community
HEALTH NEEDS ASSESSMENT

Franciscan HEALTH

MONTGOMERY COUNTY



2019 - 2021 REPORT

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community HEALTH NEEDS ASSESSMENT

1 LEARN ABOUT FRANCISCAN HEALTH CRAWFORDSVILLE

2 EXAMINE THE GEOGRAPHIC, DEMOGRAPHIC AND ECONOMIC TRAITS OF THE COMMUNITY

3 EXPLORE THE SOCIAL DETERMINANTS OF HEALTH AND OTHER HEALTH INDICATORS

4 REVIEW HEALTH OUTCOMES, SUCH AS CHRONIC DISEASES AND ILLNESSES

5 IDENTIFY THE TOP HEALTH NEEDS IN THE COMMUNITY

6 INVESTIGATE COMMUNITY HEALTH PARTNERS AND ASSETS

7 DETERMINE HOW YOU CAN HELP MEET THE NEEDS

8 UNCOVER FRANCISCAN HEALTH'S STRATEGIC THREE YEAR PLAN TO HELP

INTRODUCTION

Franciscan HEALTH

community HEALTH NEEDS ASSESSMENT

Dear Reader,

This report provides findings from the Community Health Needs Assessment (CHNA), a comprehensive review of health data and community input on health issues relevant to the community served by Franciscan Health. The assessment covers a large range of topics, but is not a complete analysis of any one issue. Rather, this data helps to identify priorities which lead to productive community discussions and the creation of goals and objectives. We invite you to investigate and use the information in this report to move toward solutions for healthier communities.

This report meets the current Internal Revenue Service's requirement for tax-exempt hospitals, which is based on the Patient Protection and Affordable Care Act of 2010. More importantly, this document assists Franciscan Health in providing essential services to those most in need. Based on the findings in this report, Franciscan Health will develop a three-year strategic plan on meeting community health needs as capacity and resources allow.

The CHNA collected input from persons representing the broad interests of the overall community, including those with specialized knowledge of, or expertise in, public health and residents of the communities the hospital serves. Franciscan Health partnered with other hospital systems, foundations, and non-profits to conduct a resident survey. Data from a variety of federal, state, and local entities were also reviewed. These findings are put into context by County Health Rankings & Roadmaps, Indiana Indicators, Center for Disease Control and Prevention (CDC), Healthy Communities Institute, (HCI) the Indiana State Department of Health (ISDH), etc.

You'll find this document organized in such a way as to guide you through the community. **Most importantly, please see the Call to Action. In this section, we share our commitment to improving community health in 2019-2021. We think it's important to be transparent, and we invite others to join us as we know improving health is a total community effort.**

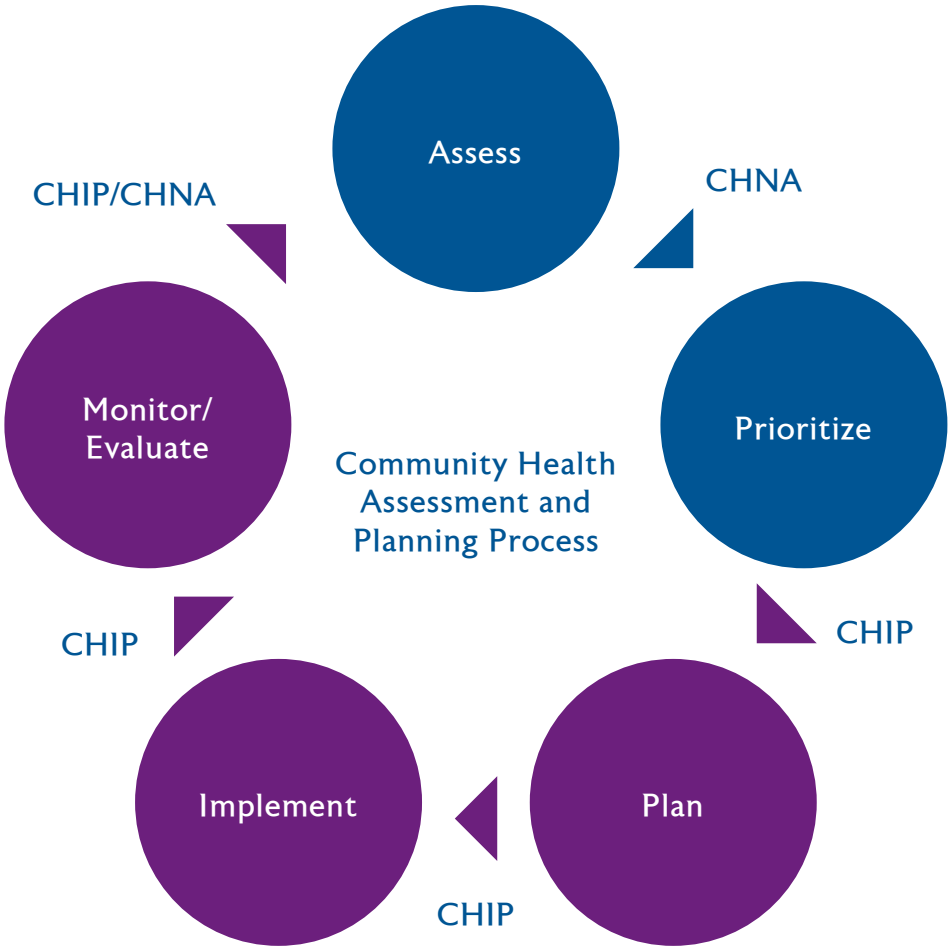
Yours in health,

The Community Health Improvement Team






Every three years, Franciscan Health takes time to assess the health needs of the communities it serves. This assessment allows us to prioritize our resources to implement programs that address these needs with evidence based practices. Throughout each three year cycle, staff evaluate and monitor the effectiveness of our programs. You'll find the strategic plan, also called the Community Health Improvement Plan (CHIP) in the Call to Action Section of this document.



"The ultimate goal of a community health assessment is to develop strategies to address the community's health needs and identified issues. A variety of tools and processes may be used to conduct a community health assessment; the essential ingredients are community engagement and collaborative participation."

– CDC

AUG-DEC 2017
Planning and Consulting with Public Health Experts on CHNA and CHIP Improvement

JAN-FEB 2018
National Public Health Data Reviewed

APR 2018
Community Health Survey Deployed

A survey was developed with the IU School of Public Health Bloomington and University of Evansville faculty, in conjunction with additional health systems, foundations and non-profits. The survey focused on social determinants of health and the desirability of community health interventions in communities. This method added valuable insight to secondary data. The survey was delivered to randomized addresses via the US Postal Service. Franciscan Health also worked to gather completed surveys from vulnerable populations in each county. For a complete survey methodology, please see the Appendix.

MAY-JULY 2018
Secondary Data Collection

With the assistance of public health graduate students, data on health and wellness issues was collected. Sources included County Health Rankings, Census Bureau Data, various reports from the Indiana State Department of Health and other national reports. Indiana Indicators, Community Commons and Healthy Communities Institute data management systems also contributed to the secondary data used. Sources of the secondary data are identified throughout this report.

AUG-OCT 2018
Feedback Meetings

While many hospital systems conduct focus groups as part of the data process, focus groups are not specifically required. Franciscan Health has employed many tools and resources to collect quantitative data that demonstrates needs in communities. However, like many hospital systems and local health departments, not as much emphasis is placed on context and the development of successful CHIPs. In preparation for the 2019-2021 cycle, Franciscan Health conducted feedback meetings with the purpose of determining implementation plans. These meetings were held with professionals in communities, internal staff and resident groups. For a complete methodology of the feedback meetings, please see the Appendix.

OCT 2018
Analysis of Data and Health Need Prioritization

OCT-NOV 2018
Final Development of CHIP

DEC 2018
Report Completion

JAN 2019
Franciscan Health Mission & Human Resources Committee Approval

FEB 2019
Franciscan Health Board of Trustees Approval

FACILITY INFORMATION

Franciscan HEALTH

community HEALTH NEEDS ASSESSMENT

FACILITY INFORMATION

Throughout our hospitals and many medical practices, we offer a number of nationally recognized Centers of Health Care Excellence.

For 140 years, Franciscan Alliance has stayed true to our founding mission to care for everyone who comes through our doors. We treat our patients with the best possible care by following the guiding ethical values embodied by our founding congregation, the Sisters of St. Francis of Perpetual Adoration. Always mindful of our Christian stewardship to the Roman Catholic Church, we minister with joy, care and compassion according to the ideals of Saint Francis of Assisi and our foundress, Blessed Maria Theresia Bonzel.

Our healthcare system carries forth Christ's healing ministry and strengthens the Catholic health care mission by:

- Providing a broad, coordinated continuum of health care services with an emphasis on improving the health of persons and communities.
- Treating the mind, body and spirit with holistic and comprehensive medical options.
- Developing creative structures for health care delivery.
- Being advocates for those in need.
- Identifying and developing our sisters and laity for Franciscan leadership.

FRANCISCAN HEALTH CRAWFORDSVILLE

Address: 1710 Lafayette Rd. Crawfordsville, IN 47933
Phone: (765) 362-28000
Specific Websites: https://www.franciscanhealth.org/healthcare-facilities/franciscan-health-crawfordsville-60
CEO Name: Terry Wilson

Average Annual Inpatient Admissions (2017): 1,171
Average Annual Outpatient Admissions (2017): 114,216
Average Annual ED Admissions (Arrivals 2017): 1,072
Average Annual Births (2017): 0

Number of Employees: 229
Number of Volunteers: 30
Number of Doctors (FPN, SPI, & Affiliates): 228
Average Length of Stay (Inpatient 2017 number of days): 5



BLESSED MARIA THERESIA BONZEL

Blessed Maria Theresia Bonzel was born on Sept. 17, 1830 in Olpe, Germany. She sought to combine the contemplative and active religious life through an unfailing commitment to Perpetual Adoration of the Blessed Sacrament and the works of mercy in the spirit of Saint Francis of Assisi. She wanted to follow Christ and to serve the poor, and was asked by Bishop Konrad Martin to form a religious Congregation. And thus the Sisters of Saint Francis of Perpetual Adoration was founded on July 20, 1863. On November 25, 1875 Blessed Maria Theresia Bonzel sent six Sisters from Olpe, Germany to Lafayette, Indiana to begin a ministry of healthcare and education for the poor and neglected. After a lifetime of dedicated service and virtuous leadership, Blessed Maria Theresia Bonzel was beatified on November 10, 2013 bestowing on her the title of "Blessed" and moving her one step closer to Sainthood. Today, over 150 years later, the Sisters of Saint Francis of Perpetual Adoration are ministering in the United States, Germany, Brazil and the Philippines.

"One good action or deed will not win the battle; we must daily begin anew."

– Blessed Maria Theresia Bonzel

List of Services (Service Lines):

Airborne infection isolation room, Auxiliary organization, Cardiac Rehabilitation, Chemotherapy, Dental services, Freestanding outpatient care center, Linguistic/translation services, Meals on wheels, Medical surgical intensive care services, Neurological services, Patient Controlled Analgesia (PCA), Psychiatric care, Psychiatric geriatric services, Diagnostic radioisotope facility, Full-field digital mammography (FFDM), Positron Emission Tomography/CT (PET/CT), Single Photon Emission Computerized Tomography (SPECT), Sleep center, Tissue transplant, Virtual colonoscopy, Wound management services

OUR MISSION

Our mission is to Continue Christ's Ministry in our Franciscan Tradition.

OUR COMMUNITY

Franciscan Health Crawfordsville community benefit programs target all of Montgomery County, IN, which is in the immediate geographic area to the hospital. This area also contains the most individuals who participate in community benefit activities, a majority of affiliated services and providers, and residents least served by other health systems.

OUR VALUES

RESPECT FOR LIFE

The gift of life is so valued that each person is cared for with such joy, respect, dignity, fairness and compassion that he or she is consciously aware of being loved.

FIDELITY TO OUR MISSION

Loyalty to and pride in the health care facility are exemplified by members of the health care family through their joy and respect in emphatically ministering to patients, visitors and co-workers.

COMPASSIONATE CONCERN

In openness and concern for the welfare of the patients, especially the aged, the poor and the disabled, the staff works with select associations and organizations to provide a continuum of care commensurate with the individual's needs.

JOYFUL SERVICE

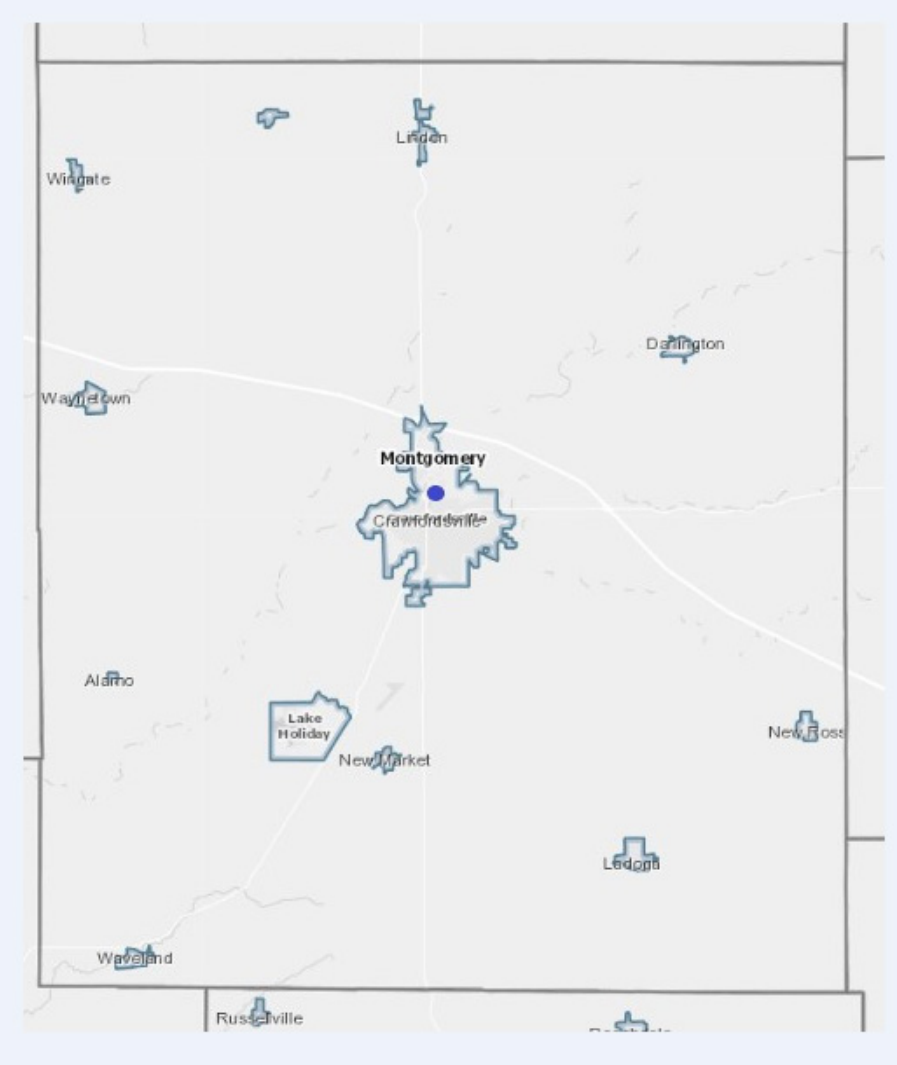
The witness of Franciscan presence throughout the institution encompasses, but is not limited to, joyful availability, compassionate, respectful care and dynamic stewardship in the service of the Church.

CHRISTIAN STEWARDSHIP

Christian stewardship is evidenced by just and fair allocation of human, spiritual, physical and financial resources in a manner respectful of the individual, responsive to the needs of society and consistent with Church teachings.

"Start by doing what is necessary; then do what is possible; and suddenly you are doing the impossible."

– Francis of Assisi



TOP HEALTH NEEDS

Franciscan Health Crawfordsville has identified the following top needs in the community: food insecurity, adult mental health, substance abuse and child abuse & neglect. For more information on how top health needs were determined, please see Section Four.

Food Insecurity

Adult Mental Health

Substance Abuse

Child Abuse & Neglect

COMMUNITY PROFILE

Franciscan HEALTH

SECTION 1

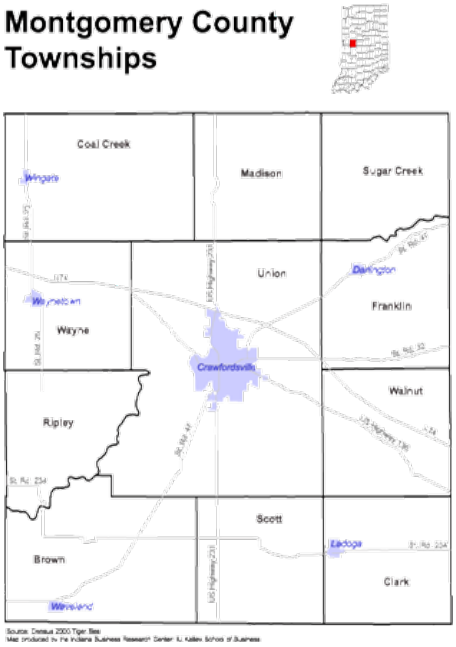
community HEALTH NEEDS ASSESSMENT

This section details the local community. The community profile contains information such as the geographic details, demographics, and social and economic well-being. Reviewing this information gives readers a sense of the community, including the strengths and challenges of daily living. Because of data constraints and the desire to offer the best snap-shot possible, the community profile may extend beyond the identified target communities for Franciscan Health's community benefit operations.

COUNTY DESCRIPTION



North, Central & South Indiana Regions



Montgomery County, Indiana

DEMOGRAPHICS

Table 1.0: Population Size for Montomery County

Cities & Towns	Populations	Percent of County
Alamo	65	0.2%
Crawfordsville	16,174	42.0%
Darlington	852	2.2%
Ladoga	1,019	2.6%
Linden	764	2.0%
New Market	632	1.6%
New Richmond	334	0.9%
New Ross	346	0.9%
Waveland	422	1.1%
Waynetown	959	2.5%
Wingate	263	0.7%

*Perect of the population not accounted for in Table 1.0 represents the number of residents not living within city/township limits.

In 2017, 6.1% of the population was preschool aged children, 17% were school aged children, 9.3% were college aged students, 22.9% were young adults, 27.2% were older adults, and 17.5% were seniors. In 2017, the average age of a person in Montgomery County was 40.4, which falls into the young adult category.

Table 1.1: Population Estimates by Age, 2016

Population Estimates by Age	Number	Percent Distributed in County	Percent Distributed in State
Preschool: 0 to 4	2,353	6.1%	6.3%
School Age: 5 to 17	6,530	17.0%	17.3%
College Age: 18 to 24	3,594	9.3%	9.9%
Young Adult: 24 to 44	8,834	22.9%	25.3%
Older Adults: 45 to 64	10,483	27.2%	25.9%
Seniors: 65 and older	6,731	17.5%	15.4%
Average Age (years)	40.4	N/A	N/A

In 2017, there were no Hawaiian natives and other Pacific Islanders, 0.4% of the population was American Indians or Alaskan natives, 1.1% were Black, 0.8% were Asian. 1.3% of the population identified as two or more racial groups, and 96.3% were White. In 2017, 4.9% of the Montgomery County population identified as Hispanic and 95.1% identified as Non-Hispanic.

Table 1.2: Population Estimates by Race (including Hispanic origin), 2016

Population Estimates by Race	Number	Percent Distributed in County	Percent Distributed in State
American Indian or Alaska Native	165	0.4%	0.4%
Asian	327	0.8%	2.4%
Black	408	1.1%	9.7%
Native Hawaiian & other Pacific Islander	16	0.0%	0.1%
White	37,098	96.3%	85.4%
Two or More Racial Groups	511	1.3%	2.1%
Non-Hispanic	36,623	95.1%	93.%
Hispanic	1,902	4.9%	7.0%

Veteran Population

According to the 2016 American Community Survey, there were approximately 2,322 U.S. Veterans living in Montgomery County. Most of the veterans in Montgomery County were between 35 and 54 years old.

Population with Disabilities

The Census Bureau defines disability as a long-lasting sensory, physical, mental, or emotional condition or conditions that make it difficult for a person to do functional or participatory activities such as seeing, hearing, walking, climbing stairs, learning, remembering, concentrating, dressing, bathing, going outside the home, or working at a job. Nearly 10.3% of people living in Montgomery County were living with a disability in 2016.

Social and Economic Factors

FINANCIAL

Refer to the tables below for a comparison of financial and economic indicators across the state and county.

According to the 2016 American Community Survey, the median household income for Montgomery County was $38,940. This was slightly lower than the Indiana median state household income. The highest incomes in Montgomery County were earned by people who are between 25 and 64 years of age.

Poverty becomes a factor when a family's total income is less than the threshold. The American Community Survey (2016) concluded that 11.3% of Montgomery's population is in poverty. The population with the highest amount of poverty is those between 18 and 34 years of age. When looking at the poverty rate among children under the age of 18, the rate increases to 16.2%. Children under the age of 12 are the second highest group in poverty in Montgomery County. In 2016, there were 2,907 recipients of free or reduced lunch in the Montgomery County School Corporation. In 2016, there were 3,301 recipients of food stamps in Montgomery County.

Table 1.3: Montgomery Income & Poverty Rates

Income and Poverty	Number	Percent of State	Indiana
Per Capita Personal Income (annual) in 2016	$38,940	86.2%	$43,097
Median Household Income in 2016	$51,527	98.5%	$52,289
Poverty Rate in 2016	11.3%	80.7%	14.0%
Poverty Rate among Children under 18	16.2%	84.8%	19.1%
Welfare (TANF) Monthly Average Families in 2017	32	0.5%	6,790
Food Stamp Recipients in 2017	3,301	0.5%	656,297
Free and Reduced Fee Lunch Recipients in 2016/2017	2,907	0.6%	495,330

EDUCATION

The following risk factors have generally been associated with increased likelihood of students dropping out of high school: high rate of absenteeism, low level of academic engagement, work or familial responsibilities, internalizing or externalizing behaviors, frequent moving, and attending a school with low achievement scores (Suh, S & Suh, J, 2007; Christle, Jolivette, Nelson, 2007; Rumberger, 2004; Balfanz & Legters, 2004).

In general, dropping out of high school is negatively associated with employment (i.e. difficulty finding a job or maintaining a job) and life outcomes (Child Trends, Data Bank Indicators, 2015). More specifically, high school drop outs are more likely to engage in crimes and exhibit poor health outcomes, especially in regard to mental health (Lochner & Moretti 2004; Freeman, 1996; Alliance for Excellent Education, 2006; Liem, J. H., Dillon & Gore, 2001).

Among one of many goals, Healthy People 2020 aims to increase the high school graduation rate from 74.9% (2007-2008) to 82.4% by 2020.

Table 1.4: Educational Attainment Profile in Montgomery County

Indicator	Description	Montgomery County	Indiana
High School Education	Percent of people aged 25 years or older who have either graduated from high school, completed the GED, or have some other equivalent credential. This percent includes all people who graduated from high school and have completed higher levels of education.	89%	88%
Bachelor's Degree or Better Education	Percent of people 25 years or older who have at least graduated from college with a bachelor's degree. This does not include vocational, technical schools or job training.	17%	24%
School Dropout Rate	Percent of individuals ages 16-24 who are not currently enrolled in school and have not completed high school or obtained a GED.	12%	12%

EMPLOYMENT

Unemployment rate is a measure of the prevalence of unemployment and calculated as a percentage by dividing the number of unemployed individuals by all individuals currently in the labor force (United States Department of Labor, 2017). The annual unemployment rate in 2017 was 3.5% in Montgomery County.

Table 1.5: Unemployment in Montgomery County

Indicator	Number	Rank in State	Percent of State	Indiana
Employed	18,353	41	0.6%	3,320,409
Unemployed	574	41	0.6%	3,203,351
Annual Unemployment Rate	3.0	46	0.5%	117,058
October 2018 Unemployment Rate	3.5	70	85.7%	3.5
Total Resident Labor Force	18,927	47	97.2%	3.2

In 2016, there were 18,353 employed individuals in Montgomery County, while 574 were unemployed (STATS Indiana).

MAJOR INDUSTRIES

The private industry represents 85.9% of the working class (2016).

Table 1.6: Industries in Montgomery County

Indicator	Employment	Percent Distributed in Region	Earnings	Percent Distributed in Region	Average Earnings per Job
Farm Proprietors	619	3.0%	$3,026	0.3%	$4,889
Nonfarm Proprietors	3,654	17.8%	$96,737	9.7%	$26,474
Farm	767	3.7%	$8,586	0.9%	$11,194
Nonfarm	19,741	96.3%	$983,827	99.1%	$49,837
Private	17,607	85.9%	$882,384	88.9%	$50,116
Wage and Salary	16,235	79.2%	$713,355	71.9%	$43,939
Total by Place of Work	20,508	100.0%	$992,413	100.0%	$48,392

TRANSPORTATION

In 2016, 5.0% of Montgomery County residents identified having no vehicle available for use, while 29.2% identified having at least one vehicle available and 41.4% identified having two vehicles available. This means that the majority of residents had vehicular transportation available, but approximately 754 residents did not.

ENVIRONMENTAL

Ground-Level Ozone

Ozone occurs naturally in the sky and helps protect us from the sun's harmful rays. But ground-level ozone can be bad for your health and the environment. Ground-level ozone is one of the biggest parts of smog. When ozone levels are above the national standard, everyone should try to limit their contact with it by reducing the amount of time spent outside. Montgomery County residents were exposed to unhealthy levels of ozone for zero days in 2014.

Particulate Matter

Air pollution is a leading environmental threat to human health. Particles in the air like dust, dirt, soot, and smoke are one kind of air pollution called particulate matter. Fine particulate matter, or PM2.5, is so small that it cannot be seen in the air. Breathing in PM2.5 may lead to breathing problems, make asthma symptoms or some heart conditions worse, and lead to low birth weight. The national standard for annual PM2.5 levels is 12.0 micrograms per cubic meter. When PM2.5 levels are above 12, air quality is more likely to affect your health. In 2014, the annual level of PM2.5 in Montgomery County was 12.0 micrograms per cubic meter.

Drinking Water Safety

In 2014, none of Montgomery County residents were potentially exposed to unsafe drinking water. This is in contrast to the 2017 report of drinking water violations in the county reported by County Health Rankings. In 2017, Montgomery County did not have any reported drinking water violations.

Table 1.7: Environmental Health Indicators

Indicator	Description	Source	Measurement Period	Montgomery County	Indiana
Air Pollution – Particulate Matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	Environmental Public Health Tracking System	2012	12.0	11.1
Drinking Water Violations	Indicator of the presence of health-related drinking water violations measured by a yes/no variable	County Health Rankings and Roadmaps	2017	None	N/A

Childhood Lead Poisoning

In 2015, the CDC released Indiana State Surveillance System data indicating that there were seven elevated lead blood tests found in the children tested for lead poisoning. Within Montgomery County, lead poisoning was not as serious of a threat to health as it was to other counties in the state.

HOUSING

Homeownership

Homeownership rates are defined by the amount of available housing units currently occupied by a homeowner. From 2012-2016, 71.6% of housing units in Montgomery County were occupied by a homeowner.

Renter's Spending 30% or more of household income on rent

From 2012-2016, 16.8% of Montgomery County residents, or approximately 1,232 people, spent 30% or more of their household income on monthly rent payments.

Severe housing problems

In the state of Indiana, an average of 14% of residents are affected by "severe housing problems." This measure is the percentage of households dealing with one of four problems: lack of complete kitchen facilities, lack of plumbing facilities, severe overcrowding, or a high cost burden. In Montgomery County, 12% of residents had a severe housing problem.

Subsidized housing

There are currently four properties that are recognized by the U.S. Department of Housing and Urban Development. One of these properties are available only to elderly residents of Montgomery County and three are available for families. The largest number of available bedrooms is three, and the smallest is two. Two of the properties are located in Crawfordsville, Indiana, one is located in Darlington, and one is located in Linden.

HEALTH ACCESS

Hospitals

There is one hospital located in Montgomery County, Franciscan Health Crawfordsville. This hospital is located at 1710 Lafayette Rd., Crawfordsville, IN, 47933.

Medically Underserved Areas

According to the Health Resources and Services Administration, "medically underserved areas/populations are areas or populations [are defined as] having too few primary care providers, high infant mortality, high poverty or a high elderly population." In Montgomery County, there are currently two medically underserved areas recognized.

Health Professions Shortage Areas

According to the Health Resources and Services Administration, "Health Professional Shortage Areas (HPSAs) are designated by HRSA as having shortages of primary care, dental care, or mental health providers and may be geographic (a county or service area), population (e.g., low income or Medicaid eligible) or facilities (e.g., federally qualified health centers, or state or federal prisons)."

Montgomery County currently has two health professional shortage areas: mental health and primary care. The need for primary care physicians is most pressing for those who are designated low-income.

HEALTH PROFILE

Franciscan HEALTH

SECTION 2

community HEALTH NEEDS ASSESSMENT

Section Two reviews social determinants of health that contribute to the community's ability to engage in healthy behaviors and achieve the best quality of life possible. From safe sleep practices to engaging in preventative screenings, these indicators provide an overview of opportunities for improvement.

Breastfeeding

In 2015, 67.7% of mothers received early prenatal care during their pregnancy. There has been a 2.5% increase among mothers receiving prenatal care since 2011. The smoking rate among expecting mothers has decreased by 3.9% since 2011. According to the CDC, tobacco use during pregnancy is linked to increased miscarriage, premature birth, low birthweight, SIDS, and birth defects (2017). Nearly 22% of mothers smoked during pregnancy in Montgomery County in 2015. Also in 2015, 78.4% of Montgomery County mothers breastfed their children. Since 2011, the population of mothers who breastfed had increased nearly 9% in the county. While this indicator is not a social determinant in the strictest sense, these indicators help readers understand some of the first challenges babies and mothers face.

MATERNAL CHILD HEALTH

Table 2.0: Montgomery County Prenatal Care Practices, 2011-2015

Indicator	2011	2012	2013	2014	2015	2011-2015 Combined
# Early Prenatal Care	302	345	321	302	320	1590
% Early Prenatal Care	65.2%	71.1%	69.3%	70.2%	67.7%	68.7%
State Percent	***68.1%***	***68.4%***	***67.4%***	***67.5%***	***69.3%***	***68.1%***
# Smoked	118	129	110	106	102	565
% Smoked During Pregnancy	25.5%	26.6%	23.8%	24.7%	21.6%	24.4%
State Percent	***68.1%***	***68.4%***	***67.4%***	***67.5%***	***69.3%***	***68.1%***
# Unmarried Mothers	188	211	207	190	230	1026
% Unmarried Mothers	40.6%	43.5%	44.7%	44.2%	48.6%	44.3%
State Percent	***42.7%***	***43.2%***	***43.3%***	***43.3%***	***43.3%***	***43.2%***
# Breastfeeding	320	349	340	315	371	1695
% Breastfeeding Mothers	69.1%	72.0%	73.4%	73.3%	78.4%	73.2%
State Percent	***74.0%***	***75.6%***	***77.3%***	***79.3%***	***80.5%***	***77.4%***
# Mothers on Medicaid	231	213	200	211	222	1077
% Mothers on Medicaid	49.9%	43.9%	43.2%	49.1%	46.9%	46.5%
State Percent	***45.6%***	***44.9%***	***44.1%***	***43.7%***	***43.0%***	***44.3%***
# Teen Births 15-17	16	18	15	8	16	73
Population	844	788	758	736	764	3890
Teen Birth Rate (15-17)	19.0	22.8	19.8	10.9	20.9	18.8
State Rate	***16.0***	***15.5***	***13.6***	***11.9***	***11.1***	***13.6***
# Teen Births 15-19	56	50	50	41	55	252
Population	1296	1232	1195	1111	1146	5980
Teen Birth Rate 15-19	43.2	40.6	41.8	36.9	48.0	42.1
State Rate	***34.8***	***33.0***	***30.3***	***28.0***	***26.0***	***30.4***

Safe Sleep

The Indiana State Department of Health and Department of Child Services have collaborated with agencies throughout Indiana to provide safe sleep education and "Infant Survival Kits" for families in Montgomery County that do not have a designated safe space for their infant to sleep. The kit includes portable crib, fitted sheet with a safe sleep message on it, wearable blanket, pacifier, and recommendations for safe sleep (ISDH &Department of Child Services, 2017). Montgomery County is in Region 9, shown on the accompanying map.

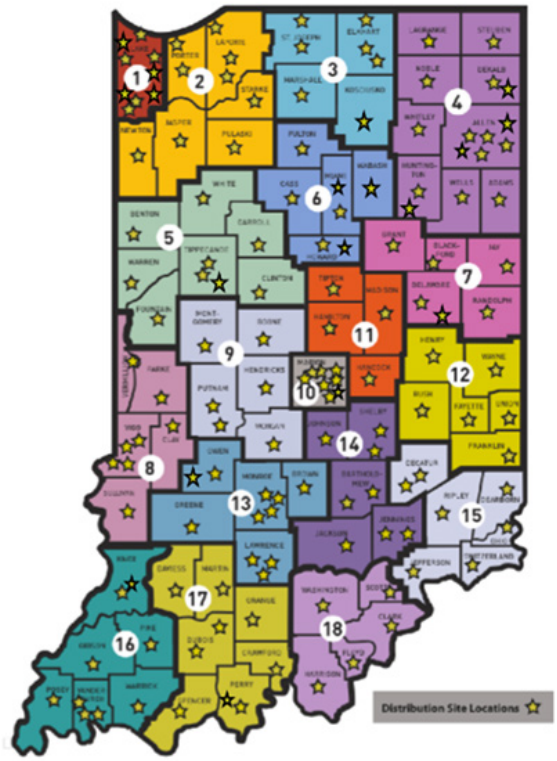


Figure 2.0: ISDH Safe Sleep Regions

Childcare Services

This indicator shows the percentage of total consumer expenditures spent on all childcare. This includes child care, day care, nursery school, preschool, babysitting, and non-institutional day care. Childcare is a major expense for families with young children. Access to affordable and high quality childcare is essential for parents to be able to provide sufficient income for their family while ensuring all of their children's social and educational needs are met. In Montgomery County, 0.59% of consumer expenditures went towards childcare. This is lower than the Indiana and U.S. values, and lower than previous values when measured. In 2016, there was one licensed child care option in Montgomery County, Crawfordsville Head Start located on Industrial Boulevard.

Table 2.1: Childcare Facilities in Montgomery County

Child Care Facility Type (2016)	Number of Facilities
# of Licensed Child Care Centers	1
# of Licensed Child Care Homes	0

FOOD SECURITY

Food insecurity is measured by the percentage of people in a county who did not have access to a reliable source of food during the past year. Lacking constant access to food is related to negative health outcomes such as weight-gain and premature mortality. In addition to asking about having a constant food supply in the past year, the measure also addresses the ability of individuals and families to provide balanced meals further addressing barriers to healthy eating. The consumption of fruits and vegetables is important but it may be equally important to have adequate access to a constant food supply. 14% of Montgomery County was considered food insecure in 2014.

Food Environment Index

The Food Environment Index ranges from 0 (worst) to 10 (best) and equally weights two indicators of the food environment: 1) Limited access to healthy foods estimates the percentage of the population that is low income and does not live close to a grocery store. Living close to a grocery store is defined differently in rural and nonrural areas; in rural areas, it means living less than 10 miles from a grocery store whereas in nonrural areas, it means less than 1 mile. "Low income" is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size. 2) Food insecurity estimates the percentage of the population who did not have access to a reliable source of food during the past year. A two-stage fixed effects model was created using information from the Community Population Survey, Bureau of Labor Statistics, and American Community Survey. There are many facets to a healthy food environment, such as the cost, distance, and availability of healthy food options. This measure includes access to healthy foods by considering the distance an individual lives from a grocery store or supermarket; there is strong evidence that food deserts are correlated with high prevalence of overweight, obesity, and premature death. Supermarkets traditionally provide healthier options than convenience stores or smaller grocery stores.

Additionally, access in regards to a constant source of healthy food due to low income can be another barrier to healthy food access. Food insecurity, the other food environment measure included in the index, attempts to capture the access issue by understanding the barrier of cost. A lack of constant access to food is related to negative health outcomes such as weight-gain and premature mortality. In addition to asking about having a constant food supply in the past year, the module also addresses the ability of individuals and families to provide balanced meals further addressing barriers to healthy eating. It is important to have adequate access to a constant food supply, but it may be equally important to have nutritious food available. In Montgomery County, 4% of residents had limited access to healthy food. 14% of residents were considered food insecure. The overall food environment index for the county was 7.7.

Table 2.2: Montogmery County Food Index

Indicator	Description	Source	Measurement Period	Montgomery County
Food Environment Index	Percentage of the population that is low-income and has low access to a grocery store, *and* the percentage of the population that did not have access to a reliable source of food during the past year (food insecurity). Rated on a scale from 0 (worst) to 10 (best)	County Health Rankings	2010 & 2014	7.7
Food Insecurity	Percentage of population who lacks adequate access to food.	County Health Rankings	2014	14%
Child Food Insecurity Rate	Percentage of children in a county who are considered food insecure	Feeding America	2016	17.7%
SNAP-authorized Stores	Number of stores in a county authorized to accept and use SNAP benefits.	USDA- Food Environment Atlas	2014	37.42
Grocery Store Density	Number of grocery stores in a county	USDA – Food Environment Atlas	2014	8
Farmers Market Density	Number of farmers markets in a county	USDA – Food Environment Atlas	2016	1

Child Food Insecurity Rate

Feeding America is the largest domestic hunger-relief organization in the United States. According to the 2017 "Map the Meal Gap," the food insecurity rate was 11.8%, and the estimated number of food insecure individuals was roughly 8,819. The food insecurity rate among children in Montgomery County was 17.7% in 2016.

According to the National Center for Education Statistics, 41.3% of children in Indiana were eligible for free and reduced lunch, while 65% were eligible within Montgomery County (2014-2015).

PHYSICAL ACTIVITY

High Schoolers Physically Active

In 2015, the USDA reported that 25.3% of high schoolers were physically active in the state of Indiana. No county specific county-level data was available.

Physical Inactivity

Adult physical inactivity is another valuable health indicator that represents the percent of adults 20 years and older who answered "no" to the following question: "During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?" (Indiana Indicators, 2017). According to County Health Rankings, 26% of adults ages 20 or older in Montgomery County were identified as physically inactive, which is equal to the state rate (2017). At this time, Healthy People 2020 has not established a goal for this indicator. Regular physical activity is an important component of maintaining a healthy lifestyle, improving overall quality of life, and reduces risk of chronic health conditions.

Access to Exercise Opportunities

Access to Exercise Opportunities measures the percentage of individuals in a county who live reasonably close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities. Individuals are considered to have access to exercise opportunities if they:

- reside in a census block that is within a half mile of a park, or
- reside in an urban census block that is within one mile of a recreational facility, or
- reside in a rural census block that is within three miles of a recreational facility.

The numerator is the number of individuals who live in census blocks meeting at least one of the above criteria. The denominator is the total county population. Parks included in the Access to Exercise Opportunities measure include local, state, and national parks. Recreational facilities included in the Access to Exercise Opportunities measure are businesses including gyms, community centers, YMCAs, dance studios and pools.

In Montgomery County, 64% of residents had access to exercise opportunities. The average in Indiana was 75%, with a range of 12% to 92%.

Recreation and Fitness Facilities

Fitness and recreation centers are defined as "establishments primarily engaged in operating fitness and recreational sports facilities featuring exercise and other active physical fitness conditioning or recreational sports activities, such as swimming, skating, or racquet sports." In 2014, it was reported that there was one recreation and fitness facility to serve all of Montgomery County.

SLEEP HEALTH

Insufficient Sleep (county-level)

Insufficient sleep measures are calculated by measuring the percentage of adults who report getting fewer than 7 hours of sleep on average. In 2014, 35% of adults reported this. The state average was 38%.

Proportion of High School Students Who Get Sufficient Sleep

Healthy People 2020 identified sufficient sleep as one of the target health goals for students across the nation. "Sufficient sleep" is defined as eight or more hours of sleep in a single night.

In 2015, it was reported by the Youth Risk Behavior Surveillance System that only 21.4% of Indiana students surveyed identified getting a sufficient amount of sleep.

Proportion of Adults Who Get Sufficient Sleep

In 2015, it was reported by the National Health Interview Survey results that approximately 61.5% of adults in Indiana surveyed identified getting a sufficient amount of sleep.

IMMUNIZATIONS

The table provided gives a comparative view of the rates of immunizations in Indiana and Montgomery County (when county-level data was available).

Table 2.3: Immunization Profile Montgomery County

Indicator	Description	Source	Measurement Period	Montgomery County	Indiana	HP 2020 Goal
Recommended Infant Immunizations	This measure represents the percent of fully immunized and recorded in Indiana's immunization registry (CHIRP).	ISDH, Epidemiology Resource Center, Surveillance and Investigation Division	2015	69.0%	56.0%	80%
Flu Shot Vaccinations	Percentage of noninstitutionalized adults, 18 and older, who have received a flu shot in the past year.	ISDH & CDC, Behavioral Risk Factor Surveillance System	2006-2010	N/A	43.6%	70.0%
Pneumonia Vaccinations	Percentage of adults, aged 65 and older, who have ever received a pneumonia vaccination.	ISDH & CDC and Prevention, Behavioral Risk Factor Surveillance System	2006-2010	N/A	73.3%	90%
HPV Vaccinations	Percentage among adolescents 13-17 years with the vaccine as reported by NIS-Teen in 2016	TeenVaxView	2016	N/A	45.2%	80.0%

SCREENINGS

Health screenings are an important part of public health because they allow for early detection and treatment of various health conditions. 88% of Montgomery County diabetic Medicare enrollees received routine monitoring in 2014 and 66.2% of Montgomery County female Medicare enrollees received a mammogram in 2014.

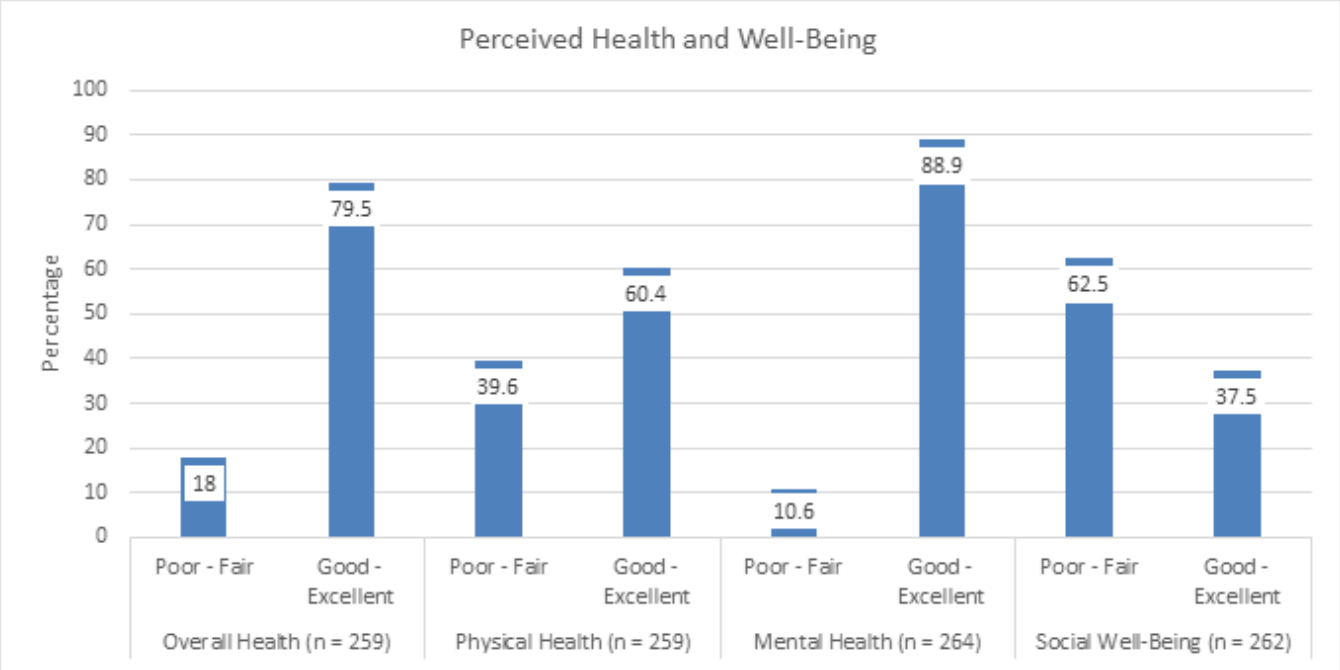
Table 2.4: Montgomery County Health Screening Statistics

Indicator	Description	Source	Measurement Period	Montgomery County	Indiana
Diabetes Monitoring	Percentage of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring.	Dartmouth Atlas of Healthcare	2014	88%	85%
Mammography Screening	Percentage of female Medicare enrollees ages 67-69 that receive mammography screening.	Dartmouth Atlas of Healthcare	2014	66.2%	62%
Pap Screening	Percentage of women ages 18 and older who reported having a pap smear during the previous 2 years.	ISDH & Behavioral Risk Factor Surveillance System	2010	N/A	94.6%
Colorectal Cancer Screening	Percentage of adults ages 50 and older who have ever had a sigmoidoscopy or colonoscopy.	ISDH & Behavioral Risk Factor Surveillance System	2010	N/A	54.7%

In the survey conducted for this report, the following information was reported. The convenience sample data reported included responses from targeted vulnerable populations within the community. Please consult the Appendix for the full survey report.

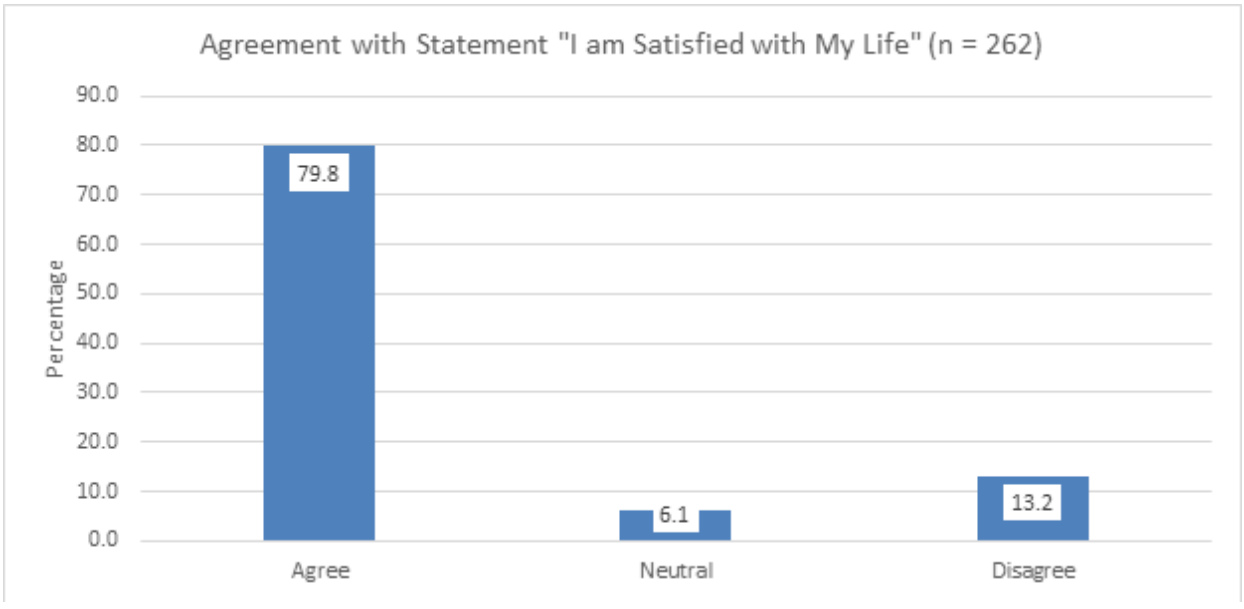
PARTICIPANTS PERCEPTION OF HEALTH AND WELL-BEING

Figure 2.1: Participants' Perception of Health and Well-Being, Montgomery County



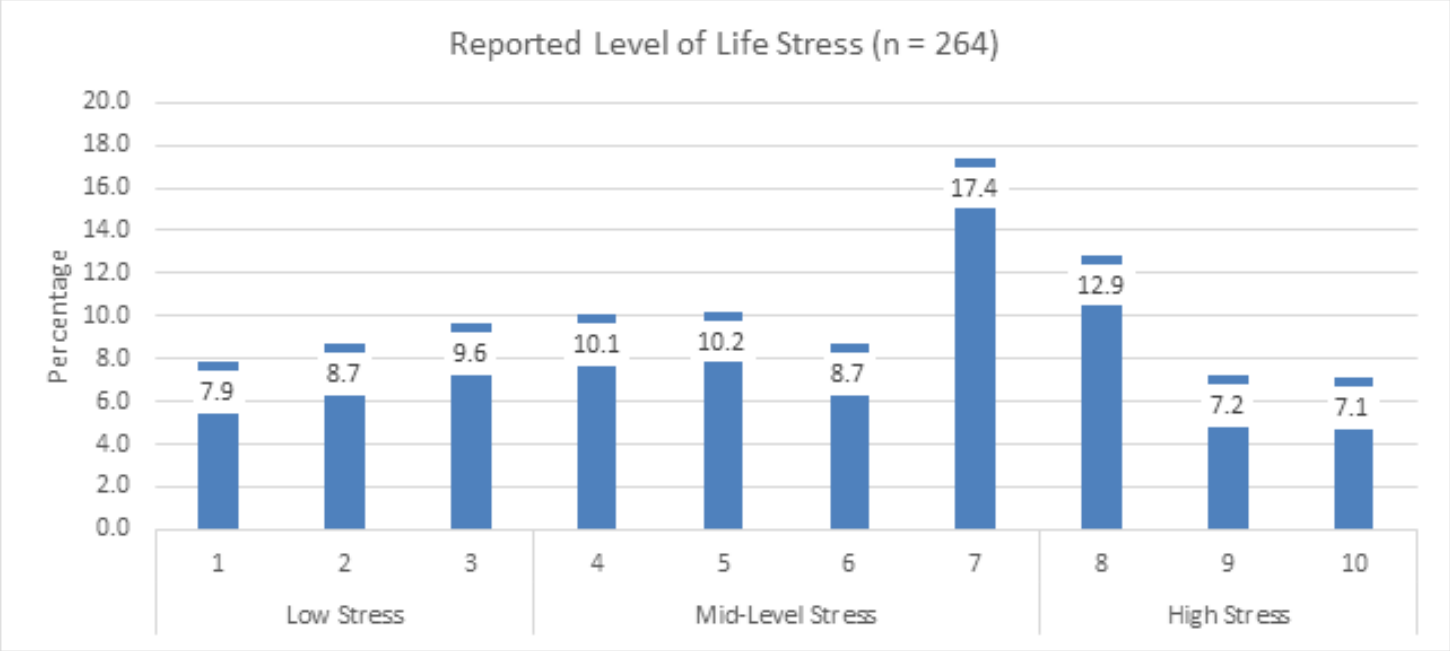
Participants were asked to respond to a single question that asked them to respond to the statement "overall I am satisfied with my life" with five response options ranging from strongly disagree to strongly agree. The majority of participants agreed with the statement, with 46.8% (n = 124) responding "strongly agree" and 33.0% (n = 87) responding "somewhat agree." Some participants (6.1%, n = 16) responded "neutral." Those indicating less overall life satisfaction responded with "somewhat disagree" (9.1%, n = 24) or "strongly disagree" (4.1%, n = 11).

Figure 2.2: Participants Agreement with Life Satisfaction



Level of Stress. Participants were asked to rank their current level of life stress by responding to a single item "Please rank yourself on a scale of 1 to 10 where 1 means you have "little or no stress" and 10 means you have "a great deal of stress." Sone participants (27.2%, n = 72) responded with scores in in the top third of possible responses (eight or higher) indicating that a relatively significant proportion of the participants identify with what would be considered an elevated (or greater) level of stress.

Figure 2.3: Ranking of Level of Life Stress



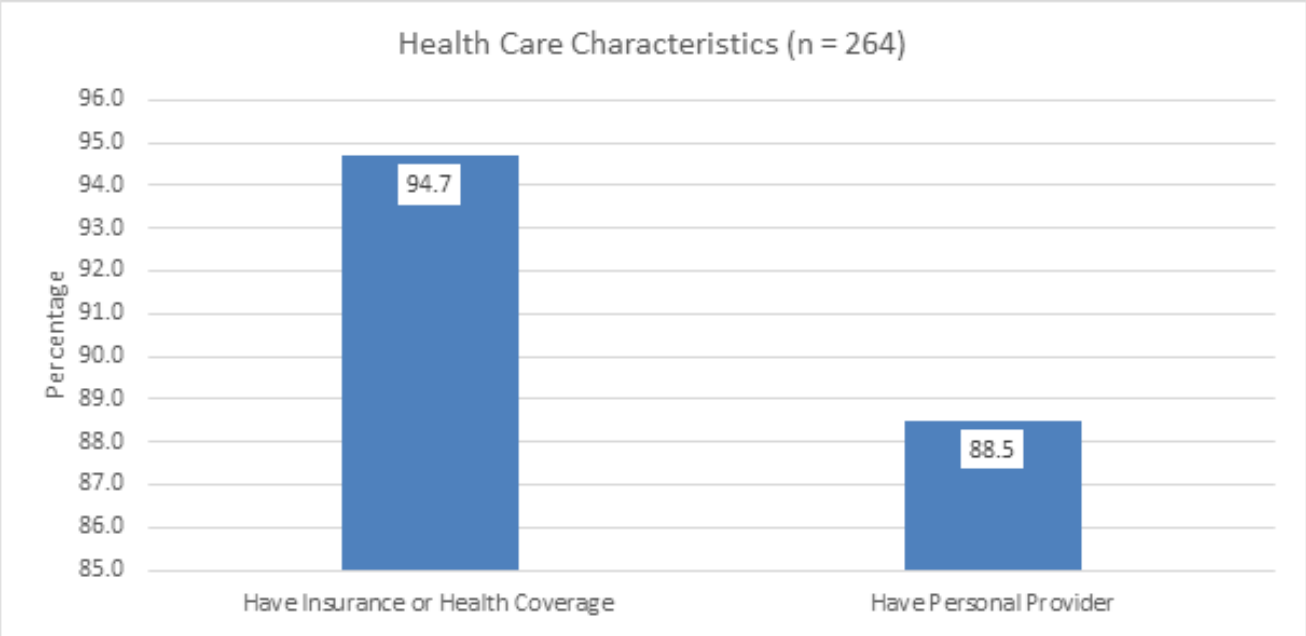
HEALTHCARE ACCESS AND ENGAGEMENT

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

Insurance or Healthcare Coverage. Participants were asked "do you currently have insurance or coverage that helps with your healthcare costs?" Of the participants, the vast majority (94.7%, n = 251) reported that they did have such coverage or insurance, while 5.1% (n = 13) responded "no."

Current Personal Provider. Participants were asked "do you currently have someone that you think of as your personal doctor or personal healthcare provider?" Most participants indicated that they did have such a personal provider (88.5%, n = 235), while 7.8% (n = 21) responded "no" and four participants (1.6%) indicated that they were "unsure" as to whether they had such a personal provider.

Figure 2.4: Participants' Reported Insurance and Personal Provider Characteristics



Healthcare Engagement. Participants were provided with a list of 14 health-related services and types of healthcare engagement and asked whether they had received or utilized each of those within the past 12 months.

Table 2.5: Participants' Reported Types of Healthcare Engagement* (n=264)

Type of Healthcare Engagement	Received Past 12 Months (%)	Did Not Receive Past 12 Months (%)
Filled a Prescription	74.2	25.8
Received a Routine Physical Exam	56.0	44.0
Received Dental Care	54.2	45.8
Received Immunizations or other Preventive Care	36.9	63.1
Received Acute Care, Like for an Infection or Injury	29.8	70.2
Received Care for a Chronic Disease	23.8	76.2
Received Care at a Hospital Emergency Room	21.2	78.8
Received Care at an Urgent Care Facility	14.1	85.9
Received a Screening for Anxiety or Depression by a Medical Provider	8.9	91.1
Received Inpatient Care at a Hospital	9.9	90.1
Received Treatment for a Mental Health Diagnosis	9.8	90.2
Received Prenatal or Well-Baby Care	1.4	98.6
Received Care Related to Family Planning	3.1	96.9
Received Treatment for Addiction	0.0	100.0

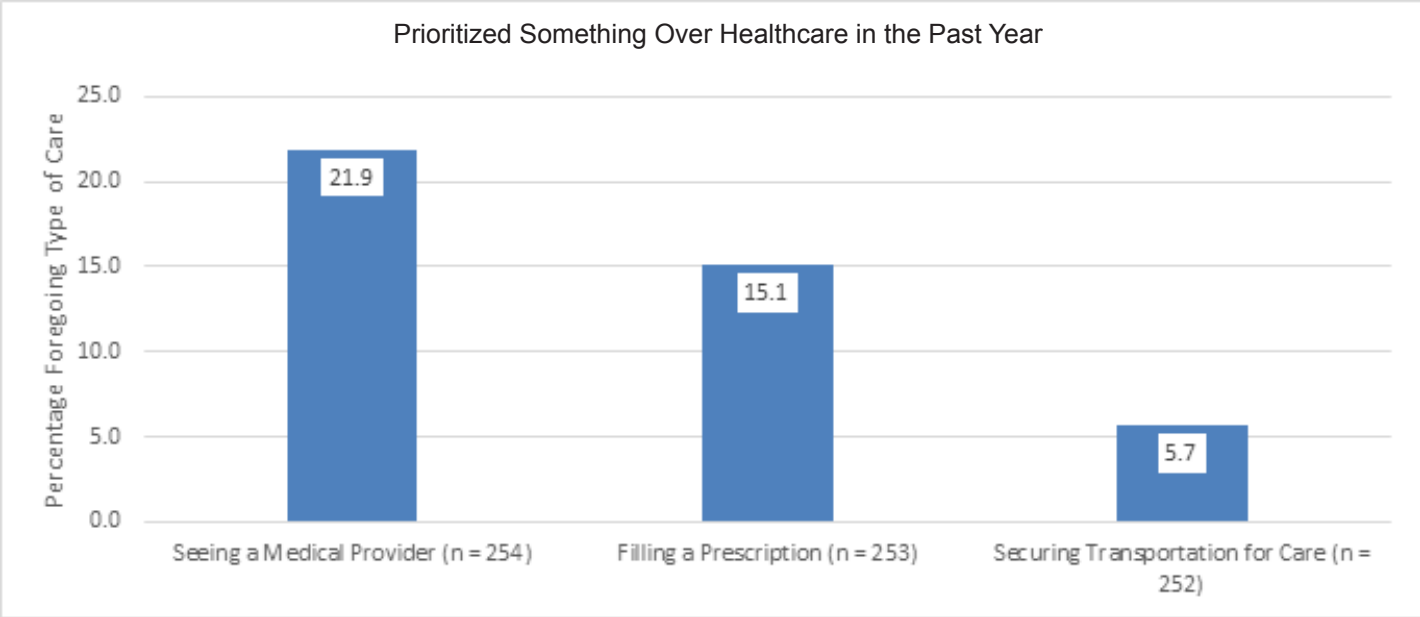
Resources and Healthcare Engagement. Participants were provided a list of three types of healthcare engagement needs including seeing a provider, filling a prescription and finding transportation for care. Participants were asked to indicate whether there had been a time within the past 12 months that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

Regarding seeing a medical provider, 21.9% of participants (n = 58) indicated that they had a need to see a provider but did not due to other needs.

Regarding needing to fill a prescription, 15.1%, (n = 40) indicated that that they had a need to avoid filling a prescription due to other needs.

Regarding needing transportation for healthcare, only 5.7% of participants (n = 15) indicated that they had not been able to access transportation due to other needs.

Figure 2.6: Participants' Reports of Resource Challenges and Healthcare



PERSONAL HEALTH-RELATED BEHAVIORS

The hospital was interested in a general understanding of the extent to which participants had participated in certain behaviors within the past 30 days. Of particular interest were behaviors that were conceptualized as health-promoting (e.g., behaviors perceived by the hospital to be supportive of ones' health and well-being) or health-challenging (e.g., behaviors perceived by the hospital to be challenging to ones' health and well-being). Table 2.7 provides a summary of this data.

Table 2.7: Self-Reported Health Behaviors (n=264)

Health Promoting Behaviors	% Reporting Behavior
Being Physically Active	47.4
Getting Plenty of Sleep	57.7
Eating Balanced Diet	47.4
Checked Blood Pressure	37.7
Tried to Reduce Stress	22.6
Took Prescription for Mental Health	15.3
Health Challenging Behaviors	**% Reporting Behavior**
Used Tobacco	11.7
Took Opioid Prescribed to Me	7.3
Driving Intoxicated	1.2
Took Opioid Not Prescribed to Me	0.0

SOCIAL DETERMINANTS OF HEALTH

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

The purpose of those items was to assess the extent to which participants "felt" specific charateristics of social factors known to influence health outcomes. To assess these, some items were worded positively. For example, "I feel safe in the place where I live," is a positively worded item and those who reported "never" or "seldom" to that item are among those who have identified a social factor that could be acted upon in the health and social services infastructure to work with an individual who has concerns about his or her housing situation. Negatively worded items like, "I worry about being able to pay my rent or mortgage," are considered at the other end of the response options with those responding "sometimes," "often" or "always" being among those who might benefit from economic or employment assitance in ways to reduce the impact on health. Table 2.8 provides a summary of this data.

Table 2.8: Participants' Reports of Felt Social Determinants

Social Determinant	Item Assessed	Total Sample Responses
Positively Worded Social Determinant Items		**Percent Reporting "Never" or "Seldom" Applies to Me**
Social Ecology (n = 261)	I feel those around me are healthy	6.1
Education (n = 261)	I am satisfied with my education	12.5
Community Cohesion (n = 257)	I make efforts to get involved in my community	29.5
Policy (n = 263)	I vote when there is an election in my town	21.0
Environment (n = 261)	I feel that my town's environment is healthy (air, water, etc)	10.5
Housing (n = 256)	I feel safe in the place where I live	0.7
Psychosocial (n = 255)	I try to spend time with others outside of work	13.9
Transportation (n = 264)	I have access to safe and reliable transportation	0.5
Negatively Worded Social Determinant Items		**Percent Reporting "Sometimes," "Often" or "Always" Applies to Me**
Economy (n = 262)	I worry about my utilities being turned off for non-payment	8.4
Employment (n = 264)	I worry about being able to pay my rent or mortgage	14.2

HEALTH OUTCOMES

Franciscan HEALTH

SECTION 3

community HEALTH NEEDS ASSESSMENT

The previous sections highlighted the environment and factors that contribute to health. Those factors, along with genetics, personal choice, and access to health services, lead to various health outcomes. This section reviews major health issues faced by residents.

ACCIDENTS, INJURIES, AND HOMICIDES

Unintentional injury and accidents continue to rank in the top 15 leading causes of injury or death, across the state and within the county. County and state data regarding injury prevention and safety indicators are shown below.

Table 3.0: Alcohol & Driving-Related Indicators

Indicator	Description	Source	Measurement Period	Montgomery County	Indiana
Driving Under the Influence of Alcohol Arrest Rate	Persons arrested for driving under the influence (DUI) of alcohol per 1,000 population.	Health Communities Institute	2012	N/A	3.6
Traffic Injury Mortality	Number of road traffic fatal injury deaths per 100 000 population (age-standardized).	Civil registration and vital statistics systems with full coverage	2015	0.0	12.4
Alcohol-Impaired Driving Deaths	Percentage of motor vehicle crash deaths with alcohol involvement.	County Health Rankings	2011-2015	18%	24%

Table 3.1: Unitentional Injury Indicators

Indicator	Description	Source	Measurement Period	Montgomery County	Indiana	Healthy People 2020 Goal
Unintentional Injury Mortality	Unintentional injury mortality is represented by the number of deaths per 100,000 people.	ISDH	2014	65.8	51.4	36.4
Unintentional Poisoning Mortality	Unintentional poisoning mortality is represented by the number of deaths per 100,000 people.	ISDH	2014	38.5	22.1	11.1
Injury ED Visits	This measure represents the number of injury-related emergency department encounters among Indiana residents per 100,000 people.	ISDH, Epidemiology Resource Center and Injury Prevention and Trauma Program	2014	1014.1	874.2	7,533.4
Injury Hospitalization	This measure represents the number of injury-related hospital admissions among Indiana residents per 100,000 people.	ISDH, Epidemiology Resource Center and Injury Prevention and Trauma Program	2014	73.9	71.0	555.8
Homicide Mortality	Homicide mortality is represented by the number of deaths per 100,000 people.	ISDH	2015	0.0	7.6	0.0

BEHAVIORAL HEALTH

Quality of Life Indicators

Mentally Unhealthy Days
According to County Health Rankings, Poor Mental Health Days measures the average number of mentally unhealthy days reported in past 30 days. This measure is based on responses to the Behavioral Risk Factor Surveillance System (BRFSS) question: "Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" Montgomery County's value of 3.9 was the average number of days a county's adult respondents report that their mental health was not good (2016).

Table 3.2: Montgomery County Mental Health Profile

Indicators	Days or Percentage	Error Margin
Mentally Unhealthy Days	3.9	3.9-4.2
Frequent Mental Distress	11%	12-13%

Physically Unhealthy Days
Physically unhealthy days are determined by the average number of days reported over the course of one month. In Montgomery County, the average was 3.8 days per every 30 days.

Disconnected Youth
The amount of disconnected youth is measured by the percentage of teens and young adults (ages 16-24) who are neither working nor in school. The average in the entire state of Indiana was 14%, while the Montgomery County rate is 19%.

Substance Abuse/Recovery
Excessive Drinking measures the percentage of a county's adult population that reports binge or heavy drinking in the past 30 days. Binge drinking is defined as a woman consuming more than four alcoholic drinks during a single occasion or a man consuming more than five alcoholic drinks during a single occasion. Heavy drinking is defined as a woman drinking more than one drink on average per day or a man drinking more than two drinks on average per day. The numerator is the sum of binge and/or heavy drinking while the denominator is the total county population. In Montgomery County, 17% of surveyed adults reported excessive drinking in the past 30 days.

Suicide
This measure is determined by averaging the percent change of the age-adjusted death rate per 100,000 people each year. The average amount of suicide deaths per 100,000 in Montgomery County was 0.0. For the entire state of Indiana, the average was 15.4.

Infectious Disease Rates

Hepatitis C, Acute Incidence Rate

The incidence rate of acute Hepatitis C in Montgomery County was 5.2 incidents of acute Hepatitis C between the years of 2011 and 2015.

Hepatitis C Virus Infections

Chronic Hepatitis C occurs when a person is not able to clear the virus after infection. From 2011 to 2015, the overall rate of chronic hepatitis C virus infections increased from 84.2 cases to 105.8 cases on average. During that time, the incidence rate in Montgomery County fluctuated from 127.5 to 91.6.

Newly Diagnosed HIV/AIDS

The Human Immunodeficiency Virus (HIV) is transmitted by an HIV-infected person having unprotected sex or by sharing needles, syringes, and other injection equipment. Sharing injecting equipment is considered high risk for transmitting HIV because the drug materials may have blood in them, which can carry HIV. Use of drugs can reduce inhibitions and increase sexual risk behaviors, which may result in chlamydia, gonorrhea, or other STDs. There is no cure for HIV, but treatment with antiviral therapy greatly extends the life expectancy of people living with HIV. From 2011 to 2015, the rate of newly diagnosed cases of HIV/AIDS in Montgomery County was 3.1. Overall in the state of Indiana, there was a 3.4% annual increase in newly diagnoses cases throughout that time period.

HIV/AIDS Prevalence

Because of better treatment, more people than ever are living with HIV in the U.S. While HIV prevalence in the U.S is still increasing, the incidence rate of annual new HIV/AIDS infections have remained relatively stable over the past few years. In 2015, there were approximately 68 residents living with HIV/AIDS in Montgomery County.

Chlamydia

Chlamydia is a sexually transmitted infection that infects both men and women. In the event that chlamydia is left undetected and untreated, women are especially at risk because it can result in serious reproductive health complications (CDC, 2017). In 2017, the incidence rate of Chlamydia was 434 in Indiana. Incidence is a measure of the new cases of a disease (Chlamydia) during a specific period of time (2017) (Indicators, 2015). Between 2011 and 2015, the incidence rate per 100,000 was 303.3 in Montgomery County.

Gonorrhea

Gonorrhea is a sexually transmitted infection that can infect both men and women. Young adults, ages 15-24, are most at-risk for contracting gonorrhea. However, permitting early detection, it can be easily treated (CDC, 2017). There was an average of a 3% increase of Gonorrhea cases annually in Indiana. The incidence rate of Gonorrhea in Montgomery County was 48.6 between the years 2011 to 2015

Intestinal Disease Infections
From 2012-2016, the average number of enteric intestinal disease infections was 20.8 per 100,000.

Table 3.3: Montgomery County Infectious Diseases

Disease	Description	Source	Measurement Period	Montgomery County	Indiana
Hepatitis C, Acute	This measure represents the rate of infection per 100,000.	ISDH, Epidemiology Resource Center	2011-2015	5.2	2.1
Hepatitis C, Chronic	This measure represents the rate of chronic hepatitis.	ISDH, Epidemiology Resource Center	2011-2015	91.6	105.8
Newly Diagnosed HIV/AIDS	This measure represents the incidence rate of newly diagnosed HIV/AIDS per 100,000.	ISDH, Epidemiology Resource Center	2011-2015	3.1	9.4
HIV/AIDS Prevalence	This measure represents the number of Hoosiers living with HIV/AIDS.	ISDH, Epidemiology Resource Center	2015	68	11,698
Chlamydia	Rate of infection, cases per 100,000.	ISDH, Epidemiology Resource Center	2011-2015	303.3	436.4
Gonorrhea	Rate of infection, cases per 100,000	ISDH, Epidemiology Resource Center	2014-2015	48.6	118.5
Intestinal Disease Infections	Rate of infection, cases per 100,000	Indiana Indicators, CDC	2012-2016	20.8	41.0

MATERNAL, INFANT AND CHILD HEALTH

Since 2011, the number of live births in Montgomery County has increased. The number of babies born with a low birth weight decreased between 2012 and 2014, but saw an increase from 2014-2015. The number of babies born before 37 weeks gestation in Montgomery County has increased since 2011.

The infant mortality rate in Montgomery County is 4 deaths per 1,000 live births. That number is lower than the state value of 7.2 deaths per 1,000 live births.

Table 3.4: Montgomery County Birth Outcomes Indicators

Indicator	2011	2012	2013	2014	2015	2011-2015 Combined
			Natality			
# of Live Births	463	485	463	430	473	2314
# Low Birth Weight	25	36	32	24	31	148
% Low Birth Weight	5.4%	7.4%	6.9%	5.6%	6.6%	6.4%
State Percent	***8.1%***	***7.9%***	***7.9%***	***7.9%***	***8.0%***	***8.0%***
# Preterm Births	38	45	39	34	45	201
% Preterm Births	8.2%	9.3%	8.4%	7.9%	9.5%	8.7%
State Percent	***10.0%***	***9.6%***	***9.6%***	***9.7%***	***9.6%***	***9.7%***

Preterm births is before 37 weeks gestation
Low birth weights is less than 2,500 grams
Very low birth weights is less than 1,500 grams

The percentage of mothers who smoked during pregnancy in Montgomery County had decreased from approximately 26% in 2011 to 22% in 2015.

Table 3.5: Mothers Who Smoked During Pregnancy

Indicator	2011	2012	2013	2014	2015	2011-2015 Combined
			Natality			
# Smoked	118	129	110	106	102	565
% Smoked	25.5%	26.6%	23.8%	24.7%	21.6%	24.4%
State Percent	***16.6%***	***16.5%***	***15.7%***	***15.1%***	***14.3%***	***15.6%***

Throughout Montgomery County, 21 substantiated and 96 unsubstantiated cases of neglect or abuse were reported in 2017. There was no available data related to child fatalities due to abuse or neglect.

Young Child

Table 3.6: Montgomery County Child in Need of Services (CHINS) Cases

Indicator	Description	2011	2012	2013	2014	2015
Children in need of services	Number of children in the county in need of services related to child abuse and neglect	75	93	82	92	76

Table 3.7: Montgomery County Child Abuse & Neglect Fatalities

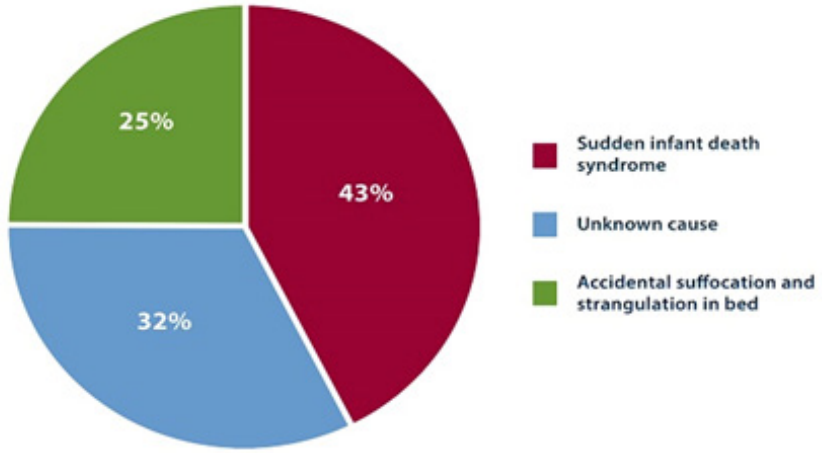
Indicator	Description	Source, Year	Substantiated	%	Unsubstantiated	%
Neglect	Number of reported cases with and without evidence of neglect.	MaGIK, IDCS 2017	21	15.33%	96	70.07%
Sexual Abuse	Number of reported cases with and without evidence of sexual abuse.	MaGIK, IDCS 2017	0	0.00%	6	4.38%
Physical Abuse	Number of reported cases with and without evidence and neglect.	MaGIK, IDCS 2017	1	0.73%	13	9.49%

Sudden Unexpected Infant Death & Sudden Infant Death Syndrome

According to the CDC, sudden unexpected infant deaths (SUIDS) occur among infants less than one year old and have no immediately apparent cause (2017). The three commonly reported types of SUID include the following:

1. Sudden infant death (SIDS)
2. Unknown cause
3. Accidental strangulation or suffocation in bed

Figure 3.0: Commonly Reported SUIDs in Indiana



SOURCE: CDC/NCHS, National Vital Statistics System, Compressed Mortality File.

CHRONIC DISEASES

Chronic diseases are among the most prevalent and costly health issues in Indiana and across the nation. Indiana has significantly inflated rates compared to the nation in regard to a variety of chronic health diseases. Chronic diseases are often easily detected and preventable.

RESPIRATORY DISEASES

Respiratory complications and diseases continue to fill the emergency department in Montgomery County (Indicators, 2015).

Table 3.8: Montgomery County Respiratory Disease Indicators

Indicator	Description	Source	Measurement Period	Montgomery County	Indiana
Pediatric Asthma Counts	This measure represents the estimated number of children with asthma ages 5-17.	American Lung Association	2016-2017	712	128,900
Adult Asthma Counts	This measure represents the number of asthma-related emergency department encounters among Indiana children ages 5 to 17 per 10,000 children.	American Lung Association	2016-2017	2,974	513,100
Age-Adjusted ER Rate Due to Asthma	This measure represents the number of asthma-related hospital admissions among Indiana residents per 10,000 people.	ISDH, Epidemiology Resource Center	2014	N/A	10.5
Chronic Lower Respiratory Disease Mortality	Chronic lower respiratory disease mortality is represented by the number of deaths per 100,000 people.	ISDH, Indiana Indicators	2012-2016	88.6	54.6
COPD	This measure represents the number of individuals with COPD within Montgomery County.	American Lung Association	2016-2017	2,474	407,400
Adults Who Smoke	This measure is the percentage of identified current smokers in Montgomery County.	ISDH, Indiana Indicators	2013-2017	20.1%	21.0%

CANCER

Table 3.9: Cancer Indicators (Rates per 100,000)

Indicator	Montgomery County	Indiana	HP 2020 Goal
Cancer Incidence	426.0	455.0	N. A
Lung	71.9	70.6	N. A
Colorectal	36.2	41.8	39
Female Breast	135.8	119.4	41
Prostate	67.6	89.3	N.A
Cancer Mortality	N/A	N/A	161
Lung	37.1	49.2	46
Colorectal	0.0	14.9	15
Female Breast	0.0	20.7	21
Prostate	0.0	18.8	21

*Measurement period for cancer incidence rates was 2009-2013 and mortality incidence rate data was collected in 2015

CARDIOVASCULAR DISEASE

Major risk factors that people cannot control include age, race, sex, family history, and prior stroke or heart attack (American Heart Association, 2017). After age 55, the risk of suffering from a stroke nearly doubles every decade, thus people 65 ages and older are most at risk. If any immediate family has suffered from a stroke, that significantly increases one's risk of also suffering from a stroke. Race also influences risk. Statistics show that African Americans are at increased risk of stroke, compared to other races or ethnicities. Other statistics include age-adjusted rates for stoke hospitalization and mortality shown below.

Table 3.10: Cardiovascular Indicators

Indicator	Rates per 100,000 Death or Hospital Admission		
	Montgomery County	Indiana	HP 2020 Goal
Stroke Hospitalization	24.4	20.9	N/A
Stroke Mortality	33.1	39.5	34
Heart Disease Hospitalization	90.4	81.5	N/A
Heart Disease Mortality	189.3	180.6	103.4

Table 3.11: Heart Failure Indcations

Indicator	Description	Montgomery County
Acute Myocardial Infarction Hospitalization	Age adjusted rates per 1,000 Medicare Beneficiaries, 65+	10.9
Acute Myocardial Infarction Deaths	Age adjusted rates per 100,000, 35+	84.5
Heart Failure Hospitalizations	Age adjusted rates per 1,000 Medicare Beneficiaries, 65+	40.7
Heart Failure Deaths	Age adjusted rates per 100,000, 35+	276

DIABETES

Obesity

Obesity is a major risk factor of diabetes and cardiovascular disease in general. According to the American Heart Association, people who carry excess weight, especially concentrated around their stomach, are more likely to suffer from heart disease or stroke, even if other risk factors are not present (2016). Major risk factors that people cannot control or change include age, sex, and race. Major risk factors that can be managed or treated include smoking, high blood pressure, high cholesterol, physical inactivity, overweight or obesity, and diabetes.

According to the CDC, 33% of adults, 20 years of age or older, were diagnosed as obese, with a category range of 31.7-33% (2014). In addition, 28.4% of adults, also 20 years of age or older, were physically inactive, with a category range of 27.2-29.1% (CDC, 2014). Childhood obesity has both immediate and long-term health impacts. Children and adolescents who are obese are at greater risk for bone and joint problems, sleep apnea, and are more likely than normal weight peers to be teased and stigmatized which can lead to poor self-esteem. Moreover, obese youth are more likely to have risk factors for cardiovascular disease, such as high cholesterol or high blood pressure. Finally, overweight and obese youth are more likely than normal weight peers to be overweight or obese adults and are therefore at risk for the associated adult health problems, including heart disease, type 2 diabetes, stroke, several types of cancer, and osteoarthritis.

According to CDC, 28.9% of Montgomery County residents aged 20+ were considered obese as of 2014. In 2014, the prevalence of diabetes in Montgomery County was 10.2%. Meaning, 10.2% of the population, ages 20 or older, were medically diagnosed with diabetes.

Table 3.12: Diabetes Indicators

Indicator	Description	Source	Measurement Period	Percentage or Rate	
				Montgomery County	Indiana
Diabetes Prevalence	Percentage of adults aged 20 and older with medically diagnosed diabetes.	CDC Diabetes Data and Statistics	2014	10.2%	10.2%
Adults, aged 20 and older, with Diabetes	Percentage of adults aged 20 and older who have ever been diagnosed with diabetes.	CDC	2013	11.8%	11.1%
Age-Adjusted Hospitalization Rates due to Diabetes	Average annual age-adjusted hospitalization rate due to diabetes per 10,000 population aged 18 years and older, including both type 1 and 2.	Indiana Hospital Association	2014-2016	N/A	20.3
Age-Adjusted Hospitalization Rate due to Short-Term Complications of Diabetes	Age-adjusted hospitalization rate due to short-term complications of diabetes per 10,000 population aged 18 years and older.	Indiana Hospital Association	2014-2016	N/A	9.0
Age-Adjusted Hospitalization Rate due to Long-Term Complications of Diabetes	Age-adjusted hospitalization rate due to short-term complications of diabetes per 10,000 population aged 18 years and older.	Indiana Hospital Association	2014-2016	N/A	9.5

TOP HEALTH NEEDS

Franciscan HEALTH

SECTION 4

community HEALTH NEEDS ASSESSMENT

As in every data collection and analysis processes, there are limits to the data collected. The survey was only available to a randomized sample. If a resident of the county did not receive the survey, they would not have an opportunity to offer input. Focus groups were primarily attended by professionals in the community speaking on behalf of their observations or clientele. Therefore, focus group data may be skewed towards secondary hearsay or from a population health management perspective. Public health data and infrastructure is severely lacking in Indiana, as the state consistently ranks in the bottom two to three states for public health funding, service, and support. Much of the data used is from state and national collections that are only implemented every few years. Data may not reflect the current status of health. Also, as a home rule state, county data isn't always available or reliable. Zip code data rarely is available, except in national databases, such as the US Census Bureau. It is the team's hope that by using the available secondary data with the collected primary data, a relatively accurate picture of community health is presented. In the survey conducted for this report, the following information was reported. The convenience sample data reported include responses from targeted vulnerable populations within the community. Please consult the appendix for the full survey report.

IMPORTANCE OF COMMUNITY-BASED HEALTH AND SOCIAL SERVICE PROGRAMS

Participants were asked to provide their perspectives on the extent to which health and social service programs are important to their local community. During the survey, participants were provided with a list of 20 different programs that are often present in many communities. Participants were inconsistent with regard to the extent to which they provided an assessment of each program type. Results from the participants were used to calculate rankings of program endorsement, although the number of participants responding to the items varied throughout the list. Of the twenty programs, 100% were ranked as being either moderately or very important by approximately, or more than, 50% of participants. While these results do provide some insight into the types of programs perceived as most important in their local community, across the board this data does suggest that in general most community members perceive the general network of health and social service programs to be important as a whole. Table 4.0 provides a list of the extent to which participants rated a program type as "moderately" or "very important. Further highlighted are the items for which there were stronger endorsements in the "very important" category than the "moderately important" category.

Table 4.0: Participants Ratings of the Importance of Community Resources

Community Programs	Moderately/Very Important %	Moderately Important %	Very Important %
Aging Services (n = 257)	92.7	45.5	47.2
Substance Abuse Prevention & Treatment (n = 257)	90.9	19.9	71.0
Physical Activity (n = 259)	90.4	39.1	51.3
Food Pantries (n = 261)	88.6	39.3	49.3
Mental Health Counseling (n = 257)	86.0	44.3	41.7
Walking Trails/Outdoor Space (n = 258)	85.7	39.8	45.9
Services for Women, Infants, Children (n = 258)	84.7	47.9	36.8
Job Training/Employment Assistance (n = 258)	81.4	41.8	39.6
Free/Emergency Childcare (n = 257)	79.2	38.5	40.7
Housing Assistance (n = 255)	79.2	52.5	26.7
Transportation Assistance (n = 258)	78.9	53.0	25.9
Financial Assistance (n = 252)	78.1	54.3	23.8
Health Insurance Assistance (n = 254)	76.9	42.9	34.0
Nutrition Education (n = 258)	76.1	49.2	26.9
Gun Safety Education (n = 259)	74.5	40.0	34.5
Family Planning (n= 253)	71.0	46.3	24.7
Food Stamps/SNAP (n = 259)	70.0	39.0	31.0
Prescription Assistance (n = 246)	68.3	48.1	20.2
Legal Assistance (n = 256)	65.2	48.4	16.8
Needle Exchange (n = 252)	53.8	30.0	23.8

COMMUNITY PERCEPTIONS OF PRIORITY HEALTH NEEDS

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

Accompanying the list of health issues was a statement that guided survey participants in their selection. The statement read "Below is a list of health issues present in many communities. Please pick the five that you think pose the greatest health concern for people living in your community." Table 4.1 provides a summary of the extent to which each health issue was selected as one of the top five issues by survey participants.

Table 4.1: Priority Health Issues Selected by Participants as Being Among the Top 5 Most In Need of Attention (n = 265)

Health Issue	% Selecting Issues As One of Top 5 Needing Attention
Substance use or abuse	77.1
Obesity	57.2
Chronic diseases like diabetes, cancer, and heart disease	43.2
Poverty	37.5
Aging and older adult needs	34.9
Tobacco use	32.3
Child neglect and abuse	31.5
Food access, affordability, and safety	27.0
Alcohol use or abuse	25.9
Mental health	24.9
Disability needs	15.0
Injuries and accidents	11.8
Environmental issues	11.1
Assault, violent crime, and domestic violence	10.5
Dental care	10.0
Suicide	9.0
Homelessness	8.0
Reproductive health and family planning	6.9
Sexual violence, assault, rape, or human trafficking	5.5
Infectious diseases like HIV, STDs, and hepatitis	1.5
Infant mortality	0.2

COMMUNITY PERCEPTIONS OF HEALTH ISSUES NEEDING PRIORITY RESOURCE ALLOCATION

In addition to assessing the extent to which participants perceived specific needs as being among the most important for action in their community, participants were also asked to prioritize for the allocation of resources in the local community. Participants were given a statement to consider prior to indicating their perceptions. The statement read "Previously you were asked to pick issues that pose the greatest health concern in your community. If you had $3 and could give $1 to help solve some of these, which are the three to which you would give $1?" Table 4.2 provides a summary of the extent to which participants selected an issue as one of the top three for the allocation of resources.

Table 4.2: Ranking of Health Issues Selected by Participants as Being Among the Top 3 to Which They Would Allocate Resources (n = 265)

Health Issue	% Selecting as a Top Priority for Resource Allocation
Substance use or abuse	47.8
Obesity	30.6
Mental health	29.9
Chronic diseases like diabetes, cancer, and heart disease	29.8
Food access, affordability, and safety	24.6
Aging and older adult needs	24.0
Child neglect and abuse	23.8
Tobacco use	17.4
Environmental issues	14.1
Disability needs	10.3
Homelessness	8.9
Poverty	8.8
Dental care	6.5
Sexual violence, assault, rape, or human trafficking	4.2
Reproductive health and family planning	4.0
Infant mortality	3.2
Injuries and accidents	2.9
Assault, violent crime, and domestic violence	2.5
Alcohol use or abuse	2.1
Infectious diseases like HIV, STDs, and hepatitis	0.4
Suicide	0.0

FOCUS GROUPS

Crawfordsville Internal Feedback Meeting
September 13, 2018

An internal feedback meeting was held on September 13, 2018, from 10:00 to 11:30 am in Bonzel Hall located at the hospital. This small group did not know about ACEs and its impact on health. However, after a review of an introductory video and discussion, the group agreed it was an important issue to address.

To include more perspectives on ACE related issues, an electronic survey was disseminated to employees. A wide range of coworkers responded and provided feedback after watching an introductory video. Respondents identified that youth living in poverty as a vulnerable population in the community.

Both groups identified the lack of hospital resources related to children and behavioral health was a concern, as well as the stigma of ACEs in the general Crawfordsville Community. The group did feel that there are community partners that could help with the efforts, but that hospital staff need help in finding and accessing those services on behalf of patients.

Crawfordsville Professional Feedback Meeting
September 13, 2018

A professional feedback meeting was held on September 19, 2019, in the Bonzel Conference Room of Franciscan Health Crawfordsville to discuss the community's perspective on community health needs and potential implementation programs. A variety of organizations were represented, including foundations, non-profit service organizations, and schools. A total of 15 people participated in the two hour session.

The group identified many strengths of the Crawfordsville community, including the health department and fire departments, local college, Wellness Coalition, and involved social service agencies. Partnership and collaboration are not difficult and there is a collegial spirit in the community. However, infrastructure for communication and documenting available resources are lacking.

As a rural community, there are some challenges with resources and funding. This includes a lack of affordable, quality child care; limited health care services provided by Franciscan Health and others; and limited availability of behavioral health services. Substance abuse is rising and the community is concerned about the ability to prevent addiction or provide residents with treatment options.

The participants indicated that those in poverty or near the poverty line, middle school youth, and minority populations are the most vulnerable. Participants noted that drugs and alcohol abuse, transportation, food insecurity, and lack of stability in families require more services and interventions than are currently available in the community.

The following tables are a collection of existing resources identified during the professional focus group meetings.

Table 4.3: Montgomery County ACEs Concerns

Crawfordsville	ACE Concerns						
	Abuse & Neglect	**Domestic Violence**	**Behavioral Health**	**Substance Abuse**	**Incarceration**	**Parent Stability**
	Nurse Family Partnership	Crawfordsville Fire Department Project Swaddle	Nurse Family Partnership	MCHD Sharp Disposal	Nurse Family Partnership Goodwill's New Beginnings Program	Nurse Family Partnership
	Montgomery County Youth Service Bureau CASA Program		Crawfordsville District Public Library	Wabash Global Health Intiative Student Interns Working @ Halfway House		Purdue Extension MoCo Strengthening Families
	Montgomery County Youth Service Bureau Child Abuse Prevention Council		Montgomery County Youth Service Bureau	Crawfordsville Fire Department MIH-CP		Montgomery County Youth Service Bureau Mentoring & Strengthening Families
	Crawfordsville Fire Department Project Swaddle		Valley Professionals Community Health Center Behavioral Health/Play Therapy	Montgomery County Youth Service Bureau Teen Court Mentoring		Crawfordsville Fire Department MIH-CP
				Montgomery County Youth Service Bureau Drug Free Mont. County		
				MCHD Overdose Response Team Work		
				Valley Professionals Community Health Center Addictions Program		
				Rockpoint Church Addictions Program Adults		
				Crawfordsville Public Library		

Table 4.4: Montgomery County Organizations Working on Adult Protective Factors

Crawfordsville	Adult Protective Factors			
	Parental Resiliency	**Child Development Education**	**Social Connections**	**Social Competence**
	Crawfordsville Fire Department Project Swaddle	Crawfordsville District Public Library Children's Literacy Programs	Crawfordsville District Public Library	MoCo Youth Service Bureau Teen Court
	Nurse Family Partnership	Nurse Family Partnership	CFD MIH-CP	MoCo Youth Service Bureau Mentoring
	MoCo Youth Service Bureau Strengthening Families/Mentoring Plus		Crawfordsville Parks & Rec Senior Citizen Club	MoCo Youth Service Bureau Alternative School
	Purdue Extensions Strengthing Families		Purdue Extension Master Gardener	MoCo Youth Service Bureau Youth As Resources
			MoCo Youth Service Bureau Various Programming	

Table 4.5: Montgomery County Organizations Working on Child Protective Factors

Crawfordsville	Child Protective Factors			
Target Group	**Positive Relationships**	**Supportive School Environments**	**Peer Activities and Support**	**Individual Values and Life Skills**
Babies & Toddlers	Nurse Family Partnership		MoCo Youth Service Bureau	Nurse Family Partnership
	MoCo Youth Service Bureau			CFD MIH-CP
	CFD MIH-CP			MoCo Youth Service Bureau
Elementary	Purdue Extensions Farm to School	Crawfordsville Schools Health Services Mental Health Support	MoCo Youth Service Bureau	Purdue Extensions Cooking
	Nurse Family Partnership		Purdue Extensions 4H	MoCo Youth Service Bureau
	MoCo Youth Service Bureau		Parks & Rec Youth Sports	Nurse Family Partnership
Middle	Purdue Extensions Farm to School	Crawfordsville Schools Health Services Athenas Girls only	MoCo Youth Service Bureau	MoCo Youth Service Bureau
	Nurse Family Partnership	Crawfordsville Schools Health Services Mental Health Support	Purdue Extensions 4H	Nurse Family Partnership
	MoCo Youth Service Bureau		Liberty Chapel Youth Group	
High School	Purdue Extensions Farm to School	Crawfordsville Schools Health Services Athenas Girls & Boys	MoCo Youth Service Bureau	MoCo Youth Service Bureau
	Nurse Family Partnership	Crawfordsville Schools Health Services Mental Health Support	Purdue Extensions 4H	Nurse Family Partnership
	MoCo Youth Service Bureau	Wabash College Global Health Initiative Student Interns help with Athenas	Liberty Chapel Youth Group	
			Parks & Rec Youth Sports	
College				

Table 4.6: Montgomery County Organizations Working on Social Determinants of Health

Crawfordsville	Social Determinants of Health							
	Food Access	**Housing & Utilities**	**Employment Assistance**	**Transportation**	**Healthcare Access**	**Insurance**	**Positive Behavior Education**	**Other**
	Crawfordsville Schools Health Services Backpack Food Program	Crawfordsville Fire Department MIH-CP	Nurse Family Partnership Goodwill's Talent Source	Crawfordsville Fire Department MIH-CP	Crawfordsville Fire Department MIH-CP	Valley Professionals Community Health Worker Insurance Navigator	Montgomery County Youth Service Bureau Alternative School	Montgomery County Health Department STD Testing
	Montgomery County Free Clinic Backpack Food Program			Crawfordsville Parks & Rec Sunshine Vans	Nurse Family Partnership		Montgomery County Youth Service Bureau Teen Court Mentoring	Montgomery County Health Department Free Vaccinations
	Montgomery County Youth Service Bureau Backpack Food Program			Wabash College Global Health Free transport to free clinic	Valley Professionals Family Medicine		Crawfordsville Fire Department MIH-CP	Crawfordsville District Public Library Internet Access & Access to Other Health Info.
	Crawfordsville Parks & Rec Senior Nutritional Service				Wabash College Global Health Intiative Transport of Patients to Free Clinic		Nurse Family Partnership	Crawfordsville District Public Library Breastfeeding Support Group
							Wabash College Global Health Initiative Student Interns w/ Paramedicine Program	Crawfordsville Fire Department
							Crawfordsville Schools Health Services & Montgomery County Free Clinic Mental Health Services	

Table 4.7: Montgomery County Organizations Working on Healing Trauma

Crawfordsville	Healing Trauma			
	Physical Activity	**Nutrition**	**Stress Reduction**	**Relationship Building**
Target Group			Valley Professionals Play Therapy	Wabash College College Mentors for Kids
Youth	Crawfordsville Parks & Rec Youth Sports	Montgomery County Youth Service Bureau Nourish	Montgomery County Youth Service Bureau Inspire Group Mentoring	Nurse Family Partnership
	Crawfordsville Parks & Rec Community Center	Purdue Extension MoCo Nutrition Ed. For kids	Nurse Family Partnership	MoCo Youth Service Bureau Youth As Resources
	Purdue Extension Wellness Coalition	Nurse Family Partnership	Valley Professionals Behavioral Health	MoCo Youth Service Bureau Jump Mentoring
		MCHD Lead & Healthy Homes		MoCo Youth Service Bureau Teen Court
		Crawfordsville Fire Department MIH-CP		Crawfordsville Fire Department Project Swaddle
Young Adult	Crawfordsville Parks & Rec Youth Sports	Nurse Family Partnership	Valley Professionals Behavioral Health	
	Crawfordsville Parks & Rec Community Center	MCHD Unfit home/Family Edu.	Crawfordsville Public Library	
	Purdue Extension Wellness Coalition	Purdue Extension Nutrition Ed/Food Pantry		
Adult	Crawfordsville Parks & Rec Community Center	Nurse Family Partnership	Valley Professionals Behavioral Health	
	Purdue Extension Wellness Coalition	Valley Professionals Diabetes/Nutritional Ed	Crawfordsville Parks & Rec Yoga/Pilates	
	Crawfordsville High School Water Aerobics Program	Crawfordsville Public Library Monthly Plant-Based Living Support Group	Crawfordsville Public Library	
	Crawfordsville Parks & Rec Fitness Classes	Purdue Extension Nutrition Ed/Food Pantry		
	Purdue Extension Walking Program			
Senior	Crawfordsville Parks & Rec Community Center	Valley Professionals Diabetes/Nutritional Ed	Crawfordsville Parks & Rec Yoga/Pilates	Crawfordsville Parks & Rec Senior Citizens Club
	Purdue Extension Wellness Coalition	Crawfordsville Parks and Rec Midland Meals/Nutritional Ed	Crawfordsville Public Library	Wabash College Global Health Initiative Students visiting Wellbrooke
	Crawfordsville High School Water Aerobics Program			
	Crawfordsville Parks & Rec Fitness Classes			
	Purdue Extension Walking Program			

2019-2021 Top Community Health Needs Scoring Sheet

Facility: **Scorer:**

	Health Issue							Potential Intervention						
Need	Size	Serious	Equity	Intervention	Time	**Score**	**Rank**	ACEs	Internal Capacity	Comm Accept	Sustain	Long Term	**Score**	**Rank**
STD	32	30	25	29	28	144	9	27	23	28	23	24	125	10
tobacco	31	34	28	30	27	150	8	29	28	31	25	28	141	9
food insecurity	37	38	39	34	31	179	3	32	28	39	27	31	157	6
heart disease	33	34	26	22	25	140	10	27	32	32	28	26	145	8
PAN	35	32	30	37	27	161	7	26	33	35	27	27	148	7
youth support services	34	31	34	34	32	165	5	42	27	32	27	32	160	5
adult MH	38	38	35	28	34	173	4	40	30	34	28	30	162	3
child abuse	37	44	40	34	41	196	1	44	28	37	26	30	165	1
substance abuse	40	44	34	29	36	183	2	43	28	37	29	28	165	1
access to HC	33	35	38	26	31	163	6	28	35	38	30	30	161	4

1=Low; 3=Neutral/Medium; 5=High

Directions

	Health Issue								Potential Intervention						
Need	Size	Serious	Equity	Intervention	Time	**Score**	**Rank**		ACEs	Internal Capacity	Comm Accept	Sustain	Long Term	**Score**	**Rank**

1=Low; 3=Neutral/Medium; 5=High

Size: How many people are affected by this?

Serious: How serious of an issue is this? Is this a potentially deadly issue? How much of a threat is it to the population affected?

Equity: How much does this affect the most vulnerable residents? Because of this, does it make those who are affected at a significant disadvantage?

Intervention: How likely is it that NON-CLINICAL interventions will change this need?

Time: How urgent or pressing is this issue? Is there immenint danger or life-threatening consequences within months?

ACES: How strong is the relationship between this need and ACES or community resiliency?

Internal Capacity: To what degree does the specific Franciscan hospital have the resources to meet this need?

Comm Accept: How acceptable is action/intervention to the community? Are there community organizations that want to engage in this work?

Sustain: How sustainable are the efforts after three years? Are there community partners or internal departments that can continue this work for six years?

Long Term: How likely is it that an intervention can create long-term or permanent change in individuals, conditions, or communities?

TOP HEALTH NEEDS, MONTGOMERY COUNTY 2019-2021

Determining the top health needs in a community is a difficult process. Many poor health outcomes, health disparities, and poor social determinants of health weigh heavily on segments of our community. We also acknowledge that there are many strengths and positive growth that balance some of these challenges. Franciscan Health determined the top health needs by reviewing secondary data, survey responses, and feedback meeting input. A core team of six staff members with education and experience in public health worked with staff in each community to come to consensus on the top issues. A combination of multi-vote ranking and the Hanlon method were used. Once a refined list of the top ten issues was brought to consensus, each staff member ranked health issues based on the following criteria:

- Size: How many people are affected by this issue?
- Seriousness: How serious of an issue is this? Is it potentially deadly? How much of a threat is it to the population that is affected?
- Equity: How much does this affect the most vulnerable residents? Because of this, does it put those who are affected at a serious disadvantage?
- Intervention:How likely is it that a non-clinical intervention will change this need?
- Time: How urgent or pressing is this? Is there imminent danger or life-threating consequences within months?

To assist with intervention planning, a second score on the potential for Franciscan Health to prioritize the health issue was determined. Scoring criteria included:

- Adverse Childhood Experiences (ACEs): How strong is the relationship between this need and ACEs and community resiliency?
- Internal Capacity:To what degree does the specific Franciscan Health hospital have the resources to meet this need?
- Community Acceptability: How acceptable is action or an intervention to the community? Are there community organizations that also want to engage in this?
- Sustainability: How sustainable are efforts after three years? Are there community partners or internal departments that can continue this work for six years?
- Long-Term Impact: How likely is it that an intervention can create long-term or permanent change in individuals, conditions, or communities?

Using a mix of Hanlon and PEARL techniques, the Franciscan Health community health team scored the secondary data, feedback meeting comments, and survey data to produce the following list of top health needs in the communit. A copy of the scoring sheet and secondary data highlight sheet used to determine these priorities are included on pages 4.10 and 4.11 and in the Appendix. Please see Table 4.8 below for a summary of Montgomery County's top health needs.

Table 4.8: Health Needs Summary, Montgomery County

Identified Need	Health Need Rank	Intervention Rank	Franciscan Health Priority?	Explanation
Substance Abuse*	2	1	Indirect	The rate of non-fatal ED visits due to opioid overdose is higher than surrounding counties, at 155 per 100,000. There is a shortage of providers to address the issue.
Heart Disease	10	8	Indirect	Hospitalization rates due to heart failure and hypertension are higher than surrounding counties. Physical activity and nutrition play a role in the prevention and management of heart disease.
Tobacco/Lung Cancer	8	9	Indirect	Consumer expenditure on tobacco products is at 1.2%. The Wellness Coalition is working to bring awareness and more services to the county.
Child Abuse and Neglect*	1	1	Yes	Survey respondents selected this as a top need. In addition the abuse and neglect rate of 18.5 per 1,000 is higher than surrounding counties.
Youth Support Services*	5	5	Yes	Adolescent suicide rates and hospitalization due to mental health concerns are far above national averages.
Adult Mental Health*	4	3	Yes	Rates of poor mental health days and hospitalization due to mental health are trending positive. However, survey respondents and focus group attendees agreed on this as a top concern.
Physical Activity and Nutrition*	7	7	Yes	The county has high hospitalizations for diabetes related issues, heart disease, and similar conditions.
Food Insecurity	3	6	Indirect	This was noted in survey responses and focus group discussions. 47.3% of children are on free or reduced lunch.
Sexually Transmitted Diseases	9	10	No	The county has higher than average rates of STDs.
Access to Health Services*	6	3	Yes	Montgomery County does not have labor and delivery services and has limited pediatric services.

*The criteria for health ranking were size of the issue, seriousness, effectiveness of non-clinical interventions, urgency and impact on health equity. Intervention rank criteria were if it was ACE related, internal capacity of the organization, acceptance of the community or partnership, sustainability, and long term or permanent outcomes. Those needs that have an asterisk represent a strong connection to adverse childhood experiences.

COMMUNITY ASSETS

Franciscan HEALTH

SECTION 5

community HEALTH NEEDS ASSESSMENT

While the health needs of this community are substantial, there are partners and assets that may offer services to address the needs in the community. This section outlines some of the organizations in the community. Readers should also review the services provided by Franciscan Health in Section 1 of this document. The appendix also lists community organizations that informed this report and provide services in the community.

EDUCATION

First Steps
620 Morland Dr.
Lafayette, IN 47903

Healthy Families Program
500 E Jefferson St.
Crawfordsville, IN 47933

Montgomery County Head Start
2985 Industrial Blvd.
Crawfordsville, IN 47933

HOUSING

Crawfordsville Housing Authority
220 E Main St.
Crawfordsville, IN 47933

Pam's Promise Transitional Housing Corp.
PO Box 405
Crawfordsville, IN 47933

FOOD RESOURCES

FISH Food Pantry
212 E Wabash Ave.
Crawfordsville, IN 47933

Meals on Wheels
816 Mill St.
Crawfordsville, IN 47933

WIC Office
2985 Industrial Blvd.
Crawfordville, IN 47933

HEALTH SERVICES

Child and Family Counseling, LLC
307 S Washington St.
Crawfordsville, IN 47933

Nurse Family Partnership
615 N 18th St.
Lafayette, IN 47904

Women's Resource Center
407 E Market St.
Crawfordsville, IN 47933

Valley Professional Community Health Center
1801 Lafayette Rd.
Crawfordsville, IN 47933

Dr. Mary Ludwig Free Clinic
816 S Mill St.
Crawfordsville, IN 47933

Families United
702 S Washington St.
Crawfordsville, IN 47933

Integrative Wellness LLC
407 E Market St.
Crawfordsville, IN 47933

Cummins Behavioral Health
701 N Englewood Dr.
Crawfordsville, IN 47933

SOCIAL SERVICES

Family Support Services of West Central Indiana
16 S Jackson St.
Crawfordsville, IN 47933

Wabash Valley Alliance, Inc.
Outpatient Services
1480 Darlington Ave.
Crawfordsville, IN 47933

Family Services, Inc.
201 E Jefferson
Crawfordsville, IN 47933

Montgomery County Youth Services Bureau
209 E Pike St.
Crawfordsville, IN 47933

Family Crisis Shelter
PO Box 254
Crawfordsville, IN 47933

Community Chest
2985 Industrial Blvd.
Crawfordsville, IN 47933

Montgomery County Division of Family Resources
1633 Eastway Dr.
Crawfordsville, IN 47933

CALL TO ACTION

Franciscan HEALTH

SECTION 6

community HEALTH NEEDS ASSESSMENT

THE COMMUNITY HEALTH IMPROVEMENT PLAN

The purpose of the Community Health Improvement Plan (CHIP) is to link the data found in the CHNA to action. The federal regulation recommends that hospitals pay special attention to those in the community with significant health equity barriers, and consult those same groups for acceptable interventions. Partnerships, sustainable change, and working directly with neighborhoods are priorities. Guidance from a variety of sources also recommend addressing root cause of issues, including structural injustices and social determinants of health.

Adverse Childhood Experiences as a Root Cause

Mental health, substance abuse, adolescent suicide, and frequent chronic diseases in Franciscan Health communities continues to rise. Considering this data, and the desire to address root causes of community health issues, a singular focus was determined: the prevention, management, and healing of adverse childhood experiences (ACEs). Franciscan Health is committed to building community resiliency, advocating for family health, and improving health equity for youth.

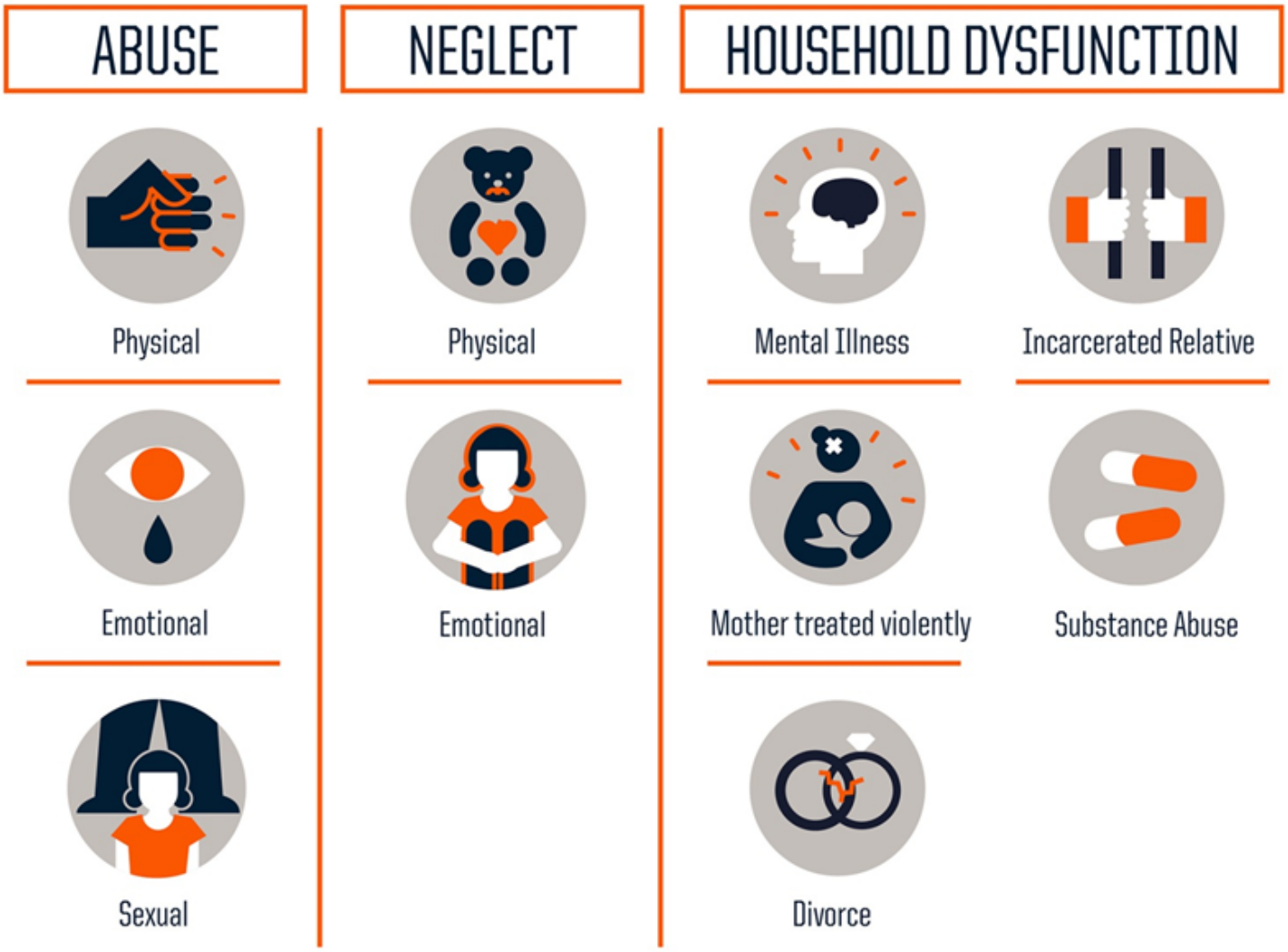
ACEs are childhood events that cause lasting trauma. Research shows that the more trauma that one experiences in childhood, the more likely it is for an individual to experience poor mental health and physical health outcomes, including depression and diabetes, as well as engage in risky health behaviors, like using tobacco and illegal substances.

The chart below shows the ACE-Related odds of having a physical health condition.

Health Condition	0 ACEs	1 ACE	2 ACEs	3 ACEs	4+ ACEs
Arthritis	100%	130%	145%	155%	236%
Asthma	100%	115%	118%	160%	231%
Cancer	100%	112%	101%	111%	157%
COPD	100%	120%	161%	220%	399%
Diabetes	100%	128%	132%	115%	201%
Heart Attack	100%	148%	144%	287%	232%
Heart Disease	100%	123%	149%	250%	285%
Kidney Disease	100%	83%	164%	179%	263%
Stroke	100%	114%	117%	180%	281%

Source: The Adverse Childhood Experiences (ACEs) Study, CDC.gov

ACES CHART


ABUSE
NEGLECT
HOUSEHOLD DYSFUNCTION
Physical
Emotional
Sexual
Physical
Emotional
Mental Illness
Mother treated violently
Divorce
Incarcerated Relative
Substance Abuse

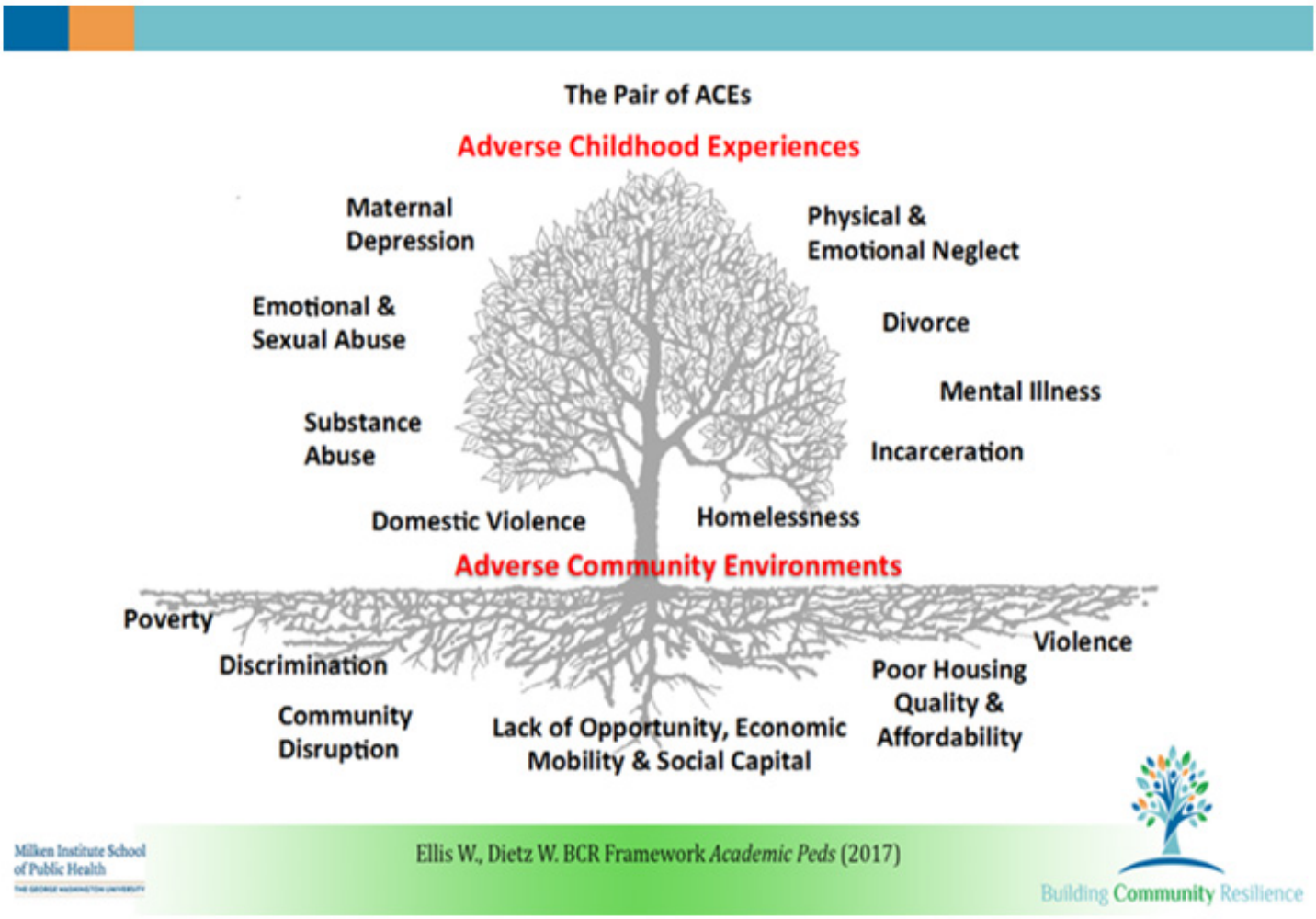
The chart below shows the difference in health behaviors:

Health Behavior	0 ACEs	3 ACEs	7 ACEs
Smoke	1 in 16	1 in 9	1 in 6
Alcoholic	1 in 69	1 in 9	1 in 6
Uses IV Drugs	1 in 480	1 in 43	1 in 30
Attempts Suicide	1 in 96	1 in 10	1 in 5

Those with an ACE score of six or more have a life expectancy of 20 years less than those with an ACE score of 0.

Research also indicates that Adverse Community Environments can add to the disparity of those with ACEs. Social determinants of health, including poverty, violence, poor housing, and food insecurity hinder resiliency and rebuilding health after trauma.

The graphic below, from Milken Institute School of Public Health at The George Washington University, show how the 'pair of ACEs' coincide:



FRANCISCAN HEALTH'S IMPLEMENTATION PLAN

Resolving ACEs for all children in Franciscan Health's communities is impossible, but so it ignoring trauma as a major factor contributing to poor quality of life. While prioritizing ACEs is complicated and challenging, Franciscan Health commits to organizing resources and activities to assist in the effort to have healthier, happier families. Our communities have many organizations and partners with similar goals. We join other health systems working on these issues, including Northwestern Memorial Hospital, Kaiser Permanente, Main Medical Center, KVC Health Systems, Duke University Hospital, California Pacific Medical Center, Beacon Health, and Virginia Hospital Center.

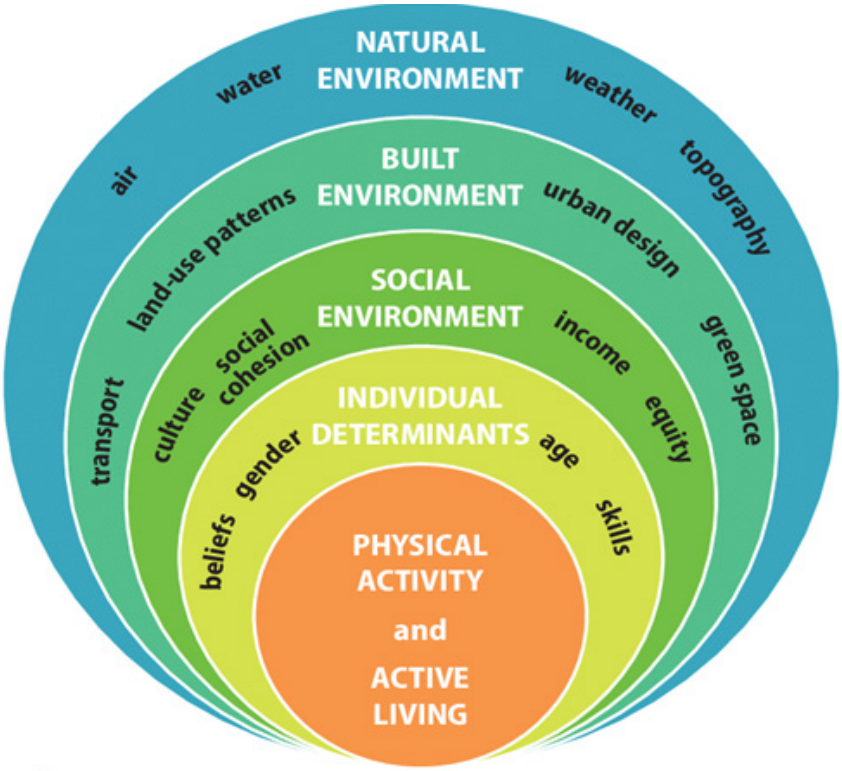
Franciscan Health is also working with various regional and statewide partners, who provide guidance, partnerships, and shared resources. These organizations include:

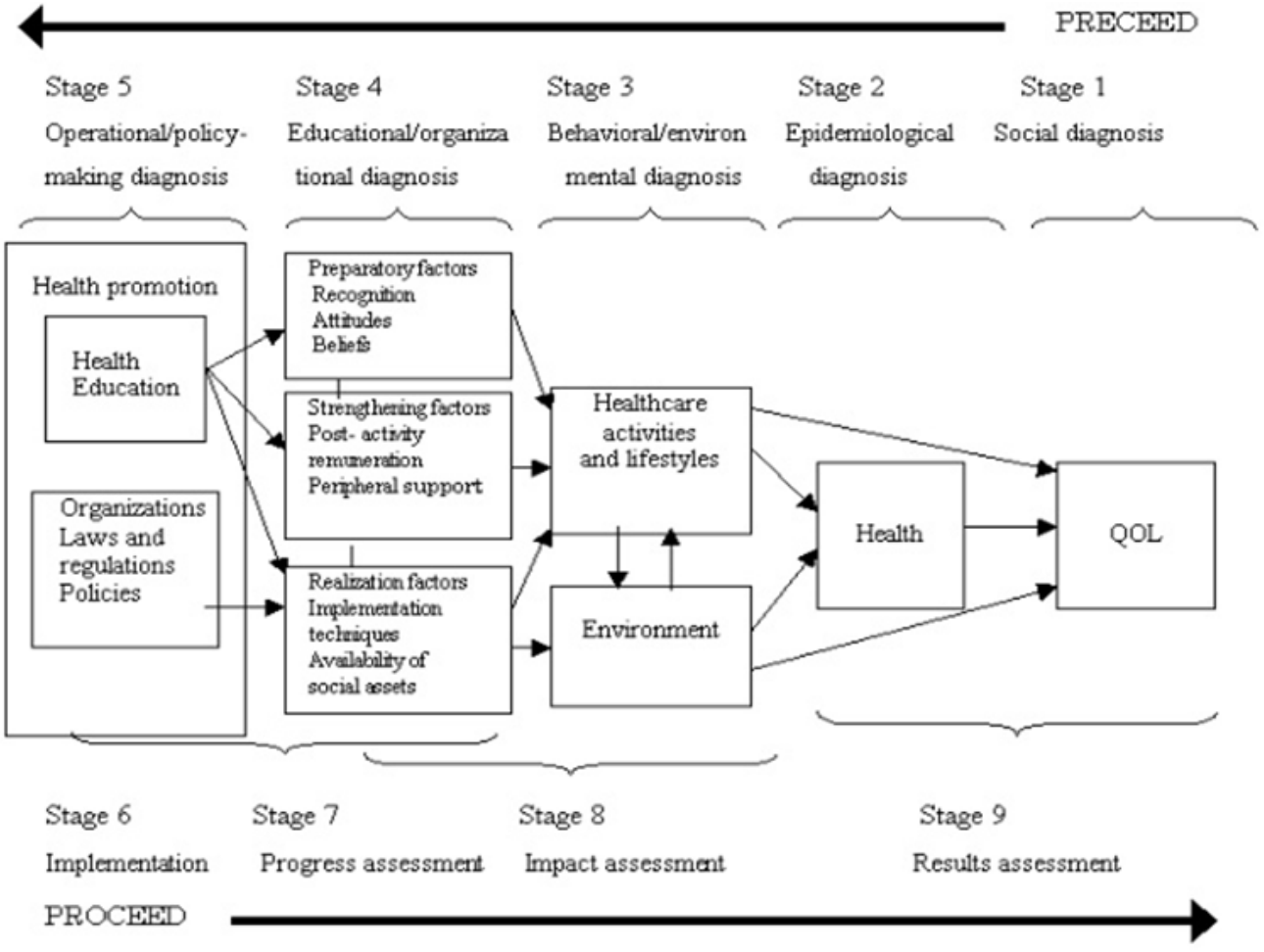
- Covering Kids and Families
- Fairbanks
- Girl Scouts of Central Indiana
- Goodwill Industries
- Indiana Department of Child Services
- Indiana University
- Indiana Youth Institute
- Indiana Youth Services Association
- Prevent Child Abuse Indiana
- Purdue University

During the Professional Feedback Meetings, several partners suggested that Franciscan Health can provide a valuable service by convening and organizing this effort. "We need you to be the backbone. Franciscan is in the best place to do that. And we want to see it from the top down, not just from 'you.'" "It's not about telling us, it's about caring enough about each other to do better. Everything is about relationships and we need each other."

Knowing that various public health interventions have different types of return of investment, a variety of strategies are necessary to changing the health and quality of life in our communities. In addition, we believe that dosing strategies—multiple messages and interventions heard often provide the best response and call to change.

Using the socio-ecological model and Preceed-Proceed model, the following activities will occur:





Action 1: Provide Education and Awareness about Childhood Trauma and Community Resiliency

Residents, parents, social service professionals, and health care providers need information and resources in order to begin to make change. While much information is available via web searches and other public resources, it can be difficult to decipher and find the right information for each audience. A full communications/health campaign strategy will provide multiple tools to help others learn more about ACEs and community resiliency. The need for these activities was a consistent theme in feedback meetings.

Action	Description	2019	2020	2021
Facilitate ACEs Connections Community Pages	These free websites will hold information about ACEs, local resources, data, and upcoming events	Launch pages in March Continuously update and invite others to contribute	Continuously update and invite others to contribute	Continuously update and invite others to contribute
Provide fact sheets, articles, and other free resources	Coordinating with partners, various items will be available to the public and social service agencies free of charge	Provide items related to the basics of ACEs, community resiliency, resources, and healing strategies	Add items specific to physical activity, nutrition, mindfulness, and building quality relationships	Add items specific to social determinants, economics, industry, and special topics
Offer free screenings of *Resilience*, by KPJR Films	This one hour, award winning documentary provides a quality overview of ACEs and resiliency	Provide 5 screenings	Provide 6 screenings	Provide 8 screenings
Coordinate training opportunities for professionals	Multiple organizations are interested in bringing national speakers and specialized training to our communities.	Develop advisory group to determine appropriate and desired trainings. Offer a basic ACEs curriculum training to use as a speaker's bureau piece. Provide one advanced training for early adopters.	Provide basic ACEs training. Add two additional specialty trainings.	Provide basic ACEs training. Add two additional specialty trainings.

Action 2: Develop Coalitions and Task Groups to Facilitate Community Partnerships

Franciscan Health values its partnerships and looks forward to working with many new community organizations. During the feedback meetings, an initial list of committed partners was developed as well as an initial local resource map. This begins the development of local groups working towards a common goal of building resiliency.

Action	Description	2019	2020	2021
Develop a community resiliency coalition	Staff will bring together partners in the community to determine structure, goals, evidence based practiced, and models of work.	Initial meeting by May The activities and direction of these committees will be determined by the partners. Therefore, specific timelines and actions are to be determined.	The activities and direction of these committees will be determined by the partners. Therefore, specific timelines and actions are to be determined.	The activities and direction of these committees will be determined by the partners. Therefore, specific timelines and actions are to be determined.

Action 3: Offer a Variety of Opportunities for People to Engage in Healing Strategies

Multiple researchers have found strategies to help adults heal from trauma and build health. Four areas are most common: physical activity, good nutrition, practicing mindfulness, and building positive relationships. Reducing barriers to health care is equally as important. New programs will be developed in these areas. At this time, the following programs are available through Franciscan Health Crawfordsville:

Physical Activity	Nutrition	Mindfulness	Positive Relationships	Access to Health Care
Athletic Training **Walk with a Doc** **Couch to 5K**	Breast Feeding Navigation Emergency Food Pantry Nourish Program		Support Groups (variety of conditions) Sexual Assault education	Free screenings Immunization Clinics

Action 4: Lead By Doing

To truly change a community, consistent and targeted interventions need to occur. With limited resources, Franciscan Health has designated one comprehensive project for each community. This project is designed to be place-based and inclusive. Franciscan Health commits to this project until the outcomes are met. Only then will staff begin to seek expansion or implementation of the project in a new community group.

Franciscan Health Crawfordsville will engage in providing life skills education for identified vulnerable students at Crawfordsville Middle and High Schools through a partnership with school sponsored clubs. In addition, various events will be facilitated to introduce girls to adult women role models and mentors. All activities will reinforce healthy relationships and expanding community connectedness. (See logic model on following page.)

Action 5: Provide Services for the Most Vulnerable

There are two populations that are of most concern in the community: new mothers and their babies as well as children without insurance. Indiana currently ranks in the low 40's for infant and maternal mortality rates.

Research is still being conducted on common causes for maternal mortality. In the areas served by Franciscan Health Crawfordsville, infant mortality can often be attributed to smoking during and after pregnancy, unsafe sleep practices, congenital anomalies, and accidents. Hospitals within Franciscan Health have been working on various interventions, often with grant support.

Franciscan Health Crawfordsville recently launched Project Swaddle, an initiative to assist with pre-natal care, transportation for labor and delivery, as well as after birth care for mother and baby.

Franciscan Health/Life Skills Education of Montgomery County Logic Model

Goal: To improve the overall wellness of 100 middle and high school students in Crawfordsville by teaching life skills and building resiliency measures by 2021.

Inputs	Outputs		Outcomes – Impact		
	Participation	*Activities*	*Learning*	*Action*	*Condition*
Hospital Franciscan Health Crawfordsville Space/Location Crawfordsville High School Crawfordsville Middle School Budget $3000 Internal Help Kate Hill-Johnson Sister Cheryl Staff Volunteers External Help Brea Carlson (Director) Chris Amidon (School Nurse) Greg Hunt (School Principle) Holly (Purdue Ext.) Karen Branch (Youth Service Bureau) Supplies Needed Staff time, interactive educational materials, snacks/food, handouts and marketing materials Research http://traumainformedschools.org/links/alive-brochure.pdf - trauma informed schools https://youthrelationships.org/hrpp - positive relationships https://www.blueprintsprograms.org/	Organizations Crawfordsville Community School Corporation Franciscan Health Purdue Extension Youth Service Bureau Community Members Crawfordsville high school and middle school students with identified risk factors **Programmatic** Geographic Area Crawfordsville – 47933 Crawfordsville Middle and High Schools Target Population 11-18 year old students within vulnerable populations Disparities High food insecurity (approximately 1800 in county)	Trainings/Requirements - Approved background checks - Staff orientation and explanation of the program - Coordination of information to be distributed to students - FH staff will be invited to participate, no specific staff requirements **What we Create Programmatic** Plan Host a focus group to identify the structure of partnership desired by the students Work with school organization directors to develop a finalized plan for partnership program Identify staff volunteers and train them appropriately to work with students Identify topics to be discussed during partnership period, with the help of current students and directors Work with staff and schools to provide education and outreach activities to increase life skills knowledge and resiliency measures Emphasis will be on nutrition education and building positive adult role model relationships.	**2019** January- March Research best practice for hosting focus groups to identify desires of high school students Work with organization's leaders to ensure that a finalized partnership plan is approved Research life skills topics and resiliency building topics that could be covered April – June Research and develop survey to measure satisfaction and learning of students and staff July – September Partner with organization directors to plan dates for the upcoming semester Research and identify what measures need to be surveyed to track results of partnership in coming semester October – December Plan spring semester with the help of current Athena students at Crawfordsville High School internal staff, and middle school staff, as needed **2020** Identify best way to successfully partner with middle school to incorporate 20 (at minimum) students Continue with current partnership plans **2021** Begin structuring plans for middle school students	**2019** January-March Host a focus group of the current students and directors to identify the desired structure of partnership Finalize partnership structure plan Poll students to better understand their interests and desires for topics to be covered in the current semester Identify and train staff within the Crawfordsville hospital to prepare them for partnership weeks April - June Host at least 2 weeks of Franciscan sponsored lessons Evaluation strategy is to survey students and staff satisfaction with conducted lessons July - September Host at least 2 more weeks of Franciscan sponsored lessons in fall semester October – December Evaluation strategy is to survey identified measures from completed fall semester partnership weeks **2020** Finalize plans to do six-week curriculum with identified middle school/high school partnership utilizing Franciscan Staff **2021** Complete final year of partnership with high school students	**2019** January – March Funding is distributed Internal and external groups are in agreement on how partnership will be conducted Students and staff are comfortable and willing to be surveyed Staff at Crawfordsville hospital are available and willing to participate in partnership April – June Weeks are available for Franciscan staff to come and students are on board with partnership time Staff member is available to conduct survey July – September Staff volunteers continue to be available and willing to participate in partnership Establish baseline data October – December Community benefit staff is available to plan upcoming spring semester Students/staff identify any changes that need to be made currently **2020** Funding continues to support student program Staff volunteers remain available **2021** Middle school staff is willing to create student program, funding is available

Join Us

Franciscan Health believes in strong families, thriving children, and resilient communities. While the challenges and disparities are challenging, by working together, we can make healthy changes. We extend the invitation to you to be a part of our work.

Community resilience is a valuable asset. Often, we think of resiliency in the face of disasters—how can we limit impact and adapt to the new way of life? How do we grow and bounce back from disruption? These same questions are valuable to ask in the time of increased substance abuse, violence, food insecurity, and other basic needs. There is something for everyone to contribute.

The Pathway to Improved Outcomes for Children and Families, via the Center for the Study of Social Policy's Strengthening Families Framework, and others suggests:

State and community leaders can:

- Build parent partnerships
- Learn more about ACEs and community resiliency
- Shift practices and policies to support children and families
- Ensure accountability

Programs that serve families and children can:

- Shift the organizational culture to value families and build on their strengths
- Make policy changes to support their workers and work-life balance
- Implement activities that build on protective factors
- Provide concrete support in times of need
- Develop social and emotional competence of children

Families can:

- Increase health education
- Become involved in the community
- Mentor another child
- Build adult-to-adult supportive peer relationships
- Help children develop problem-solving skills

Community members can:

- Be a safe adult that youth can rely on
- Support parent-child interactions
- Advocate for opportunities for physical activity and good nutrition
- Volunteer at after-school programs or lunch time mentoring programs
- Attend a screening of *Resilience*

Be sure to check https://www.franciscanhealth.org/communityhealth for more ideas and resources.

To become involved in Franciscan Health's work, please contact your local coordinator:

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Franciscan Health Carmel, Indianapolis, Mooresville
Amber Welsh, MSM
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Franciscan Health Michigan City
Sister Petra Nielson
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Franciscan Health Crown Point, Dyer, Hammond, Munster
Becky Tilton, MPH
Rebecca.tilton@franciscanalliance.org

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Multiple communities, statewide partnerships, or comments on this report
Kate Hill-Johnson, MA
Katharine.hill-johnson@franciscanalliance.org

Adverse Childhood Experiences



Children's exposure to Adverse Childhood Experiences is the greatest unaddressed public health threat of our time.

— Robert W. Block, past president of the American Academy of Pediatrics

ADVERSE CHILDHOOD EXPERIENCES

Adverse childhood experiences (ACEs) are stressful or traumatic events, including abuse and neglect. They may also include household dysfunction such as witnessing domestic violence or growing up with family members who have substance use disorders. ACEs are strongly related to the development and prevalence of a wide range of health problems throughout a person's lifespan, including those associated with substance misuse. ACEs include:

- Physical abuse
- Sexual abuse
- Emotional abuse
- Physical neglect
- Emotional neglect
- Intimate partner violence
- Mother treated violently
- Substance misuse within household
- Household mental illness
- Parental separation or divorce
- Incarcerated household member

ACEs are a good example of the types of complex issues that the prevention workforce often faces. The negative effects of ACEs are felt throughout the nation and can affect people of all backgrounds.

Many studies have examined the relationship between ACEs and a variety of known risk factors for disease, disability, and early mortality. The Division of Violence Prevention at the Centers for Disease Control and Prevention (CDC), in partnership with Kaiser Permanente, conducted a landmark ACE study from 1995 to 1997 with more than 17,000 participants. The study found:

- ACEs are common. For example, 28% of study participants reported physical abuse and 21% reported sexual abuse. Many also reported experiencing a divorce or parental separation, or having a parent with a mental and/or substance use disorder.
- ACEs cluster. Almost 40% of the Kaiser sample reported two or more ACEs and 12.5% experienced four or more. Because ACEs cluster, many subsequent studies now look at the cumulative effects of ACEs rather than the individual effects of each.
- ACEs have a dose-response relationship with many health problems. As researchers followed participants over time, they discovered that a person's cumulative ACEs score has a strong, graded relationship to numerous health, social, and behavioral problems throughout their lifespan, including substance use disorders. Furthermore, many problems related to ACEs tend to be comorbid or co-occurring.

ACEs and Prevention Efforts

Preventing ACEs and engaging in early identification of people who have experienced them could have a significant impact on a range of critical health problems. You can strengthen your substance misuse prevention efforts by:

- Informing local decision-making by collecting state- and county-level ACEs data
- Increasing awareness of ACEs among state- and community-level substance misuse prevention professionals, emphasizing the relevance of ACEs to behavioral health disciplines
- Including ACEs among the primary risk and protective factors when engaging in prevention planning efforts
- Selecting and implementing programs, policies, and strategies designed to address ACEs, including efforts focusing on reducing intergenerational transmission of ACEs
- Using ACEs research and local ACEs data to identify groups of people who may be at higher risk for substance use disorders and to conduct targeted prevention

ACEs Research and Behavioral Health

Research has demonstrated a strong relationship between ACEs, substance use disorders, and behavioral problems. When children are exposed to chronic stressful events, their neurodevelopment can be disrupted. As a result, the child's cognitive functioning or ability to cope with negative or disruptive emotions may be impaired. Over time, and often during adolescence, the child may adopt negative coping mechanisms, such as substance use or self-harm. Eventually, these unhealthy coping mechanisms can contribute to disease, disability, and social problems, as well as premature mortality.

ACEs and Substance Use

- Early initiation of alcohol use. Efforts to prevent underage drinking may not be effective unless ACEs are addressed as a contributing factor. Underage drinking prevention programs may not work as intended unless they help youth recognize and cope with stressors of abuse, household dysfunction, and other adverse experiences. Learn more from a 2008 study on how ACEs can predict earlier age of drinking onset.(link is external)
- Higher risk of mental and substance use disorders as an older adult (50+ years). ACEs such as childhood abuse (physical, sexual, psychological) and parental substance abuse are associated with a higher risk of developing a substance use disorder. Learn more from a 2017 study on adverse childhood experiences and mental and substance use disorders as an adult(link is external).
- Continued tobacco use during adulthood. Prevalence ratios for current and ever smoking increased as ACEs scores increased, according to a 2011 study on ACEs and smoking status.
- Prescription drug use. For every additional ACE score, the rate of number of prescription drugs used increased by 62%, according to a 2017 study of adverse childhood experiences and adolescent prescription drug use.(link is external)
- Lifetime illicit drug use, drug dependency, and self-reported addiction. Each ACE increased the likelihood of early initiation into illicit drug use by 2- to 4-fold, according to a 2003 study on childhood abuse, neglect, and household dysfunction and the risk of illicit drug use.

ACEs and Behavioral Problems

- Suicide attempts. ACEs in any category increased the risk of attempted suicide by 2- to 5-fold throughout a person's lifespan, according to a 2001 study. According to a recent 2017 article (link is external), individuals who reported 6 or more ACEs had 24.36 times increased odds of attempting suicide.
- Lifetime depressive episodes. Exposure to ACEs may increase the risk of experiencing depressive disorders well into adulthood—sometimes decades after ACEs occur.
- Sleep disturbances in adults. People with a history of ACEs have a higher likelihood of experiencing self-reported sleep disorders, according to a 2015 systematic review of research studies on ACEs and sleep disturbances in adults.
- High-risk sexual behaviors. Women with ACEs have reported risky sexual behaviors, including early intercourse, having had 30 or more sexual partners, and perceiving themselves to be at risk for HIV/AIDS. Learn more from a 2001 study on ACEs and sexual risk behaviors in women. Sexual minorities who experience ACEs also demonstrate earlier sexual debut according to a 2015 study.
- Fetal mortality. Fetal deaths attributed to adolescent pregnancy may result from underlying ACEs rather than adolescent pregnancy, according to a 2004 study of the association between ACEs and adolescent pregnancy.
- Pregnancy outcomes. Each additional ACE a mother experienced during early childhood is associated with decreased birth weight and gestational age of her infant at birth, according to a 2016 study on the association between ACEs and pregnancy outcomes.
- Negative physical health outcomes. Experiencing adverse childhood family experiences may increase the risk for long-term physical health problems (e.g., diabetes, heart attack) in adults.
- Poor dental health. Children who have experienced at least one ACE are more likely to have poor dental health.

Reference: https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences