## Jay County Health and Demographic Summary

Dave Hyatt

## JCH Demographics:

General (2014)

- Population: 21,179
- Average Age: 39
- Average Household Income: \$47,698
- Labor Force Employed: 89\%
- Educational Attainment:
- 16\% No High School Diploma
- 48\% High School Graduate
- 15\% Associate or Bachelor's Degree


## JCH Demographics: <br> Occupational Classification (2014)



# - Blue Collar <br> - White Collar <br> - Service \& Farm 

## Jay County Health Outcomes



## Jay County Health Factors



## Jay County Health Outcomes

| Category | Rank (of 92) 2014 | Rank (of 92) 2015 |
| :---: | :---: | :---: |
| Health Outcomes | 58 | 77 |
| Length of Life | 51 | 71 |
| Quality of Life | 64 | 76 |
| Health Factors | 62 | 56 |
| Health Behaviors | 75 | 76 |
| Clinical Care | 70 | 67 |
| Social \& Economic Factors | 57 | 43 |
| Physical Environment | 24 | 23 |

## Jay County Health Outcomes

| Category | JCH | JCH | U.S. TOP |
| :--- | :--- | :--- | :--- |
| Health Behaviors | 2014 | 2015 |  |
| Adult Smoking | $35 \%$ | $26 \%$ | $14 \%$ |
| Adult Obesity | $32 \%$ | $35 \%$ | $25 \%$ |
| Physical Inactivity | 235 | 211 | 123 |
| Sexually Transmitted Infections | $35 \%$ | $35 \%$ | $14 \%$ |
| Alcohol-Impaired Driving Deaths | 44 | 41 | 20 |
| Teen Births |  |  |  |

## Jay County Health Outcomes

| Category | JCH | JCH | U.S. TOP |
| :--- | :---: | :---: | :---: |
| Clinical Care | $17 \%$ | $17 \%$ | $11 \%$ |
| Uninsured | $3,044: 1$ | $3561: 1$ | $1,051: 1$ |
| Primary Care Physicians | $1,801: 1$ | $1641: 1$ | $1,439: 1$ |
| Mental Health Providers | 90 | 81 | 46 |
| Preventable Hospital Stays | $83 \%$ | $82 \%$ | $90 \%$ |
| Diabetic Monitoring | $60 \%$ | $63 \%$ | $71 \%$ |
| Mammography Screening |  |  |  |

## Jay County Health Outcomes

- For more stats please visit:


## countyhealthrankings.org

\&
www.medicare.gov/hospital compare

## Jay County Health Outcomes

- For more information please see appendix documents " 2015 JCH SP Community Health Appendix":
- CDC JCH Community Health Profile Data
- County Health Rankings Indiana Summary
- JCH Health Outcomes and Factors Overview


## IU Health Bowen Research Findings

Executive Summary

## IU Health Bowen Research Summary

- JCH leadership is proactively seeking to create a community health profile through data collection and analysis from various health, social and economic indicators.
- This report also provides the data context for Adams County, Blackford County, Delaware County and Randolph County as well as for the State of Indiana.


## IU Health Bowen Key Findings

- Challenges identified
- Access to healthcare
- Poverty
- Health risk behaviors
- Preventative health
- JC is also designated as a medically underserved area
- Primary care providers
- Mental health providers


## IU Health Bowen Key Findings Cont.

- Health risk behaviors
- Smoking
- Injury
- Obesity
- Physical inactivity
- Jay County exhibits higher numbers of arrests related to possession, sale or manufacture of marijuana, cocaine or opioids and synthetic drugs such as methamphetamine.


## IU Health Bowen Research Report

- For more information please reference the appendix document, " 2015 JCH SP Community Health Appendix - IU Health Bowen Community Health Report"

Jay County, IN
The following Summary Comparison Report provides an "at a glance" summary of how the selected county compares with peer counties on the full set of Primary Indicators. Peer county values for each indicator were ranked and then divided into quartiles.

|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  | (most favorable quartile) | (middle two quartiles) | (least favorable quartile) |
| Mortality | Motor vehicle deaths | Chronic kidney disease deaths <br> Chronic lower respiratory disease (CLRD) deaths <br> Coronary heart disease deaths <br> Female life expectancy Stroke deaths <br> Unintentional injury (including motor vehicle) | Alzheimer's disease deaths <br> Cancer deaths <br> Diabetes deaths <br> Male life expectancy |
| Morbidity | Syphilis | Adult diabetes <br> Adult obesity <br> Alzheimer's diseases/dementia <br> Gonorrhea <br> HIV <br> Older adult asthma <br> Preterm births | Adult overall health status Cancer Older adult depression |
| Health Care Access and Quality |  | Older adult preventable hospitalizations <br> Primary care provider access <br> Uninsured | Cost barrier to care |
| Health Behaviors | Adult binge drinking | Adult physical inactivity <br> Adult smoking <br> Teen Births | Adult female routine pap tests |
| Social Factors | Violent crime | Children in single-parent households <br> High housing costs <br> On time high school graduation <br> Poverty <br> Unemployment | Inadequate social support |
| Physical Environment | Drinking water violations | Access to parks <br> Housing stress <br> Limited access to healthy food <br> Living near highways | Annual average PM2.5 concentration |

## 2015 County Health Rankings

## Indiana

## INTRODUCTION

The County Health Rankings \& Roadmaps program helps communities identify and implement solutions that make it easier for people to be healthy in their homes, schools, workplaces, and neighborhoods. The Robert Wood Johnson Foundation (RWJF) collaborates with the University of Wisconsin Population Health Institute (UWPHI) to bring this program to cities, counties, and states across the nation. Ranking the health of nearly every county in the nation, the County Health Rankings illustrate what we know when it comes to what is making people sick or healthy. The Roadmaps to Health and RWJF Culture of Health Prize show what we can do to create healthier places to live, learn, work, and play.

## WHAT ARE THE COUNTY HEALTH RANKINGS?

Published online at countyhealthrankings.org, the Rankings help counties understand what influences how healthy residents are and how long they will live. The Rankings are unique in their ability to measure the current overall health of each county in all 50 states. They also look at a variety of measures that affect the future health of communities, such as high school graduation rates, access to healthy foods, rates of smoking, obesity, and teen births. Communities use the Rankings to identify and garner support for local health improvement initiatives among government agencies, healthcare providers, community organizations, business leaders, policy makers, and the public.

## MOVING FROM DATA TO ACTION

Roadmaps to Health help communities bring people together to look at the many factors that influence health, select strategies that work, and make changes that will have a lasting impact. The Roadmaps focus on helping
 communities move from awareness about their county's ranking to action to improve people's health. The Roadmaps to Health Action Center is a one-stop shop of information to help any community member or leader who wants to improve their community's health by addressing factors that we know influence health, such as education, income, and community safety.

Within the Action Center you will find:

- Online step-by-step guidance and tools to move through the Action Cycle
- What Works for Health - a searchable database of evidence-informed policies and programs that can improve health

[^0]- Webinars featuring local community members who share their tips on how to build a healthier community
- Community coaches, located across the nation, who provide customized consultation to local leaders who request guidance in how to accelerate their efforts to improve health. You can contact a coach by activating the Get Help button at countyhealthrankings.org


## LEARNING FROM OTHERS

At countyhealthrankings.org, we feature stories from communities across the nation who have used data from the County Health Rankings or have engaged in strategies to improve health. The RWJF Culture of Health Prize recognizes communities that are
 creating powerful partnerships and deep commitments to enable everyone in our diverse society to lead healthy lives now and for generations to come. The Prize is awarded annually by RWJF to honor communities that are working to build a Culture of Health by implementing solutions that give everyone the opportunity for a healthy life. In 2015, up to 10 winning communities will each receive a $\$ 25,000$ cash prize and have their stories shared broadly with the goal of inspiring locally driven change across the nation.

Prize winners are selected based on how well they demonstrate their community's achievement on their journey to a Culture of Health in the following areas:

- Defining health in the broadest possible terms
- Committing to sustainable systems changes and long-term policy-oriented solutions
- Cultivating a shared and deeply held belief in the importance of equal opportunity for health
- Harnessing the collective power of leaders, partners, and community members
- Securing and making the most of resources
- Measuring and sharing progress and results

Visit countyhealthrankings.org or rwjf.org/prize to learn about the work of past Prize winners and the application process.

## HOW CAN YOU GET INVOLVED?

You might want to contact your local affiliate of United Way Worldwide or the National Association of Counties - their national parent organizations have partnered with us to raise awareness and stimulate action to improve health in their local members' communities. By connecting with other leaders interested in improving health, you can make a difference in your community. In communities large and small, people from all walks of life are taking ownership and action to improve health. Visit countyhealthrankings.org to get ideas and guidance on how you can take action in your community. Working with others, you can improve the health of your community.

## HOW DO COUNTIES RANK FOR HEALTH OUTCOMES?

The green map below shows the distribution of Indiana's health outcomes, based on an equal weighting of length and quality of life.

Lighter colors indicate better performance in the respective summary rankings. Detailed information on the underlying measures is available at countyhealthrankings.org.


| County | Rank | County | Rank | County | Rank | County | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Adams | 17 | Franklin | 42 | Lawrence | 80 | Rush | 52 |
| Allen | 30 | Fulton | 62 | Madison | 79 | Scott | 92 |
| Bartholomew | 37 | Gibson | 38 | Marion | 74 | Shelby | 56 |
| Benton | 31 | Grant | 87 | Marshall | 9 | Spencer | 25 |
| Blackford | 86 | Greene | 64 | Martin | 44 | St. Joseph | 41 |
| Boone | 3 | Hamilton | 1 | Miami | 51 | Starke | 90 |
| Brown | 7 | Hancock | 26 | Monroe | 14 | Steuben | 12 |
| Carroll | 15 | Harrison | 47 | Montgomery | 50 | Sullivan | 83 |
| Cass | 32 | Hendricks | 2 | Morgan | 48 | Switzerland | 69 |
| Clark | 63 | Henry | 73 | Newton | 67 | Tippecanoe | 18 |
| Clay | 35 | Howard | 61 | Noble | 39 | Tipton | 45 |
| Clinton | 53 | Huntington | 33 | Ohio | 29 | Union | 21 |
| Crawford | 85 | Jackson | 65 | Orange | 82 | Vanderburgh | 78 |
| Daviess | 49 | Jasper | 46 | Owen | 40 | Vermillion | 71 |
| Dearborn | 27 | Jay | 77 | Parke | 34 | Vigo | 68 |
| Decatur | 55 | Jefferson | 57 | Perry | 70 | Wabash | 58 |
| DeKalb | 23 | Jennings | 88 | Pike | 81 | Warren | 6 |
| Delaware | 84 | Johnson | 10 | Porter | 8 | Warrick | 19 |
| Dubois | 5 | Knox | 76 | Posey | 11 | Washington | 89 |
| Elkhart | 20 | Kosciusko | 28 | Pulaski | 43 | Wayne | 60 |
| Fayette | 91 | LaGrange | 4 | Putnam | 22 | Wells | 16 |
| Floyd | 54 | Lake | 72 | Randolph | 59 | White | 36 |
| Fountain | 66 | LaPorte | 75 | Ripley | 24 | Whitley | 13 |

## HOW DO COUNTIES RANK FOR HEALTH FACTORS?

The blue map displays Indiana's summary ranks for health factors, based on weighted scores for health behaviors, clinical care, social and economic factors, and the physical environment.

Lighter colors indicate better performance in the respective summary rankings. Detailed information on the underlying measures is available at countyhealthrankings.org.


| County | Rank | County | Rank | County | Rank | County | Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Adams | 24 | Franklin | 47 | Lawrence | 67 | Rush | 22 |
| Allen | 44 | Fulton | 55 | Madison | 81 | Scott | 90 |
| Bartholomew | 17 | Gibson | 13 | Marion | 89 | Shelby | 48 |
| Benton | 37 | Grant | 71 | Marshall | 20 | Spencer | 10 |
| Blackford | 78 | Greene | 69 | Martin | 32 | St. Joseph | 52 |
| Boone | 2 | Hamilton | 1 | Miami | 75 | Starke | 92 |
| Brown | 30 | Hancock | 6 | Monroe | 7 | Steuben | 27 |
| Carroll | 18 | Harrison | 19 | Montgomery | 31 | Sullivan | 88 |
| Cass | 61 | Hendricks | 4 | Morgan | 50 | Switzerland | 86 |
| Clark | 62 | Henry | 59 | Newton | 85 | Tippecanoe | 11 |
| Clay | 68 | Howard | 53 | Noble | 63 | Tipton | 25 |
| Clinton | 34 | Huntington | 33 | Ohio | 54 | Union | 60 |
| Crawford | 87 | Jackson | 41 | Orange | 73 | Vanderburgh | 57 |
| Daviess | 45 | Jasper | 43 | Owen | 77 | Vermillion | 80 |
| Dearborn | 29 | Jay | 56 | Parke | 79 | Vigo | 74 |
| Decatur | 36 | Jefferson | 64 | Perry | 51 | Wabash | 23 |
| DeKalb | 16 | Jennings | 84 | Pike | 40 | Warren | 14 |
| Delaware | 58 | Johnson | 8 | Porter | 15 | Warrick | 3 |
| Dubois | 5 | Knox | 72 | Posey | 26 | Washington | 82 |
| Elkhart | 49 | Kosciusko | 21 | Pulaski | 42 | Wayne | 70 |
| Fayette | 83 | LaGrange | 28 | Putnam | 39 | Wells | 9 |
| Floyd | 38 | Lake | 91 | Randolph | 65 | White | 35 |
| Fountain | 66 | LaPorte | 76 | Ripley | 46 | Whitley | 12 |

## 2015 COUNTY HEALTH RANKINGS: MEASURES AND NATIONAL/STATE RESULTS

| Measure | Description | US Median | State Overall | State Minimum | State Maximum |
| :---: | :---: | :---: | :---: | :---: | :---: |
| HEALTH OUTCOMES |  |  |  |  |  |
| Premature death | Years of potential life lost before age 75 per 100,000 population | 7681 | 7528 | 3931 | 13579 |
| Poor or fair health | \% of adults reporting fair or poor health | 17\% | 16\% | 7\% | 28\% |
| Poor physical health days | Average \# of physically unhealthy days reported in past 30 days | 3.7 | 3.6 | 2.1 | 6.2 |
| Poor mental health days | Average \# of mentally unhealthy days reported in past 30 days | 3.5 | 3.7 | 1.8 | 6.7 |
| Low birthweight | \% of live births with low birthweight (<2500 grams) | 8\% | 8.2\% | 5.1\% | 9.8\% |
| HEALTH FACTORS |  |  |  |  |  |
| HEALTH BEHAVIORS |  |  |  |  |  |
| Adult smoking | \% of adults who are current smokers | 21\% | 23\% | 12\% | 42\% |
| Adult obesity | \% of adults that report a $\mathrm{BMI} \geq 30$ | 31\% | 31\% | 23\% | 38\% |
| Food environment index | Index of factors that contribute to a healthy food environment, (0-10) | 7.3 | 7.2 | 6.1 | 8.7 |
| Physical inactivity | $\%$ of adults aged 20 and over reporting no leisure-time physical activity | 27\% | 27\% | 18\% | 37\% |
| Access to exercise opportunities | \% of population with adequate access to locations for physical activity | 65\% | 75\% | 22\% | 94\% |
| Excessive drinking | \% of adults reporting binge or heavy drinking | 16\% | 16\% | 8\% | 25\% |
| Alcohol-impaired driving deaths | \% of driving deaths with alcohol involvement | 31\% | 26\% | 0\% | 46\% |
| Sexually transmitted infections | \# of newly diagnosed chlamydia cases per 100,000 population | 291 | 451 | 82 | 1100 |
| Teen births | \# of births per 1,000 female population ages 15-19 | 41 | 39 | 13 | 63 |
| CLINICAL CARE |  |  |  |  |  |
| Uninsured | \% of population under age 65 without health insurance | 17\% | 17\% | 10\% | 28\% |
| Primary care physicians | Ratio of population to primary care physicians | 2015:1 | 1518:1 | 14044:1 | 517:1 |
| Dentists | Ratio of population to dentists | 2670:1 | 1973:1 | 14087:1 | 1235:1 |
| Mental health providers | Ratio of population to mental health providers | 1128:1 | 750:1 | 14087:1 | 206:1 |
| Preventable hospital stays | \# of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees | 65.3 | 70 | 35 | 117 |
| Diabetic monitoring | \% of diabetic Medicare enrollees ages 65-75 that receive HbA1c monitoring | 85\% | 84\% | 28\% | 92\% |
| Mammography screening | \% of female Medicare enrollees ages 67-69 that receive mammography screening | 61\% | 61.4\% | 44.0\% | 71.6\% |
| SOCIAL AND ECONOMIC FACTORS |  |  |  |  |  |
| High school graduation | \% of ninth-grade cohort that graduates in four years | 85\% | 87\% | 72\% | 98\% |
| Some college | \% of adults ages 25-44 with some post-secondary education | 56\% | 60.2\% | 26.7\% | 86.1\% |
| Unemployment | \% of population aged 16 and older unemployed but seeking work | 7\% | 7.5\% | 5.3\% | 10.6\% |
| Children in poverty | \% of children under age 18 in poverty | 24\% | 22\% | 6\% | 33\% |
| Income inequality | Ratio of household income at the 80th percentile to income at the 20th percentile | 4.4 | 4.3 | 3.2 | 6.5 |
| Children in single-parent households | \% of children that live in a household headed by single parent | 31\% | 33\% | 12\% | 47\% |
| Social associations | \# of membership associations per 10,000 population | 12.6 | 12.7 | 7.7 | 22.4 |
| Violent crime | \# of reported violent crime offenses per 100,000 population | 199 | 334 | 14 | 1124 |
| Injury deaths | \# of deaths due to injury per 100,000 population | 73.8 | 62 | 31 | 118 |
| PHYSICAL ENVIRONMENT |  |  |  |  |  |
| Air pollution - particulate matter | Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) | 11.9 | 13.5 | 13.0 | 14.2 |
| Drinking water violations | $\%$ of population potentially exposed to water exceeding a violation limit during the past year | 1.0\% | 4\% | 0\% | 39\% |
| Severe housing problems | \% of households with overcrowding, high housing costs, or lack of kitchen or plumbing facilities | 14\% | 14\% | 7\% | 24\% |
| Driving alone to work | \% of workforce that drives alone to work | 80\% | 83\% | 52\% | 90\% |
| Long commute - driving alone | Among workers who commute in their car alone, \% commuting > 30 minutes | 29\% | 30\% | 13\% | 56\% |

[^1]
## 2015 COUNTY HEALTH RANKINGS: DATA SOURCES AND YEARS OF DATA

|  | Measure | Data Source | Years of Data |
| :---: | :---: | :---: | :---: |
| HEALTH OUTCOMES |  |  |  |
| Length of Life | Premature death | National Center for Health Statistics - Mortality files | 2010-2012 |
| Quality of Life | Poor or fair health | Behavioral Risk Factor Surveillance System | 2006-2012 |
|  | Poor physical health days | Behavioral Risk Factor Surveillance System | 2006-2012 |
|  | Poor mental health days | Behavioral Risk Factor Surveillance System | 2006-2012 |
|  | Low birthweight | National Center for Health Statistics - Natality files | 2006-2012 |
| HEALTH FACTORS |  |  |  |
| HEALTH BEHAVIORS |  |  |  |
| Tobacco Use | Adult smoking | Behavioral Risk Factor Surveillance System | 2006-2012 |
| Diet and Exercise | Adult obesity | CDC Diabetes Interactive Atlas | 2011 |
|  | Food environment index | USDA Food Environment Atlas, Map the Meal Gap | 2012 |
|  | Physical inactivity | CDC Diabetes Interactive Atlas | 2011 |
|  | Access to exercise opportunities | Business Analyst, Delorme map data, ESRI, \& US Census Tigerline Files | 2010 \& 2013 |
| Alcohol and Drug Use | Excessive drinking | Behavioral Risk Factor Surveillance System | 2006-2012 |
|  | Alcohol-impaired driving deaths | Fatality Analysis Reporting System | 2009-2013 |
| Sexual Activity | Sexually transmitted infections | National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention | 2012 |
|  | Teen births | National Center for Health Statistics - Natality files | 2006-2012 |
| CLINICAL CARE |  |  |  |
| Access to Care | Uninsured | Small Area Health Insurance Estimates | 2012 |
|  | Primary care physicians | Area Health Resource File/American Medical Association | 2012 |
|  | Dentists | Area Health Resource File/National Provider Identification file | 2013 |
|  | Mental health providers | CMS, National Provider Identification file | 2014 |
| Quality of Care | Preventable hospital stays | Dartmouth Atlas of Health Care | 2012 |
|  | Diabetic monitoring | Dartmouth Atlas of Health Care | 2012 |
|  | Mammography screening | Dartmouth Atlas of Health Care | 2012 |
| SOCIAL AND ECONOMIC FACTORS |  |  |  |
| Education | High school graduation | data.gov, supplemented w/ National Center for Education Statistics | 2011-2012 |
|  | Some college | American Community Survey | 2009-2013 |
| Employment | Unemployment | Bureau of Labor Statistics | 2013 |
| Income | Children in poverty | Small Area Income and Poverty Estimates | 2013 |
|  | Income inequality | American Community Survey | 2009-2013 |
| Family and Social Support | Children in single-parent households | American Community Survey | 2009-2013 |
|  | Social associations | County Business Patterns | 2012 |
| Community Safety | Violent crime | Uniform Crime Reporting - FBI | 2010-2012 |
|  | Injury deaths | CDC WONDER mortality data | 2008-2012 |
| PHYSICAL ENVIRONMENT |  |  |  |
| Air and Water Quality | Air pollution - particulate matter ${ }^{1}$ | CDC WONDER environmental data | 2011 |
|  | Drinking water violations | Safe Drinking Water Information System | FY2013-14 |
| Housing and Transit | Severe housing problems | Comprehensive Housing Affordability Strategy (CHAS) data | 2007-2011 |
|  | Driving alone to work | American Community Survey | 2009-2013 |
|  | Long commute - driving alone | American Community Survey | 2009-2013 |

[^2]
## CREDITS

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Suggested citation: University of Wisconsin Population Health Institute. County Health Rankings 2015

This publication would not have been possible without the following contributions:

## Data

Centers for Disease Control and Prevention: National Center for Health Statistics and Division of Behavioral Surveillance Dartmouth Institute for Health Policy \& Clinical Practice

Research Assistance
Jennifer Buechner
Kathryn Hatchell
Hyojun Park, MA
Elizabeth Pollock
Jennifer Robinson
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## Design

Forum One, Alexandria, VA

## Robert Wood Johnson Foundation

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Andrea Ducas, MPH
Michelle Larkin, JD, MS, RN
James Marks, MD, MPH
Joe Marx
Donald Schwarz, MD, MPH
Kathryn Wehr, MPH

Communications and Outreach
Burness
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Kitty Jerome, MA
Stephanie Johnson, MSW
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## County Health Rankings \& Roadmaps



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## Jay County Hospital: Health Outcomes \& Health Factors

| County Snapshot \| Additional Measures |  |  |  | Areas to Explore | ON | OFF |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
|  | Jay County | Trend (i) | Error Margin | Top U.S. Performers* | Indiana | Rank (of 92) |
| Health Outcomes |  |  |  |  |  | 77 |
| Length of Life |  |  |  |  |  | 71 |
| Premature death | 8,758 | - | 7,325-10,191 | 5,200 | 7,528 |  |
| Quality of Life |  |  |  |  |  | 76 |
| Poor or fair health | 20\% |  | 15-26\% | 10\% | 16\% |  |
| Poor physical health days | 4.0 |  | 2.9-5.0 | 2.5 | 3.6 |  |
| Poor mental health days | 4.0 |  | 3.0-5.1 | 2.3 | 3.7 |  |
| Low birthweight | 8.6\% |  | 7.4-9.8\% | 5.9\% | 8.2\% |  |
| Health Factors |  |  |  |  |  | 56 |
| Health Behaviors |  |  |  |  |  | 76 |
| Adult smoking | 26\% |  | 20-32\% | 14\% | 23\% |  |
| Adult obesity | 35\% | ~ | 29-41\% | 25\% | 31\% |  |
| Food environment index | 7.3 |  |  | 8.4 | 7.2 |  |
| Physical inactivity | 34\% | $\sim$ | 28-40\% | 20\% | 27\% |  |
| Access to exercise opportunities | 31\% |  |  | 92\% | 75\% |  |
| Excessive drinking | 10\% |  | 7-16\% | 10\% | 16\% |  |
| Alcohol-impaired driving deaths | 35\% |  |  | 14\% | 26\% |  |
| Sexually transmitted infections | 211 | $\sim$ |  | 138 | 451 |  |
| Teen births | 41 |  | 36-47 | 20 | 39 |  |
| Clinical Care |  |  |  |  |  | 67 |
| Uninsured | 17\% | ~ | 15-19\% | 11\% | 17\% |  |
| Primary care physicians | 3,561:1 |  |  | 1,045:1 | 1,518:1 |  |
| Dentists | 3,555:1 |  |  | 1,377:1 | 1,973:1 |  |
| Mental health providers | 1,641:1 |  |  | 386:1 | 750:1 |  |
| Preventable hospital stays | 81 | ~ | 71-92 | 41 | 70 |  |
| Diabetic monitoring | 82\% | - | 73-91\% | 90\% | 84\% |  |
| Mammography screening | 63.1\% | 込 | 51.5-74.8\% | 70.7\% | 61.4\% |  |
| Social \& Economic Factors |  |  |  |  |  | 43 |
| High school graduation | 93\% |  |  |  | 87\% |  |
| Some college | 43.2\% |  | 37.9-48.6\% | 71.0\% | 60.2\% |  |
| Unemployment | 6.9\% | $\sim$ |  | 4.0\% | 7.5\% |  |
| Children in poverty | 27\% | - | 20-34\% | 13\% | 22\% |  |
| Income inequality | 3.7 |  | 3.2-4.2 | 3.7 | 4.3 |  |
| Children in single-parent households | 31\% |  | 24-37\% | 20\% | 33\% |  |
| Social associations | 22.0 |  |  | 22.0 | 12.7 |  |
| Violent crime | 85 |  |  | 59 | 334 |  |
| Injury deaths | 64 |  | 49-81 | 50 | 62 |  |
| Physical Environment |  |  |  |  |  | 23 |
| Air pollution - particulate matter | 13.5 | ~ |  | 9.5 | 13.5 |  |
| Drinking water violations | 0\% |  |  | 0\% | 4\% |  |
| Severe housing problems | 11\% |  | 9-13\% | 9\% | 14\% |  |
| Driving alone to work | 84\% |  | 81-86\% | 71\% | 83\% |  |
| Long commute - driving alone | 24\% |  | 21-28\% | 15\% | 30\% |  |

2015
90th percentile, i.e., only $10 \%$ are better.
Note: Blank values reflect unreliable or missing data

SECONDARY DATA ANALYSIS OF JAY COUNTY HEALTH: PREPARED FOR JAY COUNTY HOSPITAL

## INDIANA UNIVERSITY SCHOOL OF MEDICINE DEPARTMENT OF FAMILY MEDICINE BOWEN RESEARCH CENTER

# Secondary Data Analysis of Jay County Health 

Prepared for Jay County Hospital<br>February 2015

Laura Gano, MPH
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## Contents

Acknowledgements ..... 4
Executive Summary ..... 5
Introduction ..... 6
Methods ..... 7
Data analysis ..... 8
Findings ..... 9
Population characteristics ..... 9
Population by county ..... 9
Population by age group ..... 10
Population by race ..... 11
Population by ethnicity ..... 12
Population by sex ..... 13
Population by rurality ..... 14
Low birthweight births ..... 15
Teen births ..... 16
Uninsured children ..... 17
Uninsured adults ..... 18
High school graduation rate ..... 19
Some college (post-secondary education) ..... 20
English proficiency ..... 21
Unemployment ..... 22
Median household income ..... 23
Children living in poverty ..... 24
Children eligible for free lunch ..... 25
Children in single parent households ..... 26
Population morbidity ..... 27
Diabetes prevalence ..... 27
HIV prevalence ..... 28
Poor or fair health ..... 29
Poor physical health days ..... 30
Poor mental health days ..... 31
Obesity ..... 32
Sexually transmitted infections (chlamydia) ..... 33
Population Mortality ..... 34
Premature death ..... 34
Infant mortality ..... 35
Child mortality ..... 36
Alcohol-impaired driving deaths ..... 37
Motor vehicle crash death rate ..... 38
Drug poisoning deaths ..... 39
Injury deaths ..... 40
Healthcare workforce and utilization ..... 41
Healthcare workforce ..... 41
Preventable hospital stays ..... 46
Diabetic screening ..... 47
Mammography screening ..... 48
Health care costs ..... 49
Could not see doctor due to cost ..... 50
Social/environmental factors affecting health ..... 51
Smoking ..... 51
Physical inactivity ..... 52
Excessive drinking ..... 53
Access to exercise opportunities ..... 54
Food insecurity ..... 55
Limited access to healthy foods ..... 56
Inadequate social/emotional support ..... 57
Controlled substances dispensed ..... 58
Substance abuse treatment admissions ..... 59
Arrests for operating while intoxicated (OWI) ..... 60
Arrests for public intoxication (PI) ..... 61
Arrests for liquor law violations ..... 62
Arrests for possession, sale, or manufacture of marijuana ..... 63
Arrests for possession, sale, or manufacture of cocaine or opioids ..... 64
Arrests for possession, sale, or manufacture of synthetic drugs ..... 65
Arrests for possession, sale, or manufacture of other drugs ..... 66
Violent crime ..... 67
Homicide ..... 68
Air pollution - particulate matter ..... 69
Severe housing problems ..... 70
Driving alone to work ..... 71
Long commute - driving alone ..... 72
Summary ..... 73
References ..... 80
Appendix ..... 81

## Acknowledgements

This report was completed by the Indiana University School of Medicine, Department of Family Medicine, Bowen Research Center http://iufammed.iupui.edu/bowen-research-center and was funded by Jay County Hospital.

February 27, 2015

Many thanks to the Indiana University Center for Health Policy for their contributions to this report.

## Executive Summary

Jay County Hospital leadership is proactively seeking an inclusive understanding of County health needs and contracted with the Bowen Research Center to create a community health profile through secondary data collection and analysis from various existing health, social, and economic indicators datasets. To provide context, data are also provided for Adams County, Blackford County, Delaware County and Randolph County as well as for the State of Indiana. This secondary data analysis represents the initial stage of the creation of a future community health needs assessment.

Key findings from this analysis were that Jay County's most challenging issues appear to reside in the areas of access to healthcare, poverty, health risk behaviors and preventive health. Health Resources and Services Administration (HRSA) data show that Jay County is a designated medically underserved area (MUA)[1], a primary medical care health professional shortage area (HPSA)[2] and a mental health provider shortage area (MPSA).[2] Healthcare workforce shortages might account for decreased levels of diabetic screening and mammography screening. Jay County is less racially and ethnically diverse than Indiana overall, but is quite similar in population characteristics to neighboring counties. Although Jay County's unemployment rate is lower than the State unemployment rate, over one-quarter of County children live in poverty and over 40\% receive free school lunches. Jay County's high school graduation rate is higher than the State's, but less than one-half of County residents have received any post-secondary education. Increased health risk behaviors include high levels of smoking, injury, obesity, and physical inactivity. Higher levels of obesity and physical inactivity may be correlated with County residents having less access to healthy foods while correspondingly having far less access to exercise opportunities. Finally, among the less populous counties included in this report (Adams, Blackford, Jay and Randolph), Jay County exhibits higher numbers of arrests related to possession, sale or manufacture of marijuana, cocaine or opioids and synthetic drugs such as methamphetamine.

The data provided in this report are intended to assist Jay County Hospital leadership in advancing to the next phase of the community needs health assessment and in identifying other appropriate stakeholders for prioritizing and addressing community health needs.

## Introduction

When the Affordable Care Act (ACA) was enacted in 2010, new reporting requirements were set forth under Internal Revenue Service (IRS) Code 501(r) which obligated charitable hospitals to complete and implement a Community Health Needs Assessment every three years in order to retain 501(c)(3) charitable hospital status[3]. Although Jay County Hospital is not required to comply with IRS Code 501(r) guidelines, the Hospital is proactively seeking an inclusive understanding of County health needs. To meet this need, Jay County Hospital contracted with the Bowen Research Center to create a community health profile through secondary data collection and analysis from various existing health, social, and economic indicators datasets. The purpose of this community health profile is to assess health indicators, health concerns, health status, perceived barriers to health care, and lifestyle risk factors for Jay County residents in order to inform Jay County Hospital's future efforts in creation of a community health needs assessment similar to what is required under IRS Code 501(r) guidelines.

## Methods

To assess health indicators, Bowen Research Center professional staff obtained data shown from existing secondary datasets. Datasets consulted include:

- US Census Population Estimates
- National Center for Chronic Disease Prevention and Health Promotion
- National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention
- Health Indicators Warehouse
- CDC WONDER mortality data
- National Center for Health Statistics
- Behavioral Risk Factor Surveillance System
- ESRI \& US Census TIGER Files
- Fatality Analysis Reporting System
- Map the Meal Gap
- USDA Food Environment Atlas
- Health Research and Services Administration (HRSA) Area Resource File
- Dartmouth Atlas of Health Care
- Data.gov
- Bureau of Labor Statistics
- Small Area Income and Poverty Estimates
- FBI - Uniform Crime Reporting
- National Center for Education Statistics
- Comprehensive Housing Affordability Strategy (CHAS) data
- American Community Survey
- Indiana Board of Pharmacy/Prescription Drug Mentoring Program (INspect)
- Treatment Episode Dataset

Please see the Appendix for further details regarding data source years and how data are reported.

## Data analysis

Data were compiled, merged and analyzed using Microsoft Excel ${ }^{\circledR}$ software. Health indicators data were collected and summarized from secondary datasets in order to illustrate Jay County health in relation to Adams, Blackford, Delaware, Randolph Counties as well as Indiana overall.

## Findings

In comparison with overall Hoosier health, Jay County's most challenging issues appear to lie in the realms of poverty, preventive health, and post-secondary education. In other areas, Jay County performs better than the State of Indiana overall: excessive drinking, alcoholimpaired driving deaths and drug poisoning deaths rates are less than State-wide rates. However, when examining metrics related to possession, sales or manufacture of drugs, when compared to Adams County, Blackford County and Randolph County, Jay County shows elevated levels of criminal activity related to marijuana, cocaine and opioids and synthetic drugs (such as methamphetamine). See below for further details.

## Population characteristics

Population by county
In relation to demographics, Jay County's overall population $(21,366)$ is nearly double that of Blackford County $(12,502)$, the least populated contiguous county but less than Randolph County $(25,815)$, Adams County $(34,365)$ and Delaware County $(117,364)$.

Table 1. Total county population

| Location | Population |
| :--- | :---: |
| Adams | 34,365 |
| Blackford | 12,502 |
| Delaware | 117,364 |
| Jay | 21,366 |
| Randolph | 25,815 |

Figure 1. Total county population


Population by age group
Next to Adams County (30.6\%), Jay County (26.2\%) has the highest population of those aged 18 or less; both of those are higher than the Indiana proportion (24.3\%). Randolph County (23.9\%), Blackford County (22.3\%) and Delaware County (19.7\%) all had lower proportions of those aged less than 18 years than the State. Jay County's (16.0\%) population of those aged 65 and over is less than Blackford County (18.9\%) and Randolph County ( $17.7 \%$ but more than Delaware County (15.3\%), Adams County (14.3\%) or the State (13.6\%).

## Table 2. Age groups

| Location | $\%<18$ years | $\% \geq 65$ years |
| :--- | :---: | :---: |
| Indiana | 24.3 | 13.6 |
| Adams | 30.6 | 14.3 |
| Blackford | 22.3 | 18.9 |
| Delaware | 19.7 | 15.3 |
| Jay | 26.2 | 16.0 |
| Randolph | 23.9 | 17.7 |

Figure 2. Age groups

## Population by Age Group Percentages



## Population by race

With the exception of Delaware County (88.0\%), Jay County's (95.6\%) non-Hispanic White population is very similar to Blackford County's (96.8\%), Randolph County's (95.0\%), and Adams County's (94.5\%); 81.3\% overall of Hoosier citizens identify as non-Hispanic White.

Table 3. Race

| Location | \% African <br> American | \% American <br> Indian/ Alaskan <br> Native | \% Asian | \% Native Hawaiian/ <br> Other Pacific <br> Islander | \% Non-Hispanic <br> White |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Indiana | 9.1 | 0.4 | 1.7 | 0.1 | 81.3 |
| Adams | 0.3 | 0.3 | 0.2 | 0.0 | 94.5 |
| Blackford | 0.5 | 0.2 | 0.2 | 0.0 | 96.8 |
| Delaware | 6.9 | 0.3 | 1.1 | 0.1 | 88.0 |
| Jay | 0.3 | 0.1 | 0.4 | 0.0 | 95.6 |
| Randolph | 0.5 | 0.4 | 0.2 | 0.0 | 95.0 |

Figure 3. Race


Population by ethnicity
Regarding ethnicity, $2.8 \%$ of Jay County residents identify as Hispanic in comparison with $6.2 \%$ of all Indiana citizens, $4.2 \%$ of Adam County residents, $3.0 \%$ of Randolph County residents, $1.9 \%$ of Delaware County residents and $1.1 \%$ of Blackford County residents.

Table 4. Ethnicity

| Location | \% Hispanic |
| :--- | :---: |
| Indiana | 6.2 |
| Adams | 4.2 |
| Blackford | 1.1 |
| Delaware | 1.9 |
| Jay | 2.8 |
| Randolph | 3.0 |

Figure 4. Ethnicity
Population by Ethnicity Percentages


Population by sex
Females comprise $50.8 \%$ of Jay County residents, which is identical to the statewide proportion (50.8\%) and nearly identical to Adams County and Blackford County (50.6\% each) and Randolph County (50.7\%). Delaware County's female population is $52.0 \%$.

Table 5. Sex

| Location | \% Female | \% Male |
| :--- | :---: | ---: |
| Indiana | 50.8 | 49.2 |
| Adams | 50.6 | 49.4 |
| Blackford | 50.6 | 49.4 |
| Delaware | 52.0 | 48.0 |
| Jay | 50.8 | 49.2 |
| Randolph | 50.7 | 49.3 |

Figure 5. Sex


Population by rurality
Regarding rurality, Jay County (55.7\%) has the second highest proportion of rural residents among the contiguous counties; only Randolph County (61.9\%) had more rural residents. Adams County has $53.7 \%$ rural residency, while Blackford County has $50.6 \%$. Less than thirty percent of Indiana (27.6\%) residents are rural, while even less in Delaware County (22.8\%) reside in rural areas.

## Table 6. Rurality

| Location | \% Rural | \% Non-rural |
| :--- | :---: | :---: |
| Indiana | 27.6 | 72.4 |
| Adams | 53.7 | 46.3 |
| Blackford | 50.6 | 49.4 |
| Delaware | 22.8 | 77.2 |
| Jay | 55.7 | 44.3 |
| Randolph | 61.9 | 38.1 |

Figure 6. Rurality


Low birthweight births
Of Jay County births, $8.0 \%$ were low birthweight births (<2500 grams), which is slightly lower than the State proportion (8.3\%). Adams County experienced only 6.9\% low birthweight births; $8.8 \%$ of Randolph County births were low birthweight while $9.3 \%$ of Blackford County and $9.5 \%$ of Delaware County births were low birthweight.

Table 7. Low birthweight (< 2500 grams) births

| Location | \% low birthweight births |
| :--- | :---: |
| Indiana | 8.3 |
| Adams | 6.9 |
| Blackford | 9.3 |
| Delaware | 9.5 |
| Jay | 8.0 |
| Randolph | 8.8 |

Figure 7. Low birthweight (< 2500 grams) births


## Teen births

The teen birth rate (per 1,000 population, females aged $15-19$ ) was 44 per 1,000 for Jay County, higher than the State teen birth rate (40 per 1,000). Blackford County's teen birth rate ( 52 per 1,000 ) aligns with its second highest low birthweight proportion, given that teen births are a risk factor for low birthweight babies.[4] Interestingly, Delaware County, which has the highest low birthweight rate among the contiguous counties, also has the lowest teen birth rate ( 25 per 1,000). Randolph County's teen birth rate is 46 per 1,000 and Adams County's teen birth rate is 31 per 1,000.

Table 8. Teen birth rate (births per 1,000 female population, ages 15-19)

| Location | Teen birth rate (per 1,000) |
| :--- | :---: |
| Indiana | 40.2 |
| Adams | 31.2 |
| Blackford | 52.4 |
| Delaware | 25.1 |
| Jay | 44.4 |
| Randolph | 45.8 |

Figure 8. Teen birth rate (births per 1,000 female population, ages 15-19)


Uninsured children
Adams County (10.8\%) and Jay County (8.4\%) have the highest proportions of uninsured children; both percentages are higher than the overall State percentage (8.3\%). Randolph County (8.1\%), Blackford County (7.6\%) and Delaware County (7.2\%) have the lowest rates.

Table 9. Uninsured children

| Location | \% uninsured children |
| :--- | :---: |
| Indiana | 8.3 |
| Adams | 10.8 |
| Blackford | 7.6 |
| Delaware | 7.2 |
| Jay | 8.4 |
| Randolph | 8.1 |

Figure 9. Uninsured children


Uninsured adults
One-fifth (20.0\%) of Hoosier adults are uninsured; Delaware County adults are uninsured at the same proportion (20.0\%). Slightly more adults are uninsured in Blackford County (20.9\%), while $21.2 \%$ are uninsured in Jay County, $21.6 \%$ in Randolph County and $23.4 \%$ in Adams County.

Table 10. Uninsured adults

| Location | \% uninsured adults |
| :--- | :---: |
| Indiana | 20.0 |
| Adams | 23.4 |
| Blackford | 20.9 |
| Delaware | 20.0 |
| Jay | 21.2 |
| Randolph | 21.6 |

Figure 10. Uninsured adults


High school graduation rate
Of the contiguous counties, Randolph has the lowest high school graduation rate (86.1\%), which is slightly lower than the overall Indiana rate (86.5\%). Eight-eight percent (88.0\%) of Jay County residents are high school graduates; the Delaware County rate is just higher at $89 \%$. Blackford County (92.5\%) and Adams County (92.8\%) have the highest high school graduation rates.

Table 11. High school graduation rate

| Location | \% graduated |
| :--- | :---: |
| Indiana | 86.5 |
| Adams | 92.8 |
| Blackford | 92.5 |
| Delaware | 89.0 |
| Jay | 88.0 |
| Randolph | 86.1 |

Table 11. High school graduation rate
High School Graduation Percentages


## Some college (post-secondary education)

Fewer adults aged 25-44 who reside in the contiguous counties have had some level of post-secondary education than Indiana residents overall (59.7\%). Delaware County residents have had slightly less post-secondary education (59.6\%); Just over one-half of Randolph County (51.5\%) and Adams County (50.5\%) residents had received some post-secondary education while less than one-half of Jay County (44.4\%) and Blackford County (43.5\%) had obtained some level of post-secondary education.

Table 12. Some college education (post-secondary education)

| Location | \% some college |
| :--- | :---: |
| Indiana | 59.7 |
| Adams | 50.5 |
| Blackford | 43.5 |
| Delaware | 59.6 |
| Jay | 44.4 |
| Randolph | 51.5 |

Figure 12. Some college education (post-secondary education)


## English proficiency

All of the contiguous counties have higher levels of proficiency in English than the State of Indiana overall (98.4\%): Adams County, 98.0\%; Randolph County, 99.5\%; Delaware County, 99.6\%; Blackford County, 99.9\%). Almost one hundred percent (99.6\%) of Jay County residents have proficiency in English.

Table 13. English proficiency

| Location | \% Proficient in English |
| :--- | :---: |
| Indiana | 98.4 |
| Adams | 98.0 |
| Blackford | 99.9 |
| Delaware | 99.6 |
| Jay | 99.6 |
| Randolph | 99.5 |

Figure 13. English proficiency


Unemployment
Jay County (7.3\%) and Adams County (7.8\%) both experience levels of unemployment lower than the State (8.4\%). The other contiguous counties have higher levels of unemployment: Delaware (9.5\%); Randolph (9.7\%); Blackford (10.6\%).

Table 14. Unemployment

| Location | \% unemployment |
| :--- | :---: |
| Indiana | 8.4 |
| Adams | 7.8 |
| Blackford | 10.6 |
| Delaware | 9.5 |
| Jay | 7.3 |
| Randolph | 9.7 |

Figure 14. Unemployment


Median household income
Indiana residents have a higher median household income $(\$ 46,954)$ than the contiguous counties: Adams County, \$42,944; Jay County, \$42,410; Randolph County, \$40,656; Blackford County, \$38,927; Delaware County, \$37,339.

Table 15. Median household income

| Location | Household Income |
| :--- | :---: |
| Indiana | $\$ 46,954$ |
| Adams | $\$ 42,944$ |
| Blackford | $\$ 38,927$ |
| Delaware | $\$ 37,339$ |
| Jay | $\$ 42,410$ |
| Randolph | $\$ 40,656$ |

Figure 15. Median household income


## Children living in poverty

Fewer Hoosier children live in poverty (22.1\%) than in the contiguous counties:
Blackford County, 25.0\%; Jay County, 25.0\%; Delaware County, 26.5\%; Randolph County, 27.3\%;
Adams County, 33.2\%.

Table 16. Children living in poverty

| Location | \% Children in Poverty |
| :--- | :---: |
| Indiana | 22.1 |
| Adams | 33.2 |
| Blackford | 25.0 |
| Delaware | 26.5 |
| Jay | 25.8 |
| Randolph | 27.3 |

Figure 16. Children living in poverty


Children eligible for free lunch
Over forty percent (40.0\%) of Blackford County, Randolph County and Delaware County children are eligible to receive free lunches ( $43.0 \%, 42.3 \%, 41.9 \%$, respectively). Adams County has fewer children eligible for free lunch (31.7\%) than the State-wide proportion of children eligible to receive free lunch (38.9\%).

Table 17. Children eligible for free lunch

| Location | \% free lunch |
| :--- | :---: |
| Indiana | 38.9 |
| Adams | 31.7 |
| Blackford | 43.0 |
| Delaware | 41.9 |
| Jay | 41.4 |
| Randolph | 42.3 |

Figure 17. Children eligible for free lunch


Children in single parent households
Nearly one-third of Hoosier children (32.8\%) reside in single parent households in comparison with $39.2 \%$ of Blackford County children, $37.9 \%$ of Delaware County children, $35.0 \%$ of Randolph County children, $30.2 \%$ of Jay County children and $16.1 \%$ of Adams County children.

Table 18. Children in single parent household

| Location | \% children in single-parent households |
| :--- | :---: |
| Indiana | 32.8 |
| Adams | 16.1 |
| Blackford | 39.2 |
| Delaware | 37.9 |
| Jay | 30.2 |
| Randolph | 35.0 |

Figure 18. Children in single parent household


## Population morbidity

## Diabetes prevalence

Since increasing age is a risk factor for development of diabetes mellitus [5], it is not surprising that the prevalence of diabetes mellitus is highest among those contiguous counties with the highest populations aged 65 and over. Slightly over twelve percent (12.2\%) of both Jay County and Blackford County residents are diabetic; Blackford County has the highest proportion of senior citizens. Randolph County has the highest prevalence of diabetes (13.0\%) and the second highest population of seniors. Delaware County's (10.5\%) proportion of diabetic residents is identical to the State proportion. Adams County has the lowest diabetic prevalence (8.9\%) as well as the lowest proportion of senior residents.

Table 1. Diabetes prevalence

| Location | \% diabetic |
| :--- | :---: |
| Indiana | 10.5 |
| Adams | 8.9 |
| Blackford | 12.2 |
| Delaware | 10.5 |
| Jay | 12.2 |
| Randolph | 13.0 |

Figure 1. Diabetes prevalence


HIV prevalence
Regarding HIV prevalence rates, 62 per 100,000 Jay County residents are living with an HIV diagnosis which is less than half the State-wide rate (159 per 100,000). HIV prevalence in Adams County is 21 per 100,000; 49 per 100,000 in Randolph County; and 98 per 100,000 in Delaware County. HIV prevalence data from Blackford County are suppressed per Centers of Disease Control guidelines to protect privacy.

Table 2. HIV prevalence

| Location | HIV rate per 100,000 |
| :--- | :---: |
| Indiana | 159 |
| Adams | 21 |
| Blackford | - |
| Delaware | 98 |
| Jay | 62 |
| Randolph | 49 |

Figure 2. HIV prevalence


Poor or fair health
At 26.0\%, Blackford County residents had the highest response rate of poor or fair health (vs. good, very good, excellent). Jay County residents had the next highest poor/fair response rate at $20.3 \%$ while $20.1 \%$ of Randolph County residents and $16.1 \%$ of Delaware County residents responded this way. Only Adams County residents had a lower proportion of these responses (13.3\%) than the overall State rate (16.1\%).

Table 3. Poor or fair health

| Location | \% poor or fair health |
| :--- | :---: |
| Indiana | 16.1 |
| Adams | 13.3 |
| Blackford | 26.0 |
| Delaware | 20.1 |
| Jay | 20.3 |
| Randolph | 20.1 |

Figure 3. Poor or fair health


Poor physical health days
Of all the contiguous counties, only Adams County reported a fewer average of poor physical health days (2.5) in comparison with the State average (3.6). Jay County residents reported 4.0 poor physical health days, Delaware County residents reported 4.6, Randolph County 4.0 and Blackford County 5.2 poor physical health days.

Table 4. Poor physical health days

| Location | Average physically unhealthy days |
| :--- | :---: |
| Indiana | 3.6 |
| Adams | 2.5 |
| Blackford | 5.2 |
| Delaware | 4.6 |
| Jay | 4.0 |
| Randolph | 5.0 |

Figure 4. Poor physical health days


Poor mental health days
As with poor physical health, Adams County reported the least number of poor mental health days (2.8) and Blackford County residents reported the greatest number (5.0). Randolph County reported slightly fewer poor mental health days (3.6) compared to the statewide average (3.7). Jay County reported 4.0 average poor mental health days and Delaware County residents reported 4.9.

Table 5. Poor mental health days

| Location | Average mentally unhealthy days |
| :--- | :---: |
| Indiana | 3.7 |
| Adams | 2.8 |
| Blackford | 5.0 |
| Delaware | 4.9 |
| Jay | 4.0 |
| Randolph | 3.6 |

Figure 5. Poor mental health days


Obesity
In alignment with Indiana's obesity rate (31.4\%), nearly one-third of contiguous County residents are obese. This high obesity rate undoubtedly contributes to the diabetes rates, since being overweight is a key risk factor for development of diabetes.[5] Randolph County has the highest proportion (34.8\%) but Jay County's rate is not appreciably lower - 34.6\%. Just over one-third of Blackford County (33.5\%) and Delaware County (33.2\%) residents are obese; in Adams County, $30.4 \%$ are obese.

## Table 6. Obesity

| Location | \% obese |
| :--- | :---: |
| Indiana | 31.4 |
| Adams | 30.4 |
| Blackford | 33.5 |
| Delaware | 33.2 |
| Jay | 34.6 |
| Randolph | 34.8 |

Figure 6. Obesity
Obesity Percentages


Sexually transmitted infections (chlamydia)
The incidence rate for chlamydia infection is lowest in Adams County (131 per 100,000). Although Jay County has the next lowest rate (235 per 100,000) it is still nearly double that of Adams County. Blackford County's rate (254 per 100,000) is similar to Jay County's rate but Randolph County's rate (391 per 100,000) is substantially higher. Delaware County's rate (651 per 100,000 is substantially higher than the Statewide rate of 427 per 100,000.

Table 7. Sexually transmitted infections (chlamydia)

| Location | Sexually transmitted infections (chlamydia) per 100,000 |
| :--- | :---: |
| Indiana | 427 |
| Adams | 131 |
| Blackford | 254 |
| Delaware | 651 |
| Jay | 235 |
| Randolph | 391 |

Figure 7. Sexually transmitted infections (chlamydia)


## Population Mortality

Premature death
Indiana's overall age-adjusted premature (residents under the age of 75) mortality rate is 382 per 100,000. Two of the contiguous counties had lower rates, Adams County ( 319 per 100,000 ) and Randolph County ( 373 per 100,000. Jay County's rate is 410 per 100,000;

Delaware County's is 417 per 100,000; and Blackford County's rate is 493 per 100,000.

Table 1. Premature death

| Location | Premature deaths per 100,000 |
| :--- | :---: |
| Indiana | 382 |
| Adams | 319 |
| Blackford | 493 |
| Delaware | 417 |
| Jay | 410 |
| Randolph | 373 |

Figure 1. Premature death


Infant mortality
Due to data privacy constraints, infant mortality rates are reported only for Indiana (8 per 1,000 live births), Adams County ( 9 per 1,000 live births) and Delaware County (10 per 1,000 live births).

Table 2. Infant Mortality

| Location | Infant deaths per 1,000 live births |
| :--- | :---: |
| Indiana | 8 |
| Adams | 9 |
| Blackford | - |
| Delaware | 10 |
| Jay | - |
| Randolph | - |

Figure 2. Infant mortality


## Child mortality

Child mortality data were not reported for Blackford County or Randolph County. Jay County had the lowest child mortality rate (52 per 100,000) compared to Delaware County (67 per 100,000), Indiana overall (64 per 100,000) and Adams County (104 per 100,000).

Table 3. Child mortality

| Location | Child deaths per 100,000 |
| :--- | :---: |
| Indiana | 64 |
| Adams | 104 |
| Blackford | - |
| Delaware | 67 |
| Jay | 52 |
| Randolph | - |

Figure 3. Child mortality
Child Mortality per 100,000


Alcohol-impaired driving deaths
The proportion of deaths in which alcohol was a factor are more than ten percent higher in Jay County (35.3\%) than in the State overall (26.2\%). The proportion is also higher in Delaware County (32.1\%) but lower in Randolph County (23.5\%) and much lower in Blackford County (10.0\%) and Adams County (6.3\%).

Table 4. Alcohol-impaired driving deaths

| Location | \% Alcohol-impaired driving deaths |
| :--- | :---: |
| Indiana | 26.2 |
| Adams | 6.3 |
| Blackford | 10.0 |
| Delaware | 32.1 |
| Jay | 35.3 |
| Randolph | 23.5 |

Figure 4. Alcohol-impaired driving deaths


Motor vehicle crash death rate
Of the contiguous counties, Jay County has the second highest motor vehicle crash death rate (19 per 100,000); Blackford County's rate is highest at 21 per 100,000. Randolph County's rate (16 per 100,000) and Adams County's rate (15 per 100,000) exceed the State rate (14 per 100,000); only Delaware County's rate (11 per 100, 0000) is lower.

Table 5. Motor vehicle crash death rate

| Location | Motor vehicle crash deaths per 100,000 |
| :--- | :---: |
| Indiana | 14 |
| Adams | 15 |
| Blackford | 21 |
| Delaware | 11 |
| Jay | 19 |
| Randolph | 16 |

Figure 5. Motor vehicle crash death rate


Drug poisoning deaths
Jay County (10 per 100,000), Adams County and Randolph County (both 8 per 100,000) drug poisoning mortality rates are lower than the statewide rate of 12 per 100,000. Delaware County's rate is 15 per 100,000 and the Blackford County rate is nearly double the State rate at 23 per 100,000.

Table 6. Drug poisoning deaths

| Location | Drug poisoning deaths per 100,000 |
| :--- | :---: |
| Indiana | 12 |
| Adams | 8 |
| Blackford | 23 |
| Delaware | 15 |
| Jay | 10 |
| Randolph | 8 |

Figure 6. Drug poisoning deaths


Injury deaths
Both Jay County ( 66 per 100,000) and Blackford County ( 73 per 100,000 ) had higher injury death rates than the statewide rate of 61 per 100,000. Delaware County, Randolph County and Adams County had lower injury mortality than the State (58 per 100,000; 56 per 100,000; and 43 per 100,000, respectively).

Table 7. Injury deaths

| Location | Injury deaths per 100,000 |
| :--- | :---: |
| Indiana | 61 |
| Adams | 43 |
| Blackford | 73 |
| Delaware | 58 |
| Jay | 66 |
| Randolph | 56 |

Figure 7. Injury deaths


## Healthcare workforce and utilization

## Healthcare workforce

With the exception of Delaware County, the contiguous counties have lower levels of primary care workforce providers than Indiana. When considering the category Primary Care Providers, the State's ratio of persons per providers is 1538:1; Delaware County has more providers at 1188 persons per provider (1188:1); Blackford County's ratio of persons to provider is 1799:1; Jay County and Adams County primary care providers must provide service at ratios of 3044 persons per provider and 3124 persons per provider, respectively; and Randolph County providers must provide care for 4350 persons per provider. In the category Other Primary Care Providers, inequity is reduced for Randolph County as there is one provider per 3226 persons (3226:1); in Adams County, 3124 persons per provider (3124:1); in Blackford County, 3125 persons per provider (3125:1); in Jay County, there are 2670 persons per provider (2670:1) while Delaware County has even fewer persons per provider (1833:1) than the State overall (2044:1). Mental health providers represent the profession most lacking in the healthcare workforce, especially for Adams County (6957:1) and Randolph County (6536:1). Blackford County has an astonishing 12,665 persons per mental health provider ratio (12665:1). Jay County's mental health providers bear nearly double the load than the overall ratio for the State: there are 1800 persons per mental health provider in Jay County while there are 916 persons per provider for Indiana. Delaware has the most favorable ratio of all: 614 persons per mental health provider. As with other healthcare professions, there are more dentists in Delaware County per person (1976:1) than in Indiana (2072:1) and the other contiguous Counties. In Adams County, there are 2484 persons per dentist (2484:1); in Blackford County, 4221 persons per dentist (4221:1); in Jay County, 4231 persons per dentist (4231:1); and in Randolph County, over 5000 persons per dentist (5228:1).

Table 1. Primary care providers ratio

| $\underline{\text { Location }}$ | $\underline{\text { PCP ratio }}$ |
| :--- | :--- |
| Indiana | $\underline{1538: 1}$ |
| Adams | $\underline{3124: 1}$ |
| Blackford | $\underline{1799: 1}$ |
| Delaware | $\underline{1188: 1}$ |
| Jay | $\underline{3044: 1}$ |
| Randolph | $\underline{4350: 1}$ |

Figure 1. Primary care providers ratio


Table 2. Other primary care providers ratio

| Location | Other PCP ratio |
| :--- | :--- |
| Indiana | $2044: 1$ |
| Adams | $3124: 1$ |
| Blackford | $3125: 1$ |
| Delaware | $1833: 1$ |
| Jay | $2670: 1$ |
| Randolph | $3226: 1$ |

Figure 2. Other primary care providers ratio


Table 3. Mental health providers (MHP) ratio

| Location | MHP ratio |
| :--- | :--- |
| Indiana | $916: 1$ |
| Adams | $6957: 1$ |
| Blackford | $12665: 1$ |
| Delaware | $614: 1$ |
| Jay | $1800: 1$ |
| Randolph | $6536: 1$ |

Figure 3. Mental health providers (MHP) ratio


Table 4. Dental providers ratio

| Location | Dentist ratio |
| :---: | :---: |
| Indiana | $2072: 1$ |
| Adams | $2484: 1$ |
| Blackford | $4221: 1$ |
| Delaware | $1976: 1$ |
| Jay | $4321: 1$ |
| Randolph | $5228: 1$ |

Figure 4. Dental providers ratio


## Preventable hospital stays

Preventable hospital stays related to ambulatory care-sensitive conditions include: convulsions, chronic obstructive pulmonary disease, bacterial pneumonia, asthma, congestive heart failure, hypertension, angina, cellulitis, diabetes, gastroenteritis, kidney/urinary Infection, and dehydration and are measured as the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 Medicare enrollees.[6] Jay County (90 per 1,000), Randolph County (91 per 1, 0000), Adams County ( 97 per 1,000) and Blackford County (106 per 100,000 have stay rates higher than the State of Indiana rate (76 per 1,000). Only Delaware County exhibited a lower rate ( 67 per 1,000). It is possible that these higher rates may be linked to the elderly populations in these counties since the many of the ambulatory care-sensitive conditions are common to those aged 65 and over.

## Table 5. Preventable hospital stays

| Location | Preventable hospitalizations per 1,000 |
| :--- | :---: |
| Indiana | 76 |
| Adams | 97 |
| Blackford | 106 |
| Delaware | 67 |
| Jay | 90 |
| Randolph | 91 |

Figure 5. Preventable hospital stays


## Diabetic screening

The percentage of Medicare enrollees who receive HbA1c monitoring is lowest in Jay County ( $82.7 \%$ ); this is lower than the statewide rate of $83.8 \%$. Blackford County diabetic screening for this population is $84.1 \%$. In Delaware County, $84.7 \%$ are screened and in Randolph County $87.4 \%$ are screened and in Adams County $88.7 \%$ are screened. These screening rates may have some influence over the high rate of diabetes in the contiguous counties.

Table 6. Diabetic screening

| Location | \% Medicare enrollees who received diabetic screening |
| :--- | :--- |
| Indiana | 83.8 |
| Adams | 88.7 |
| Blackford | 84.1 |
| Delaware | 84.7 |
| Jay | 82.7 |
| Randolph | 87.4 |

Figure 6. Diabetic screening


## Mammography screening

Adams County (50.5\%), Blackford County (56.8\%) and Jay County (60.4\%) have lower mammography screening rates for female Medicare enrollees than the State proportion (61.3\%). Randolph County and Delaware County mammography screening rates are over sixtyfour percent (64.1\% and 64.8\%, respectively).

Table 7. Mammography screening

| Location | \% female Medicare enrollees who received mammography screening |
| :--- | :---: |
| Indiana | 61.3 |
| Adams | 50.5 |
| Blackford | 56.8 |
| Delaware | 64.8 |
| Jay | 60.4 |
| Randolph | 64.1 |

Figure 7. Mammography screening


Health care costs
Blackford County spends more $(\$ 10,541)$ on Medicare enrollees than that State of Indiana does overall $(\$ 9,901)$. Jay County $(\$ 9,076)$ and the other contiguous counties spend slightly less than the State: Randolph County, \$9,799; Delaware County, 9,522; Adams County, $\$ 9,010$.

Table 8. Health care costs

| Location | Medicare spending per enrollee |
| :--- | :---: |
| Indiana | $\$ 9,901$ |
| Adams | $\$ 9,010$ |
| Blackford | $\$ 10,541$ |
| Delaware | $\$ 9,552$ |
| Jay | $\$ 9,076$ |
| Randolph | $\$ 9,799$ |

Figure 8. Healthcare costs


Could not see doctor due to cost
Adams County was the only contiguous county to have a lower percentage that could not see a physician due to cost (9.6\%) than the overall State proportion (14.4\%). Fifteen percent (15\%) of Randolph County residents couldn't see a doctor due to cost while $16.4 \%$ of Delaware County residents, $17.9 \%$ of Jay County residents and $23.5 \%$ of Blackford County residents were prevented from seeing a doctor due to cost.

Table 9. Could not see doctor due to cost

| Location | \% could not see doctor due to cost |
| :--- | :---: |
| Indiana | 14.4 |
| Adams | 9.6 |
| Blackford | 23.5 |
| Delaware | 16.4 |
| Jay | 17.9 |
| Randolph | 15.0 |

Figure 9. Could not see doctor due to cost


## Social/environmental factors affecting health

Smoking
Smoking in Indiana remains a serious problem, and Adams County (20.8\%) is the only one of the contiguous counties that had a lower proportion of current adult smokers than the statewide rate (21.9\%). Nearly thirty percent (29.4\%) of Blackford County residents are smokers and over one-quarter (25.5\%) of Jay County and Delaware County (25.2\%) residents are smokers. In Randolph County, 23.5\% of adults are current smokers.

Table 1. Smoking

| Location | \% adult smokers |
| :--- | :---: |
| Indiana | 22.8 |
| Adams | 20.8 |
| Blackford | 29.4 |
| Delaware | 25.2 |
| Jay | 25.6 |
| Randolph | 23.5 |

Figure 1. Smoking


## Physical inactivity

High rates of physical activity are certainly linked to high obesity rates; all of the contiguous counties have rates of physical inactivity higher than the statewide rate (27.9\%): Adams County, 28.5\%, Blackford County, 30.7\%; Delaware County, 31.5\%, Jay County, 32.0\%, Randolph County, 38.8\%

Table 2. Physical inactivity

| Location | \% Physically Inactive |
| :--- | :---: |
| Indiana | 27.9 |
| Adams | 28.5 |
| Blackford | 30.7 |
| Delaware | 31.5 |
| Jay | 32.0 |
| Randolph | 38.8 |

Figure 2. Physical inactivity


## Excessive drinking

With the exception Randolph County (16.0\%), all of the contiguous counties exhibit excessive drinking rates lower than the overall State of Indiana rate (15.9\%). Jay County has the lowest rate of excessive drinking (10.2\%), followed by Delaware County (11.9\%), Adams County (13.5\%) and Blackford County (14.3\%).

Table 3. Excessive drinking

| Location | \% excessive drinking |
| :--- | :---: |
| Indiana | 15.9 |
| Adams | 13.5 |
| Blackford | 14.3 |
| Delaware | 11.9 |
| Jay | 10.2 |
| Randolph | 16.0 |

Figure 3. Excessive drinking


## Access to exercise opportunities

All of the contiguous counties have fewer opportunities to access exercise than the level of opportunities for the State overall (63.9\%), but Jay County residents have by far the fewest opportunities to access exercise (14.9\%). Over sixty percent (61.1\%) of Delaware County residents have access to exercise; over fifty percent of both Blackford County and Adams County have access to exercise ( $56.8 \%$ and $56.3 \%$, respectively); less than one-third ( $27.1 \%$ ) of Randolph County residents have access to exercise opportunities.

Table 4. Access to exercise opportunities

| Location | \% with access |
| :--- | :---: |
| Indiana | 63.9 |
| Adams | 56.3 |
| Blackford | 56.8 |
| Delaware | 61.1 |
| Jay | 14.9 |
| Randolph | 27.1 |

Figure 4. Access to exercise opportunities


## Food insecurity

Only Delaware County (17.5\%) residents have a greater proportion of food insecurity than overall Hoosier residents (16.3\%). Just over fifteen percent (15.3\%) of Blackford County residents experience food insecurity while just under fifteen percent (14.7\%) of Randolph County residents are food insecure. The populace of both Adams County and Jay County experience food insecurity at $13.1 \%$.

Table 5. Food insecurity

| Location | \% food insecure |
| :--- | :---: |
| Indiana | 16.3 |
| Adams | 13.1 |
| Blackford | 15.3 |
| Delaware | 17.5 |
| Jay | 13.1 |
| Randolph | 14.7 |

Figure 5. Food insecurity


Limited access to healthy foods
Jay County has the highest proportion (8.9\%) of residents who have limited access to healthy foods followed by Randolph County (8.8\%) and Delaware County (7.0\%); all have rates higher than the State percentage, $6.3 \%$. In Adams County, $2.8 \%$ of residents have limited access to healthy foods while in Blackford County only $0.6 \%$ have limited access.

Table 6. Limited access to healthy foods

| Location | \% with limited access |
| :--- | :---: |
| Indiana | 6.3 |
| Adams | 2.8 |
| Blackford | 0.6 |
| Delaware | 7.0 |
| Jay | 8.9 |
| Randolph | 8.8 |

Figure 6. Limited access to healthy foods


Inadequate social/emotional support
At 26.9\%, Blackford County has the highest percentage of residents lacking social/emotional support while $24.6 \%$ percent of Jay County residents receive inadequate social support. In Delaware County, $18.4 \%$ of residents lack social support which is less than the statewide proportion of $20.1 \%$.

Table 7. Inadequate social support

| Location | \% inadequate social support |
| :--- | :---: |
| Indiana | 20.1 |
| Adams | 23.6 |
| Blackford | 26.9 |
| Delaware | 18.4 |
| Jay | 24.6 |
| Randolph | 20.6 |

Figure 7. Inadequate social support


Controlled substances dispensed
Over 250,000 controlled substances were dispensed in Delaware County $(259,647)$ while in Adams County, 43,357 were dispensed; in Blackford County, 32,327; in Jay County, 42,115 and in Randolph County, 53,483.

Table 8. Number of controlled substances dispensed

| Location | Number of controlled substances dispensed |
| :--- | :---: |
| Adams | 45,357 |
| Blackford | 32,327 |
| Delaware | 259,647 |
| Jay | 42,115 |
| Randolph | 53,483 |
| Adams | 45,357 |

Figure 8. Number of controlled substances dispensed


Substance abuse treatment admissions
In Delaware County the number of persons admitted for substance abuse treatment was 1,037 . The greatest number of admissions in the lesser-populated counties was in Randolph County (192); Adams County had 151 substance abuse treatment admissions. Jay County had slightly less than 100 substance abuse treatment admissions (98) while Blackford County had 58 substance abuse treatment admissions.

Table 9. Number of substance abuse treatment admissions

| Location | Number of substance abuse treatment admissions |
| :--- | :---: |
| Adams | 151 |
| Blackford | 58 |
| Delaware | 1,037 |
| Jay | 98 |
| Randolph | 192 |

Figure 9. Number of substance abuse treatment admissions

# Number of Substance Abuse Treatment Admissions 



Arrests for operating while intoxicated (OWI)
In 2012, over 400 arrests for OWI occurred in Delaware County (405); in Adams County, 147; in Blackford County, 38; in Jay County, 73; and in Randolph County, 29 there were 29 OWI arrests.

Table 10. Number of arrests for OWI

| Location | Number of arrests for OWI |
| :--- | :---: |
| Adams | 147 |
| Blackford | 38 |
| Delaware | 405 |
| Jay | 73 |
| Randolph | 29 |

Figure 10. Number of arrests for OWI


Arrests for public intoxication (PI)
Except for Delaware County (248), Jay County had the greatest number of public intoxication (PI) arrests (88). The other contiguous counties arrested far fewer people for PI:

Adams County, 32; Blackford County, 13; Randolph County, 14.

Table 11. Number of arrests for public intoxication

| Location | Number of arrests for public intoxication |
| :--- | :---: |
| Adams | 32 |
| Blackford | 13 |
| Delaware | 248 |
| Jay | 88 |
| Randolph | 14 |

Figure 11. Number of arrests for public intoxication


## Arrests for liquor law violations

Delaware County arrested 205 people for liquor law violations; the remainder of the counties arrested approximately one-quarter of that number. Sixty-seven (67) were arrested in Adams County while only 12 were arrested in Blackford County. Jay County arrested 54 for liquor law violations; Randolph County had nearly the same number of liquor law violations (56).

Table 12. Number of arrests for liquor law violations

| Location | Number of arrests for liquor law violations |
| :--- | :---: |
| Adams | 67 |
| Blackford | 12 |
| Delaware | 205 |
| Jay | 54 |
| Randolph | 56 |

Figure 12. Number of arrests for liquor law violations


Arrests for possession, sale, or manufacture of marijuana
As with alcohol-related arrests, the number of arrests related to possession, sale or manufacture of marijuana were much higher in Delaware County (159) than in the contiguous counties but Jay County had the next-highest number of arrests related to marijuana (70). In Adams County, there were 45 marijuana-related arrests; in Blackford, 22; and in Randolph, 35.

Table 13. Number of arrests for possession, sale, or manufacture of marijuana

| Location | Number of arrests for possession, sale or manufacture of marijuana |
| :--- | :---: |
| Adams | 45 |
| Blackford | 22 |
| Delaware | 159 |
| Jay | 70 |
| Randolph | 35 |

Figure 13. Number of arrests for possession, sale, or manufacture of marijuana


Arrests for possession, sale, or manufacture of cocaine or opioids
Besides Delaware County (35), Jay County (17) had the highest number of arrests related to cocaine or opioids. Adams County and Blackford County both arrested eight (8) people for cocaine- or opioid-related possession, sales or manufacture while Randolph County had 12 of these arrests.

Table 14. Number of arrests for possession, pale or manufacture of cocaine or opioids

| Location | Number of arrests for possession, pale or manufacture of cocaine or opioids |
| :--- | :---: |
| Adams | 8 |
| Blackford | 8 |
| Delaware | 35 |
| Jay | 17 |
| Randolph | 12 |

Figure 14. Number of arrests for possession, pale or manufacture of cocaine or opioids


Arrests for possession, sale, or manufacture of synthetic drugs
Delaware County had the greatest number (63) of arrests for possession, sale, or manufacture of synthetic drugs (e.g., methamphetamine). Jay County arrested 44 people for these offenses, while Adams County arrested 20; Blackford arrested 31; and Randolph had the lowest number of arrests for possession, sale, or manufacture of synthetic drugs with six (6) arrests.

Table 15. Number of arrests for possession, sale, or manufacture of synthetic drugs

| Location | Number of arrests for possession, sale, or manufacture of synthetic drugs |
| :--- | :---: |
| Adams | 20 |
| Blackford | 31 |
| Delaware | 63 |
| Jay | 44 |
| Randolph | 6 |

Figure 15. Number of arrests for possession, sale, or manufacture of synthetic drugs


Arrests for possession, sale, or manufacture of other drugs
In this category, Delaware County had the least number of arrests (2). Randolph County arrested the greatest number (13) of people for possession, sale, or manufacture of other drugs; Adams County had ten (10) arrests for these offenses; Blackford County had five (5) arrests and Jay County arrested six (5) for possession, sale, or manufacture of other drugs.

Table 16. Number of arrests for possession, sale, or manufacture of other drugs

| Location | Number of arrests for possession, sale, or manufacture of other drugs |
| :--- | :---: |
| Adams | 10 |
| Blackford | 5 |
| Delaware | 2 |
| Jay | 6 |
| Randolph | 13 |

Figure 16. Number of arrests for possession, sale, or manufacture of other drugs


Violent crime
Delaware County's violent crime rate ( 378 per 100,000) is higher than the Indiana rate (329 per 100,000). The Blackford County rate (120 per 100,000) is nearly less than one-ha If that State rate, while the Jay County rate (68 per 100,000) is less than one-quarter the State rate. Randolph County has the lowest violent crime rate (45 per 100,000) among the contiguous counties. Violent crime data for Adams County were unreported.

Table 17. Violent crime

| Location | Violent crime per 100,000 |
| :--- | :---: |
| Indiana | 329 |
| Adams | - |
| Blackford | 120 |
| Delaware | 378 |
| Jay | 68 |
| Randolph | 46 |

Figure 17. Violent crime


Homicide
Delaware County is the only contiguous county which reported a homicide rate (3 per 100,000 ); the Indiana homicide rate is 5 per 100,000.

Table 18. Homicide

| Location | Homicide per 100,000 |
| :--- | :---: |
| Indiana | 5.4 |
| Adams | - |
| Blackford | - |
| Delaware | 3.2 |
| Jay | - |
| Randolph | - |

Figure 18. Homicide


Air pollution - particulate matter
All of the contiguous counties, with the exception of Adams County, had the same level of particulate matter as the State measurement: 13.5 micrograms per cubic meter (PM2.5). Adams County's level is 13.4 PM2.5.

Table 19. Air pollution - particulate matter

| Location | Average daily PM2.5 |
| :--- | :---: |
| Indiana | 13.5 |
| Adams | 13.4 |
| Blackford | 13.5 |
| Delaware | 13.5 |
| Jay | 13.5 |
| Randolph | 13.5 |

Figure 19. Air pollution - particulate matter


Severe housing problems
Delaware County had the highest percentage (17.6\%) of severe housing problems among the contiguous counties, followed by Adams County (17.1\%). Randolph County (11.4\%), Jay County (11.0\%) and Blackford County (9.6\%) all have lower percentages of severe housing problems than Indiana overall (13.6\%).

Table 20. Severe housing problems.

| Location | \% severe housing problems |
| :--- | :---: |
| Indiana | 13.6 |
| Adams | 17.1 |
| Blackford | 9.6 |
| Delaware | 17.6 |
| Jay | 11.0 |
| Randolph | 11.4 |

Figure 20. Severe housing problems


Driving alone to work
Jay County residents drive alone to work at the same rate (82.9\%) as all other Hoosier commuters Statewide. Eighty-two percent (82.0\%) of Randolph County commuters drive alone, while 78.4\% of Adams County residents do, $87.2 \%$ of Blackford County residents do, and $78.8 \%$ of Delaware County residents drive alone to work.

Table 21. Driving alone to work

| Location | \% who drive alone |
| :--- | :---: |
| Indiana | 82.9 |
| Adams | 78.4 |
| Blackford | 87.2 |
| Delaware | 78.8 |
| Jay | 82.9 |
| Randolph | 82.0 |

Figure 21. Driving alone to work

## Driving Alone to Work Percentages



## Long commute - driving alone

Residents of Blackford County and Randolph County make a higher percentage of long commutes while driving alone ( $38.6 \%$ and $33.2 \%$, respectively) than other Indiana commuters (29.8\%). Nearly thirty percent (29.8\%) of Jay County residents make long commutes while driving alone; $23.2 \%$ of Adams County residents do and $19.5 \%$ of Delaware County residents do so.

Table 22. Long commute-driving alone

| Location | \% long commute, driving alone |
| :--- | :---: |
| Indiana | 29.8 |
| Adams | 23.2 |
| Blackford | 38.6 |
| Delaware | 19.5 |
| Jay | 27.4 |
| Randolph | 33.2 |

Figure 22. Long commute - driving alone


## Summary

According to Health Resources and Services Administration (HRSA) data, Jay County is a designated medically underserved area (MUA)[1], a primary medical care health professional shortage area (HPSA)[2] and a mental health provider shortage area (MPSA)[2]. Health Resources and Services Administration HPSA and MPSA designations are based upon geography (county or service area), population (e.g., low income) or facility (e.g., federally qualified health center); HRSA also designates areas which suffer shortages of dental providers (DPSA)[2]. Medically Underserved Areas/Populations are areas or populations designated by HRSA as having too few primary care providers, high infant mortality, high poverty or a high elderly population[1]. The counties adjacent to Jay County - Adams, Blackford, Delaware and Randolph Counties - are all designated MUA, HPSA and MPSA shortage areas. Delaware County and Randolph County are designated DPSA areas as well.

As a whole, Jay and contiguous Counties Adams, Blackford, Delaware and Randolph are not highly populated and have similar age and sex distribution characteristics as the remainder of Indiana[7, 8]. However, the region comprised of these Counties is markedly less racially and ethnically diverse than Indiana overall[7]. Except for Delaware County, the region is decidedly more rural[9]. Sixty percent $(3 / 5)$ of these Counties have elevated teen birth rates when compared to the State overall (40 per 100,000), including Jay County (44 per 100,000) [6]. Eighty percent (4/5) of these Counties, including Jay County ( $21.2 \%$ ), have higher proportions of uninsured adults than Indiana (20.0\%)[10]. The proportion of uninsured children is particularly high in Adams County (10.8\%, compared to State percentage of $8.3 \%$ )[10]. Although all of the Counties except Randolph County (86.1\%) show higher rates of high school graduation[11] than Indiana (86.5\%) overall, the proportion of residents obtaining at least some level of postsecondary education is lower throughout the region. This is especially true for Jay (44.4\%) and Blackford (43.5\%) counties, where less than one-half of residents have obtained at least some level of college education. Rates of proficiency in English[12] are near one hundred percent in the region. Although Jay County's unemployment rate (7.3\%) [6] is lower than the State-wide rate (8.4\%), sixty percent (3/5) of the contiguous Counties experience higher rates of unemployment than the State rate. Lower levels of household income[13] may reflect higher
rates of unemployment as the entire region has lower household income than the State $(\$ 46,954)$ overall. Except for Jay County (30.2\%) and Adams County (16.1\%), over one-third of the area's children reside in single parent households[12], a key indicator for poverty[14]. As a probable consequence of reduced employment and household income and the increased percentage of single parent households, more children live in poverty[13] in this region than in Indiana overall (22.1\%). Over one-quarter (25.8\%) of Jay County children live in poverty[13]. Mirroring the region's poverty, in four of the five contiguous Counties, over forty percent of area children receive free school lunches; 41.\% of Jay County children quality for free lunches[6].

Regarding morbidity, the prevalence of diabetes[15] is higher for three of the five contiguous Counties (Blackford, 12.2\%; Jay, 12.2\%; and Randolph, 13.0\%) than in the State (10.5\%) as a whole; Delaware County's percentage (10.5\%) of diabetic residents is identical. The prevalence of HIV[6] is much lower in the area than in Indiana (159 per 100,000); the Jay County rate (62 per 100,000) is less than one-half of the State rate. Except for Adams County (13.1\%), all Counties reported higher percentages of poor or fair health[6] compared to the State (16.1\%); just over twenty percent (20.1\%) of Jay County residents reported poor or fair health. All Counties except Adams County (2.5) reported higher averages of poor physical health days[6] during the past month than Indiana (3.6) overall. Jay County residents reported 4 average poor physical health as well as 4 poor mental health days during the past 30 days, in comparison with 3.7 poor mental health days for all Hoosiers [6]. With $31.4 \%$ of its citizens categorized as obese[16], the State of Indiana is ranked the ranked $9^{\text {th }}$ in when comparing obesity nationwide[17]. With the exception of Adams County (30.4\%), all contiguous Counties residents have higher percentages of obese residents than Indiana overall; in Jay County, over one-third (34.6\%) of residents are obese. Although the incidence rate for sexually transmitted infection (chlamydia) is much higher in Delaware County (651 per 100,000) than the State-wide rate ( 427 per 100,000 ), the rate is much lower for the remainder of the region, including Jay County (235 per 100,000)[6].

In relation to mortality, Jay County experienced a higher rate (410 per 100,000) of premature death (years of potential life lost prior to age 75)[6] than the overall State-wide rate (382 per 100,000); rates for the entire area except for Randolph County (373 per 100,00) exceeded the State rate[6]. Due to local and national constraints around confidentiality, infant mortality rates are suppressed when the number of deaths is less than 10 ; and rates are considered unreliable when the numerator is 20 or less[18]. In alignment with these constraints, infant mortality rates (infant deaths per 1,000 live births) are available only for Adams and Delaware Counties; the rate for Adams County is lower (8.7 per, 100) than the State rate ( 7.7 per 1000) while Delaware County's rate (9.9 per 1000) exceeds the State's rate[6]. As with infant mortality, child (less than 18 years of age[6]) mortality data are limited due to reliability issues. Of the Counties with available data, both Jay County and Delaware County rates ( 52 per 100,000 and 67 per 100,000, respectively) are lower than the State rate ( 64 per 100,000); Adam County's rate (104 per 100,000) far exceeds the other County rates and the overall Indiana rate. Unfortunately, Jay County's percentage of alcohol-impaired driving deaths (35.3\%) is higher than other Counties in the area as well as the State proportion (26.2\%)[19]. Of the five contiguous Counties, Jay County has the second-highest motor vehicle crash death rate (19 per 100,000) which exceeds he State rate (14 per 100,000)[6]. The State of Indiana's rate of drug poisoning deaths is 12 per 100,000; Blackford County's rate is nearly double ( 23 per 100,000 ) while Jay County's rate is less, 10 per 100,000[6]. Both Jay County's rate of injury deaths (including both intentional and unintentional as the injury mechanism) (66 per 100,000) and Blackford County's rate ( 73 per 100,000 ) are in excess of the Indiana rate ( 61 per 100,000)[18].

Many of the health disparities seen in the five-County area are likely related to the lack of health workforce personnel. For example, in Jay County the ratio of primary care providers is one primary care provider per 3,044 persons (in comparison with Indiana overall, in which the ratio is 1538:1)[20]. In the category other primary care providers, Jay County is more equitable: one other primary care provider per 2,670 person whereas Indiana has one other primary care provider per 2,044 persons[20]. The area in which the region as whole has the greatest need is in mental health providers, but Jay County is well represented in this profession with a ratio of
one provider per 1,800 persons[20]. Although this is twice the burden placed that the State experiences (one mental health provider per 916 persons), it is much lower than the ratio observed in Blackford County: one mental health provider per 12,665 persons[20]. Jay County's greatest need in relation to the healthcare workforce is for dental providers since there is only one dentist per 4,321 persons; the State ratio is one dentist per 2,072 persons.[20]

The scarcity of providers no doubt contributes to the elevated rate of preventable hospital stays related to ambulatory-care sensitive conditions in Jay County (90 per 1,000) as compared to the overall Indiana rate of 76 per 1,000.[6] The lower percentages of Medicare enrollees who receive appropriate diabetic and mammography screening ( $82.7 \%$ diabetic screening vs. 83.8 for Indiana; 60.4\% mammography screening vs. 61.3\% for Indiana) is possible related to a deficiency in health care workforce in Jay County.[6] The amount of Medicare spending per enrollee in Indiana and the five contiguous Counties is rather similar: \$9,901 for the State overall versus a low of $\$ 9,010$ in Adams County and the highest spending amount per enrollee in Blackford County, \$10,541.[6] Jay County spends \$9,076 per enrollee.[6] It is important to remember, however, that no 'ideal' amount of spending per Medicare enrollee has yet been determined so these figures do not represent trending toward or away from an ideal spending amount.[6] Finally, compared to the State of Indiana proportion of 14.4\%, more residents of the contiguous Counties (except for Adams County) were less able to see a physician due to the cost. In Jay County, $17.9 \%$ of residents were unable to see the doctor due to the cost; in Blackford County, cost prevented nearly one-quarter (23.5\%) from seeing the doctor.[6]

In addition to lacking healthcare workforce personnel, social and environmental factors negatively affect Jay County's community health profile. For example, over one-quarter (25.6\%) of Jay County adult residents are current smokers[6]; nearly one-third (32.0\%) are physically inactive.[16] This low level of physical activity may be due, in part, to the fact that a mere $14.9 \%$ of Jay County have access to exercise opportunities. [6] One social behavior risk factor in Jay County's favor is a low percentage (10.2\%) of excessive drinking (defined as binge or heavy drinking patterns); this is the lowest proportion of the contiguous Counties and is also lower than the Indiana rate (15.9\%).[6] Both Jay and Adams Counties have the lowest
percentage (13.1\%) of residents who experience food insecurity (not having access to reliable food sources within the past year) in comparison with $16.3 \%$ of Hoosiers being food insecure. [6] Although food security is not an issue for Jay County residents, having limited access to healthy food is problematic. In comparison with Indiana residents overall (6.3\%), more (8.9\%) Jay County residents have limited access to healthy foods.[6] In regard to psychological influences affecting health, nearly one-quarter of Jay County residents have inadequate social or emotional support available compared to Hoosiers overall (20.1\%)[6]. Among the contiguous counties, Delaware County generally has greater criminal activity related to alcohol and drugs as demonstrated by the number of arrests connected with substance abuse. This may be in part due to the far greater number of controlled substances dispensed in Delaware County $(259,647)$ in relation to the other counties; for example, the number of controlled substances dispensed in Delaware County was over six times the number dispensed in Jay County (42,115) [21]. (In Indiana, 12, 735,878 were dispensed overall.)[21] Data derived from the Treatment Episode Dataset show that Jay County residents were admitted to substance abuse treatment programs at a much lower number (98) than Delaware County $(1,037)$ and the State $(35,764)$ overall.[22] Next to Delaware County $(405)$, Adams County had the next highest number (147) of arrests for operating while intoxicated (OWI); in Jay County, only one-half this number (73) of arrests for OWI occurred.[23] (In Indiana, 23,350 OWI arrests occurred.)[23] Although Jay County residents had a lower number of OWI arrests, more Jay County residents were arrested for public intoxication (PI).[23] Delaware County had the highest number of PI arrests (248), but the number of PI arrests for Jay County (88) was more than two and one-half times that of Adams County (32), which had the next highest number of PI arrests.[23] (Overall, there were $14,787 \mathrm{Pl}$ arrests in Indiana.)[23] However, Adams County residents had a higher number of arrests related to liquor law violations (67) than Jay County (54); in Delaware County, there were 205 arrests for these types of violations.[23] (Indiana reported 12,866 liquor law violations.)[23] With the exception of Delaware County, Jay County had the highest number of arrests for possession, sale or manufacture of marijuana, cocaine or opioids and synthetic drugs (e.g., methamphetamine) of the contiguous counties.[23] Regarding marijuana, Delaware County arrested 159 persons for possession, sale or manufacture while Jay County
arrested 70 - over one and one-half times the next-highest number of arrests (45) in Adams County.[23] While Jay County's number (17) of arrests for possession, sale or manufacture of cocaine or opioids was only one-half of the number of Delaware County arrests (35), it was nearly one and one-half times the next-highest number of arrests (12) in Randolph County.[23] In reference to possession, sale or manufacture of synthetic drugs (such as methamphetamine), Jay County again had a higher number of arrests (44) for these offenses than the other contiguous counties with the exception of Delaware County (63).[23] Jay County's number of arrests for possession, sale or manufacture of synthetic drugs was nearly one and one-half times higher than Blackford County, which had the next highest number of arrests (31) for these offenses.[23] Interestingly, Delaware County had the lowest number of arrests (2) for possession, sale or manufacture of other drugs; Randolph County had the highest number (13) while Jay County arrested six (6) people for these offenses.[23] Most of the contiguous Counties have much lower violent crime rates than the State (329 per 100,000), but Delaware County's rate is higher ( 378 per 100,000).[6] By comparison, Jay County's violent crime rate is 68 per 100,000.[6] Of violent crimes, besides the State rate (5 per 100,000) for homicide, a homicide rate is reported for only Delaware County (3 per 100,000).[6] Other social factors affecting the health of Hoosier citizens include severe housing problems (lacking complete kitchen facilities; lacking complete plumbing facilities; severe overcrowding; severely cost burdened).[6] Jay County's percentage of severe housing problems (11.0\%) is less serious than the State-wide proportion (13.6\%) and the severe housing problems encountered in Delaware County (17.6\%).[6] Environmental issues such as air pollution also contribute to a decrease in community health. All of the contiguous Counties have air pollution (particulate matter) averages identical to the Indiana average (13.5 PM2.5) except for Adams County, which has a slightly lower average (13.4 PM2.5). Transportation affects community health, and driving alone to work is considered the most detrimental to community health.[6] Data show that anywhere from $78.4 \%$ (Adams County) to $87.2 \%$ (Blackford County) of residents of the contiguous Counties drive alone to work compared to the overall State percentage (82.9\%).[12] The proportion of Jay County residents who drive alone to work is identical (82.9\%).[12] Even more dangerous than driving to work alone is driving alone on a long commute (at least thirty
minutes to arrive at work), because this practice contributes to physical inactivity and is also correlated with higher blood pressure and body mass index.[6] Nearly thirty percent (29.8\%) of Hoosiers drive alone on a long commute and over one-third (33.2) of Blackford County residents do while $27.4 \%$ of Jay County residents commute more than thirty minutes alone to work.[12]

As data from various health and social databases illustrate, Jay County's most challenging issues appear to reside in the areas of access to healthcare, poverty, health risk behaviors and preventive health. It is hoped that Jay County Hospital leadership will have gained greater understanding of the community's health profile from this secondary data analysis and will utilize these data to inform the next phase of their community health assessment and to identify the appropriate stakeholders for that process.

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## Appendix

| Measure | Source | Year(s) | Reporting |
| :---: | :---: | :---: | :---: |
| Population | Census Population Estimates | 2012 | Quantity |
| \% below 18 years of age | Census Population Estimates | 2012 | Percentage |
| \% 65 and older | Census Population Estimates | 2012 | Percentage |
| \% Non-Hispanic African American | Census Population Estimates | 2012 | Percentage |
| \% American Indian/ Alaskan Native | Census Population Estimates | 2012 | Percentage |
| \% Asian | Census Population Estimates | 2012 | Percentage |
| \% Native Hawaiian/Other Pacific Islander | Census Population Estimates | 2012 | Percentage |
| \% Hispanic | Census Population Estimates | 2012 | Percentage |
| \% Non-Hispanic white | Census Population Estimates | 2012 | Percentage |
| \% not proficient in English | American Community Survey | $\begin{aligned} & \hline 2008- \\ & 2012 \end{aligned}$ | Percentage |
| \% Females | Census Population Estimates | 2012 | Percentage |
| \% Rural | Census Population Estimates | 2010 | Percentage |
| Diabetes | Nat'l Ctr for Chronic Disease Prevention and Health Promotion | 2010 | Percentage |
| HIV prevalence rate | Nat'I Ctr for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention | 2010 | Rate per 100,000 |
| Infant mortality | Health Indicators Warehouse | $\begin{aligned} & \hline 2002- \\ & 2008 \end{aligned}$ | Per 1,000 live births |
| Child mortality | CDC WONDER mortality data | $\begin{array}{\|l\|} \hline 2007- \\ 2010 \\ \hline \end{array}$ | Rate per 100,000 |
| Premature death | Nat'l Ctr for Health Statistics | $\begin{array}{\|l\|} \hline 2008- \\ 2010 \\ \hline \end{array}$ | Rate per 100,000 |
| Poor or fair health | Behavioral Risk Factor Surveillance System | $\begin{aligned} & \hline 2006- \\ & 2012 \\ & \hline \end{aligned}$ | Percentage |
| Poor physical health days | Behavioral Risk Factor Surveillance System | $\begin{aligned} & \hline 2006- \\ & 2012 \\ & \hline \end{aligned}$ | Average |
| Poor mental health days | Behavioral Risk Factor Surveillance System | $\begin{array}{\|l\|} \hline 2006- \\ 2012 \\ \hline \end{array}$ | Average |
| Low birth weight | National Center for Health Statistics | $\begin{aligned} & \hline 2005- \\ & 2011 \\ & \hline \end{aligned}$ | Percentage |
| Adult smoking | Behavioral Risk Factor Surveillance System | $\begin{aligned} & \hline 2006- \\ & 2012 \\ & \hline \end{aligned}$ | Percentage |
| Adult obesity | Nat'l Ctr for Chronic Disease Prevention and Health Promotion | 2010 | Percentage |
| Physical inactivity | Nat'I Ctr for Chronic Disease Prevention and Health Promotion | 2010 | Percentage |
| Access to exercise opportunities | OneSource Global Business Browser, Delorme map data, ESRI, \& US Census Tigerline Files | $\begin{aligned} & 2010 \& \\ & 2012 \\ & \hline \end{aligned}$ | Percentage |


| Excessive drinking | Behavioral Risk Factor Surveillance <br> System | $2006-$ <br> 2012 | Percentage |
| :--- | :--- | :--- | :--- |
| Alcohol-impaired driving <br> deaths |  | $2008-$ |  |
| Sexually transmitted infections <br> (chlamydia) | Nat'I Ctr for HIV/AIDS, Viral Hepatitis, <br> STD, and TB Prevention | 2012 | Percentage |
|  |  | 2011 | Rate per |
| Teen births | National Center for Health Statistics |  |  |


| Injury deaths | CDC WONDER mortality data | $\begin{aligned} & 2006- \\ & 2010 \\ & \hline \end{aligned}$ | Rate per <br> 100,000 |
| :---: | :---: | :---: | :---: |
| Median household income | Small Area Income and Poverty Estimates | 2012 | Dollar amount |
| Children eligible for free lunch | National Center for Education Statistics | 2011 | Percentage |
| Homicide rate | National Center for Health Statistics | $\begin{array}{l\|} \hline 2004- \\ 2010 \\ \hline \end{array}$ | Rate per <br> 100,000 |
| Air pollution - particulate matter | CDC WONDER Environmental data | 2011 | Average |
| Severe housing problems | Comprehensive Housing Affordability Strategy (CHAS) data | $\begin{aligned} & \hline 2006- \\ & 2010 \end{aligned}$ | Percentage |
| Driving alone to work | American Community Survey | $\begin{aligned} & \hline 2008- \\ & 2012 \\ & \hline \end{aligned}$ | Percentage |
| Long commute - driving alone | American Community Survey | $\begin{aligned} & \hline 2008- \\ & 2012 \\ & \hline \end{aligned}$ | Percentage |
| Controlled substances | Indiana Board of Pharmacy / Prescription Drug Monitoring | 2014 | Number |
| Substance abuse treatment admissions | Treatment Episode Dataset | 2014 | Number |
| Operating while intoxicated arrests | Uniform Crime Reports | 2012 | Number |
| Public intoxication arrests | Uniform Crime Reports | 2012 | Number |
| Liquor law violations arrests | Uniform Crime Reports | 2012 | Number |
| Possession, sale or manufacture of marijuana arrests | Uniform Crime Reports | 2012 | Number |
| Possession, sale or manufacture of cocaine or opioids arrests | Uniform Crime Reports | 2012 | Number |
| Possession, sale or manufacture of synthetic drugs arrests | Uniform Crime Reports | 2012 | Number |
| Possession, sale or manufacture of other drugs | Uniform Crime Reports | 2012 | Number |


[^0]:    1 www.countyhealthrankings.org/indiana

[^1]:    5 www.countyhealthrankings.org/indiana

[^2]:    ${ }^{1}$ Not available for AK and HI.

