

Community Health Needs Assessment

November 26, 2018



★ IU Health
Bedford Hospital

<https://iuhealth.org/in-the-community>



Bedford Hospital



Dan Peterson
Chair, SCR Board Executive Committee

11/26/18
Date

Indiana University Health (IU Health) Community Health Needs Assessment Team Members

IU Health Team

Levi Brown
Associate
Community Outreach and Engagement

Brenda Chamness, M.S., MCHES®
Manager, Community Benefit/Mission
Community Outreach and Engagement

Kathy Chapuran, M.Ed., CHES®
Community Benefit Project Manager
Community Outreach and Engagement

Abby Church, MPH
Data Analysis Project Manager
Community Outreach and Engagement

Joyce M. Hertko, Ph.D.
Director
Community Outreach and Engagement

Lisa Johnson
Coordinator, Engagement & Outreach
IU Health Bedford Hospital

Amanda Pabody
Community Benefit Project Manager
Community Outreach and Engagement

Lori Satterfield, MBA
Community Benefit Project Manager
Community Outreach and Engagement

Verité Healthcare Consulting

Keith Hearle, MBA
Founder and President

Patrick McMahon, MBA, CPA
Vice President

Alex Wallace, MPP
Senior Associate

For the 2018 Community Health Needs Assessment, Indiana University Health conducted the community survey data collection in collaboration with Indiana University, University of Evansville and an Indiana Hospital Collaborative, including Community Health Network, Franciscan Alliance, St. Vincent Health and other hospital partners.

Additional IU Health collaborators included:

- April Grudi, Deployment Leader-Expert, System Office of Transformation
- Adam Hillsamer, Deployment Leader, System Office of Transformation
- Dawn Parks, Senior Data Analyst-Business/Clinical Intelligence, Decision Support & Analytics
- Brian Reed, Transformation Officer, IU Health East Central Region Office of Transformation
- Sandra Ryder-Smith, Director, Market Analytics & Insight

TABLE OF CONTENTS

- EXECUTIVE SUMMARY 5
 - Introduction..... 5
 - Community Definition..... 5
 - Significant Community Health Needs..... 5

- DATA AND ANALYSIS..... 6
 - Definition of Community Assessed..... 6
 - Secondary Data Summary..... 7
 - Demographics 7
 - Economic Indicators 7
 - Local Health Status and Access Indicators 7
 - Ambulatory Care Sensitive Conditions..... 8
 - Community Need Index..... 8
 - Food Deserts 8
 - Medically Underserved Areas and Populations 8
 - Health Professional Shortage Areas 8
 - Relevant Findings of Other CHNAs..... 8
 - Significant Indicators..... 8
 - Primary Data Summary 9
 - Community Meetings 9
 - Interviews..... 10
 - Community Survey..... 10

- OTHER FACILITIES AND RESOURCES IN THE COMMUNITY 13
 - Federally Qualified Health Centers 13
 - Hospitals..... 13
 - Local Health Departments (LHDs)..... 13
 - Other Community Resources..... 13

- APPENDIX A - OBJECTIVES AND METHODOLOGY 14
 - Regulatory Requirements..... 14
 - Methodology 14
 - Collaborating Organizations 15
 - Data Sources 15
 - Community Survey Methodology 15
 - Information Gaps 15

TABLE OF CONTENTS

APPENDIX B – SECONDARY DATA ASSESSMENT.....	16
Demographics.....	16
Economic Indicators	18
People in Poverty	18
Unemployment	20
Insurance Status	20
Crime	21
Local Health Status and Access Indicators	21
County Health Rankings	21
Community Health Status Indicators	24
Indiana State Department of Health.....	25
Behavioral Risk Factor Surveillance System.....	27
Ambulatory Care Sensitive Conditions (ACSC) also referred to as Preventative Quality Indicators (PQI).....	28
Community Need Index™ and Food Deserts	29
Dignity Health Community Need Index.....	29
Food Deserts	30
Medically Underserved Areas and Populations.....	30
Health Professional Shortage Areas (HPSA)	30
Findings of Other Community Health Needs Assessments.....	31
APPENDIX C – INTERVIEWEES AND COMMUNITY MEETING PARTICIPANTS	33
APPENDIX D – IMPACT OF ACTIONS TAKEN SINCE THE PREVIOUS CHNA	33
Healthy Weight and Nutrition	33
Mental Health.....	33
Substance Abuse.....	33
Chronic Disease Management	34
Basic Needs	34
APPENDIX E – CONSULTANT QUALIFICATIONS	35

EXECUTIVE SUMMARY

Introduction

This Community Health Needs Assessment (CHNA) was conducted to identify significant community health needs and to inform development of an Implementation Strategy that addresses them.

Indiana University Health Bedford Hospital (IU Health Bedford Hospital or “the hospital”) operates as a critical access hospital with inpatient, outpatient and ambulatory care services, including a 24-hour emergency room and emergency medical services. IU Health Bedford Hospital is a modern healthcare facility approved by The Joint Commission on the Accreditation of Healthcare Organizations. It offers advanced technology and medical services in internal medicine, family practice, general surgery, orthopedics and gynecology.

The hospital is part of Indiana University Health (IU Health), the largest and most comprehensive health system in the state of Indiana. IU Health, in partnership with Indiana University School of Medicine, one of the nation’s leading medical schools, gives patients access to leading-edge medicine and treatment options that are available first, and often only, at IU Health. Additional information about IU Health is available at: <https://iuhealth.org/>.

Each IU Health hospital is dedicated to the community it serves. Each hospital conducts a CHNA to understand current community health needs and to inform strategies designed to improve community health, including initiatives designed to address social determinants of health. The CHNAs are conducted using widely accepted methodologies to identify the significant needs of a specific community. The assessments also are conducted to comply with federal laws and regulatory requirements that apply to tax-exempt hospitals.

IU Health invites community members to review the Community Health Needs Assessments and provide comments to communitybenefit@iuhealth.org.

For copies of each IU Health CHNA report and also for associated implementation strategies, visit: <https://iuhealth.org/in-the-community>. Updated implementation strategies for each IU Health hospital are scheduled to be published by May 15, 2019.

Community Definition

For purposes of this CHNA, IU Health Bedford Hospital’s community is defined as Lawrence County, Indiana. The county accounted for over 85 percent of the hospital’s

inpatient cases in 2016. The total population of this community in 2015 was 45,485.

The following map portrays this community. The map shows county and ZIP code boundaries. Specific ZIP codes are included in analyses if any portion of the ZIP code overlaps with one or more counties.



Source: Microsoft MapPoint and IU Health, 2018

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 data¹ 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 one or more key stakeholders who were interviewed, 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 (listed in alphabetical order) have been identified as significant in the community served by IU Health Bedford Hospital. References are made below to exhibits and findings presented in this report.

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

Access to Health Care Services

- Lawrence County has an under-supply of primary care providers compared to both Indiana and national rates (**Exhibit 24**).
- Primary Care and Mental Health Care Health Professional Shortage Areas (HPSAs) are present in Lawrence County (**Exhibit 37**).
- Above average rates of ambulatory care sensitive conditions (ACSCs) indicate potential access problems in the community (**Exhibit 33**).
- Health insurance is difficult to access for many in Lawrence County, leading to inadequate access of health care services (**Exhibit 21, 25, Interviews**).
- Access to healthcare and the cost of adequate care were both identified as primary concerns in community input (**Community Meetings, Interviews**).

Drug and Substance Abuse (Including Opioids and Alcohol)

- The opioid crises, other forms of drug and substance abuse, and alcohol use and abuse, were identified by community members as particularly significant (**Community Meetings, Community Survey, Interviews**).
- Lawrence County compared unfavorably in driving deaths with alcohol involvement (**Exhibits 24, 25**).
- Drug and substance abuse also has been identified as a top concern in Lawrence County and across the region in other assessments, including Indiana's State Health Improvement Plan (**Other Assessments**).

Education, Workforce Training, and Unemployment

- Unemployment rates in Lawrence County have been above Indiana averages in recent history (**Exhibits 20, 24**).
- Lawrence County compares unfavorably to Indiana and peer averages in both high school graduation rates and college education (**Exhibit 24, 25**).
- Community members identified unemployment, workforce training, education, and a skill gap in the local area compared to job opportunities as significant concerns in Lawrence County (**Community Meetings, Interviews**).

Mental Health

- Mental health status and access to mental health care were identified by community members as significant problems (**Community Survey, Other Assessments, Community Meetings**).
- Lawrence County has an under-supply of mental health providers compared to both Indiana and national rates (**Exhibit 24**).
- Mortality rates for suicide are higher in Lawrence County than the Indiana average (**Exhibit 26**).
- Lawrence County has been designated as a Mental Health Care Health Professional Shortage Areas (HPSAs) (**Exhibit 37C**).

Obesity, Diabetes, and Physical Inactivity

- Individuals providing input identified obesity and a lack of physical activity as primary concerns (**Community Meetings, Community Survey, Interviews**).
- Both the percent of adults who are obese and the percent that are physically inactive in Lawrence County are comparatively high (**Exhibits 24, 25**).
- The mortality rates for diabetes and other conditions related to obesity (such as heart disease) are comparatively high (**Exhibit 26**).
- Other assessments identified obesity, diabetes, and lack of physical exercise as significant issues across the community (**Other Assessments**).

DATA AND ANALYSIS

Definition of Community Assessed

The community assessed by IU Health Bedford Hospital was defined by the geographic origins of patients discharged from the hospital, and on that basis was identified as Lawrence County, Indiana.

Residents from this county accounted for 86 percent of the hospital's 2016 inpatient discharges (**Exhibit 1**).

Exhibit 1: IU Health Bedford Hospital Inpatient Discharges by County, 2016

County	Percent of Inpatients (2016)
Lawrence County	86%

Source: Analysis of Indiana University Health Discharge Data, 2016

The estimated, total population of this county in 2015 was 45,485 persons (**Exhibit 2**).

Exhibit 2: Community Population, 2015

County	Estimated Population 2015
Lawrence County	45,485

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

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 one or more of the counties.

Exhibit 3: IU Health Bedford Hospital Community



Source: Microsoft MapPoint and IU Health, 2018

Secondary Data Summary

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

Demographics

Population characteristics and trends directly influence community health needs. The total population in the IU Health Bedford Hospital community is expected to decrease by 0.9 percent from 2015 to 2020. Between 2016 and 2021, five of the seven ZIP codes in the IU Health Bedford Hospital community are projected to gain population.

The number of persons aged 65 years and older is projected to grow at a much faster rate (10.4 percent). This should contribute to growing need for health services, since older individuals typically need and use more services than younger persons.

Economic Indicators

Many health needs have been associated with poverty. At 12.9 percent, Lawrence County's poverty rate has been below the Indiana average. The poverty rate for the Black population in Lawrence County is 9.9 percent, which is significantly lower than the Indiana average. Low income census tracts are prevalent in IU Health Bedford Hospital's community, particularly around the hospital.

Unemployment rates have been steadily decreasing and while they are currently higher than the Indiana average,

unemployment rates in Lawrence County are currently on par with the U.S. average. Crime rates in the community have been consistently below Indiana averages, except for aggravated assault.

The percentage of people uninsured 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*, Lawrence County ranked 70th for overall health outcomes.

Lawrence County had 28 out of 42 indicators ranked in the bottom half of Indiana counties. Of those, 14 were in the bottom quartile, including: health outcomes, health factors, length of life, premature death, low birth weight, adult obesity, physical inactivity, alcohol-impaired driving deaths, teen births, social and economic factors, high school graduation, unemployment, physical environment, and driving alone to work.

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 appear to be most problematic:

- Years of potential life lost
- Percent in fair or poor health
- Percent low birth weight
- Percent obese
- Percent physically inactive
- Percent driving deaths from alcohol-impairment
- Teen birth rate
- Percent uninsured
- Violent crime rate
- Percent with severe housing problems
- Percent who drive alone to work

According to the Centers for Disease Control and Prevention (CDC), mortality rates for major cardiovascular diseases, diseases of the heart, all other diseases, ischemic heart disease, chronic lower respiratory diseases, cerebrovascular diseases (stroke), Alzheimer's disease, diabetes mellitus, intentional self-harm (suicide), and motor vehicle accidents were higher than the Indiana averages. Mortality rates for essential hypertension, other diseases of the circulatory system, certain conditions originating in the perinatal period, congenital malformations, and all other external causes were significantly higher than the Indiana average.

The overall cancer incidence rates were higher in Lawrence County than the Indiana averages for all cancers, lung,

colon, uterus, melanoma, thyroid, oral cavity and pharynx, and brain cancer.

Rates of communicable disease in Lawrence County were lower for all communicable diseases than Indiana averages.

Ambulatory Care Sensitive Conditions

Ambulatory Care Sensitive Conditions (ACSCs) include fourteen health conditions (also referred to as Preventative Quality Indicators, or “PQIs”) “for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.”² 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.

The ACSC rate for perforated appendix, hypertension, low birth weight, community-acquired pneumonia, urinary tract infection, and lower-extremity amputation among patients with diabetes in the IU Health Bedford Hospital community exceeded the Indiana average.

Community Need Index

Dignity Health, a California-based hospital system, developed and published a *Community Need Index™* (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 Lawrence County was 3.0 – equivalent to the national median of 3.0.

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 within the IU Health Bedford Hospital community have been designated as food deserts, including several near the hospital.

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 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.”

Lawrence County is not a designated MUA or MUP.

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 IU Health Bedford Hospital’s Community have been designated as Primary 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 the community served by IU Health Bedford Hospital.

- Drug/substance abuse
- Mental/behavioral health

Significant Indicators

Exhibit 4 presents many of the indicators discussed in the above secondary data summary. An indicator is considered significant if it varies materially from a benchmark level (e.g., an average for Indiana or the United States). For example, while Indiana’s percent unemployed was 3.5 percent and Lawrence County was 4.4 percent. For IU Health Bedford Hospital, the unemployment rate is thus considered significant. The last column of **Exhibit 4** identifies where more information regarding the data sources can be found.

The benchmarks include Indiana averages, national averages, and in some cases averages for “peer counties” from across the United States. In the *Community Health Status Indicators* data source, peer counties are defined as being similar in terms of population density, household incomes, and related characteristics.

² Agency for Healthcare Research and Quality (AHRQ) *Prevention Quality Indicators*.

Exhibit 4: Significant Indicators

Indicator	Area	Value	Benchmark	Exhibit
65+ Population change, 2015-2020	Lawrence County	10.4%	-0.9% – Total Community Population	12
Population with a disability	Lawrence County	16.9%	13.6% – Indiana	16
Poverty rate, Hispanic, 2012-2016	Lawrence County	43.3%	12.2% – Lawrence County White	18
Percent unemployed	Lawrence County	4.4%	3.5% – Indiana	20
Percent of adults with some college education	Lawrence County	57.3%	65.0% – U.S.	24
Violent crime rate	Lawrence County	300	155 – Peer Counties	25
Percent with severe housing problems	Lawrence County	11.9%	10.7% – Peer Counties	25
Years of potential life lost rate	Lawrence County	9,231	7,794 – Indiana	24
Percent of adults obese	Lawrence County	35.5%	32.0% – Indiana	24
Percent of adults physically inactive	Lawrence County	33.1%	26.8% – Indiana	24
Mortality rate (diabetes)	Lawrence County	31.7	26.0 – Indiana	26
Admissions for lower-extremity amputation due to diabetes (ACSC) per 100,000	Lawrence County	111.3	82.4 – Indiana	33
Cancer incidence rate (all types)	Lawrence County	454.3	445.2 – Indiana	28
Population per primary care provider	Lawrence County	3,033	1,320 – U.S.	24
Population per mental health provider	Lawrence County	1,821	470 – U.S.	24
Mortality rate (suicide)	Lawrence County	17.9	15.4 – Indiana	26
Percent births low birth weight	Lawrence County	8.5%	7.3% – Peer Counties	25
Teen birth rate	Lawrence County	42	30 – Peer Counties	25
Percent mothers smoked during pregnancy	Lawrence County	28.5%	15.6% – Indiana	30
Admissions for low birth weight births (ACSC) per 1,000 births	Lawrence County	7,554.7	6,174.2 – Indiana	33
Percent driving deaths with alcohol involvement	Lawrence County	35.9%	22.4% – Indiana	24

Source: Verité Analysis

Primary Data Summary

Primary data were gathered in three ways: Community Meetings, Key Stakeholder Interviews, and a Community Survey.

Community Meetings

On April 10, 2018, a meeting of community representatives was held at IU Health Bedford Hospital in Bedford, the county seat of Lawrence County. The meeting was attended by eight community members invited by IU Health because they represent important community organizations and sectors such as: non-profit organizations, local business, health care providers, local policymakers, parks and recreation departments, and schools.

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

Organizations Represented at Community Meeting

- Bedford Public Library
- Bedford Chamber of Commerce
- City of Bedford
- City of Bedford Parks and Recreation

- IU Health Bedford Hospital
- Purdue Extension
- Stone City Products

The meeting began with a presentation that discussed the goals and status of the CHNA process and the purpose of the community meeting. Then, secondary data were presented, along with a summary of the most unfavorable community health indicators. For the community served by IU Health Bedford Hospital, those indicators were (in alphabetical order):

- Chronic disease management and mortality
- Low birth weight and teen birth rates
- Mental illness and supply of mental health providers
- Mortality from motor vehicle accidents and other injuries
- Obesity and physical inactivity
- Smoking and smoking during pregnancy
- Unemployment and economic factors

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, such as: substance

abuse and treatment, access to and pricing of healthcare, collaboration in the community on health needs, and healthy food access and knowledge.

During the meeting, a range of other topics was discussed, including:

- Hospital admissions that are preventable
- Skills gap in local area compared to job opportunities
- Mental illness stigma
- Smoking policies
- Limited resources in community
- Lack of awareness of existing programs/resources
- Population patterns in the world and in rural communities

After discussing the needs identified through secondary data and adding others to the list, each participant was asked through a voting process to identify “three to five” they consider to be most significant. From this process, the group identified the following needs as most significant in the community served by IU Health Bedford Hospital:

1. Substance abuse and treatment
2. (Tie) Access to and pricing of healthcare
2. (Tie) Obesity and physical inactivity
3. Unemployment and economic factors/workforce training and education
4. Mental illness and supply of mental health providers

Interviews

An interview also was conducted with a representative of the Lawrence County Health Department. The interview was conducted to assure that appropriate and additional input was received from a governmental public health official. The individual that was interviewed did not participate in the community meeting. Accordingly, the results of the community meeting were discussed and insights were sought regarding significant community health needs, 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 interviewee confirmed that the top needs identified by the community meeting group were some of the most significant. These needs were:
 - Substance abuse and treatment
 - Obesity and physical inactivity
 - Access to and pricing of healthcare
 - Unemployment and economic factors/workforce training
 - Mental illness and supply of mental health providers
- Factors that influence many of the health needs include financial issues, information dissemination and availability, and transportation options.
- Access to affordable health insurance was identified as an issue, with the challenges of navigating the bureaucracy of health insurance difficult for many residents.

- Substance abuse was identified as a significant issue with many contributing factors, including the need for other activities and employment opportunities for young residents.
 - Support groups were thought to be available, but the need for local treatment centers and education programs about substance abuse in schools were identified as needs in the county.
- The need for a health educator was identified as significant, with immunization education and substance abuse education highlighted as particularly important.
- An increase in communicable disease, particularly with Hepatitis, has been noted in the community and tied to the substance abuse prevalence.
- There is concern among residents about adequate access to healthcare, and some residents fear that due to consolidation in healthcare that inpatient units may be on the decline as provider options in the community.

Community Survey

To inform the CHNA, a community survey was conducted by the Indiana Hospital Collaborative.³

Across Indiana, 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. For IU Health Bedford Hospital, surveys were received from 252 community households. According to the responses, these households included 479 adults.

Exhibit 5 portrays the community health needs considered most significant by survey respondents from IU Health Bedford Hospital's community.

³ For more information on the survey methodology, see Appendix A.

Exhibit 5: Community Survey – Significant Health Needs

Community Health Need	IU Health Bedford Hospital Number of Responses	IU Health Bedford Hospital Percent of Respondents
Substance use or abuse	211	83.7%
Obesity	141	55.8%
Child neglect and abuse	103	40.8%
Chronic diseases, like diabetes, cancer, and heart disease	97	38.6%
Poverty	93	37.0%
Alcohol use or abuse	90	35.6%
Aging and older adult needs	78	30.8%
Tobacco use	78	30.8%
Assault, violent crime, and domestic violence	61	24.1%
Mental health	61	24.0%
Food access, affordability, and safety	38	15.0%
Infectious diseases, like HIV, STDs, and hepatitis	32	12.8%
Disability needs	28	11.1%
Injuries and accidents	22	8.9%
Environmental issues	22	8.7%
Homelessness	19	7.7%
Dental care	19	7.6%
Reproductive health and family planning	18	7.3%
Sexual violence, assault, rape, or human trafficking	11	4.5%
Suicide	4	1.4%
Infant mortality	1	0.4%

Source: Community Survey

The community survey indicates that substance abuse, obesity, child neglect and abuse, and chronic diseases represent top concerns in the community served by IU Health Bedford Hospital.

Exhibit 6 arrays survey responses regarding health factors across demographic and socioeconomic characteristics. The exhibit includes findings from all adults living in homes where a survey questionnaire was returned in one of the 17 counties served by IU Health.

Exhibit 7 notes 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 those without a high school diploma. Opioid misuse also appears to be more prevalent in these populations.

Exhibit 6: 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 7: 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%

Exhibit 7: Community Survey – Health Behaviors (continued)

Measure	Total	Female	Male	White	Black	Asian	Hispanic	\$0 – \$25k	\$25 – \$75k	\$75k+	No High School Diploma
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 IN THE COMMUNITY

This section identifies other facilities and resources available in the community served by IU Health Bedford Hospital that are available to address community health needs.

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.

There currently are no FQHC sites operating in the IU Health Bedford Hospital community. As such, there is no Exhibit 8.

Hospitals

Two hospitals (including IU Health Bedford Hospital) are located in the community (Exhibit 9).

Exhibit 9: Hospitals, 2018

County	Facility
Lawrence	Indiana University Health Bedford Hospital (Bedford)
Lawrence	St. Vincent Dunn Hospital Inc. (Bedford)

Source: Indiana State Department of Health, 2018

Local Health Departments (LHDs)

Exhibit 10 presents information on LHDs that provide services in the IU Health Bedford Hospital community.

Exhibit 10: Local Health Departments, 2018

County	Public Health Department
Lawrence	Lawrence County Health Department (Bedford)

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 IU Health Bedford Hospital. 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 addictions
- 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

APPENDIX A – OBJECTIVES AND METHODOLOGY

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.⁴ 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?

⁴ Internal Revenue Code, Section 501(r).

⁵ 501(r) Final Rule, 2014.

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 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).⁵

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

Data from multiple sources were gathered and assessed, including secondary data⁶ published by others and primary data obtained through community input. See Appendix B for an assessment 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 C.

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 data⁷ 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.

⁶ “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.

⁷ “Secondary data” refers to data published by others, for example the U.S. Census and the Indiana State Department of Health.

Collaborating Organizations

For this assessment, IU Health Bedford Hospital 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, and Indiana University Health. Comparisons to benchmarks were made 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 IU Health Bedford Hospital, surveys were received from 252 community households. According to the responses, these households included 479 adults.

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

This section presents an assessment of secondary data regarding health needs in the IU Health Bedford Hospital community. IU Health Bedford Hospital's community is comprised of Lawrence County, Indiana.

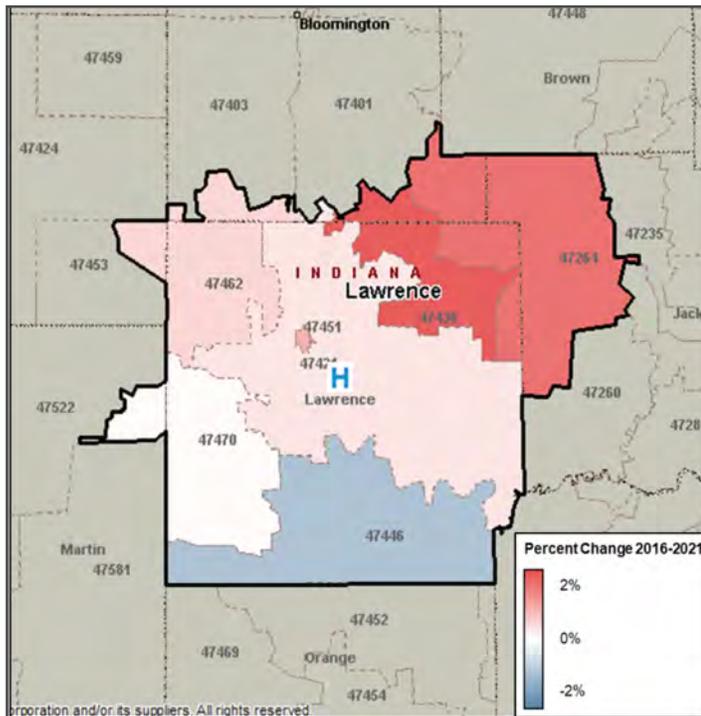
Demographics

Exhibit 11A: Percent Change in Community Population by County, 2015-2020

County	Estimated Population 2015	Estimated Population 2020	Percent Change 2015-2020
Lawrence County	45,485	45,075	-0.9%
Indiana Total	6,612,768	6,738,573	1.9%

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

Exhibit 11B: Percent Change in Local Community Population by ZIP Code, 2016-2021



Healthcare Advisory Board, 2017

Description

Exhibit 11A shows the total population for each community county in 2015 and projections to 2020. Exhibit 11B maps the percent change in population by ZIP code between 2016 and 2021 for each ZIP code in the community.

Observations

- A decrease in population is projected for Lawrence County between 2015 and 2020.

Exhibit 12: Percent Change in Population by Age/Sex Cohort, 2015-2020

Age/Sex Cohort	Estimated Population 2015	Projected Population 2020	Percent Change 2015-2020
Lawrence County	45,485	45,075	-0.9%
0-17	9,900	9,563	-3.4%
Male, 18-44	7,172	6,948	-3.1%
Female, 18-44	6,929	6,765	-2.4%
45-64	13,028	12,467	-4.3%
65+	8,456	9,332	10.4%
Indiana State	6,612,768	6,738,573	1.9%
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

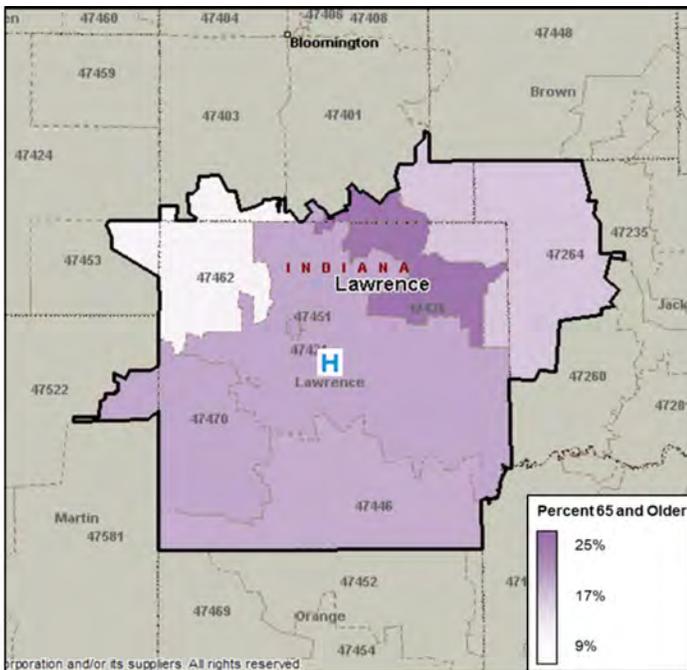
Description

Exhibit 12 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 increase by 10.4 percent between 2015 and 2020.
- The growth of older populations is likely to lead to growing need for health services, since on an overall per-capita basis, older individuals typically need and use more services than younger persons.

Exhibit 13: Percent of Population Aged 65+ by ZIP Code, 2015



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

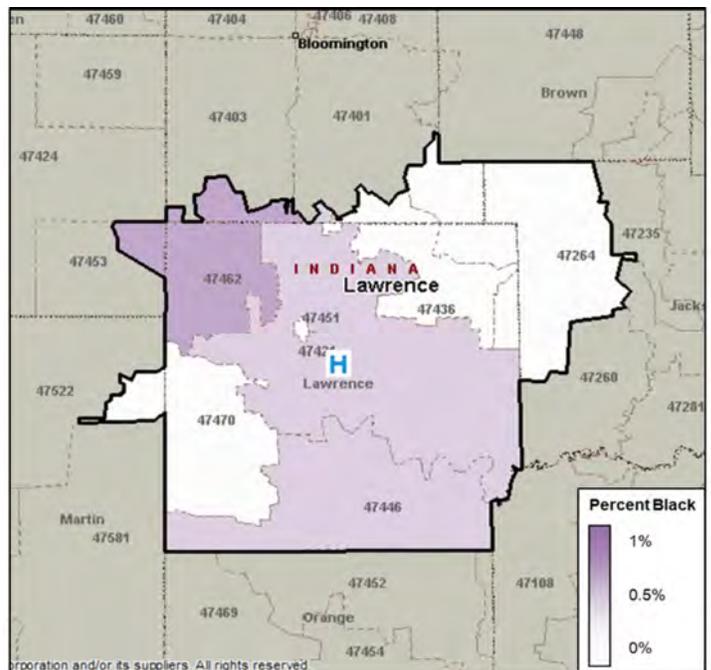
Description

Exhibit 13 portrays the percent of the population 65 years of age and older in the community by ZIP code.

Observations

- ZIP code 47436 has the highest proportion of the population aged 65 and older.

Exhibit 14: Percent of Population – Black, 2015



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

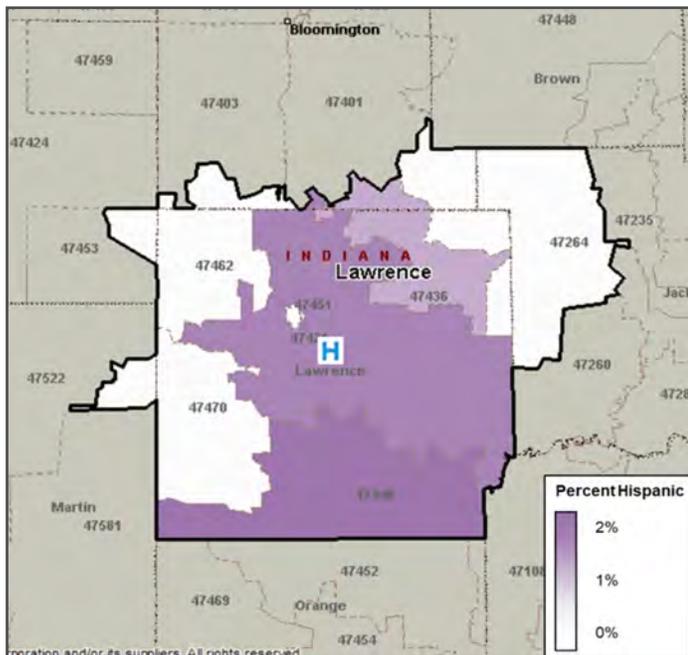
Description

Exhibit 14 portrays locations where the percentages of the population that are Black were highest in 2015.

Observations

- The Black population of Lawrence County is under one percent in all ZIP codes.

Exhibit 15: Percent of Population – Hispanic (or Latino), 2015



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

Description

Exhibit 15 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

- Lawrence County had a higher percentage of the population with a disability compared to Indiana and U.S. averages.
- Lawrence County had a lower 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.”

Exhibit 16: Other Socioeconomic Indicators, 2012-2016

Measure	Lawrence County	Indiana	United States
Population 25+ without High School Diploma	11.6%	11.9%	13.0%
Population with a Disability	16.9%	13.6%	12.5%
Population Linguistically Isolated	0.9%	3.2%	8.5%

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

Description

Exhibit 16 portrays the percent of the population (aged 25 years and above) without a high school diploma, with a disability, and linguistically isolated, by county.

Observations

- Lawrence County had a lower percentage of residents aged 25 years and older without a high school diploma than the Indiana and U.S. averages.

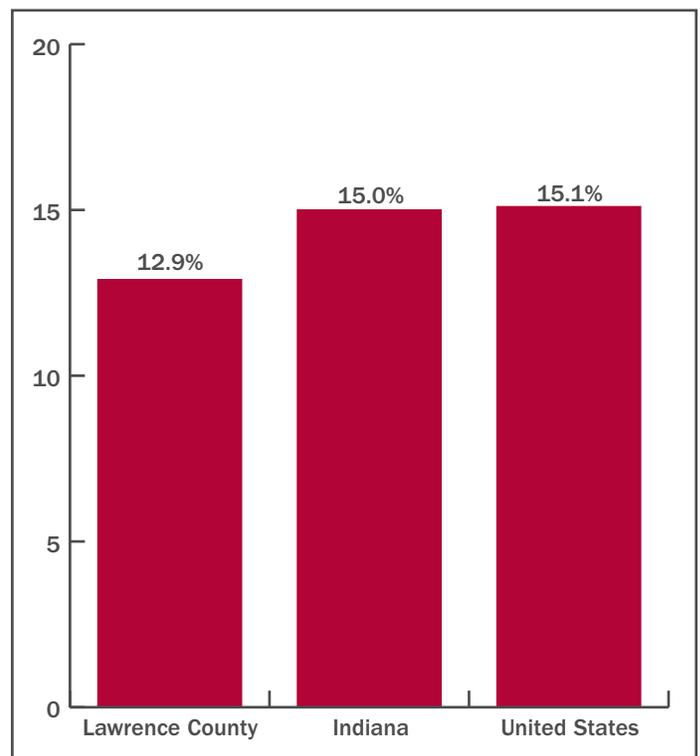
- Lawrence County had a higher percentage of the population with a disability compared to Indiana and U.S. averages.
- Lawrence County had a lower proportion of the population that is linguistically isolated. Linguistic isolation is defined as residents who speak a language other than English and speak 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 17: Percent of People in Poverty, 2012-2016



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

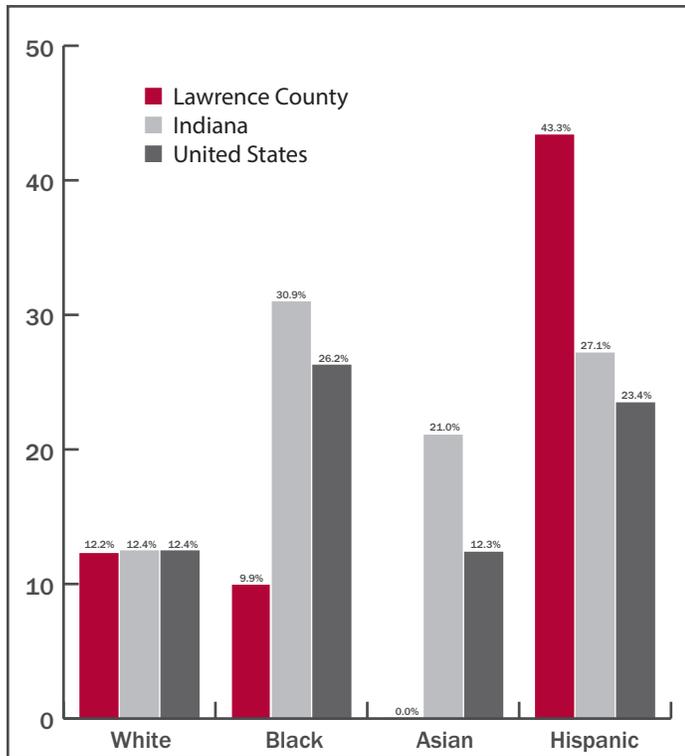
Description

Exhibit 17 portrays poverty rates by county.

Observations

- The poverty rate in Lawrence County was below both the Indiana and national averages from 2012-2016.

Exhibit 18: Poverty Rates by Race and Ethnicity, 2012-2016



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

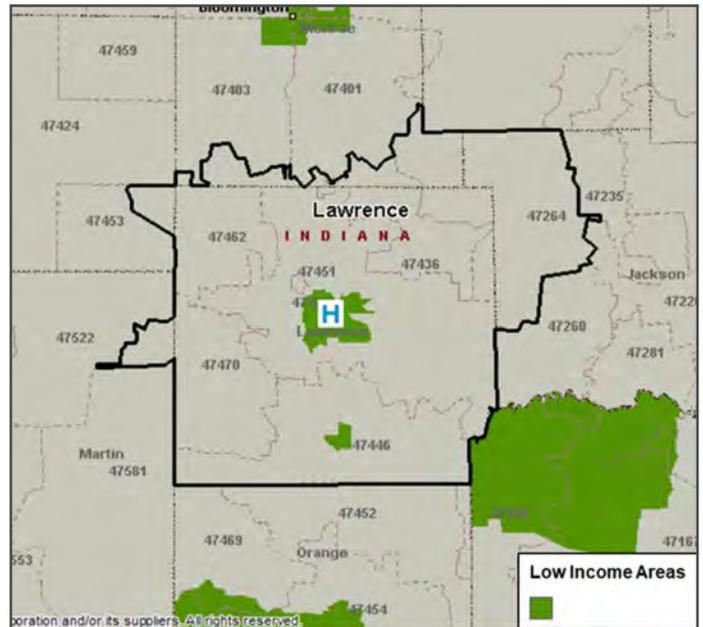
Description

Exhibit 18 portrays poverty rates by race and ethnicity.

Observations

- Poverty rates in Lawrence County have been lower than national averages for all population cohorts, except the Hispanic (or Latino) cohort.
- Approximately two-fifths of Hispanic (or Latino) residents in Lawrence County lived in poverty.

Exhibit 19: Low Income Census Tracts, 2017



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

Description

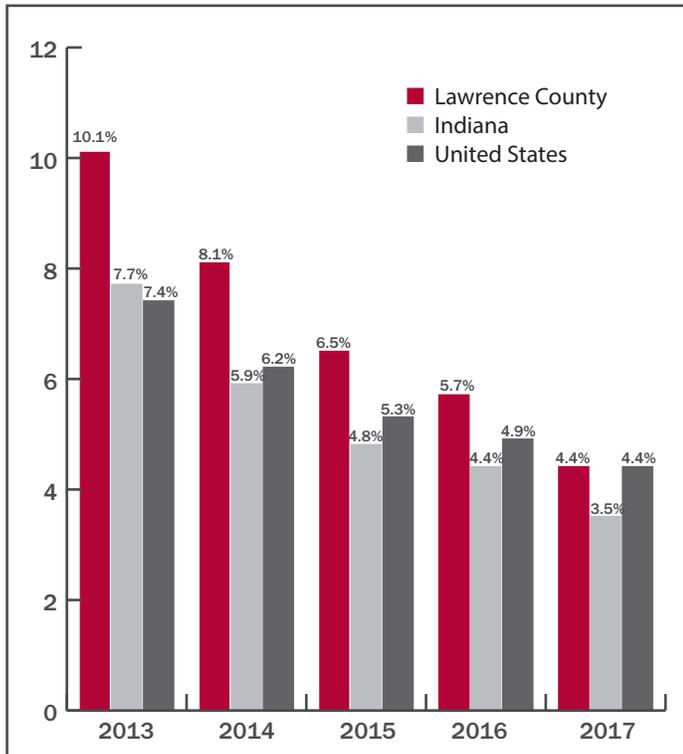
Exhibit 19 portrays the location of federally-designated low income census tracts.

Observations

- Low income census tracts have been prevalent in areas proximate to the hospital.

Unemployment

Exhibit 20: Unemployment Rates, 2013-2017



Source: Bureau of Labor Statistics, 2018

Description

Exhibit 20 shows unemployment rates for 2013 through 2017 for Lawrence County, with Indiana and national rates for comparison.

Observations

- Between 2013 and 2017, unemployment rates at the local, state, and national levels declined significantly.
- The unemployment rate in Lawrence County has been above the Indiana average.

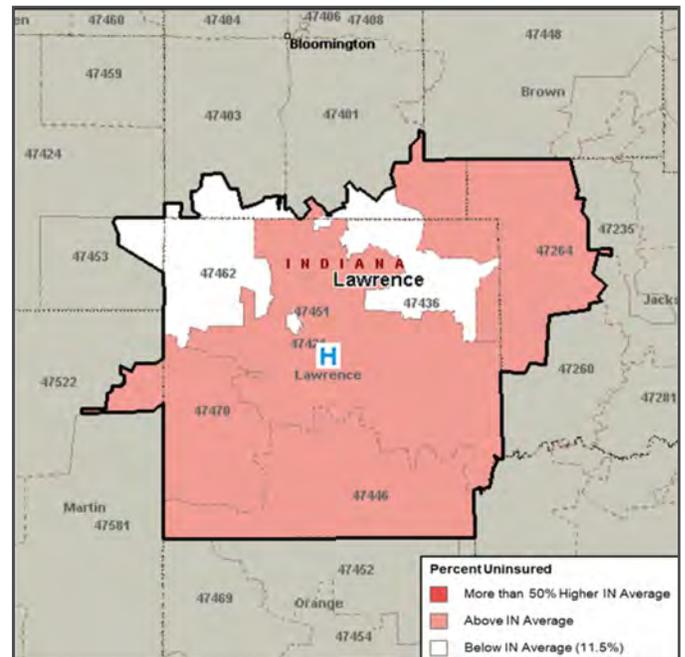
Insurance Status

Exhibit 21A: Percent of the Population without Health Insurance, 2015-2020

County	Population	Population Uninsured	Percent Uninsured
Lawrence County	45,047	5,455	12.1%
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

Exhibit 21B: Percent of the Population without Health Insurance, 2015-2020



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

Description

Exhibit 21A presents the estimated percent of people uninsured by county in 2015, with a projection to 2020. Exhibit 21B maps the 2015 uninsured rates by ZIP code.

Observations

- In 2015, the uninsured rates were higher than the Indiana rate in ZIP codes 47264, 47421, 47446, and 47470.
- 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.⁸

⁸ See: <http://hrms.urban.org/briefs/Increase-in-Medicaid-under-the-ACA-reduces-uninsurance.html>

Crime

Exhibit 22: Crime Rates by Type and Jurisdiction, Per 100,000, 2016

Indicator	Lawrence	Indiana
Violent crime	282.3	407.3
Murder	-	6.7
Rape (revised definition)	-	38.0
Rape (legacy definition)	10.9	28.1
Robbery	4.4	111.2
Aggravated assault	267.0	251.5
Property crime	483.6	2,606.5
Burglary	155.4	517.4
Larceny - theft	262.6	1,865.5
Motor vehicle theft	65.7	223.5

Source: Federal Bureau of Investigation, 2017

Description

Exhibit 22 provides crime statistics.

Observations

- 2016 crime rates in Lawrence County were below Indiana averages in all areas except aggravated assault.

Local Health Status and Access Indicators

This section assesses health status and access indicators for the IU Health Bedford Hospital community. 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.

County Health Rankings

Exhibit 23: County Health Rankings, 2015 and 2018

Measure	Lawrence County 2015	Lawrence County 2018
Health Outcomes	80	70
Health Factors	67	70
Length of Life	72	78
Premature death	72	78
Quality of Life	80	66
Poor or fair health	79	38
Poor physical health days	55	58
Poor mental health days	55	33
Low birthweight	82	80
Health Behaviors	45	61
Adult smoking	18	35
Adult obesity	75	75
Food environment index	66	52
Physical inactivity	53	83
Access to exercise opportunities	21	21
Excessive drinking	12	14
Alcohol-impaired driving deaths	84	84
Sexually transmitted infections	60	60
Teen births	83	83
Clinical Care	43	39
Uninsured	65	64
Primary care physicians	62	64
Dentists	38	37
Mental health providers	44	53
Preventable hospital stays	44	35
Diabetes monitoring	18	19
Mammography screening	29	40
Social & Economic Factors	75	76
High school graduation	68	77
Some college	64	37
Unemployment	88	85
Children in poverty	52	62
Income inequality	77	64
Children in single-parent households	48	48
Social associations	21	22
Violent crime	49	58
Injury deaths	77	49
Physical Environment	73	69
Air pollution	74	4
Severe housing problems	56	45
Driving alone to work	80	74
Long commute – driving alone	57	44

Source: County Health Rankings, 2018

Description

Exhibit 23 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,⁹ social and economic factors, and physical environment.¹⁰ *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

- Lawrence County had 28 out of 42 indicators ranked in the bottom half of Indiana Counties. Of those, 14 were in the bottom quartile, including: health outcomes, health factors, length of life, premature death, low birth weight, adult obesity, physical inactivity, alcohol-impaired driving deaths, teen births, social and economic factors, high school graduation, unemployment, physical environment, and driving alone to work.

Exhibit 24: County Health Rankings Data Compared to Indiana and U.S. Averages, 2018

Indicator Category	Indicator	Lawrence County	Indiana	U.S.
Health Outcomes				
Length of life	Years of potential life lost before age 75 per 100,000 population (age-adjusted)	9,231	7,794	6,700
Quality of life	Percentage of adults reporting fair or poor health (age-adjusted)	16.1	17.7	16.0
Quality of life	Average number of physically unhealthy days reported in past 30 days (age-adjusted)	3.9	3.9	3.7
Quality of life	Average number of mentally unhealthy days reported in past 30 days (age-adjusted)	4.0	4.3	3.8
Quality of life	Percentage of live births with low birthweight (< 2500 grams)	8.5	8.0	8.0
Health Factors				
Health Behaviors				
Adult smoking	Percentage of adults who are current smokers	19.2	21.1	17.0
Adult obesity	Percentage of adults that report a BMI of 30 or more	35.5	32.0	28.0
Food environment index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	7.9	7.0	7.7
Physical inactivity	Percentage of adults age 20 and over reporting no leisure-time physical activity	33.1	26.8	23.0
Access to exercise opportunities	Percentage of population with adequate access to locations for physical activity	76.3	76.6	83.0
Excessive drinking	Percentage of adults reporting binge or heavy drinking	16.4	18.6	18.0
Alcohol-impaired driving deaths	Percentage of driving deaths with alcohol involvement	35.9	22.4	29.0
Sexually transmitted infections	Number of newly diagnosed chlamydia cases per 100,000 population	291.0	437.9	478.8
Teen births	Number of births per 1,000 female population ages 15-19	42.3	30.5	27.0

⁹ 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.

¹⁰ A composite measure that examines Environmental Quality, which includes the number of air pollution-particulate matter days and air pollution-ozone days, and Built Environment, which includes access to healthy food and recreational facilities and the percent of restaurants that are fast food.

Exhibit 24: County Health Rankings Data Compared to Indiana and U.S. Averages, 2018 (continued)

Indicator Category	Indicator	Lawrence County	Indiana	U.S.
Clinical Care				
Uninsured	Percentage of population under age 65 without health insurance	12.0	11.3	11.0
Primary care physicians	Ratio of population to primary care physicians	3033:1	1,505:1	1,320:1
Dentists	Ratio of population to dentists	2396:1	1,852:1	1,480:1
Mental health providers	Ratio of population to mental health providers	1821:1	701:1	470:1
Preventable hospital stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	54.2	56.8	49.0
Diabetes monitoring	Percentage of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring	88.6	84.7	85.0
Mammography screening	Percentage of female Medicare enrollees ages 67-69 that receive mammography screening	61.7	62.1	63.0
Social and Economic Environment				
High school graduation	Percentage of ninth-grade cohort that graduates in four years	87.1	87.2	83.0
Some college	Percentage of adults ages 25-44 with some post-secondary education	57.3	62.0	65.0
Unemployment	Percentage of population ages 16 and older unemployed but seeking work	5.7	4.4	4.9
Children in poverty	Percentage of children under age 18 in poverty	20.8	19.1	20.0
Income inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	4.1	4.4	5.0
Children in single-parent households	Percentage of children that live in a household headed by single parent	31.2	33.7	34.0
Social associations	Number of membership associations per 10,000 population	16.7	12.3	9.3
Violent crime	Number of reported violent crime offenses per 100,000 population	300.0	356.2	380.0
Injury deaths	Number of deaths due to injury per 100,000 population	73.9	69.9	65.0
Physical Environment				
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	11.9	14.0	19.0
Driving alone to work	Percentage of the workforce that drives alone to work	86.4	83.0	76.0
Long commute – driving alone	Among workers who commute in their car alone, the percentage that commute more than 30 minutes	33.2	30.5	35.0

Source: County Health Rankings, 2018

Description

Exhibit 24 provides data for each underlying indicator of the composite categories in the *County Health Rankings*.¹¹ 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

- The following indicators (presented alphabetically) compared particularly unfavorably across the IU Health Bedford Hospital community:
 - Percent driving deaths with alcohol-impairment
 - Ratio of population to primary care providers
 - Ratio of population to mental health care providers

¹¹ *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

Community Health Status Indicators

Exhibit 25: Community Health Status Indicators, 2018

Indicator	Lawrence 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 25 compares Lawrence 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

- Lawrence ranked in the bottom quartile for 11 (of 34) indicators; years of potential life lost, percent in fair or poor health, percent low birth weight, percent obese, percent physically inactive, percent driving deaths from alcohol-impairment, teen birth rate, percent uninsured, violent crime rate, percent with severe housing problems, and percent who drive alone to work.

Exhibit 26: Selected Causes of Death, Age-Adjusted Rates per 100,000 Population, 2016

Indicator	Lawrence County	Indiana
Major cardiovascular diseases	259.9	237.4
Diseases of heart	191.0	180.6
Cancer	170.1	172.5
All other diseases	190.8	171.3
Ischemic heart diseases	117.5	102.2
Other diseases of heart	67.2	68.3
Chronic lower respiratory diseases	70.5	54.6
All other and unspecified accidents and adverse effects	14.3	40.1
Cerebrovascular diseases (stroke)	42.1	39.5
Alzheimer's disease	45.3	34.9
Diabetes mellitus	31.7	26.0
Nephritis, nephrotic syndrome and nephrosis (kidney disease)	15.7	18.4
Intentional self-harm (suicide)	17.9	15.4
Influenza and pneumonia	9.6	12.6
Motor vehicle accidents	16.2	12.4
Chronic liver disease and cirrhosis	10.8	11.2
Hypertensive heart disease with or without renal disease	6.2	10.2
Essential hypertension and hypertensive renal disease	15.3	10.0
Assault (homicide)	0.0	7.6
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (excluding SIDS)	0.0	6.2
Other diseases of circulatory system	11.5	6.2
Certain conditions originating in the perinatal period	11.7	4.9
Congenital malformations, deformations and chromosomal abnormalities	7.2	3.9
All other external causes	8.3	2.6
Atherosclerosis	0.0	1.1
Pregnancy, childbirth and the puerperium	0.0	0.8
Sudden infant death syndrome (SIDS)	0.0	0.7
Peptic ulcer	0.0	0.5

Source: Indiana State Department of Health, 2017

Description

Exhibit 26 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

- In Lawrence County, mortality rates for major cardiovascular diseases, diseases of the heart, all other diseases, ischemic heart disease, chronic lower respiratory disease, cerebrovascular diseases (stroke), Alzheimer's disease, diabetes mellitus, intentional self-harm (suicide), and motor vehicle accidents were worse than the Indiana averages.
- Mortality rates for essential hypertension, other diseases of the circulatory system, certain conditions originating in the perinatal period, congenital malformations, and all other external causes were more than 50 percent worse than the Indiana averages.

Exhibit 27: Age-Adjusted Cancer Mortality Rates per 100,000 Population, 2016

Indicator	Lawrence County	Indiana
All Cancers	170.1	172.5
Stomach	4.3	2.7
Colon, rectum and anus	13.5	14.9
Pancreas	5.7	11.9
Trachea, bronchus and lung	51.8	49.2
Breast	16.6	11.6
Cervix uteri, corpus uteri and ovary	5.4	8.2
Prostate	2.6	7.6
Urinary tract	6.6	8.8
Non-Hodgkin's lymphoma	10.7	6.4
Leukemia	11.4	6.7
Other forms of cancer	41.6	44.6

Source: Indiana State Department of Health, 2017

Description

Exhibit 27 provides age-adjusted mortality rates for selected forms of cancer in 2016. Light grey shading highlights indicators worse than the Indiana average; dark grey shading highlights indicators more than 50 percent worse than the Indiana average.

Observations

- Cancer mortality rates for lung and breast cancers were higher in Lawrence County than the Indiana averages.
- Cancer mortality for stomach, Non-Hodgkin's lymphoma, and Leukemia were more than 50 percent worse in Lawrence County.

Exhibit 28: Age-Adjusted Cancer Incidence Rates per 100,000 Population, 2010-2014

Indicator	Lawrence County	Indiana
All cancers	454.3	445.2
Breast	105.3	120.1
Prostate	91.4	95.7
Lung and bronchus	81.0	72.8
Colon and rectum	52.8	43.2
Uterus	30.4	27.0
Bladder	20.8	21.0
non-Hodgkin lymphoma	12.0	19.0
Melanoma of the skin	26.3	18.1
Kidney and renal pelvis	16.7	17.8
Leukemia	9.7	13.2
Pancreas	11.7	12.7
Thyroid	12.4	11.8
Oral cavity and pharynx	12.6	11.7
Brain and ONS	9.7	6.9
Liver and bile duct	5.8	6.5

Source: Centers for Disease Control and Prevention, 2014.

Description

Exhibit 28 presents age-adjusted cancer incidence rates in the community. Light grey shading highlights indicators worse than Indiana averages.

Observations

- In Lawrence County, overall cancer incidence rates for all cancers, lung, colon, uterus, melanoma, thyroid, oral cavity, and brain were higher than the Indiana averages.

Exhibit 29: Communicable Disease Incidence Rates per 100,000 Population, 2016

Indicator	Lawrence County	Indiana
HIV/AIDS*	80.0	188.0
Chlamydia	200.1	465.0
Gonorrhea	52.8	142.5
Primary and Secondary Syphilis	0.0	5.0

*Note: Data from 2014

Source: Indiana State Department of Health, 2016.

Description

Exhibit 29 presents incidence rates for various communicable diseases.

Observations

- Lawrence County has rates of communicable disease below both the Indiana averages for all diseases.

Exhibit 30: Maternal and Child Health Indicators, 2011-2015

Indicator	Lawrence County	Indiana
Infant Mortality Rate (per 1,000 Live Births)	4.6	7.2
Low Birth Weight Percent	8.1%	8.0%
Preterm Births Percent	9.6%	9.7%
Early Prenatal Care Percent	76.2%	68.1%
Smoked During Pregnancy Percent	28.5%	15.6%
Unmarried Mothers Percent	41.5%	43.2%
Breastfeeding Percent	72.7%	77.4%
Mother on Medicaid Percent	51.8%	44.3%
Teen Birth Rate (15-17)	16.3	13.6
Teen Birth Rate (15-19)	42.7	30.4

Source: Indiana Department of Health, 2016

Description

Exhibit 30 presents various maternal and infant health indicators. Light grey shading highlights indicators worse than Indiana averages; dark grey shading highlights indicators more than 50 percent worse than the Indiana averages.

Observations

- In Lawrence County, the percent of low birthweight infants, percent of mothers who breastfeed, percent of mothers on Medicaid, rate of teens giving birth (age 15-17), and rate of teens giving birth (age 15-19) were above the Indiana averages.
- The percentage of women who smoked during pregnancy was more than 50 percent worse than the Indiana average.

Exhibit 31A: Behavioral Risk Factor Surveillance System, Race/Ethnicity, 2016

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

Source: Behavioral Risk Factor Surveillance System, 2016

Exhibit 31B: Behavioral Risk Factor Surveillance System, Income, 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%	21.1%
Adults without Health Care Coverage	23.7%	25.3%	16.3%	7.6%	3.6%	33.1%	13.6%
Obese (based on BMI)	36.5%	35.3%	34.1%	34.6%	28.7%	34.0%	32.5%
Diabetes	18.7%	17.4%	11.9%	9.3%	6.5%	15.4%	11.5%
Angina or Coronary Heart Disease	8.3%	6.5%	5.1%	3.0%	3.0%	6.3%	4.9%
No Physical Activity in Past Month	42.5%	38.0%	28.6%	20.8%	13.7%	41.2%	26.8%
Asthma	20.4%	12.6%	9.5%	7.5%	7.1%	15.6%	10.2%

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 31A and 31B 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.

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.
- BRFSS indicators for residents without a high school diploma were worse than average for all indicators presented.

Ambulatory Care Sensitive Conditions (ACSC) also referred to as Preventative Quality Indicators (PQI)

Exhibit 32: 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
Lawrence County	28.4	700.0	90.8	634.1	73.8	363.4	7,554.7
Indiana	59.0	632.7	110.2	664.1	63.3	434.8	6,174.2
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
Lawrence County	73.8	215.8	167.5	25.6	9.3	111.3
Indiana	138.5	184.5	148.2	40.6	32.0	82.4
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 32 provides 2017 ACSC (PQI) rates (per 100,000 persons) for ZIP codes in the IU Health Bedford Hospital community – 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.”¹² 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

- For Lawrence County, the rates of admissions for ACSC exceeded Indiana averages for six of thirteen conditions: perforated appendix, hypertension, low birth weight, community acquired pneumonia, urinary tract infection, and lower-extremity amputation among patients with diabetes.

¹² Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators.

Exhibit 33: Ratio of ACSC Rates for IU Health Bedford Hospital Community and Indiana, 2017

County	Lawrence County	Indiana	Ratio: Lawrence/Indiana
Lower-Extremity Amputation Among Patients with Diabetes	111.3	82.4	1.4
Low Birth Weight	7,554.7	6,174.2	1.2
Community-Acquired Pneumonia	215.8	184.5	1.2
Hypertension	73.8	63.3	1.2
Urinary Tract Infection	167.5	148.2	1.1
Perforated Appendix	700.0	632.7	1.1
Chronic Obstructive Pulmonary Disease (COPD) of Asthma in Older Adults	634.1	664.1	1.0
Heart Failure	363.4	434.8	0.8
Diabetes Long-Term Complications	90.8	110.2	0.8
Uncontrolled Diabetes	25.6	40.6	0.6
Dehydration	73.8	138.5	0.5
Diabetes Short-Term Complications	28.4	59.0	0.5
Asthma in Younger Adults	9.3	32.0	0.3

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

Description

Exhibit 33 provides the ratio of Ambulatory Care Sensitive Conditions (ACSC) also referred to as Preventative Quality Indicators (PQI) rates in the IU Health Bedford Hospital community 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.

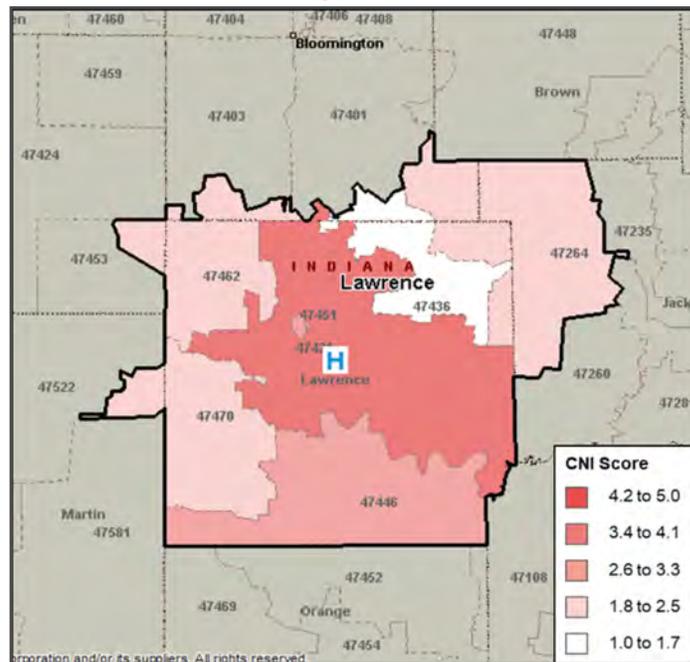
Observations

- In the community, ACSC rates for lower-extremity amputation among patients with Diabetes were 40 percent higher than the Indiana average.
- ACSC rates within the IU Health Bedford Hospital community for low birth rate, community-acquired pneumonia, and hypertension were 20 percent higher than the Indiana average.

Community Need Index™ and Food Deserts

Dignity Health Community Need Index

Exhibit 34: Community Need Index, 2017



Source: Microsoft MapPoint and Dignity Health, 2017

Description

Exhibit 34 presents the Community Need Index™ (CNI) score for each ZIP code in the community. Higher scores (e.g., 4.2 to 5.0) indicate higher levels of community need.

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:

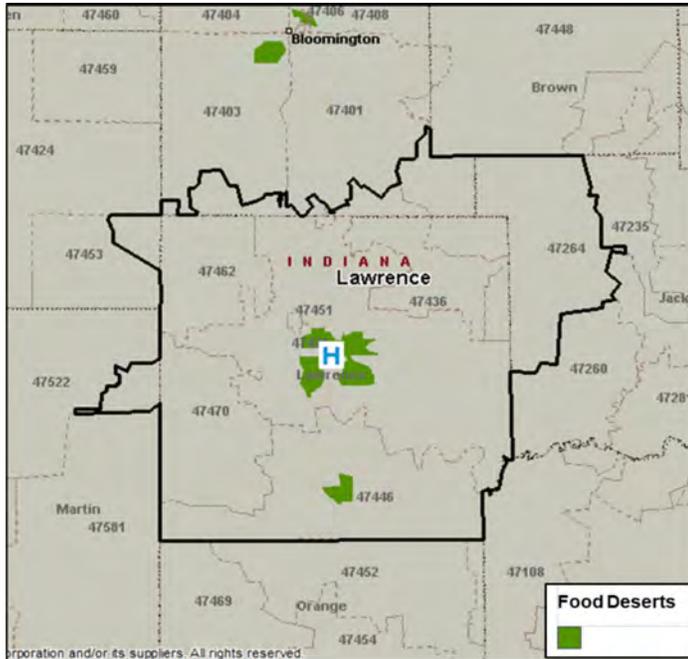
- The percentage of elders, children, and single parents living in poverty;
- The percentage of adults over the age of 25 with limited English proficiency, and the percentage of the population that is non-White;
- The percentage of the population without a high school diploma;
- The percentage of uninsured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

- Lawrence County scored a 3.0 on the CNI scale which is consistent with the national average.
- ZIP codes within the IU Health Bedford Hospital community scored in both the “Lowest Need” and the “Moderate Need” categories.

Exhibit 35: Food Deserts, 2017



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

Description

Exhibit 35 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 the IU Health Bedford Hospital community have been designated as food deserts, notably in census tracts close to the hospital.

Medically Underserved Areas and Populations

Description

Exhibit 36 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.¹³ 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 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.”¹⁴

Observations

- Lawrence County has no designated MUAs or MUPs.

Health Professional Shortage Areas (HPSA)

Exhibit 37A: Primary Care Health Professional Shortage Areas, 2018

County	HPSA Name	HPSA Type Description
Lawrence	Low Income – Lawrence County	HPSA Population

Source: Health Resources and Services Administration, 2018

Description

Exhibit 37A 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

¹³ Health Resources and Services Administration.

See <http://www.hrsa.gov/shortage/mua/index.html>

¹⁴ Ibid.

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 is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility.”¹⁵

Observations

- The low-income population of Lawrence County has been designated as a primary care HPSA.

Description

Exhibit 37B shows the locations of federally-designated dental care HPSA areas.

Observations

- No locations within Lawrence County have been designated a dental care HPSA, so there is no exhibit.

Exhibit 37C: Mental Care Health Professional Shortage Areas, 2018

County	HPSA Name	HPSA Type Description
Lawrence	Mental Health Catchment Area 23	HPSA Geographic High Needs

Source: Health Resources and Services Administration, 2018

Description

Exhibit 37C lists the locations of federally-designated mental health care HPSA areas.

Observations

- Lawrence County has been designated as a mental care HPSA as a part of the Mental Health Catchment Area 23.

¹⁵ 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

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.¹⁶ 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
- 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

¹⁶ Available at: <https://www.in.gov/isdh/18888.htm>

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 in the community.
- 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 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.
- 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

Exhibit 38: Significant Needs Identified in Other CHNAs

Prioritized Need	Frequency
Drug/substance abuse	2
Mental/behavioral health	2
Access to basic/primary health care	1
Access to mental health services	1
Community engagement and building	1
Diabetes	1
Education	1
Food insecurity	1
Funding for health services	1
Housing issues/homelessness	1
Nutrition/access to healthy food	1
Obesity	1
Physical inactivity/lack of exercise	1
Suicide	1
Tobacco use during pregnancy	1
Transportation	1
Unemployment	1

Description

Several other needs assessments conducted by hospital facilities were reviewed. Significant needs identified by these facilities are presented in Exhibit 38. The reviewed assessments include the following:

- Hoosier Uplands Community Needs Assessment
- St. Vincent Dunn Hospital CHNA 2016

Observations

- The following indicators most often were identified as significant in other hospital CHNAs that assessed IU Health Bedford Hospital’s community:
 - Drug and substance abuse
 - Mental/behavioral health

APPENDIX C – INTERVIEWEES AND COMMUNITY MEETING PARTICIPANTS

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

- Bedford Public Library
- Bedford Chamber of Commerce
- City of Bedford
- City of Bedford Parks and Recreation
- IU Health Bedford Hospital
- Lawrence County Public Health Department
- Purdue Extension
- Stone City Products

APPENDIX D – IMPACT OF ACTIONS TAKEN SINCE THE PREVIOUS CHNA

This appendix discusses the impact of community health improvement actions taken by IU Health Bedford Hospital to address significant community health needs since its last CHNA report was conducted. The impacts (both expected and achieved) of each community health program are described below.

Healthy Weight and Nutrition

- **IU Health Bucks.** IU Health Bedford Hospital partnered with the Bedford Farmer’s Market to offer \$5 vouchers called IU Health Bucks. The IU Health Bucks project is a nutrition education program targeting underserved populations. The program aims to increase the integration of fruits and vegetables into family mealtimes among participants. The program distributes over 300 IU Health Bucks per year. IU Health Bedford Hospital supports this program through the time and expertise of staff members, as well as through direct funding of the IU Health Bucks.
- **Nutrition Education.** IU Health Bedford Hospital provided

information about proper portions and nutrition at the Bedford Farmer’s Market. Over 10 community members took part in this event. IU Health Bedford Hospital dedicated staff time and expertise to support the event.

- **Community Garden.** IU Health Bedford Hospital partnered with Live Well Lawrence County and the Bedford Parks Department to develop a community garden site. The site included walking paths and grounds for growing food. Over half of the garden plots were utilized by gardeners in the first year of the program.
- **American Cancer Society 5K.** In a partnership with the American Cancer Society, IU Health Bedford Hospital hosted a 5K. The purpose was to raise money for the American Cancer Society as well as promoting wellness and physical activity. A total of 80 community members participated, and \$2,002 was raised for the American Cancer Society.
- **Healthy Drinking Habits.** Staff members from IU Health Bedford Hospital gave a presentation about the benefits of proper water intake at a local middle school. The staff members educated 40 students, and one class was noted to increase their intake of water, when compared to sugary beverages, by 16 percent. IU Health Bedford Hospital supported this program through donated staff time and expertise.

Mental Health

- **Grief Support Groups.** IU Health Bedford Hospital offered support groups for people coping with the loss of a loved one. Two grief support groups were offered each year for a six week term, and there were a total of 50 participants. IU Health Bedford Hospital dedicated staff time to coordinate this initiative.

Substance Use

- **Tobacco Education.** IU Health Bedford Hospital employees went to a middle school to talk to students about the damaging effects of using tobacco products. Approximately, 170 students and teachers were educated about tobacco impacts and cessation methods. Staff time and expertise were used to support this activity.
- **Tobacco Cessation Classes.** Twenty-five individuals attended free tobacco cessation classes offered weekly by IU Health Bedford Hospital throughout 2017. Many of the individuals repeated the class as well. The classes focused on helping people quit using tobacco. IU Health Bedford Hospital donated staff time to coordinate this program
- **Safe Night.** At Safe Night, IU Health Bedford Hospital provided information to youth and parents about not smoking and the effects of using tobacco. IU Health Bedford Hospital also demonstrated to parents the effect of their smoking habits on themselves and their children.

The attendance for Safe Night was 3,500 people. IU Health Bedford Hospital supported this event by supplying informational materials and staff time.

- **Local Business Partnerships.** IU Health Bedford Hospital partnered with two local businesses to host tobacco education classes for the employees of the local businesses. A total of 16 employees from the participating businesses took part in the programs. IU Health Bedford Hospital dedicated staff time and expertise to the programs.

Chronic Disease Management

- **Chronic Obstructive Pulmonary Disease.** IU Health Bedford Hospital screened for Chronic Obstructive Pulmonary Disease (COPD) at local health fairs. The target was to encourage those with the disease to quit smoking, if that was the cause, and provide ideas about alternatives to tobacco. Sixty-four people were screened for COPD in 2017 and eight were screened in 2018. IU Health Bedford Hospital supported these screenings by supplying equipment and staff time.
- **Echocardiogram.** IU Health Bedford Hospital offered free sport echocardiogram tests to local athletes in order to detect if they have cardiac abnormalities. One hundred thirty-six athletes were tested between 2016 and 2017. Fifty-seven athletes were tested in 2018. IU Health Bedford Hospital supported these screenings by supplying equipment and staff time.
- **Relay for Life.** IU Health Bedford Hospital supported Relay for Life by donating \$1,000 annually and providing additional financial support to an IU Health Bedford Hospital relay team.
- **Skin Cancer Screenings.** IU Health Bedford Hospital offered free screenings to detect potential skin cancer. A total of 18 people were screened. IU Health Bedford Hospital supported these screenings by supplying staff time.
- **Woman's Health Screenings.** IU Health Bedford Hospital offered free or reduced cost screenings to detect potential cancers. A total of 3 people were screened. IU Health Bedford Hospital supported these screenings by supplying equipment and staff time.
- **Diabetes Support Groups.** IU Health Bedford Hospital offered support groups for those living with diabetes. Twelve people benefited from the support groups over two years. IU Health Bedford Hospital contributed staff time and \$507 to this effort.
- **Diabetes Clinic.** IU Health Bedford Hospital formed a clinic designed to support people living with diabetes. Through this effort, IU Health Bedford Hospital was able to serve 105 people in 2016. IU Health Bedford Hospital dedicated over \$80,000 and staff time to this program. The clinic was recognized in Bedford's Community Benefit Subsidized Services during 2016, 2017, and 2018.
- **Medical Nutrition Therapy.** IU Health Bedford Hospital designed Medical Nutrition Therapy sessions to help people with their conditions by treating it with proper

nutrition. Since the creation of these therapy sessions, 88 people have been served by this program. IU Health Bedford Hospital supports this program by utilizing staff time and over \$40,000 in funding. The therapy program was recognized in Bedford's Community Benefit Subsidized Services during 2017 and 2018.

- **Sun Safety.** In an effort to promote sun safety, IU Health Bedford Hospital donated over \$5,400 in sunscreen to the local swimming pool and ball park over the last three years.
- **Lawrence County Cancer Patient Services.** IU Health Bedford Hospital financially supports Lawrence County Cancer Patient Services and local advocacy events by donating approximately \$500 annually.
- **Get Outdoors Day.** IU Health Bedford Hospital educates children about sun safety. This education includes supplying children with hats, UV bead bracelets, and sunglasses. Over 250 children have been educated on sun safety since 2017. IU Health Bedford Hospital supports this program by dedicating staff time and expertise to educate the children.
- **Senior Fair.** IU Health Bedford Hospital participates in a senior fair where the hospital hands out colorectal screening kits. Through this initiative, 100 kits were distributed to community members. IU Health dedicated employee time to coordinate this initiative.
- **Blood Pressure Checks.** IU Health Bedford Hospital offered free blood pressure checks to the community. Over 50 blood pressure checks were performed and documented. Information was given to participants about recommended levels and follow up if needed. IU Health Bedford Hospital dedicated employee time and expertise to coordinate this initiative.

Basic Needs

- **Becky's Place.** IU Health Bedford Hospital put together hygiene kits for the residents of Becky's Place.

APPENDIX E – CONSULTANT QUALIFICATIONS

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.



Bedford Hospital