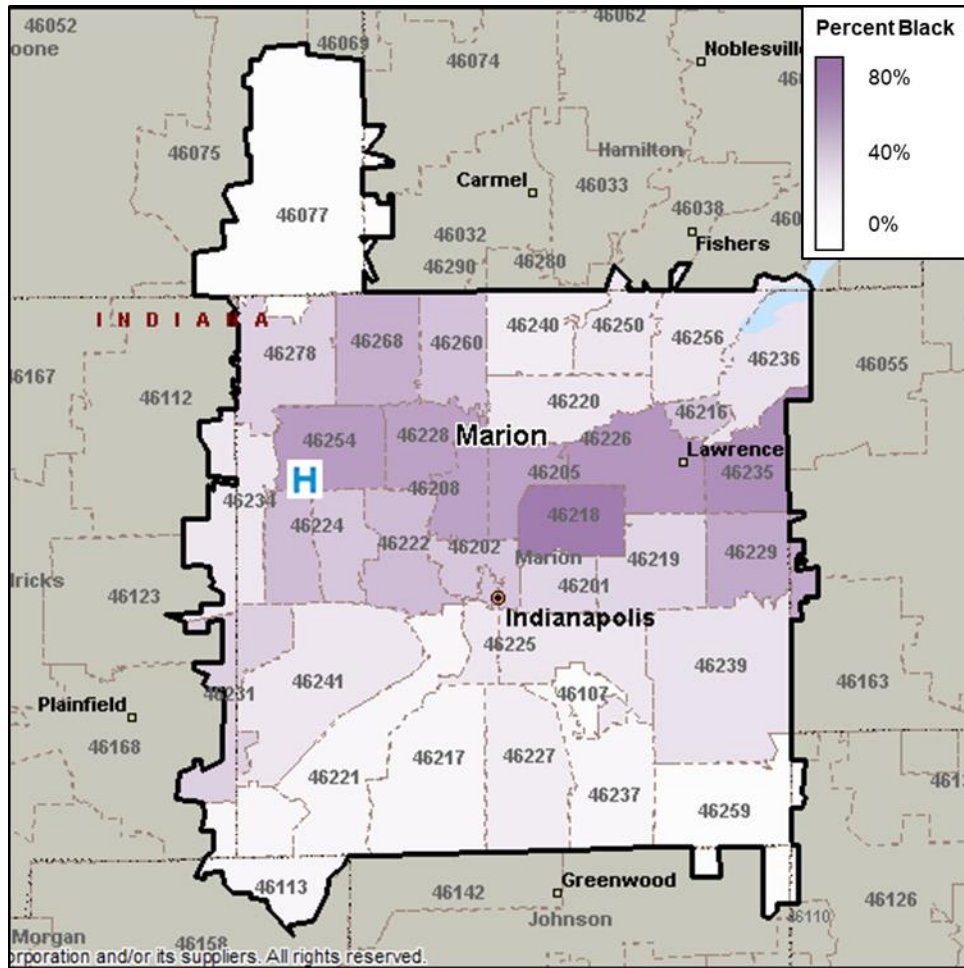
Exhibit 11 shows the community's population for certain age and sex cohorts in 2015, with projections to 2020.

**Observations**

- The number of persons aged 65 years and older is projected to grow by 16.1 percent in Marion County and 15.4 percent in Indiana between 2015 and 2020. These cohorts are expected to grow at much faster rates than the population as a whole.
- The growth of older populations is likely to lead to growing need for health services (including rehabilitation services), since on an overall per-capita basis, older individuals typically need and use more services than younger persons.



**Exhibit 12: Percent of Population - Black, 2015**



Source: U.S. Census ACS 2016 5-year estimates and Microsoft MapPoint

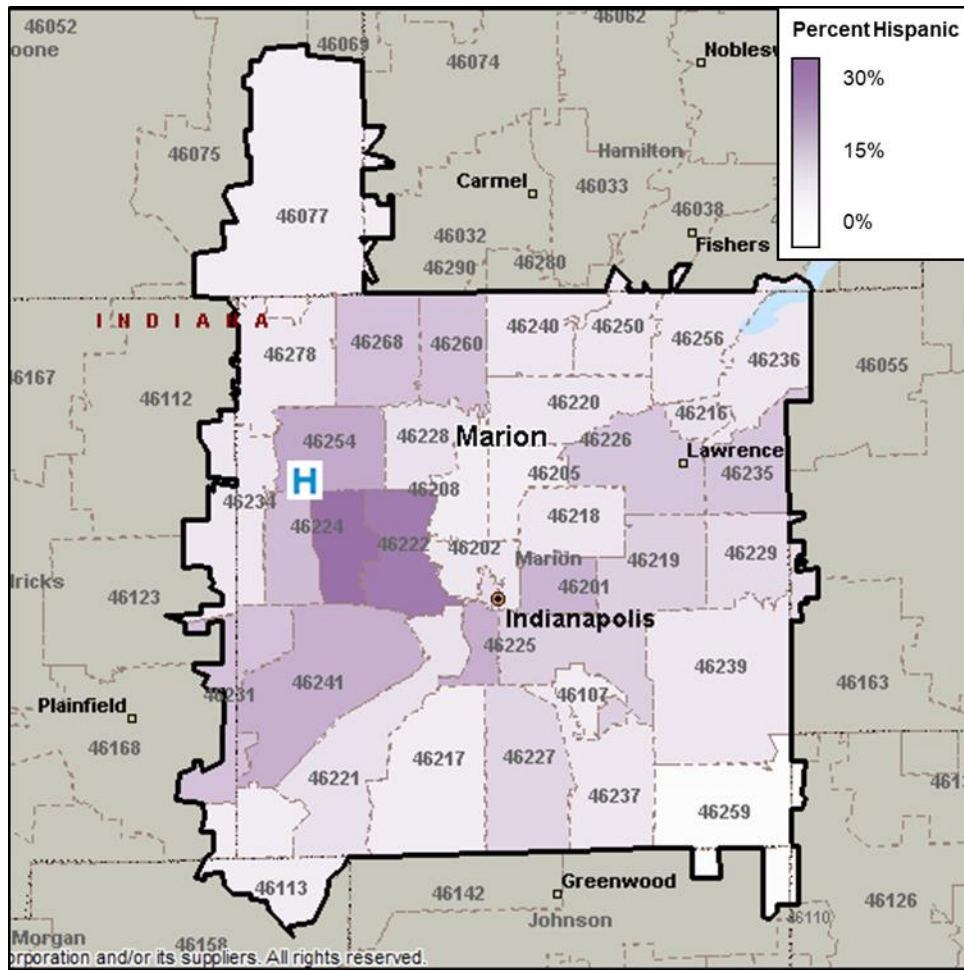
**Description**

Exhibit 12 portrays locations where the percentages of the population that are Black were highest in 2015. The diversity of the community is important to recognize given the presence of health disparities and barriers to health care access experienced by different racial and ethnic groups. The prevalence of hypertension and stroke is known to be higher for Blacks than for Whites.

**Observations**

- Over 50 percent of residents of six community ZIP codes (46218, 46235, 46226, 46254, 46208, and 46205) in 2015 were Black.
- In 2015, the percent of residents that were Black was under two percent in three of the community’s 38 ZIP codes (46077, 46107, and 46259).

**Exhibit 13: Percent of Population – Hispanic (or Latino), 2015**



Source: U.S. Census ACS 2016 5-year estimates and Microsoft MapPoint

**Description**

Exhibit 13 portrays locations in the community where the percentages of the population that are Hispanic (or Latino) were highest in 2015. The diversity of the community is important to recognize given the presence of health disparities and barriers to health care access experienced by different racial and ethnic groups.

**Observations**

- The percentage of residents that are Hispanic (or Latino) was highest in ZIP codes 46224 (29.9 percent) and 46222 (26.5 percent) – both located west of the hospital.

**Exhibit 14: Other Socioeconomic Indicators, 2012-2016**

Measure	Marion County	Indiana	United States
Population 25+ without High School Diploma	14.4%	11.9%	13.0%
Population with a Disability	13.7%	13.6%	12.5%
Population Linguistically Isolated	6.0%	3.2%	8.5%

Source: U.S. Census, ACS 5-Year Estimates, 2017

**Description**

Exhibit 14 portrays the percent of the population (aged 25 years and above) without a high school diploma, with a disability, and linguistically isolated.

**Observations**

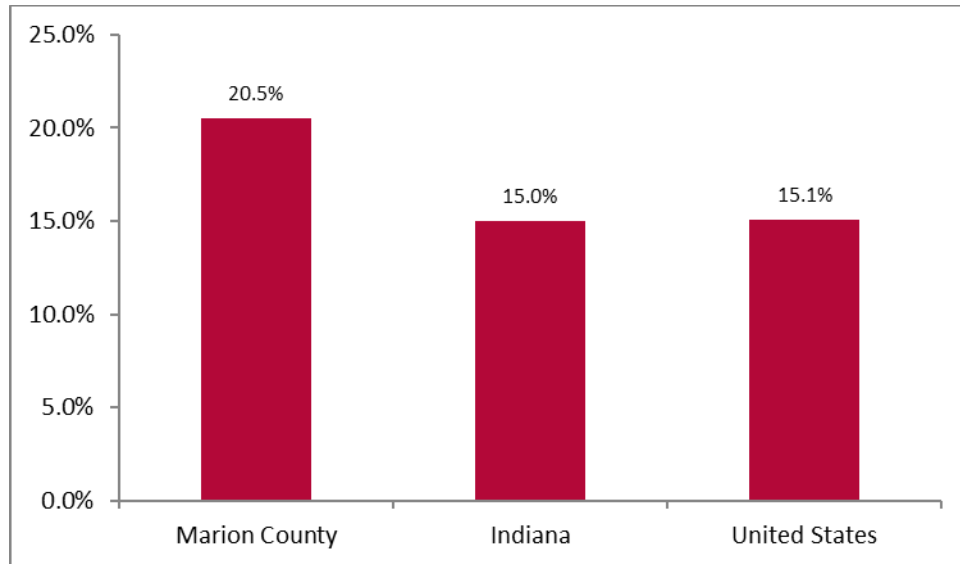
- Marion County had a higher percentage of residents aged 25 years and older without a high school diploma than the Indiana and U.S. averages.
- Marion County also had a higher percentage of the population with a disability compared to Indiana and U.S. averages.
- Compared to Indiana, Marion County had a higher proportion of the population that is linguistically isolated. Linguistic isolation is defined as residents who speak a language other than English and speak English less than “very well.”

## Economic indicators

The following economic indicators with implications for health were assessed: (1) people in poverty; (2) unemployment rates; (3) insurance status; and (4) crime rates.

### People in Poverty

**Exhibit 15: Percent of People in Poverty, 2012-2016**



Source: U.S. Census, ACS 5-Year Estimates, 2017

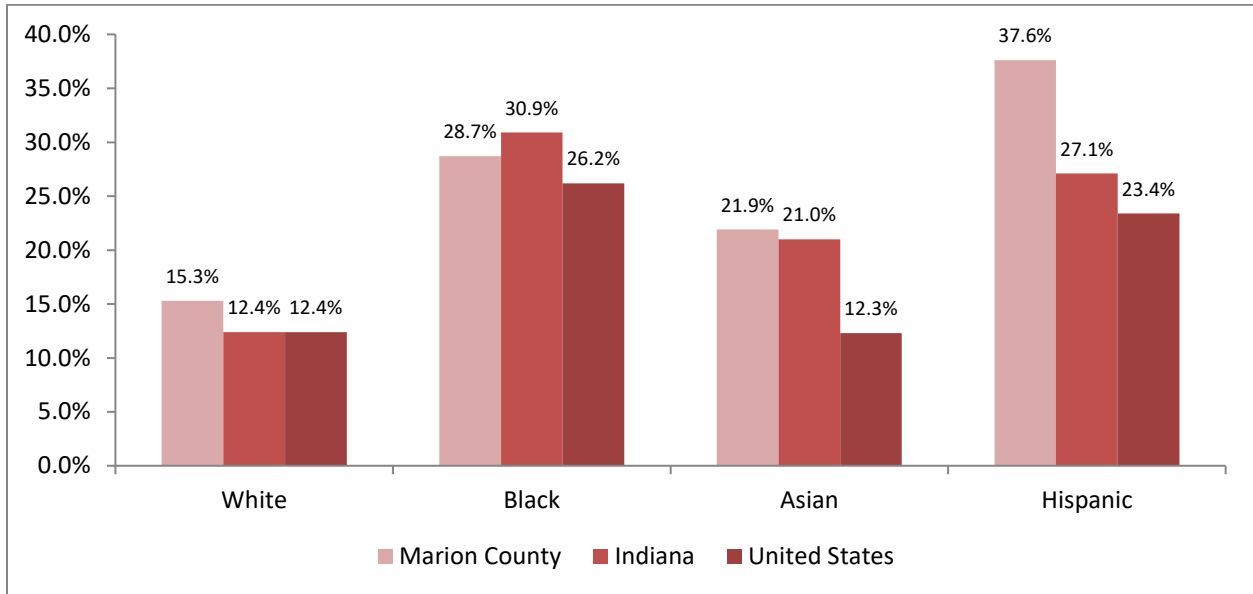
### Description

Exhibit 15 portrays recent, average poverty rates for Marion County, Indiana, and the U.S.

### Observations

- The poverty rate in Marion County has been well above Indiana and national averages.

**Exhibit 16: Poverty Rates by Race and Ethnicity, 2012-2016**



Source: U.S. Census, ACS 5-Year Estimates, 2017

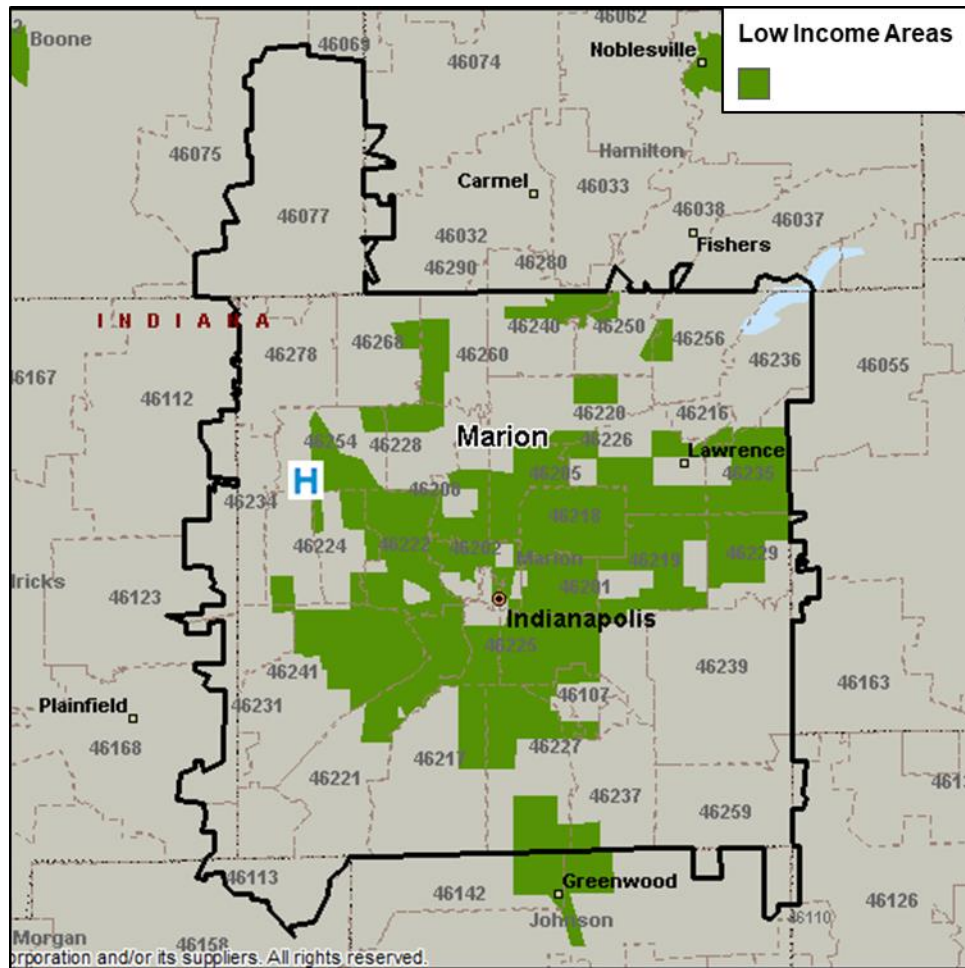
### Description

Exhibit 16 portrays poverty rates in Marion County, Indiana, and the U.S. by race and ethnicity.

### Observations

- Poverty rates in Marion County have been higher than national averages for all population cohorts.
- Poverty rates for Black and Hispanic residents of Marion County have been much higher than rates for White residents.

Exhibit 17: Low Income Census Tracts, 2017



Source: US Department of Agriculture Economic Research Service, ESRI, 2017

### Description

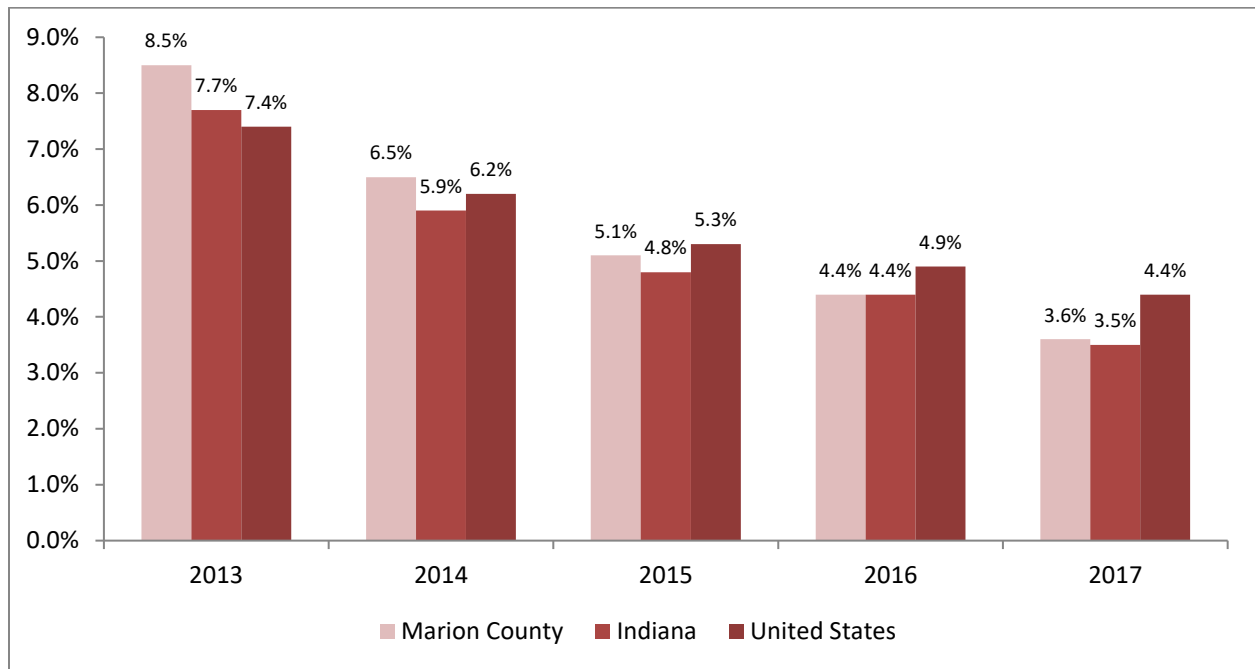
Exhibit 17 portrays the location of federally-designated low income census tracts in Marion County.

### Observations

- Low income census tracts have been prevalent throughout Marion County and in areas surrounding the hospital.

**Unemployment**

**Exhibit 18: Unemployment Rates, 2013-2017**



Source: Bureau of Labor Statistics, 2018

**Description**

Exhibit 18 shows unemployment rates for 2013 through 2017 for Marion County, with Indiana and national rates for comparison.

**Observations**

- Between 2013 and 2017, unemployment rates at the local, state, and national levels declined significantly.
- In recent years, rates in Marion County have been at or above Indiana averages, but below U.S. averages.

**Insurance Status**

**Exhibit 19: Percent of the Population without Health Insurance, 2015**

County	Population	Population Uninsured	Percent Uninsured
Marion County	922,012	127,787	13.9%
Indiana	6,490,256	747,942	11.5%
United States	313,576,137	36,700,246	11.7%

Source: U.S. Census, ACS 5-Year Estimates, 2017

**Description**

Exhibit 19 presents the estimated percent of people uninsured in Marion County and Indiana in 2015.

**Observations**

- In 2015, uninsurance rates were comparatively high in ZIP codes 46201, 46218, 46222, 46224, 46225, 46226, and 46254 (central portions of Marion County).
- Subsequent to the Affordable Care Act’s passage, a June 2012 Supreme Court ruling provided states with discretion regarding whether or not to expand Medicaid eligibility. Indiana was one of the states that expanded Medicaid. Across the United States, uninsured rates have fallen most in states that decided to expand Medicaid.<sup>11</sup>

<sup>11</sup> See: <http://hrms.urban.org/briefs/Increase-in-Medicaid-under-the-ACA-reduces-uninsurance.html>



**Crime**

**Exhibit 20: Crime Rates by Type and Jurisdiction, Per 100,000, 2016**

Indicator	Indianapolis (2016)	Indiana (2016)
Violent crime	1,374.4	<b>407.4</b>
Murder	17.1	<b>6.7</b>
Rape (revised definition)	79.0	<b>38.0</b>
Robbery	458.9	<b>111.2</b>
Aggravated assault	819.4	<b>251.5</b>
Property crime	4,794.8	<b>2,606.5</b>
Burglary	1,178.4	<b>517.4</b>
Larceny - theft	3,039.8	<b>1,865.5</b>
Motorvehicle theft	576.7	<b>223.5</b>

Source: Federal Bureau of Investigation, 2017

**Description**

Exhibit 20 provides selected crime statistics for Indianapolis and for Indiana.

**Observations**

- 2016 crime rates in Indianapolis were well above Indiana averages.
- Violence and crime are significant contributors to injuries that lead to the need for rehabilitation services.

### **Local Health Status and Access Indicators**

This section assesses health status and access indicators for Marion County. Data sources include: (1) County Health Rankings, (2) the Indiana State Department of Health, and (3) the CDC’s Behavioral Risk Factor Surveillance System.

Throughout this section, data and cells are highlighted if indicators are unfavorable because they exceed benchmarks (e.g., Indiana, peer group, or U.S. averages). Where confidence interval data are available, cells are highlighted only if variances are unfavorable and statistically significant.

APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

County Health Rankings

Exhibit 21: County Health Rankings, 2015 and 2018

Measure	Marion County	
	2015	2018
<b>Health Outcomes</b>	74	75
<b>Health Factors</b>	89	92
<b>Length of Life</b>	69	77
Premature death	69	77
<b>Quality of Life</b>	74	79
Poor or fair health	49	69
Poor physical health days	36	32
Poor mental health days	48	61
Low birthweight	85	89
<b>Health Behaviors</b>	86	91
Adult smoking	47	76
Adult obesity	40	46
Food environment index	92	89
Physical inactivity	19	23
Access to exercise opportunities	4	4
Excessive drinking	46	85
Alcohol-impaired driving deaths	55	40
Sexually transmitted infections	92	92
Teen births	88	82
<b>Clinical Care</b>	32	24
Uninsured	86	87
Primary care physicians	12	11
Dentists	2	1
Mental health providers	2	3
Preventable hospital stays	28	22
Diabetes monitoring	61	73
Mammography screening	44	42
<b>Social &amp; Economic Factors</b>	92	92
High school graduation	90	92
Some college	19	20
Unemployment	54	48
Children in poverty	88	91
Income inequality	85	88
Children in single-parent households	92	92
Social associations	66	65
Violent crime	71	69
Injury deaths	51	67
<b>Physical Environment</b>	68	90
Air pollution	57	91
Severe housing problems	87	90
Driving alone to work	25	24
Long commute - driving alone	32	27

Source: County Health Rankings, 2018

## Description

Exhibit 21 presents *County Health Rankings*, a University of Wisconsin Population Health Institute initiative funded by the Robert Wood Johnson Foundation, which incorporates a variety of health status indicators into a system that ranks each county/city within each state in terms of “health factors” and “health outcomes.” Indicators and composites are grouped into the following categories: health behaviors, clinical care,<sup>12</sup> social and economic factors, and physical environment.<sup>13</sup> *County Health Rankings* is updated annually. *County Health Rankings 2018* relies on data from 2006 to 2017, with most data from 2011 to 2016.

The exhibit presents 2015 and 2018 rankings for each available indicator category. Rankings indicate how the county ranked among all 92 counties in Indiana, with 1 indicating the highest (most favorable) ranking and 92 the lowest (least favorable).

Light grey shading indicates rankings in the bottom half of Indiana counties; dark grey shading indicates rankings in bottom quartile of Indiana counties.

## Observations

- In 2018, Marion County ranked in the bottom half of Indiana counties for 29 of the 42 indicators assessed. Of those, 25 were in the bottom quartile, including overall health outcomes, length of life, quality of life, health behaviors, and others.
- Marion County ranked last (92 out of 92 counties) in health factors, sexually transmitted infections, social and economic factors, high school graduation rates, and prevalence of children living in single-parent households.
- Marion County ranked poorly on several measures associated with stroke and injury risks, including: smoking, obesity, excessive drinking, diabetes monitoring, high school graduation rates, violent crime, and injury deaths.

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<sup>12</sup>A composite measure of Access to Care, which includes the percent of the population without health insurance and ratio of population to primary care physicians, and of Quality of Care, which includes the hospitalization rate for ambulatory care sensitive conditions, whether diabetic Medicare patients are receiving HbA1C screening, and percent of chronically ill Medicare enrollees in hospice care in the last 8 months of life.

<sup>13</sup>A composite measure that examines Environmental Quality, which includes the number of air pollution-particulate matter days and air pollution-ozone days, and of Built Environment, which includes access to healthy food and recreational facilities and the percent of restaurants that are fast food.

APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

**Exhibit 22: County Health Rankings Data Compared to Indiana and U.S. Averages, 2018**

Indicator Category	Indicator	Marion County	Indiana	U.S.
<b>Health Outcomes</b>				
Length of life	Years of potential life lost before age 75 per 100,000 population (age-adjusted)	9,216	<b>7,794</b>	6,700
Quality of life	Percentage of adults reporting fair or poor health (age-adjusted)	17.7	<b>17.7</b>	16.0
Quality of life	Average number of physically unhealthy days reported in past 30 days (age-adjusted)	3.8	<b>3.9</b>	3.7
Quality of life	Average number of mentally unhealthy days reported in past 30 days (age-adjusted)	4.1	<b>4.3</b>	3.8
Quality of life	Percentage of live births with low birthweight (< 2500 grams)	9.1	<b>8.0</b>	8.0
<b>Health Factors</b>				
<b>Health Behaviors</b>				
Adult smoking	Percentage of adults who are current smokers	21.4	<b>21.1</b>	17.0
Adult obesity	Percentage of adults that report a BMI of 30 or more	32.7	<b>32.0</b>	28.0
Food environment index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	6.6	<b>7.0</b>	7.7
Physical inactivity	Percentage of adults age 20 and over reporting no leisure-time physical activity	26.5	<b>26.8</b>	23.0
Access to exercise opportunities	Percentage of population with adequate access to locations for physical activity	87.2	<b>76.6</b>	83.0
Excessive drinking	Percentage of adults reporting binge or heavy drinking	19.2	<b>18.6</b>	18.0
Alcohol-impaired driving deaths	Percentage of driving deaths with alcohol involvement	19.6	<b>22.4</b>	29.0
Sexually transmitted infections	Number of newly diagnosed chlamydia cases per 100,000 population	949.3	<b>437.9</b>	478.8
Teen births	Number of births per 1,000 female population ages 15-19	41.4	<b>30.5</b>	27.0
<b>Clinical Care</b>				
Uninsured	Percentage of population under age 65 without health insurance	13.7	<b>11.3</b>	11.0
Primary care physicians	Ratio of population to primary care physicians	1,245:1	<b>1,505:1</b>	1,320:1
Dentists	Ratio of population to dentists	1,179:1	<b>1,852:1</b>	1,480:1
Mental health providers	Ratio of population to mental health providers	402:1	<b>701:1</b>	470:1
Preventable hospital stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enr	49.3	<b>56.8</b>	49.0
Diabetes monitoring	Percentage of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring	82.8	<b>84.7</b>	85.0
Mammography screening	Percentage of female Medicare enrollees ages 67-69 that receive mammography screening	61.5	<b>62.1</b>	63.0

Source: County Health Rankings, 2018

APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

**Exhibit 22: County Health Rankings Data Compared to Indiana and U.S. Averages, 2018 (continued)**

Indicator Category	Indicator	Marion County	Indiana	U.S.
<b>Social and Economic Environment</b>				
High school graduation	Percentage of ninth-grade cohort that graduates in four years	72.1	<b>87.2</b>	83.0
Some college	Percentage of adults ages 25-44 with some post-secondary education	62.3	<b>62.0</b>	65.0
Unemployment	Percentage of population ages 16 and older unemployed but seeking work	4.4	<b>4.4</b>	4.9
Children in poverty	Percentage of children under age 18 in poverty	28.0	<b>19.1</b>	20.0
Income inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	4.8	<b>4.4</b>	5.0
Children in single-parent households	Percentage of children that live in a household headed by single parent	47.3	<b>33.7</b>	34.0
Social associations	Number of membership associations per 10,000 population	11.6	<b>12.3</b>	9.3
Violent crime	Number of reported violent crime offenses per 100,000 population	1196.7	<b>356.2</b>	380.0
Injury deaths	Number of deaths due to injury per 100,000 population	83.3	<b>69.9</b>	65.0
<b>Physical Environment</b>				
Air pollution - particulate matter <sup>1</sup>	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	12.3	<b>11.1</b>	8.7
Severe housing problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	19.0	<b>14.0</b>	19.0
Driving alone to work	Percentage of the workforce that drives alone to work	82.1	<b>83.0</b>	76.0
Long commute - driving alone	Among workers who commute in their car alone, the percentage that commute more than 30 minutes	28.5	<b>30.5</b>	35.0

Source: County Health Rankings, 2018

## APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

### Description

Exhibit 22 provides data for each underlying indicator of the composite categories in the *County Health Rankings*.<sup>14</sup> The exhibit also includes Indiana and national averages. Light grey shading highlights indicators found to be worse than the Indiana average; dark grey shading highlights indicators more than 50 percent worse than the Indiana average.

### Observations

- Marion County benchmarks unfavorably to Indiana and U.S. averages for most of the indicators incorporated into *County Health Rankings*.
- Values for two Marion County indicators were over 50 percent above Indiana averages:
  - Number of newly diagnosed chlamydia cases per 100,000 population
  - Number of reported violent crime offenses per 100,000 population

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<sup>14</sup> County Health Rankings provides details about what each indicator measures, how it is defined, and data sources at [http://www.countyhealthrankings.org/sites/default/files/resources/2013Measures\\_datasources\\_years.pdf](http://www.countyhealthrankings.org/sites/default/files/resources/2013Measures_datasources_years.pdf)

**Community Health Status Indicators**

**Exhibit 23: Community Health Status Indicators, 2018**

Indicator	Marion County
Years of Potential Life Lost Rate	
% Fair/Poor Health	
Physically Unhealthy Days	
Mentally Unhealthy Days	
% Low Birth Weight	
% Smokers	
% Obese	
Food Environment Index	
% Physically Inactive	
% With Access to Exercise Opportunities	
% Excessive Drinking	
% Driving Deaths Alcohol-Impaired	
Chlamydia Rate	
Teen Birth Rate	
% Uninsured	
Primary Care Physicians Rate	
Dentist Rate	
Mental Health Professionals Rate	
Preventable Hosp. Rate	
% Receiving HbA1c Screening	
% Mammography Screening	
High School Graduation Rate	
% Some College	
% Unemployed	
% Children in Poverty	
Income Ratio	
% Single-Parent Households	
Social Association Rate	
Violent Crime Rate	
Injury Death Rate	
Average Daily PM2.5	
% Severe Housing Problems	
% Drive Alone to Work	
% Long Commute - Drives Alone	

Source: County Health Rankings and Verité Analysis, 2018.



## Description

County Health Rankings has organized community health data for all 3,143 counties in the United States. Following a methodology developed by the Centers for Disease Control's (CDC) *Community Health Status Indicators Project* (CHSI), County Health Rankings also publishes lists of "peer counties," so comparisons with peer counties in other states can be made. Each county in the U.S. is assigned 30 to 35 peer counties based on 19 variables including population size, population growth, population density, household income, unemployment, percent children, percent elderly, and poverty rates.

This *Community Health Status Indicators* analysis formerly was available from the CDC. Because comparisons with peer counties (rather than only counties in the same state) are meaningful, Verité Healthcare Consulting rebuilt the CHSI comparisons for this and other CHNAs.

Exhibit 23 compares Marion County to its respective peer counties and highlights community health issues found to rank in the bottom half and bottom quartile of the counties included in the analysis. Light grey shading indicates rankings in the bottom half of peer counties; dark grey shading indicates rankings in the bottom quartile of peer counties.

## Observations

- Marion County ranks in the bottom quartile of its peer counties for the following community health indicators:
  - Years of potential life lost
  - Percent of adults smoking
  - Percent of adults who are obese
  - Percent of adults who are physically inactive
  - Teen birth rate
  - Violent crime rate
  - Injury death rate
  - Average Daily PM2.5 (the average daily density of fine particulate matter in micrograms per cubic meter, a measure of air quality and pollution)
  - Percent who drive alone to work
- A number of these problematic indicators are associated with stroke and injury risks.

APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

Indiana State Department of Health

Exhibit 24: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2016

Indicator	Marion County	Indiana
Major cardiovascular diseases	232.5	<b>237.4</b>
Diseases of heart	177.7	<b>180.6</b>
Cancer	182.0	<b>172.5</b>
All other diseases	196.2	<b>171.3</b>
Ischemic heart diseases	98.6	<b>102.2</b>
Other diseases of heart	64.0	<b>68.3</b>
Chronic lower respiratory diseases	61.7	<b>54.6</b>
All other and unspecified accidents and adverse effects	51.1	<b>40.1</b>
Cerebrovascular diseases (stroke)	39.4	<b>39.5</b>
Alzheimer's disease	32.5	<b>34.9</b>
Diabetes mellitus	27.0	<b>26.0</b>
Nephritis, nephrotic syndrome and nephrosis (kidney disease)	22.8	<b>18.4</b>
Intentional self-harm (suicide)	15.2	<b>15.4</b>
Influenza and pneumonia	13.0	<b>12.6</b>
Motor vehicle accidents	12.5	<b>12.4</b>
Chronic liver disease and cirrhosis	13.5	<b>11.2</b>
Hypertensive heart disease with or without renal disease	15.1	<b>10.2</b>
Essential hypertension and hypertensive renal disease	7.5	<b>10.0</b>
Assault (homicide)	18.7	<b>7.6</b>
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (excluding SIDS)	4.9	<b>6.2</b>
Other diseases of circulatory system	5.9	<b>6.2</b>
Certain conditions originating in the perinatal period	6.8	<b>4.9</b>
Congenital malformations, deformations and chromosomal abnormalities	4.1	<b>3.9</b>
All other external causes	1.9	<b>2.6</b>
Atherosclerosis	2.0	<b>1.1</b>
Pregnancy, childbirth and the puerperium	1.3	<b>0.8</b>
Sudden infant death syndrome (SIDS)	0.2	<b>0.7</b>
Peptic ulcer	0.7	<b>0.5</b>

Source: Indiana State Department of Health, 2017

## APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

### Description

Exhibit 24 provides age-adjusted mortality rates for selected causes of death in 2016. Light grey shading highlights indicators worse than the Indiana average; dark grey shading highlights any indicators more than 50 percent worse than the Indiana average.

### Observations

- Mortality rates for assault (homicide), atherosclerosis, and pregnancy, childbirth and the puerperium were more than 50 percent worse than the Indiana average.

APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

**Behavioral Risk Factor Surveillance System**

**Exhibit 25A: Behavioral Risk Factor Surveillance System,  
Indiana Data by Race/Ethnicity, 2016**

Indicator	White	Black	Hispanic	Indiana
Current Smokers	21.0%	23.0%	17.8%	<b>21.1%</b>
Adults without Health Care Coverage	10.8%	17.1%	39.4%	<b>13.6%</b>
Obese (based on BMI)	32.1%	42.1%	26.8%	<b>32.5%</b>
Diabetes	11.4%	16.2%	8.8%	<b>11.5%</b>
Angina or Coronary Heart Disease	5.1%	4.2%	2.2%	<b>4.9%</b>
No Physical Activity in Past Month	26.3%	27.5%	32.9%	<b>26.8%</b>
Asthma	9.8%	15.9%	6.3%	<b>10.2%</b>

Source: Behavioral Risk Factor Surveillance System, 2016

**Exhibit 25B: Behavioral Risk Factor Surveillance System,  
Indiana Data by Income and Education Level, 2016**

Indicator	< \$15,000	\$15- \$24,999	\$25- \$49,999	\$50- \$74,999	≥\$75,000	No High School Diploma	Indiana
Current Smokers	38.5%	30.0%	25.3%	16.6%	10.3%	38.1%	<b>21.1%</b>
Adults without Health Care Coverage	23.7%	25.3%	16.3%	7.6%	3.6%	33.1%	<b>13.6%</b>
Obese (based on BMI)	36.5%	35.3%	34.1%	34.6%	28.7%	34.0%	<b>32.5%</b>
Diabetes	18.7%	17.4%	11.9%	9.3%	6.5%	15.4%	<b>11.5%</b>
Angina or Coronary Heart Disease	8.3%	6.5%	5.1%	3.0%	3.0%	6.3%	<b>4.9%</b>
No Physical Activity in Past Month	42.5%	38.0%	28.6%	20.8%	13.7%	41.2%	<b>26.8%</b>
Asthma	20.4%	12.6%	9.5%	7.5%	7.1%	15.6%	<b>10.2%</b>

Source: Behavioral Risk Factor Surveillance System, 2016

**Description**

The Centers for Disease Control and Prevention’s (CDC) Behavioral Risk Factor Surveillance System (BRFSS) gathers data through a telephone survey regarding health risk behaviors, healthcare access, and preventive health measures. Data are collected for the entire United States. Analysis of BRFSS data can identify localized health issues, trends, and health disparities, and can enable county, state, or nation-wide comparisons.

Exhibits 25A and 25B depict BRFSS data for the state of Indiana by race/ethnicity, income level, and for those without a high school diploma. Light grey shading highlights indicators worse than the Indiana average; dark grey shading highlights indicators more than 50 percent worse than the Indiana average.

## APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

### Observations

- The BRFSS data indicate that on all but one measure presented, risk factors were higher for Black residents of Indiana than for Whites (and for lower-income residents than for those with higher incomes). Hispanic (or Latino) residents have experienced higher uninsured and physical inactivity rates. Most of the indicators in the exhibits represent risk factors for stroke and injury – including smoking, obesity, diabetes, and physical inactivity.
- BRFSS indicators for residents without a high school diploma were worse than average for all indicators presented.

APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

**Ambulatory Care Sensitive Conditions (Prevention Quality Indicators)**

**Exhibit 26: PQI (ACSC) Rates per 100,000, 2017**

County	Diabetes Short-Term Complications	Perforated Appendix	Diabetes Long-Term Complications	Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults	Hypertension	Heart Failure	Low Birth Weight
<b>Marion County</b>	<b>80.2</b>	<b>695.2</b>	<b>108.4</b>	<b>728.0</b>	<b>102.1</b>	<b>508.0</b>	<b>7,904.1</b>
<b>Indiana</b>	<b>59.0</b>	<b>632.7</b>	<b>110.2</b>	<b>664.1</b>	<b>63.3</b>	<b>434.8</b>	<b>6,174.2</b>
United States	68.9	351.4	101.6	480.9	49.2	321.6	N/A

Source: IU Health, 2018 - Note: Rates are not age-sex adjusted

County	Dehydration	Community-Acquired Pneumonia	Urinary Tract Infection	Uncontrolled Diabetes	Asthma in Younger Adults	Lower-Extremity Amputation Among Patients with Diabetes
<b>Marion County</b>	<b>111.3</b>	<b>133.6</b>	<b>131.2</b>	<b>46.1</b>	<b>41.9</b>	<b>89.5</b>
<b>Indiana</b>	<b>138.5</b>	<b>184.5</b>	<b>148.2</b>	<b>40.6</b>	<b>32.0</b>	<b>82.4</b>
United States	130.1	249.7	155.6	13.2	41.1	17.2

Source: IU Health, 2018 - Note: Rates are not age-sex adjusted

## Description

Exhibit 26 provides 2017 ACSC (PQI) rates (per 100,000 persons) for Marion County – with comparisons to Indiana and U.S. averages. Light grey shading highlights indicators worse than Indiana averages; dark grey shading highlights indicators more than 50 percent worse than Indiana averages.

ACSCs are health “conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.”<sup>15</sup> As such, rates of hospitalization for these conditions can “provide insight into the quality of the health care system outside of the hospital,” including the accessibility and utilization of primary care, preventive care and health education. Among these conditions are: angina without procedure, diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, and asthma.

Disproportionately high rates of discharges for ACSC indicate potential problems with the availability or accessibility of ambulatory care and preventive services and can suggest areas for improvement in the health care system and ways to improve outcomes.

## Observations

- The rates of admissions for ACSC exceeded Indiana averages for nine of thirteen conditions: diabetes short-term complications, perforated appendix, COPD, hypertension, heart failure, low birth weight, uncontrolled diabetes, asthma in younger adults, and lower-extremity amputation among patients with diabetes.
- Hypertension and diabetes both are known to contribute to stroke risks.

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<sup>15</sup>Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

**Exhibit 27: Ratio of ACSC Rates for Marion County and Indiana, 2017**

County	Marion County	Indiana	Ratio: Marion/Indiana
Hypertension	102.1	63.3	1.6
Diabetes Short-Term Complications	80.2	59.0	1.4
Asthma in Younger Adults	41.9	32.0	1.3
Low Birth Weight	7,904.1	6,174.2	1.3
Heart Failure	508.0	434.8	1.2
Uncontrolled Diabetes	46.1	40.6	1.1
Perforated Appendix	695.2	632.7	1.1
Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults	728.0	664.1	1.1
Lower-Extremity Amputation Among Patients with Diabetes	89.5	82.4	1.1
Diabetes Long-Term Complications	108.4	110.2	1.0
Urinary Tract Infection	131.2	148.2	0.9
Dehydration	111.3	138.5	0.8
Community-Acquired Pneumonia	133.6	184.5	0.7

Source: IU Health, 2018 - Note: Rates are not age-sex adjusted

**Description**

Exhibit 27 provides the ratio of Ambulatory Care Sensitive Conditions (ACSC) also referred to as Preventative Quality Indicators (PQI) rates for Marion County compared to Indiana averages. Conditions where the ratios are highest (meaning that the PQI rates in the community are the most above average) are presented first.

**Observations**

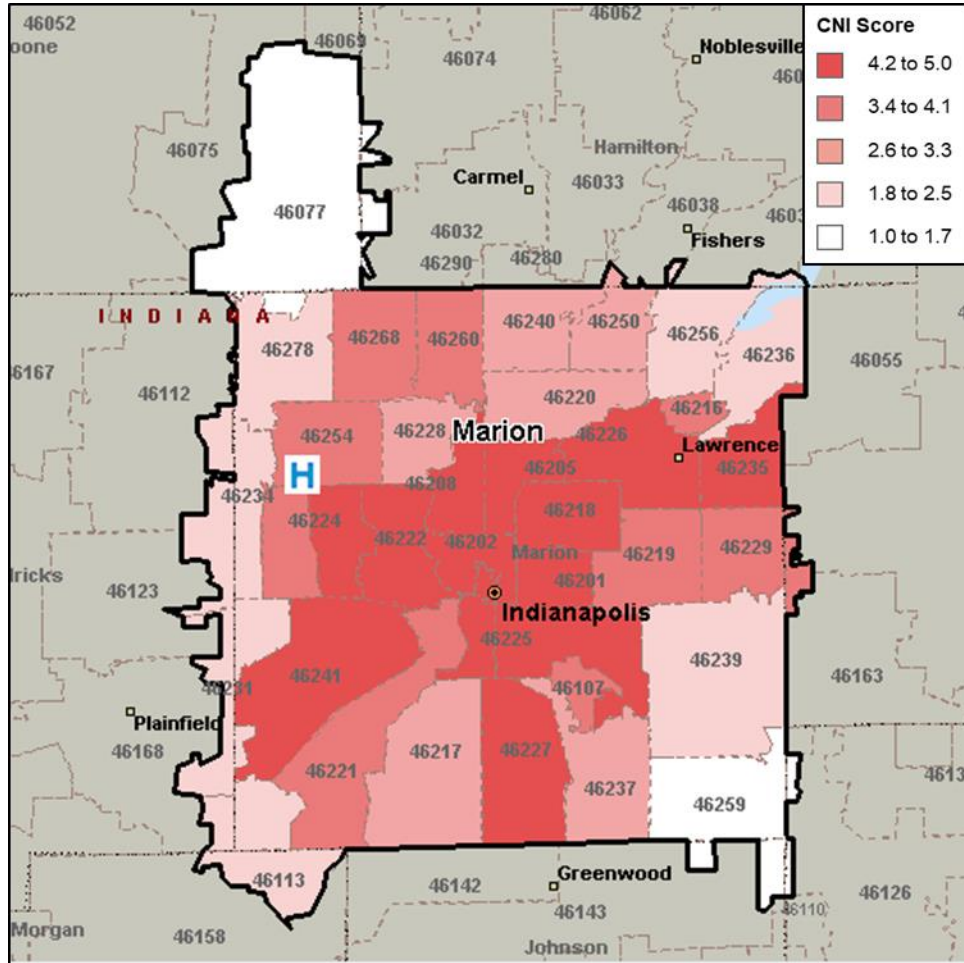
- In the community, ACSC rates for hypertension were 60 percent higher than the Indiana average and rates of diabetes short-term complications were 40 percent higher.
- As stated previously, hypertension and diabetes both are known to contribute to stroke risks.



**Community Need Index™ and Food Deserts**

**Dignity Health Community Need Index**

**Exhibit 28: Community Need Index, 2017**



Source: Microsoft MapPoint and Dignity Health, 2017

**Description**

Exhibit 28 presents the *Community Need Index*™ (CNI) score for each ZIP code in Marion County. Higher scores (e.g., 4.2 to 5.0) indicate higher levels of community need. The national median score is calibrated to 3.0.

Dignity Health, a California-based hospital system, developed and published the CNI as a way to assess barriers to health care access. The index, available for every ZIP code in the United States, is derived from five social and economic indicators:

- The percentage of elders, children, and single parents living in poverty;

## APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without a high school diploma;
- The percentage of uninsured and unemployed residents; and
- The percentage of the population renting houses.

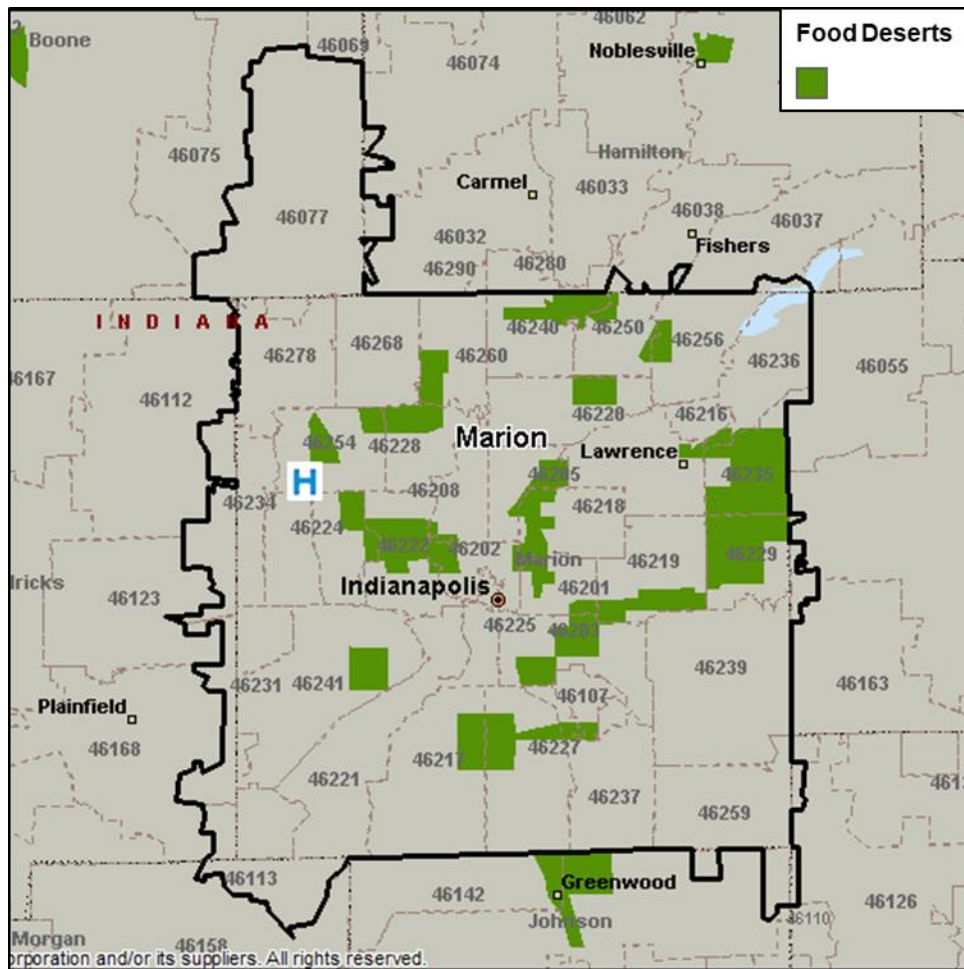
CNI scores are grouped into “Lowest Need” (1.0-1.7) to “Highest Need” (4.2-5.0) categories

### **Observations**

- Marion County scored a 3.8 on the CNI scale (on a weighted average basis), indicating that higher than average need exists in the county.
- Fourteen of 38 Marion County ZIP codes scored in the “highest need” category. Many of these are located in Indianapolis and proximate to the hospital.

Food Deserts

Exhibit 29: Food Deserts, 2017



Source: Microsoft MapPoint and U.S. Department of Agriculture, 2017

**Description**

Exhibit 29 shows the location of “food deserts” in the community.

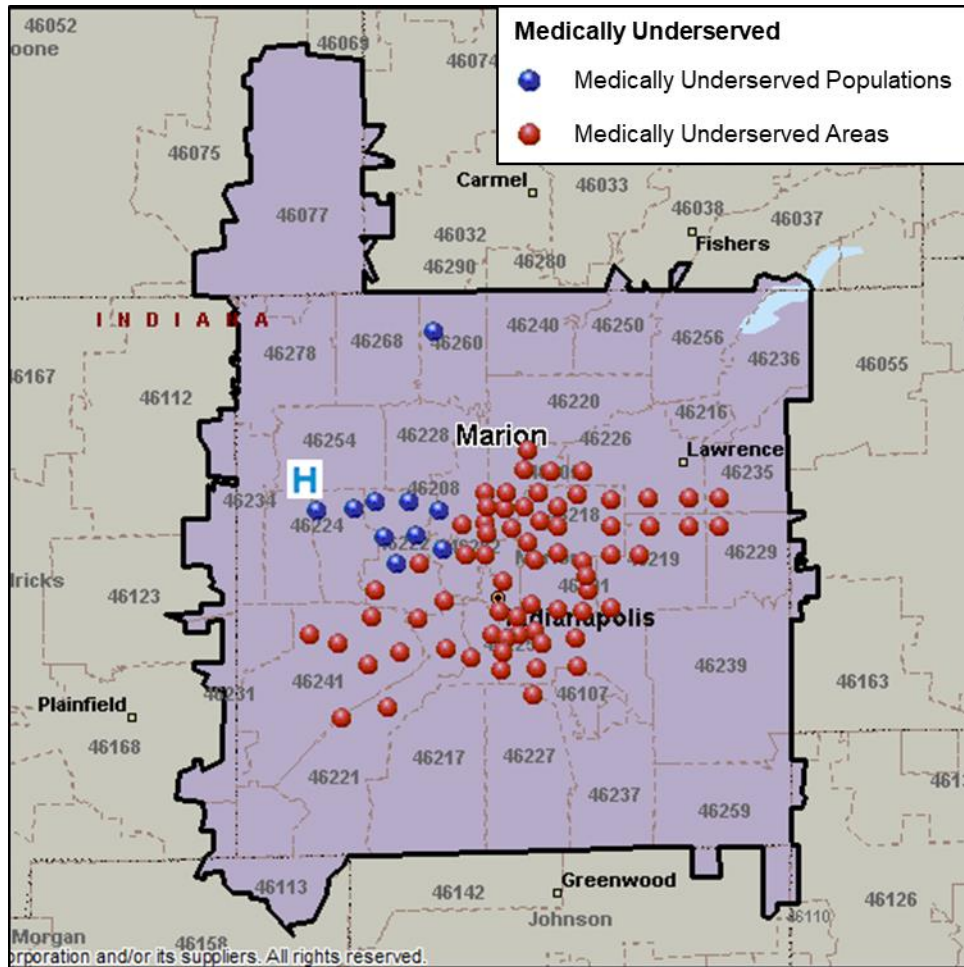
The U.S. Department of Agriculture’s Economic Research Service defines urban food deserts as low-income areas more than one mile from a supermarket or large grocery store and rural food deserts as more than 10 miles from a supermarket or large grocery store. Many government-led initiatives aim to increase the availability of nutritious and affordable foods to people living in these areas.

**Observations**

- Several census tracts in Marion County have been designated as food deserts, including several close to the hospital.

**Medically Underserved Areas and Populations**

**Exhibit 30: Medically Underserved Areas and Populations, 2017**



Source: Microsoft MapPoint and HRSA, 2017

**Description**

Exhibit 30 illustrates the location of Medically Underserved Areas (MUAs) in the community.

Medically Underserved Areas and Populations (MUA/Ps) are designated by the Health Resources and Services Administration (HRSA) based on an “Index of Medical Underservice.” The index includes the following variables: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.<sup>16</sup> Areas with a score of 62 or less are considered “medically underserved.”

Populations receiving MUP designation include groups within a geographic area with economic barriers or cultural and/or linguistic access barriers to receiving primary care. If a population

<sup>16</sup> Heath Resources and Services Administration. See <http://www.hrsa.gov/shortage/mua/index.html>

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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.”<sup>17</sup>

### Observations

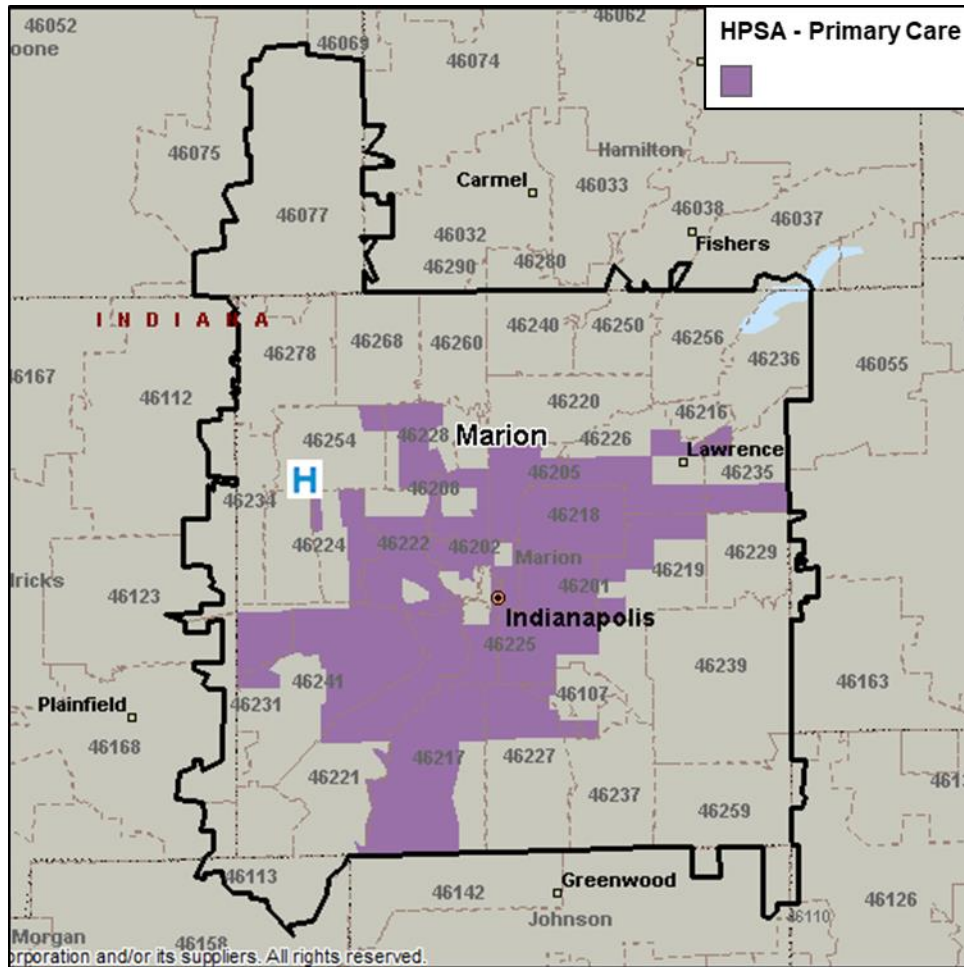
- Many census tracts throughout Marion County and Indianapolis have been designated as Medically Underserved.

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<sup>17</sup>*Ibid.*

**Health Professional Shortage Areas (HPSA)**

**Exhibit 31: Primary Care Health Professional Shortage Areas, 2018**



Source: Health Resources and Services Administration, 2018

**Description**

Exhibit 31 depicts the locations of federally-designated primary care HPSA areas.

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present. In addition to areas and populations that can be designated as HPSAs, a health care facility can receive federal HPSA designation and an additional Medicare payment if it provides primary medical care services to an area or population group identified as having inadequate access to primary care, dental, or mental health services. HPSAs can be: “(1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which

## APPENDIX B – SECONDARY DATA ASSESSMENT (MARION COUNTY)

is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility.”<sup>18</sup>

### Observations

- Census tracts throughout Marion County have been designated as HPSAs for Primary Care.

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<sup>18</sup> U.S. Health Resources and Services Administration, Bureau of Health Professionals. (n.d.). *Health Professional Shortage Area Designation Criteria*. Retrieved 2012, from <http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/index.html>

**Findings of Other Community Health Needs Assessments**

**Exhibit 32: Significant Needs Identified in Other CHNAs**

Prioritized Need	Frequency
Mental/behavioral health	5
Access to basic/primary health care	4
Obesity	4
Drug/substance abuse	3
Nutrition/access to healthy food	3
Poverty	3
Diabetes	2
Tobacco use/smoking	2
Transportation	2
Violence/crime	2

Source: Analysis of Other CHNA Reports by Verité, 2018

**Description**

Several other needs assessments conducted by hospital facilities were reviewed for this CHNA. Significant needs identified by these facilities are presented in Exhibit 32. The reviewed assessments include the following:

- Beacon Health System Pediatric Health Needs Assessment 2015
- Community Health Network CHNA 2015
- Franciscan St. Francis Health CHNA 2015
- Marion County Public Health Department Community Health Assessment 2014
- St. Vincent Indianapolis Hospital CHNA 2016

The Marion County Public Health Department (MCPHD) is working to publish an updated Community Health Assessment by the end of 2018.

**Observations**

- The following indicators most often were identified as significant in other hospital CHNAs that assessed needs in Marion County:
  - Mental and behavioral health
  - Access to basic and primary health care
  - Obesity
  - Drug and substance abuse
  - Nutrition and access to healthy foods
  - Poverty



## APPENDIX C – SECONDARY DATA ASSESSMENT (INDIANA)

This section presents an assessment of secondary data regarding health needs in the State of Indiana.

### Demographics

**Exhibit 33: Percent Change in Population by Age/Sex Cohort, 2015-2020**

Age/Sex Cohort	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
<b>Indiana State</b>	<b>6,612,768</b>	<b>6,738,573</b>	<b>1.9%</b>
0-17	1,578,079	1,571,356	-0.4%
Male, 18-44	1,178,486	1,187,607	0.8%
Female, 18-44	1,160,314	1,169,877	0.8%
45-64	1,729,765	1,695,267	-2.0%
65+	966,124	1,114,466	15.4%

Source: State of Indiana by the Indiana Business Research Center, March 2018

### Description

Exhibit 33 shows the state’s population for certain age and sex cohorts in 2015, with projections to 2020.

### Observations

- The number of persons aged 65 years and older is projected to increase by 15.4 percent between 2015 and 2020.
- The growth of older populations is likely to lead to growing need for health services (including rehabilitation services), since on an overall per-capita basis, older individuals typically need and use more services than younger persons.

APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

Indiana Health Status and Access Indicators

Exhibit 34: Indiana County Health Rankings Data Compared to U.S. Averages, 2018

Indicator Category	Indicator	Indiana	U.S.
<b>Health Outcomes</b>			
Length of life	Years of potential life lost before age 75 per 100,000 population (age-adjusted)	7,794	<b>6,700</b>
Quality of life	Percentage of adults reporting fair or poor health (age-adjusted)	17.7	<b>16.0</b>
Quality of life	Average number of physically unhealthy days reported in past 30 days (age-adjusted)	3.9	<b>3.7</b>
Quality of life	Average number of mentally unhealthy days reported in past 30 days (age-adjusted)	4.3	<b>3.8</b>
Quality of life	Percentage of live births with low birthweight (< 2500 grams)	8.0	<b>8.0</b>
<b>Health Factors</b>			
<b>Health Behaviors</b>			
Adult smoking	Percentage of adults who are current smokers	21.1	<b>17.0</b>
Adult obesity	Percentage of adults that report a BMI of 30 or more	32.0	<b>28.0</b>
Food environment index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	7.0	<b>7.7</b>
Physical inactivity	Percentage of adults age 20 and over reporting no leisure-time physical activity	26.8	<b>23.0</b>
Access to exercise opportunities	Percentage of population with adequate access to locations for physical activity	76.6	<b>83.0</b>
Excessive drinking	Percentage of adults reporting binge or heavy drinking	18.6	<b>18.0</b>
Alcohol-impaired driving deaths	Percentage of driving deaths with alcohol involvement	22.4	<b>29.0</b>
Sexually transmitted infections	Number of newly diagnosed chlamydia cases per 100,000 population	437.9	<b>478.8</b>
Teen births	Number of births per 1,000 female population ages 15-19	30.5	<b>27.0</b>
<b>Clinical Care</b>			
Uninsured	Percentage of population under age 65 without health insurance	11.3	<b>11.0</b>
Primary care physicians	Ratio of population to primary care physicians	1,505:1	<b>1,320:1</b>
Dentists	Ratio of population to dentists	1,852:1	<b>1,480:1</b>
Mental health providers	Ratio of population to mental health providers	701:1	<b>470:1</b>
Preventable hospital stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	56.8	<b>49.0</b>
Diabetes monitoring	Percentage of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring	84.7	<b>85.0</b>
Mammography screening	Percentage of female Medicare enrollees ages 67-69 that receive mammography screening	62.1	<b>63.0</b>

Source: County Health Rankings, 2018

APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

**Exhibit 34: Indiana County Health Rankings Data Compared to U.S. Averages, 2018 (continued)**

Indicator Category	Indicator	Indiana	U.S.
<b>Social and Economic Environment</b>			
High school graduation	Percentage of ninth-grade cohort that graduates in four years	87.2	<b>83.0</b>
Some college	Percentage of adults ages 25-44 with some post-secondary education	62.0	<b>65.0</b>
Unemployment	Percentage of population ages 16 and older unemployed but seeking work	4.4	<b>4.9</b>
Children in poverty	Percentage of children under age 18 in poverty	19.1	<b>20.0</b>
Income inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	4.4	<b>5.0</b>
Children in single-parent households	Percentage of children that live in a household headed by single parent	33.7	<b>34.0</b>
Social associations	Number of membership associations per 10,000 population	12.3	<b>9.3</b>
Violent crime	Number of reported violent crime offenses per 100,000 population	356.2	<b>380.0</b>
Injury deaths	Number of deaths due to injury per 100,000 population	69.9	<b>65.0</b>
<b>Physical Environment</b>			
Air pollution - particulate matter <sup>1</sup>	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	11.1	<b>8.7</b>
Severe housing problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	14.0	<b>19.0</b>
Driving alone to work	Percentage of the workforce that drives alone to work	83.0	<b>76.0</b>
Long commute - driving alone	Among workers who commute in their car alone, the percentage that commute more than 30 minutes	30.5	<b>35.0</b>

Source: County Health Rankings, 2018

## Description

Exhibit 34 provides statewide data for each underlying indicator of the composite categories in the County Health Rankings for Indiana, with national averages for comparison.<sup>19</sup> Light grey shading highlights indicators found to be worse than the Indiana average; dark grey shading highlights indicators more than 50 percent worse than the Indiana average.

## Observations

- Indiana compared unfavorably to national averages for a majority of indicators, many of which are associated with stroke and injury risks, including:
  - Years of potential life lost
  - Percent of adults reporting poor or fair health
  - Low birth weight births
  - Current smokers
  - Adult obesity
  - Physical inactivity and access to exercise opportunities
  - Teen birth rate
  - Supply of primary care physicians, dentists, and mental health providers

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<sup>19</sup> County Health Rankings provides details about what each indicator measures, how it is defined, and data sources at [http://www.countyhealthrankings.org/sites/default/files/resources/2013Measures\\_datasources\\_years.pdf](http://www.countyhealthrankings.org/sites/default/files/resources/2013Measures_datasources_years.pdf)

APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

**Exhibit 35: Indiana-Wide CHSI, Counties in Bottom Quartile of Peers, 2018**

Indicator	Counties Ranked in Bottom Quartile	Percent IN Counties in Bottom Quartile
Average Daily PM2.5	74	80.4%
% Smokers	63	68.5%
% Physically Inactive	47	51.1%
Years of Potential Life Lost Rate	43	46.7%
Mentally Unhealthy Days	41	44.6%
% Drive Alone to Work	41	44.6%
% Some College	38	41.3%
Teen Birth Rate	33	35.9%
% Fair/Poor Health	32	34.8%
Physically Unhealthy Days	32	34.8%
% Uninsured	31	33.7%
% Mammography Screening	31	33.7%
% Obese	31	33.7%
Preventable Hosp. Rate	28	30.4%
Dentist Rate	28	30.4%
% Single-Parent Households	28	30.4%
% Long Commute - Drives Alone	27	29.3%
Primary Care Physicians Rate	26	28.3%
% Receiving HbA1c Screening	24	26.1%
Mental Health Professionals Rate	23	25.0%
% With Access to Exercise Opportunities	23	25.0%
% Low Birth Rate	22	23.9%
Injury Death Rate	21	22.8%
% Children in Poverty	20	21.7%
Chlamydia Rate	18	19.6%
Food Environment Index	16	17.4%
Social Association Rate	16	17.4%
% Severe Housing Problems	15	16.3%
Violent Crime Rate	15	16.3%
Income Ratio	12	13.0%
% Unemployed	10	10.9%
% Driving Deaths Alcohol-Impaired	6	6.5%
% Excessive Drinking	5	5.4%
High School Graduation Rate	4	4.3%

Source: County Health Rankings and Verité Analysis, 2018.

## Description

Exhibit 35 provides statewide data for the Community Health Status Indicators, depicting how many Indiana counties (out of 92) were ranked in the bottom quartile compared to their respective peer counties for each CHSI indicator. For further information on CHSI methodology, *see* Exhibit 23.

## Observations

- The CHSI data indicate that Indiana counties rank particularly unfavorably for the following indicators:
  - Average Daily PM2.5 (the average daily density of fine particulate matter in micrograms per cubic meter, a measure of air quality and pollution)
  - Percent of adults who smoke
  - Percent of adults who are physically inactive
  - Years of potential life lost rate
  - Mentally unhealthy days
  - Percent of adults who drive alone to work
  - Percent of adults with some college education

APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

**Exhibit 36: Indiana-Wide CHSI, Counties in Bottom Half of Peers, 2018**

Indicator	Counties Ranked in Bottom Half	Percent IN Counties in Bottom Half
Average Daily PM2.5	91	98.9%
% Smokers	85	92.4%
Mentally Unhealthy Days	78	84.8%
% Uninsured	73	79.3%
% Physically Inactive	72	78.3%
% Drive Alone to Work	69	75.0%
Years of Potential Life Lost Rate	66	71.7%
% Some College	66	71.7%
Teen Birth Rate	66	71.7%
% Fair/Poor Health	65	70.7%
Physically Unhealthy Days	64	69.6%
% Mammography Screening	62	67.4%
Mental Health Professionals Rate	62	67.4%
% With Access to Exercise Opportunities	59	64.1%
% Low Birth Rate	59	64.1%
% Obese	57	62.0%
Preventable Hosp. Rate	56	60.9%
% Receiving HbA1c Screening	56	60.9%
Primary Care Physicians Rate	54	58.7%
Dentist Rate	52	56.5%
% Single-Parent Households	49	53.3%
% Long Commute - Drives Alone	48	52.2%
% Children in Poverty	47	51.1%
Food Environment Index	47	51.1%
Injury Death Rate	46	50.0%
Chlamydia Rate	43	46.7%
Social Association Rate	40	43.5%
% Severe Housing Problems	36	39.1%
% Unemployed	35	38.0%
Violent Crime Rate	29	31.5%
Income Ratio	29	31.5%
% Excessive Drinking	28	30.4%
High School Graduation Rate	26	28.3%
% Driving Deaths Alcohol-Impaired	24	26.1%

Source: County Health Rankings and Verité Analysis, 2018.

## Description

Exhibit 36 provides statewide data for the Community Health Status Indicators, depicting how many Indiana counties (out of 92) were ranked in the bottom half compared to their respective peer counties for each CHSI indicator. For further information on CHSI methodology, *see* Exhibit 23.

## Observations

- The CHSI data indicate that Indiana counties rank particularly unfavorably for the following indicators:
  - Average Daily PM2.5 (the average daily density of fine particulate matter in micrograms per cubic meter, a measure of air quality and pollution)
  - Percent of adults who smoke
  - Mentally unhealthy days
  - Percent uninsured
  - Percent of adults physically inactive
  - Percent of adults who drive alone to work
  - Years of potential life lost rate
  - Percent of adults with some college education
  - Teen birth rate
  - Percent of adults in fair or poor health
  - Physically unhealthy days
  - Percent receiving mammography screening
  - Supply of mental health professionals



**Exhibit 37: America’s Health Rankings, 2017**

Measure Name	Rank	Measure Name	Rank	Measure Name	Rank
Public Health Funding	49	All Determinants	37	Disconnected Youth	25
Air Pollution	46	Cardiovascular Deaths	37	Low Birthweight	25
Dentists	45	Diabetes	37	Chlamydia	24
High Cholesterol	44	High Health Status	37	Injury Deaths	24
Cholesterol Check	43	Colorectal Cancer Screening	36	Immunization Tdap	22
Heart Attack	43	Poor Mental Health Days	35	Immunizations - Adolescents	22
Cancer Deaths	42	Six+ Teeth Extractions	35	Suicide	22
Infant Mortality	42	Drug Deaths	34	Unemployment Rate, Annual	22
Mental Health Providers	42	Immunizations - Children	34	Fruits	20
All Outcomes	41	Personal Income, Per Capita	34	Dedicated Health Care Provider	18
Clinical Care	41	Median Household Income	33	Underemployment Rate	18
Preventable Hospitalizations	41	Occupational Fatalities	33	Disparity in Health Status	16
Smoking	41	Poor Physical Health Days	33	Income Disparity Ratio	16
Stroke	41	Frequent Physical Distress	32	Pertussis	16
Behaviors	40	Insufficient Sleep	32	Vegetables	16
Obesity	40	Policy	32	High School Graduation	15
Heart Disease	39	Seat Belt Use	31	Income Inequity	15
Neighborhood Amenities	39	Violent Crime	31	Children in Poverty	13
Primary Care Physicians	39	High Blood Pressure	29	Immunization Meningococcal	13
Dental Visit, Annual	38	Binge Drinking	28	Water Fluoridation	8
Frequent Mental Distress	38	Excessive Drinking	28	Infectious Disease	6
Overall	38	Uninsured	28	Salmonella	4
Physical Inactivity	38	Chronic Drinking	27		
Premature Death	38	Community & Environment	27		

Source: America’s Health Rankings, 2017.

**Description**

Exhibit 37 depicts America’s Health Rankings for the State of Indiana. Indiana was measured against each state in the nation and ranked for each indicator. Light grey shading indicates rankings in the bottom half of U.S. states; dark grey shading indicates rankings in bottom quartile.

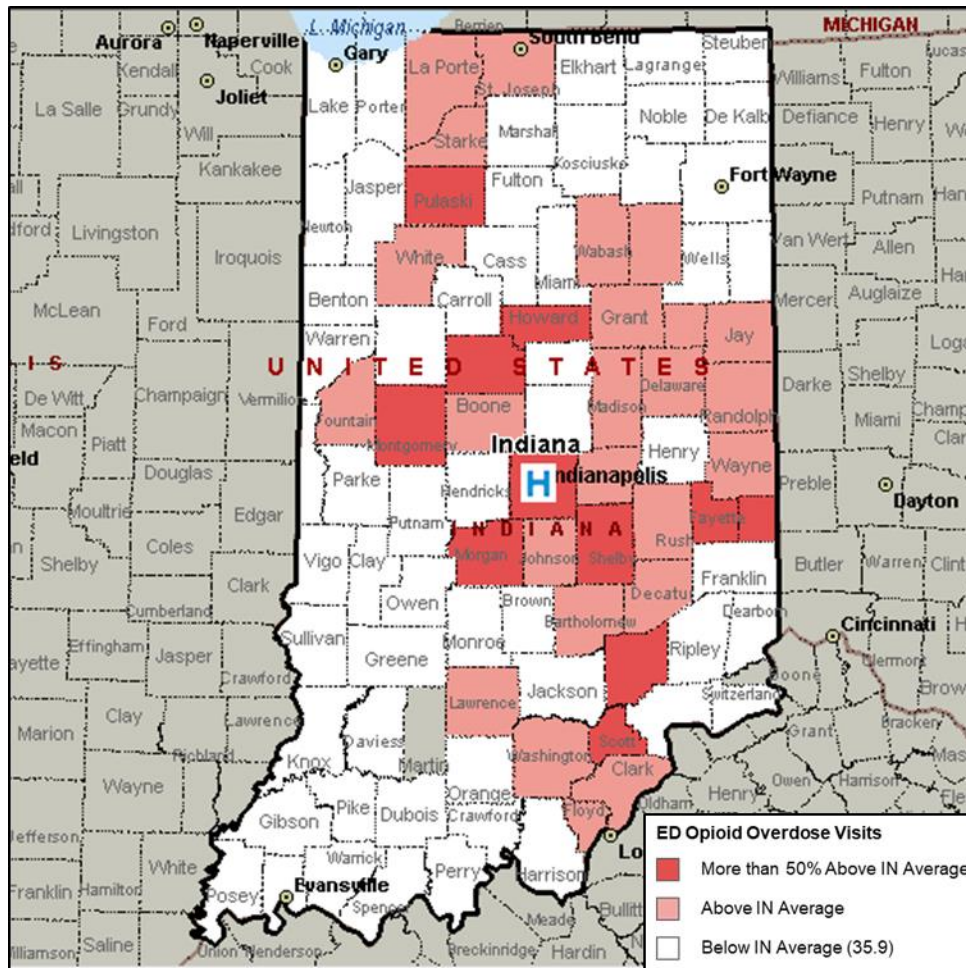
**Observations**

- Within all states in the U.S., Indiana was ranked in the bottom quartile or half for more than two-thirds of the measures. The state ranked particularly unfavorably for:
  - Public Health Funding
  - Air Pollution
  - Supply of Dentists
  - High Cholesterol
  - Cholesterol Check
  - Heart Attacks
  - Cancer Deaths
  - Infant Mortality
  - Supply of Mental Health Providers

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- All Health Outcomes
- Clinical Care
- Preventable Hospitalizations
- Smoking
- Stroke
- Health Behaviors
- Obesity

**Exhibit 38: Indiana Emergency Department Opioid Overdose Visits, by County, 2011-2015**



Source: Indiana State Department of Health, 2017.

### Description

Exhibit 38 depicts the frequency of emergency department opioid overdose visits (per 100,000 people) in Indiana from 2011 to 2015. Pink shading indicates that the county is above the Indiana average rate of 35.9; dark red shading indicates the county is more than 50 percent above the Indiana average. The map thus shows where emergency department visits due to opioids have been most prevalent.

### Observations

- ED visits due to opioid overdoses are occurring across Indiana, in urban and rural areas alike.
- The rate in Marion County has been more than 50 percent higher than the Indiana average.

## Findings of Other Community Health Needs Assessments

### Indiana State Health Assessment and Improvement Plan

A State Health Assessment and Improvement Plan (SHA) was published recently by the Indiana State Department of Health.<sup>20</sup> The SHA was conducted in collaboration with over 100 partner organizations, key informants, and health experts to identify and address Indiana’s greatest health challenges.

The Indiana Health Improvement Partnership (IHIP), met three times during 2017 and early 2018 to develop key components of the SHA including values, forces of change analysis, and assessment of strengths, weaknesses, opportunities, and threats. The process involved five steps:

1. Conducting a community health status assessment;
2. Assessing and analyzing prior assessments;
3. Reviewing other agency and coalition plans;
4. Interviewing key informants and gathering qualitative data; and
5. Identifying health needs.

**State Health Assessment.** The SHA had the following conclusions regarding state health needs:

- After reviewing assessments from local health assessments around the state, the IHIP observed that ten needs were most often identified as priorities:
  - Access to care
  - Mental and behavioral health
  - Obesity
  - Substance abuse disorders
  - Nutrition and physical activity
  - Diabetes
  - Tobacco use
  - Heart disease
  - Cancer
  - Maternal and infant health
- The initial prioritization of health needs by the IHIP steering committee focused on the following areas:
  - Social determinants of health and health equity
  - Improving public health infrastructure (funding and culture/equality of public health practices)
  - Improving health and reducing health disparities, particularly in the areas of chronic disease, birth outcomes and infant mortality, reduced injury and death due to opioid exposure, and improved access to mental health services

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<sup>20</sup> Available at: <https://www.in.gov/isdh/18888.htm>

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- When asked about barriers to achieving optimal health in their communities, key informants indicated that low staffing levels, low funding levels, not being able to break cultural barriers, increases in drug use, poverty and apathy, lack of free clinics, unaffordable healthcare and medications, lack of available affordable housing, provider billing, and limited local resources as major limitations.
- Social determinants of health were recognized as a key component to achieving optimal health in Indiana, with a recognition to improve population health, “the public health system must expand to include non-traditional partners such as transportation, workforce development, and housing.”
- Income inequality was identified as a social determinant of health need, with the top 20 percent of households in Indiana having an income 13.5 times higher than the bottom 20 percent.
- Indiana residents report different health status based on their location in the state, largely due to access to affordable healthcare. Mid-sized population areas report the lowest number of poor or fair health days, while rural areas report the highest.
- Indiana introduced expanded insurance options for lower income residents through the Healthy Indiana Plan (HIP) 2.0 in 2015. Over 1.4 million residents are enrolled in Medicaid in the state, with more than 20,000 of these enrollees being pregnant women.
- Language barriers and cultural competency of services were identified as major obstacles to receiving healthcare and social services in Indiana.
- Heart disease, cancer, and stroke were identified as the top causes of mortality in Indiana and identified as significant needs across the state.
- Indiana was the tenth most obese state in the nation, with over two-thirds of adults being overweight and almost a third being obese. Obesity disproportionately affects low-income, rural, and African American populations.
- Poor nutrition contributed to four of the top ten causes of death in Indiana: cardiovascular disease, stroke, diabetes, and cancer.
- Over 21 percent of Indiana adults were current smokers, the tenth highest rate in the nation and contributing to five of the top ten leading causes of death (cardiovascular disease, stroke, diabetes, chronic lower respiratory disease, and cancer). Smoking rates are disproportionately high for low income adults, those with a high school education or less, and those identifying as lesbian, gay, bisexual and transgender (LGBT).
- Infant mortality has been an Indiana health priority since 2014. The national rate of infant deaths is 5.9 deaths per 1,000 live births. In Indiana, this rate was 7.5 in 2016. Additionally, Healthy People 2020 established a goal of 6.0 deaths by 2020.

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- Drug overdose and opioid-related deaths increased by 500 percent between 1999 and 2016. More than 1,500 residents died of drug overdoses in 2016, with 785 of these overdoses being from opioids. This increase in opioid-related deaths represents a 1,725 percent increase since 1999.

**State Health Improvement Plan.** After the finalization of the state health assessment, the Indiana State Health Improvement Plan (ISHIP) was drafted to address the final priorities. These priorities were:

- Improve birth outcomes and reduce infant mortality
- Address the opioid epidemic
- Reduce rates of chronic disease
- Improve the public health infrastructure

### The State of Obesity in Indiana

The State of Obesity database is an initiative from the Robert Wood Johnson Foundation to track obesity and comorbidities across the country. For more than a decade, an annual report, *The State of Obesity* (formerly *F as in Fat*) has raised awareness about the seriousness of the obesity epidemic, encouraged the creation of a national obesity prevention strategy and highlighted promising approaches for reversing the epidemic at the state and local level. The report series is a collaborative project of the Trust for America's Health and the Robert Wood Johnson Foundation and is supported by a grant from the Foundation.<sup>21</sup>

The initiative found the following about obesity in Indiana for 2017:

- Indiana had the 12th highest adult obesity rate in the nation overall at 33.6 percent.
- This obesity percentage has increased greatly in the past decades, with the rate in Indiana in 1990 at 13.3 percent, in 2000 at 20.5 percent, and in 2010 at 29.1 percent.
- Indiana also had the ninth highest overweight and obesity rate for youth (ages 10 to 17) as of 2016, at 33.9 percent overall.
- Disparities are evident in Indiana obesity rates. Over 42 percent of Black residents in Indiana were obese in 2017, while this rate was 32.1 percent for White residents and 28.2 percent for Latino residents.
- Several other conditions linked to obesity also display high rates in Indiana, including:
  - Diabetes has an incidence rate of 11.8 percent in Indiana adults, ranked the eleventh highest in the country

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<sup>21</sup> For more information, see <https://stateofobesity.org/about/>.

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- Hypertension has an incidence rate of 35.2 percent in Indiana adults, ranked the eleventh highest in the country
- Over 19 percent of children in Indiana are food insecure, and overall 14.4 percent of the state population is food insecure. Food insecurity is defined as “living in homes that had limited or uncertain access to food at some point during the year.”

### **Indiana Tobacco Control 2020 Strategic Plan**

The 2020 Indiana Tobacco Control Strategic Plan is a State plan coordinated by the Tobacco Prevention and Cessation Commission (TPC) of the Indiana State Department of Health. TPC seeks the input and collaboration of many partners, from state agencies to grassroots community organizations working together in implementing this plan to reduce Indiana’s burden from tobacco.

Specific findings from the plan are described below:

- Tobacco use continues to be the single most preventable cause of death and disease in Indiana, costing Indiana and its residents 11,100 lives and nearly \$3 billion in health care costs annually.
- Despite a decline in the rate of smoking in Indiana in the past 15 years, more than one million adults in Indiana still smoke cigarettes, with the smoking rates among pregnant women, those with any mental illness, and those with low education levels higher than the general population rate.
- Cigarette smoking among high school students has dropped to 12 percent; however, the trends with other tobacco products (such as electronic cigarettes) are concerning.
  - In 2014, 29.0 percent of high school youth and 11.2 percent of middle school youth in Indiana reported ever trying e-cigarettes.
  - Additionally, 15.6 percent of high school students and 5.2 percent of middle school students reported using e-cigarettes in the past 30 days.
- The Strategic Plan established specific strategies and measurable objectives for the time period 2014/2015 to 2020, including:
  - Decrease smoking among high school youth, from 12.0 percent to 9.0 percent.
  - Increase proportion of school districts with a tobacco free campus policy which includes Electronic Nicotine Delivery Systems, from 10 percent to 50 percent.
  - Decrease smoking among all adults (from 23 percent to 18 percent), among Medicaid members (from 47 percent to 35 percent), and among pregnant women (from 15 percent to 8 percent).

## Indiana Workforce Issues

Several studies have shown that Indiana has a current and growing undersupply of health professionals.

- The Indiana Department of Workforce Development, for example, forecasts that Indiana will have a shortage of about 9,000 registered nurses by 2030.<sup>22</sup>
- America’s Health Insurance Plans (AHIP) issues reports regarding physician workforce supply, and found that Indiana’s per-capita supply of psychiatrists is 58 percent of the national rate.<sup>23</sup> Indiana is one of seven states to have an overall supply of physicians (primary care, psychiatry, OBGYN, and general surgeons) below 80 percent of the national rate.
- The Robert Graham Center also studies primary care physician workforce needs across the U.S.<sup>24</sup> Its most recent study indicates that Indiana will need 20 percent more physicians by 2030 to maintain “the status quo.” Population growth and aging, along with higher levels of insurance coverage are contributing to this need. Across the U.S., the ratio of population to primary care physicians is 1,463:1; Indiana’s ratio is 1,659:1 – indicating a comparatively low supply of these professionals.
- HRSA, however, projects that “there will be a sufficient supply of physical medicine and rehabilitation providers to meet the nation’s demand for physical medicine and rehabilitation services in 2025.”<sup>25</sup>

## Other Relevant Studies and Publications

A number of studies and publications are informative regarding community health needs relevant to services provided by RHI.

### The Better Together Plan

In 2017, The Cardiovascular & Diabetes Coalition of Indiana published *The Better Together Plan: 2017-2021*. This document “is Indiana’s first statewide initiative that provides goals and strategies to reduce the burden of heart disease, stroke, and diabetes,<sup>26</sup>” and contains numerous, relevant statistics and prevention strategies. According to this publication:

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<sup>22</sup> <http://www.insideindianabusiness.com/story/35524534/to-meet-todays-health-care-needs-close-the-nursing-shortage>

<sup>23</sup> [https://www.ahip.org/wp-content/uploads/2016/07/Workforce\\_DataBrief\\_7.14.16.pdf](https://www.ahip.org/wp-content/uploads/2016/07/Workforce_DataBrief_7.14.16.pdf)

<sup>24</sup> <https://www.graham-center.org/content/dam/rgc/documents/maps-data-tools/state-collections/workforce-projections/Indiana.pdf>

<sup>25</sup> [https://bhwh.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/BHW\\_FS\\_Phy\\_Med\\_Rehab.pdf](https://bhwh.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/BHW_FS_Phy_Med_Rehab.pdf)

<sup>26</sup> Better Together Plan: 2017-2021, at <http://indianacadi.org/wp-content/uploads/2017/03/better-together-plan-draft-feb24.pdf>, page 2.



## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- Heart disease, stroke, and diabetes are the first, fourth, and seventh leading causes of death in Indiana. In 2014, 13,701 Indiana residents died of heart disease and 3,104 died of stroke.
  - Prevalence of heart disease and stroke increases with age.
  - Males experience heart disease at higher rates than females, while prevalence of stroke is comparable for males and females.
  - Higher income and education levels are linked to lower prevalence for both conditions.
- Risk factors for heart disease and stroke include hypertension and high cholesterol.
- Stroke is the leading cause of disability in Indiana.
  - More than 3.5 percent of Indiana residents have had a stroke.
  - In 2014, 15,522 patients were discharged from a hospital for stroke.
  - More than 30 percent of adults who have had a stroke also have been diagnosed with hypertension.
  - The prevalence of stroke is 5 times higher for Indiana residents with less than a high school education when compared with college graduates.
  - In Indiana, stroke is the third leading cause of death for African Americans and the fourth leading cause for Caucasians.
- Risk factors for cardiovascular disease include: smoking, hypertension, high cholesterol, overweight/obese, and poor nutrition.
- These conditions are among the most prevalent and costly health problems in Indiana; however, they often are preventable and manageable through:
  - Early detection,
  - Improved nutrition,
  - Increased physical activity,
  - Avoiding tobacco use and exposure to secondhand smoke, and
  - Treatment therapy.
- The *Better Together Plan* includes a framework with specific objectives for:
  - All Hoosiers (to live free of risk factors for heart disease, stroke, and diabetes – such as smoking, poor nutrition, and low physical activity),
  - Individuals with increased risk factors (so they do not develop disease), and
  - Individuals with heart disease, stroke, or diabetes (so they experience improved quality of life and extended years of life).
- Strategies include addressing health disparities (which generally result from differences in social determinants of health), enhancing the supply of primary care providers, creating population-specific screening events, and offering patient education on health improvement.

### ThinkFirst Traumatic Brain Injury Fast Facts

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

The ThinkFirst National Injury Prevention Foundation, among other initiatives, publishes information about injury, including Traumatic Brain Injury (TBI). Traumatic Brain Injury *Fast Facts* includes a definition of TBI which is “an alteration in brain function, or other evidence of brain pathology, caused by an external force.”<sup>27</sup> Such injuries “can lead to life-long effects in cognition (thinking) and body functions, such as movement.”<sup>28</sup> Other information is as follows:

- In the U.S., an estimated 3.2 to 5.3 million people are living with long-term or life-long disabilities resulting from a TBI.
- Concussions are a mild form of TBI. TBI accounts for 30 percent of all injury-related deaths in the U.S.
- Adults 65 years of age and older have the highest rates of TBI-related deaths. Children 0-14 and adolescents/adults 15-24 are the most likely to visit an emergency room for a TBI-related injury.
- Most TBI cases are due to:
  - Falls (47 percent),
  - Being struck by or against an object (15 percent),
  - Motor vehicle crashes (14 percent), and
  - Other reasons, including intentional self-harm.
- Prevention tips include:
  - Wearing appropriate, certified helmets for sports, recreational, and transportation activities,
  - Safe driving: avoiding impairment by alcohol and drugs, avoiding cell phone use or texting while driving, using seatbelts
  - Clearing hazards that might contribute to falls,<sup>29</sup>
  - Supervising infants and young children to prevent falls,
  - Avoiding violence, and
  - Avoiding unnecessary roughness in sports and activities.

### ThinkFirst Spinal Cord Injury Fast Facts

ThinkFirst also publishes information about spinal cord injury. Spinal Cord Injury *Fast Facts* includes a definition of SCI which is “any occurrence of acute trauma to neural elements of the spinal cord.”<sup>30</sup> Such injuries “can result in lasting motor and/or sensory deficits.”<sup>31</sup> Other information is as follows:

- In the U.S., there are approximately 17,700 new cases of SCI annually.

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<sup>27</sup> <http://thinkfirst.org/sites/default/files/TBI%20Fast%20Facts%202018jc.pdf>

<sup>28</sup> *Ibid.*

<sup>29</sup> *Ibid.*

<sup>30</sup> <http://thinkfirst.org/sites/default/files/SCI%20Fast%20Facts9-9-18.pdf>

<sup>31</sup> *Ibid.*

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- Alcohol use is a contributing factor to one out of every four spinal cord injuries.
- Males account for 78 percent of new cases, which are most prevalent in two age groups: 16-30 years of age (people in this group are more likely to engage in risky behavior) and seniors over 65 years of age (who are more likely to fall).
- The majority of SCI cases are due to preventable, traumatic causes:
  - Motor vehicle crashes,
  - Acts of violence,
  - Falls, and
  - Sports and recreation.
- Non-traumatic cases include diseases such as cancer, arthritis, osteoarthritis, and inflammation.
- The average inpatient hospital stay following an SCI is 11 days, followed by an additional 35 days in a rehabilitation center.
- Prevention tips include:
  - Driving safe and sober,
  - Use of seat belts and child seats/restraints,
  - Avoiding violence and assuring firearm safety,
  - Avoiding diving into shallow water,
  - Taking precautions while playing sports, and
  - Clearing hazards that might contribute to falls.<sup>32</sup>

### Brain Basics: Preventing Stroke

The National Institutes of Health’s National Institute of Neurological Disorders and Stroke (NINDS) published *Brain Basics: Preventing Stroke*.<sup>33</sup> This publication states that a stroke occurs “when blood circulation to the brain fails. Brain cells can die from decreased blood flow and the resulting lack of oxygen.” “A blockage of a blood vessel in the brain or neck, called an ischemic stroke, ... is responsible for about 80 percent of strokes.”<sup>34</sup>

The publication indicates that two key steps will lower risk of death or disability from stroke:

- Control stroke’s risk factors, and
- Know stroke’s warning signs.

Risk factors include age (with risk increasing with age), gender (men have a higher risk for stroke, but more women die from stroke), race (the age-adjusted incidence of stroke is about twice as high in African Americans and Hispanic Americans as in Caucasians), and family

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<sup>32</sup> *Ibid.*

<sup>33</sup> <https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Preventing-Stroke>

<sup>34</sup> *Ibid.*

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

history (family members may have a genetic tendency for stroke risk factors such as hypertension or diabetes).<sup>35</sup>

Treatable risk factors for stroke include:

- High blood pressure (hypertension), which is “by far the most potent risk factor for stroke.”
- Cigarette smoking, which “causes about a two-fold increase in the risk of ischemic stroke and up to a four-fold increase in the risk of hemorrhagic stroke.”
- Heart disease.
- Diabetes, which causes “destructive changes in the blood vessels throughout the body, including the brain.”
- Warning signs or history of Transient Ischemic Attack (TIA) or stroke (risk of having another stroke is many times greater if one already has occurred).
- Cholesterol imbalance (excess LDL).
- Physical inactivity and obesity.

NINDS scientists predict that “with continued attention to reducing the risks of stroke and by using currently available therapies and developing new ones, Americans should be able to prevent 80 percent of all strokes.”

### **Indiana State Department of Health Trauma White Paper**

In 2012, the Indiana State Department of Health published a *Trauma White Paper*. This paper indicated that “the No. 1 killer of young people in Indiana is injury, or trauma.”<sup>36</sup> Also, that more than 32,000 Hoosiers are hospitalized each year from injuries, and in 2009, 3,700 died.

The paper states that:

- Indiana has a special challenge because “we rank first in the nation for interstate highway miles per land area.”
- Also, “falls are the No. 1 injury cause of death of those over the age of 65 in Indiana. The death rate from falls has been climbing every year since 2003.”<sup>37</sup>

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<sup>35</sup> *Ibid.*

<sup>36</sup> <https://www.in.gov/isdh/19537.htm>

<sup>37</sup> *Ibid.*

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- Problems posed by injury are most acute in rural areas, where there aren't enough EMS providers and travel times to trauma centers are the longest.
- As of 2012, Indiana had not placed “all components of the trauma system ... in the same state agency.” These include EMS, hospital emergency departments, trauma centers, rehabilitation centers, state trauma registries, and injury prevention/public education programs.<sup>38</sup>

The paper called for development of a statewide trauma system with appropriate staffing and resources.

### **Indiana State Department of Health: *Special Emphasis Report: Fall Injuries among Older Adults, 2014***

In 2016, ISDH published *Special Emphasis Report: Fall Injuries among Older Adults, 2014*. This report included the following information:

- Falls are the leading cause of traumatic brain injury (TBI) in Indiana residents 65 years of age and older, accounting for 57 percent of TBI deaths and 35 percent of TBI hospitalizations. Thirty-seven percent of fall deaths and hospitalizations among older adults were associated with a TBI.<sup>39</sup>
- Age-adjusted fall death rates increased from 27.9 per 100,000 in 2005 to 35.3 per 100,000 in 2014. Nonfatal fall hospitalizations have decreased slightly.
- Fall rates were highest for older Hoosiers who self-reported that they don't exercise or that have one or more of the following conditions: asthma, heart disease, obesity, stroke, COPD, diabetes, and poor mental health/depression.

The ISDH Division of Trauma and Injury Prevention identified older adult fall prevention as a priority, and is seeking greater use of the Centers for Disease Control and Prevention STEADI (Stopping Elderly Accidents Deaths & Injuries) toolkit.

### **Indiana State Department of Health: *Special Emphasis Report: Traumatic Brain Injury, 2016***

In August 2018, ISDH published *Special Emphasis Report: Traumatic Brain Injury, 2016*. This report included the following information:

- During 2016, more than 35,000 people in Indiana sustained a TBI.<sup>40</sup> In 1,239 cases, TBI was reported as a cause of death. TBI led or contributed to 6,726 hospitalizations and 23,305 emergency department visits.

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<sup>38</sup> *Ibid.*

<sup>39</sup> [https://www.in.gov/isdh/files/2016\\_SER\\_Older\\_Adult\\_Falls\\_Indiana.pdf](https://www.in.gov/isdh/files/2016_SER_Older_Adult_Falls_Indiana.pdf)

<sup>40</sup> [https://www.in.gov/isdh/files/TBI\\_Special\\_Emphasis\\_Report%20%202018.pdf](https://www.in.gov/isdh/files/TBI_Special_Emphasis_Report%20%202018.pdf)

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- Causes of TBI included: suicide, unintentional falls, motor vehicle accidents, homicide, struck by/against an object, and other reasons.
- The CDC’s “Heads Up” program provides free tools to help providers, school administrators, and others recognize and respond to a TBI.<sup>41</sup>

The report also includes information on Indiana’s Spinal Cord and Brain Injury Fund, which maintains a surveillance registry for TBIs and SCIs, funds research, and funds post-acute extended treatment and services for certain individuals and facilities.

### **Indiana State Department of Health Division of Trauma and Injury Prevention Injury Prevention Resource Guide**

In 2017, ISDH published its Indiana Injury Prevention Resource Guide. Following a public health approach, for ten “injury topics,” the guide (1) describes the problem, (2) identifies causes and risk and protective factors, (3) develops and implements/evaluates prevention strategies, and (4) disseminates information to ensure widespread adoption.<sup>42</sup> The injury topics in the guide are:

- Alcohol and Injury,
- Child Maltreatment,
- Distracted Driving,
- Prescription Drug Overdose,
- Infant Safe Sleep,
- Older Adult Falls,
- Sexual Violence,
- Suicide Prevention,
- Trauma and Trauma System, and
- Traumatic Brain Injury.

### **Governor’s Council for People with Disabilities, Five Year Strategic Plan (2017-2021)**

The Indiana Governor’s Council for People with Disabilities publishes a strategic plan every five years (State Plan). The 2017-2021 State Plan covers the time period October 1, 2016 to September 30, 2021.<sup>43</sup> This plan calls for (among other initiatives):

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<sup>41</sup> <https://www.cdc.gov/headsup/index.html>

<sup>42</sup> <https://www.in.gov/isdh/files/Preventing%20Injuries%20in%20Indiana.pdf>

<sup>43</sup> [https://www.in.gov/gpcpd/files/State\\_Plan\\_2017-2021\\_Goals\\_and\\_Objectives\\_Final\\_Public.pdf](https://www.in.gov/gpcpd/files/State_Plan_2017-2021_Goals_and_Objectives_Final_Public.pdf)

## APPENDIX C –SECONDARY DATA ASSESSMENT (INDIANA)

- Enhancing self-directed community living and autonomy of individuals with disabilities,
- Increasing access to safe, affordable, integrated and accessible housing and community infrastructure,
- Doubling the number of individuals with developmental disabilities who are employed at a living wage,
- Enhancing access to health care and wellness services for people with disabilities – including mental health services and particularly for women (e.g., through telemedicine, home visits, and patient-focused education and wellness incentives),
- Increasing resources, access, and options for transportation for people with disabilities – including better trained bus drivers, reducing multi-jurisdictional issues, and changes to Medicaid regulations and policies relating to transportation, and
- Encouraging full inclusion of those with disabilities including in advocacy and public policy efforts.

The plan cites “a recent Griffin Hammis report” which states that mental health needs and the lack of investment in mental health is “so evident that Indiana may be one of the worst places in the United States to live if you have a mental health need.”

## APPENDIX D – INTERVIEWEES AND COMMUNITY MEETING PARTICIPANTS

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Individuals from a wide variety of organizations and communities participated in the interview process and/or community meetings (**Exhibit 39**).

### Exhibit 39: Interviewee and Community Meeting Participant Organizational Affiliations

Organizations	
Adult and Child Health	Indianapolis Metropolitan Police Department
All Senior Citizens Connect	Indy Hunger Network
Central Indiana Council on Aging (CICOA)	Indianapolis Parks and Recreation
City of Indianapolis	Irvington Development Organization
Coburn Place	Jump IN for Healthy Kids
Community Health Network	Lawrence Community Gardens
Gennesaret Free Clinics	Marion County Public Health Department
Gleaners Food Bank	New Beginnings Church
Health by Design	Paramount Schools of Excellence
IU Health Methodist Hospital	Progress House
Rehabilitation Hospital of Indiana	Purdue Extension
Indiana Youth Institute	The Polis Center
Indianapolis Fire Department	University of Indianapolis
IU Health University Hospital	



## **APPENDIX E – EVALUATION OF PROGRAM IMPACTS**

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RHI follows federal guidelines for reporting community benefit – programs designed to improve health and increase access to healthcare services – and other community investments. As defined by these guidelines, community benefit includes charity care, unreimbursed costs of government-sponsored programs and support for medical research and other healthcare services that provide care to promote health and wellness in response to identified community needs.

RHI’s community benefit focus is to reach largely underserved communities by reducing health disparities and/or improve quality of life for individuals living within those communities.

This appendix provides an overview of the impact RHI’s community benefit activities had from 2016-2018 in addressing the identified community health needs and key areas of focus for our hospital since the last CHNA was conducted in 2015.

### **Access to Healthcare**

RHI offers free monthly support groups related to stroke, brain injury, and spinal cord injury providing education, training and coping skills to both survivors and their caregivers. Additionally, these programs help to decrease social isolation and increase support in the community.

RHI partnered with a number of local hospitals and health care organizations to co-sponsor the annual “Strike out Stroke” events at Victory Field. The focus of this event was to educate the community about the prevalence and symptoms of stroke and send the message that quick action in the event of a suspected stroke can save lives. Volunteer efforts included distributing promotional giveaways as well as providing stroke education information and blood pressure readings to attendees prior to the game. This is another example of RHI’s ongoing commitment to increasing access to healthcare and educating members of our community on the importance of health awareness.

In partnership with IU Health, RHI participated in the 2016 INShape Indiana Black and Minority Health Fair in July. Focused activities included health screenings, education and resources that help community participants attain, maintain and live a healthy lifestyle and reduce their risk of chronic diseases. RHI clinicians performed 50 blood pressure screenings with education on normal values and the importance of maintaining a healthy lifestyle.

### **Nutrition and Healthy Weight**

RHI team members annually volunteered at Arsenal Tech High School as we partnered with IU Health to provide free sports physicals for IPS students from local schools. Volunteer activities included screening for vision and measuring the height, weight and blood pressure of 135 students. Because of these collaborative efforts, we have helped a large number of Marion County high school students stay active by passing their physicals that will allow them to participate in sports activities.

## APPENDIX E – EVALUATION OF PROGRAM IMPACTS

RHI Sports' Annual Water Ski Clinic is a two day program held annually at Morse Reservoir. This clinic provides individuals with physical disabilities the opportunity to participate in the thrilling sport of water skiing, helping to increase the participant's overall physical fitness and self-confidence while decreasing feelings of isolation and helplessness. The two day event serves community individuals with physical disabilities.

RHI Sports Community Fitness Program occurs twice weekly at our main hospital location. In recognizing that an individual with a disability needs to continue leading a healthy lifestyle, RHI makes the therapy gym and specialized equipment available at no cost to all members of the community that have a physical disability.

### **Community Revitalization**

Team RHI partnered with numerous community members every spring these past 3 years for the Great Indy Cleanup. Sponsored by Keep Indiana Beautiful, this is an anti-litter program in partnership with the City of Indianapolis that is designed to assist individuals and community groups combat heavy litter and debris that has accumulated in public spaces. Our team's efforts concentrated on the school grounds of Jonathan Jennings Elementary School and the surrounding neighborhoods on the west-side of Indianapolis.

RHI has partnered with Junior Achievement of Central Indiana and numerous industry leaders to support the annual JA JobSparks events at the Indiana State Fairgrounds. The focus of the annual two day event was to offer Marion County students insights on what industries interest them, what specific jobs are like, and what education is required to perform them successfully. Research has shown that when a student has a real idea of what they want to do after high school, they are much more likely to stay in school and graduate. Because of the efforts of our employees, we have provided a "spark" in positively impacting more than 8,700 Indianapolis students each year by sharing with them our clinical expertise and providing insights into physical, occupational and speech therapy careers.

RHI has partnered with Greater Indy Habitat for Humanity to financially support and volunteer in helping build homes on the East and West side of Indianapolis. We continue to welcome the opportunity to serve our community and, as a result of these collaborative efforts, assisting families on their journey to homeownership.

### **Behavioral Health and Substance Abuse**

Targeting mental health issues, RHI has partnered with Mental Health of America Greater Indianapolis and Families First of Indiana in 2016-2018 to sponsor Mental Health First Aid scholarships for Marion County community members (teachers, social workers, youth group leaders, etc.) to be trained to recognize the potential risk factors and warning signs for a range of mental health problems and provide guidance for those undergoing crisis to receive necessary resources, support, and treatments to achieve recovery.

## **APPENDIX F – CONSULTANT QUALIFICATIONS**

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Verité Healthcare Consulting, LLC (Verité) was founded in May 2006 and is located in Alexandria, Virginia. The firm serves clients throughout the United States as a resource that helps hospitals conduct Community Health Needs Assessments and develop Implementation Strategies to address significant health needs. Verité has conducted more than 60 needs assessments for hospitals, health systems, and community partnerships nationally since 2010.

The firm also helps hospitals, hospital associations, and policy makers with community benefit reporting, program infrastructure, compliance, and community benefit-related policy and guidelines development. Verité is a recognized national thought leader in community benefit and Community Health Needs Assessments.