2021 | Community Health Needs Assessment

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IU Health Blackford

Blackford

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Approval date

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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 Blackford, located in Hartford City, Indiana, is a wellness focused hospital, dedicated to delivering exceptional critical access care to the residents of Blackford County. This facility offers a specialty clinic and outpatient surgical services. IU Health Blackford focuses on providing superior care in a familiar, community atmosphere. It is a Pathway to Excellence designated facility.

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: 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 implementation strategy, visit: iuhealth.org/in-the-community/community-benefit. Updated implementation strategies for each IU Health hospital are scheduled to be published by May 15, 2022.

Community Definition

For purposes of this CHNA, IU Health Blackford's community is defined as Blackford County, Indiana. The county accounted for 75 percent of the hospital's inpatient cases in 2019. The estimated population of this community in 2019 was 11,930. The following map portrays this community.
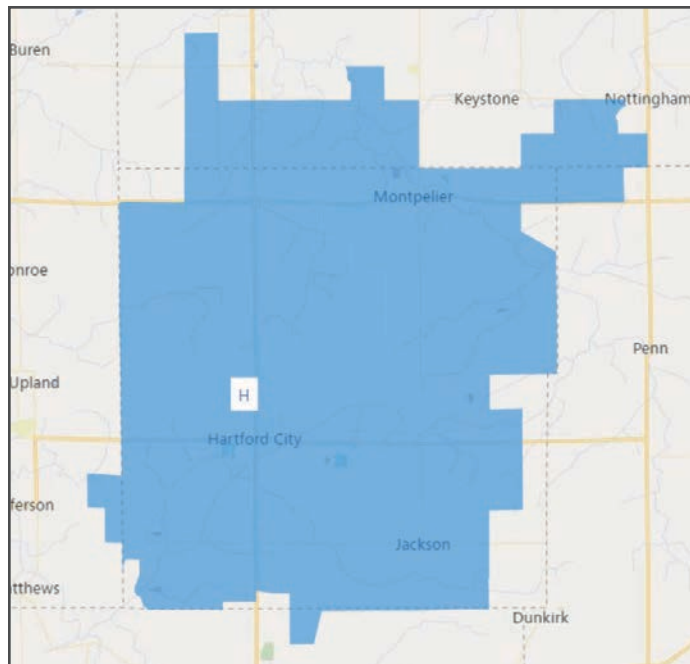
Source: Power BI and IU Health, 2021

Significant community health needs

Identifying significant community health needs is an important element of CHNAs. Several data sources were assessed to identify those needs, including:
- Secondary data (i.e., data collected by another entity or for a different purpose), including demographics, health status, access to care indicators and social determinants of health;
- Findings from other community health assessments of areas served by the hospital; and
- Input obtained from individuals who participated in one or more community meetings, interviews or surveys.

Access to healthcare services
- The low-income population of Blackford County has been designated as a Medically Underserved Population (Exhibit 33).
- Blackford County has been designated as a Mental Health Care Health Professional Shortage Area (HPSA) and the low-income population has been designated a Primary Care and Dental Care HPSA (Exhibits 34A and B).
- The ratio of population to primary care physicians, dentists and mental health providers in Blackford County is significantly higher than state and national averages (Exhibit 21).
- Stakeholders identified both access to healthcare services and access to mental health services as significant needs as well as a lack of providers (particularly specialists and mental health professionals) (Community meetings, Interviews, Survey).

Aging population and needs of seniors
- The number of persons aged 65 years and older in Blackford County is projected to grow by 5.7 percent between 2020 and 2025, despite the total population of the county expected to decrease during the same time period (Exhibit 10).
- Other assessments identified a number of elderly needs as significant issues, including elderly nutrition and physical activity, transportation, in-home care and access to affordable services (Other assessments).

Drug and substance abuse (including opioids and alcohol)
- Half of driving deaths in Blackford County involved alcohol, a proportion more than double the state average and significantly above the national average (Exhibit 21).
- Substance abuse and addiction, including issues with opioids, alcohol and methamphetamines, were identified as significant needs in Blackford County. Issues surrounding substance abuse were also highlighted in discussions of access to behavioral health services and stakeholders identified the issue as worsening due to effects of the COVID-19 pandemic (Community meetings, Interviews, Survey).

Food insecurity and healthy eating
- Census tracts throughout the identified community are designated as food deserts (Exhibit 31).
- Other assessments identified nutrition as a significant need, with a focus on the need for increased fruit and vegetable intake (Other assessments).
- Stakeholders believed an increased focus on healthy eating – including proper nutrition and health education around healthy eating – was a significant issue (Interviews).

Maternal and infant health and child wellbeing
- Blackford County compared unfavorably to Indiana for several maternal and infant health indicators, including the percent of mothers breastfeeding, low birthweight, preterm births and a rate of smoking during pregnancy that was more than double the Indiana average (Exhibit 26).
- Blackford County ranked in the bottom quartile of Indiana counties for low birthweight, teen births, children in poverty and children in single-parent households (Exhibit 20).
- Stakeholders identified maternal, infant and child wellbeing as significant issues and believed child development and learning was impacted by the COVID-19 pandemic. Teen births and smoking during pregnancy, in particular, were identified as concerns (Community meetings, Interviews).

Mental health
- Blackford County has been designated as a Mental Health Care Health Professional Shortage Area (HPSA) (Exhibit 34C).
- The rate of mental health providers is significantly lower than the state and national averages (Exhibit 21).
- The county ranks in the bottom half of Indiana counties for poor mental health days, and the average number of poor mental health days exceeded the national average (Exhibits 20 and 21).
- Mental health issues, including worsening mental health conditions, suicide and access to mental health services, were identified by most stakeholders as a significant need in Blackford County. Participants also believed the issue had worsened due to the COVID-19 pandemic and isolation (Community meetings, Interviews, Survey).

Obesity, diabetes and physical inactivity
- Blackford County compared unfavorably to Indiana and United States averages for adult obesity, physical inactivity and access to exercise opportunities (Exhibit 21).
- Mortality rates due to chronic conditions associated with obesity were also unfavorable, including heart disease (Exhibit 22).
- Admissions for several Ambulatory Care Sensitive Conditions (ACSCs) exceeded state averages, including for diabetes long-term complications, uncontrolled diabetes and lower extremity amputation due to diabetes (Exhibit 28).
- Stakeholders identified obesity, associated chronic conditions, diabetes, physical inactivity and a lack of accessible areas to exercise as significant issues (Community meetings, Interviews).
- Physical inactivity was identified as a significant community health issue, particularly among older adults (Other assessments).

Smoking, tobacco use and exposure to secondhand smoke
- The adult smoking rate in Blackford County exceeded the national average and the county was in the bottom half of Indiana counties for smoking (Exhibits 20 and 21).
- Rates for lung cancer mortality and incidence were above state averages in Blackford County (Exhibits 23 and 24).
- The percent of mothers who smoked during pregnancy in Blackford County was more than double the Indiana average (Exhibit 26).
- Smoking, tobacco usage and addiction and smoking during pregnancy were all identified as significant issues in the community (Community meetings, Interviews).

Social determinants of health
- Unemployment rates in Blackford County have been higher than state and national averages in recent years, and the county ranked in the bottom quartile of Indiana for unemployment (Exhibits 17 and 20).
- The county ranked in the bottom quartile of Indiana counties for children in poverty and in the bottom half for any post-secondary education (Exhibit 20).
- Areas in the county were in the bottom quartile nationally for housing and transportation vulnerability (Exhibit 32). The county also compared poorly to state averages for the percent of workforce that drives alone to work and driving alone to work with a long commute (Exhibit 21).
- Stakeholders identified multiple issues with social determinants of health as significant, including poverty,

resources for low-income populations and transportation (Community meetings, Surveys).
- Other assessments identified a variety of social determinants of health factors as significant concerns, including affordability of healthcare, transportation and the need for community services (Other assessments).

Data and analysis

Definition of community assessed

The community assessed by IU Health Blackford was defined by the geographic origins of the hospital's discharges. In 2019, this geographic area was identified as Blackford County, Indiana.

Residents from these this county accounted for 75 percent of the hospital's 2019 inpatient discharges (Exhibit 1).

Exhibit 1: IU Health Blackford inpatient discharges by county, 2019

County	Percent of inpatients
Blackford County	75.0%

Source: Analysis of IU Health Discharge Data, 2019

The estimated population of this county in 2019 was 11,930 persons (Exhibit 2).

Exhibit 2: Local community population, 2019

County	Estimated population
Blackford County	11,930

Source: State of Indiana by the Indiana Business Research Center, 2019

The hospital is located in Hartford City, Indiana, ZIP code 47348.

Exhibit 3 portrays the community. The map shows county and ZIP code boundaries. Some ZIP codes could overlap one or more counties. The "H" logo marks the location of this hospital on the map.

Exhibit 3: IU Health Blackford community
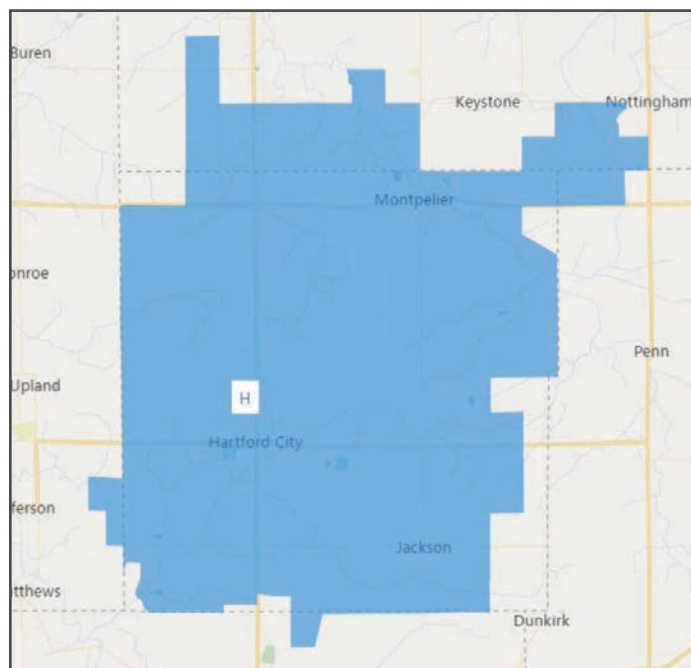
Source: Power BI and IU Health, 2021

Secondary data summary

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

Demographics
Population characteristics and trends directly influence community health needs. The total population of Blackford County is expected to decrease by 4.7 percent from 2020 to 2025 (approximately 550 people).

While the total population is expected to decrease between 2020 and 2025, the population aged 65 years and older is projected to grow by 5.7 percent during the same period. This should contribute to a growing need for health services, since older individuals typically need and use more services than younger persons.

ZIP code 47348, which includes Hartford City, had a higher proportion of population aged 65 years and older than other areas. All ZIP codes in the community had a proportion of Black and Hispanic (or Latino) residents below 5 percent.

Residents with a disability are more prevalent than the state and national average. Residents are more likely to have a high school diploma and less likely to be linguistically isolated, compared to Indiana and the United States.

Economic Indicators
Many health needs have been associated with poverty, as those in low-income households typically are less healthy

than those in more prosperous areas. At 12.8 percent (over the 2015-2019 time period), Blackford County's poverty rate has been below the Indiana and national averages. While poverty rates are not available for racial and ethnic populations in Blackford County due to low sample size, poverty rates for Black and Hispanic (or Latino) residents in Indiana and the United States were higher than those for White populations.

Between 2015 and 2019, unemployment rates decreased in the county, state and nationally. In recent years, Blackford County's unemployment rates have been above Indiana and national averages. Due to the COVID-19 pandemic, it is anticipated that unemployment rates will rise in 2020 data. The rise in unemployment is likely to affect numerous health-related factors, such as access to employer-based health insurance and access to health services.

The percentage of people uninsured in Blackford County is below the state and national averages. Crime rates in the county are below Indiana averages for all indicators.

Local health status and access indicators
In the 2019 *County Health Rankings*, Blackford County ranked 84th for overall health outcomes and 65th for overall health factors out of 92 counties in Indiana.

Blackford County had 29 out of 41 indicators ranked in the bottom half of Indiana counties. Of those, 16 were in the bottom quartile, including health outcomes, length of life, premature death, quality of life, poor physical health days, low birthweight, health behaviors, adult obesity, teen births, dentists, mental health providers, mammography screening, unemployment, children in poverty, children in single-parent households and injury deaths.

The percent of alcohol-impaired driving deaths, the ratios of population to dentists and mental health providers, and the injury death rate were significantly worse than state and national averages.

According to the Indiana Department of Health (IDOH), mortality rates were above state averages for several heart disease indicators.

The overall cancer incidence and mortality rates were higher in Blackford County than the Indiana averages. Blackford County also compared unfavorably for incidence and mortality rates of lung cancer.

Rates of communicable disease in Blackford County were below Indiana averages for all indicators.

Several maternal and infant health indicators were unfavorable in Blackford County, including unfavorable rates of mothers breastfeeding, low birthweight, preterm births and a significantly higher rate of mothers who smoked during pregnancy (more than double the Indiana average).

For the state of Indiana, Behavioral Risk Factor Surveillance System (BRFSS) data indicates that on all but one measure presented, risk factors were higher for Black residents than for White residents (and for lower-income residents than those with higher incomes). Hispanic (or Latino) residents have experienced higher uninsured, physical inactivity and occasional smoking rates.

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."[1] These conditions include diabetes, perforated appendixes, chronic obstructive pulmonary disease (COPD), hypertension, congestive heart failure, pneumonia, urinary tract infection and asthma.

The rates of admissions for ACSCs in Blackford County were above state averages for several indicators, including diabetes long-term complication, lower extremity amputation with diabetes, asthma in younger adults, uncontrolled diabetes and urinary tract infections.

Community Need Index
Dignity Health, a California-based hospital system, developed and published a Community Need Index™ (CNI) that measures barriers to healthcare 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; and
- 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 Blackford County was 3.0 – equal to the national median of 3.0.

[1] *Agency for Healthcare Research and Quality – AHRQuality Indicators™. (n.d.) Prevention Quality Indicators Overview. Retrieved from https://qualityindicators.ahrq.gov/Modules/pqi_resources.aspx#techspecs*

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.

Census tracts in the community have been designated as food deserts.

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."

The low-income population of Blackford County has been designated as a 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.

The low-income population of Blackford County has been designated as a Primary Care and Dental Care HPSA, and the entire county has been designated as a Mental Health Care HPSA.

Relevant findings of other CHNAs
This CHNA also considered the findings of other recent, available assessments conducted by other community-based organizations or agencies, Local Health Departments (LHDs) and the state of Indiana. These other assessments consistently identified the following needs as significant for the community served by IU Health Blackford.
- Food insecurity
- Chronic disease and chronic disease management
- Aging population and needs of seniors

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, the percent of Blackford County residents with a disability was 20.6 percent. A comparable statistic for Indiana as a whole was 13.7 percent. For the IU Health Blackford community, residents with a disability is considered significant. The last column of Exhibit 4 identifies where more information regarding the data sources can be found in this report. The benchmarks include Indiana averages and national averages.

Exhibit 4: Significant indicators

Indicator	Area	Value	Benchmark	Exhibit
65+ population change, 2020-2025	Blackford County	16.9%	15.0% – Indiana	9
Population with a disability	Blackford County	20.6%	13.7% – Indiana	13
Poverty rate, White, 2015-2019	Blackford County	11.9%	11.2% – Indiana	15
Poverty rate, Asian, 2015-2019	Blackford County	59.0%	18.0% – Indiana	15
Unemployment rate, 2019	Blackford County	4.0%	3.3% – Indiana	17
Percent of children in poverty	Blackford County	22.3%	18.0% – U.S.	21
Injury death rate per 100,000 population	Blackford County	114.2	67.0 – U.S.	21
Percent of driving deaths with alcohol involvement	Blackford County	50	20.8 – Indiana	21
Percent adults obese	Blackford County	35.8	32.8 – Indiana	21
Percent adults physically inactive	Blackford County	38.5	25.0 – Indiana	21
Percent with adequate access to exercise opportunities	Blackford County	60.1	75.2 – Indiana	21
Population per dentist	Blackford County	5,988:1	1,460:1 – U.S.	21
Population per mental health provider	Blackford County	3,992:1	440:1 – U.S.	21
Mammography screening	Blackford County	35.0	40.0 – Indiana	21
Teen birth rate	Blackford County	39.7	25.0 – U.S.	21
Percent of live births with low birthweight	Blackford County	8.6	8.0 – U.S.	21
Years of potential life lost before age 75 per 100,000	Blackford County	11,056.8	6,900.0 – U.S.	21
Driving alone to work	Blackford County	85.3	76.0 – U.S.	21
Mortality rate (diseases of heart)	Blackford County	180.5	178.7 – Indiana	22
Mortality rate (other diseases of heart)	Blackford County	83.5	72.6 – Indiana	22
Mortality rate (all cancers)	Blackford County	184.4	163.3 – Indiana	23
Admissions for diabetes long-term complications (ACSC)	Blackford County	184.2	116.6 – Indiana	28
Admissions for uncontrolled diabetes (ACSC)	Blackford County	43.3	39.2 – Indiana	28
Asthma in younger adults (ACSC)	Blackford County	35.3	27.2 – Indiana	28
Admissions for urinary tract infections (ACSC)	Blackford County	151.7	149.1 – Indiana	28

Source: IU Health Analysis

Primary data summary

IU Health Blackford obtained community input through focus groups of community stakeholders, an additional survey issued to stakeholders who were unable to attend the community meetings and a key informant interview with a public health expert.

See Appendix C for a list of organizations and community members who participated in the community input process.

Two community meetings were held in 2021 to receive input from stakeholders regarding the health needs in Blackford County – one on April 23 and another on May 13. Secondary data and a preliminary list of community health need priorities was presented at both meetings. Each group was then asked questions about the preliminary list, including their reactions, additions to the proposed needs, thoughts regarding the causes, impacts of the COVID-19 pandemic and others.

After these discussions, participants were given the opportunity to make additional comments before being asked to vote on the significant needs in the county. Participants were asked to choose three to five significant health needs in a poll during the meeting.

Participants focused discussion on access to mental health services, health insurance barriers, substance abuse and addiction, tobacco use (including during pregnancy and among youth with vaping), a lack of health education, maternal and infant health, childcare, the disconnect between good education rates but lack of jobs, transportation barriers, a lack of knowledge of available resources and others.

From this process, participants from the April 23 community meeting identified the following needs as most significant for Blackford County:
- Access to mental health providers
- Health literacy and education
- Substance abuse (including opioids, alcohol and methamphetamines)
- Obesity and associated conditions (diabetes, cardiovascular issues)

Participants from the May 13 community meeting identified the following needs as most significant for Blackford County:
- Substance abuse and addiction (including tobacco usage)
- Access to healthcare services
- Access to mental health services
- Maternal, infant and child health and wellbeing

In discussing the impacts of the COVID-19 pandemic on health, participants focused on isolation and its impacts on mental health, increase in substance abuse, impacts on child learning, increase in domestic violence and abuse, increasing physical inactivity and growing community conflict and negative attitudes (including towards frontline workers).

An additional community survey was issued to stakeholders unable to attend community meetings, asking them to identify priority needs. Among two responses, the following issues were identified as the most significant by both respondents:
- Substance abuse and addiction
- Mental health and suicide
- Poverty and lack of resources for low-income population
- Lack of providers (specialists and mental health)

The survey also asked about the impacts of the COVID-19 pandemic. Issues selected as significant impacts by both respondents include:
- Social isolation and loneliness
- Learning and development impacts among children

An additional interview was conducted with a representative of a local public health department to obtain subject-matter expertise into the health needs in Blackford County. The following issues were discussed as significant:
- Substance abuse and addiction is a significant issue
- Mental health and access to mental health care are significant issues, amplified by the COVID-19 pandemic
- Maternal and infant health issues exist, particularly around teen births and smoking during pregnancy
- Smoking and obesity are two issues that have long been identified as issues in Blackford and continue to persist despite local work
- Transportation is a large barrier to accessing services, particularly a lack of public transportation options
- More community focus on health lifestyle is needed, including nutrition, physical activity, tobacco-free residents and accessible areas to exercise (health education plays a role here)

Other facilities and resources in the community

This section identifies other facilities and resources available in the community served by IU Health Blackford 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 are currently no FQHC sites operating in the IU Health Blackford community, so there is no Exhibit 5.

Hospitals

IU Health Blackford is the only hospital located in the community (Exhibit 6).

Exhibit 6: Hospitals, 2021

County	Facility
Blackford	IU Health Blackford (Hartford City)

Source: Indiana Department of Health, 2021

Local Health Departments

Exhibit 7 presents information on LHDs that provide services in the IU Health Blackford community.

Exhibit 7: Local Health Departments, 2021

Public Health Department
Blackford County Health Department (Hartford City)

Source: Indiana Department of Health, 2021

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 Blackford. Indiana 211 is a free service that helps Indiana residents find health and human service agencies and resources in their local community. Indiana 211 is a division of the Indiana Family and Social Services Administration (FSSA). To get help, residents can visit the website, (www.in211.org), call 2-1-1 or 1-866-211-9966 (available 24/7) or text their zip code to 898-211 (available Monday – Friday 8 am – 5 pm).

The other organizations and resources accessible through Indiana 211 provide the following types of services and resources:
- Housing and utilities
- Food, clothing and household items
- Summer food programs
- Healthcare 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

In addition to Indiana 211, IU Health Blackford, along with other hospitals and organizations in the community, use Aunt Bertha to connect patients and the community with local organizations and resources that can help address their healthcare and social needs, including food, housing, transportation, health, clothing, household items, education and legal and employment services.

IU Health's branded Aunt Bertha public platform, *IU Health Connect*, is a free service found at www.iuhealthconnect.org.

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

The CHNA report must include certain information including, but not limited to:
- A description of the community and how it was defined;
- A description of the methodology used to determine the health needs of the community; and
- A prioritized list of the community's health needs.

Methodology

CHNAs seek to identify significant health needs for particular geographic areas and populations by focusing on the following questions:
- **Who** in the community is most vulnerable in terms of health status or access to care?
- **What** are the unique health status and/or access needs for these populations?
- **Where** do these people live in the community?
- **Why** are these problems present?

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

Federal regulations allow hospital facilities to define the community they serve based on "all of the relevant facts and circumstances," including the "geographic location" served by the hospital 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).[3]

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

Data from multiple sources was gathered and assessed, including secondary data 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 four data sources:
- Secondary data (i.e., data collected by another entity or for a different purpose), 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; and
- Input obtained from individuals who were interviewed.

Collaborating organizations
For this assessment, IU Health Blackford collaborated with other Indiana health systems on the community meetings and key informant interviews.

Data sources
Community health needs were identified by collecting and analyzing data from multiple sources. Statistics for numerous community health statuses, healthcare access and related indicators were analyzed, including data

[2] *IRS. (Aug. 3, 2021). Community Health Needs Assessment for Charitable Hospital Organizations – Section 501(r)(3). Retrieved from: https://www.irs.gov/charities-non-profits/community-health-needs-assessment-for-charitable-hospital-organizations-section-501r3*

[3] *Ibid.*

provided by local, state and federal government agencies, local community service organizations and IU 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.

Health equity
The CHNA process is an opportunity to research and expand health equity work for IU Health. Identifying significant community health needs involves continuing to recognize and understand every factor that impacts optimal health for all in a community. According to the Centers for Disease Control and Prevention (CDC), "Health equity is achieved when every person has the opportunity to "attain his or her full health potential" and no one is "disadvantaged from achieving this potential because of social position or other socially determined circumstances." Health inequities are reflected in differences in length of life; quality of life; rates of disease, disability and death; severity of disease; and access to treatment."[4] These differences, or health disparities, may be seen by race/ethnicity, age, gender, income, insurance status, education, geographic location and other factors. A community's most vulnerable and marginalized populations experience health disparities more than others. Eliminating these disparities is key to achieving health equity.

Overall health and health disparities are strongly influenced by "the conditions in the environment where people are born, live, learn, work, play, worship and age."[5] These conditions, also referred to as social determinants of health, may have a greater impact on health outcomes than healthcare. Also, addressing social determinants of health reduces health disparities, thus advancing health equity in communities. Examples of social determinants of health include poverty, food insecurity, housing, social isolation, transportation, racism and other forms of discrimination. Healthy People 2030 groups social determinants of health into five domains: economic stability; education access and quality; healthcare access

and quality; neighborhood and built environment; and social community context.[6] Determining the existence and extent of these conditions within a community is as important as knowing the health outcomes within a community.

Through the CHNA process, several steps were taken to work towards a better understanding of inequities in the community including analyzing data sources by demographic factors (if available) to identify disparities; inviting and engaging community members and community-based organizations representing certain populations or that offer services to certain populations to participate in the primary data collection process; and including social determinants of health data in the analysis.

Information gaps
This CHNA relies on multiple data sources and community input gathered in January through June of 2021. Several data limitations should be recognized when interpreting results. For example, some data (e.g., County Health Rankings, mortality data and others) exist only at a county-wide level of detail. Those data sources do not allow the assessment of 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.

Not all existing data can be stratified by demographic indicators to identify health disparities and patterns of inequity. Often no or limited demographic data is collected as part of the surveillance process for some data sources. When health disparities are identified, the data may not provide a clear understanding of why they exist and may be beyond the scope of this CHNA. This CHNA does not capture the policies, laws, systems, environments, nor practices that cause health inequities. Additional data, analysis and community engagement are needed to identify the root causes of health disparities to best advance health equity in the community.

The availability of data sources, including indexes, capturing social determinants of health indicators and their impact on health continues to grow and may not all be reflected in this CHNA.

Relevant findings from other assessments or reports conducted by community-based organizations, agencies or local health departments (LHDs) may not be available for

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[4] *Centers for Disease Control and Prevention. (March 11, 2020). Health Equity. Retrieved from: https://www.cdc.gov/chronic disease/healthequity/index.htm*

[5] *Healthy People 2030. (n.d.). Social Determinants of Health. Retrieved from: https://health.gov/healthypeople/objectives-and-data/social-determinants-health*

[6] *Ibid.*

every county in the defined community. If available, assessments may have focused on the overall health and well-being of the county or region; specific health conditions, health behaviors or social determinants of health; or the health and well-being of certain populations in the community.

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 Blackford community. IU Health Blackford's community is comprised of Blackford County, Indiana.
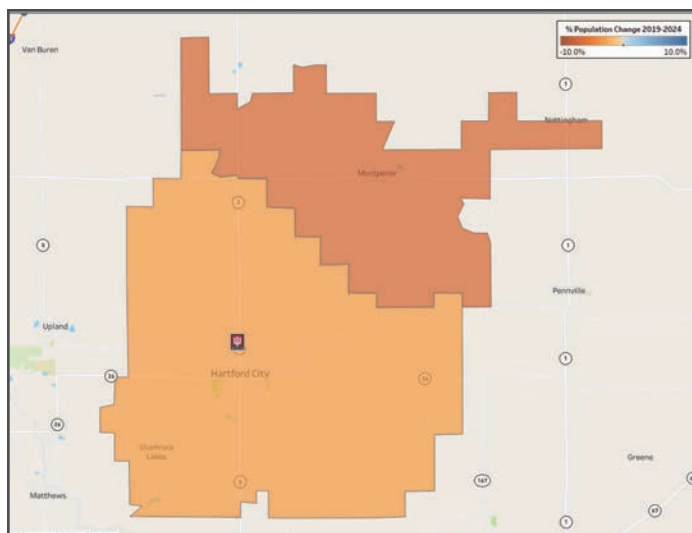
Demographics

Exhibit 8A: Percent change in community population by county, 2020-2025

County	Estimated population 2020	Estimated population 2025	Percent change 2020-2025
Blackford County	11,759	11,210	-4.7%
Indiana total	6,738,573	6,889,552	2.2%

Source: State of Indiana by the Indiana Business Research Center, February 2021

Exhibit 8B: Percent change in community population by ZIP Code, 2020-2025

Source: Advisory Board, 2020

Description
Exhibit 8A shows the total population for Blackford County in 2020 and projections to 2025. Exhibit 8B maps the percent change in population by ZIP code between 2020 and 2025 for each ZIP code in the community.

Observations
- A decrease in population is projected for Blackford County between 2020 and 2025.

Exhibit 9: Percent change in population by age/sex cohort, 2020-2025

Age/Sex Cohort	Estimated population 2020	Projected population 2025	Percent change 2020-2025
Blackford County	**11,759**	**11,210**	**-4.7%**
0-19	2,857	2,754	-3.6%
20-44 male	1,512	1,423	-5.9%
20-44 female	1,534	1,419	-7.5%
45-64	3,198	2,805	-12.3%
65+	2,658	2,809	5.7%
Indiana State	**6,738,573**	**6,889,552**	**2.2%**
0-19	1,754,443	1,786,582	1.8%
20-44 male	1,093,860	1,100,228	0.6%
20-44 female	1,080,537	1,088,697	0.8%
45-64	1,695,267	1,632,008	-3.7%
65+	1,114,466	1,282,037	15.0%

Source: State of Indiana by the Indiana Business Research Center, February 2021

Description
Exhibit 9 shows the community's population for certain age and sex cohorts in 2020, with projections to 2025.

Observations
- The number of persons aged 65 years and older is projected to grow by 5.7 percent in Blackford County and 15.0 percent in Indiana between 2020 and 2025.
- 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 10: Percent of population aged 65+ by ZIP Code, 2019
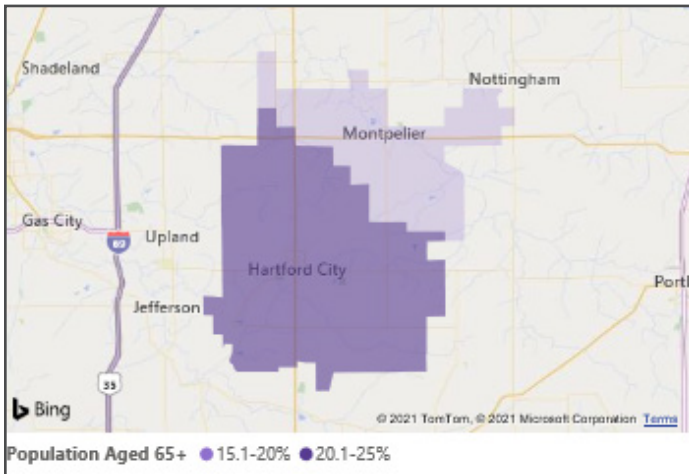
Source: U.S. Census American Community Survey (ACS) 2019 5-year estimates and Power BI

Description
Exhibit 10 portrays the percent of the population 65 years of age and older in the community by ZIP code.

Observations
- ZIP code 47348 (surrounding Hartford City) has the highest proportion of the population aged 65 and older.

Exhibit 11: Percent of population – Black, 2019
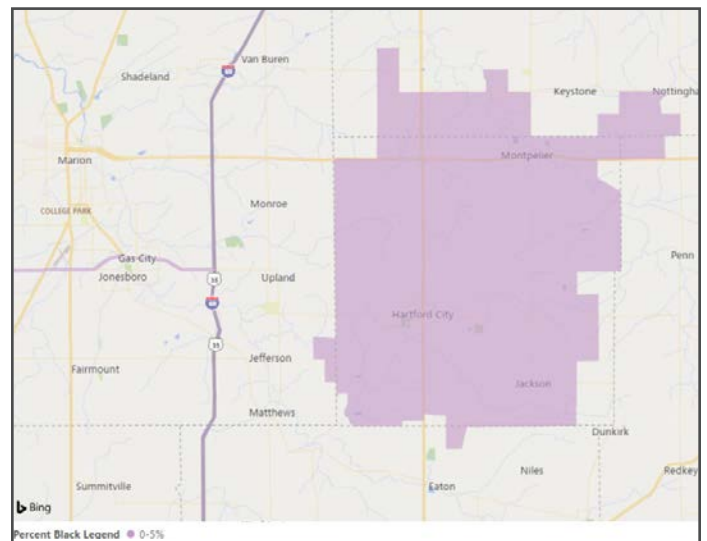
Source: U.S. Census ACS 2019 5-year estimates and Power BI

Description
Exhibit 11 portrays locations where the percentages of the population that are Black were highest in 2019.

Observations
- The Black population of Blackford County is under five percent in all ZIP codes.

Exhibit 12: Percent of population – Hispanic (or Latino), 2019
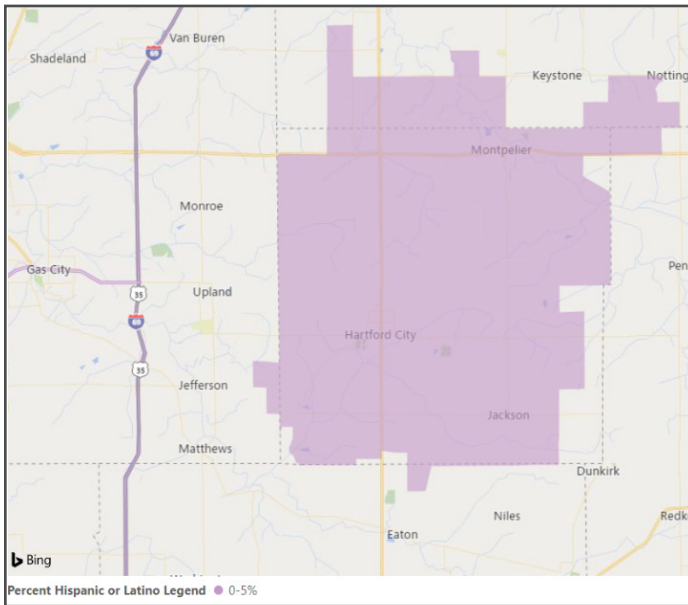
Source: U.S. Census ACS 2019 5-year estimates and Power BI

Description
Exhibit 12 portrays locations in the community where the percentages of the population that are Hispanic (or Latino) were highest in 2019. The diversity of the community is important to recognize given the presence of health disparities and barriers to healthcare access experienced by different racial and ethnic groups.

Observations
- The population of Blackford County residents that are Hispanic (or Latino) was highest in ZIP code 46952 at less than five percent in 2019.

Exhibit 13: Other socioeconomic indicators, 2015-2019

Measure	Population with a disability	Population 25+ without high school diploma	Population linguistically isolated
Blackford County	20.6%	10.6%	0.9%
Indiana	13.7%	11.8%	3.1%
United States	12.6%	12.0%	8.2%

Source: U.S. Census, ACS 5-year estimates, 2020

Description
Exhibit 13 portrays the percent of the population with a disability, aged 25 years and above without a high school diploma and linguistically isolated.

Observations
- Blackford County had a higher percentage of the population with a disability compared to Indiana and U.S. averages.
- Blackford County had a lower percentage of residents aged 25 years and older without a high school diploma than Indiana and U.S. averages.
- Compared to Indiana, Blackford 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

People in poverty

Exhibit 14: Percent of people in poverty, 2015-2019
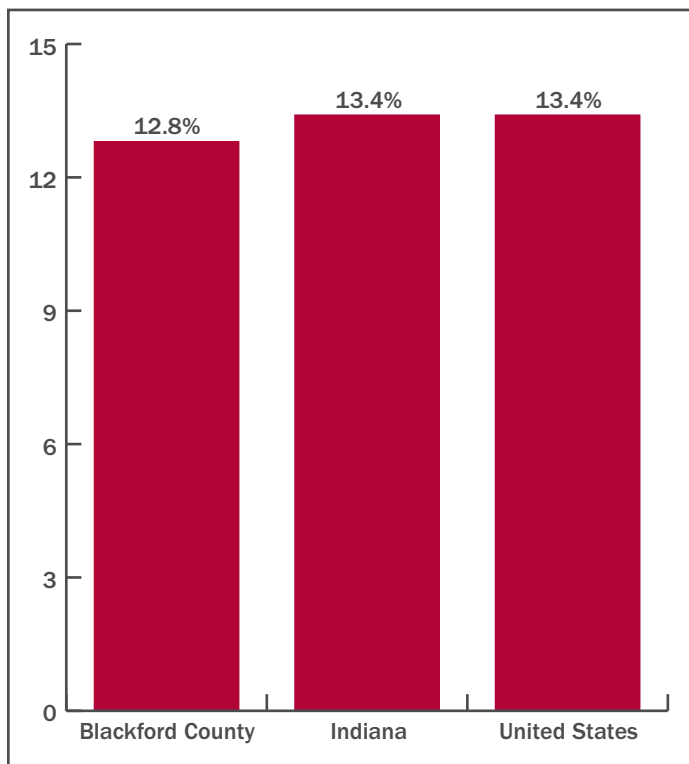
Source: U.S. Census, ACS 5-year estimates, 2020

Description
Exhibit 14 portrays poverty rates in Blackford County, Indiana and the U.S.

Observations
- The poverty rate in Blackford County was slightly below Indiana and national averages from 2015-2019.

Exhibit 15: Poverty rates by race and ethnicity, 2015-2019
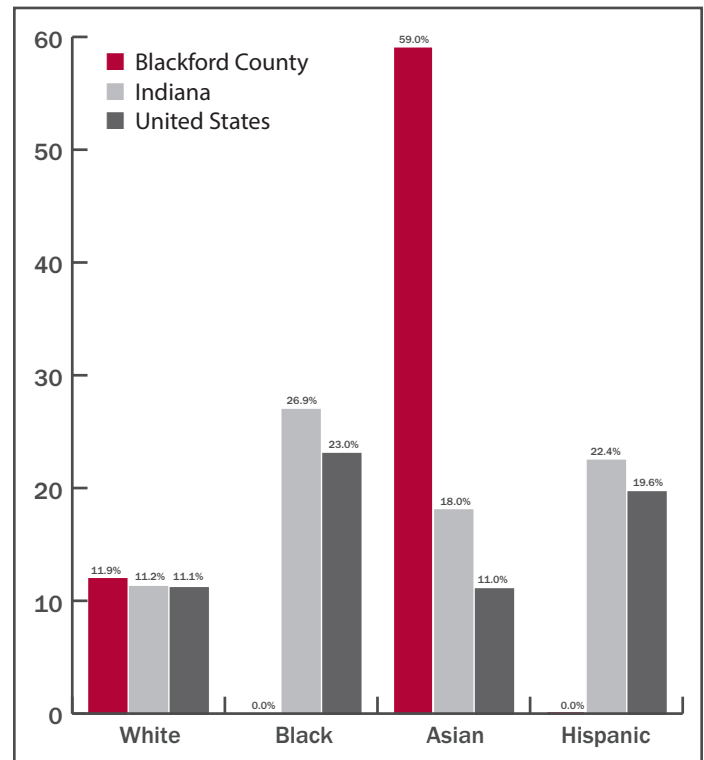
Source: U.S. Census, ACS 5-year estimates, 2020

Description
Exhibit 15 portrays poverty rates in Blackford County, Indiana and the U.S. by race and ethnicity.

Observations
- Due to small samples of various population cohorts living in Blackford County, the Black and Hispanic (or Latino) demographic cohort poverty rates are reported as zero percent.
- The poverty rate for the Asian population in Blackford County was significantly higher than both Indiana and U.S. averages.

Exhibit 16: Low-income census tracts, 2021

No census tracts in the Blackford County community are designated by HUD as low income.

Unemployment

Exhibit 17: Unemployment rates, 2015-2019
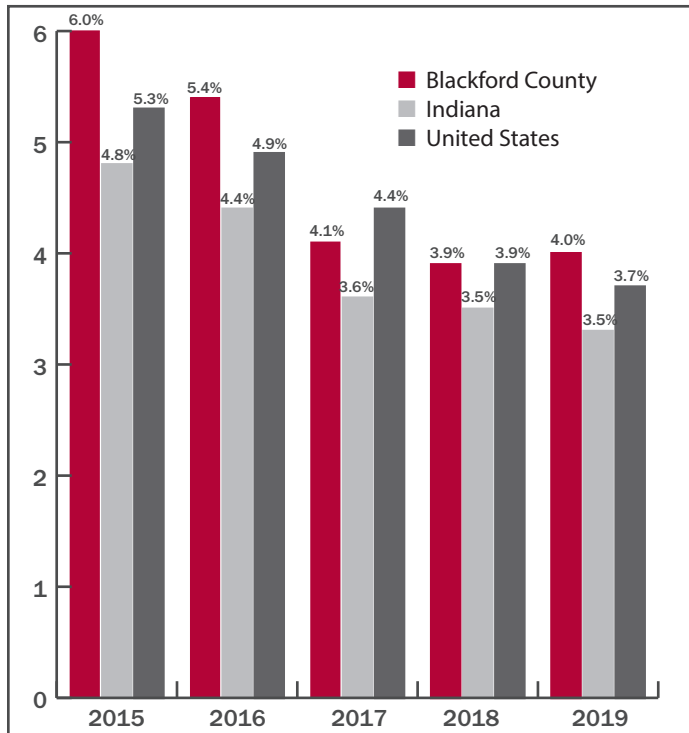
Source: U.S. Bureau of Labor Statistics, 2020

Description
Exhibit 17 shows unemployment rates for 2015 through 2019 for Blackford County, with Indiana and national rates for comparison.

Observations
- Between 2015 and 2019, unemployment rates at the local, state and national levels declined significantly.
- Unemployment rates in Blackford County were above Indiana averages for the time period.

Insurance status

Exhibit 18A: Percent of the population without health insurance, 2019

County	Population	Population Uninsured	Percent uninsured
Blackford County	9,164	785	8.6%
Indiana	5,474,844	532,695	9.7%
United States	319,706,872	28,248,613	8.8%

Source: U.S. Census, Small Area Health Insurance Estimates (SAHIE), 2019

Exhibit 18B: Percent of the population without health insurance, 2019
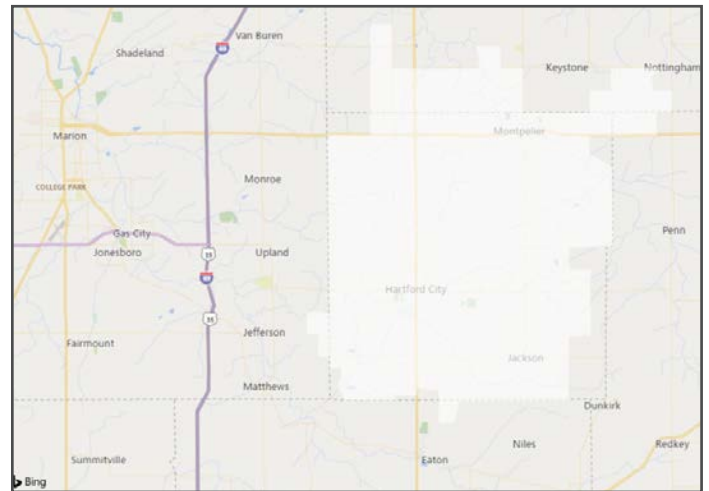
Source: U.S. Census, Small Area Health Insurance Estimates (SAHIE), 2019

Description
Exhibit 18A presents the estimated percent of people uninsured in Blackford County and Indiana in 2019. Exhibit 18B maps the 2019 uninsured rates by ZIP code.

Observations
- The uninsured rates in all Blackford County ZIP codes were lower than the Indiana average.
- 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 U.S., uninsured rates have fallen in most states that decided to expand Medicaid.[7]

[7] *Assistant Secretary from Planning and Evaluation, Office of Health Policy. Issue Brief No. HP-2021-13. Health Coverage Under the Affordable Care Act: Enrollment Trends and State Estimates. Retrieved from: https://aspe.hhs.gov/sites/default/files/ migrated_legacy_files//200776/ASPE%20Issue%20Brief-ACA-Related%20Coverage%20by%20State.pdf*

Crime

Exhibit 19: Crime rates by type and jurisdiction, per 100,000, 2019

Indicator	Blackford County	Indiana
Aggravated assault	127.6	499.5
Arson	–	10.8
Burglary	68.0	664.2
Homicide	–	10.6
Larceny	187.1	2,992.9
Motor vehicle theft	25.5	423.7
Property crime	280.6	4,080.9
Robbery	–	160.8
Violent crime	127.6	750.2

Source: Federal Bureau of Investigation, 2020

Description
Exhibit 19 provides crime statistics.

Observations
- Crime rates in Blackford County were well below Indiana averages.

Local health status and access indicators

Exhibit 20: County Health Rankings, 2019

Measure	Blackford County
Health outcomes	**84**
Health factors	**65**
Length of life	**88**
Premature death	88
Quality of life	**75**
Poor or fair health	51
Poor physical health days	73
Poor mental health days	68
Low birthweight	77
Health behaviors	**72**
Adult smoking	49
Adult obesity	71
Food environment index	28
Physical inactivity	47
Access to exercise opportunities	51
Excessive drinking	16
Alcohol-impaired driving deaths	15
Sexually transmitted infections	21
Teen births	81
Clinical care	**50**
Uninsured	62
Primary care physicians	69
Dentists	82
Mental health providers	82
Preventable hospital stays	31
Mammography screening	71
Social and economic factors	**61**
High school graduation	6
Some college	65
Unemployment	75
Children in poverty	76
Income inequality	34
Children in single-parent households	71
Social associations	2
Violent crime	10
Injury deaths	91
Physical environment	**46**
Air pollution	42
Severe housing problems	37
Driving alone to work	61
Long commute – driving alone	52

Source: County Health Rankings, 2019

Description

Exhibit 20 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." Health factors consists of summary composites that are grouped into the following categories: health behaviors, clinical care, social and economic factors and physical environment. Health outcomes consist of summary composites that are grouped by the categories of length of life and quality of life.[8] *County Health Rankings* are updated annually. *County Health Rankings* 2019 relies on data from 2007 to 2019.

The exhibit presents 2019 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 the bottom quartile of Indiana counties.

Observations

- In 2019, Blackford County had 29 out of 41 indicators ranked in the bottom half of Indiana counties. Of those, 16 were in the bottom quartile: health outcomes, length of life, premature death, quality of life, poor physical health days, low birthweight, health behaviors, adult obesity, teen births, dentists, mental health providers, mammography screening, unemployment, children in poverty, children in single-parent households and injury deaths.

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[8] *County Health Rankings and Roadmaps. (2021). County Health Rankings Model. Retrieved from: https://www.countyhealth rankings.org/explore-health-rankings/measures-data-sources/ county-health-rankings-model*

Exhibit 21: County Health Rankings data compared to Indiana and U.S. averages, 2019

Indicator category	Indicator	Blackford County	Indiana	U.S.
Health outcomes				
Length of life	Years of potential life lost before age 75 per 100,000 population (age-adjusted)	11,056.8	8,237.5	6900.0
Quality of life	Percentage of adults reporting fair or poor health (age-adjusted)	16.9	17.7	16.0
Quality of life	Average number of physically unhealthy days reported in past 30 days (age-adjusted)	4.1	3.9	3.7
Quality of life	Average number of mentally unhealthy days reported in past 30 days (age-adjusted)	4.2	4.3	3.8
Quality of life	Percentage of live births with low birthweight (<2500 grams)	8.6	8.1	8.0
Health factors				
Health behaviors				
Adult smoking	Percentage of adults who are current smokers	19.9	21.1	17.0
Adult obesity	Percentage of adults that report a BMI of 30 or more	35.8	32.8	29.0
Food environment index	Index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best)	8.3	7.1	7.7
Physical inactivity	Percentage of adults age 20 and over reporting no leisure-time physical activity	27.4	25.1	22.0
Access to exercise opportunities	Percentage of population with adequate access to locations for physical activity	60.1	75.2	84.0
Excessive drinking	Percentage of adults reporting binge or heavy drinking	16.6	18.6	18.0
Alcohol-impaired driving deaths	Percentage of driving deaths with alcohol involvement	50.0	20.8	29.0
Sexually transmitted infections	Number of newly diagnosed chlamydia cases per 100,000 population	333.4	466.0	497.3
Teen births	Number of births per 1,000 female population ages 15-19	39.7	28.4	25.0
Clinical care				
Uninsured	Percentage of population under age 65 without health insurance	10.0	9.5	10.0
Primary care physicians	Ratio of population to primary care physicians	1,736:1	1,495:1	1,330:1
Dentists	Ratio of population to dentists	5,988:1	1,810:1	1,460:1
Mental health providers	Ratio of population to mental health providers	3,992:1	669:1	440:1
Preventable hospital stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	4,220.000	5,023.0	4520.0
Mammography screening	Percentage of female Medicare enrollees ages 67-69 that receive mammography screening	35.0	40.0	41.0
Flu vaccinations	Percentage of Medicare enrollees who receive an influenza vaccination	48.0	47.0	45.0
Social and economic factors				
High school graduation	Percentage of ninth-grade cohort that graduates in four years	97.8	83.8	85.0
Some college	Percentage of adults ages 25-44 with some post-secondary education	51.0	62.4	65.0
Unemployment	Percentage of population ages 16 and older unemployed but seeking work	4.0	3.5	4.4
Children in poverty	Percentage of children under age 18 in poverty	22.3	17.8	18.0
Income inequality	Ratio of household income at the 80th percentile to income at the 20th percentile	3.8	4.4	4.9
Children in single-parent households	Percentage of children that live in a household headed by single parent	35.7	33.6	33.0
Social associations	Number of membership associations per 10,000 population	23.0	12.3	9.0

Indicator Category	Indicator	Blackford County	Indiana	U.S.
Violent crime	Number of reported violent crime offenses per 100,000 population	49.3	385.1	386.0
Injury deaths	Number of deaths due to injury per 100,000 population	114.1	74.1	67.0
Physical environment				
Air pollution	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	11.7	11.8	8.6
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	11.0	13.7	18.0
Driving alone to work	Percentage of the workforce that drives alone to work	85.3	83.0	76.0
Long commute – driving alone	Among workers who commute in their car alone, the percentage that commute more than 30 minutes	35.0	30.7	35.0

Source: County Health Rankings, 2019

Description

Exhibit 21 provides data for each underlying indicator of the composite categories in the *County Health Rankings*.[9] 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 for Blackford County:
  - Number of deaths due to injury per 100,000 population
  - Percentage of driving deaths with alcohol involvement
  - Ratio of population to dentists
  - Ratio of population to mental health providers

[9] *County Health Rankings provides details what each indicator measures, how it is defined and data source at https://www. countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model*

Exhibit 22: Selected causes of death, age-adjusted rates per 100,000 population, 2019

Indicator	Blackford County	Indiana
Major cardiovascular diseases	215.4	237.5
Diseases of heart	180.5	178.7
Cancer	184.4	163.3
Other diseases of circulatory system	<10	80.7
Other diseases of heart	83.5	72.6
Chronic lower respiratory diseases	<10	56.1
All other and unspecified accidents and adverse effects	<10	45.3
Cerebrovascular diseases (stroke)	<10	41.5
Alzheimer's disease	<10	31.7
Diabetes mellitus	<10	25.0
Nephritis, nephrotic syndromes and nephrosis (kidney disease)	<10	17.1
Intention self<10harm (suicide)	9.0	14.1
Influenza and pneumonia	<10	11.6
Motor vehicle accidents	<10	12.6
Chronic liver disease and cirrhosis	<10	12.0
Hypertensive heart disease with or without renal disease	<10	13.1
Essential hypertension and hypertensive renal disease	<10	10.4
Assault (homicide)		7.2
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified (excluding SIDS)	<10	6.0
Certain conditions originating in the perinatal period	<10	3.6
Congenital malformations, deformations and chromosomal abnormalities	<10	4.0
All other external causes	<10	2.4
Athersclerosis	<10	2.3
Pregnancy, childbirth and the puerperium	<10	0.9
Sudden infant death syndrome (SIDS)	<10	0.7
Peptic ulcer	<10	0.7

Source: Indiana Department of Health, 2019

Description
Exhibit 22 provides age-adjusted mortality rates for selected causes of death in 2019. Light grey shading highlights indicators worse than the Indiana average. The Indiana Department of Health does not provide rates when total deaths for that particular cause of death is <10 in that county.

Observations
- Selected causes of death for Blackford County exceeded the state average for cancer, diseases of the heart and other diseases of the heart.

Exhibit 23: Age-adjusted cancer mortality rates per 100,000 population, 2019

Indicator	Blackford County	Indiana
All cancers	184.4	163.3
Breast	<10	10.6
Cervix uteri, corpus uteri and ovary	<10	7.0
Colon, rectum and anus	<10	15.0
Leukemia	<10	14.5
Non-Hodgkin's lymphoma	23.0	18.3
Other forms of cancer	<10	51.5
Pancreas	<10	11.8
Prostate	<10	7.9
Stomach	<10	2.4
Trachea, bronchus and lung	54.9	42.9
Urinary tract	<10	8.5

Source: Indiana Department of Health, 2019

Description
Exhibit 23 provides age-adjusted mortality rates for selected forms of cancer in 2019. Light grey shading highlights indicators worse than the Indiana average. The Indiana Department of Health does not provide rates when total cases of that particular type of cancer are <10 in that county.

Observations
- Cancer mortality rates in Blackford County for all cancers, Non-Hodgkin's lymphoma and trachea, bronchus and lung were higher than the Indiana averages.

Exhibit 24: Age-adjusted cancer incidence rates per 100,000 population, 2013-2017

Indicator	Blackford County	Indiana
All cancers	504.1	459.3
Bladder	26.3	21.7
Brain and ONS	<10	6.5
Breast	120.7	122.9
Cervix	<10	8.2
Childhood (ages <15)	<10	16.2
Colon and rectum	56.9	42.6
Esophagus	<10	5.5
Kidney and renal pelvis	<10	19.0
Leukemia	<10	13.7
Liver and bile duct	<10	7.2
Lung and bronchus	89.2	72.2
Melanoma of the skin	20.2	21.7
Non-Hodgkin's lymphoma	23.0	18.6
Oral cavity and pharynx	<10	12.7
Ovary	<10	10.4
Pancreas	<10	13.3
Prostate	92.3	94.2
Stomach	<10	5.9
Thyroid	<10	12.5
Uterus	<10	28.2

Source: Centers for Disease Control and Prevention, 2017

Description
Exhibit 24 presents age-adjusted cancer incidence rates in the community. Light grey shading highlights indicators worse than the Indiana average. The CDC does not provide rates when total cases of that particular type of cancer are <10 in that county.

Observations
- Cancer incidence rates in Blackford County for all cancers, bladder, colon and rectum, lung and bronchus and Non-Hodgkin's lymphoma were higher than the Indiana averages.

Exhibit 25: Communicable disease incidence rates per 100,000 population, 2019

Indicator	Blackford County	Indiana
Chlamydia	425.2	526.3
Gonorrhea	102.1	177.1
HIV/AIDS	50.3	189.9
Primary and secondary syphilis	<5	5.0

Source: Indiana Department of Health, 2019

Description
Exhibit 25 presents incidence rates for various communicable diseases.

Observations
- Blackford County had lower communicable disease rates than the Indiana averages in 2019.

Exhibit 26: Maternal and child health indicators, 2019

Indicator	Blackford County	Indiana
Breastfeeding	73.6%	82.0%
Infant mortality rate (per 1,000 live births)	0.0	6.5
Low birthweight	10.4%	8.2%
Mothers on Medicaid	48.8%	38.5%
Mothers under 19 (per 1,000 mothers)	16.6	20.7
Prenatal care	72.0%	68.9%
Preterm births	11.2%	10.1%
Smoked during pregnancy	30.4%	11.8%
Unmarried mothers	46.4%	44.5%

Source: Indiana Department of Health, 2019

Description
Exhibit 26 presents various maternal and infant health indicators. Light grey shading highlights indicators worse than the Indiana average; dark grey shading highlights indicators more than 50 percent worse than the Indiana average. Values of 0.0 were listed for rates so low that they could not be reported by the IDOH.

Observations
- In Blackford County, most of the maternal and infant health indicators were worse than the Indiana averages and the smoked during pregnancy percent was 50 percent worse than the Indiana averages.

Exhibit 27A: Behavioral Risk Factor Surveillance System, Indiana data by race/ethnicity, 2019

Indicator	Black	White	Hispanic	Indiana
Angina or coronary heart disease	3.8%	4.9%	1.6%	4.6%
Asthma	17.6%	14.6%	8.9%	14.5%
Diabetes	17.9%	12.1%	9.0%	12.4%
No health coverage	10.8%	8.9%	33.1%	10.9%
No physical activity	33.9%	30.3%	38.0%	30.9%
Obese (based on BMI)	43.5%	33.3%	29.3%	33.6%
Smoke everyday	36.8%	31.9%	20.7%	31.9%
Smoke some days	17.4%	10.0%	29.7%	11.5%

Source: Behavioral Risk Factor Surveillance System and Centers for Disease Control and Prevention, 2019

Exhibit 27B: Behavioral Risk Factor Surveillance System, Indiana data by income and education level, 2019

Indicator	< $15,000	$15-$24,999	$25-$34,999	$35-$49,999	$50-$74,999	≥ $75,000	No high school diploma	Indiana
Angina or coronary heart disease	6.0%	7.1%	6.5%	4.7%	3.7%	2.3%	7.1%	4.6%
Asthma	19.8%	18.3%	16.9%	14.4%	14.6%	11.7%	16.8%	14.5%
Diabetes	18.7%	20.0%	13.4%	11.1%	10.3%	7.8%	16.1%	12.4%
No health coverage	19.0%	18.1%	13.6%	11.1%	8.0%	4.5%	22.8%	10.9%
No physical activity	46.2%	44.4%	35.1%	31.6%	25.0%	19.4%	47.6%	30.9%
Obese (based on BMI)	39.8%	36.7%	35.4%	34.3%	34.3%	28.6%	33.9%	33.6%
Smoke everyday	44.0%	40.8%	34.4%	32.2%	29.6%	22.2%	43.5%	31.9%
Smoke some days	17.1%	15.3%	9.5%	12.9%	9.2%	6.4%	14.0%	11.5%

Source: Behavioral Risk Factor Surveillance System and Centers for Disease Control and Prevention, 2019

Description

The Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) gathers data through a telephone survey regarding 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 27A and 27B 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 White residents (and for lower-income residents than those with higher incomes). Hispanic (or Latino) residents have experienced higher uninsured, physical inactivity and occasional smoking rates.
- BRFSS indicators for residents without a high school diploma were worse than average when compared to Indiana for all indicators presented in this exhibit. Additionally, those with lower income levels compare unfavorably to those with higher income levels for all indicators.

Ambulatory Care Sensitive Conditions or Preventative Quality Indicators

Exhibit 28: PQIs (ACSCs) rates per 100,000, 2019

Indicator	Blackford	Indiana	U.S.
Diabetes short-term complications	43.3	90.3	58.3
Diabetes long-term complications	184.2	116.6	104.1
COPD or asthma in older adults	437.7	467.9	493.8
Hypertension	21.7	56.7	60.0
Heart failure	454.9	455.7	413.0
Community acquired pneumonia	238.3	248.3	158.8
Urinary tract infection	151.7	149.1	141.3
Uncontrolled diabetes	43.3	39.2	43.0
Asthma in younger adults	35.3	27.2	30.3
Lower extremity amputation with diabetes	43.3	30.2	29.3
Prevention overall composite	1,451.5	1,465.9	1,306.3
Prevention acute composite	390.0	397.4	300.1
Prevention chronic composite	1,061.5	1,068.7	1,006.4
Prevention diabetes composite	270.8	257.4	218.8

Source: IU Health, 2019 – Note: Rates are not age-sex adjusted

Description

Exhibit 28 provides 2019 ACSC (PQI) rates (per 100,000 persons) for ZIP codes in the IU Health Blackford community compared 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."[10] 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, preventative care, and health education. Among these conditions are : asthma, diabetes, chronic obstructive pulmonary disease

(COPD), hyptertension, congestive heart failure, urinary tract infection, and prevention overall, acute and chronic composites.

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

Observations
- For Blackford County, the rates of admissions for ACSC exceeded Indiana averages for 6 of 14 conditions: diabetes long-term complications, urinary tract infection, uncontrolled diabetes, asthma in younger adults, lower extremity amputation with diabetes and prevention diabetes.

[10] *Ibid, 8.*

Exhibit 29: Ratio of ACSC rates for IU Health Blackford community and Indiana, 2019

Indicator	Blackford County	Indiana	Ratio: Blackford/ Indiana
Diabetes long-term complications	184.2	116.6	1.6
Lower extremity amputation with diabetes	43.3	30.2	1.4
Asthma in younger adults	35.3	27.2	1.3
Prevention diabetes composite	270.8	257.4	1.1
Uncontrolled diabetes	43.3	39.2	1.1
Heart failure	454.9	455.7	1.0
Community acquired pneumonia	238.3	248.3	1.0
Urinary tract infection	151.7	149.1	1.0
Prevention overall composite	1,451.5	1,465.9	1.0
Prevention acute composite	390.0	397.4	1.0
Prevention chronic composite	1,061.5	1,068.7	1.0
COPD or asthma in older adults	437.7	467.9	0.9
Diabetes short-term complications	43.3	90.3	0.5
Hypertension	21.7	56.7	0.4

*Source: IU Health, 2019 – Note: Rates are not age-sex adjusted*

Description
Exhibit 29 provides the ratio of Ambulatory Care Sensitive Conditions (ACSC) also referred to as Preventative Quality Indicators (PQI) rates for the IU Health Blackford 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 Blackford County, ACSC rates for diabetes long term complications were 60 percent higher than the Indiana average and rates for lower extremity amputation with diabetes were 40 percent higher.

Community Need Index, Food deserts and Social Vulnerability Index

Exhibit 30: Community Need Index, 2020
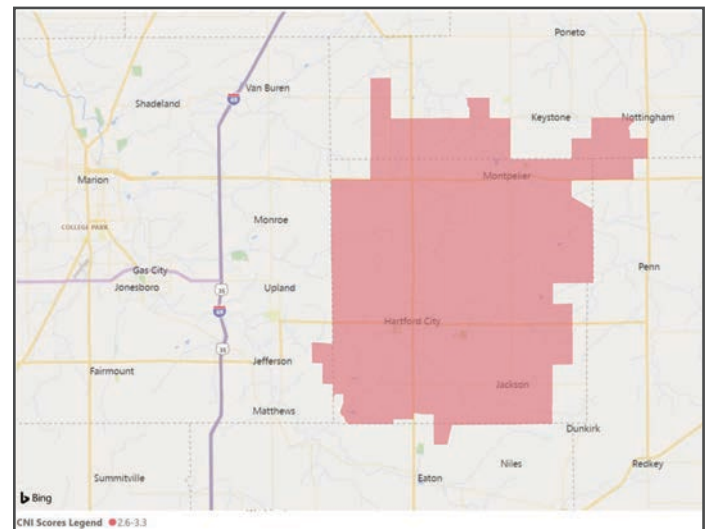
Source: Power BI and Dignity Health, 2020

Description
Exhibit 30 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. The national median score is calibrated to 3.0.

Dignity Health, a California-based hospital system, developed and published the CNI as a way to assess barriers to health care access. The index, available for every ZIP code in the United States, is derived from five social and economic indicators:
- The percentage of elders, children and single parents living in poverty;
- 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
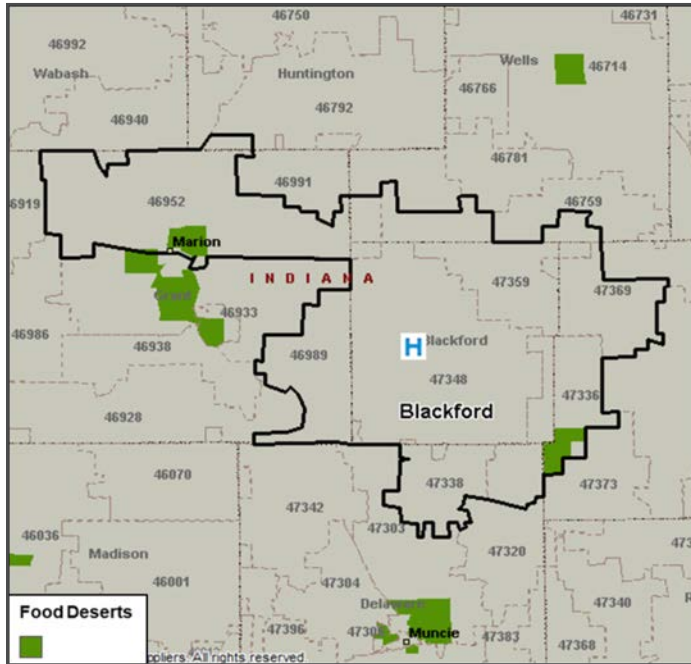- The percentage of the population renting houses.

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

Observations
- Blackford County scored a 3.0 on the CNI scale, which aligned with the national average of 3.0.

Food deserts

Exhibit 31: Food deserts, 2017

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

Description
Exhibit 31 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 Blackford community have been designated as food deserts.

Exhibit 32: Social Vulnerability Index, housing type and transportation theme, 2018

Blackford County housing/transportation SVI map
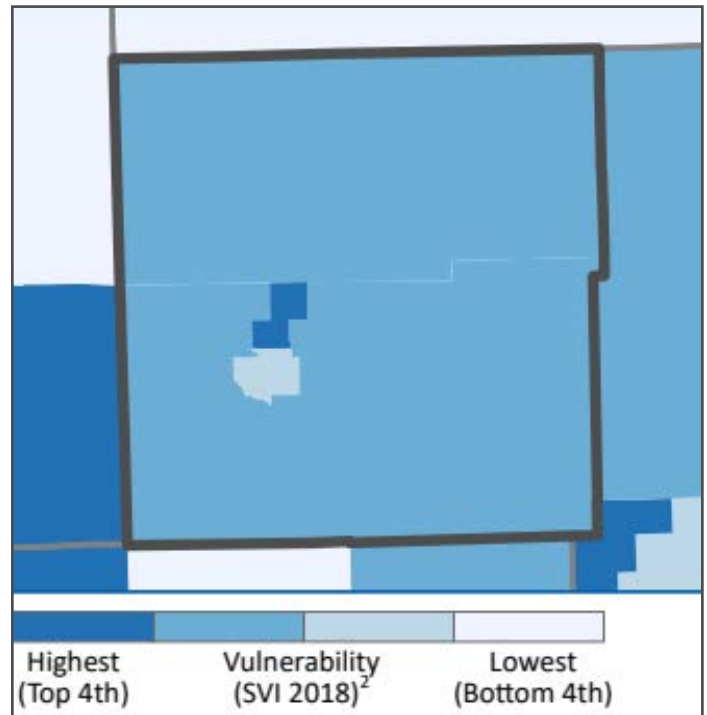
Source: Centers for Disease Control and Prevention, 2019

Description
Exhibit 32 portrays Social Vulnerability Index (SVI) scores (for the housing and transportation theme only) for census tracts throughout Blackford County. The SVI is derived from U.S. census data. Variables are grouped into four themes, including: socioeconomic status, household composition, race/ethnicity/language and housing/transportation.[11] The maps in this exhibit display the housing and transportation theme of SVI in the community.

Observations
- One (1) of Blackford County's 4 census tracts (25.0 percent) rank in the bottom quartile nationally. That 1 census tract makes up 22.5 percent of the county's population.

[11] *Agency for Toxic Substances and Disease Registry. (Aug. 30, 2021). CDC/ATSDR SVI Fact Sheet. Retrieved from: https://www.atsdr.cdc.gov/placeandhealth/svi/fact_sheet/fact_sheet.html*

Medically Underserved Areas and Populations

Exhibit 33: Medically Underserved Areas, 2021

County	Designated area	Medically Underserved Designation Type
Blackford	Low Income – Blackford County	Medically Underserved Population

Source: HRSA, 2021

Description
Exhibit 33 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 (IMU)." 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.[12] 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."[13]

Observations
- The low-income population of Blackford County has been designated as a Medically Underserved Population.

Health Professional Shortage Areas

Exhibit 34A: Primary care Health Professional Shortage Areas, 2021

County	HPSA	Type
Blackford	Low Income – Blackford County	HPSA Population

Source: HRSA, 2021

Description
Exhibit 34A lists the locations of federally designated primary care HPSA areas.

A geographic area can receive a federal Health Professional Shortage Area (HPSA) designation if a shortage of primary medical care, dental care, or mental health care professionals is found to be present. In addition to areas and populations that can be designated as HPSAs, a health care facility can receive federal HPSA designation and an additional Medicare payment if it provides primary medical care services to an area or population group identified as having inadequate access to primary care, dental, or mental health services. HPSAs can be: (1) An urban or rural area (which need not conform to the geographic boundaries of a political subdivision and which is a rational area for the delivery of health services); (2) a population group; or (3) a public or nonprofit private medical facility.[14]

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

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[12] *Health Resources & Services Administration. (Feb. 2021). What is Shortage Designation? Retrieved from: https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation*
[13] *Ibid.*

[14] *Ibid.*

Exhibit 34B: Dental care Health Professional Shortage Areas, 2021

County	HPSA	Type
Blackford	Low Income – Blackford County	HPSA Population

Source: HRSA, 2021

Description
Exhibit 34B lists the locations of federally designated dental care HPSA areas.

Observations
- Low-income populations in Blackford County have been designated as a dental care HPSA.

Exhibit 34C: Mental health care Health Professional Shortage Areas, 2021

County	HPSA	Type
Blackford	East Central Indiana	HPSA Geographic High Needs

Source: HRSA, 2021

Description
Exhibit 34C lists the locations of federally designated mental health HPSA areas.

Observations
- Blackford County has been designated as a mental health HPSA as a part of the East Central Indiana region.

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.[15] 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 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 cultural barriers, increases in drug use, poverty and

[15] Indiana Department of Health. (May 2018). Indiana Health Assessment and Improvement Plan, May 2018 – December 2021. Retrieved from: http://www.isdh.state.in.us/NewIntranet/pdfs/OPM/Indiana_State_Health_Plan_I-SHIP.pdf

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."

Related data points from the assessment supporting the above conclusions have not been included in this report. The data points in the report no longer reflect the most recent year of data available. The current SHA and ISHIP will sunset at the end of 2021. A committee was convened in the summer of 2021 to coordinate an update to the plan that will span 2022-2026; however, the process was not far enough along to provide updates for this CHNA.

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

Since the publication of the ISHIP, the priorities of the plan have not changed though some of the approaches to addressing the priorities have evolved according to the Indiana Department of Health. The SHA and ISHIP annual report did not have current targets on objectives. The annual report can be found on the Indiana Department of Health website at https://www.in.gov/health/phpm/tracking-public-health-performance/state-health-improvement-plan/.

Exhibit 35: Significant needs identified in other assessments or reports

Prioritized Need	Frequency
Food insecurity	2
Aging population and needs of seniors	1
Asthma	1
Cardiovascular disease	1
Diabetes	1
Health disparities	1
Infant mortality	1
Obesity	1
Physical inactivity	1
Public health infrastructure	1
Screenings for cancer	1
Substance use disorders	1
Tobacco use	1
Transportation	1

Source: Analysis by IU Health, 2021

Description
Several other assessments and reports conducted by community-based organizations or agencies, local health departments (LHDs) and the state of Indiana were reviewed. Significant needs identified in these assessments are presented in Exhibit 35.

Observations
- The following indicators most often were identified as significant in other CHNAs that assessed IU Health Blackford's community:
  – Food insecurity
  – Chronic disease and chronic disease management
  – Aging population and needs of seniors

Coronavirus disease (COVID-19) pandemic and vaccine

COVID-19 is a very contagious virus that has become a major threat to the health and well-being of all people around the world. In March 2020, the Indiana Department of Health confirmed the first case of COVID-19 in Indiana and the first reported death.[16,17] The coronavirus outbreak was declared a state, national and international public health emergency.[18,19,20] It has had tremendous health and economic impacts on Indiana and its residents. There have been 806,094 total positive cases of COVID-19 and 13,743 total deaths from COVID-19 in the state of Indiana (Exhibit 36). The virus has spread to every county in Indiana.

Exhibit 36: COVID-19 indicators – Blackford County, Indiana and United States – results as of August 16, 2021

Indicator	Blackford	Indiana	United States
Total positive cases	1,417	806,094	36,951,181
Total case rate per 100,000	12,051.4	11,934.0	11,273.0
Total deaths	33	13,743	620,493
Total death rate per 100,000	280.7	210.0	187.0
Total population vaccinated	4,341	3,019,608	168,689,357
Percent of population vaccinated	42.9	51.5	50.8

Source: Indiana Department of Health Indiana COVID-19 Dashboard and Map, 2021; Centers for Disease Control and Prevention COVID Data Tracker, 2021; Indiana Department of Health COVID-19 Vaccination Dashboard, 2021; COVID-19 Data Tracker – Vaccinations in the United States, 2021.

Certain groups are particularly vulnerable to the effects of COVID-19 and are at greater risk of severe illness and outcomes, including hospitalization and death. The CDC continues to review and update information on the groups most at risk.[21] The current groups, of which some are listed below, can all be found in communities throughout Indiana, including those served by IU Health hospitals. Of particular concern is that some of the underlying conditions and risk factors are significantly prevalent in Indiana.

- People aged 65 and older – risk increases with age
- Many racial and ethnic minority groups who have long been impacted by health and social inequities
- Adults with underlying medical conditions including:
  – Cancer
  – Cerebrovascular disease
  – Chronic kidney disease
  – Chronic lung disease, including COPD (chronic obstructive pulmonary disease) and asthma
  – Dementia or other neurological conditions
  – Diabetes
  – Down Syndrome
  – Heart conditions
  – HIV infection
  – Immunocompromised state (weakened immune system)
  – Liver disease
  – Overweight and obesity
  – Pregnancy and recent pregnancy
  – Sickle cell disease or thalassemia
  – Smoking, current and former
  – Solid organ or blood stem cell transplant
  – Stroke or cerebrovascular disease
  – Substance use disorders
- Children with underlying medical conditions including:
  – Children with medical complexity, with genetic, neurologic, metabolic conditions or with congenital heart disease
  – Obesity
  – Diabetes
  – Asthma or chronic lung disease
  – Sickle cell disease
  – Immunosuppression

The above conditions and risk factors were not the only threats to the health and well-being of people. Many lost jobs or income in 2020 because of temporary or permanent

[16] *Indiana Department of Health. (March 6, 2020). Press Release.* State Health Department Confirms 1st Case of COVID-19 in Hoosier with Recent Travel. *Retrieved from: https://events.in.gov/event/state-health-department-confirms-1st-case-of-covid-19–in-hoosier-with-recent-travel/*

[17] *Indiana Department of Health. (March 6, 2020). Press Release.* Health Department Announces 1st COVID-19 Death in Indiana. *Retrieved from: https://events.in.gov/event/isdh-news-release-health-department-announces-1st-covid-19-death-in-indiana*

[18] *State of Indiana, Executive Department Indianapolis. (March 6, 2020). Executive Order 20-02.* Declaration of Public Health Emergency for Coronavirus Disease 2019 Outbreak. *Retrieved from: https://www.in.gov/gov/files/20-02ExecutiveOrder DeclarationofPublicHealthEmergencyforCOVID-19FINAL.pdf*

[19] *U.S. Department of Health and Human Services. Public Health Emergency (Jan. 31, 2020).* Determination that a Public Health Emergency Exists. *Retrieved from: https://www.phe.gov/emergency/news/healthactions/phe/Pages/2019-nCoV.aspx*

[20] *World Health Organization. (March 1, 2020).* WHO Director-General's opening remarks at the media briefing on COVID-19 – 11 March 2020. *Retrieved from: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—11-march-2020*

[21] *Centers for Disease Control and Prevention. (Aug. 20, 2021). People with Certain Medical Conditions. Retrieved from: https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html*

business closures due to stay-at-home orders or shutdowns to help reduce the spread of COVID-19 (e.g., Governor Holcomb issued a "Stay-at-Home" order that went into effect on March 24, 2020).[22] This made it difficult for individuals and families to cover the expenses for basic needs, such as food, housing, childcare and healthcare services. The Indiana unemployment rate in the first few months of 2020 averaged 3.2 percent but rose significantly in April 2020 to 16.9 percent.[23] The rate remained higher than the beginning of the year for the rest of 2020. The number of people unemployed in Indiana increased from 111,373 in March 2020 to 544,935 in April 2020, which was the highest for the year.[24] However, the number of people unemployed in Indiana from April to the end of 2020 never fell as low as March 2020. The Indiana Department of Workforce Development processed 7.8 million unemployment insurance (UI) claims in 2020 compared to about 1 million claims in 2019.[25]

Employment is just one factor influencing social determinants of health. In April 2020, the U.S. Census Bureau started measuring household experiences across the nation during the coronavirus pandemic through an experimental data system called the Household Pulse Survey.[26] These measures represent how people were managing across a range of social determinants of health. Below is a selection of metrics specific to Indiana, mostly from the period of April 23, 2020, to May 5, 2020 – shortly after COVID-19 was confirmed in Indiana.

- 37.8 percent of adults reported symptoms of anxiety or depressive disorder. This peaked at 43.7 percent later in 2020.
- 11.9 percent of adults reported they were uninsured. This peaked at 13.5 percent later in 2020.
- 34.2 percent of adults reported delaying or not getting

medical care because of the COVID-19 pandemic in the last four weeks. This peaked at 44.9 percent later in 2020.
- 9.4 percent of adults reported there was either sometimes or often not enough to eat in the last seven days. This peaked at 13.2 percent in 2021.
- 21.2 percent of adults missed last month's rent or mortgage payment or were not confident they could pay next month's rent or mortgage on time. This peaked at 29.3 percent in 2020.
- 46.1 percent of adults reported the likelihood of eviction or foreclosure (period – August 19 – 31, 2020). This peaked at 54.0 percent almost a year later in 2021.
- 32.8 percent of adults reported that it was somewhat or very difficult to pay for usual household expenses in the last seven days (period – August 19 – 31, 2020). This peaked at 36.8 percent later in 2020.

There are multiple steps people can take to protect themselves from the virus, including getting a vaccine. Though people may not be able to receive a vaccine due to age, weakened immune system or underlying medical condition, it is widely available to people 12 years of age or older. In December 2020, the first vaccinations for COVID-19 were received and administered in Indiana. Out of an estimated 5.7 million people who are eligible for the vaccine in Indiana, as of August 16, 2021, 3,019,608 (51.5 percent) are fully vaccinated for COVID-19 (Exhibit 36).[27] In Indiana, 16.1 percent of those aged 18 and over reported being hesitant about receiving a COVID-19 vaccine when compared to 10.5 percent of the United States (data as of August 2, 2021).[28] The main reasons reported for the hesitancy in Indiana include concerned about side effects, don't trust the government and don't trust COVID-19 vaccines. These are the same top reasons reported across the U.S.[29]

[22] State of Indiana, Executive Department Indianapolis. (March 23, 2020). Executive Order 20-08. Directive for Hoosiers to Stay at Home. Retrieved from: https://www.in.gov/gov/files/Executive_Order_20-08_Stay_at_Home.pdf
[23] Hoosiers by the Numbers. (n.d.). Local Area Unemployment Statistics (LAUS) – Seasonally Adjusted. Retrieved from: http://www.hoosierdata.in.gov/dpage.asp?id=54&view_number=2&menu_level=&panel_number=2
[24] Ibid.
[25] Indiana Department of Workforce Development. 2021. 2021 State of the Indiana Workforce Report – Responding to the Pandemic. Retrieved from: https://www.in.gov/dwd/files/2021-State-of-the-Indiana-Workforce-Report.pdf

[26] U.S. Census Bureau, Household Pulse Survey. (n.d.). Retrieved from: https://www.census.gov/data-tools/demo/hhp/#/
[27] Indiana Department of Health. (n.d.). Indiana COVID-19 Vaccination Dashboard. Retrieved from: https://www.coronavirus.in.gov/vaccine/2680.htm
[28] U.S. Census Bureau. (n.d.). Household Pulse Survey COVID-19 Vaccination Tracker – Vaccine Hesitancy. Retrieved from: https://www.census.gov/library/visualizations/interactive/household-pulse-survey-covid-19-vaccination-tracker.html
[29] Ibid.

Appendix C – Interview, community meeting and survey participants

Individuals from a wide variety of organizations and communities participated in the interview process, community meetings and surveys. Participants included representatives from the following organizations:

- Blackford County Community Corrections
- Blackford County Community Foundation
- Blackford County Economic Development Corporation
- Blackford County Health Department
- Blackford County Schools
- Blackford County Sheriff's Office
- Citizens State Bank
- Indy Container Board
- IU Health
- IU Health Ball
- IU Health Blackford
- LifeStream Services
- Purdue Extension
- Second Harvest Food Bank
- Smith Insurance Services

Appendix D – Impact of actions taken since the previous CHNA

This appendix discusses the impact of community health improvement actions taken by IU Health Blackford 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.

Access to healthcare

- **The Healthy Community Alliance of East Central Indiana (HCA)** engages 149 collaborating organizations in three East Central Region counties (Delaware, Blackford and Jay). In 2019 and 2020, ten new partners were added to the network (Crossroads Financial Credit Union, Jay County Development Corporation, Jay County Drug Prevention Coalition, Jay Community Schools, Home Health Angels, United Way of Jay County, Alexandria Care Center, John Jay Center for Learning, United Day Care Center of Delaware County and Community Partners Children's Bureau). The

HCA makes multiple resources available to collaborators, including facilitated workgroup sessions in each county, materials such as Tobacco Cessation Toolkits and Healthy Lifestyle toolkits, online resources like an e-newsletter, media messaging and access to community health data for each of the three counties. These resources are provided to all collaborating organizations free of charge. In 2020, the HCA began offering webinar programming as a way to engage partners in accessing resources and programming in all three counties. The CDC Change tool survey process was conducted in both Delaware and Jay Counties in 2020 by the HCA partner organizations with HCA partner support. In Blackford County, HCA efforts led to programming and curriculum changes at the Blackford Community School System. A 2019 survey found that 105 of HCA partner organizations were utilizing at least one of these provided resources to influence change amongst their audiences. The Healthy Community Alliance is organized and facilitated by the IU Health East Central Region Hospitals and receives materials and support from IU Health Ball.

- **The IU Health East Central Region added six new primary care providers** – two physicians, two Family Nurse Practitioners (FNP), one Nurse Practitioner (NP) and one Physician Assistant (PA) – in 2019. Two of the new primary care providers are located in Jay County, one in Blackford County and three in Delaware County, where the provider footprint was expanded with the addition of an existing physician practice into the IU Health physician network. A new HIV Pre-Exposure Prophylaxis Clinic and a Pediatric Hospitalist Program were started at IU Health Ball in 2019. Six new primary care providers joined the IU Health East Central Region – three physicians, two FNPs and one Women's Health Nurse Practitioner (WHNP) – in 2020. Two of the new providers are located in Jay County, two are based in Grant County and two in Delaware County. Additionally, virtual services were expanded allowing all primary care providers to provide virtual visits to their patients. In 2021, a new two-physician primary care clinic was established in Upland including a Family Nurse Practitioner Behavioral Counselor (FNP-BC) to provide additional primary care support. A partnership with Taylor University provided a student health center at this practice in August of 2021. A new nurse practitioner joined the Blackford practice in May of 2021. Jay Family First Healthcare had a new physician join in August of 2021.

- The IU Health East Central Region Perinatal Coordinator facilitated the development of 36 collaborators to enhance efforts to decrease infant mortality and improve the health of newborns and women in 2019-2020. Access to community resources increased due to ECR efforts that include the promotion of Baby and Me Tobacco Free program, implementation of a Tobacco Treatment Pilot Program in five ECR physician office settings designed to provide client consultations and referrals to 1-800 Quit Now and pharmacotherapy options. IU Health Jay received an IDOH OB Navigation grant which provided OB

Navigation for clients in Jay and Blackford Counties to offer continuum of care throughout pregnancy in 2020. Physician practices in the region received Safe Sleep education and resources, and a partnership with IU Health Ball Lactation Services resulted in the development of telemedicine lactation services at IU Health Jay. An Intra-professional Model of Care for Newborn Intensive Care Unit (NICU) rounds with discharge planning was developed at IU Health Ball to decrease Length of Stay (LOS) and barriers to discharge. In 2021 the Indiana Department of Health awarded two years of funding for the implementation of a HIPPA compliant text messaging and remote monitoring virtual platform to all obstetrical practices in the ECR providing prenatal care and offering delivery services at IU Health Ball.

- **IU Health provided two family Medicine Directors plus a resident rotation at a subsidized rate to Open Door Health Services.** This allowed Open Door to expand its obstetric capability to service low-income residents of East Central Indiana. These two physicians provided a total of 15,006 patient encounters in 2019 and 7,912 in 2020. In the first half of 2021, they provided 4,633 patient encounters. Other OB services are offered at IU Health Ball through its Family Medicine Program, Perinatal Center and physician practice facilities. Several other private practices offer OB services to the community as well.

Behavioral health

- **IU Health East Central Region Virtual Care Behavioral Health Hub** was established in 2019. The IU Health Blackford and IU Health Jay Emergency Departments had 161 patients admitted with a Substance Use Disorder (SUD) diagnosis in 2019. The number of admitted patients increased to 190 at both EDs in 2020. Patients were identified by administering an UNCOPE screening, the patient reports previous substance use/treatment or bedside staff identifies substance misuse as the cause of the ED visit. Treatment of 52 episodes of substance use in 47 patients were served by the virtual peer recovery program in 2019 with 37 episodes of treatment for 32 patients in 2020. In the first half of 2021, 35 episodes of treatment were provided for 30 patients. The hub employees include a total of seven peer recovery coaches. A coach is always available 24-hours a day, 7-days a week. The average response time after a consult is requested was approximately 5-minutes. The Hub receives a call from the ECR every 8-10 days on average. Collaborators include System Clinical Services (SCS)/Virtual Care, BHC and ED staff. Funding was through the FSSA and Indiana Department of Health.

Chronic disease management

- **The IU Health Ball Addiction Treatment and Recovery Center** opened in 2019 and offered an Intensive Outpatient Program (IOP), which included group recreation therapy and individual and family counseling services and peer recovery coaching. Medication Assisted Treatment (MAT), an Individual Outpatient Program and IOP Aftercare Program are also available. This center provided 67 assessments and had 44 persons enrolled in IOP and/or the Individual Track in July-December of 2019. Those numbers increased to 130 and 107 in 2020. Patients who completed the IOP demonstrated a 35 percent increase in sobriety and pregnant women demonstrated a 100 percent sobriety rate. The IU Health Behavioral Health Collaborative agreed to supply the cost of staff, space and equipment in 2019. Numerous community partners were engaged including AA, NA, Briana's Hope, A Better Life, Celebrate Recovery and Smart Recovery, plus faith-based partnerships and community resource partners.
- **Drug take-back kiosks** were installed at four East Central Indiana locations: Pavilion Pharmacy at IU Health Ball in Muncie (Pavilion), IU Health Yorktown Pharmacy in Yorktown, IU Health Blackford Pharmacy in Hartford City and IU Health Jay in Portland. The kiosks are open to the public and available during business hours. In 2019, 874 pounds of prescription meds were recovered at Pavilion, 230 pounds at Blackford, 161 pounds at Yorktown and 161 pounds at Jay. In 2020, 897 pounds of meds were collected from the four locations and destroyed. In January-June of 2021, 690 pounds of meds were collected and destroyed with an estimated 800 pounds to be collected in the second half of 2021.
- **1-800 Quit Now telephone service** was established in the East Central Region in 2019. The Indiana Tobacco Quit Line received 226 referrals from Delaware County, 28 from Blackford County and 32 from Jay County in 2019. Participant numbers declined in the face of the COVID-19 pandemic in 2020. The Indiana Tobacco Quit Line received 152 referrals with 103 from Delaware County, 20 from Blackford County and 29 from Jay County in 2020. In January-June of 2021, referrals totaled 58 with 38 from Delaware County, ten from Blackford County and nine from Jay County.

Obesity and diabetes

- **The East Central Indiana Food Council** is a volunteer-run organization led by local activists interested in addressing community issues around food access and nutrition that began in 2019. It receives support from the IU Health-led Healthy Community Alliance initiative. The group has strategically grown from a Delaware County focus to include participants from Blackford and Jay Counties. The Council is composed of multiple community collaborators representing Ball State University, Muncie Food Hub,

IU Health, Purdue Extension, Second Harvest Food Bank, Grace Baptist Church, Soup Kitchen of Muncie, Blood-n-Fire Ministries, Community and Family Services Food Pantries in Hartford City, Montpelier and Portland and the Children's Bureau as well as local farmers and farmers market organizers. In 2019, the group offered guidance to area schools and farmers regarding the process of bringing local farm products to schools, with the outcome of a new online resource for accessing mandatory forms and policies and connections made between schools and farmers. In response to the COVID-19 pandemic, the group held a special philanthropy session in 2020 where funders talked directly with food support organizations directly about their needs. The result was that groups received funding for initiatives such as additional equipment and the Muncie Food Hub partnered with IU Health to offer free produce for 15-weeks delivered to ten locations in Delaware, Blackford and Jay Counties. Sites included food pantries, childcare centers, community centers and healthcare organizations where vulnerable populations were able to be reached. The Healthy Community Alliance Nutrition Workgroup was combined into the Food Council in June of 2021 and brought additional partners into the collaborative while integrating a more defined focus on healthy eating. The group organized a field trip in July 2021 to tour an aquaculture facility which has long term potential to bring fresh produce to underserved areas.

- **IU Health offers the Families at the Farmers Market in Muncie and Hartford City each year.** In 2019, 65 families participated at the Muncie site and six in Hartford City. Families were offered three different opportunities during the summer to learn about fresh produce, physical activity and tobacco cessation, and each family received coupons redeemable for fresh produce at the Farmers Market. Fifty-seven percent of families participating in a survey reported an increase in produce utilization at mealtimes following the program. Delaware County collaborators included Minnetrista, Whitely Community Council, Ross Center, Minority Health Coalition, Ivy Tech, Boys/Girls Club, Buley Center, Open Door Health Services, Salvation Army, YWCA of ECI, YMCA/Appletree, Youth Opportunity Center, Hillcroft, Spangler Farms, Northern Tropics Greenhouse and IU Health Ball. The Blackford County collaborators were Children and Family Services of Blackford County/WIC, Grace United Methodist Church, Growers and Makers Market, Common Grounds Coffee Shop, Blackford County Public Library, Purdue Extension and IU Health Blackford. In 2020, the program's in-person sessions were eliminated due to COVID-19 precautions. Sixty-eight families in Muncie and 29 families in Hartford City received a healthy eating packet with coupons redeemable at local farmers markets and farm stands. Head Start joined the collaboration and facilitated connections with families in Blackford County. Fresh fruits/vegetables were eaten at "most meals" according to 67 percent of participants after completing the program with 100 percent of survey respondents stating

they "learned a lot" and reported using the Farmers Market "two or more times." Coupon redemption rates were over 50 percent in 2019 and 2020. In 2021, this program utilized a model similar to 2020 with no in-person education session. Over 100 families registered for the program with the addition of several new locations. It is anticipated that 65 families in Muncie and 30 families in Hartford City will actively engage with the program in 2021.

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 numerous 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.