2019

Perry County Memorial Hospital Community Health Needs Assessment

Prepared by the Indiana Rural Health Association

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Every three years, Perry County Memorial Hospital conducts a community health needs assessment. This process involves many people from the community. The objective is to identify the areas where we thrive and, just as importantly, the areas where we need to expand and improve services. This information is gathered through a variety of methods including on-site focus group discussions, in-person community surveys, and electronic online survey distribution.

The community health needs assessment is a very in-depth exercise, but is one we highly value because of the information we obtain in the process. The feedback we receive is essential for our planning, and I assure you that everyone on our staff takes this information very seriously. It is only through the feedback we get from the community that we are able to develop our strategies for the future. As the leadership team continues to develop our strategic planning for the years ahead, the feedback from the community helps to guide our plans.

PCMH is committed to providing great health care to all the communities we serve. I believe that good health for all creates a stronger community. PCMH serves all members of our community with health, prevention, and wellness services. The healthier all members of our community are, the stronger our community becomes.

The extent to which a rural community cannot only be sustained, but also thrive, is highly dependent on the quality of services offered by local healthcare providers. The ability to attract business development to provide better jobs and therefore sustain more local businesses is dependent on the extent to which quality health services are available. At PCMH, we are dedicated to delivering the highest quality standards of care with the goal being to not only meet expectations, but to exceed them. The results obtained through the community health needs assessment will help us tremendously in this end.

Therefore, on behalf of the entire staff at Perry County Memorial Hospital, I would like to thank all of you who participated in the community health needs assessment. Both individuals and organizations invested time with us to complete this process and, in response, we will invest our resources to continually improve our healthcare services.

Sincerely,

Brian Herwig

CEO
Perry County Memorial Hospital

Process

Perry County Memorial Hospital (PCMH) contracted with the Indiana Rural Health Association (IRHA) to conduct the Community Health Needs Assessment (CHNA).

IRHA first identified the community served by PCMH through conversations with the hospital. Based on a review of patient zip codes, the hospital was able to define the community served as all postal codes within the geographic area of Perry and Spencer Counties. The hospital provided a primary service area list of zip codes, which can be found in Appendix A.

To quantifiably describe the community, census reports were pulled from the United States Census Bureau Reports. Quantifiable statistics and reports for health-related community data were obtained from Perry County Memorial Hospital and the Community Health Rankings & Roadmaps from the Robert Wood Johnson Foundation. The full versions of these reports can be viewed in Appendix A. Additional reports on chronic disease and overdose rates were pulled from the Centers for Disease Control website and the Indiana State Cancer Registry. Excerpts from these reports can also be found in Appendix A.

Next, a steering committee of Perry County representatives was organized with the help of the Perry County Memorial Hospital CEO, Brian Herwig. Business owners, local officials, healthcare providers, minority leaders, clergy, student representatives, and any other interested parties were invited to attend the meeting to discuss the health-related needs of the county with a view to identifying the areas of greatest concern. The list of attendees, the organization they represent, and their contact information can be found in Appendix B.

From the information obtained during the steering committee meeting, a 33-question survey was developed to gain the perspective of the inhabitants of the community. Questions included queries about the effect of various factors (such as illegal drug use, mental health services, and affordable housing), as well as probes into the perceived need for various services and facilities in the county. The survey was widely disseminated to the residents of Perry County through inclusion on the Perry County Memorial Hospital's website, face-to-face polling at the Perry County Public Library in Tell City and the Spencer County Public Library in Rockport. An online survey posted on SurveyMonkey.com was also made available to the public. The survey may be viewed in Appendix C.

To identify all healthcare facilities and resources that are currently responding to the healthcare needs of the community, the IRHA contacted PCMH to ascertain the facilities that are currently available to the residents of their service area. The hospital was able to provide a listing of the facilities and resources, including, but not limited to, clinics, family practices, and nursing facilities. The list of existing community resources can be found in Appendix D.

At this point, the entirety of the collected data was submitted to Perry County Memorial Hospital to explain how the needs identified by the CHNA are currently being met, as well as to write a plan of action for those needs that are not currently being met. PCMH was also able to identify the information gaps limiting the hospital's ability to assess all of the community's health needs.

The completed CHNA was then publically posted on hospital's website. Hard copies of the full report were made available to the community upon request at the hospital, as well.

Community Served

The community served by Perry County Memorial Hospital is defined as follows: All people living within Perry County or Spencer County, Indiana, at any time during the year. To be determined as living within the service area, a person must reside within one of the following postal zip codes: 47514, 47515, 47520, 47525, 47551, 47574, 47576, 47586, 47637, 47588, 47523, 47531, 47536, 47537, 47550, 47577, 47579, 47611, 47615, 47617, 47634, and 47635.

Description of Community

Physical

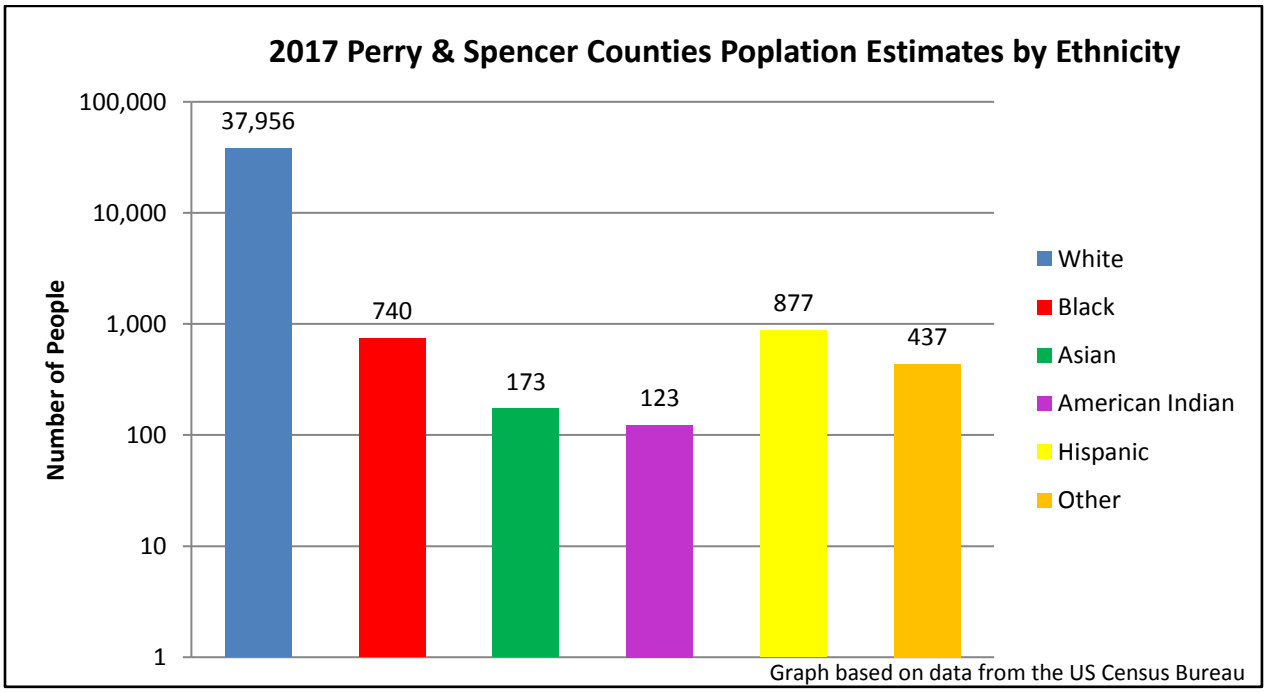
Perry and Spencer counties are located in the extreme southcentral region of Indiana. The counties are largely rural with Perry as the 58th largest county in Indiana at approximately 382 square miles in area and Spencer County as the 46th largest county at 397 square miles.

Population – Ethnicity, Age, Gender & Income

According to the U.S. Census Report estimates for 2018, the total population of the counties is approximately 39,429 and the median age in the counties is 42.6 years old. Females make up 48.1% of the overall populace. Minority populations make up approximately 3.8% of the total inhabitants of the county. The average household income is $52,485.

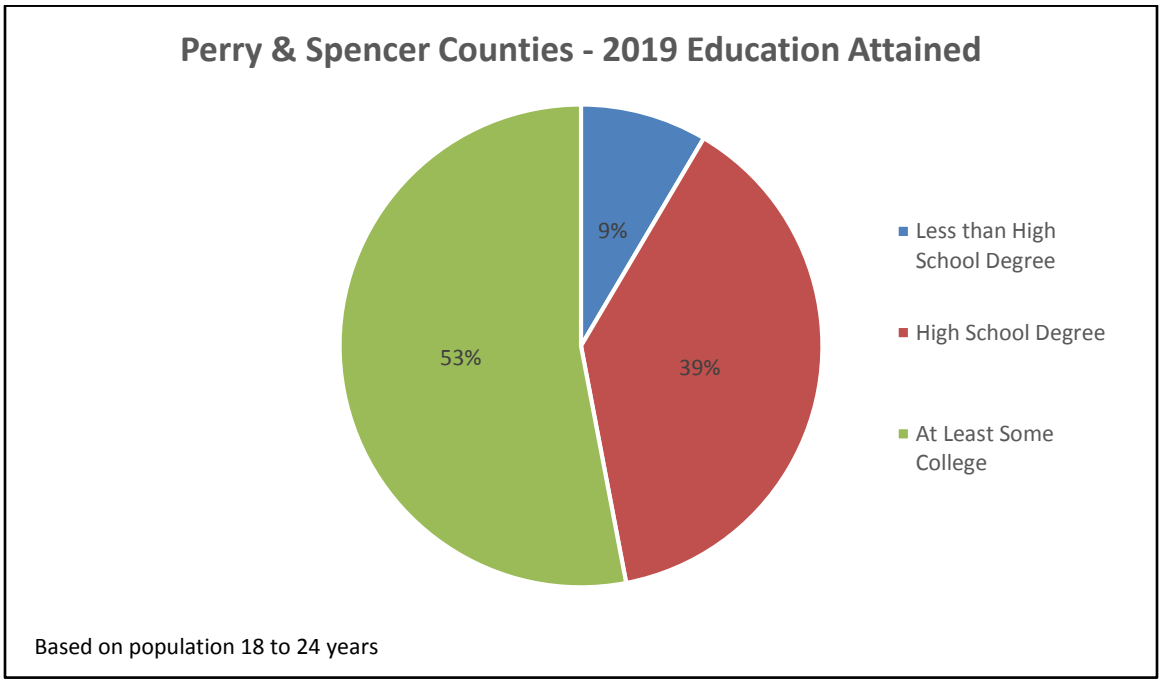
All Topics	Spencer County, Indiana	Perry County, Indiana
Persons per household, 2013-2017	**2.51**	**2.35**
PEOPLE		
Population		
Population estimates, July 1, 2018, (V2018)	20,327	19,102
Population estimates base, April 1, 2010, (V2018)	20,952	19,338
Population, percent change - April 1, 2010 (estimates base) to July 1, 2018, (V2018)	-3.0%	-1.2%
Population, Census, April 1, 2010	20,952	19,338
Age and Sex		
Persons under 5 years, percent	5.2%	5.4%
Persons under 18 years, percent	21.8%	21.0%
Persons 65 years and over, percent	19.3%	18.8%
Female persons, percent	49.7%	46.4%
Race and Hispanic Origin		
White alone, percent	97.2%	95.2%
Black or African American alone, percent (a)	1.0%	2.8%
American Indian and Alaska Native alone, percent (a)	0.3%	0.4%
Asian alone, percent (a)	0.4%	0.5%
Native Hawaiian and Other Pacific Islander alone, percent (a)	0.0%	Z
Two or More Races, percent	1.1%	1.1%
Hispanic or Latino, percent (b)	3.0%	1.4%
White alone, not Hispanic or Latino, percent	94.8%	93.9%

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates



Education

The Robert Wood Johnson Foundation reports that approximately 91.5% of the residents in PCMH's service area have high school diplomas, which is exceptional when compared with a statewide average of only 84%. However, only 53% of the community has at least some college education compared with a statewide average of 62%.



Graph based on data from US Census Bureau

The full reports from U.S. Census Bureau and the Robert Wood Johnson Foundation can be viewed in Appendix A.

Health Summary

Based on data from the 2019 County Health Rankings & Roadmaps report, Perry County ranks 48th in Health Outcomes and 55th in Health Factors and Spencer County ranks 8th in Health Outcomes and 8th in Health Factors out of a total of 92 counties in the state. This puts Perry County squarely in the middle of the pack and Spencer County among some of the very best in the state.

The Health Outcomes ranking were based on a combined report of 3.9 days of poor physical health by Perry County residents compared to a statewide average of 3.9 and a combined report of 4.2 days of poor mental health days by Perry County residents compared to a statewide average of 4.3. Spencer County had only 3.5 reported poor physical health days and 3.8 poor mental health days by comparison. The Health Factors ranking was based on Health Behaviors, Clinical Care, Social and Economic Factors, and Physical Environment.

A slightly higher instance of physical inactivity (at 27% compared to a statewide average of 25%) and a high rate of teen births in Perry County (46 compared to the state average of 28) all combined to earn a ranking of 55 out of 92 counties in Health Behaviors. Spencer County, however, had a lower rate of smoking than the state average (18% compared to Indiana's 21%) and a drastically lower rate of alcohol-

impaired driving deaths (4% compared to the state average of 21%) which garnered the county a ranking of 10th out of 92 counties in Health Behaviors.

Both counties received high rankings for Clinical Care at 22nd for Perry County and 16th for Spencer County. The largest boost to the Clinical Care scoring seems to be the low number of preventable hospital stays with both counties coming in well below the state average. Perry County had only 2571 preventable hospital stays and Spencer County had only 3845 compared to the statewide average of 5023. Each county also came in very slightly below the state average of 9% uninsured population at 8% uninsured in both counties.

The counties split again on Social & Economic Factors with Perry County receiving a rank of 65th and Spencer County receiving a rank of 15th in the state. While both counties exceeded state averages for percentage of high school graduates with Perry at 90% and Spencer at 93% (compared to a statewide average of 84%), there were disparate rates of college education between the two counties with Perry at only 48% and Spencer at 58% and neither exceed the state average of 62%. Unemployment rates were also split in the two counties with Perry above the state average of 3.5% at 3.8% and Spencer slightly below it at 3.4%. While Perry County came in at exactly the state average of 18% for children in poverty, Spencer County was well below the average at 12%. Children in single parent households also separated the two counties with Perry at a rate of 36% compared to the state average of 34% and Spencer much lower at 18%. The final major difference was the number of injury related deaths. Indiana averages 74 with Perry County exceeding that rate at 86 and Spencer County coming in much lower at 54.

Perry County did outpace Spencer County in the scoring for Physical Environment with a ranking of 30 out of 92 Indiana counties. Spencer County came in at 45. The counties' scores were relatively on par with the statewide averages with the exception of severe housing problems which came in lower than the statewide average of 14% at 9% (Perry County) and 8% (Spencer County).

The County Health Rankings measures the population living with limited access to healthy foods using the USDA Food Environment Atlas. Individuals are counted who have both low access to a supermarket or large grocery store and a low income. "Low access" is greater than ten miles away in a rural county. "Low income" individuals are classified if they fall into the government definition of poverty or have a median family income at or below 80% of the county's median family income.

Full copies of the Robert Wood Johnson County Health Rankings & Roadmaps reports for Perry and Spencer counties can be found in Appendix A.

Primary and Chronic Diseases

Perry County Memorial Hospital generated a report of the Top Diagnoses by Payer Mix for their inpatients for the previous calendar year, July 1, 2018 through June 30, 2019. From this report, the top twenty most common diagnoses for their service area were identified. A further examination of the payer mix for each diagnosis resulted in additional data to identify the issues that were most often seen in low-income, disabled, and/or older populations. (*Note: It is important to understand the key characteristics of the PCMH population. This includes identifying the low-income, disabled, and/or elderly population.

The population trends help provide an indication of patterns within the residents of the community and assist in identifying the needs around this populace.)

The following list contains the top ten most common diagnoses and the percentage of Medicare and Medicaid patients for each diagnosis:

COPD – 110 cases (73.6% Medicare and Medicaid)
Urinary Tract Infection – 87 cases (81.6% Medicare and Medicaid)
Pneumonia – 85 cases (72.9% Medicare and Medicaid)
Kidney Failure – 69 cases (82.6% Medicare and Medicaid)
Respiratory Failure – 62 cases (74.2% Medicare and Medicaid)
Sepsis – 45 cases (77.8% Medicare and Medicaid)
Dehydration – 37 cases (75.7% Medicare and Medicaid)
Encephalopathy – 31 cases (90.3% Medicare and Medicaid)
Hyposmolality – 29 cases (66.7% Medicare and Medicaid)
Acute & Chronic Respiratory Failure – 23 cases (73.9% Medicare and Medicaid)

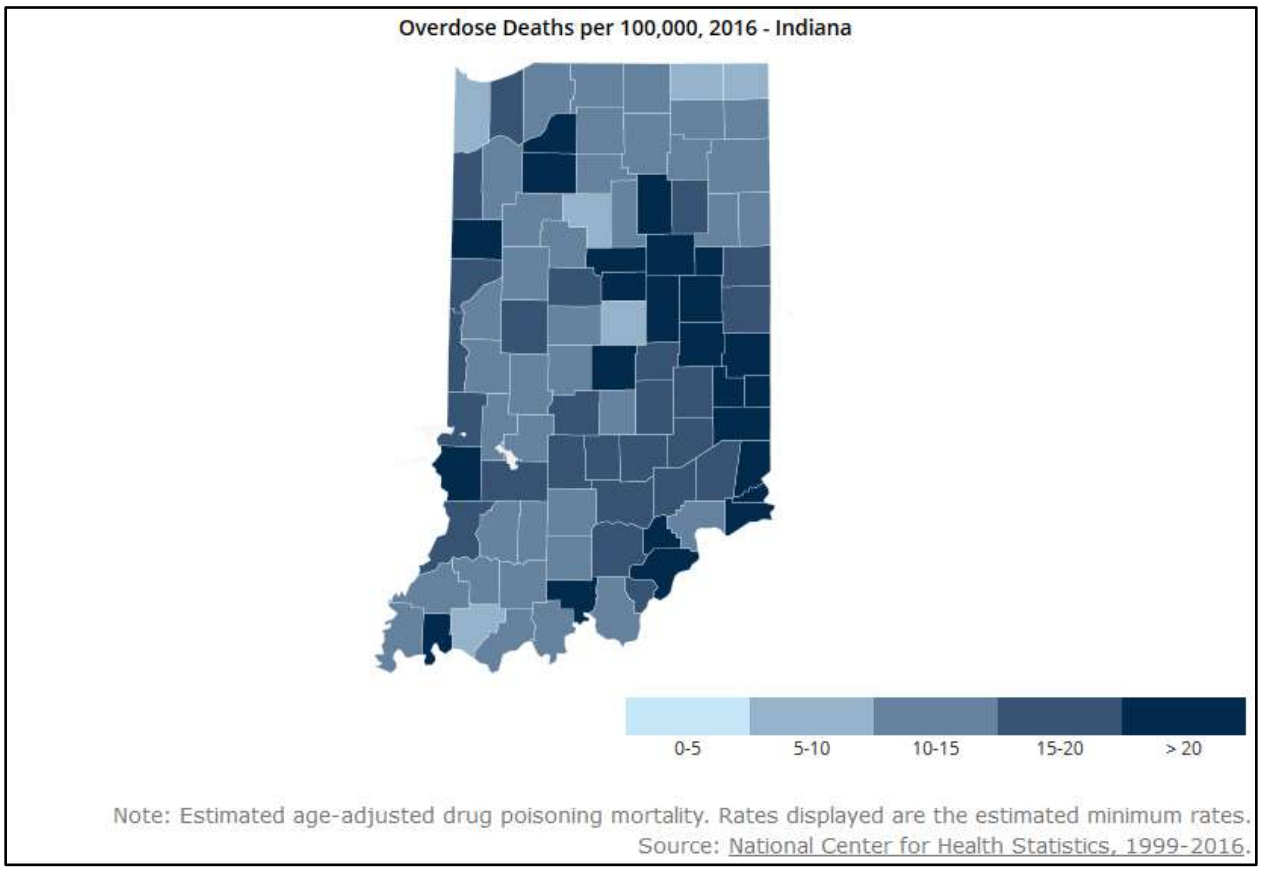
The list of top inpatient diagnoses and payer mix report can be found in Appendix A.

The most recent county-level cancer reports from the state of Indiana are from 2015, and Perry County Memorial Hospital's service area show slightly lower rates of all types of cancers when compared to the state average. The rate of cancer (per 100,000 people) in Perry County comes in below the statewide rate of 466.6 at a nearby 443.2 and Spencer County is slightly higher at 448.5. The counties are divided on the rates of prostate cancer with Spencer County coming in at an average of 100.5 versus a statewide rate of 106.9 and Perry County considerably lower at only 81.4. Breast cancer rates are divided as well, with Perry County slightly lower than the statewide rate of 118.1 at 111.3 and Spencer County at 120.5, which is higher than the statewide rate. The county is higher than average for rates of lung and colon/rectal cancers. The disparities continue for lung cancer, where Perry County comes in well above the state average of 79 with a rate of 90.7. However, Spencer County is lower than the state average at a rate of 75.7. Once more, the counties differ in rates, splitting the state average of 44.1 for colon/rectal cancer. Perry County slightly below the state average at a rate of 40.4 and Spencer is slightly above with a rate of 50.4. Cancer mortality rates for all types of cancer in Perry County are significantly above the state average at an average rate of 212.7 versus Indiana's overall rate of 187.3 and Spencer County is slightly lower at a rate of 181.0.

In instances of chronic disease, specifically heart disease and stroke, the CDC data shows disparate rankings between the two counties, with Spencer County at 60th and Perry County at 21st out of 92 Indiana county in hospitalization rate. However, additional data from the Centers for Disease Control and Prevention Division for Heart Disease and Stroke Prevention ranks Spencer County very highly at 8th best in the state and Perry County at a middling rank of 40th out of Indiana's 92 county in rate of deaths due to heart disease and stroke.

The CDC's Diabetes Data & Trends report also relates that PCMH's service area comes in well below the state average in rates of diabetes. The counties have age-adjusted rates of 8.6% (Perry) and 6.1% (Spencer) compared to an Indiana-wide average of 10.4% and national rate of 8.7%.

The Robert Wood Johnson County Health Rankings and Roadmaps report shows that the state average of overdose deaths per 100,000 is 23 for 2015-17. Perry County comes in under the state average with a rate of 11 per 100,000. Spencer County data was not available, but the map from the CDC below shows that the county is comparable to Perry County with a rate somewhere between 11 and 15 deaths per 100,000.



Portions of the Indiana State Cancer Registry's Indiana Cancer Facts & Figures, as well as the four CDC reports, can be found in Appendix A.

Existing Healthcare Resources

Perry County Memorial Hospital provided a complete listing of the currently available healthcare facilities and services that are accessed by those living within their service area. This list includes, but is not limited to, a Critical Access Hospital, community-based physicians, a variety of specialty clinics, oral care providers, eye care providers, mental health services, nursing homes, assisted living facilities, fitness centers, and more. PCMH will be able to use this listing when creating their action plan to fully incorporate all available resources.

Advanced Rehabilitation, Inc.
Allen & Allen Family Dentistry
Braun Dental Associates
Burris, LeClere and Labhart Eye Center
Butler Family Dentistry

Cannelton Community Center/Gym
Catholic Charities
Catholic Charities Table of Blessings
Complete Wellness Chiropractic Spine and Sport
Complete Wellness Chiropractic
Crisis Connection, Inc.
CVS Pharmacy
Dale Family Medicine
Danzer Orthodontics
Davita Dialysis Center
Deaconess Clinic Reo
Dr. Dianne Rudolph
Dr. Mark Flannagan
Dr. Rogan & Associates
Emmick Eye Care, PLLC
EverBody's Fun & Fitness Center
Faulkenberg Harth
Fred's Pharmacy Xpress
Gladish Chiropractic Clinic
Golding Living Center - Lincoln Hills
Groups of Tell City Substance Abuse Treatment
Hancock Dental Arts
Home Instead Senior Care of Jasper
Kizior & Young Orthodontics
LifeSpring Health Systems
Marcum Family Healthcare
Memorial Hospital and Healthcare Center Bristow Clinic
New Directions Health & Fitness Center
New Directions Health & Fitness Club
Oakwood Health Campus
Perry County Family Practice
Perry County Memorial Hospital
Perry County Memorial Hospital Professional Building
Perry County Memorial Hospital Telepsychiatry
Perry County Memorial Hospital Therapy Department
Perry County OB/GYN
Perry County Surgical Associates
Perry Regional Foot and Ankle
Pro Rehab
Rehabilitation & Performance Institute
Rockport Pharmacy

Santa Claus Family Dentistry
Santa Claus Family Medicine
Sheldon's Express Pharmacy
Southern Hills Counseling Center
Sovar Chiropractic
Spencer County Clinic
Spencer County Hospice Inc.
Spencer County Medical Center
Tell City Clinic
The Hancock Clinic
The Office of Drs. Marcrum, Bailey, and Kleeman
Troy Clinic
Troy Medical Clinic
Walmart Pharmacy
Walmart Vision Center

A complete listing of the facilities can also be found in Appendix D.

Identifying Health & Service Needs

A steering committee of Perry County and Spencer County representatives was organized with the help of the Perry County Memorial Hospital CEO, Brian Herwig. Business owners, local officials, healthcare providers, minority leaders, clergy, student representatives, and any other interested parties were invited to attend the meeting to discuss the health-related needs of the county with a view to identifying the areas of greatest concern

The steering committee was encouraged to brainstorm all areas of need or concern in the health field in Perry County in both large and small group settings. Once a master list of all concerns was agreed upon by the full group, attendees were asked to list what they perceived to be the greatest strengths and values in their county. Then, they were asked to identify the highest priorities from the master list of challenges.

By analyzing both prioritized lists from the small groups, the IRHA was able to detect the items that appeared most frequently and identified the community's areas of greatest concern:

Mental/behavioral health services
Suicide
Substance use disorder
Lack of adequate housing at all levels
Parental education regarding healthy living for infants through high school
Transportation
After hours care
Poverty

The master list, priority list, and the list of areas that were determined to be of the greatest need can be found in Appendix B.

The identified areas of greatest need were used to create a 33-question survey, addressing demographics, county issues, and community services and amenities, which can be found in Appendix C. The survey was widely disseminated via internet access, community bulletins, and the local newspaper to the residents of Perry County through inclusion on the Perry County Memorial Hospital's website and a publically available survey posted on SurveyMonkey.com. Face-to-face polling was also implemented at the Perry County Public Library in Tell City and the Spencer County Public Library in Rockport. To conduct the in-person survey, two members of the IRHA staff greeted all county residents as they entered the libraries and asked for their participation in the survey. Hard copies of the survey were also left at some of the locations, as well as PCMH, for anyone who preferred to complete a paper copy of the survey. The general public was alerted to the face-to-face and online polls through PCMH newsletters and social media. At the end of polling, there was a total of 163 total responses, including 24 face-to-face responses. The majority (63.19%) of the respondents were from zip code 47586, 95.68% of the respondents identified as white, and the ages of respondents were fairly distributed between 26 and 74 years of age.

After basic demographics, respondents were asked to assess the effect of various factors on their community by selecting "very negative effect, some negative effect, no effect, some positive effect, or very positive effect." The second portion of the survey required respondents to assess the need for various services and facilities in their community by selecting "no need, slight need, definite need, or extreme need." Respondents were also able to select "no opinion/don't know" for any items they did not want to answer.

There was also a section for open comments at the end of the survey for any additional information the respondents wanted to share.

When asked "how do these issues affect your county," the standout answers by all respondents were (0 is very negative effect, 4 is very positive effect):

1. Illegal or prescription drug misuse – 1.78 weighted average response
2. Poverty – 1.95 weighted average response
3. Availability of housing for people with Substance Use Disorder – 2.26 weighted average response
4. Availability of treatment for people with Substance Use Disorder – 2.28 weighted average response
5. Mental health of the community – 2.45 weighted average response
6. Availability of weekend/afterhours transportation – 2.46 weighted average response

When asked "do you see a need for the following services/facilities in your community," the standout responses were (0 is not needed, 4 is extremely needed):

1-2. Weekend of afterhours medical services – weighted average of 3.38 (tie)
Illegal and/or prescription drug rehabilitation services – weighted average of 3.38 (tie)
3. Illegal and/or prescription drug education – weighted average of 3.33
4. Mental/behavioral health services – weighted average of 3.31
5. Illegal and/or prescription drug rehabilitation facilities – weighted average of 3.28

The full summary of the survey results can be found in Appendix C.

A random sampling of the comments from the survey that recurred most often by topic is below. All comments have been left as originally submitted unless they have been edited for length.

Open comments regarding illegal or prescription drug misuse:

"Perry county is full of people who have addiction issues with illegal substances. If we could provide help to those who self medicate because they have no other options, example would be inability to afford insurance to pay for said therapy."

"I feel as if we need to open up a place that has rehabilitation, housing, etc for those with drug abuse, mental health, and coming out of jail to be able to go into. That would help get a lot of crime off the streets"

"Our community is comprised of many residents suffering from substance abuse and mental illness with nowhere to receive the proper treatment without having to be sent over an hour away just to have access to the care and facilities they need. Then once they come home they have no continuity of the care they received at other facilities, no where to go home to where they will be in a stable environment and the cycle repeats itself."

Open comments regarding the emergency room at PCMH:

"While PCMH offers a lot of great services. The ER department needs A LOT of work. wait time is too long. Doctors are of no help and barely offer anything. Better off going to another emergency room if you arent dying"

"Better ER doctors in Tell City"

"Our hospital should definitely overhaul the emergency room services. I'm sitting here now with a sick child for 2 hrs with 1 doctor and 2 nurses, none of which have checked on us."

Open comments regarding afterhours or quick care services:

"Perry County needs a urgent care facility or an after hours clinic that takes more then 15 patients. There is a need for weekend care for being sick but not sick enough for a er visit. Having a urgent care would cut down on non emergent visits to the er allowing the the er staff to focus more on the emergent cases."

"Need weekend medical care and clinic needs to take more than 12 walk ins in the evening especially during flu season. They are so rushed they don't run the appropriate tests like flu and strep"

"I feel that the county is lucky to have a local hospital to provide emergent care and short term stays. I think the hospital should focus on providing services that are not already available in the community instead of duplicating services. Maybe offering a true Mec Center for after hours care that is not considered and billed as emergency services would be a good start."

Open comments regarding transportation:

"I have had to cancel or reschedule Dr. appts. due to an inability to get transportation. It sometimes requires 48 hours notice and even then there is no guarantee of a ride."

"Need for more ambulances. The wait times for ambulances is horrendous."

"Extreme need for transportation for elderly who have medical appointments including those on Medicaid."

A complete summary of the survey results can be found in Appendix C.

Summary of Findings

Based on the information gathered as part of the Community Health Needs Assessment, the Indiana Rural Health Association has identified the areas of greatest need in Perry County. Through the collection of health data and community input on the county's strengths, values, and challenges within the hospital's service area, the following needs were identified as being of the highest importance:

Identified Areas of Need

- Illegal or prescription drug misuse/Substance Use Disorder: treatment, facilities, housing, education; mental/behavioral health
- Transportation: medical and non-medical, afterhours and weekend
- Availability of medical services afterhours and on weekends: Emergency Room, Quick Care, Urgent Care

Perry County Memorial Hospital has earned the trust and respect of many local residents. This can be leveraged with providers and local business and community service organizations to explore the suggested and other ideas to enhance the quality of life of Perry and Spencer County residents.

Appendix A

Resources & Reference Materials

Hancock County (KY)	Zip Code
Hawesville	42348
Lewisport	42351
Perry County (IN)	
Branchville	47514
Bristow	47515
Cannelton/Tobinsport	47520
Derby	47525
Leopold	47551
Rome	47574
St. Croix	47576
Siberia	47515
Tell City	47586
Tennyson	47637
Troy	47588
Spencer County	
Dale	47523
Evanston	47531
Fulda	47536
Gentryville	47537
Lamar	47550
St. Meinrad	47577
Santa Claus	47579
Chrisney	47611
Grandview	47615
Hatfield	47617
Richland	47634
Rockport	47635

QuickFacts

Spencer County, Indiana; Perry County, Indiana

QuickFacts provides statistics for all states and counties, and for cities and towns with a ***population of 5,000 or more***.

Table

All Topics	Spencer County, Indiana	Perry County, Indiana
Persons per household, 2013-2017	**2.51**	**2.35**
PEOPLE		
Population		
Population estimates, July 1, 2018, (V2018)	20,327	19,102
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Population, Census, April 1, 2010	20,952	19,338
Age and Sex		
Persons under 5 years, percent	▲ 5.2%	▲ 5.4%
Persons under 18 years, percent	▲ 21.8%	▲ 21.0%
Persons 65 years and over, percent	▲ 19.3%	▲ 18.8%
Female persons, percent	▲ 49.7%	▲ 46.4%
Race and Hispanic Origin		
White alone, percent	▲ 97.2%	▲ 95.2%
Black or African American alone, percent (a)	▲ 1.0%	▲ 2.8%
American Indian and Alaska Native alone, percent (a)	▲ 0.3%	▲ 0.4%
Asian alone, percent (a)	▲ 0.4%	▲ 0.5%
Native Hawaiian and Other Pacific Islander alone, percent (a)	▲ 0.0%	▲ Z
Two or More Races, percent	▲ 1.1%	▲ 1.1%
Hispanic or Latino, percent (b)	▲ 3.0%	▲ 1.4%
White alone, not Hispanic or Latino, percent	▲ 94.8%	▲ 93.9%
Population Characteristics		
Veterans, 2013-2017	1,576	1,303
Foreign born persons, percent, 2013-2017	1.4%	0.7%
Housing		
Housing units, July 1, 2018, (V2018)	9,139	8,739
Owner-occupied housing unit rate, 2013-2017	82.0%	77.3%
Median value of owner-occupied housing units, 2013-2017	$117,900	$103,000
Median selected monthly owner costs -with a mortgage, 2013-2017	$1,021	$920
Median selected monthly owner costs -without a mortgage, 2013-2017	$393	$325
Median gross rent, 2013-2017	$650	$585
Building permits, 2018	40	24
Families & Living Arrangements		
Households, 2013-2017	8,101	7,460
Persons per household, 2013-2017	**2.51**	**2.35**
Living in same house 1 year ago, percent of persons age 1 year+, 2013-2017	91.3%	88.9%
Language other than English spoken at home, percent of persons age 5 years+, 2013-2017	3.3%	1.5%
Computer and Internet Use		
Households with a computer, percent, 2013-2017	78.3%	76.3%
Households with a broadband Internet subscription, percent, 2013-2017	68.0%	66.4%
Education		
High school graduate or higher, percent of persons age 25 years+, 2013-2017	89.8%	87.9%
Bachelor's degree or higher, percent of persons age 25 years+, 2013-2017	15.9%	14.3%
Health		
With a disability, under age 65 years, percent, 2013-2017	9.6%	11.5%
Persons without health insurance, under age 65 years, percent	▲ 8.5%	▲ 8.1%
Economy		
In civilian labor force, total, percent of population age 16 years+, 2013-2017	63.2%	54.8%
In civilian labor force, female, percent of population age 16 years+, 2013-2017	56.4%	55.6%
Total accommodation and food services sales, 2012 ($1,000) (c)	19,385	23,677
Total health care and social assistance receipts/revenue, 2012 ($1,000) (c)	D	80,301
Total manufacturers shipments, 2012 ($1,000) (c)	1,634,151	945,549
Total merchant wholesaler sales, 2012 ($1,000) (c)	D	13,269
Total retail sales, 2012 ($1,000) (c)	130,084	157,206
Total retail sales per capita, 2012 (c)	$6,243	$8,078

Transportation		
Mean travel time to work (minutes), workers age 16 years+, 2013-2017	26.8	23.5
Income & Poverty		
Median household income (in 2017 dollars), 2013-2017	$55,280	$49,689
Per capita income in past 12 months (in 2017 dollars), 2013-2017	$29,114	$23,003
Persons in poverty, percent	⚠ 10.4%	⚠ 12.1%

BUSINESSES

Businesses		
Total employer establishments, 2017	404	362
Total employment, 2017	5,016	5,883
Total annual payroll, 2017 ($1,000)	219,468	220,828
Total employment, percent change, 2016-2017	0.6%	Z
Total nonemployer establishments, 2017	1,196	865
All firms, 2012	1,540	1,204
Men-owned firms, 2012	907	650
Women-owned firms, 2012	421	289
Minority-owned firms, 2012	40	F
Nonminority-owned firms, 2012	1,450	1,137
Veteran-owned firms, 2012	166	107
Nonveteran-owned firms, 2012	1,265	1,022

GEOGRAPHY

Geography		
Population per square mile, 2010	52.8	50.7
Land area in square miles, 2010	396.74	381.73
FIPS Code	18147	18123

About datasets used in this table

Value Notes

⚠ Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. Click the Quick Info ⓘ icon to the left of each row in TABLE view to learn about sampling error.

The vintage year (e.g., V2018) refers to the final year of the series (2010 thru 2018). *Different vintage years of estimates are not comparable.*

Fact Notes

- **(a)** Includes persons reporting only one race
- **(b)** Hispanics may be of any race, so also are included in applicable race categories
- **(c)** Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data

Value Flags

- **-** Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper interval of an open ended distribution.
- **D** Suppressed to avoid disclosure of confidential information
- **F** Fewer than 25 firms
- **FN** Footnote on this item in place of data
- **NA** Not available
- **S** Suppressed; does not meet publication standards
- **X** Not applicable
- **Z** Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

STATSINDIANA

Indiana's Public Data Utility

Choose one of the following geographies and click go to view its profile:

County: Perry Go

Region: EGR 1 GO

Perry County, Indiana

Organized in 1814 and named for War of 1812 hero Oliver Hazard Perry

County Seat: Tell City
Largest City: Tell City (2018 population: 7,237)
Population per Square Mile: 50.04
Square Miles: 381.70
Go to county's in.gov site

Population over Time	Number	Rank in State	Percent of State	Indiana
Yesterday (2010)	19,338	75	0.3%	6,484,192
Today (2018)	19,102	75	0.3%	6,691,878
Tomorrow (2020 projection)*	19,279	75	0.3%	6,852,121
Percent Change 2010 to Today	-1.2%	47		3.2%

*Projection based on 2010 Census counts.
Sources: U.S. Census Bureau; Indiana Business Research Center

Components of Population Change, 2017-2018	Number	Rank in State	Percent of State	Indiana
Net Domestic Migration	94	23		3,555
Net International Migration	0	73		9,227
Natural Increase (births minus deaths)	19	53	0.1%	19,211

Source: U.S. Census Bureau

Population Estimates by Age, 2018	Number	Rank in State	Pct Dist. in County	Pct Dist. in State
Preschool (0 to 4)	1,032	75	5.4%	6.3%
School Age (5 to 17)	2,981	74	15.6%	17.2%
College Age (18 to 24)	1,488	75	7.8%	9.8%
Young Adult (25 to 44)	4,861	69	25.4%	25.4%
Older Adult (45 to 64)	5,150	75	27.0%	25.6%

Seniors (65 and older)	3,590	76	18.8%	15.8%
Median Age	41.3			Median Age = 37.9

Sources: U.S. Census Bureau; Indiana Business Research Center

Population Estimates by Race and Hispanic Origin, 2018	Number	Rank of	Pct Dist. in County	Pct Dist. in State
American Indian or Alaska Native Alone	69	72	0.4%	0.4%
Asian Alone	95	65	0.5%	2.5%
Black Alone	542	38	2.8%	9.8%
Native Hawaiian and Other Pac. Isl. Alone	7	66	0.0%	0.1%
White	18,188	75	95.2%	85.1%
Two or More Race Groups	201	78	1.1%	2.1%
Hispanic or Latino Origin (can be of any race)				
Non-Hispanic	18,826	75	98.6%	92.9%
Hispanic	276	81	1.4%	7.1%

Source: U.S. Census Bureau

Household Types	Number	Rank in State	Pct Dist. in County	Pct Dist. in State
Households in 2017 (Includes detail not shown below)	7,460	75	100.0%	100.0%
Married With Children	1,249	76	16.7%	18.8%
Married Without Children	2,725	71	36.5%	30.0%
Single Parents	654	69	8.8%	9.6%
Living Alone	2,105	69	28.2%	28.3%

Source: U.S. Census Bureau, American Community Survey 5-year estimates.

Housing	Number	Rank in State	Pct Dist. in County	Pct Dist. in State
Total Housing Units in 2018 (estimate)	8,739	76	100.0%	100.0%
Total Housing Units in 2017 (includes vacant units)	8,618	75	100.0%	100.0%
Owner Occupied (Pct. distribution based on all housing units)	5,765	74	66.9%	61.2%
Median Value (2017)	$103,000	59		
Renter Occupied (Pct. distribution based on all housing units)	1,695	75	19.7%	27.7%
Median Rent (2017)	$433	83		

Source: U.S. Census Bureau, American Community Survey 5-year estimates.

Education	Number	Rank in State	Percent of State	Indiana

School Enrollment (2018/2019 Total Reported)	2,971	71	0.3%	1,117,590
Public	2,971	71	0.3%	1,054,903
Adults (25+ in 2017 ACS)	13,635	74	0.3%	4,369,451
with High School diploma or higher	87.9%	51		88.3%
with B.A. or higher degree	14.3%	66		25.3%

Sources: Indiana Department of Education; U.S. Census Bureau, American Community Survey 5-year estimates.

Income and Poverty	Number	Rank in State	Percent of State	Indiana
Per Capita Personal Income (annual) in 2018	$37,851	82	80.3%	47,149
Median Household Income in 2017	50,670	57	93.6%	$54,134
Poverty Rate in 2017	12.1%	45	91.0%	13.3%
Poverty Rate among Children under 18	17.5%	44	98.3%	17.8%
Welfare (TANF) Monthly Average Families in 2018	13	78	0.2%	6,032
Food Stamp Recipients in 2018	1,539	70	0.3%	605,854
Free and Reduced Fee Lunch Recipients in 2018/2019	1,409	70	0.3%	514,915

Sources: U.S. Bureau of Economic Analysis; U.S. Census Bureau; Indiana Family Social Services Administration; Indiana Department of Education

Health and Vital Statistics	Number	Rank of	Percent of State	Indiana
Births, 2017	214	73	0.3%	82,170
Births to Teens, 2017	24	53	0.5%	5,152
Deaths, 2017	225	71	0.3%	65,602

Source: Indiana State Department of Health

Labor Force, 2018	Number	Rank in State	Percent of State	Indiana
Total Resident Labor Force	9,323	72	0.3%	3,381,713
Employed	8,979	71	0.3%	3,265,580
Unemployed	344	72	0.3%	116,133
Annual Unemployment Rate	3.7	28	108.8%	3.4
October 2019 Unemployment Rate	**2.9**	**40**	**96.7%**	**3.0**

Source: STATS Indiana, using data from the Indiana Department of Workforce Development

Employment and Earnings by Industry, 2018	Employment	Pct Dist. in County	Earnings ($000)	Pct Dist. In County	Avg. Earnings Per Job
Total by place of work	8,710	100.0%	$421,611	100.0%	$48,405
Wage and Salary	6,838	78.5%	$290,233	68.8%	$42,444

Farm Proprietors	360	4.1%	$2,774	0.7%	$7,706
Nonfarm Proprietors	1,512	17.4%	$53,757	12.8%	$35,554
Farm	403	4.6%	$3,781	0.9%	$9,382
Nonfarm	8,307	95.4%	$417,830	99.1%	$50,299
Private	6,791	78.0%	$339,443	80.5%	$49,984
Accommodation, Food Serv.	Data not available due to BEA non-disclosure requirements.				
Arts, Ent., Recreation	Data not available due to BEA non-disclosure requirements.				
Construction	394	4.5%	$16,882	4.0%	$42,848
Health Care, Social Serv.	508	5.8%	$23,418	5.6%	$46,098
Information	54	0.6%	$2,299	0.5%	$42,574
Manufacturing	2,140	24.6%	$161,342	38.3%	$75,393
Professional, Tech. Serv.	203	2.3%	$9,189	2.2%	$45,266
Retail Trade	936	10.7%	$21,276	5.0%	$22,731
Trans., Warehousing	286	3.3%	$12,437	2.9%	$43,486
Wholesale Trade	81	0.9%	$4,630	1.1%	$57,160
Other Private (not above)	1,185*	13.6%*	$59,039*	14.0%*	$49,822*
Government	1,516	17.4%	$78,387	18.6%	$51,706

Source: U.S. Bureau of Economic Analysis

* These totals do not include county data that are not available due to BEA non-disclosure requirements.

Residential Building Permits, 2018	Units	Pct Dist. in County	Pct Dist. in State	Cost ($000)	State Cost ($000)
Total Permits Filed	24	100.0%	100.0%	$4,023	$4,879,857
Single-Family	24	100.0%	76.4%	$4,023	$4,269,197
2-Family	0	0.0%	2.0%	0	$49,353
3- and 4-Family	0	0.0%	0.2%	$0	$6,163
5+ Family	0	0.0%	21.4%	$0	$555,144

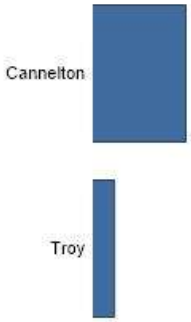
Notes: Detail cost may not sum to total due to rounding. Greene County does not currently issue building permits, so it is excluded.

Source: U.S. Census Bureau

Largest Cities and Towns in Perry County

Name	Population in 2018	Percent of County
Cannelton	1,488	7.8%
Tell City	7,237	37.9%

Troy	396	2.1%



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STATSINDIANA
Indiana's Public Data Utility

Choose one of the following geographies and click go to view its profile:
County: Spencer Go
Region: EGR 1 GO

Spencer County, Indiana

Named for Battle of Tippecanoe hero Spier Spencer

County Seat: Rockport
Largest City: Santa Claus (2018 population: 2,410)
Population per Square Mile: 51.24
Square Miles: 396.70
Go to county's in.gov site

Population over Time	Number	Rank in State	Percent of State	Indiana
Yesterday (2010)	20,952	71	0.3%	6,484,192
Today (2018)	20,327	71	0.3%	6,691,878
Tomorrow (2020 projection)*	21,211	69	0.3%	6,852,121
Percent Change 2010 to Today	-3.0%	72		3.2%

*Projection based on 2010 Census counts.
Sources: U.S. Census Bureau; Indiana Business Research Center

Components of Population Change, 2017-2018	Number	Rank in State	Percent of State	Indiana
Net Domestic Migration	-45	57		3,555
Net International Migration	0	73		9,227
Natural Increase (births minus deaths)	-44	81	-0.2%	19,211

Source: U.S. Census Bureau

Population Estimates by Age, 2018	Number	Rank in State	Pct Dist. in County	Pct Dist. in State
Preschool (0 to 4)	1,057	73	5.2%	6.3%
School Age (5 to 17)	3,383	70	16.6%	17.2%
College Age (18 to 24)	1,530	72	7.5%	9.8%
Young Adult (25 to 44)	4,480	74	22.0%	25.4%
Older Adult (45 to 64)	5,945	69	29.2%	25.6%

Seniors (65 and older)	3,932	70	19.3%	15.8%
Median Age	43.8			Median Age = 37.9

Sources: U.S. Census Bureau; Indiana Business Research Center

Population Estimates by Race and Hispanic Origin, 2018	Number	Rank of	Pct Dist. in County	Pct Dist. in State
American Indian or Alaska Native Alone	54	83	0.3%	0.4%
Asian Alone	78	74	0.4%	2.5%
Black Alone	198	61	1.0%	9.8%
Native Hawaiian and Other Pac. Isl. Alone	0	91	0.0%	0.1%
White	19,768	70	97.2%	85.1%
Two or More Race Groups	229	71	1.1%	2.1%
Hispanic or Latino Origin (can be of any race)				
Non-Hispanic	19,726	71	97.0%	92.9%
Hispanic	601	62	3.0%	7.1%

Source: U.S. Census Bureau

Household Types	Number	Rank in State	Pct Dist. in County	Pct Dist. in State
Households in 2017 (Includes detail not shown below)	8,101	70	100.0%	100.0%
Married With Children	1,661	66	20.5%	18.8%
Married Without Children	3,305	65	40.8%	30.0%
Single Parents	360	85	4.4%	9.6%
Living Alone	1,989	74	24.6%	28.3%

Source: U.S. Census Bureau, American Community Survey 5-year estimates.

Housing	Number	Rank in State	Pct Dist. in County	Pct Dist. in State
Total Housing Units in 2018 (estimate)	9,139	73	100.0%	100.0%
Total Housing Units in 2017 (includes vacant units)	9,033	73	100.0%	100.0%
Owner Occupied (Pct. distribution based on all housing units)	6,644	68	73.6%	61.2%
Median Value (2017)	$117,900	43		
Renter Occupied (Pct. distribution based on all housing units)	1,457	77	16.1%	27.7%
Median Rent (2017)	$440	82		

Source: U.S. Census Bureau, American Community Survey 5-year estimates.

Education	Number	Rank in State	Percent of State	Indiana

School Enrollment (2018/2019 Total Reported)	3,405	67	0.3%	1,117,590
Public	3,285	67	0.3%	1,054,903
Adults (25+ in 2017 ACS)	14,377	70	0.3%	4,369,451
with High School diploma or higher	89.8%	21		88.3%
with B.A. or higher degree	15.9%	57		25.3%

Sources: Indiana Department of Education; U.S. Census Bureau, American Community Survey 5-year estimates.

Income and Poverty	Number	Rank in State	Percent of State	Indiana
Per Capita Personal Income (annual) in 2018	$43,971	31	93.3%	47,149
Median Household Income in 2017	56,646	28	104.6%	$54,134
Poverty Rate in 2017	10.4%	64	78.2%	13.3%
Poverty Rate among Children under 18	12.2%	79	68.5%	17.8%
Welfare (TANF) Monthly Average Families in 2018	17	69	0.3%	6,032
Food Stamp Recipients in 2018	1,149	80	0.2%	605,854
Free and Reduced Fee Lunch Recipients in 2018/2019	1,230	75	0.2%	514,915

Sources: U.S. Bureau of Economic Analysis; U.S. Census Bureau; Indiana Family Social Services Administration; Indiana Department of Education

Health and Vital Statistics	Number	Rank of	Percent of State	Indiana
Births, 2017	214	73	0.3%	82,170
Births to Teens, 2017	14	72	0.3%	5,152
Deaths, 2017	203	75	0.3%	65,602

Source: Indiana State Department of Health

Labor Force, 2018	Number	Rank in State	Percent of State	Indiana
Total Resident Labor Force	10,983	65	0.3%	3,381,713
Employed	10,623	65	0.3%	3,265,580
Unemployed	360	71	0.3%	116,133
Annual Unemployment Rate	3.3	50	97.1%	3.4
October 2019 Unemployment Rate	**2.6**	**66**	**86.7%**	**3.0**

Source: STATS Indiana, using data from the Indiana Department of Workforce Development

Employment and Earnings by Industry, 2018	Employment	Pct Dist. in County	Earnings ($000)	Pct Dist. In County	Avg. Earnings Per Job
Total by place of work	9,845	100.0%	$450,957	100.0%	$45,806
Wage and Salary	7,341	74.6%	$301,943	67.0%	$41,131

Farm Proprietors	513	5.2%	$13,631	3.0%	$26,571
Nonfarm Proprietors	1,991	20.2%	$56,907	12.6%	$28,582
Farm	616	6.3%	$17,750	3.9%	$28,815
Nonfarm	9,229	93.7%	$433,207	96.1%	$46,940
Private	8,109	82.4%	$383,670	85.1%	$47,314
Accommodation, Food Serv.	Data not available due to BEA non-disclosure requirements.				
Arts, Ent., Recreation	Data not available due to BEA non-disclosure requirements.				
Construction	695	7.1%	$31,244	6.9%	$44,955
Health Care, Social Serv.	466	4.7%	$29,385	6.5%	$63,058
Information	107	1.1%	$8,978	2.0%	$83,907
Manufacturing	1,349	13.7%	$97,339	21.6%	$72,156
Professional, Tech. Serv.	Data not available due to BEA non-disclosure requirements.				
Retail Trade	668	6.8%	$13,970	3.1%	$20,913
Trans., Warehousing	447	4.5%	$28,974	6.4%	$64,819
Wholesale Trade	371	3.8%	$20,676	4.6%	$55,730
Other Private (not above)	2,176*	22.1%*	$110,177*	24.4%*	$50,633*
Government	1,120	11.4%	$49,537	11.0%	$44,229

Source: U.S. Bureau of Economic Analysis

* These totals do not include county data that are not available due to BEA non-disclosure requirements.

Residential Building Permits, 2018	Units	Pct Dist. in County	Pct Dist. in State	Cost ($000)	State Cost ($000)
Total Permits Filed	40	100.0%	100.0%	$8,845	$4,879,857
Single-Family	40	100.0%	76.4%	$8,845	$4,269,197
2-Family	0	0.0%	2.0%	0	$49,353
3- and 4-Family	0	0.0%	0.2%	$0	$6,163
5+ Family	0	0.0%	21.4%	$0	$555,144

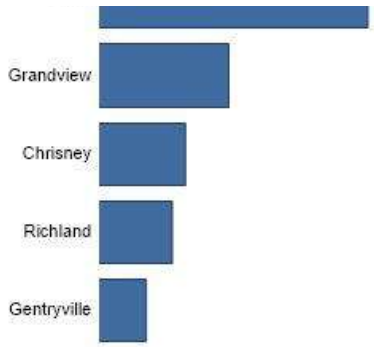
Notes: Detail cost may not sum to total due to rounding. Greene County does not currently issue building permits, so it is excluded.

Source: U.S. Census Bureau

Largest Cities and Towns in Spencer County

Name	Population in 2018	Percent of County
Chrisney	472	2.3%
Dale	1,495	7.4%

Gentryville	261	1.3%
Grandview	711	3.5%
Richland	403	2.0%
Rockport	2,153	10.6%
Santa Claus	2,410	11.9%



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Compare Counties

2019 Rankings

	Indiana	Perry (PE), IN X	Spencer (SP), IN X PEER COUNTY
Health Outcomes		48	8
Length of Life		36	26
Premature death	8,200	7,700	7,200
Quality of Life		68	4
Poor or fair health	18%	17%	14%
Poor physical health days	3.9	3.9	3.5
Poor mental health days	4.3	4.2	3.8
Low birthweight	8%	8%	6%
Health Factors		55	9
Health Behaviors		55	10
Adult smoking	21%	20%	18%
Adult obesity**	33%	34%	34%
Food environment index**	7.1	7.5	8.8
Physical inactivity**	25%	27%	25%
Access to exercise opportunities	75%	76%	48%
Excessive drinking	19%	17%	18%
Alcohol-impaired driving deaths	21%	23%	4%
Sexually transmitted infections**	466.0	144.7	183.4
Teen births	28	46	27
Clinical Care		22	16
Uninsured	9%	8%	8%
Primary care physicians	1,500:1	2,370:1	2,950:1
Dentists	1,810:1	3,180:1	3,400:1
Mental health providers	670:1	1,590:1	5,100:1
Preventable hospital stays	5,023	2,571	3,845
Mammography screening	40%	39%	46%
Flu vaccinations	47%	36%	47%
Social & Economic Factors		65	15
High school graduation	84%	90%	93%
Some college	62%	48%	58%
Unemployment	3.5%	3.8%	3.4%
Children in poverty	18%	18%	12%
Income inequality	4.4	4.3	3.8
Children in single-parent households	34%	36%	18%
Social associations	12.3	12.7	15.0
Violent crime**	385		
Injury deaths	74	86	54

	Indiana	Perry (PE), IN X	Spencer (SP), IN X PEER COUNTY
Physical Environment		30	45
Air pollution - particulate matter	11.8	12.1	12.1
Drinking water violations		No	No
Severe housing problems	14%	9%	8%
Driving alone to work	83%	84%	85%
Long commute - driving alone	31%	31%	42%

** Compare across states with caution
Note: Blank values reflect unreliable or missing data

PERRY COUNTY MEMORIAL HOSPITAL
TOP 20 DIAGNOSES AND PAYMENT
07/01/18 THRU 06/30/19

		COPD	PNEUMONIA	SEPSIS
PAYMENT SOURCE		J44.1	J18.9	A41.9
SUPP TO MEDICARE		0	0	0
BC/BS		2	3	1
COMMERCIAL INS		5	1	1
MANAGED CARE		1	0	1
CHAMPUS/VA/TRIC		0	0	0
IAG REG W/O PLAN		2	3	1
KMA/UNY/PASSPRT		4	1	0
MEDICARE		0	0	0
MEDICARE ADV.		0	2	1
MEDICARE INP.		60	43	28
MEDICARE IP. MGD		11	8	2
MEDICAID		0	3	1
MADICAID MGD CARE		7	3	2
INDIANA HIP		3	3	1
PRIVATE (SELF)		0	1	0
PRIVATE IAS		15	14	6
TRUE PRIV. PAY		0	0	0
TOTAL	110		85	45

UTI	RESP. FAIL	TYPE 1 DM	A&C RESP. FAIL	KIDNEY FAIL	DEHYDRATION
N39.0	J96.01	E10.10	J96.21	N17.9	E86.0
0	0	0	0	0	0
0	1	1	1	2	1
0	1	0	1	0	1
2	0	0	0	1	0
1	0	0	0	0	0
2	3	0	1	1	1
0	5	0	1	2	1
0	0	0	0	0	0
1	0	0	0	0	0
59	38	1	12	45	24
4	5	0	3	5	1
5	1	2	0	3	1
1	1	0	1	2	1
1	1	3	1	2	1
1	0	0	0	0	0
10	6	5	2	6	5
0	0	0	0	0	0
87	62	12	23	69	37

ENCEPHOLOPA	NSTEMI	HEART FAIL	A&C HEART FAI	RESP. FAIL W/ HYPERCAPNIA	INTEST. OBST.
G93.41	I21.4	I50.9	I50.23	J96.02	K56.609
0	0	0	0	0	0
0	1	1	0	1	0
0	1	0	0	0	0
0	0	0	0	1	0
0	0	0	0	0	0
0	0	0	0	0	1
1	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	1	0
25	12	16	11	7	7
1	5	1	2	0	0
1	0	0	0	0	0
0	0	0	1	0	0
1	0	0	0	0	0
0	0	0	0	0	0
2	1	2	2	0	2
0	0	0	0	0	0
31	20	20	16	10	10

MATERNAL CARE C-SECTIO	DELIVERY	HYPOSMOALIT	HYP. HEART	CELLULITIS
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0	2	1	0	0
0	0	0	0	0
1	1	0	0	0
0	0	0	0	0
0	0	1	1	0
2	0	3	0	0
0	0	0	0	0
0	0	1	0	0
0	0	13	9	8
0	0	2	1	1
1	0	0	1	0
2	0	0	0	0
3	3	4	0	0
0	0	0	0	0
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9	8	29	15	11

Indiana Cancer Facts and Figures

2015

A Sourcebook for Planning and Implementing Programs for Cancer Prevention and Control

Introduction Letter

Dear Hoosiers,

The *Indiana Cancer Facts and Figures 2015* is the fourth iteration of our state's only comprehensive report on the burden of cancer. This report provides the most recent and accurate data available for the state of Indiana, covering a wide variety of current cancer issues and trends, including cancer incidence, mortality, and survival statistics as well as information on decreasing the risk of cancer, cancer symptoms, risk factors, early detection, and treatment.

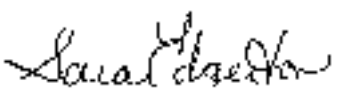
The Indiana Cancer Consortium (ICC) is proud to promote the message that this report sends from the Indiana cancer community to Hoosiers across the state. The *Indiana Cancer Facts and Figures 2015* perfectly demonstrates the willingness and the passion that Hoosiers have to work together to improve and overcome our state's cancer burden. We know that we can only make a real difference through collective effort and action.

The size and scope of this report becomes that much more admirable when considering that nearly 100 percent of it is completed voluntarily by ICC members. As such, we trust that the collaborative efforts of our contributing partners will benefit all Indiana residents and serve as a rallying call for us to move forward as a single cancer control alliance.

From the ICC, we thank the American Cancer Society and the Indiana State Department of Health for their organizational partnership in the development of this report. We also thank all those who helped make this report a reality. The time, the resources, and the expertise shared will establish this report as a leading tool for Indiana's cancer prevention and control efforts. Furthermore, we also recognize the value of all those who will now take this report and act according to its findings.

Finally, to all Indiana residents, the ICC promises to continue convening partners, identifying cancer burdens, and developing and implementing evidence-based interventions that will improve the health of all citizens of Indiana.

Sincerely,



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Collaborating to Conquer Cancer

The Comprehensive Cancer Control National Partnership is a movement of states, tribes, territories, US Pacific Island Jurisdictions, and local communities working together to reduce the burden of cancer for all people. In the Hoosier state, the Indiana Cancer Consortium (ICC) serves as that comprehensive cancer control coalition, responsible for developing, implementing, and evaluating a statewide cancer control plan, which address cancer from prevention through palliation.

Collaborating to Conquer Cancer is the underlying philosophy, vision, and model that directs the ICC, as well as our partners across the nation. In Indiana, we are proud to say that *Collaborating to Conquer Cancer* represents the more than 200 organizational and individual members of the ICC who work to bring together Indiana's cancer community, identify disease challenges facing both state and local communities, and develop evidence-based solutions that make a difference.

The ICC membership plans, contributes, and takes advantage of a full range of free services — including professional trainings, educational publications, mini-grants, and guidance. By listening to our partners, public health and medical experts, and other interested Hoosiers, we continually evolve to better address the gaps in cancer prevention and control across the state. The larger our coalition grows, the bigger impact we have. Become a member at IndianaCancer.org.

The Plan

The collaborative process is best reflected through the development and implementation of Indiana's current cancer control plan, our roadmap to coordinate cancer control efforts. The plan is comprised of six focus areas, including primary prevention, early detection, treatment, quality of life, data, and advocacy. Within those six areas, experts in the fields of public health, cancer research, and treatment identified the most important activities that, when implemented, can reduce cancer in Indiana. Day by day, as more partners engage in strategies from this plan, extraordinary accomplishments are made. *This* is the power of our unique cancer control alliance. Together we are stronger than cancer.

Key Activities

- Lead in the ongoing development, implementation, and evaluation of an Indiana-focused comprehensive cancer control plan that addresses cancer across the continuum.
- Provide guidance to members on current issues in cancer advocacy, research, detection, and treatment.
- Provide a forum for a multi-sectored and diverse membership to discuss the cancer issues challenging Indiana.
- Strengthen communication, resource sharing, and collaboration in the cancer community, and reduce duplication and inefficiency.
- Educate Indiana health workers and cancer advocates on current evidence-based strategies and best practices.
- Support and inform Indiana on policy, system, and environmental changes that decrease risk factors which impact Hoosier communities.

Indiana Cancer Facts and Figures 2015

The *Indiana Cancer Facts and Figures 2015* includes the most up-to-date cancer information available and identifies current cancer trends and their potential impact on Indiana residents. This report significantly helps the ICC measure Indiana's progress toward meeting the goals and objectives outlined in the *Indiana Cancer Control Plan*. This publication is an exemplary application of collaboration in public health. We hope that the sharing of knowledge, resources, and expertise among the many participating organizations to produce this tool will inspire organizations across the state to tackle the cancer burden together.

Understanding Cancer Data

Cancer data can sometimes be difficult to interpret. Here is some information about common terms and methods used to better understand cancer data so that it can be effectively used to guide interventions and policy decisions.

Incidence (New cases)

Incidence refers to annual or average annual incidence. Annual incidence is the number of new cases of cancer diagnosed during a calendar year. Average annual incidence is the number of new cases diagnosed during a specified number of years. Indiana resident incidence data in this report, unless otherwise noted, were obtained from the Indiana State Cancer Registry (ISCR). Because there are delays in health care providers reporting cancer cases to the ISCR and the ISCR has to make sure data are complete and accurate before publishing them, the most current data available for this report were from 2012. Visit www.in.gov/isdh/24360.htm to see if more up-to-date data are available.

Mortality (Deaths)

Mortality refers to annual or average annual mortality. Annual mortality is the number of deaths from cancer during a calendar year (Note: the cancer was not necessarily diagnosed in the same year). Average annual mortality is the average number of deaths during a specified number of years. Mortality data reflect the underlying cause of death as recorded on the death certificate. Indiana resident mortality data in this report, unless otherwise noted, are from the ISCR who obtains annual death certificate record information from the Indiana State Department of Health Vital Records Department. Data from 2012 were the most current mortality data available for this report. Visit www.in.gov/isdh/24360.htm to see if more up-to-date data are available.

Cancer Rates

In this document, cancer rates represent the number of new cases of cancer per 100,000 people (incidence) or the number of cancer deaths per 100,000 people (mortality) during a specific period [see example below]. Typically, incidence rates are calculated based only on the number of invasive cancer cases that occurred during a period and do not include in situ cases. Invasive cancer is cancer that has spread beyond the layer of tissue in which it developed and is growing into surrounding, healthy tissues. See page 9 for additional information about in situ cancer.

Example: If a county's lung cancer incidence rate is 40.0 cases per 100,000 people that means 40 new cases of invasive lung cancer were diagnosed for every 100,000 people. If the county's population is 25,000, then an incidence rate of 40.0 means 10 new cases of invasive lung cancer were diagnosed in that county during that year. Rates provide a useful way to compare cancer burden irrespective of the actual population size. Rates can be used to compare demographic groups (males have higher lung cancer rates than females), race/ethnic groups (African American males have higher prostate cancer rates than white males), or geographic areas (Indiana has higher lung cancer incidence rates than California). Population data to calculate the incidence rates were obtained from www.seer.cancer.gov/popdata.

Age-Adjusted Rates

Older age groups generally have higher cancer rates than younger age groups. For example, in Indiana, more than 60 percent of new lung cancer cases occur in those ages 60 and older. As a result, if one county's lung cancer incidence rate is higher than another, the first question asked is whether the county with a higher rate has an older population.

To address this issue, all mortality and incidence rates presented in this report, unless otherwise noted, have been age-adjusted. This removes the impact of different age distributions between populations and allows for direct comparisons of those populations. Additionally, age-adjustment allows for a comparison of rates within a single population over time. An age-adjusted rate is not a real measure of the burden of the disease on a population, but rather an artificial measure that is used for comparison purposes. All mortality and incidence rates in this publication were age-adjusted using the direct method. This method weights the age-specific rates (*i.e.*, rates calculated for each age group) for a given sex, race, or geographic area by the age distribution of the standard population. The 2000 US standard million population and five-year age group population numbers were used to calculate all of the age-adjusted rates in this report.

Confidence Intervals and Statistical Significance

Because the ISCR collects information on all reportable cancer cases that occur in Indiana, the incidence and mortality rates in this report are not subject to sampling error (*i.e.*, error in estimating rates because one is working with sample rather than population data). However, cancer rates are often impacted by random variation, especially when looking at rates for rare types of cancer or among small geographic areas. Because of this random variation, confidence intervals (CIs) are used to describe the range of that variation. Most typically, 95% CIs are calculated, which provide a range of values in which one is 95% confident that the true rate exists, or, more technically, a 95% CI is such that if one repeated a study 100 times, 95 of the intervals would include the true rate.

For this report, CIs for the age-adjusted rates were calculated with a method based on the gamma distribution.[1] This method produces valid CIs even when the number of cases is very small. When the number of cases is large, the CIs produced with the gamma method are equivalent to those produced with the more traditional methods. The formulas for computing CIs can be found at www.in.gov/isdh/24360.htm

(click "Help" then "Index"). Generally, when the 95% CI for the area of interest does not overlap with the 95% CI for the comparison area, we would say that the two areas are statistically significantly different at the $P<.05$ level (*i.e.*, the difference between the two rates is more than that expected by random variation). The limitation of this method, though, is that if two rates have overlapping CIs, they are probably not significantly different, but there is a chance that they still could be. Therefore, some of the rates in this report (*e.g.*, county rates) not designated as being significantly above or below the comparison rate (*e.g.*, Indiana rate) could still be significantly different.

Other Common Terms Used and Groups Referenced in this Report:

Adults. Used in this report to refer to people ages 18 years and older.

Age-specific Rate. The total number of new cases or deaths among residents in a specific age group divided by the population of that age group then multiplied by 100,000.

American Cancer Society (ACS). A nationwide, community-based voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives, and diminishing suffering from cancer, through research, education, advocacy, and service. Additional information is available at www.cancer.org.

Burden. The number of new cases or deaths from cancer or overall impact of cancer in a community.

Carcinogen. Any chemical, physical, or viral agent that is known to cause cancer.

Centers for Disease Control and Prevention (CDC). The CDC's mission is the following: "Collaborating to create the expertise, information, and tools that people and communities need to protect their health — through health promotion, prevention of disease, injury and disability, and preparedness for new health threats." Additional information is available at www.cdc.gov.

Five-year Survival. The percentage of people who are alive five years after their cancer is diagnosed. While statistically valid, these percentages are based on historical data and might not reflect current advances in treatment. Therefore, five-year survival rates should not be seen as a predictor in an individual case.

Lifetime Risk. The probability that an individual, over the course of a lifetime, will develop or die from cancer.

Malignant. Cancer that has spread beyond the location in which it started.

Metastasis. Movement of cancer from part of the body to a separate area of the body.

Morbidity. The number of people who have a disease.

National Center for Health Statistics (NCHS). Contained within the CDC, the NCHS is the nation's principal health statistics agency. They compile statistical information to guide actions and policies to improve health. Additional information is available at www.cdc.gov/nchs.

Prevalence. A calculation of the proportion of people with a certain disease at a given time.

Risk Factor. Anything that increases a person's probability of getting a disease. Risk factors can be lifestyle-related, environmental, or genetic (inherited).

Surveillance, Epidemiology, and End Results (SEER) Program. Contained within the National Cancer Institute, SEER works to provide information on cancer statistics in an effort to reduce the burden of cancer among the US population. Additional information is available at www.seer.cancer.gov.

Staging. The process of finding out whether cancer has spread and, if so, how far. There is more than one system for staging (see page 9 for additional information).

References are provided throughout this report to provide readers with additional information. Web addresses are provided for online information.

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[1] Fay MP, Feuer EJ. Confidence intervals for directly standardized rates: a method based on the gamma distribution. *Statistics in Medicine*. 1997; 16: 791–801.

Common Questions about Cancer

What is cancer?

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. The cancer cells form tumors that destroy normal tissue. If cancer cells break away from a tumor, they can travel through the blood stream or the lymph system to other areas of the body, where they might form new tumors (metastases). If this growth is not controlled, cancer might be fatal.

Are all growths and tumors cancerous?

Not all irregular growths of abnormal cells lead to cancer. A tumor can be either benign (non-cancerous) or malignant (cancerous). Benign tumors do not metastasize and, with very rare exceptions, are not life threatening. Benign tumors usually grow slowly, remain localized, and do not destroy surrounding normal tissue.

What causes cancer?

All cancers develop because of damage to or mutation of genes that control cell growth and division. These genetic changes can be caused by exposure to external factors (*e.g.*, tobacco, poor diet, alcohol, chemicals, sunlight, radiation, infectious organisms) or internal factors (*e.g.*, inherited mutations, hormones, immune conditions, mutations that occur from metabolism). Only about five to ten percent of all cancers are the result of inherited gene mutations.[1]

External and internal factors often act together or in sequence to initiate or promote cancer development. Many years often pass between exposures or mutations and detectable cancer. Because of this, it is often difficult to directly identify causes of specific cancer cases.

Who gets cancer?

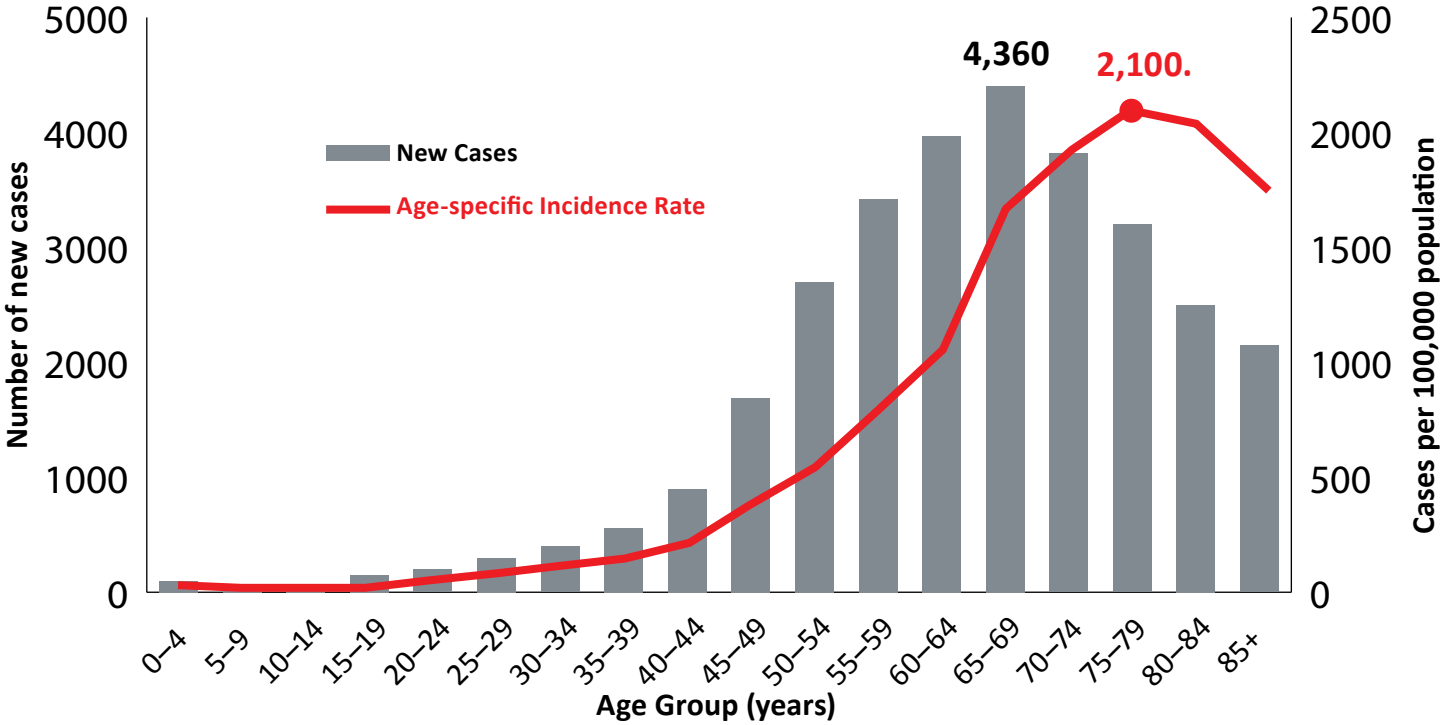
Anyone can get cancer at any age; however, middle and older aged people are most likely to develop cancer. In Indiana, during 2012, 66 percent of all cancers cases occurred among people ages 55–84, including 23 percent among people ages 55–64, 26 percent among people ages 65–74, and 18 percent among people ages 75–84 [Figure 1].

Additionally, individuals who have been exposed to certain external and internal risk factors have an increased risk of developing cancer. For example, male smokers are about 23 times more likely to develop lung cancer than nonsmokers.[2] Also, females who have a first degree relative (*i.e.*, mother, sister, or daughter) with a history of breast cancer have about twice the risk of developing breast cancer, compared to females who do not have this family history.[2]

Can cancer be prevented?

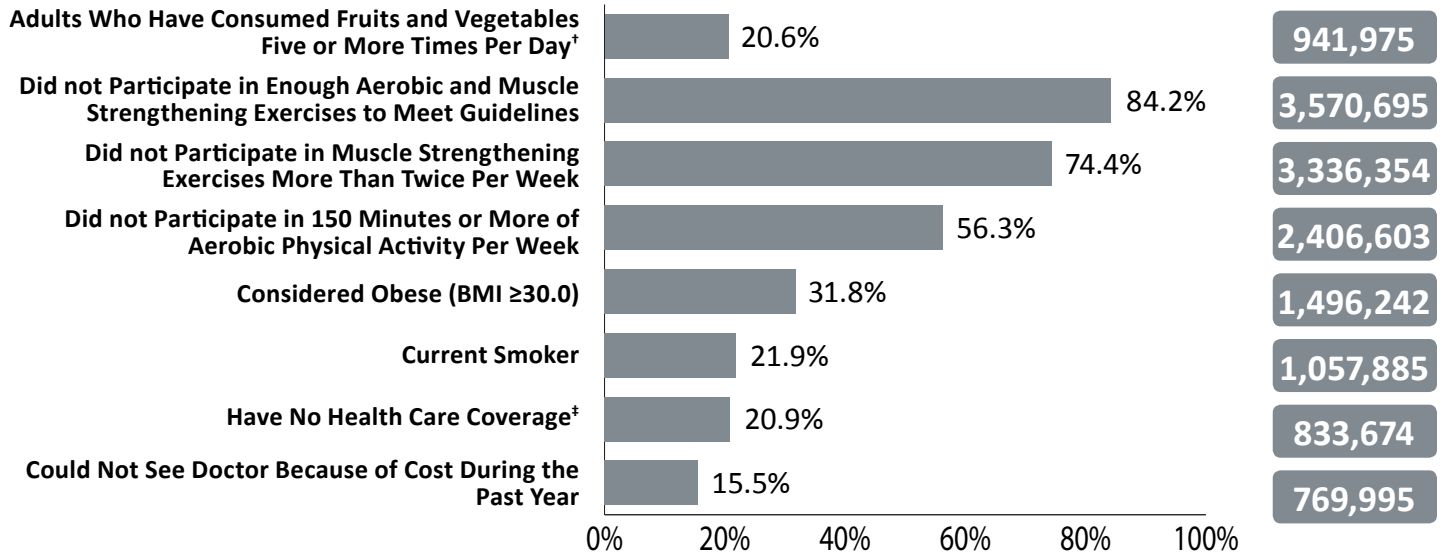
Many cancers can be prevented by modifying external risk factors and making lifestyle changes, such as eliminating tobacco use, improving dietary habits, increasing physical

Figure 1. Number and Rate of New Cancer Diagnoses among Residents — Indiana, 2012



Data are provided for the age groups with the largest number of cases and highest rate. Source: Indiana State Cancer Registry

Figure 2. Preventive Cancer Behaviors and Access to Medical Care among Adults* — Indiana, 2013



** Adults are people ages 18 years and older*

† Data from 2009

‡ Adults ages 18–64

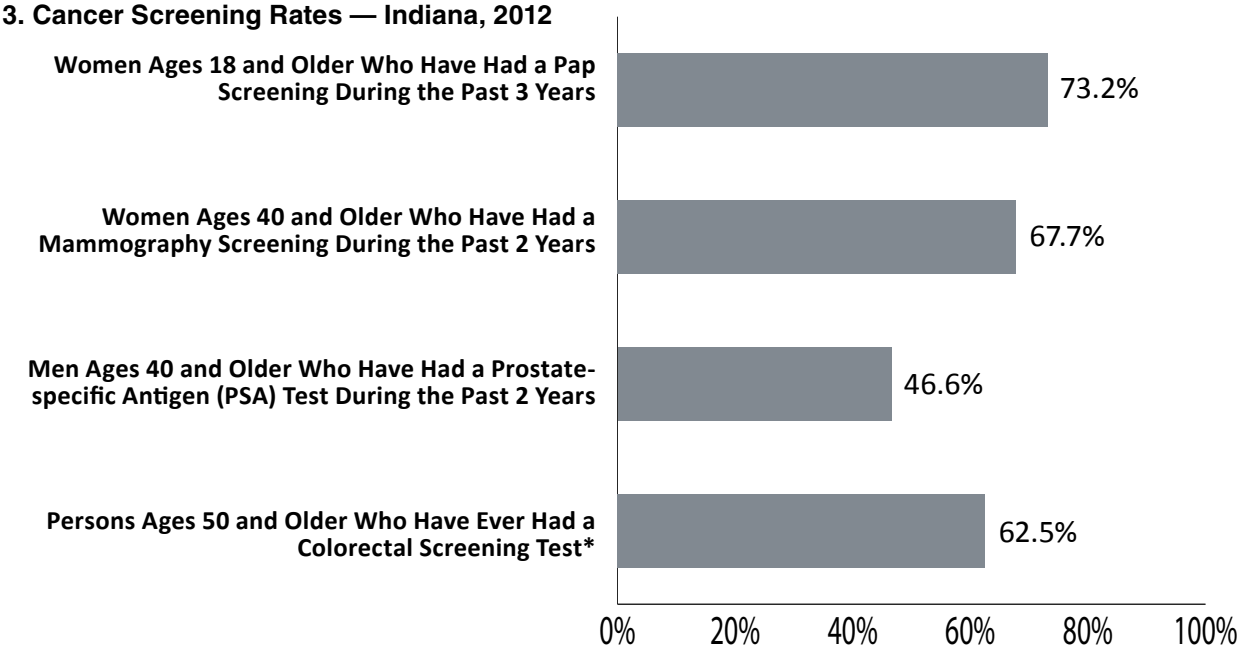
Source: Indiana Behavioral Risk Factor Surveillance System

activity, losing weight, and avoiding excessive sun and infectious disease exposures. Additionally, many cancers can be prevented or identified at an early stage if people receive regular medical care and obtain early detection cancer screenings. Figure 2 describes the burden of some lifestyle and external factors among Indiana adults and Figure 3 describes cancer screening rates among Indiana adults.

Additional information about cancer risk factors include:

- **Tobacco.** All cancers caused by the use of tobacco products could be prevented. The American Cancer Society (ACS) estimates that, during 2014, almost 176,000 cancer deaths were caused by tobacco use.[2] During 2013, 21.9 percent of Indiana adults were current smokers.[3]
- **Body Weight, Diet, and Physical Activity.** The World Cancer Research Fund estimates that about one-third of the 585,720 cancer deaths expected to have occurred during 2014 were related to overweight or obesity, physical inactivity, and poor nutrition.[2] During 2013, 31.8 percent of Indiana adults were considered obese.[3] Additionally, during 2013, 56.3 percent of Indiana adults did not get the recommended 150 minutes of exercise per week (recommendations available at www.cdc.gov/physicalactivity/everyone/guidelines/index.html).[3] During 2009, approximately 80 percent failed to eat fruits and vegetables five or more times each day.[3] Diets low in animal fat and high in fruits and vegetables could help prevent certain cancers.
- **Infection with HPV and Other Infectious Diseases.** The human papillomavirus (HPV) is the single greatest risk factor for cervical cancer.[4] The Centers for Disease Control and Prevention (CDC) estimates that 21,000 cancer cases each year could potentially be prevented with HPV vaccines. In all, an estimated 15 to 20 percent of cancers worldwide are related to infectious exposures, such as hepatitis B virus (HBV), human papillomavirus (HPV), human immunodeficiency virus (HIV), *Helicobacter* bacteria, and others.[5] Many of these infections can be prevented through behavioral changes or the use of vaccines or antibiotics.[5]
- **Sun Exposure.** Excessive exposure to ultraviolet (UV) radiation from the sun or other sources, like tanning beds, is the greatest risk factor for developing skin cancer. The US Department of Health and Human Services and the International Agency of Research on Cancer panel has found that exposure to sunlamps or sun beds is a known carcinogen.[6]
- **Health Care Coverage**. Uninsured and underinsured patients are substantially more likely to be diagnosed with cancer at a later stage, when treatment can be more extensive and costly.[2] According to the US Census Bureau, almost 48.6 million Americans were uninsured in 2011 — including one-third of Hispanics and one in 10 children (18 years and younger).[2] In 2013, approximately 21 percent (20.9) of Indiana residents ages 18-64 reported to having no health care coverage.[3] The Affordable Care Act is expected to continue to reduce the number of uninsured people — improving the health care system for cancer patients.[2]
- **Screening.** Early diagnosis through regular screening examinations saves lives by identifying cancers when they are most curable and treatment is more successful. Cancers that can be detected by screening include breast, cervix, colon, lung, oral cavity, rectum, skin, and testicular cancers.

Figure 3. Cancer Screening Rates — Indiana, 2012



** Sigmoidoscopy or colonoscopy*

Source: Indiana Behavioral Risk Factor Surveillance System

How is cancer staged?

A cancer's stage is based on the primary tumor's size and location in the body and whether it has spread from the site of origin to other areas of the body. There are two main staging systems used to classify tumors.

The ***TNM staging system*** assesses tumors in three ways: extent of the primary tumor (T), absence or presence of regional lymph node involvement (N), and absence or presence of distant metastases (M). Once the T, N, and M are determined, a stage is assigned. Stages are given numbers (I, II, III, IV) and represent a scale — stage I is the earliest possible diagnosis, and stage IV is advanced.

Summary staging is useful for descriptive and statistical analyses of cancer data and is used throughout this report. An in situ tumor is a tumor at the earliest possible stage — when cells have not invaded surrounding tissue. This stage can only be diagnosed by microscopic examination. A localized tumor is any tumor that has not spread beyond the primary organ. A regional or distant tumor is one that has spread to other parts of the body (this is also referred to as a tumor that has metastasized), either through the blood or lymph systems. With an unstaged/unknown tumor, there is insufficient information available to determine the stage of the disease.

What is the impact of stage at diagnosis on survival?

Staging is essential in determining the choice of therapy and assessing prognosis. It is a strong predictor of survival; generally, the earlier the stage, the better the prognosis. Locally and nationally, about half of newly diagnosed cases are either in situ or localized [Figure 4].

How is cancer treated?

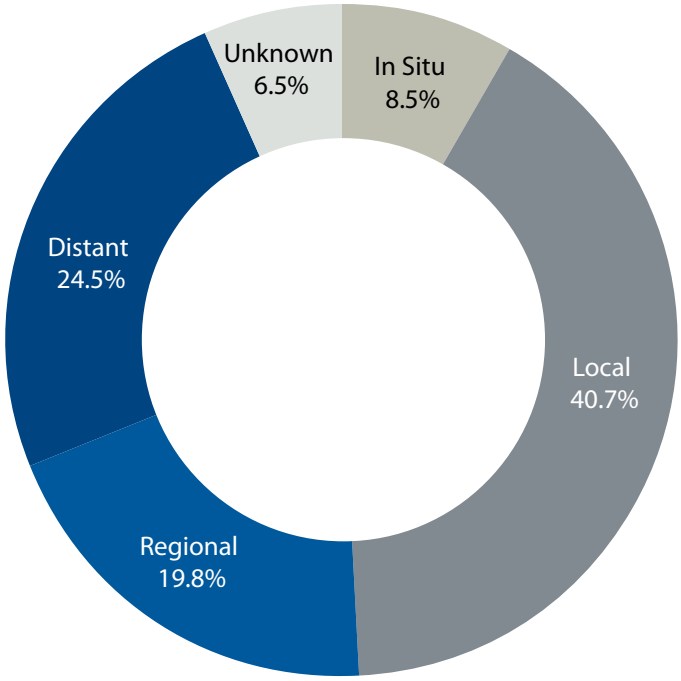
Treatment depends on the cancer type and stage, specific diagnosis, and overall health of the individual. Cancer is treated by one or more of the following therapies:

- **Surgery** removes the tumor by cutting out the cancerous mass; it is mostly used for localized tumors.
- **Chemotherapy** uses either intravenous or oral drugs to destroy cancer cells. It is used with the intention of curing or inducing remission in cancers in early stages.
- **Hormone therapy** might be given to block the body's natural hormones and to slow or stop the growth of certain cancers.
- **Immunotherapy or biologic therapies are** used to stimulate and strengthen a person's own immune system to destroy the cancer cells.
- **Radiation or radiotherapy** uses high-energy rays to destroy or slow the growth of cancer cells. It can be done with the intention of curing some cancers that have not spread too far from their site of origin or to relieve symptoms.

Can cancer be cured?

Many cancers can be cured if detected and promptly treated. For most types of cancer, if a person's cancer has been in remission (all signs and symptoms of the disease are absent) for five years, the cancer is considered cured. However, the length of remission at which a person is considered cured differs by cancer type. Certain skin cancers, such as a basal cell carcinoma, are considered cured as soon as the lesion is removed. For other cancers (*e.g.*, pancreatic), eight to ten years must pass before the person is considered cured.

Figure 4. Percent of Cancer Cases Diagnosed During Each Stage* — Indiana, 2008–2012



During 2008–2012, of the 169,378 Indiana residents who received an in situ or invasive cancer diagnosis, 83,269 (49.2%) were diagnosed in the in situ or local stage, 75,026 (44.3%) were diagnosed in the regional or distant stage, and 11,083 (6.5%) had unknown staging.

** Includes all in situ and invasive cancers except for basal and squamous cell skin cancers and in situ bladder, cervical, and prostate cancers, which are not reportable.*

Source: Indiana State Cancer Registry

What are the most common cancers?

The most commonly occurring cancers for both the state and the nation are the same. Excluding skin cancers, breast and prostate are the most prevalent cancers among females and males, respectively. Lung, including bronchus, and colon cancers are the next most common cancers among both sexes [Table 1]. Annually, lung cancer is responsible for the most cancer-related deaths among both sexes [Table 1].

How many people alive today will get cancer?

About 2.4 million Hoosiers, or 2 in 5 people now living in Indiana, will eventually develop cancer. Nationally, men have slightly less than a one in two chance of developing cancer in their lifetime; for women, the lifetime risk of developing cancer is a little more than one in three.[2]

How many people alive today have ever had cancer?

Approximately 13.7 million Americans with a history of cancer were alive on January 1, 2012.[2] Some of these individuals were cancer free, while others still had evidence of cancer and might have been undergoing treatment.

How many new cases of cancer are expected to occur this year?

The ACS estimated that approximately 35,620 Indiana residents will be diagnosed with cancer in 2015, amounting to almost four new cases of cancer diagnosed every hour of every day. Nationally, an estimated 1.6 million new cancer cases were diagnosed in 2014.[2] These estimates did not include cases of non-melanoma skin cancer and carcinoma in situ (except for in situ urinary bladder cancer cases).

How many people are expected to die from cancer this year?

During 2015, about 13,420 Indiana residents are expected to die of cancer, which translates to approximately 36 people every day.[2] Cancer is the second leading cause of death in Indiana following heart disease. Among children ages five to 14, cancer is the second leading cause of death following deaths from accidents.

How many people today survive cancer?

Using data from the Surveillance Epidemiology and End Results (SEER) registry, the five-year survival rate for

Table 1. Leading Sites of New Cancer Cases and Deaths among Indiana Residents by Sex, 2012

Number (%) of New Cases

Males	Count	%	Females	Count	%
Prostate	2,844	19.25%	Breast	4,366	27.83%
Lung and Bronchus	2,540	17.20%	Lung and Bronchus	2,134	13.60%
Colon and Rectum	1,447	9.80%	Colon and Rectum	1,378	8.78%
Urinary Bladder	1,071	7.25%	Corpus and Uterus, NOS	994	6.34%
Kidney and Renal Pelvis	688	4.66%	Brain and Other Nervous System	615	3.92%
Non-Hodgkin Lymphoma	657	4.45%	Thyroid	588	3.75%
Melanoma of the Skin	589	3.99%	Non-Hodgkin Lymphoma	545	3.47%
Oral Cavity and Pharynx	567	3.84%	Melanoma	502	3.20%
Brain and Other Nervous System	444	3.01%	Kidney and Renal Pelvis	429	2.73%
Pancreas	430	2.91%	Pancreas	420	2.68%
All Sites	**14,771**		**All Sites**	**15,689**	

Number (%) of Deaths

Males	Count	%	Females	Count	%
Lung and Bronchus	2,250	31.89%	Lung and Bronchus	1,708	27.29%
Colon and Rectum	613	8.69%	Breast	872	13.93%
Prostate	606	8.59%	Colon and Rectum	556	8.88%
Pancreas	395	5.60%	Pancreas	388	6.20%
Leukemia	308	4.37%	Leukemia	238	3.80%
Liver and Intrahepatic Bile Duct	294	4.17%	Non-Hodgkin Lymphoma	203	3.24%
Esophagus	280	3.97%	Corpus and Uterus, NOS	200	3.20%
Urinary Bladder	255	3.61%	Brain and Other Nervous System	161	2.57%
Non-Hodgkin Lymphoma	239	3.39%	Liver and Intrahepatic Bile Duct	156	2.49%
Kidney and Renal Pelvis	212	3.00%	Kidney and Renal Pelvis	118	1.89%
All Sites	**7,055**		**All Sites**	**6,258**	

Source: Indiana State Cancer Registry

Table 2. Cancer Incidence and Mortality (Death) Rate Comparisons between Indiana and the US, by Sex and Race, 2006–2010*

	Incidence rate per 100,000 people (2006–2010)			Mortality rate per 100,000 people (2006–2010)		
	Indiana	US	Difference (%)	Indiana	US	Difference (%)
Total	464.0†	469.1	-1.73	192.6†	176.4	9.18
Males	527.4†	541.1	-2.53	223.8†	215.3	3.95
Females	422.0†	417.8	1.01	161.5†	149.7	7.88
Whites	458.9†	469.3	-2.22	191.4†	175.8	8.87
African Americans	472.8	476.5	-0.78	221.4†	210.3	5.28

** Age-adjusted*

† Indiana rate is significantly higher (P<.05) than the US rate

Source: United States Cancer Statistics: 1999 — 2010 Mortality, WONDER Online Database. United States Department of Health and Human Services, Centers for Disease Control and Prevention; 2013. Accessed at http://wonder.cdc.gov/CancerMort-v2010.html on Mar 28, 2014 3:20:11 PM

2004–2010 from the 18 SEER geographic areas was 66.1 percent.[7] Factors such as early stage of disease at diagnosis can greatly improve the probability of survival after five years.

What are the costs of cancer?

During 2014, $1.83 billion was the estimated direct cost of treating Indiana residents with cancer. The estimated indirect costs totaled $11.12 billion for the same year.[8] The Milken Institute estimated that, should current trends continue, Indiana residents would spend $2.76 billion on direct costs for cancer care in 2023.[9]

How does cancer incidence and mortality in Indiana compare with the rest of the US?

Indiana's age-adjusted cancer incidence rate during 2006–2010 was 464.0 per 100,000 people. This was statistically higher than, but very similar to, the national rate of 469.1 per 100,000 people (<2% difference) [Table 2; Figure 5].

However, during the same period, Indiana's age-adjusted mortality rate was nine percent higher than the national rate (192.6 versus 176.4 deaths per 100,000 people). This included being almost four percent higher among Indiana males (223.8 versus 215.3 deaths per 100,000 males) and almost eight percent higher among Indiana females (161.5 versus 149.7 deaths per 100,000 females) [Table 2; Figure 6].

Lung cancer had the largest differences between the Indiana and US incidence and mortality rates, as the incidence rate among Indiana residents was almost 15 percent higher and the mortality rate was over 18 percent higher. This increase in risk is mostly attributable to Indiana having a high prevalence of smokers compared to the rest of the US. In 2013, Indiana had the 12th highest adult smoking rate in the country.[3]

Is the cancer burden in the US and Indiana lessening?

The burden of specific cancer types among US residents has changed over the years [Figures 7 and 8]. For example, with the gradual decrease in smoking rates among Americans over the past several decades, lung cancer mortality rates have begun to decrease, especially among US males.

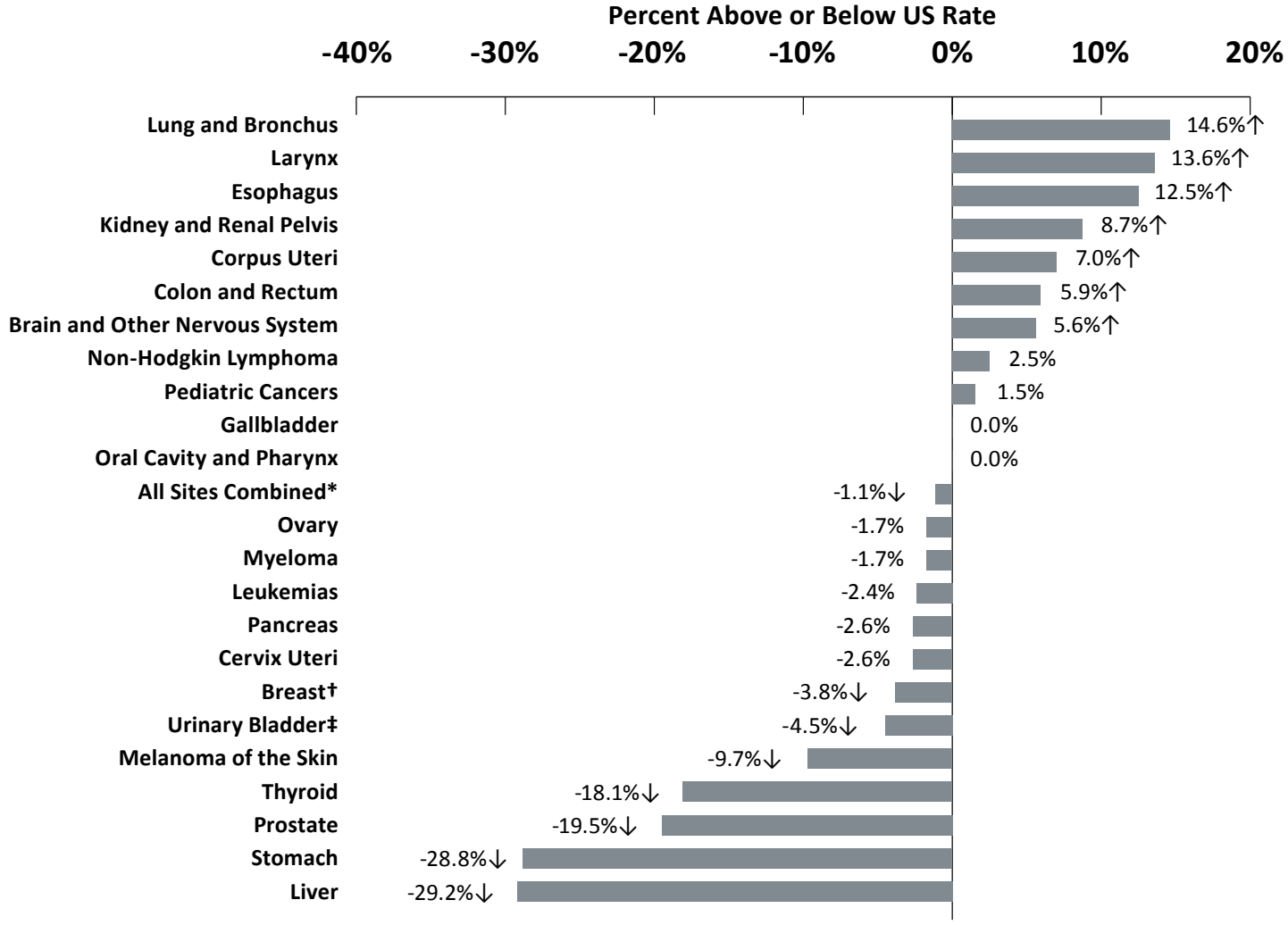
In Indiana, from 2003 to 2012, the age-adjusted incidence rates for all cancers combined decreased 13 percent from 490.2 to 428.0 cases per 100,000 people. Likewise, the age-adjusted mortality rates decreased 9.4 percent from 206.0 to 186.7 deaths per 100,000 people. However, trends varied among the different cancer types.

These statistics indicate that progress continues to be made in the early detection and treatment of certain cancers, and that the incidence and mortality of some cancers is declining. However, a significant cancer burden still exists among Indiana residents that require continued and more targeted cancer control efforts.

How does Indiana track changes in cancer risk and risk behavior data?

The Indiana State Cancer Registry was established in 1987 to compile information on cancer cases and other related data necessary to conduct epidemiological studies of cancer and develop appropriate preventive and control programs. The data in this registry allows for the evaluation of cancer prevention

Figure 5. How Do Indiana Cancer Incidence Rates Compare to US Rates?* (2006–2010)



** Age-adjusted*

† Female breast cancers only

‡ Urinary Bladder includes invasive and in situ.

Note: ↑↓ symbols denote whether Indiana's rate is significantly different than the US rate based on the 95% confidence interval overlap method (see Page 4 for description). ↑ = significantly higher; ↓ = significantly lower.

Source: United States Cancer Statistics: 1999–2010 Incidence, WONDER Online Database. United States Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Accessed at http://wonder.cdc.gov/cancer-v2010.html on Jul 14, 2014 3:56:43 PM

efforts and the measurement of progress toward reaching the state goal of reducing cancer incidence and mortality among Indiana residents.

Additionally, several data sources are used to describe the burden of risk factors (*e.g.*, obesity) and cancer screening rates among Indiana residents. The Behavioral Risk Factor Surveillance System (BRFSS) is the main source utilized to do this because it provides yearly data that can be used to generate Indiana-specific estimates for a large number of cancer risk and preventative factors. These findings can then be tracked over time and compared to other states to evaluate how Indiana is progressing in those areas. Additional local, state, and national data resources can be found in the Indiana Community Health Information Resource Guide (www.indianactsi.org/chep/resourceguide).

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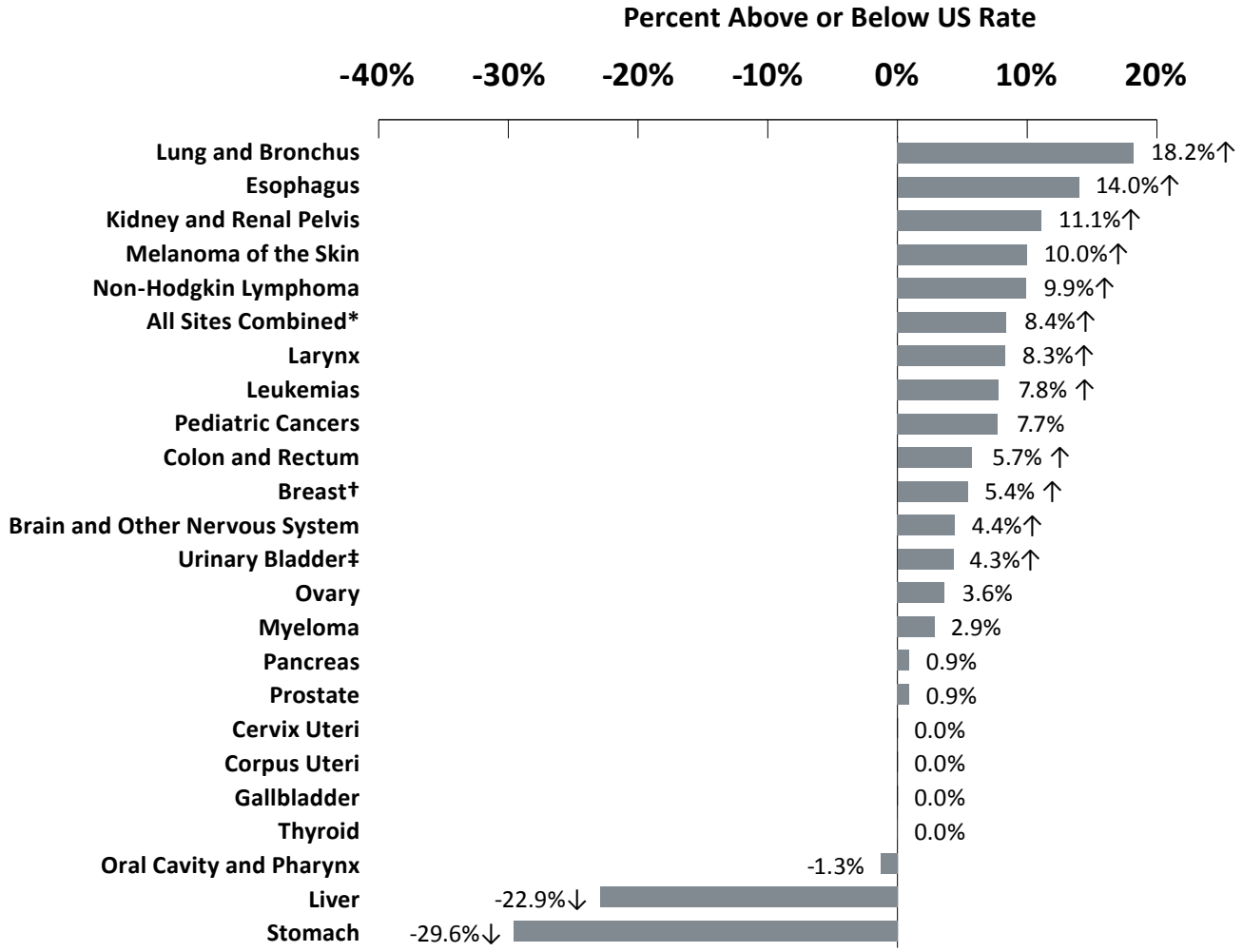
Figure 6. How Do Indiana Cancer Mortality (Death) Rates Compare to US Rates?* (2006–2010)



** Age-adjusted*

† Female breast cancers only

‡ Urinary Bladder includes invasive and in situ.

Note: ↑↓ symbols denote whether Indiana's rate is significantly different than the US rate based on the 95% confidence interval overlap method (see Page 4 for description). ↑ = significantly higher; ↓ = significantly lower.

Source: United States Cancer Statistics: 1999–2010 Incidence, WONDER Online Database. United States Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2013. Accessed at http://wonder.cdc.gov/cancer-v2010.html on Jul 14, 2014 3:56:43 PM

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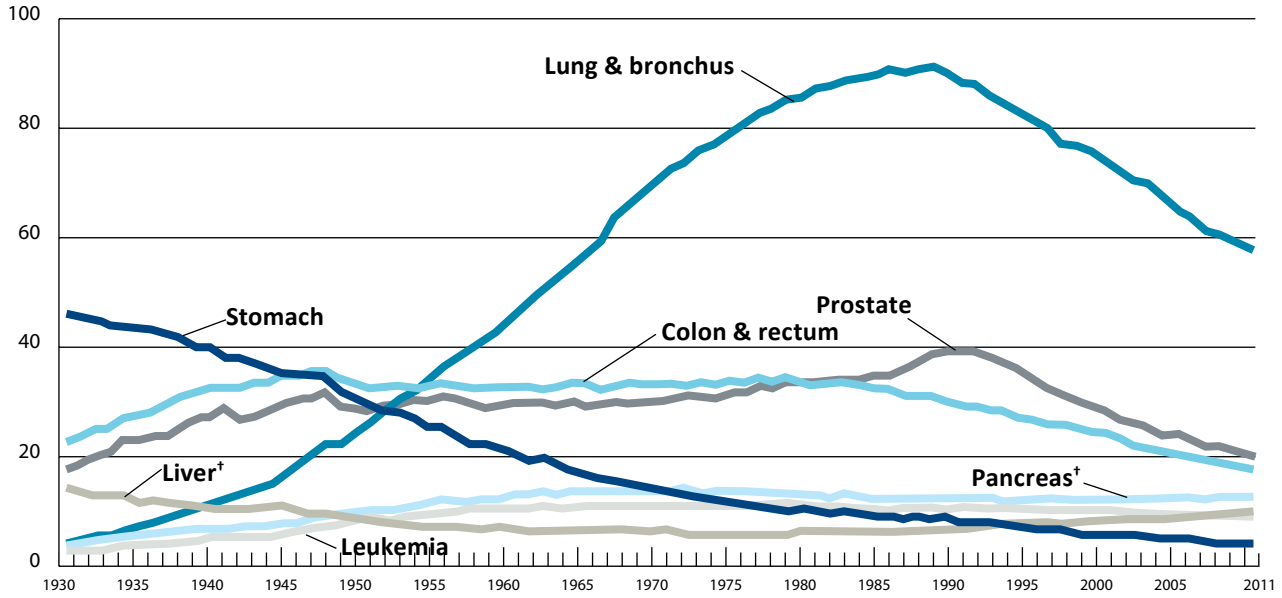
Figure 7. Cancer Mortality (Death) Rates among Males by Site* — US, 1930–2011



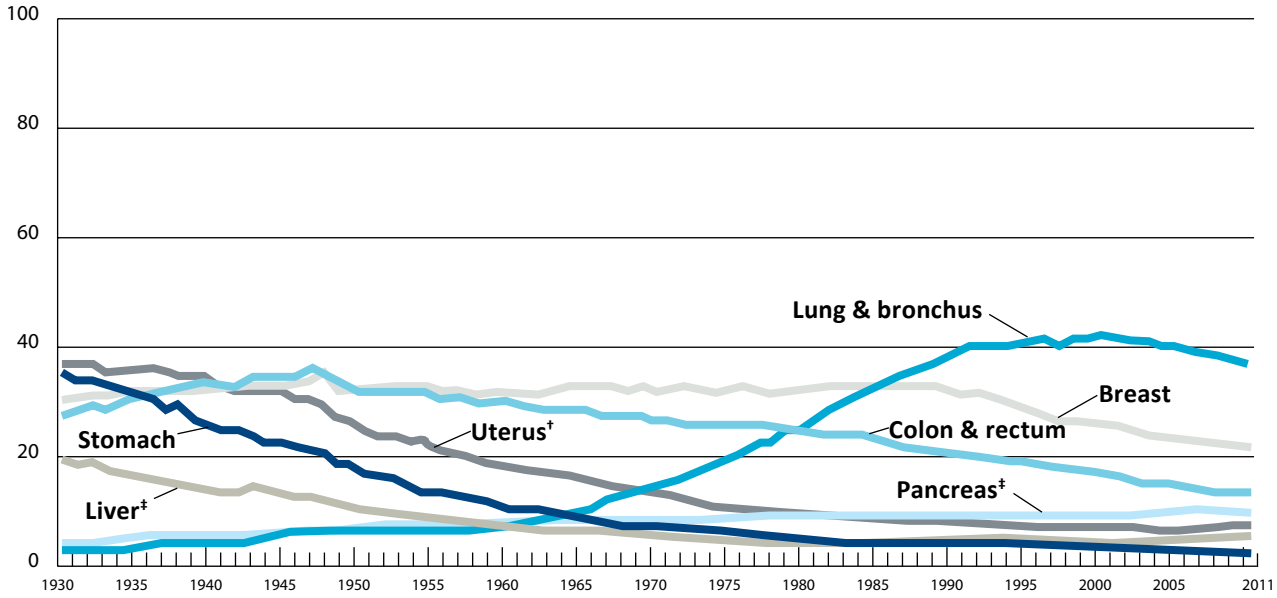
** Per 100,000 age adjusted to the 2000 US standard population.*

† Mortality rates for pancreatic and liver cancers are increasing.

Note: Due to changes in IDC coding, numerator information has changed over time. Rates for cancer of the liver, lung and bronchus, and colon and rectum are affected by these coding changes.

Source: US Mortality Volumes 1930 to 1959 and US Mortality Data 1960 to 2011, National Center for Health Statistics, Centers for Disease Control and Prevention. ©2015, American Cancer Society, Inc., Surveillance Research.

Figure 8. Cancer Mortality (Death) Rates among Females by Site* — US, 1930–2011



** Per 100,000 age adjusted to the 2000 US standard population.*

† Uterus refers to uterine cervix and uterine corpus combined.

‡ Mortality rates for pancreatic and liver cancers are increasing.

Note: Due to changes in IDC coding, numerator information has changed over time. Rates for cancer of the liver, lung and bronchus, and colon and rectum are affected by these coding changes.

Source: US Mortality Volumes 1930 to 1959 and US Mortality Data 1960 to 2011, National Center for Health Statistics, Centers for Disease Control and Prevention. ©2015, American Cancer Society, Inc., Surveillance Research.

Table 3. Indiana Cancer Incidence Rates by County*, 2008–2012

County	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Indiana	163,104	466.6	17,643	106.9	22,073	118.1	25,837	73.9	15,483	44.4
Adams	821	440.7	98	115.0	112	113.6	92	48.5	102	55.7 ↑
Allen	8,121	447.7 ↓	865	101.6	1,142	116.2	1,117	62.5 ↓	780	42.8
Bartholomew	2,028	467.7	180	87.9 ↓	283	122.3	331	76.0 ↓	178	41.1
Benton	226	424.8	X	X	X	X	46	83.0	26	51.8
Blackford	427	493.9	53	129.2	54	116.0	69	78.9	44	48.7
Boone	1,246	428.0 ↓	134	95.9	213	133.8	176	63.7	110	38.1
Brown	470	448.9	57	96.4	57	96.1	66	63.3	44	44.0
Carroll	530	431.2	71	107.9	65	96.6	78	61.9	52	42.0
Cass	970	422.1 ↓	119	112.7	121	102.1	192	82.9	98	42.1
Clark	2,825	468.3	198	66.2 ↓	376	110.9 ↑	512	86.1 ↑	261	43.5
Clay	807	505.9 ↑	94	119.1	93	110.6	118	69.7	91	57.7 ↑
Clinton	854	454.7	94	104.4	108	112.4	150	80.9	98	49.6
Crawford	309	479.5	29	80.4	45	138.1	56	83.7	25	37.7
Daviess	774	438.9	82	98.5	84	89.4 ↓	120	67.2	88	48.3
Dearborn	1,237	439.1	152	107.7	167	113.2	216	76.0	125	46.0
Decatur	660	443.8	81	114.8	68	84.8 ↓	108	72.0	57	37.8
DeKalb	1,044	458.9	109	97.7	151	124.1	167	72.1	104	46.8
Delaware	3,228	492.6 ↑	394	128.5 ↑	406	118.2	553	82.9 ↑	312	46.0
Dubois	1,092	445.0	132	114.1	144	110.9	138	55.5 ↓	111	44.7
Elkhart	4,695	468.3	506	110.5	600	113.2	700	69.8	420	42.1
Fayette	669	426.8 ↑	73	95.4	63	78.3	138	84.7	61	37.7
Floyd	1,992	481.4	162	81.4 ↓	282	122.3	338	82.2	166	39.2
Fountain	521	459.0	64	114.4	71	122.8	92	76.9	60	51.3
Franklin	523	386.3 ↓	71	115.6	62	92.4	84	60.1	41	30.2 ↓
Fulton	625	473.3	69	104.9	76	110.3	110	81.2	72	54.0
Gibson	908	450.3	111	116.6	133	125.3	141	68.2	109	53.7
Grant	2,265	519.5 ↑	284	139.1 ↑	287	124.8	357	78.9	235	53.6 ↑
Greene	949	463.6	87	85.3	110	101.6	172	79.6	90	43.9
Hamilton	4,895	412.3 ↓	548	93.1 ↓	888	129.6 ↑	484	47.2 ↓	414	36.2 ↓
Hancock	1,827	480.6	142	74.5 ↓	242	118.7	312	82.8	153	40.2
Harrison	1036	457.9	85	71.9 ↓	140	118.1	186	82.0	77	33.8 ↓
Hendricks	3,398	485.0	361	105.1	500	129.2	482	72.0	269	38.6
Henry	1,479	475.9	159	107.5	172	102.3	250	79.3	166	52.1
Howard	2,263	437.0 ↓	219	86.3 ↓	291	106.5	398	75.3	205	39.0
Huntington	1,038	475.5	110	106.1	129	111.1	136	62.3	102	46.3
Jackson	1,232	504.9 ↑	121	105.9	170	134.8	200	78.5	116	48.5
Jasper	913	488.1	109	116.7	122	126.3	166	88.1 ↑	88	46.6
Jay	628	496.1	67	110.7	98	140.2	91	71.0	77	60.6 ↑
Jefferson	873	459.7	89	94.5	91	89.4 ↓	145	75.3	80	42.6
Jennings	757	499.5	63	84.8	94	115.3	148	97.3 ↑	50	35.5
Johnson	3,279	453.8	267	75.5 ↓	446	114.5	522	73.2	329	45.4
Knox	1,182	510.4 ↑	142	131.9 ↑	154	123.8	171	71.4	121	53.0
Kosciusko	1,953	460.3	227	112.1	261	119.5	302	69.8 ↓	188	44.1
LaGrange	703	401.2 ↓	66	78.3 ↓	93	104.2	110	62.2	63	35.1
Lake	13,516	494.8 ↑	1,714	136.4 ↑	1,840	124.7	1,978	72.2	1,435	52.5 ↑
LaPorte	3,179	486.9 ↑	432	140.0 ↑	398	115.9	508	77.1	308	47.7
Lawrence	1,385	470.7	135	90.3	171	111.0	250	82.7	149	50.6

County	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Madison	3,779	476.6	505	133.9 ↑	468	112.7	636	79.0	350	44.1
Marion	19,952	462.5	1,802	91.7 ↓	2,926	122.2	3,357	80.1 ↑	1,715	40.1 ↓
Marshall	1,281	470.8	167	131.4	163	111.8	167	60.0 ↓	121	44.7
Martin	344	541.9 ↑	40	120.7	48	148.9	49	75.3	47	73.4 ↑
Miami	913	428.1 ↓	103	95.1	103	98.4	167	78.4	66	32.1 ↓
Monroe	2,644	450.7	257	93.3	368	116.1	374	63.8 ↓	235	41.2
Montgomery	955	419.1 ↓	93	86.3	109	91.4 ↓	176	77.1	92	40.1
Morgan	1,952	503.2 ↑	213	109.4	275	131.7	307	80.2	201	52.5 ↑
Newton	388	432.2	46	100.8	46	101.0	66	70.4	41	46.9
Noble	1,056	417.3 ↓	107	91.0	152	113.9	161	64.9	103	40.5
Ohio	206	542.2	X	X	29	147.0	43	109.0 ↑	24	66.5
Orange	608	493.9	48	75.0 ↓	74	110.9	119	93.8 ↑	69	57.3
Owen	677	515.3 ↓	73	95.7	72	106.4	120	92.0 ↑	68	54.7
Parke	474	441.2	56	99.2	57	99.5	96	86.0	39	35.8
Perry	527	443.2	46	81.4	72	111.3	106	90.7	49	40.4
Pike	363	425.1	38	91.8	53	120.5	56	62.1	43	49.6
Porter	4,315	486.7 ↑	618	141.5 ↑	606	126.6	663	76.0	393	46.2
Posey	735	468.9	99	129.7	101	120.1	94	62.2	69	44.4
Pulaski	390	452.5	49	110.7	41	93.2	63	69.6	45	52.3
Putnam	998	473.8	82	80.0 ↓	121	114.6	200	94.0 ↑	100	47.7
Randolph	846	502.2	106	130.7	104	120.2	143	81.4	87	51.2
Ripley	768	462.9	78	97.7	100	113.6	133	78.2	73	43.3
Rush	527	500.7	45	86.1	61	115.3	87	78.1	46	42.8
Scott	647	479.5	31	47.2 ↓	77	108.1	124	89.5	71	51.3
Shelby	1,304	509.7 ↑	130	105.2	184	138.4	206	80.4	131	49.8
Spencer	573	448.5	63	100.5	78	120.5	100	75.7	63	50.4
St. Joseph	6,805	469.3	827	122.6 ↑	937	121.9	1,050	71.8	688	47.1
Starke	725	507.1 ↑	91	124.9	81	111.1	129	85.9	57	40.3
Steuben	840	411.9 ↓	91	87.3	99	93.0 ↓	139	65.5	76	37.7
Sullivan	583	454.0	55	92.0	70	105.7	101	75.6	64	50.0
Switzerland	285	472.3	27	85.2	22	72.4 ↓	51	84.4	38	66.5 ↑
Tippecanoe	3,355	477.7	356	113.2	469	125.3	472	68.5	293	42.9
Tipton	464	443.0	41	76.2	72	129.8	76	72.2	61	56.0
Union	207	457.3	31	150.5	20	86.9	34	67.7	X	X X
Vanderburgh	4,617	445.3 ↓	491	102.2	599	109.3	827	78.7	427	41.0
Vermillion	545	515.4 ↑	75	149.3 ↑	64	110.4	95	86.7	59	57.5
Vigo	2,971	506.2 ↑	312	117.9	409	131.3	477	81.0	270	45.2
Wabash	988	457.5	126	122.1	120	107.5	136	62.9	108	45.6
Warren	251	469.6	29	108.4	37	127.8	38	71.6	27	50.8
Warrick	1,611	476.2	201	115.3	252	137.7 ↓	215	64.4	143	42.7
Washington	815	518.8 ↑	60	76.8 ↓	112	137.5	158	97.8 ↑	74	48.6
Wayne	2,089	484.1	221	112.6	234	102.7	392	88.3 ↑	176	39.3
Wells	689	410.4 ↓	67	85.8	92	106.3	89	51.5 ↓	55	31.7 ↓
White	753	466.1	82	100.6	84	97.8	135	79.1	74	44.5
Whitley	913	470.2	106	114.7	120	119.8	132	67.2	83	42.5

** Rates are per 100,000 people and age-adjusted to the 2000 US Standard Population*

"x" Rate and comparison to state rate is suppressed if fewer than 20 cases occurred because rate is considered unstable.

Source: Indiana State Cancer Registry

Table 4. Indiana Cancer Mortality (Death) Rates by County*, 2008–2012

County	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Indiana	65,367	187.3	2,918	21.9	4,410	22.6	20,028	57.5	5,818	16.6
Adams	320	162.4 ↓	23	27.7	X	X	66	34.0 ↓	35	19.6
Allen	3,166	175.6 ↓	144	21.4	258	25.0	855	48.2 ↓	288	15.7
Bartholomew	804	185.2	33	19.4	53	21.6	257	58.7	63	15.1
Benton	98	178.3	X	X	X	X	44	82.2 ↑	X	X
Blackford	172	194.5	X	X	X	X	49	55.7	28	32.0 ↑
Boone	537	192.5	33	33.3 ↑	45	27.4	159	59.3	41	14.7
Brown	189	184.8	X	X	X	X	63	62.4	X	X
Carroll	229	181.0	X	X	X	X	54	41.8 ↓	22	17.5
Cass	450	192.0	X	X	28	22.8	162	69.3 ↑	34	14.9
Clark	1,158	195.4	36	17.8	50	15.1 ↓	414	70.5 ↑	102	17.0
Clay	311	189.9	X	X	22	24.6	96	58.2	36	22.1
Clinton	383	196.0	23	29.5	X	X	129	67.2	45	22.1
Crawford	110	171.1	X	X	X	X	43	63.7	X	X
Daviess	327	182.4	X	X	X	X	104	58.9	33	18.9
Dearborn	496	180.4	21	19.6	27	19.0	168	59.7	49	18.6
Decatur	301	199.5	X	X	X	X	96	64.1	20	13.5
DeKalb	439	193.4	X	X	25	20.5	122	53.4	41	17.4
Delaware	1,297	191.4	41	15.2 ↓	81	23.4	417	62.0	126	17.8
Dubois	434	173.7	23	24.7	32	22.6	97	39.0 ↓	49	19.4
Elkhart	1,720	171.3 ↓	81	21.4	112	19.9	492	49.7 ↓	155	15.8
Fayette	364	231.5 ↑	20	28.5	25	29.1	123	76.1 ↑	34	20.6
Floyd	761	186.2	21	13.1 ↓	56	23.0	252	60.7	51	12.2
Fountain	236	202.2	X	X	X	X	77	65.1	26	23.6
Franklin	255	186.4	X	X	X	X	79	57.1	29	21.4
Fulton	277	207.2	X	X	X	X	88	66.3	21	15.5
Gibson	357	174.3	X	X	28	25.7	97	46.9	47	22.7
Grant	893	201.3	30	18.0	62	25.2	284	63.1	73	16.5
Greene	413	194.6	X	X	X	X	144	67.5	34	16.0
Hamilton	1,618	154.2 ↓	75	19.4	141	22.1	375	36.4 ↓	124	11.4 ↓
Hancock	677	185.5	24	17.0	50	23.8	220	60.6	47	13.2
Harrison	385	173.6	X	X	23	19.2	132	59.7	25	11.3
Hendricks	1,121	169.5 ↓	44	18.6	81	20.7	329	50.8	83	12.1 ↓
Henry	624	196.4	24	20.2	32	18.5	213	68.0 ↑	50	15.4
Howard	936	176.3	31	15.9	61	20.8	299	56.3	74	13.7
Huntington	445	197.5	27	30.4	33	25.4	119	52.3	39	17.6
Jackson	512	207.5 ↑	26	26.2	25	18.7	171	68.1	46	18.9
Jasper	384	208.0	21	29.4	33	32.3	140	75.4 ↑	25	13.6
Jay	273	211.9	X	X	X	X	80	62.6	32	24.9
Jefferson	323	169.0	X	X	X	X	109	55.9	29	15.2
Jennings	318	217.3 ↑	X	X	X	X	110	71.5 ↑	23	16.9
Johnson	1,215	171.6 ↓	48	17.8	70	17.5	376	53.0	109	14.9
Knox	439	181.0	X	X	27	19.9	130	53.7	50	20.3
Kosciusko	800	188.3	40	25.5	50	21.2	242	56.7	66	15.0
LaGrange	295	168.9	X	X	X	X	80	45.7	29	15.6
Lake	5,333	194.8 ↑	245	22.4	403	26.2 ↑	1,497	54.8	546	20.1 ↑
LaPorte	1,278	195.5	67	27.4	91	25.8	362	55.7	133	19.7
Lawrence	570	188.9	X	X	40	24.0	185	60.8	55	18.1

County	All Cancers		Prostate (Male-only disease)		Female Breast		Lung		Colon and Rectum	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Madison	1,573	194.2	63	20.0	94	21.0	546	67.5 ↑	129	15.7
Marion	8,503	203.2 ↑	394	25.8 ↑	601	24.9	2719	65.4 ↑	704	16.7
Marshall	462	163.8 ↓	23	21.9	30	18.9	128	46.0 ↓	38	13.3
Martin	125	189.3	X	X	X	X	38	58.7	X	X
Miami	409	192.6	X	X	21	19.5	145	68.1	25	11.8
Monroe	1,014	172.1 ↓	49	21.8	68	20.5	292	49.7 ↓	79	13.7
Montgomery	415	177.7	20	19.9	20	14.8	131	57.1	36	15.3
Morgan	721	196.9	29	25.2	49	23.8	242	63.1	62	17.1
Newton	179	197.0	X	X	X	X	56	60.3	23	25.1
Noble	473	189.7	29	30.8	38	29.3	133	52.8	51	20.7
Ohio	77	198.2	X	X	X	X	32	81.0	X	X
Orange	257	206.6	X	X	X	X	94	73.7 ↑	20	15.4
Owen	269	214.2	X	X	20	29.1	86	65.4	21	18.4
Parke	200	188.6	X	X	X	X	68	61.1	X	X
Perry	257	212.7	X	X	X	X	93	79.4 ↑	31	24.6
Pike	155	180.3	X	X	X	X	54	60.8	X	X
Porter	1,567	180.6	76	23.4	119	24.2	468	53.8	150	17.4
Posey	255	165.2	X	X	X	X	64	41.5 ↓	21	13.5
Pulaski	170	192.4	X	X	X	X	50	55.4	X	X
Putnam	413	196.9	X	X	23	20.6	158	74.9 ↑	54	25.4 ↑
Randolph	335	193.1	20	26.2	X	X	100	56.9	32	18.7
Ripley	343	200.5	X	X	X	X	98	58.1	35	20.9
Rush	226	209.0	X	X	X	X	70	63.1	X	X
Scott	285	217.2 ↑	X	X	X	X	108	78.8 ↑	22	17.2
Shelby	478	186.9	X	X	28	20.2	151	58.6	40	14.9
Spencer	231	181.0	X	X	X	X	70	53.7	29	22.2
St. Joseph	2,717	180.5	143	23.5	178	20.9	780	52.4 ↓	245	16.3
Starke	306	219.0 ↑	X	X	23	31.4	108	72.7 ↑	21	15.0
Steuben	346	170.4	21	26.0	31	26.2	99	46.7	29	14.7
Sullivan	284	217.5 ↑	X	X	X	X	87	65.5	27	21.1
Switzerland	139	229.5 ↑	X	X	X	X	51	81.2 ↑	X	X
Tippecanoe	1,200	172.5 ↓	49	17.9	107	26.5	330	48.9 ↓	120	17.1
Tipton	177	163.6	X	X	X	X	46	42.9	23	20.3
Union	75	173.4	X	X	X	X	25	56.9	X	X
Vanderburgh	1,987	187.0	83	19.3	138	24.0	617	58.6	150	13.8
Vermillion	220	205.2	X	X	X	X	87	79.1 ↑	25	25.0
Vigo	1,200	202.1 ↑	39	17.2	82	24.3	398	68.1 ↑	101	16.7
Wabash	432	186.3	29	29.6	25	18.9	115	52.3	39	15.2
Warren	94	172.2	X	X	X	X	32	58.4	X	X
Warrick	554	167.5 ↓	33	27.2	44	24.1	153	46.0 ↓	40	12.3
Washington	323	206.4	X	X	X	X	117	73.7 ↑	23	15.6
Wayne	902	202.0 ↑	27	14.5	52	21.3	292	66.1 ↑	74	16.2
Wells	266	150.7 ↓	X	X	X	X	77	44.4 ↓	28	15.7
White	339	204.2	X	X	20	22.1	113	66.8	29	17.7
Whitley	371	189.8	32	44.1 ↑	24	21.8	107	54.1	30	15.7

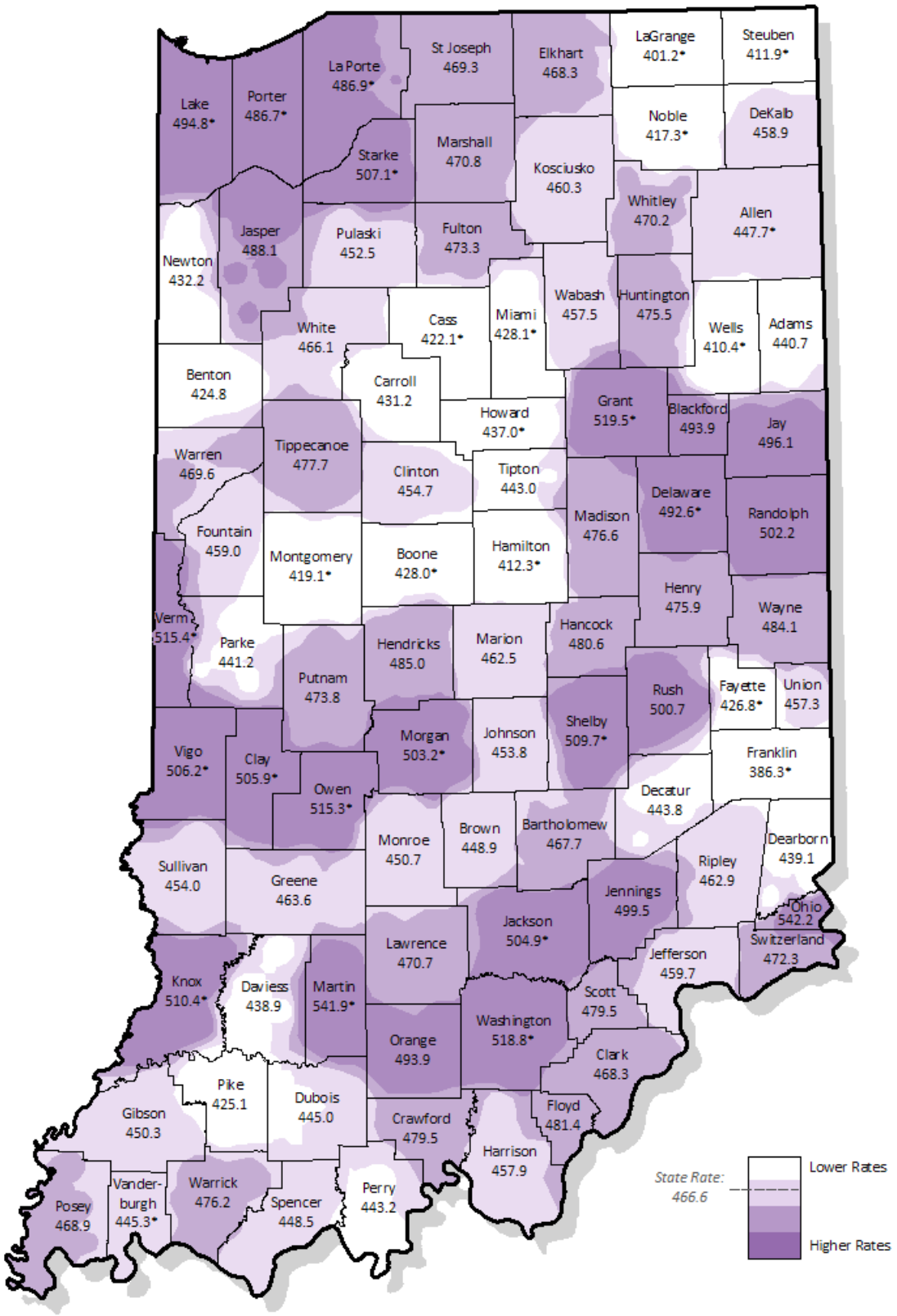
** Rates are per 100,000 people and age-adjusted to the 2000 US Standard Population*

† "↑↓" symbols denote whether the county's rate is significantly different than the Indiana rate based on the 95% confidence interval overlap method (see Page 4 for description). Because of limitations of this method, some of the counties without ↑↓ symbols could still have significantly different rates than the state.

"x" Rate and comparison to state rate is suppressed if fewer than 20 deaths occurred because rate is considered unstable; counts <5 are suppressed to maintain confidentiality.

Source: Indiana State Cancer Registry

Map 1. Incidence Rates for All Cancers Combined by County — Indiana, 2008-2012



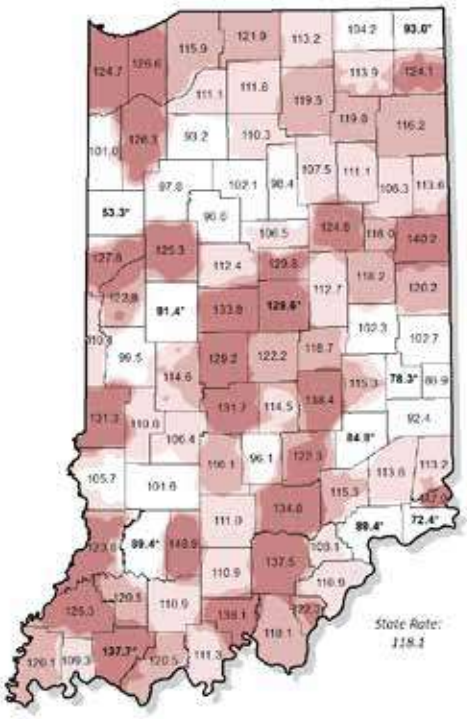
** Significantly different (higher or lower) than state rate (P<.05)*

Technical note: This map presents age-adjusted county incidence rates using a smoothed interpolated surface and is intended to provide a generalized depiction of rate variability throughout the state.

Source: Indiana State Cancer Registry

Map 2. Incidence Rates for Selected Cancer Types by County — Indiana, 2008-2012

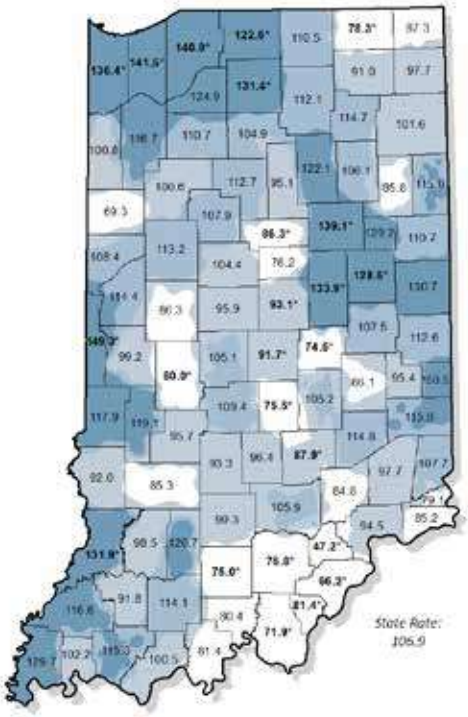
BREAST CANCER



COLON & RECTUM CANCER

Lower Rates → Higher Rates

PROSTATE CANCER



LUNG CANCER

** Significantly different (higher or lower) than state rate (P<.05)*

Technical note: This map presents age-adjusted county incidence rates using a smoothed interpolated surface and is intended to provide a generalized depiction of rate variability throughout the state.

Source: Indiana State Cancer Registry

What is the Impact on Indiana Residents?

Table 5. Burden of Invasive Female* Breast Cancer — Indiana, 2008–2012

	Average number of cases per year (2008–2012)	Rate per 100,000 females† (2008–2012)	Number of cases (2012)	Rate per 100,000 females† (2012)
Indiana Incidence	4,415	118.1	4,366	115.7
Indiana Deaths	882	22.6	872	21.9

** Fewer than 40 cases of breast cancer occur among Indiana males each year. The annual incidence rate (typically around 1.0 case per 100,000 males) remained stable during 2008-2012.*

† Age-adjusted

Source: Indiana State Cancer Registry

Bottom Line

Breast cancer is the second leading cause of cancer death and, excluding skin cancers, the most frequently diagnosed cancer among females in the US.[1] The lifetime risk of developing breast cancer among females is one in eight.[1] Breast cancer is typically diagnosed during a screening examination. An estimated 231,840 new cases of invasive breast cancer and 40,290 breast cancer-related deaths are expected to occur among females nationally in 2015.[1] White and African American females have similar incidence rates; however, African American females have significantly higher mortality rates.[2] This may be, in part, because of late diagnosis, diagnosis in younger individuals, and barriers to healthcare access [Figure 9].[2] Today, there are 3 million US females who are breast cancer survivors. Females should have frequent conversations with their health care provider about their risks for breast cancer and how often they should be screened. Breast cancer is rare among males as an estimated 2,350 cases will occur in 2015.[1] However, because males are prone to ignoring warning signs, they are often diagnosed at later stages and have poorer prognoses. During 2015, it is estimated that 440 males are expected to die nationally from breast cancer.

Who Gets Breast Cancer?

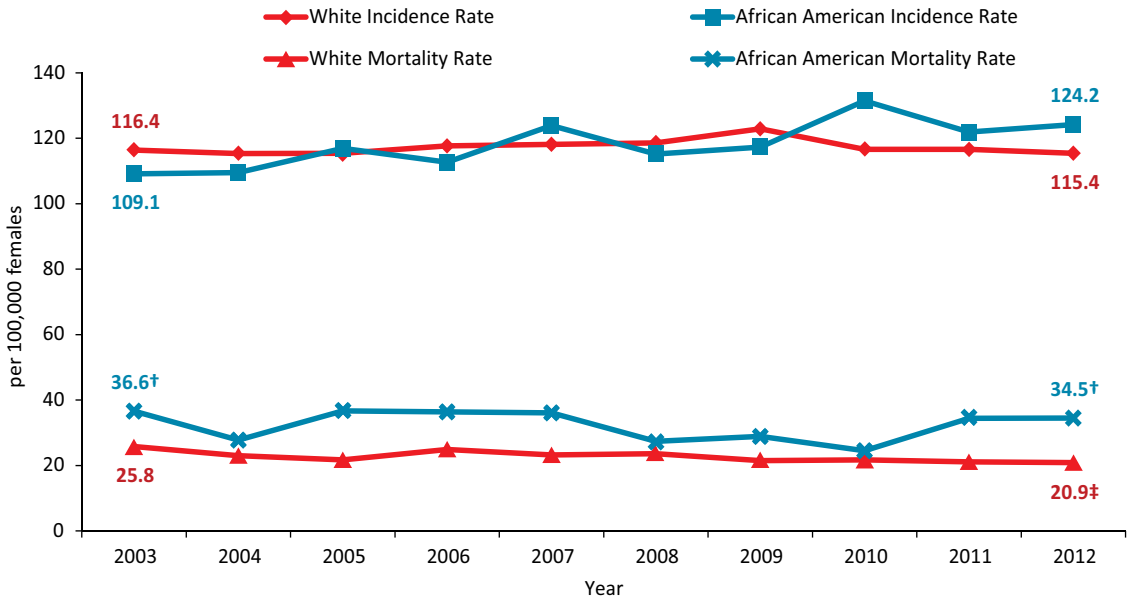
Sex and **age** are the two greatest risk factors for developing breast cancer. Females have a much greater risk of developing breast cancer (>99% of Indiana cases occur among females), and that risk increases with age. Overall, in Indiana, 79 percent of all breast cancer incidence and 88 percent of breast cancer deaths occur in females over the age of 50.

Factors associated with increased breast cancer risk include weight gain after the age of 18, being overweight or obese, use of menopausal hormone therapy, physical inactivity, and alcohol consumption. Research also indicates that long-term, heavy smoking increases breast cancer risk, particularly among females who start smoking before their first pregnancy.

Additional risk factors include:

- **Family history** — Females who have had one or more first degree relatives who have been diagnosed with breast cancer have an increased risk. Additionally, breast cancer risk increases if a woman has a family member who carries the breast cancer susceptibility genes (BRCA) 1 or 2, which accounts for five to ten percent of all female breast cancers. BRCA mutations also account for five to 20 percent of all male breast cancers, and 15 to 20 percent of familial breast cancers.[1]
- **Race** — In Indiana, during 2008-2012, the breast cancer incidence rates for African American and white females were similar, but the mortality rate for African American females was 39 percent higher than for whites.[3] African American females had significantly higher rates of diagnosis at the regional or distant stage [Figure 10].
- **Reproductive factors** — Females may have an increased risk if they have a long menstrual history (menstrual periods that start early and/or end later in life), have recently used oral contraceptives or Depo-Provera, have never had children, or had their first child after the age of 30.[1]
- **Certain medical findings** — High breast tissue density, high bone mineral density, type 2 diabetes, certain benign breast conditions, and lobular carcinoma in situ may increase risk

Figure 9. Female Breast Cancer Incidence and Mortality (Death) Rates Trends by Race* — Indiana, 2003–2012



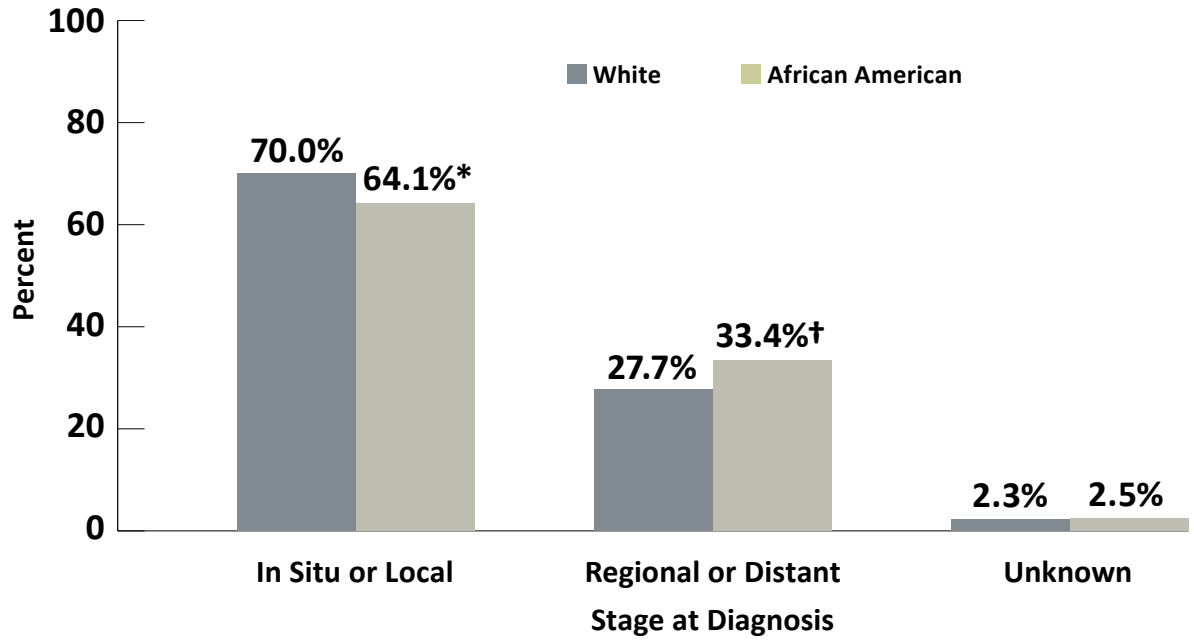
** Age-adjusted*

† Rate among African-Americans was significantly higher than rate among whites (P<.05)

‡ The breast cancer mortality rate among white females was significantly lower (P<.05) in 2012 compared to 2003

Source: Indiana State Cancer Registry

Figure 10. Percent of Female Breast Cancer Cases by Stage of Diagnosis and Race — Indiana, 2008–2012



* *Proportion of cases diagnosed in the local stage was significantly lower (P<.05) among African American females when compared to white females, but significantly higher than whites for the in situ stage.*

† *Proportion of cases diagnosed in the regional or distant stage was significantly higher (P<.05) among African American females when compared to white females*

Source: Indiana State Cancer Registry

BE AWARE!

Common Signs and Symptoms of Breast Cancer

- The most common symptom of breast cancer is a new lump or mass. It's important to have anything new or unusual checked by a doctor.
- Other symptoms of breast cancer may include:
  - Hard knots, or thickening
  - Swelling, warmth, redness, or darkening
  - Change in size or shape
  - Dimpling or puckering of the skin
  - Itchy, scaly sore, or rash on the nipple
  - Pulling in of the nipple or other parts of the breast
  - Nipple discharge that starts suddenly
  - New pain in one spot that doesn't go away

Although these symptoms can be caused by things other than breast cancer, it is important to have them checked out by your doctor.

for developing breast cancer. In addition, high dose radiation to the chest for cancer treatment increases risk.[1]

Factors associated with a decreased risk of breast cancer include breastfeeding, regular moderate or vigorous physical activity, and maintaining a healthy body weight. Two medications — tamoxifen and raloxifene — have been approved to reduce breast cancer risk in female at high risk.[1]

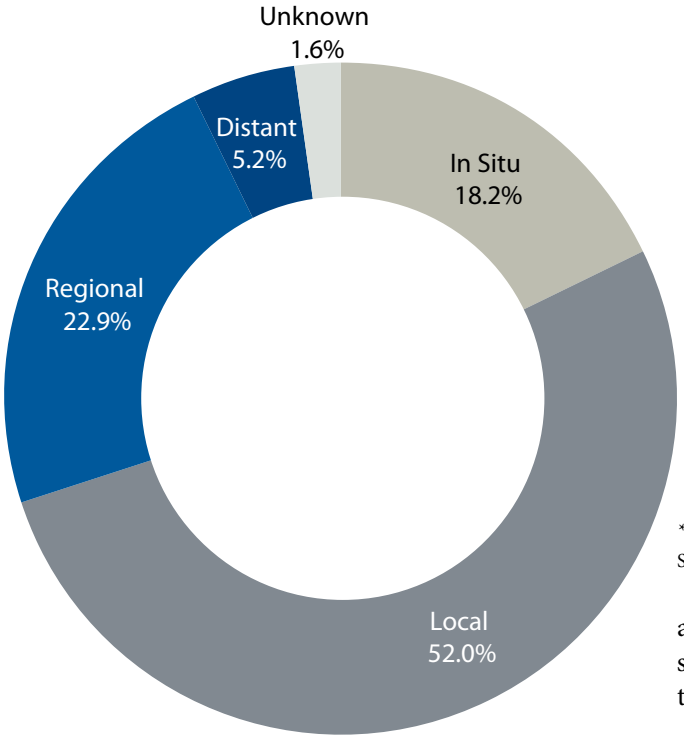
Can Breast Cancer Be Detected Early? — *see the "Be Aware" box for additional information*

Females should have frequent conversations with their health care provider about their risks for breast cancer and how often they should be screened. In general, females should follow these recommendations:

- **Breast Self-Awareness.** Females in their 20s should be aware of the normal look and feel of their breasts, so that they can identify potentially dangerous changes.
- **Clinical Breast Exams.** The American Cancer Society recommends that females in their 20s and 30s have a clinical breast exam by a health care professional every three years. Asymptomatic females in their 40s should have yearly clinical breast exams.
- **Screening Mammograms.** The United States Preventive Services Task Force recommends a screening mammogram every two years for females aged 50 to 74, which help detect cancers before a lump can be felt. Females between the ages of 40 to 49, especially those with a family history of breast cancer, should discuss the risks and benefits of mammography with their health provider to determine if it is right for them.

According to the 2012 Indiana Behavioral Risk Factor Surveillance System (BRFSS), only 69.5 percent of females ages

Figure 11. Percent of Female Breast Cancer Cases Diagnosed During Each Stage* — Indiana, 2008–2012



During 2008–2012, of the 26,996 female Indiana residents who received a breast cancer diagnosis, 18,969 (70%) were diagnosed in the in situ or local stage, 7,608 (28.2%) were diagnosed in the regional or distant stage, and 419 (1.6%) had unknown staging.

** Includes all in situ and invasive cases*
Source: Indiana State Cancer Registry

50 and older had a mammogram during the past two years. The Affordable Care Act requires preventive screening services to be included in most insurance policies. Often, these services are paid in full. Individuals should check with their individual insurance providers for specific plan information.

What Factors Influence Breast Cancer Survival?

Staging of breast cancer takes into account the number of lymph nodes involved and whether the cancer has moved to a secondary location [Figure 11]. When breast cancer is detected early, before it is able to be felt, the five-year survival rate is 99 percent.[1] During 2012, in Indiana, only 52 percent of breast cancer cases were diagnosed at the local stage. Approximately 18 percent were diagnosed in situ (the earliest stage possible for diagnosis).[3] During this same time, almost 30 percent of Indiana's breast cancer cases were diagnosed in the regional or distant stages.[3]

There are multiple treatment options available for breast cancer patients. Surgical treatment options include mastectomy (the medical term for the surgical removal of one or both breasts, either partially or completely) and lumpectomy (the removal of only the cancerous area of the breast). Local radiation can be used to treat the tumor without affecting the rest of the body. Other treatments include chemotherapy, hormone therapy, and targeted therapy. These can be given orally or intravenously in order to reach cancer cells anywhere in the body. An individual's treatment plan is personalized and based both on medical and personal choices. Individuals should partner with their medical providers and be active participants in the development of a treatment and care plan.

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[3] Indiana State Cancer Registry Statistics Report Generator. Accessed online at http://www.in.gov/isdh/24360.htm on December 3, 2014.

TAKE CHARGE!

What You Can Do to Help Prevent Breast Cancer

- Know your risk! Talk to your doctor about your personal and family history, and screening.
- Get screened regularly.
- Be smoke free! Visit www.in.gov/quitline for free, evidence-based smoking cessation assistance.
- Maintain a healthy weight.
- Adopt a physically active lifestyle.
- Limit alcohol consumption.
- Limit postmenopausal hormone use. When evaluating treatment options for menopausal symptoms, consider the increased risk of breast cancer associated with the use of estrogen and progestin and discuss this with your physician.
- Breastfeed, if you can. Studies suggest that breastfeeding for one year or more slightly reduces a woman's overall risk of breast cancer.

What is the Impact on Indiana Residents?

Table 6. Burden of Invasive Cervical Cancer — Indiana, 2008–2012

	Average number of cases per year (2008–2012)	Rate per 100,000 females† (2008–2012)	Number of cases (2012)	Rate per 100,000 females† (2012)
Indiana Incidence	250	7.4	240	7.1
Indiana Deaths	86	2.4	100	2.7

† Age-adjusted

Source: Indiana State Cancer Registry

Cervical Cancer

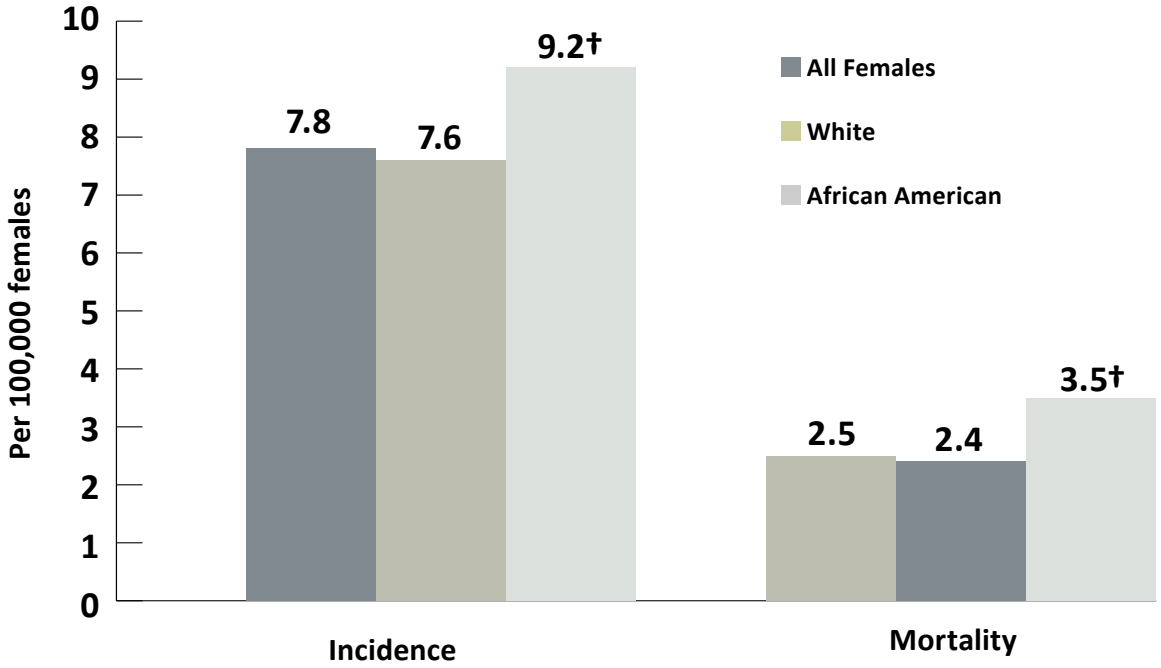
Bottom Line

Cervical cancer is almost 100 percent preventable through regular routine screening, avoidance of controllable risk factors, and vaccination against the human papillomavirus (HPV). In the US, an estimated 12,900 cases of invasive cervical cancer cases will be diagnosed in 2015 and 4,100 deaths will occur.[1] Large declines in incidence rates over most of the past several decades have begun to taper off, particularly among younger females; from 2006 to 2010, rates were stable in females younger than 50, and decreasing by only 3.1 percent in females ages 50 and older.[1] In Indiana, approximately 250 new cases of cervical cancer and 86 cervical cancer-related deaths occur annually among females [Table 6].

Who Gets Cervical Cancer?

- Infection with HPV is the single greatest risk factor for cervical cancer. Most cervical cancers are caused by persistent infection with certain types of HPV. The CDC estimates that at least 91 percent of cervical cancer cases are caused by HPV each year.[2] Other risk factors for cervical cancer include a compromised immune system and smoking.
- HPV is passed person-to-person through skin-to-skin sexual contact. Risk of transmission can be reduced by delaying first sexual activity, limiting the number of sexual partners, and using condoms.
- HPV vaccination is the best method of prevention. There are two vaccines (Cervarix and Gardasil) for females that are approved ages 9 through 26. HPV vaccination is routinely recommended for girls ages 11 and 12 and for females ages 13 through 26 who did not get any or all of the doses when they were younger. One vaccine (Gardasil) is approved for males ages 9 through 26. HPV vaccination is routinely recommended for males ages 11 and 12 and for males ages 13 through 21 who did not get any or all of the doses when they were younger. Vaccination is routinely recommended for immunocompromised males and for males who have sex with males who are ages 22-26.[3] A new vaccine, Gardasil 9, has recently been approved by the Food and Drug Administration, which would protect against nine strains of HPV and can prevent almost 90 percent of HPV-related cervical cancers. Due to the recent approval of Gardasil 9, it has not yet been included in vaccination recommendations.
- According to the National Immunization Survey (NIS), in 2013 only 54 percent of girls and 18 percent of boys ages 13 through 17 in Indiana received the first in the three dose series of HPV vaccine.[4] Only 71 percent of girls in Indiana who began the series got all three shots.[4]
- Indiana females are most often diagnosed with cervical cancer during their middle adult years. During 2012, 85 percent of cervical cancer cases occurred among Indiana females less than 65 years-old, including 38 percent of cases occurring among females ages 25 to 44 and 46 percent among females ages 45 to 64.[5]
- During 2003-2012, African American females in Indiana, compared to white females, had a 21 percent higher cervical cancer incidence rate (9.2 versus 7.6 cases per 100,000 females, respectively) and a 46 percent higher mortality

Figure 12. Cervical Cancer Incidence and Mortality (Death) Rates by Race* — Indiana, 2003–2012

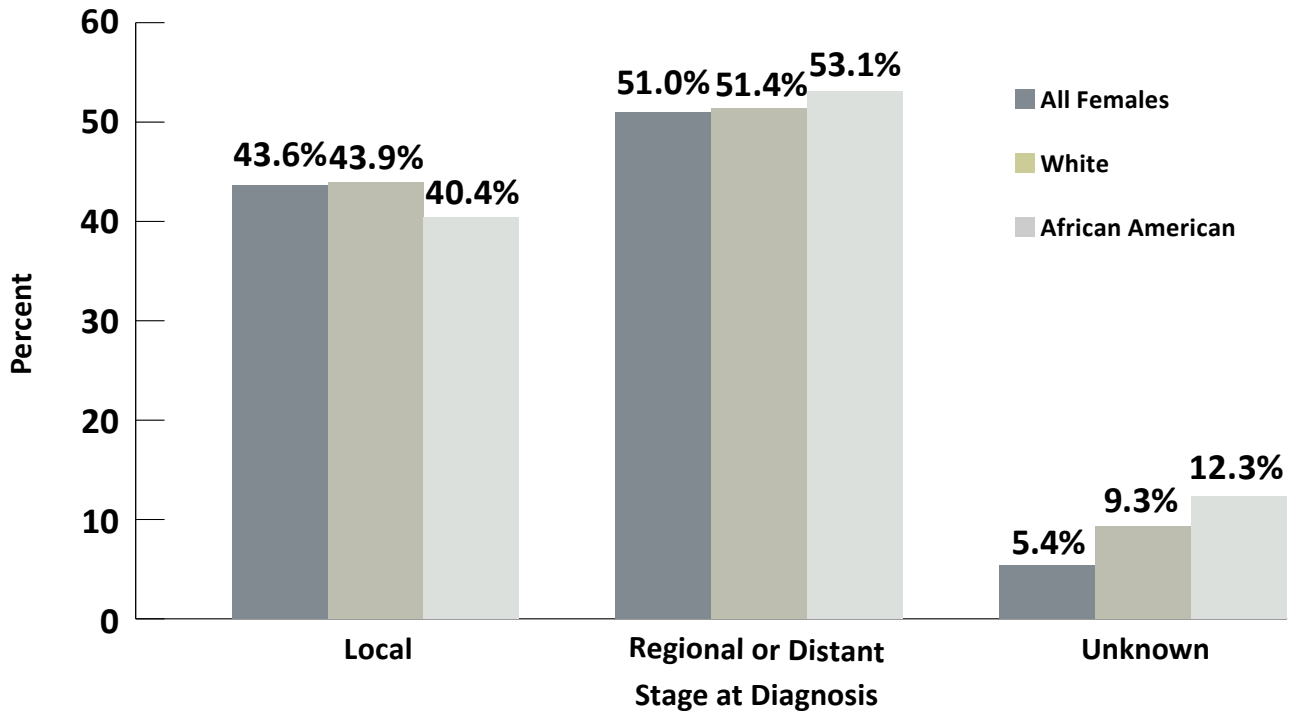


* *Age-adjusted*

† *Rate among African American females is significantly higher (P<.05) than the rate among white females*

Source: Indiana State Cancer Registry

Figure 13. Percent of Cervical Cancer Cases by Stage of Diagnosis and Race* — Indiana, 2003–2012



** Proportion of cases diagnosed in the regional or distant stage compared to the local stage is significantly higher (P<.05) among African American females than among white females*

Source: Indiana State Cancer Registry

rate (3.5 versus 2.4 deaths per 100,000 females, respectively) [Figure 12]. While many factors are probably impacting this disparity, one apparent issue is that African American females tend to be diagnosed more often after the cervical cancer is no longer localized [Figure 13].[5]

Can Cervical Cancer Be Detected Early?

In the US, the cervical cancer mortality rate declined by almost 70 percent between 1955 and 1992, mainly because of the effectiveness of Pap smear screening.[3] Pap screenings allow for early identification and treatment of abnormal cervical cells before they become cancerous. This is important because, typically, the pre-cancerous conditions do not cause pain or other symptoms and are only detected through Pap screenings.

The American Cancer Society, in collaboration with the American Society for Colposcopy and Cervical Pathology and the American Society for Clinical Pathology recommend all average-risk females ages 21 through 65 receive a routine Pap screening every three years. The preferred screening method for females ages 30 through 35 is a HPV and Pap test (called co-testing) every five years.[1]

In 2012, 73.2 percent of Indiana females ages 18 and older reported having had a Pap screen during the past three years. This rate was similar for all racial and ethnic groups.[5]

What Factors Influence Cervical Cancer Survival?

Figure 14 provides the percent of Indiana females diagnosed during each stage of cervical cancer during 2008-2012. The five-year survival rate for patients diagnosed with cervical cancer at the local stage is 91 percent.[1]

In Indiana, from 2003-2007 to 2008-2012, the incidence of cervical cancer decreased, but the mortality rate remained constant [Figure 15]. There is no clear reason for this finding; however, it might be because while routine screening is catching most cases of cervical cancer prior to it becoming invasive, there still remains a consistent group of females who are not being screened and are diagnosed after the cancer has spread. These females are at increased risk for poor health outcomes.

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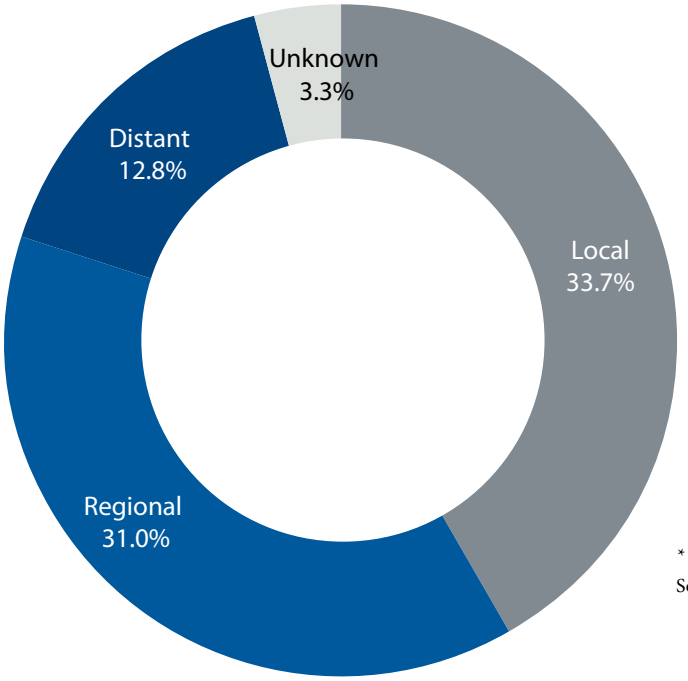
[3] Centers for Disease Control and Prevention. *Human Papillomavirus.* Atlanta, GA. 2011. Accessed at http://www.

Figure 14. Percent of Cervical Cancer Cases Diagnosed During Each Stage* — Indiana, 2008–2012

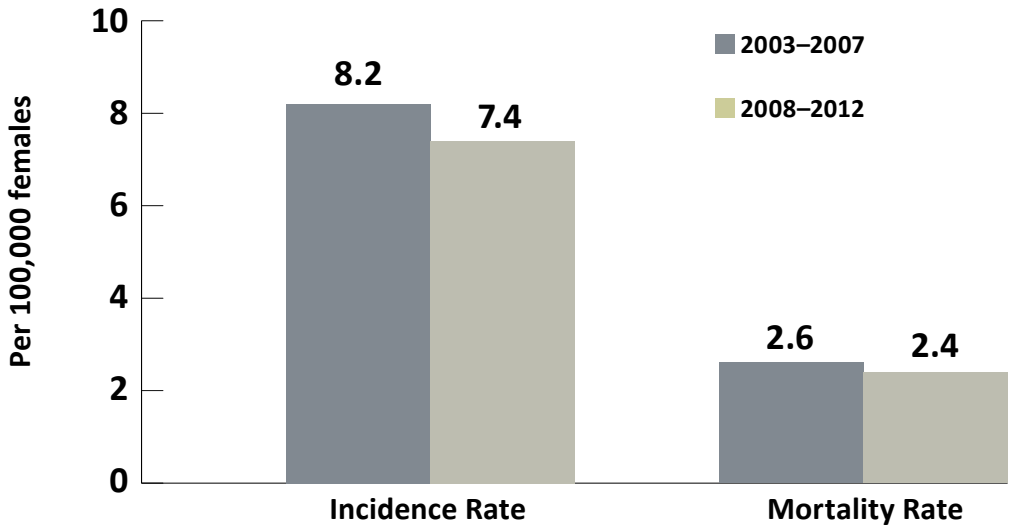


During 2008–2012, of the 1,547 Indiana females who received a diagnosis of invasive cervical cancer, 521 (33.7 percent) were diagnosed in the local stage, 677 (43.8 percent) were diagnosed in the regional or distant stage, and 51 (3.3 percent) had unknown staging.

** Only includes invasive cases; in situ cases are not reportable*

Source: Indiana State Cancer Registry

Figure 15. Changes in Cervical Cancer Incidence and Mortality (Death) Rates among Indiana Females between the Five-year Periods of 2003–2007 and 2008–2012*



** Age-adjusted*

Source: Indiana State Cancer Registry

cdc.gov/hpv/vaccine.html on April 16, 2014.

[4] Centers for Disease Control and Prevention, Immunization Managers. Accessed at http://www.cdc.gov/vaccines/imz-managers/coverage/nis/teen/figures/2013-map.html on January 12, 2015.

[5] Indiana State Cancer Registry Statistics Report Generator. Accessed at http://www.in.gov/isdh/24360.htm on June 16, 2014.

Take Charge!

What You Can Do to Help Prevent Cervical Cancer

- Get vaccinated — Protecting yourself from HPV decreases your risk for cervical and other cancers.
- Practice safe sex.
- Be smoke-free — Visit www.in.gov/quitline for free smoking cessation assistance.
- Have routine Pap screenings.
- Ask for an HPV test with your Pap smear if you are age 30 or older.
- Watch for abnormal vaginal discharge and bleeding.

What is the Impact on Indiana Residents?

Table 7. Burden of Cancer among Children Ages 0–19 Years — Indiana, 2008-2012

	Average number of cases per year (2008–2012)	Rate per 100,000 children* (2008–2012)	Number of cases (2012)	Rate per 100,000 children* (2012)
Indiana Incidence	368	20.5	378	21.1
Indiana Deaths	42	2.3	46	2.6

** Age-specific*

Source: Indiana State Cancer Registry

Bottom Line

The occurrence of cancer during childhood is rare, representing approximately one percent of all new cancer diagnoses in the US.[1] Although uncommon, cancer is the second leading cause of death among children ages five to 14, exceeded only by accidents.[1] Between 2008-2012, 368 cases of cancer and 42 cancer-related deaths occurred each year among Indiana children ages 0–19 [Table 7]. In general, childhood cancer trends in Indiana are similar to what is seen nationwide. For most cases of childhood cancer, the cause is unknown.

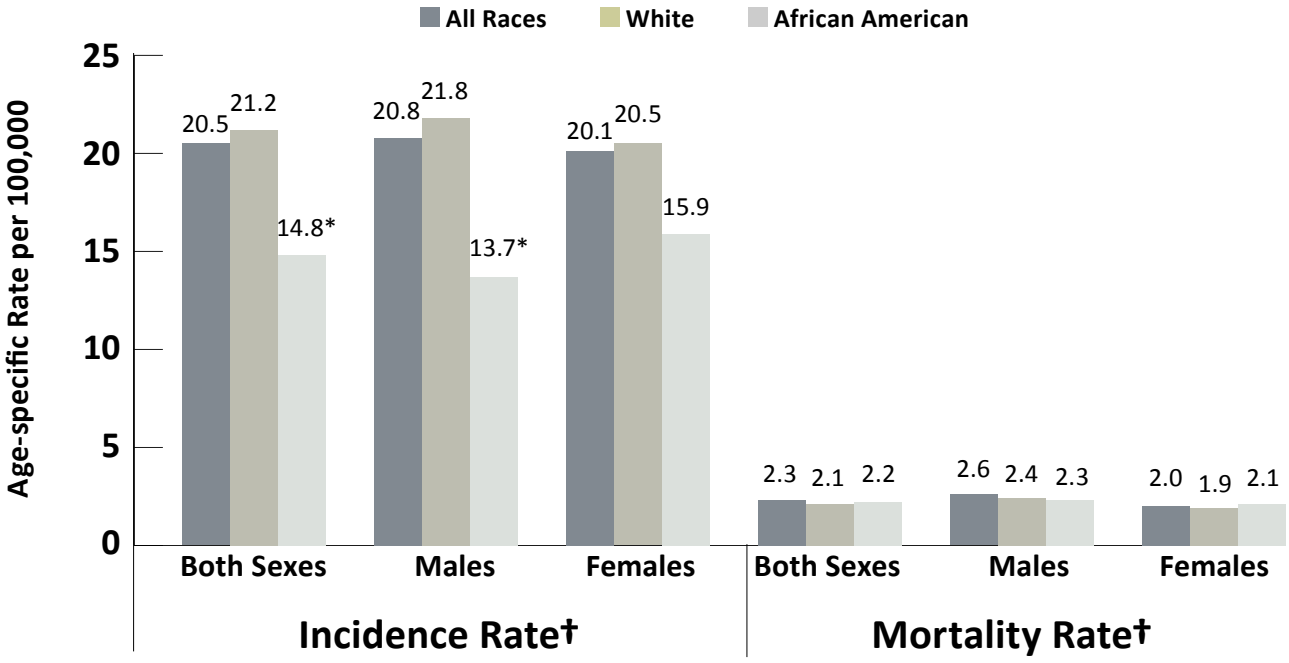
The incidence rate of cancer among Indiana children ages 0–19 during 2008-2012 was 20.5 cases per 100,000 children, which was similar to the national rate of 19.1 cases per 100,000 children for 2007–2011, the most recent years for which national data are available.[2] In Indiana, the childhood cancer mortality rate was 2.3 deaths per 100,000 children compared to the US mortality rate of 2.4 deaths per 100,000 children [Figure 16].[2]

Using the International Classification of Childhood Cancer system, the most common cancer types diagnosed among Indiana children ages 0–14 were leukemias and brain tumors. In children ages 15–19, the most common cancer types were lymphomas and a group of cancers that include epithelial cancers (cancers that develop from the cellular covering of internal and external body surfaces or related tissues in the skin, hollow viscera and other organs) and melanoma.

Who Most Often Gets Childhood Cancer?

- **White children.** During 2008-2012, in Indiana, white children had a significantly higher incidence rate than African American children (21.2 versus 14.8 per 100,000 children, respectively) [Figure 16]. This difference in rates between races is also seen nationally. The reasons for these differences are not known.[1]
- **Children born with certain genetic disorders or familial syndromes**. Children with a familial neoplastic syndrome, inherited immunodeficiency, certain genetic syndromes, and chromosomal abnormalities are at greater risk for developing various types of childhood cancer.[3]
- **Males born with undescended testes.** They are at greater risk for testicular cancer.[3]
- **Additional risk factors include:**[3]
  - Radiation exposure, especially prenatally (includes x-rays);
  - Tanning bed or sun exposure increases the risk of melanoma, one of the more common cancers among teenagers;
  - Prior chemotherapy with an alkylating agent or epipodophyllotoxin;
  - Infection with the Epstein-Barr virus is associated with certain types of lymphoma; and
  - Insecticide exposure, especially prenatally, is associated with leukemia.

Figure 16. Incidence and Mortality (Death) Rates among Children Ages 0–19 Years by Sex and Race — Indiana, 2008–2012

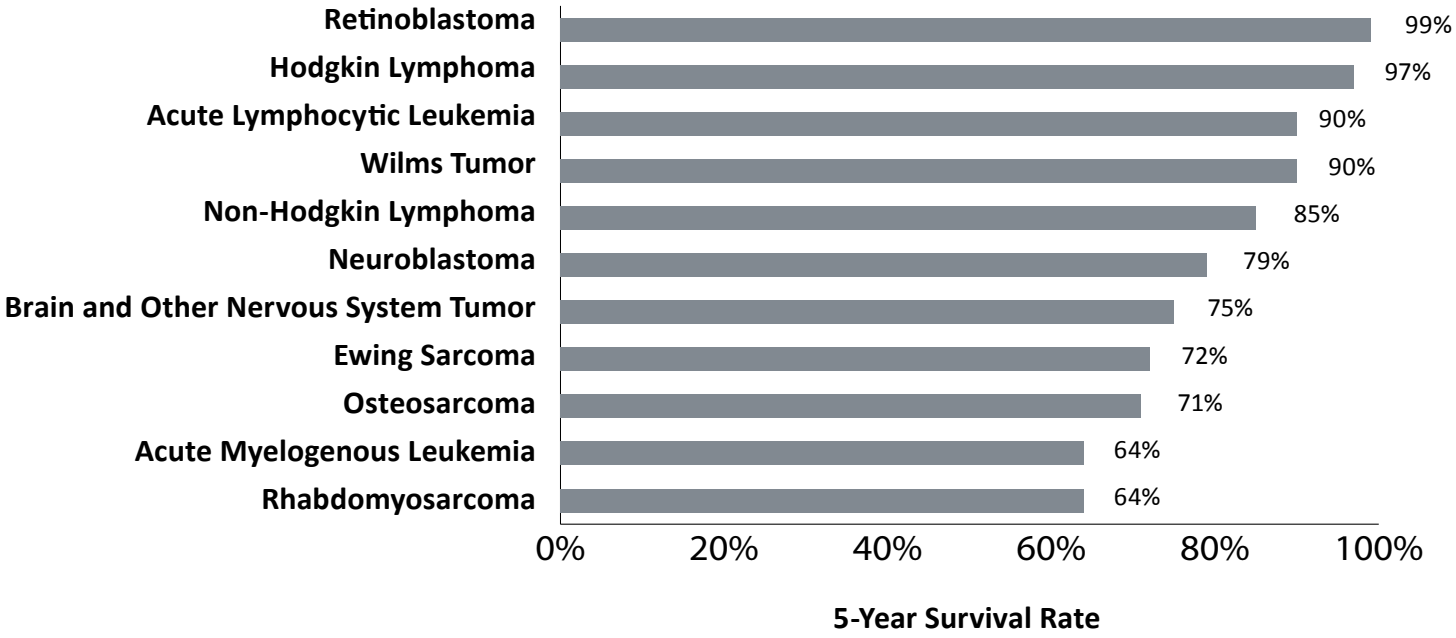


** Rate is significantly lower (P<.05) among African Americans than among whites*

† Age-specific rate per 100,000 children

Source: Indiana State Cancer Registry

Figure 17. Five-year Survival Rates for the Most Common Childhood Cancers — United States, 2003–2009



Source: American Cancer Society. Childhood Cancer. Atlanta, GA. 2011. Accessed at www.cancer.org/acs/groups/cid/documents/webcontent/002287-pdf.pdf on June 03, 2013.

Can Childhood Cancer Be Detected Early? — *see "Be Aware" box for additional information*

Early symptoms are usually nonspecific. Parents should ensure that children have regular medical checkups and should be aware of any unusual symptoms that persist.

What Factors Influence Childhood Cancer Survival?

Overall, US childhood deaths due to cancer have dropped more than 50 percent since 1975 because of improved treatment options. The five-year survival rate for childhood cancers is now 83 percent.[1] However, rates vary considerably depending on cancer type; moreover, within the major categories, cancer subtypes might vary in response to treatment or survival characteristics [Figure 17].

The earlier a cancer is diagnosed and treated, the better. Childhood cancers can be treated by a combination of therapies (surgery, radiation, and chemotherapy) chosen based on the type and stage of cancer. Treatment is coordinated by a team of experts, including pediatric oncologists, pediatric nurses, social workers, psychologists, and others. Because these cancers are uncommon, outcomes are more successful when treatment is managed by a children's cancer center.[1]

Survivors of childhood cancer might experience treatment-related side effects. Information for survivors of childhood cancer is available at www.survivorshipguidelines.org.

BE AWARE!

Common Signs and Symptoms of Childhood Cancer

Childhood cancer is rare, but your child should be examined by a health care provider if you notice any of these potential cancer-related signs and symptoms:

- Unusual mass or swelling
- Unexplained paleness or loss of energy
- Sudden tendency to bruise
- Persistent, localized pain
- Prolonged, unexplained fever or illness
- Frequent headaches, often with vomiting
- Sudden eye or vision changes
- Excessive, rapid weight loss

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What is the Impact on Indiana Residents?

Table 8. Burden of Invasive Colon and Rectum Cancer — Indiana, 2008–2012

	Average number of cases per year (2008–2012)	Rate per 100,000 people* (2008–2012)	Number of cases (2012)	Rate per 100,000 people* (2012)
Indiana Incidence (New cases)	3,097	44.4	2,825	39.6
Indiana Mortality (Deaths)	1,164	16.6	1,169	16.3

** Age-adjusted*

Source: Indiana State Cancer Registry

Colon and Rectum Cancer

Bottom Line

Colorectal cancer is the third most commonly diagnosed cancer and cause of cancer-related death among both males and females in the US and Indiana. The American Cancer Society (ACS) estimated that 2,890 Indiana residents will be diagnosed with colorectal cancer and 1,080 will die because of the disease during 2015.[1] The lifetime risk of developing colorectal cancer is 1 in 22 for females and 1 in 21 for males.[1] In Indiana, African Americans have higher colorectal cancer incidence and mortality rates than whites, and males have higher rates than females.

Who Gets Colon and Rectum Cancer?

Age and sex are the two greatest risk factors for developing colorectal cancer. During 2012, 91 percent of cases diagnosed were among Indiana residents age 50 and older. In addition, during 2008-2012, colorectal cancer incidence rates were 27 percent higher among Indiana males than females (50.3 versus 39.5 cases per 100,000 people) [Figure 18].

Additional risk factors for colorectal cancer include:

- **Race.** In Indiana, during 2008–2012, African Americans had an 18 percent higher incidence rate (51.5 versus 43.7 cases per 100,000 people) and a 37 percent higher mortality rate (22.0 versus 16.1 deaths per 100,000 people) when compared with whites [Figure 18].
- **Personal or family history.** Risk is increased by having a personal or family history of colorectal cancer or polyps, a personal history of chronic inflammatory bowel disease, or certain inherited genetic conditions (*e.g.,* Lynch syndrome, also known as hereditary nonpolyposis colorectal cancer, and familial adenomatous polyposis [FAP]).[2]
- **Smoking.** According to Surgeon General's Report, *The Health Consequences of Smoking — 50 Years of Progress*, smoking is a known cause of colorectal cancer. In addition, smoking increases the failure rates of treatment for all cancers.
- **Diabetes.** Studies have found that individuals with type 2 diabetes are at higher risk.[2] Although diabetes and colorectal cancer share similar risk factors, this increased risk remains even after those are taken into consideration.[2] Studies also suggest that the relationship may be stronger in males than in females. In addition, some research indicates that some diabetic medications independently affect colorectal cancer risk. In general, colorectal cancer patients with diabetes appear to have slightly poorer survival rates than non-diabetic patients.[2]
- **Modifiable risk factors.** Overweight and obesity, physical inactivity, a diet high in red or processed meat, and alcohol consumption have been found to increase colorectal cancer risk.[2] There are some factors that may help lower risk or even prevent colorectal cancer. Moderate daily fruit and vegetable intake has been shown to decrease risk. In addition, consumption of dairy products and higher blood levels of vitamin D appear to decrease risk.[2] Intake of dietary folate, dietary fiber, cereal fiber, and whole grains is associated with reduced risk; specifically, for every 10 grams of daily fiber consumption there is a 10 percent reduction in cancer risk.[2] Some studies suggest that long-term, regular use of non-steroidal anti-inflammatory drugs (such as aspirin), and use of postmenopausal hormones may reduce risk; however, these drugs and therapies are not recommended for the prevention of colorectal cancer because they can have serious adverse health effects.[2]

Can Colon and Rectum Cancer Be Detected Early? — *see the "Be Aware" box for additional information*

Colorectal cancer incidence rates increased from 1975 through the mid-1980s, but have been decreasing for the past two decades in the US.[2] Declines have accelerated during the past few years. From 2008 to 2010, incidence rates decreased by more than four percent per year in both males and females.[2] These declines are largely attributed to increases in the use of colorectal cancer screening tests that allow the detection and removal of colorectal polyps before they progress to cancer.[2] A similar trend has been seen in Indiana [Figure 19].

Symptoms of advanced disease include rectal bleeding, blood in the stool, a change in bowel habits, and cramping pain in the lower abdomen. In some cases, blood loss from cancer leads to anemia (low red blood cells), causing symptoms such as weakness and fatigue.

Beginning at age 50, both males and females with average risk for colorectal cancer should follow one of these testing schedules:

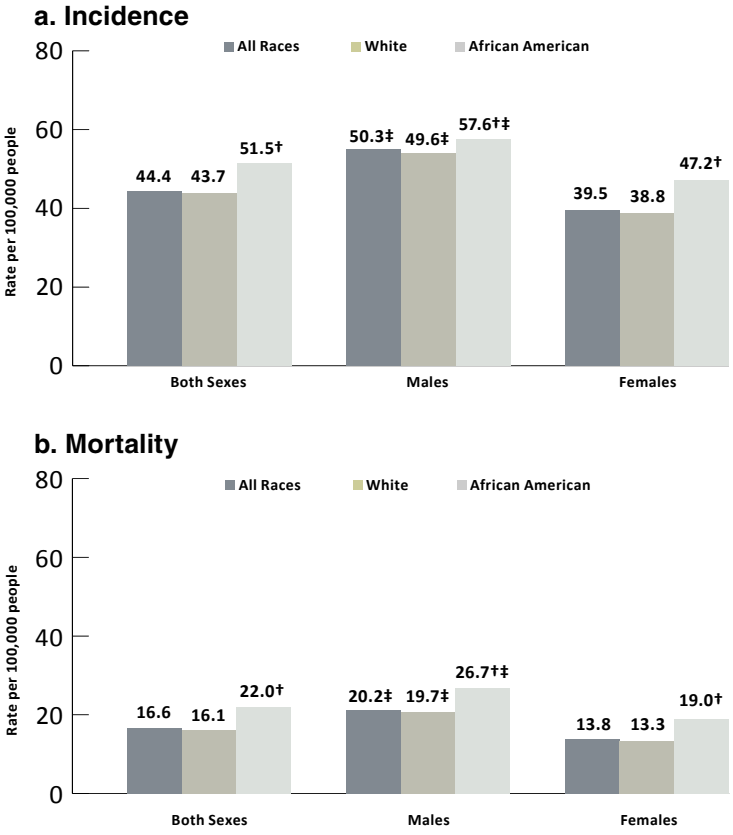
- Tests that find polyps and cancer:
  - Colonoscopy every ten years; or
  - Flexible sigmoidoscopy, double-contrast barium enema, or computed tomography (CT) colonography (also referred to as a "virtual colonoscopy") every five years. If any of these three tests are positive, a colonoscopy should be done.

BE AWARE!

Common Signs and Symptoms of Colorectal Cancer

- Early Stage: No symptoms
- Late Stage:
  - Rectal bleeding
  - Blood in stool
  - Change in bowel habits
  - Cramping pain in lower abdomen
  - Weakness
  - Extreme fatigue

Figure 18. Colorectal Cancer Incidence (a) and Mortality (Death) (b) Rates by Sex and Race* — Indiana, 2008–2012



** Age-adjusted*

† Rate among African Americans is significantly higher (P<.05) than rate among whites

‡ Rate among males is significantly higher (P<.05) than rate among females

Source: Indiana State Cancer Registry

TAKE CHARGE!

What You Can Do to Help Prevent Colorectal Cancer

- Get screened regularly
- Maintain a healthy weight
- Adopt a physically active lifestyle
- Avoid tobacco products
- Limit consumption of alcohol
- Consume a healthy diet that:
  - Emphasizes plant sources
  - Supports a healthy weight
  - Includes at least 2 ½ cups of a variety of vegetables and fruits each day
  - Includes whole grains rather than processed (refined) grains
  - Limits processed and red meats
- Tests that primarily find cancer
  - Yearly fecal occult blood test (FOBT) or fecal immunochemical test (FIT) or a stool DNA test (undetermined interval). If any of these three tests are positive, a colonoscopy should be done.
- Individuals who have an increased risk should talk to their health care provider about whether they should be screened at a younger age, more frequently, or with colonoscopy.

In recent years, colorectal cancer incidence rates have increased among younger adults in the US. Therefore, timely evaluation of symptoms consistent with colorectal cancer in adults under age 50 is important.

What Factors Influence Colorectal Cancer Survival?

Nationally, mortality rates for colorectal cancer have declined in both males and females over the past two decades.[2] In Indiana, mortality rates decreased 31 percent from 2002 to 2012 (from 21.3 to 16.6 deaths per 100,000 people) [Figure 19]. This included a 32 percent decrease among both males (from 25.9 to 19.7 deaths per 100,000) and females (from 17.9 to 13.6 deaths per 100,000).

In the US, the five- and ten-year relative survival rates for people with colorectal cancer are 65 percent and 58 percent, respectively.[2] When colorectal cancers are detected early, at the local stage, the five-year survival rate is 90 percent. In Indiana, during 2008–2012, 44.2 percent of colorectal cancers were identified early, in the in situ or local stage [Figure 20]. If the cancer has spread regionally beyond the colon or rectum, the five-year survival rate decreases to 70 percent. The five-year survival rate for colorectal cancer that is diagnosed late, or in the distant stage, is 13 percent.

Surgery is the most common treatment for colorectal cancer. Chemotherapy alone, or in combination with radiation, is given before or after surgery to patients whose cancer has deeply penetrated the bowel wall or spread to lymph nodes. Three targeted monoclonal antibody therapies, which block growth of blood vessels to the tumor or the effects of hormone-like factors that promote cancer cell growth, are approved to treat metastatic colorectal cancer.

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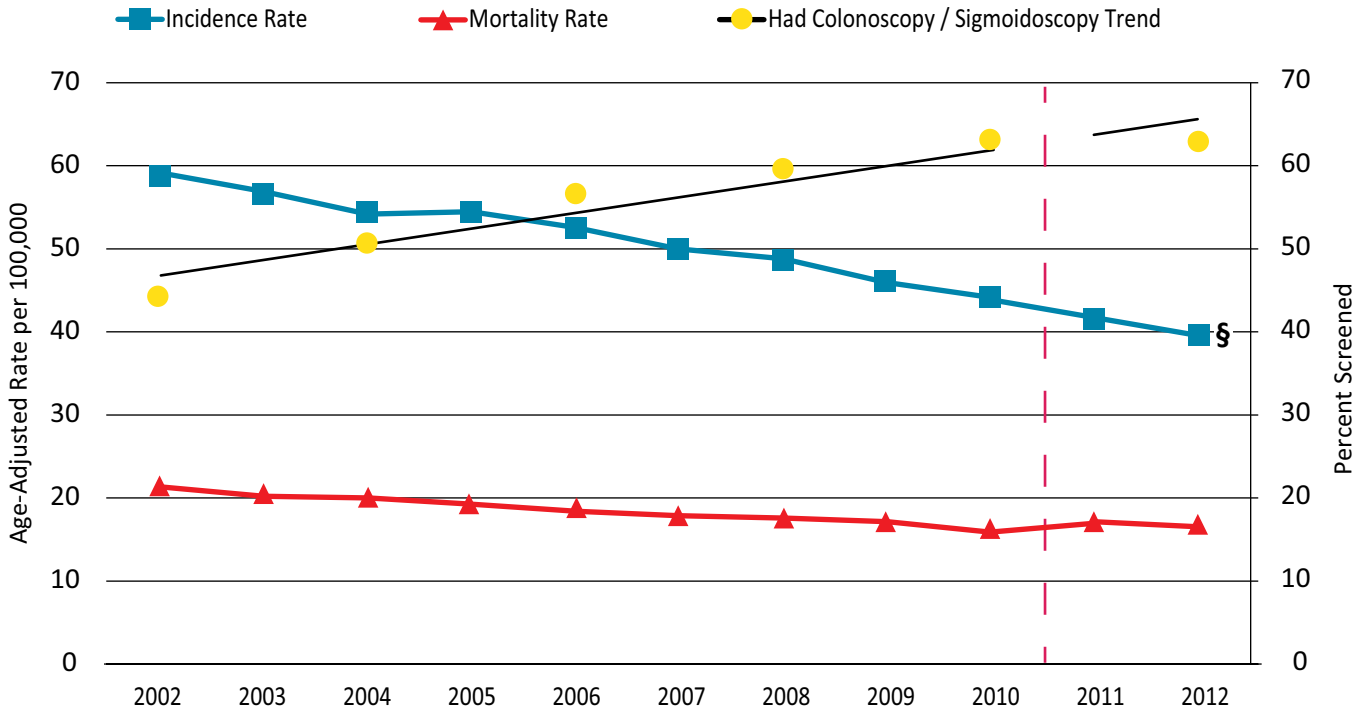
Figure 19. Trends in Colorectal Cancer Incidence* and Screening Rates† — Indiana, 2002–2012



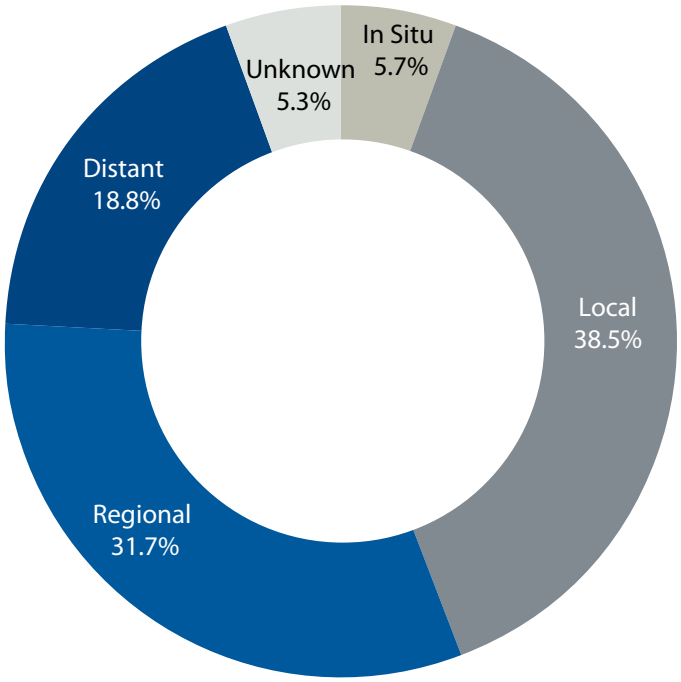
** Incidence rates are age-adjusted.*

† Persons ages 50 and older who have ever had a sigmoidoscopy or colonoscopy. Starting in 2002, these data have been collected every two years. A trend line is provided. Beginning in 2011, the BRFSS methodology changed with the inclusion of cell phone respondents and a new weighting procedure; thus, 2011 and forward are not directly comparable to previous years.

§ Incidence rate in 2012 is significantly lower (P<.05) than the rate in 2002

Sources: Indiana State Cancer Registry (Incidence data); Indiana Behavioral Risk Factor Surveillance System (Screening data)

Figure 20. Percent of Colon and Rectum Cancer Cases Diagnosed During Each Stage* — Indiana, 2008–2012



During 2008–2012, of the 16,419 Indiana residents who were diagnosed with colorectal cancer, 7,251 (44.2%) were diagnosed in the in situ or local stage, 8,290 (50.5%) were diagnosed in the regional or distant stages, and 878 (5.3%) had unknown staging.

** Includes all in situ and invasive cases*

Source: Indiana State Cancer Registry

What is the Impact on Indiana Residents?

Table 9. Burden of Invasive Lung Cancer — Indiana, 2008–2012

	Average number of cases per year (2008–2012)	Rate per 100,000 people* (2008–2012)	Number of cases (2012)	Rate per 100,000 people* (2012)
Indiana Incidence	5,167	73.9	4,674	65.4
Indiana Mortality	4,006	57.5	3,958	55.7

** Age-adjusted*

Source: Indiana State Cancer Registry

Bottom Line

Lung cancer is the leading cause of cancer deaths in the US and Indiana, killing over 158,000 Americans and approximately 4,000 Indiana residents each year. The American Cancer Society (ACS) estimated that 5,510 Indiana residents will be diagnosed with lung and bronchus cancer and 4,060 are expected to die because of the disease during 2015.[1] If all tobacco smoking were stopped, the occurrence of lung cancer would decrease by an estimated 90 percent[2]; however, in Indiana, 21.9 percent of adults continue to smoke tobacco, placing them at great risk for developing lung and other types of cancer.[3]

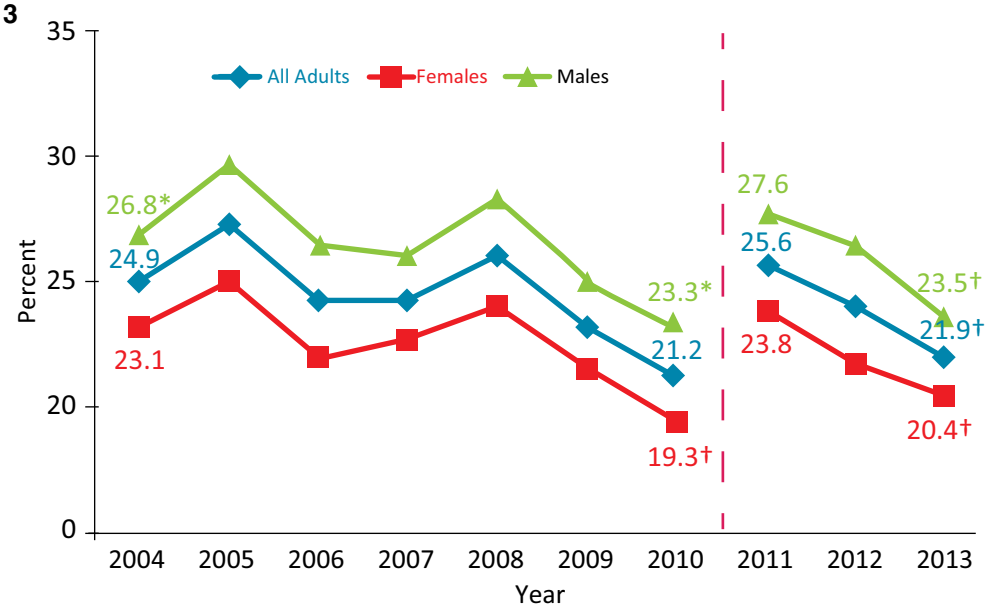
Who Most Often Gets Lung Cancer?

- **Smokers.** Smoking accounts for 87 percent of lung cancer deaths and at least 30 percent of all cancer deaths. Lung cancer mortality rates are about 23 times higher for current male smokers and 13 times higher for current female smokers when compared to people who have never smoked.[4] Over one million (21.9 percent) adults in Indiana are current smokers, and Indiana's adult smoking rate remains among the highest in the nation (median adult smoking rate in the US was 19 percent in 2013).[5]
- **Individuals exposed to secondhand smoke.** Each year, an estimated 50,000 American and 1,240 Indiana resident nonsmokers die from exposure to secondhand smoke (smoke breathed in involuntarily by someone who is not smoking).[4]
- **Individuals exposed to other cancer-causing agents.** Exposure to asbestos, radon, arsenic, talc, vinyl chloride, coal products, and radioactive ores, like uranium, can increase risk for developing lung cancer, especially if they also smoke tobacco. Radon is a naturally occurring gas that comes from rocks and dirt and can get trapped in houses and buildings. It cannot be detected by smell, taste, or sight. The Environmental Protection Agency reports radon as the cause of 20,000 cases of lung cancer each year, making it the second leading cause of lung cancer behind smoking.[9]
- **Males, especially African American males.** During 2008–2012, Indiana males, compared to females, had a 50 percent greater lung cancer incidence rate (91.3 versus 61.0 cases per 100,000 people, respectively) and a 69 percent greater mortality rate (75.1 versus 44.5 deaths per 100,000 people, respectively). This is mainly because a higher percentage of males have been smokers compared to females. In 2013, 23.5 percent of adult males and 20.4 percent of adult females reported being current smokers [Figure 21].[3] African American males in Indiana have approximately 17 percent greater incidence and 20 percent greater lung cancer mortality rates than do white males [Figure 22].

Can Lung Cancer Be Detected Early? — *see the "Be Aware" box for additional information*

Findings from the National Cancer Institute's National Lung Screening Trial established screening with the use of low-dose computed tomography in specific high-risk groups has been shown to be effective in reducing mortality from lung cancer. Individuals at high-risk are defined as those ages 55 to 74 who have a minimum 30 pack per year tobacco smoking history, who currently smoke, or have quit within the past 15 years.

Figure 21. Percent of Indiana Residents, Ages 18 Years and Older, who Reported Being Current Smokers — Indiana, 2004–2013



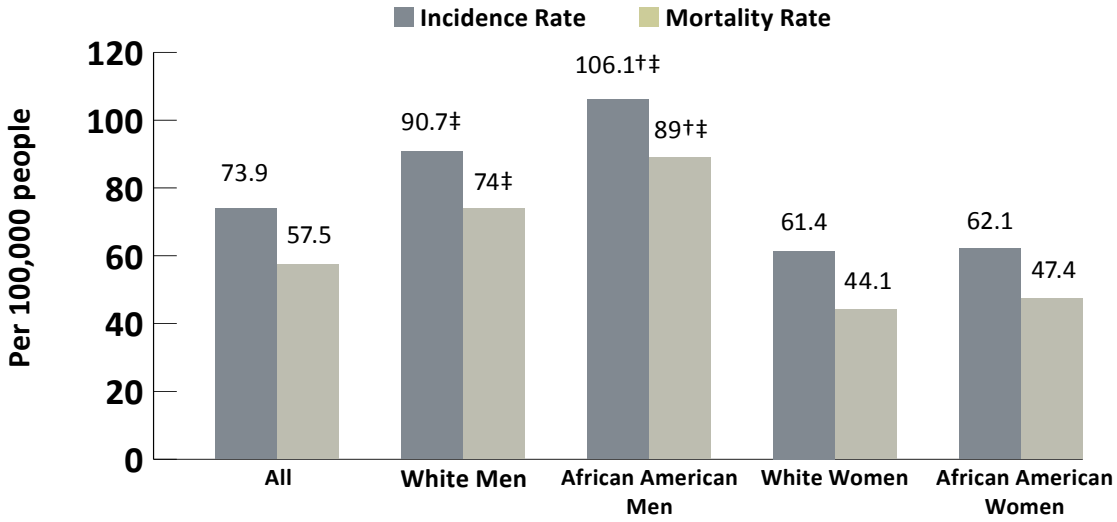
** Significantly higher (P<.05) compared to females for same year*

† Significantly lower (P<.05) compared to first year of data in trend line

Due to a change in BRFSS weighting methodology and the inclusion of cell phone individuals, results from 2011 and forward and not directly comparable with previous years.

Source: Indiana Behavior Risk Factor Surveillance System

Figure 22. Lung Cancer Incidence and Mortality (Death) Rates by Race and Sex* — Indiana, 2008–2012



** Age-adjusted*

† Significantly elevated (P<.05) compared to white males

‡ Rate among males is significantly higher (P<.05) than rate among females of the same race

Source: Indiana State Cancer Registry

What Factors Influence Lung Cancer Survival?

Lung cancer is often diagnosed at a later stage, which negatively impacts a person's odds of survival. The five-year survival rate is highest (54 percent) if the lung cancer is diagnosed when it is confined entirely within the lung (*i.e.*, localized)[6]; however, in Indiana, during 2008–2012, only 18.7 percent of lung cancers were diagnosed during this stage [Figure 23].

The one-year relative survival rate for lung cancer increased from 35 percent during 1975–1979 to 42 percent during 2002–2005, largely because of improvements in surgical techniques and combined therapies. However, the five-year survival rate for all stages combined is currently only 16 percent. The five-year survival for small cell lung cancer (6 percent) is lower than that for non-small cell lung cancer (18 percent).[7]

Treatment options are determined by the type (small cell or non-small cell) and stage of cancer, and include surgery, radiation therapy, chemotherapy, and targeted therapies such as bevacizumab (Avastin) and erlotinib (Tarceva). For localized cancers, surgery is usually the treatment of choice. Because the disease has usually spread by the time it is discovered, radiation therapy and chemotherapy are often used, sometimes in combination with surgery.

BE AWARE!

Common Signs and Symptoms of Lung Cancer

- Persistent cough
- Sputum streaked with blood
- Chest pain
- Voice changes
- Recurrent pneumonia or bronchitis
- Smokers should have an open conversation with their healthcare providers about the risks and benefits of lung cancer screening.

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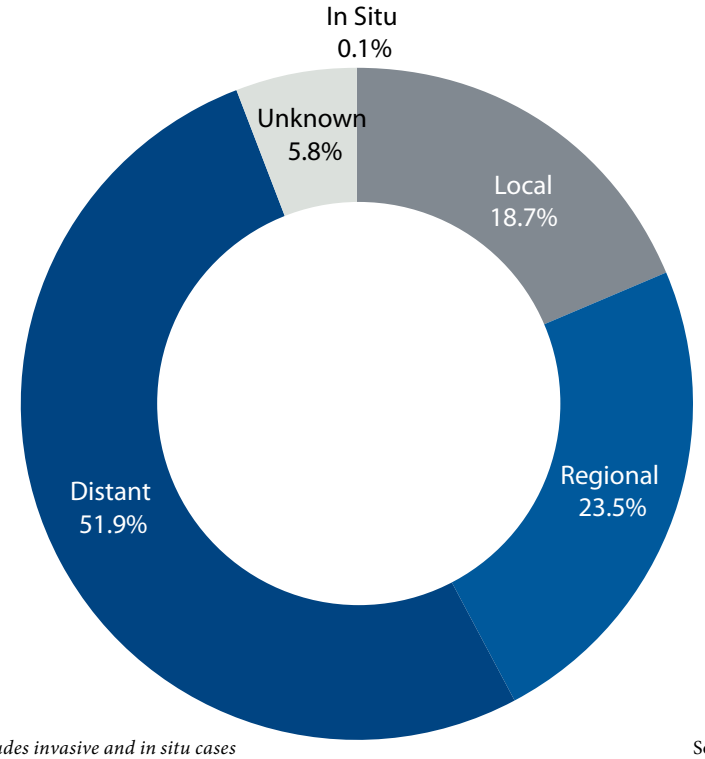
[7] American Cancer Society. *Cancer Facts & Figures 2014.* Atlanta, GA. 2014. www.cancer.org/Research/CancerFactsFigures/index . Accessed September 22, 2014.

Figure 23. Percent of Lung Cancer Cases Diagnosed During Each Stage* — Indiana, 2008–2012



During 2008–2012, of the 25,859 Indiana residents who received a diagnosis of in situ or invasive lung cancer, 4,861 (18.8 percent) were diagnosed in the in situ or local stage, 19,498 (75.4 percent) were diagnosed in the regional or distant stage, and 1,500 (5.8 percent) had unknown staging.

** Includes invasive and in situ cases*

Source: Indiana State Cancer Registry

[8] Centers for Disease Control and Prevention. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Atlanta: US Department of Health and Human Services, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006. www.surgeongeneral.gov/library/secondhandsmoke/. Accessed Dec 21, 2011.

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TAKE CHARGE!

What You Can Do to Help Prevent Lung Cancer

- Be tobacco-free. Quitting tobacco smoking substantially decreases your risk of developing lung cancer along with ten other types of cancer, exacerbation of asthma in adults, cardiovascular disease, and chronic obstructive pulmonary disease (COPD) among many other diseases.[10] Smokers who quit, regardless of age, live longer than people who continue to smoke.[4] Visit QuitNowIndiana.com for free, evidence-based smoking cessation assistance.
- Avoid all secondhand smoke exposure.

TAKE CHARGE!

What the Community Can Do to Help Prevent Lung Cancer

- Implement comprehensive smoke-free air policies and higher taxes on tobacco products.
- Sustain tobacco control program funding to help reduce smoking rates and lessen the burden of tobacco use in Indiana. Annually, tobacco use costs the state over $2 billion in health care costs, including approximately $487 million in Medicaid payments alone.[11]
- Support the continued adoption of smoke-free workplaces. The United States Surgeon General has concluded that smoke-free workplace policies are the only effective way to eliminate exposure to secondhand smoke in the workplace and lead to less smoking among workers.[8]
- Support health care provider outreach efforts that help decrease tobacco use initiation, consumption and increase quit attempts.

What is the Impact on Indiana Residents?

Table 10. Burden of Melanoma — Indiana, 2008–2012

	Average number of cases per year (2008–2012)	Rate per 100,000 people* (2008–2012)	Number of cases (2012)	Rate per 100,000 people* (2012)
Indiana Incidence	**1,191**	**17.4**	**1,091**	**15.8**
Indiana Mortality	**214**	**3.1**	**192**	**2.7**

** Age-adjusted*

Source: Indiana State Cancer Registry

Note: The number of basal cell and squamous cell skin cancers (i.e., nonmelanoma skin cancers, or NMSC) is difficult to estimate because these cases are not required to be reported to the Indiana State Cancer Registry. According to one report, in 2006 an estimated 3.5 million cases of NMSC occurred among US residents.[2] Because of the limitations of the NMSC data, most of the data reported in this section are only for melanoma.

Bottom Line

Skin cancer (*i.e.*, melanoma and non-melanoma skin cancer) is an uncontrolled growth and spread of cells or lesions in the epidermis (the outer layer of skin). Excessive exposure to ultraviolet (UV) radiation from the sun or other sources, like tanning beds, is the greatest risk factor for developing skin cancer. Overall, skin cancers affect more people than lung, breast, colon, and prostate cancers combined. The two most common forms of non-melanoma skin cancers (NMSC) are basal cell and squamous cell carcinoma. Melanoma accounts for less than two percent of skin cancer cases, but causes the most skin cancer deaths.[1] Overall, the lifetime risk of getting melanoma is about one in 50 for whites, one in 1,000 for African Americans, and one in 200 for Hispanics.[2]

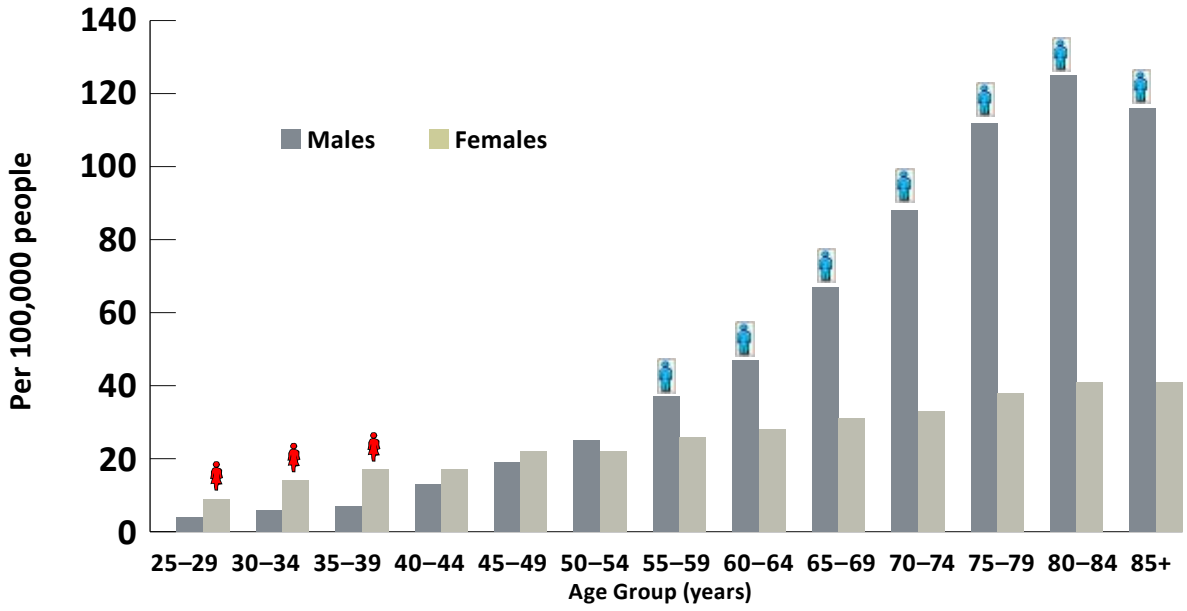
The number of non-melanoma skin cancer (*i.e.*, basal cell and squamous cell carcinoma) is difficult to estimate because these cases are not required to be reported to the Indiana State Cancer Registry. According to one report, in 2006, an estimated 3.5 million cases of NMSC occurred among US residents. Because of the limitations of the NMSC data, most of the data reported in this section are only for melanoma.

Who gets Melanoma/Skin Cancer?

People of all ages, races, and ethnicities are subject to developing skin cancer. Some risk factors include:

- **Age.** During 2008-2012, more than 74 percent of melanoma cases occurred among Indiana residents ages 50 and older [Figure 24]. However, nationally, melanoma is on the rise among younger people.[3]
- **Sex.** Overall, during 2008-2012, the incidence rate for melanoma among Indiana males was 30 percent higher than among females. However, before the age of 50, the incidence rate among females was 64 percent higher than among males. Then, among people ages 55 and older, males had more than twice the risk that females did.[3]
- **Race.** During 2008-2012, the risk of melanoma was 15 times higher for Indiana whites than for African Americans; however, anyone can develop the disease.[3]
- **Fair to light skinned complexion.** Freckles are an indicator of sun sensitivity and sun damage.
- **Hair and eye color.** People with natural blonde or red hair or blue or green eyes are more susceptible to a higher risk of developing melanoma.
- **Multiple or atypical nevi (moles).** People who have a large number of moles (more than 50) often have a higher risk of developing melanoma.
- **Family history.** The risk for developing melanoma is greater for someone who has had one or more close relatives diagnosed with the disease.
- **Excessive exposure to UV radiation from the sun and tanning beds.** The US Department of Health and Human Services and the International Agency of Research on Cancer panel has found that exposure to sunlamps or sunbeds is *known to be a human carcinogen* based on sufficient evidence of carcinogenicity from studies in humans.[4]
- **History of sunburn.** Sunburn at an early age can increase a person's risk for developing melanoma and other skin cancers.

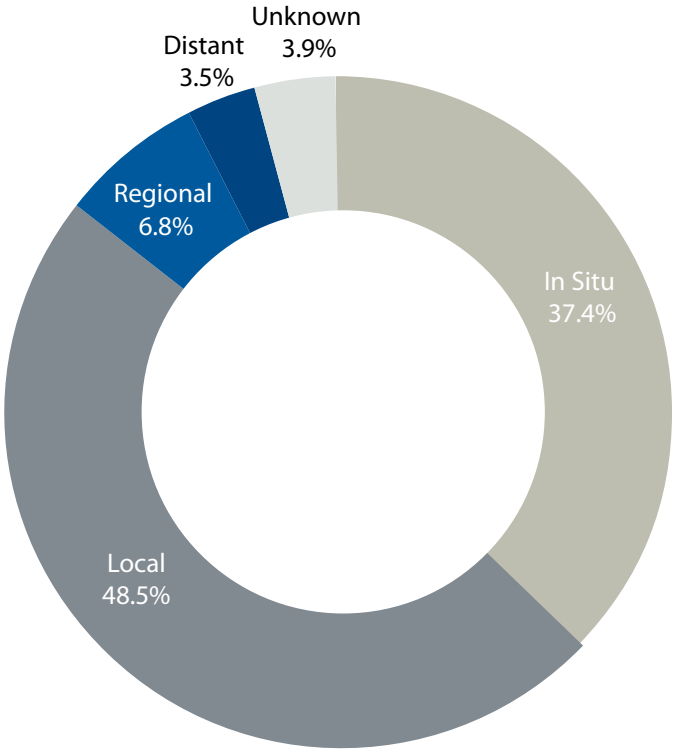
Figure 24. Incidence of Melanoma Skin Cancer by Age Group and Sex, Indiana 2008-2012



= *Significantly elevated (P<.05) among females compared to males*
= *Significantly elevated (P<.05) among males compared to females*

Source: Indiana State Cancer Registry

Figure 25. Percent of Melanoma Cases Diagnosed During Each Stage* — Indiana, 2008–2012



During 2008–2012, of the 9,506 Indiana residents who received a diagnosis of in situ or invasive melanoma, 8,166 (85.9%) were diagnosed in the in situ or local stage, 972 (10.2%) were diagnosed in the regional or distant stage, and 3.9% in the unknown stage.

** Includes invasive and in situ cases*

Source: Indiana State Cancer Registry

- **Diseases that suppress the immune system.** People who have a weakened immune system, or who are being treated with immune-suppressing medicines, have an increased risk for melanoma.[2]
- **Past history of basal cell or squamous cell skin cancers.**
- **Occupational exposure to coal tar, pitch, creosote, arsenic compounds, radium, or some pesticides.**

Can Skin Cancer be Detected Early? — *see the "Be Aware" box for additional information*

The best way to detect skin cancer early is to recognize changes in skin growths or the appearance of new growths. Adults should thoroughly examine their skin regularly, preferably once a month. New or unusual lesions or a progressive change in a lesion's appearance (size, shape, or color, for example) should be evaluated promptly by a health care provider.

Melanomas often start as small, mole-like growths that increase in size and might change color. Basal cell carcinoma might appear as growths that are flat or as small raised pink or red, translucent, shiny areas that might bleed following minor injury. Squamous cell carcinoma might appear as growing lumps, often with a rough surface, or as flat, reddish patches that grow slowly.

BE AWARE!

Common Signs and Symptoms of Melanoma

A simple **ABCDE** rule outlines some warning signs of melanoma:

A = Asymmetry: One half of the mole (or lesion) does not match the other half.

B = Border: Border irregularity; the edges are ragged, notched or blurred.

C = Color: The pigmentation is not uniform, with variable degrees of tan, brown, or black.

D = Diameter: The diameter of a mole or skin lesion is greater than 6 millimeters (or the size of a pencil eraser).

E = Evolution: When existing moles change in shape, size or color. Any sudden increase in size of an existing mole should be checked.

*Melanoma might appear differently than what is described in the **ABCDE** rule, so discuss any changes to existing moles or new growths on the skin with your health care provider.*

What Factors Influence Survival?

Most basal and squamous cell carcinomas can be cured, especially if the cancer is detected and treated early. Early stage basal and squamous cell carcinomas can be removed in most cases by one of several methods including surgical excision, electrodesiccation, and curettage (tissue destruction by electric current and removed by scraping with a curette), or cryosurgery (tissue destruction by freezing). Radiation therapy and certain topical medications may be used in some cases.

Melanoma is also highly curable if detected in its earliest stages and treated properly. Treatment involves removing the primary growth and surrounding normal tissue. Sometimes, a sentinel lymph node is biopsied to determine stage.[1] Additional, extensive lymph node surgery may be needed if lymph node metastases are present. Treatment for advanced cases of melanoma includes palliative surgery, newer targeted or immunotherapy drugs, and sometimes chemotherapy and/or radiation therapy. The treatment of advanced melanoma has changed with the US Food and Drug Administration approval of targeted drugs such as vemurafenib (Zelboraf), dabrafenib (Tafinlar), trametinib (Mekinist), and the immunotherapy drugs ipilimumab (Yervoy) and pembrolizumab (Keytruda).[1]

Melanoma is more likely than other skin cancers to spread to other parts of the body (*i.e.* legs, pelvis, spine, bones, liver, and brain). The five-year survival rate for people with melanoma is 91 percent. For localized melanoma (48.5 percent of cases diagnosed in Indiana), the five-year survival rate is 98 percent. When melanoma is spread regionally (6.8 percent of cases diagnosed in Indiana), the five-year survival rate is 62 percent. In Indiana, during 2008-2012, 3.5 percent of cases were diagnosed in the distant stage. For those diagnosed during this stage, the five-year survival rate declines to just 16 percent.

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TAKE CHARGE!

What You Can Do to Help Prevent Skin Cancer

- Limit or avoid exposure to the sun during peak hours (10 a.m. to 4 p.m.).
- Wear sunscreen with a Sun Protection Factor (SPF) of 30 or higher that protects you from both UVA and UVB rays. These are called "broad spectrum" sunscreens.
- Wear clothing that has built-in SPF in the fabric or wear protective clothing such as long sleeves and long pants (tightly woven dark fabrics protect your skin better than lightly colored, loosely woven fabrics).
- Wear a hat that protects your scalp and shades your face, neck, and ears.
- Avoid use of tanning beds and sun lamps.
- Wear sunglasses to protect your eyes from ocular melanoma (melanoma of the eye).
- ALWAYS protect your skin. Your skin is still exposed to UV rays on cloudy days and during the winter months. Use extra caution around water, snow, and sand as they reflect the sun's ultraviolet rays.

What is the Impact on Indiana Residents?

Table 11. Burden of Invasive Prostate Cancer — Indiana, 2008–2012

	Average number of cases per year (2008–2012)	Rate per 100,000 people* (2008–2012)	Number of cases (2012)	Rate per 100,000 people* (2012)
Indiana Incidence	3,529	106.9	2,844	82.6
Indiana Mortality	584	21.9	606	21.9

** Age-adjusted*

Source: Indiana State Cancer Registry

Prostate Cancer

Bottom Line

The prostate is an exocrine gland in the male reproductive system. Excluding all types of skin cancer, prostate cancer is the most commonly diagnosed cancer, and the second leading cause of cancer death among males in the US and Indiana.[1] Approximately one in six males in the US will be diagnosed with prostate cancer and one in 36 will die from it during their lifetime.

Who Gets Prostate Cancer Most Often?

- **Older males.** The chance of developing prostate cancer rises rapidly after age 50, with two out of three new diagnoses occurring among males over age 65.[7] About 60 percent of all prostate cancer cases are diagnosed in males ages 65 and older, and 97 percent occur in males 50 and older.[1]
- **African American Males.** African American males are more likely to develop prostate cancer (one in five lifetime incidence) [Table 12] than whites, and the mortality rate for African American males is twice as high as white males.[7] However, in Indiana, this disparity between African American and white males appears to be decreasing [Figure 26].
- **Males with a family history of prostate cancer.** Males with one first-degree relative (a father, brother, or son) with a history of prostate cancer are two to three times more likely to develop the disease.[2] This risk increases if more family members are diagnosed with prostate cancer.

Can Prostate Cancer Be Detected Early?

— see the "Be Aware" box for additional information

Not all medical experts agree that screening for prostate cancer will save lives. The controversy focuses on cost of screening, the age groups to be screened, and the potential for serious side effects associated with treatment after diagnosis. Not all forms of prostate cancer need treatment.

The American Cancer Society recommends that beginning at the age of 50, males who are at average risk of prostate cancer and have a life expectancy of at least 10 years have a conversation with their health care provider about the benefits and limitations of prostate-specific antigen (PSA) testing. Males should have an opportunity to make an informed decision about whether or not to be tested based on their personal values and preferences. Males at high risk of developing prostate cancer, (African Americans or males with a close relative diagnosed with prostate cancer before the age of 65), should have this discussion with their health care provider beginning at 45. Males at even higher risk (because they have several close relatives diagnosed with prostate cancer at an early age) should have this discussion with their provider at 40.[1]

- Potential benefits of prostate cancer screening include:
  - Early detection
  - Increased treatment effectiveness
- Potential risks of prostate cancer screening include:
  - False-positive test results (indicating that you have prostate cancer when you do not) — potentially leading to unneeded testing and can cause anxiety.
  - Over-diagnosis — since prostate cancer may not grow or cause symptoms. Typical growth is slow and may not cause health problems.
  - Over-treatment of some prostate cancers that might not affect a man's health if left untreated. Also, treatment might lead to serious side effects such as impotence (inability to keep an erection) and incontinence (inability to control the flow of urine, resulting in leakage).[8]
- Given the potential risks linked to prostate cancer screening, it is vital for males to talk with their health care provider to become informed decision makers. Each man should:
  - Understand his risk of prostate cancer.
  - Understand the risks, benefits, and alternatives to screening.
  - Participate in the decision to be screened or not at a level he desires.
  - Makes a decision consistent with his preferences and values.
- Tests commonly used to screen for prostate cancer include:
  - **Digital rectal exam (DRE).** A doctor or nurse inserts a gloved, lubricated finger into the rectum to feel the prostate. This allows the examiner to estimate the size of the prostate and feel for any lumps or other abnormalities.
  - **PSA test.** This is a blood test that measures levels of PSA, a substance made by the prostate. While high PSA levels may indicate the presence of prostate cancer, it may also indicate other noncancerous conditions.
  - If PSA or DRE tests are abnormal, doctors may perform additional tests, including use of transrectal ultrasounds and biopsies.

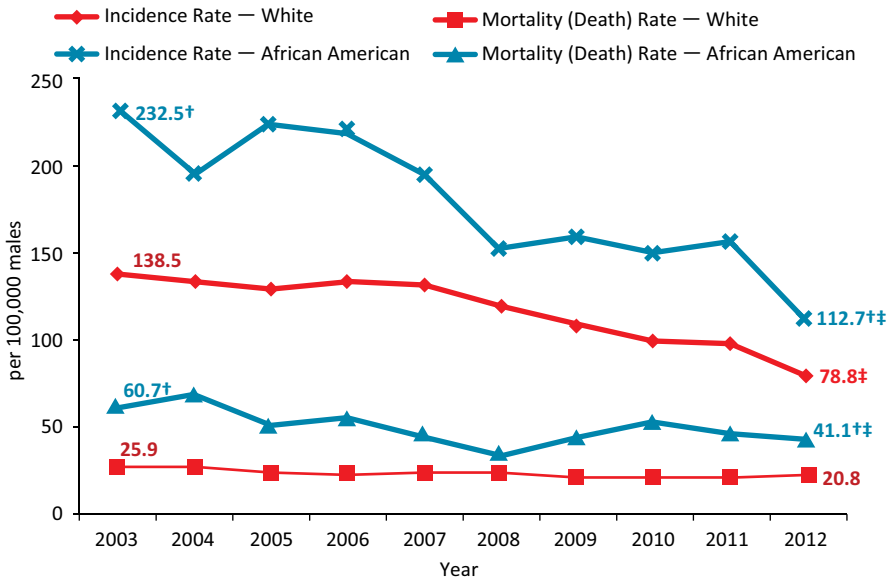
Table 12. Probability of Developing Prostate Cancer Over Selected Age Intervals by Race — US, 2009–2011*

Age	White		African American	
30 to 39	0.01	(1 in 12,288)	0.03	(1 in 4,000)
40 to 49	0.29	(1 in 390)	0.73	(1 in 138)
50 to 59	2.11	(1 in 47)	3.92	(1 in 25)
60 to 69	5.96	(1 in 16)	9.51	(1 in 10)
70 to 79	7.04	(1 in 14)	10.30	(1 in 9)
Lifetime risk	14.16	(1 in 7)	19.08	(1 in 5)

** For people free of cancer at beginning of age interval. Percentages and "1 in" numbers might not be equivalent because of rounding.*

Source: DevCan: Probability of Developing or Dying of Cancer Software, Version 6.8.0. Statistical Research and Applications Branch, National Cancer Institute, August 2014. http://surveillance.cancer.gov/devcan/).

Figure 26. Prostate Cancer Incidence and Mortality (Death) Rates by Race* — Indiana, 2003–2012



** Age-adjusted*

† Significantly elevated (P<.05) compared to white males

‡ Significantly lower (P<.05) compared to 2003

Source: Indiana State Cancer Registry

What Factors Influence Prostate Cancer Survival?

- **Stage of diagnosis.** After prostate cancer has been diagnosed, tests are performed to determine whether the cancer cells remain within the prostate or have spread to other parts of the body [Figure 27]. The grade assigned to the tumor, typically called the Gleason score, indicates the likely aggressiveness of the cancer.
- **Treatment options** vary depending on age, stage, and grade of cancer. The most common treatments for localized prostate cancer (confined to the prostate) include:
  - ***Active surveillance (watchful waiting).*** The patient's prostate cancer is closely monitored by performing the PSA and DRE tests regularly. Treatment occurs only if and when the prostate cancer causes symptoms or shows signs of growing. This can be more appropriate for males with less aggressive tumors and older males.
  - ***Surgery (radical prostatectomy).*** Prostatectomy is surgery to remove the prostate completely. Radical prostatectomy removes the prostate as well as the surrounding tissue.
  - ***Radiation therapy.*** Radiation destroys cancer cells, or prevents them from growing, by directing high-energy X-rays (radiation) at the prostate. There are two types of radiation therapy:
    - ***External radiation therapy.*** A machine outside the body directs radiation at the cancer cells.
    - ***Internal radiation therapy (brachytherapy).*** Radioactive seeds or pellets are surgically placed into or near the cancer to destroy the cancer cells.
  - ***Hormone therapy.*** This treatment, called androgen deprivation therapy (ADT), alters the effects of male hormones on the prostate through medical or surgical castration (elimination of testicular function) or administration of antiandrogen medications.
  - ***Cyrotherapy.*** This treatment involves the controlled freezing of the prostate gland in order to destroy cancerous cells.[5]

BE AWARE!

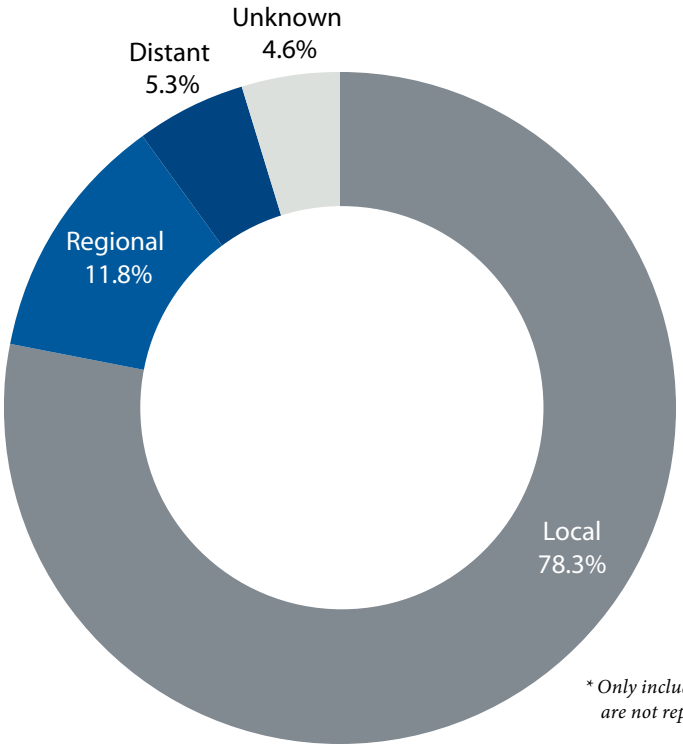
Common Signs and Symptoms of Prostate Cancer

- In early stages, prostate cancer may not cause symptoms. It is important to know that some males have no symptoms at all. [1,5]
- Symptoms* of prostate cancer can include:
  - Difficulty starting urination
  - Weak or interrupted flow of urine
  - Frequent urination, especially at night
  - Inability to empty the bladder completely
  - Pain or burning during urination
  - Blood in the urine or semen
  - Painful ejaculation
  - Trouble having an erection
  - Pain in the back, hips, or pelvis that doesn't go away**

**These symptoms also occur frequently as a result of non-cancerous conditions, such as prostate enlargement or infection and none are specific for prostate cancer*

***This symptom is most associated with advanced prostate cancer since it commonly spreads to the bones.*

Figure 27. Percent of Prostate Cases Diagnosed During Each Stage* — Indiana, 2008–2012



During 2008–2012, of the 17,643 Indiana residents who received an invasive prostate cancer diagnosis, 13,819 (78.3%) were diagnosed in the local stage, 2,090 (11.8%) were diagnosed in the regional stage, 928 were diagnosed in the distant stage (5.3%), and 806 (4.6%) had unknown staging.

** Only includes invasive cases; in situ cases are not reportable*

Source: Indiana State Cancer Registry

- **Overall survival.** The majority (93 percent) of prostate cancers are discovered in the local or regional stages.[1] In the US, the five-year relative survival rate for prostate cancer among African Americans is 96 percent and nearly 100 percent among whites.[2] Obesity and smoking are associated with an increased risk of dying from prostate cancer.[1]

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TAKE CHARGE!

What You Can Do to Help Prevent Prostate Cancer

- Stay active, eat well, and maintain a healthy body weight. In particular:
  - Eat at least five servings of fruits and vegetables each day.
  - Limit intake of red meats (especially processed meats such as hot dogs, bologna, and lunch meat).
  - Avoid excessive consumption of dairy products (>3 servings/day) and calcium (>1,500 mg/day).
  - Include recommended levels of lycopene (antioxidants that help prevent damage to DNA which are found in tomatoes, pink grapefruit, and watermelon) and vitamin E in your diet.
  - Meet recommended levels of physical activity. (http://www.cdc.gov/physicalactivity/everyone/guidelines/index.html)[6]

What is the Impact of Cancer on African Americans in Indiana?

Table 13. Burden of Cancer among African Americans — Indiana, 2008–2012

	Average number of cases per year (2008–2012)	Rate per 100,000 people* (2008–2012)	Number of cases (2012)	Rate per 100,000 people* (2012)
Indiana Incidence	2,338	479.6	2,181	430.8
Indiana Mortality	995	221.2	1,063	228.6

** Age-adjusted*

Source: Indiana State Cancer Registry

Bottom Line

African Americans have the highest mortality rate and shortest survival of any racial and ethnic group in the US for most cancers.[1] The causes of these inequalities are complex and are thought to reflect social and economic disparities more than biologic differences associated with race. These include inequities in work, wealth, income, education, housing, and overall standard of living, as well as barriers to high-quality cancer prevention, early detection, and treatment services.[1] In Indiana, while the overall racial disparities in cancer incidence and mortality rates have been gradually decreasing, during 2008–2012 African Americans still had almost a four percent greater incidence of cancer than whites, and over a 21 percent higher mortality rate.

What Types of Cancer Impact the African American Community the Most?

Table 14 provides an overview of the leading types of cancer that impacted African Americans in Indiana during 2012. Prostate cancer was the most common cancer diagnosed in African American males. Breast cancer was the most common cancer diagnosed in African American females. The leading cause of cancer death among males and females was lung cancer. Colorectal cancer was the third leading cause of cancer deaths among males and third leading cause of cancer death for females. Breast cancer was the second leading cause of cancer death for females.

Table 14. Leading Sites of New Cancer Cases and Deaths among African Americans by Sex — Indiana, 2012

Number (%) of New Cases

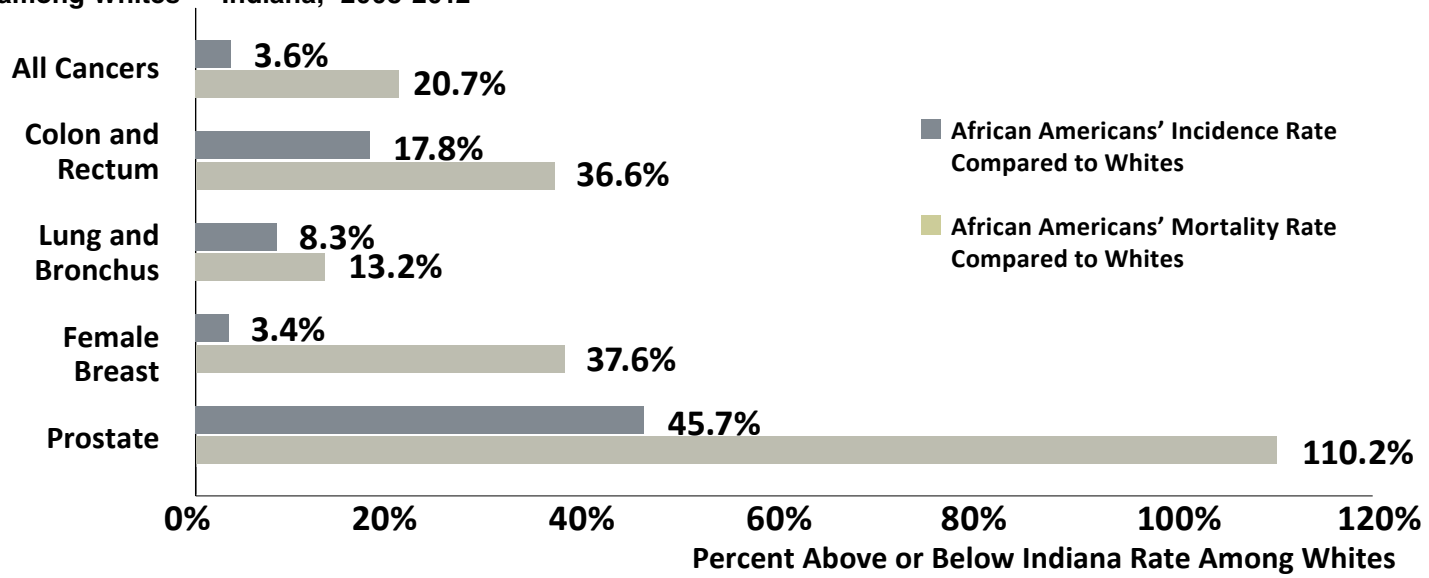
Male	Count	%	Female	Count	%
Prostate	257	26.1%	Breast	359	30.0%
Lung and Bronchus	171	17.3%	Lung and Bronchus	148	12.4%
Colon and Rectum	94	9.5%	Colon and Rectum	117	9.8%
Kidney and Renal Pelvis	59	6.0%	Pancreas	42	3.5%
Urinary Bladder	34	3.4%	Non-Hodgkin Lymphoma	41	3.4%
Pancreas	30	3.0%	Thyroid	29	2.4%
Non-Hodgkin Lymphoma	29	2.9%	Kidney and Renal Pelvis	28	2.3%
Oral Cavity and Pharynx	27	2.7%	Cervix Uteri	23	1.9%
Leukemia	20	2.0%	Ovary	20	1.7%
Melanoma of the Skin	2	0.2%	Melanoma of the Skin	4	0.3%
All Sites	**986**		**All Sites**	**1,195**	

Number (%) of Deaths

Male	Count	%	Female	Count	%
Lung and Bronchus	158	29.9%	Lung and Bronchus	148	27.7%
Prostate	65	12.3%	Breast	98	18.4%
Colon and Rectum	53	10.0%	Colon and Rectum	56	10.5%
Pancreas	34	6.4%	Pancreas	36	6.7%
Liver	30	5.7%	Ovary	21	3.9%
Leukemia	18	3.4%	Leukemia	16	3.0%
Kidney and Renal Pelvis	12	2.3%	Non-Hodgkin Lymphoma	13	2.4%
Non-Hodgkin Lymphoma	9	1.7%	Cervix Uteri	11	2.1%
Urinary Bladder	7	1.3%	Kidney and Renal Pelvis	7	1.3%
Oral Cavity and Pharynx	7	1.3%	Urinary Bladder	6	1.1%
All Sites	**529**		**All Sites**	**534**	

Source: Indiana State Cancer Registry

Figure 28. Comparison of Cancer Incidence and Mortality (Death) Rates among African American to those among Whites — Indiana,* 2008-2012



** Age-adjusted incidence and mortality rates are significantly elevated (P<.05) among African Americans compared to whites for all cancer types except for female breast cancer incidence*

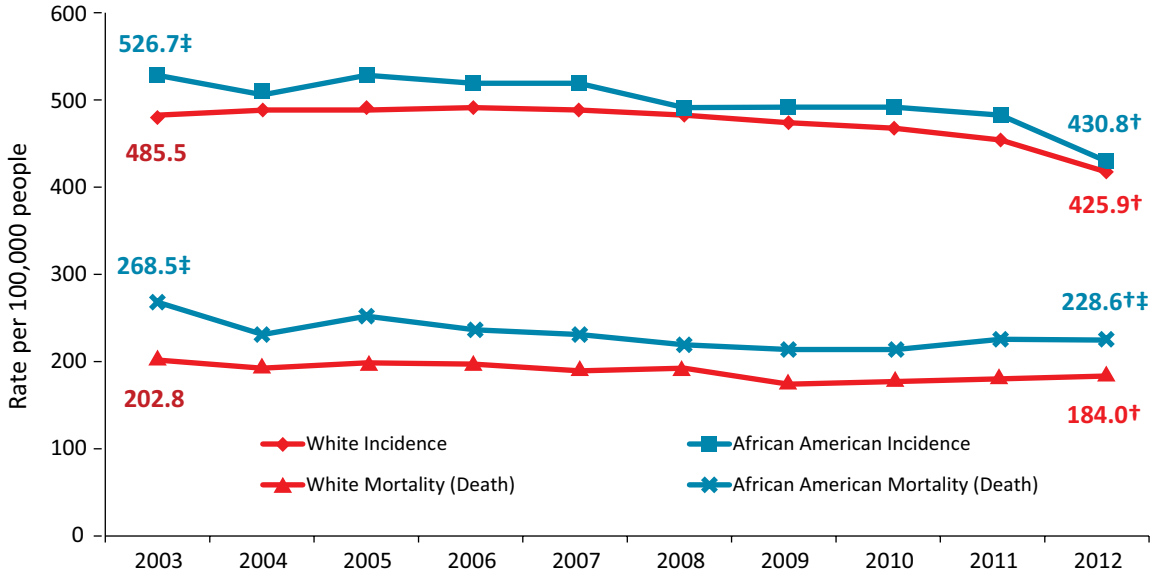
Source: Indiana State Cancer Registry

What are the Cancer Disparities in Indiana Relating to Race?

While African Americans, compared to whites, continue to be unequally burdened by cancer in Indiana [Figure 28], the disparities between the two groups have been gradually decreasing [Figure 29]. Despite these gains, continued work needs to be done to address the differences among the races, especially the difference in cancer mortality rates. Some additional information about the impact of specific cancer types among African Americans during 2008-2012 is provided below.

- **Colon and Rectum Cancer.** In comparison to whites, African Americans had an 18 percent higher incidence rate (51.5 versus 43.7 cases per 100,000 people, respectively) and a 37 percent higher mortality rate for colon and rectum cancer (22.0 versus 16.1 deaths per 100,000 people, respectively). African American males, in particular, were at greater risk, as their age-adjusted incidence rate was 16 percent greater than white males (57.6 versus 49.6 cases per 100,000 males, respectively) and their mortality rate was 36 percent higher (26.7 versus 19.7 deaths per 100,000 males, respectively). African American females had similar rates to white males, but, compared to white females, they had a 22 percent greater incidence rate (47.2 versus 38.8 cases per 100,000 females, respectively) and a 43 percent greater mortality rate (19.0 versus 13.3 deaths per 100,000 females, respectively).
- **Lung Cancer.** In comparison to whites, African Americans had an eight percent higher incidence rate (80.0 versus 73.9 cases per 100,000 people, respectively) and a 13 percent higher mortality rate (64.3 versus 56.8 deaths per 100,000 persons, respectively). Additionally, the age-adjusted mortality rate for lung cancer was nearly two times greater for African American males compared to African American females (89.0 versus 47.4 deaths per 100,000 females, respectively).
- **Prostate Cancer.** The age-adjusted incidence rate for prostate cancer was 46 percent higher among African American males compared to white males (146.3 versus 100.4 cases per 100,000 males, respectively). Moreover, the death rate for prostate cancer was more than two times greater (43.1 versus 20.5 deaths per 100,000 males, respectively).
- **Breast Cancer.** African American females had similar incidence rates to white females for breast cancer (122.0 versus 118.0 cases per 100,000 females, respectively). However, the mortality rate for African American females was 38 percent high than the rate for white females (30.0 versus 21.8 deaths per 100,000 females, respectively). Breast cancers diagnosed in African American females are more likely to have factors associated with poor prognosis (*i.e.*, higher grade, advanced stage, and negative hormone estrogen[ER] and progesterone [PR]) receptor status) than those diagnosed in white females. Studies have shown that certain reproductive patterns that are more common among African American females (*i.e.*, giving birth to more than one child, younger age at menarche, early age at first pregnancy), may be associated with increased risk for aggressive subtypes of breast cancer.[1]

Figure 29. Cancer Incidence and Mortality (Death) Rates by Race* — Indiana, 2003-2012



** Age-adjusted*

† Rate is significantly lower than in 2003

‡ African American rate is significantly higher (P<.05) than the white rate

Source: Indiana State Cancer Registry

Can Cancer Be Prevented? — *see the "Take Charge" box for additional information*

Figure 30 describes the burden of some lifestyle and external factors among African American adults in Indiana. Additional information about the impact of cancer risk factors on African Americans in Indiana is provided below.

- **Body Weight, Diet, and Physical Activity.** Scientific evidence suggests that nationally about one-third of cancer deaths are related to overweight or obesity, physical inactivity, and poor nutrition, and thus could be prevented.[2] In particular, being obese has been linked with increased risk for developing cancers of the breast (in postmenopausal females), colon, endometrial, kidney, and esophagus. In 2013, in Indiana, African American adults were 36 percent more likely than white adults to be considered obese based on body mass index (BMI) (41.7 percent versus 30.6 percent, respectively).[3] Additionally, 58 percent of African American adults did not get their recommended 150 minutes of exercise per week, and almost 80 percent failed to eat the recommended daily servings of fruits and vegetables (*i.e.*, 2 cups of fruit and 2½ cups of vegetables per day).[3]
- **Tobacco.** Smoking is the most preventable cause of premature death in the US and is responsible for about 30 percent of all cancer deaths.[4] In 2013, 24.8 percent of African American adults were current smokers, with 26.4 percent of males and 23.4 percent of females reporting current smoking.[3]
- **Health Care Coverage.** Uninsured and underinsured patients are substantially more likely to be diagnosed with cancer at a later stage, when treatment can be more extensive and more costly.[1] In 2013, in Indiana, African American adults were 70 percent more likely than white adults to not see a doctor during the year because of cost (22.8 percent versus 13.4 percent, respectively) and African Americans, ages 18–64, were 66 percent more likely than white adults to not have any form of health care coverage (28.8 percent versus 17.3 percent, respectively).[3]

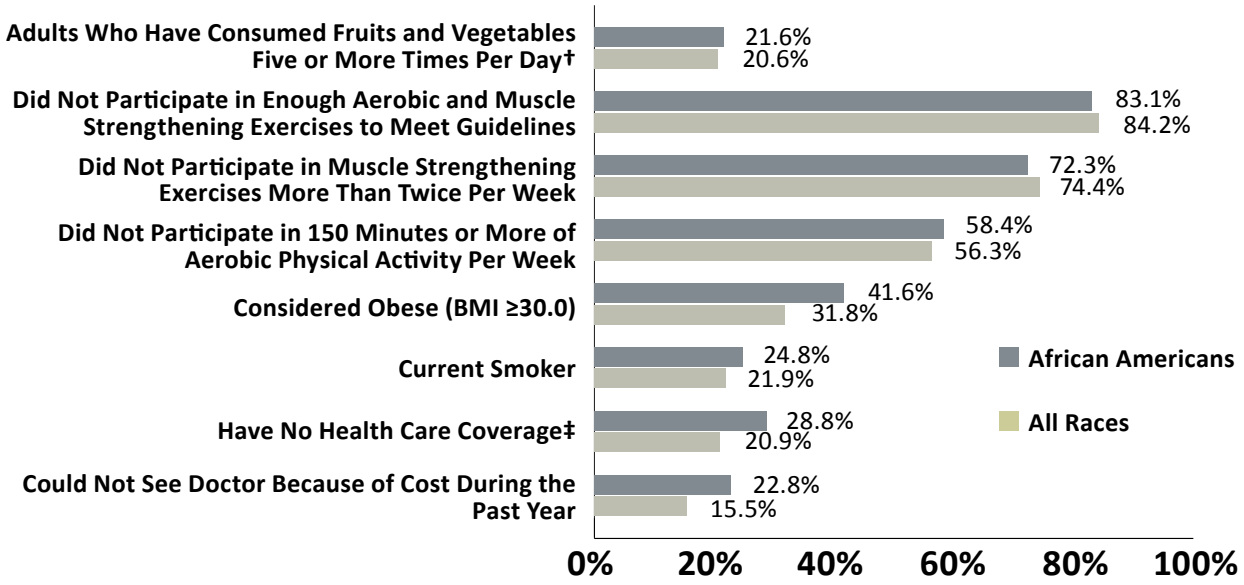
Can Cancer Be Detected Early?

Early detection tests can lead to the prevention of cancer through the identification and removal of precancerous lesions, particularly for cancers of the cervix and colon and rectum. Screening can detect cancer at an earlier stage, which can reduce the extent of treatment, improve the chances of cure, extend life, and thereby improve the quality of life for cancer survivors. In general, race did not play a role in cancer screening rates among Indiana adults during 2012 [Figure 31].

What Factors Influence Cancer Survival?

Despite having similar screening rates, African Americans are less likely than whites to survive five years at each stage of diagnosis [Figure 32] for most cancer types.[2] Based on data from the Surveillance, Epidemiology, and End Results (SEER) Program's nine population-based cancer registries the five-year survival rate for all cancer sites for whites was 69.7 percent compared to 60.7 percent for African Americans during 1973-2011.[5] Much of the difference in survival is believed to be because of barriers that prevent timely and high-quality medical care, including delayed diagnoses after screenings, greater frequency of having later stage diagnoses, and disparities in treatment.

Figure 30. Preventative Cancer Behaviors and Access to Medical Care among African American Adults* — Indiana, 2013



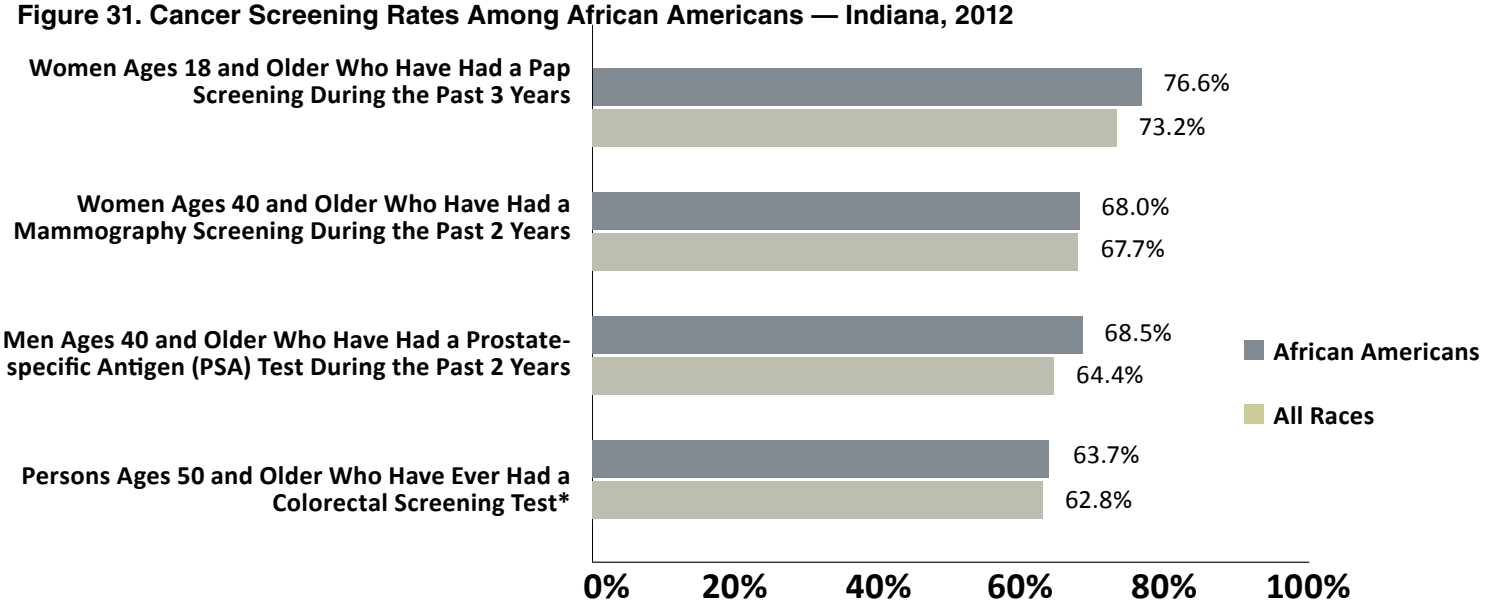
** Adults are people ages 18 and older*

† Data from 2009

‡ Adults ages 18–64

Source: Indiana Behavioral Risk Factor Surveillance System

Figure 31. Cancer Screening Rates Among African Americans — Indiana, 2012



** Sigmoidoscopy or colonoscopy*

Source: Indiana Behavioral Risk Factor Surveillance System

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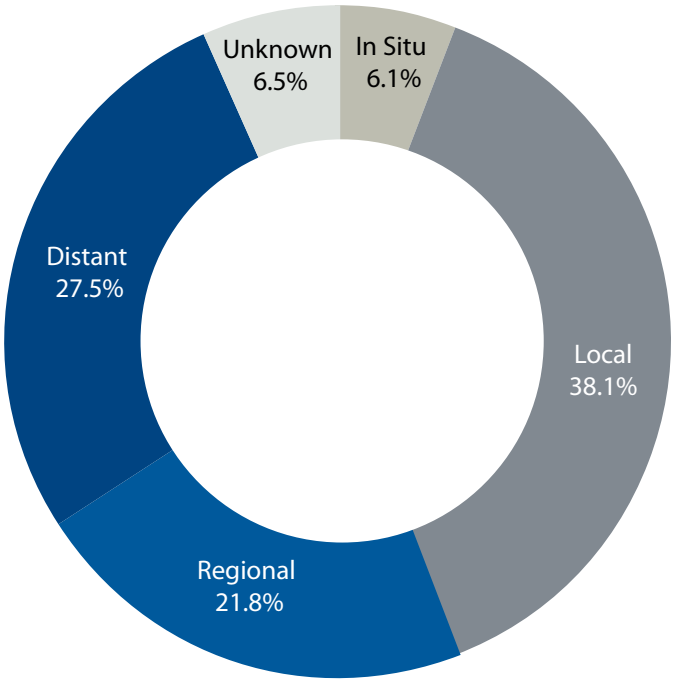
Figure 32. Percent of Cancer Cases Diagnosed among African Americans During Each Stage* — Indiana, 2008-2012



During 2008–2012, of the 11,808 African-American Indiana residents who received a diagnosis of in situ or invasive cancer, 5,218 (44.2 percent) were diagnosed in the in situ or local stage, 5,822 (49.3 percent) were diagnosed in the regional or distant stage, and 768 (6.5 percent) had unknown staging.

** Includes all in situ and invasive cancers except for basal and squamous cell skin cancers and in situ bladder, cervical, and prostate cancers, which are not reportable*

Source: Indiana State Cancer Registry

TAKE CHARGE!

What You Can Do to Help Prevent Cancer and Improve Care Among African Americans:

- Maintain a healthy body weight.
- Increase physical activity levels.
- Eat the recommended daily servings of fruits and vegetables.
- Be smoke-free — Visit www.in.gov/quitline for free smoking cessation assistance.
- Identify a primary health care provider and regularly talk about your cancer screening options.
- Talk to your primary health care provider regularly about your cancer screening options.
- Seek treatment early and avoid delaying follow-up care if you are diagnosed with cancer.
- Support the development of culturally relevant resources and support programs for African Americans that focus on early detection and treatment of cancer, as well as, improved access to services.
- Encourage health care providers to be culturally competent (*i.e.*, respectful and responsive to cultural beliefs that influence the health practices of racial and ethnic minority patients).
- Work to decrease the disparities in socioeconomic factors such as employment, income, and insurance status, which influence health behaviors and outcomes.
- Health care providers are encouraged to ask African American patients about their life, encourage them to ask questions, take seriously the responsibility and respect conferred on the provider, and involve family members.

What is the Impact of Cancer on Hispanics in Indiana?

Table 15. Burden of Cancer among Hispanics — Indiana, 2007-2011

	Average number of cases per year (2007-2011)	Rate per 100,000 people* (2007-2011)	Number of cases (2011)	Rate per 100,000 people* (2011)
Indiana Incidence	554	342.3	578	315.1
Indiana Mortality	127	99.7	139	91.9

** Age-adjusted*

Source: US Cancer Statistics Working Group. US Cancer Statistics: 1999–2011 Incidence and Mortality Web-based Report. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2011. Accessed at wonder.cdc.gov on February 5, 2014.

Cancer Facts & Figures for Hispanics

Bottom Line

Hispanics are the largest, fastest-growing, and youngest minority group in the US and the second largest minority group in Indiana. In 2013, 420,577 Indiana residents (6.4 percent) identified themselves as Hispanic or Latino; up from 3.5 percent in 2000.[1] Hispanics' median age was 24.1 years in 2013 compared to 37.3 years among all Indiana residents. Nationally, about one in two Hispanic males and one in three Hispanic females will be diagnosed with cancer during their lifetime.[2] Additionally, cancer is the leading cause of death among Hispanics in the US, accounting for 21 percent of deaths overall and 15 percent of deaths among children.[2]

Cancer Data for Hispanics in Indiana

The Indiana State Cancer Registry (ISCR) collects data on all cancer cases in Indiana to study trends of the disease and assist in the prevention of cancer and the care of patients impacted by it. There are some unique characteristics of the Hispanic population, and limitations in data collection that impact the ability to describe the burden of cancer for this group. First, while the ISCR does collect data on the ethnicity (Hispanic versus non-Hispanic) of patients, there is potential underreporting of this variable. Additionally, the rapidly changing and increasing Hispanic population tends to be younger and more mobile, thus making them less at risk for developing cancer (age-related) and more difficult to assign to a specific geographic area (mobility-related). Finally, most cancer data in Indiana and the US are reported for Hispanics as an aggregate group, which masks important differences that exist among Hispanic subpopulations according to country of origin. According to the 2013 American Community Survey, 75 percent of the Hispanic population in Indiana was born in Mexico. Because of these factors, the rates and numbers reported for Hispanics in Indiana can vary considerably year-to-year, and the burden of cancer might be slightly higher than is reported.

Table 16. Leading Sites of New Cancer Cases and Deaths among Hispanics by Sex — Indiana, 2007–2011

Number (%) of New Cases

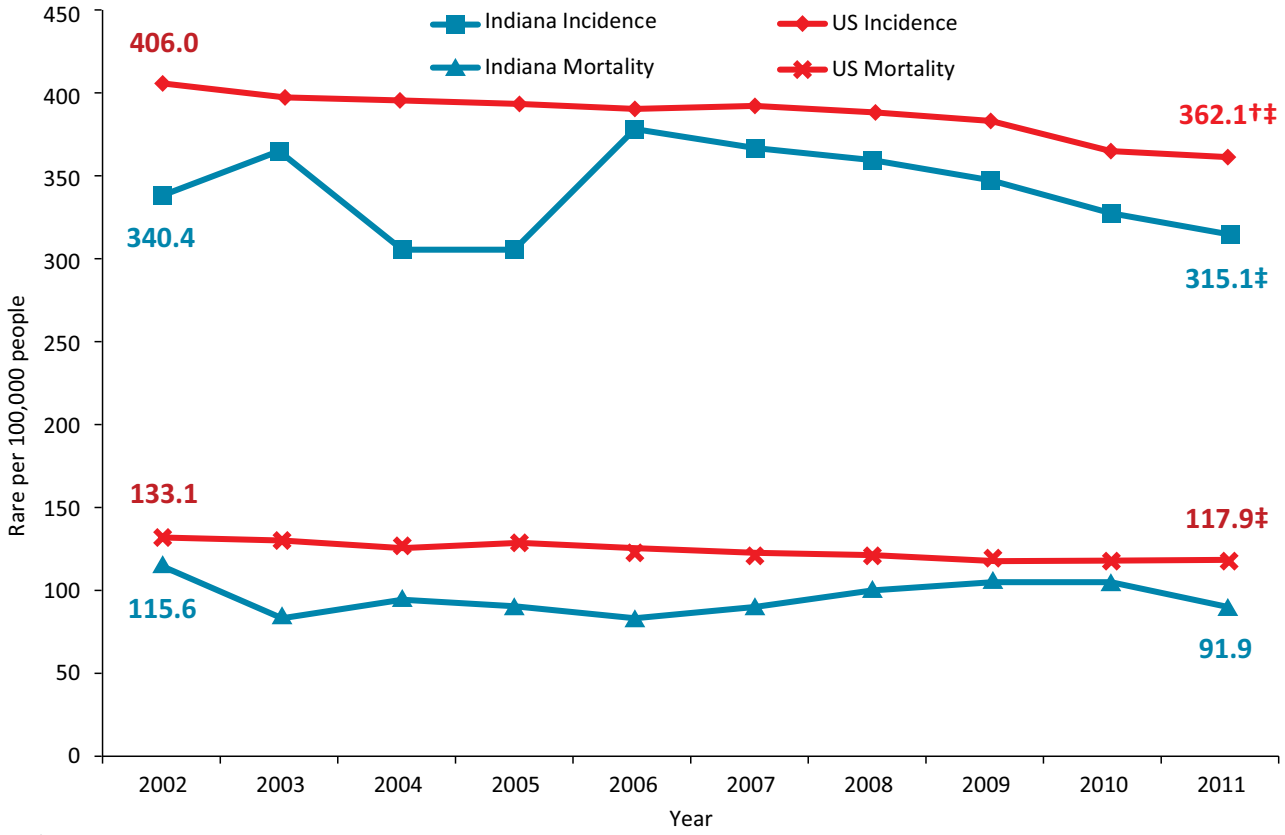
Male	Count	%	Female	Count	%
Prostate	292	23.0%	Breast	391	27.9%
Lung and Bronchus	123	9.7%	Colon and Rectum	133	9.5%
Colon and Rectum	122	9.6%	Thyroid	107	7.6%
Kidney and Renal Pelvis	80	6.3%	Lung and Bronchus	98	7.0%
Non-Hodgkin Lymphoma	63	5.0%	Corpus Uteri	83	5.9%
Urinary Bladder	61	4.8%	Kidney and Renal Pelvis	57	4.1%
Leukemias	55	4.3%	Leukemias	55	3.9%
Liver	46	3.6%	Cervix Uteri	54	3.8%
Stomach	44	3.5%	Ovary	46	3.3%
All Sites	**1,270**		**All Sites**	**1,402**	

Number (%) of Deaths

Male	Count	%	Female	Count	%
Lung and Bronchus	56	18.5%	Breast	42	14.5%
Prostate	36	10.6%	Lung and Bronchus	37	12.8%
Colon and Rectum	33	8.8%	Colon and Rectum	30	10.3%
Pancreas	31	7.3%	Pancreas	26	9.0%
Liver	25	7.3%	Leukemias	22	7.6%
All Sites	**346**		**All Sites**	**290**	

Source: US Cancer Statistics Working Group. US Cancer Statistics: 1999–2011 Incidence and Mortality Web-based Report. Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2011. Accessed at wonder.cdc.gov on November 21, 2014.

Figure 33. Cancer Incidence and Mortality (Death) Rates for Hispanics* — Indiana and US, 2002–2011



** Age-adjusted*

† US rate is significantly higher (P<.05) than the Indiana rate.

‡ Rate is significantly lower than in 2002.

This section uses national and Indiana-specific results reported by the National Program of Cancer Registries, who develops them based on data supplied annually by the ISCR and other state cancer registries.

What Types of Cancer Impact the Hispanic Community the Most?

The cancer burden among Hispanics living in the US is similar to that seen in their countries of origin.[2] Compared to rates in the US, incidence of breast, colorectal, lung, and prostate cancers are lower in Puerto Rico, Cuba, and Central and South America, whereas incidence rates of cervical, liver, and stomach cancers are higher.[3] There is some evidence that descendants of Hispanic migrants have cancer rates that approach those of non-Hispanic whites because of acculturation.[4-6] "Acculturation" refers to the process by which immigrants adopt the attitudes, values, customs, beliefs, and behaviors of their new culture. The effects of acculturation are complex and can be associated with both positive and negative influences on health.[2] Among Hispanic immigrants to the US, these changes might include increases in smoking, obesity, and alcohol intake and decreases in dietary quality and physical activity.[7] One study found that overall cancer death rates among Hispanics were 22 percent higher among those who were US-born compared to those who were foreign-born.[8] Table 16 provides an overview of the leading types of cancer that have impacted Hispanics in Indiana. Overall, cancer was the leading cause of death among Indiana Hispanics from 2008-2012.[9,10] Lung and bronchus cancer was the most common cause of cancer-related death among Hispanic males and breast cancer was the most common among Hispanic females.[10]

What are the Cancer Disparities Relating to Ethnicity?

In Indiana and the US, for all cancers combined, and for the most common cancers (prostate, female breast, colorectal, and lung), incidence and death rates are lower among Hispanics than among non-Hispanic whites.[11] Cancers for which national rates are higher among Hispanics include stomach, cervix, liver, acute lymphocytic leukemia, and gallbladder.[2]

For 2007-2011, the overall cancer incidence rate for Indiana Hispanics was significantly lower than the national rate for Hispanics (342.3 versus 377.7 per 100,000, respectively).[11] The cancer mortality rate among all Indiana residents was 190.1 deaths per 100,000 people, while it was 91 percent lower among Hispanic Indiana residents at 99.7 deaths per 100,000

people.[10] Additional information about the impact of specific cancer types among Hispanics in the US and Indiana is provided below.

- **Prostate Cancer.** During 2007-2011, the prostate cancer incidence rate among Hispanics in the US was about 20 percent lower than the rate among non-Hispanic whites.[2] In Indiana, during 2007–2011, the incidence rate among Hispanics was significantly lower than the national rate (95.1 versus 120.5 cases per 100,000 males, respectively).[11] During that same time period, the mortality rate in Indiana was similar the national rate (17.0 versus 18.5 deaths per 100,000 males, respectively).[10]
- **Breast Cancer.** The US breast cancer incidence rate among Hispanic females was 37 percent lower than that among non-Hispanic white females.[2] It has been estimated that about seven percent of this difference might be explained by more protective reproductive patterns (lower age at first birth and larger number of children) among Hispanic females.[12, 13] It might also reflect less use of menopause hormone replacement therapy and under-diagnosis because of lower utilization of mammography.[14, 15] Recent studies suggest that ethnic variation in genetic factors that influence breast cancer development might also contribute to some of the difference.[16-18] However, Hispanic females are about 20 percent more likely to die of breast cancer than non-Hispanic white females diagnosed at a similar age and stage.[2] Differences in access to care and treatment likely contribute to this disparity.[20] In Indiana, during 2007–2011, the incidence rate for Hispanics was similar to the national rate for Hispanics (84.2 versus 91.8 cases per 100,000 females, respectively). Additionally, during 2007–2011, the mortality rates were statistically similar (10.9 versus 14.5 deaths per 100,000 females, respectively).
- **Colon and Rectum Cancer.** In the US, colorectal cancer incidence rates for Hispanic males and females are ten percent and 21 percent lower, respectively, than those for non-Hispanic whites.[2] However, the rates for Hispanics in the US are higher than those for residents of Puerto Rico and Spanish-speaking countries in South and Central America.[3,19] Colorectal cancer is rare in developing countries but common in affluent countries, where diets tend to be higher in fat, refined carbohydrates, and animal protein, and levels of physical activity are low. In Indiana, during 2007–2011, the incidence rate for Hispanics was similar to the national rate for Hispanics (37.0 versus 37.9 cases per 100,000 people, respectively). Additionally, during 2007–2011, the mortality rates for Indiana were statistically similar to the national rate (10.7 versus 12.4 deaths per 100,000 people, respectively).
- **Lung Cancer.** In the US, the lung cancer rates for Hispanics are about half those for non-Hispanic whites, because of traditionally lower rates of cigarette smoking and because Hispanics who do smoke are less likely to be daily smokers.[2] In Indiana, during 2007–2011, the incidence rate for Hispanics was similar to the national rate for Hispanics (34.1 versus 34.3 cases per 100,000 people, respectively). During 2007–2011, the mortality rate in Indiana was also similar to the national rate (10.7 versus 12.4 deaths per 100,000 people).

What are the Indiana and US Trends in Cancer Rates for Hispanics?

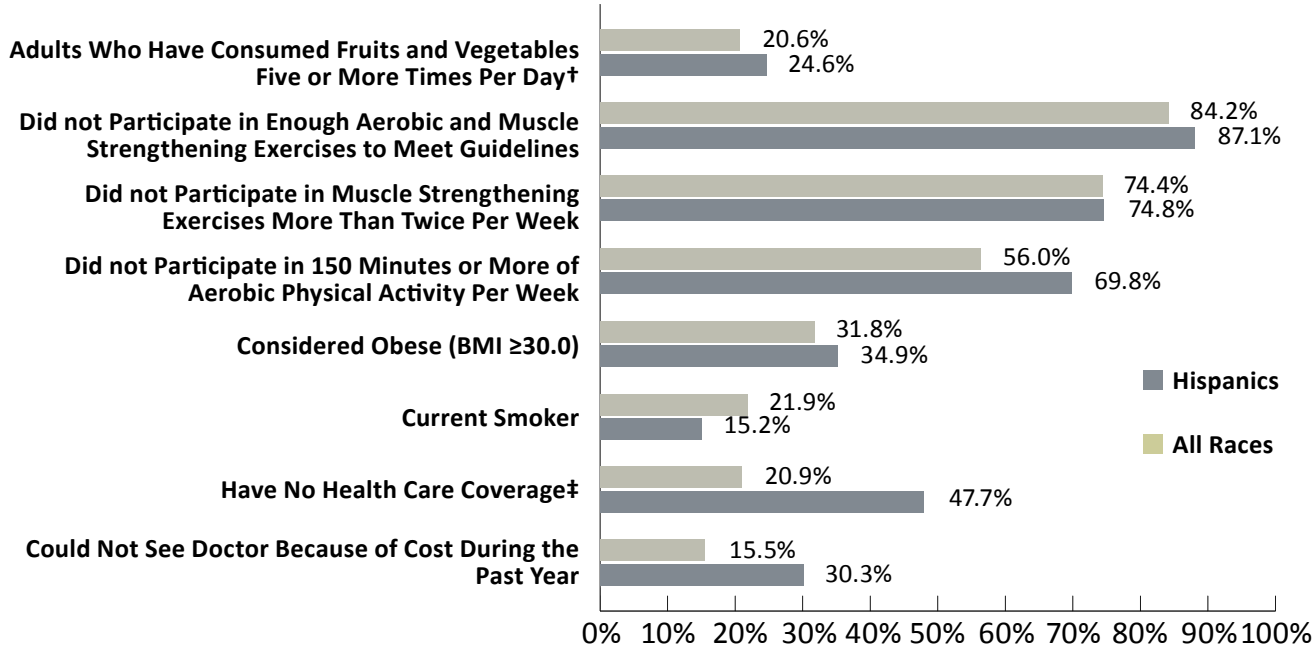
Figure 33 shows how cancer incidence and mortality rates for Hispanics in Indiana and the US have gradually decreased over time. From 2002 to 2011, the incidence rate decreased 33 percent in Indiana and 12.5 percent in the US.[10,11] From 2002 to 2011, the mortality rate decreased 12.3 percent in Indiana and 12.9 percent in the US. There is no clear explanation for why these rates have decreased, although it is important to note that the demographic characteristics of this population changed considerably during those periods.

Can Cancer Be Prevented? *— see the "Take Charge" box for additional information*

Figure 34 describes the burden of some lifestyle and external factors for Hispanic adults in Indiana. Additional information about the impact of cancer risk factors on Hispanics in Indiana include:

- **Body Weight, Diet, and Physical Activity.** Scientific evidence suggests that nationally about one-third of cancer deaths are related to overweight or obesity, physical inactivity, and poor nutrition and thus could be prevented.[20] During 2013, in Indiana, 34.9 percent of Hispanic adults were considered to be obese based on body mass index (BMI).[21] Additionally, in 2013, 68.9 percent of Hispanic adults did not get their recommended 30+ minutes of moderate physical activity five or more days per week (or vigorous physical activity for 20+ minutes three or more days per week). In 2009, about 75 percent of Hispanic adults did not eat the recommended daily servings of fruits and vegetables (*i.e.*, 2 cups of fruit and 2½ cups of vegetables per day).[21]
- **Tobacco.** Cigarette smoking is the major risk factor for lung cancer, accounting for about 87 percent and 70 percent of the cases among males and females, respectively.[22] Hispanics traditionally have a lower smoking rate than other groups. In 2013, 15.2 percent of adult Hispanics reported being current smokers, significantly lower than the rate of 21.9 percent for all Indiana adults.[21] While there was no difference in smoking prevalence between Hispanic males and white, non-Hispanic males (21.5 percent versus 23.5 percent, respectively), Hispanic females were less likely to be current smokers than white, non-Hispanic females (9.1 percent versus 20.7 percent, respectively).
- **Health Care Coverage.** Hispanics are less likely to have health insurance than any other racial or ethnic group,

Figure 34. Preventive Cancer Behaviors and Access to Medical Care for Hispanic Adults* — Indiana, 2013



** Data from 2013*
† Data from 2009
‡ Adults ages 18–64
Note: Adults are ages 18 years and older

Source: Indiana Behavioral Risk Factor Surveillance System

partially because they are much more likely than whites to work in agriculture, construction, domestic and food services, and other low-wage occupations, which are less likely to offer employer-based health insurance benefits.[23] If health coverage is available, it might not be widely affordable. In 2013, in Indiana, Hispanic adults were twice as likely as the total adult prevalence to not see a doctor during the year because of cost (30.3 percent versus 15.5 percent, respectively).[21] In 2013, Indiana Hispanics ages 18–64, were over two times more likely than adults ages 18-64 overall to not have health insurance (47.7 percent versus 20.9 percent, respectively).[21]

Can Cancer Be Detected Early?

Early detection tests can lead to the prevention of cancer through the identification and removal of precancerous lesions. Screening can detect cancer at an earlier stage, which can reduce the extent of treatment, improve the chances of cure, extend life, and thereby improve the quality of life for cancer survivors. The percentage of Hispanic females having a cervical cancer screening (Pap test) within the past three years was similar to the overall female prevalence (71.0 percent versus 73.2 percent, respectively). [21]

What Factors Influence Cancer Survival?

In general, the further a cancer has spread, the less likely that treatment will be effective. Although Hispanics have lower incidence and death rates than non-Hispanic whites for the most common cancers, they are more likely to be diagnosed with a more advanced stage of disease. Overall, the lifetime probability of dying from cancer among Hispanics is 1 in 5 for males and about 1 in 6 for females.[2]

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TAKE CHARGE!

What You Can Do to Help Prevent Cancer and Improve Care for Hispanics

- Maintain a healthy body weight.
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- Eat the recommended daily servings of fruits and vegetables.
- Be smoke-free — Visit www.in.gov/quitline for free smoking cessation assistance.
- Identify a primary health care provider and regularly talk about your cancer screening options.
- Seek treatment early and avoid delaying follow-up care if you are diagnosed with cancer.
- Encourage health care providers to identify ways to be able to clearly communicate health information for people with limited English proficiency in their primary language and to be culturally competent (*i.e.,* respectful and responsive to cultural beliefs that influence the health practices of racial and ethnic minority patients).
- Work to decrease the disparities in socioeconomic factors such as employment, income, and insurance status, which influence health behaviors and outcomes.
- Health care providers are encouraged to ask Hispanic patients about their life, encourage them to ask questions, take seriously the responsibility and respect conferred on the provider, and involve family members.[2]

What is a Survivor?

Due to advances in treatment and earlier screenings, more and more people are living after a cancer diagnosis. The American Cancer Society (ACS) defines a cancer survivor as any person who has been diagnosed with cancer, from the time of diagnosis through the balance of life. Survivorship, like cancer itself, is complex and can be difficult to navigate.

There are three phases of cancer survival — the time from diagnosis to the end of initial treatment, the transition from treatment to extended survival, and long term survival.[1] More often than not, the terms "survivor" and "survivorship" are associated with the transitional period after treatment ends. However, survivorship includes a wide range of cancer experiences and paths[2], including:

- Living cancer-free for the remainder of life;
- Living cancer-free for many years, but experiencing one or more serious, late complications of treatment;
- Living cancer-free for many years, but dying after a late recurrence;
- Living cancer-free after the first cancer is treated, but developing a second cancer;
- Living with intermittent periods of active disease requiring treatment; and
- Living with cancer continuously without a disease-free period.

The preferred path for most cancer patients is to receive treatment and be "cured". This is the primary goal of all cancer treatment when possible. For many cancer patients, the initial course of treatment is successful and the cancer does not return.

Many of survivors must still cope with the mid- and long-term effects of treatment, as well as any psychological effects — such as fear of returning disease.[2] It is important that cancer patients, caregivers, and survivors have the information and support needed to help minimize these effects and improve quality of life and treatment.

Survivorship by the Numbers

An estimated 13.7 million Americans with a history of cancer were alive on January 1, 2012, according to the ACS. This estimate does not include carcinoma in situ (non-invasive cancer) of any site, except urinary bladder, and does not include basal and squamous cell carcinomas. If current estimates continue, by January 1, 2022, the population of cancer survivors will increase to almost 18 million nationwide.

According to the Indiana State Cancer Registry, as of December 31, 2012, there were an estimated 286,973 cancer survivors for all cancers combined [Table 17]. The four highest-burden cancers for the state (lung, breast, colorectal and prostate) account for approximately 56 percent of these survivors [Table 18].

Table 17. Indiana Cancer Survivor Counts*

Cancer Type	Counts
Female Breast	63,051
Cervical	4,190
Colorectal	30,491
Lung	16,812
Melanoma	14,950
Prostate	47,482
All Types	**286,973**

** Survivors (anyone treated for an invasive cancer, and still living) as of December 31, 2012*

Source: Indiana State Cancer Registry

Table 18. Percent of Survivors from Four Highest-Burden Cancers*

Cancer Type	Survivorship (Counts)	Survivorship (Percentage)
Female Breast	63,051	22%
Colorectal	30,491	11%
Lung	16,812	6%
Prostate	47,482	17%

** Survivors (anyone treated for an invasive cancer, and still living) as of December 31, 2012.*

Source: Indiana State Cancer Registry

Female Breast

Breast cancer is the second leading cause of cancer death, and, excluding skin cancers, the most frequently diagnosed cancer among Indiana females, with about 4,400 cases diagnosed each year. Sex and age are the two greatest risk factors for developing breast cancer. Females have a much greater risk of developing breast cancer than do males, and that risk increases with age. *[See the breast cancer section of this report for more information.]*

The overall five-year relative survival rate for female breast cancer patients has improved from 75 percent between 1975 and 1977 to 91 percent during 2004 through 2010.[2] For the most part, this is attributed to improvements in treatment and increased use of mammography screening.[3]

According to the ACS, the five-year relative survival rate varies depending on the cancer stage. When breast cancer is detected early, in the local stage, the five-year survival rate is 99 percent. If the cancer has spread regionally (*e.g.*, to a nearby lymph node), that rate decreases to 84 percent. In instances where the breast cancer has spread to distant lymph nodes or organs (the distant stage), the five-year survival rate decreases to 23 percent. Other factors, such as tumor grade, hormone

receptor status, and increased human epidermal growth factor receptor 2 (HER2) protein made by the cancer cells, can influence survival rates.

A common side effect of breast cancer surgery and radiation therapy is lymphedema of the arm. Lymphedema is a buildup of lymph fluid in the tissue under the skin caused by the removal or damage of the lymph nodes under the arm (called the axillary lymph nodes). It can develop soon after treatment, or even several years later. Lymphedema risk can be reduced when only the first lymph nodes to which cancer is likely spread are removed, rather than removing many lymph nodes to determine whether or not the cancer has spread. For patients with lymphedema, there are a number of effective therapies that can be used. Some evidence also suggests that upper-body exercise and physical therapy may reduce the severity and risk of developing this condition.[4]

Other long-term local effects of surgery or radiation treatment include numbness or tightness and pulling or stretching in the chest wall, arms or shoulders. In addition, women diagnosed and treated for breast cancer at a younger age may experience impaired fertility and premature menopause, and are at increased risk of osteoporosis. Aromatase inhibitor treatment can cause muscle pain, joint stiffness and/or pain, and sometimes osteoporosis.

Colorectal Cancer

Colorectal cancer is the third most commonly diagnosed cancer and cause of cancer-related death among both males and females in Indiana. In 2014, the ACS estimated that 3,020 Indiana adults would be diagnosed with colorectal cancer, and 1,090 would die because of the disease. The lifetime risk of developing colorectal cancer is about five percent for both males and females in the United States. Sex and age are the two greatest risk factors. In addition, the *The Health Consequences of Smoking — 50 Years of Progress: A Report of the Surgeon General* indicates that smoking causes colorectal cancer and increases the failure rate of treatment for all cancers. In Indiana, African Americans have higher colorectal cancer incidence and mortality rates than whites, and males have higher rates than females. *[See the colorectal cancer section of this report for more information.]*

The ACS reports that the one- and five-year survival rates for colorectal cancer are 83 percent and 65 percent, respectively. The ten-year survival rate decreases to 58 percent. When colorectal cancer is detected early (in the local stage), the five-year survival rate is 90 percent.[2] When the cancer has spread regionally, the five-year survival rate decreases to 70 percent. The five-year survival rate decreases to only 13 percent when colorectal cancer spreads distantly.

While most long-term survivors report a high quality of life, some are troubled by bowel dysfunction and other health-related issues. For those with a permanent colostomy (a surgical procedure that brings one end of the large intestine out through the abdominal wall), some issues such as problems around intimacy and sexuality, embarrassment, social inhibition, and body-image disturbances may occur.

According to the ACS, as many as 40 percent of patients treated for localized colorectal cancer, and colorectal cancer that has spread to nearby organs, are also at increased risk of second primary cancers of the colon and rectum.

Lung Cancer

Lung cancer is not a single disease; rather, it is a group of cancers that originate in the lung and associated tissues. Lung cancer is the leading cause of preventable and premature cancer deaths in Indiana, killing an estimated 4,000 Indiana residents every year. Smoking accounts for 87 percent of lung cancer deaths and at least 30 percent of all cancer deaths. However, in Indiana, about 22 percent of adults continue to smoke tobacco, placing them at great risk for developing lung and other types of cancer.[5] *[See the lung cancer section of this report for more information.]*

The ACS reports that the one-year relative survival rate for all lung cancers combined increased from 37 percent during 1975-1979 to 45 percent during 2006-2009, largely due to improvements in surgical techniques and combined therapies. The five-year survival rate is highest (54 percent) if the lung cancer is diagnosed when it is confined entirely within the lung (localized). The overall five-year survival rate for small cell lung cancer is six percent, which is lower than that for non-small cell lung cancer (18 percent).

Lung cancer survivors often have impaired lung function, especially if surgery is part of treatment. Respiratory therapy and medications can improve the ability to resume to normal daily activities and improve fitness. Lung cancer survivors who continue to smoke should be encouraged to quit. Survivors of smoking-related cancers are at an increased risk for additional smoking-related cancers, especially in the head, neck and urinary tract. Some survivors may feel stigmatized because of the connection between smoking and lung cancer. This is especially difficult for lung cancer survivors who never smoked.

Prostate Cancer

Prostate cancer is an uncontrolled growth and spread of cells in the prostate, an exocrine gland in the male reproductive system. Excluding all types of skin cancer, prostate cancer is the most commonly diagnosed cancer and the second leading cause of cancer death among Indiana males. There were approximately 2,844 new cases of prostate cancer diagnosed in Indiana during 2012, and there were 606 deaths due to prostate cancer during that same year. The ACS estimates that there were nearly three million males with a history of prostate

cancer living in the US as of January 1, 2014. Older males, African American males, and males with a family history of prostate cancer have a higher risk of being diagnosed. *[See the prostate cancer section of this report for more information.]*

The five-year survival rate of prostate cancer is almost 100 percent when discovered in the local or regional stages. The ACS reports that the five-year survival rate for all stages combined has increased over the past 25 years from 68 percent to almost 100 percent. According to the most recent data, the 10- and 15-year survival rates are 99 percent and 94 percent, respectively.

Many prostate cancer survivors who have been treated with surgery or radiation therapy experience side effects from treatment. These include incontinence, erectile dysfunction and bowel complications. Patients who received hormonal treatment may experience symptoms similar to menopause in women such as loss of libido, hot flashes, night sweats, irritability, and osteoporosis. In the long term, hormone therapy also increases risk of diabetes, cardiovascular disease, and obesity.[6]

Resources

The National Cancer Survivorship Resource Center is a collaboration between the ACS and the George Washington Cancer Institute, funded by the CDC. Its goal is to shape the future of post-treatment cancer survivorship care, and to improve the quality of life for cancer survivors. Staff and more than 100 volunteer survivorship experts nationwide developed tools for cancer survivors, caregivers, health care professionals, and policy and advocacy efforts. For more information, visit www.cancer.org/survivorshipcenter.

The National Coalition for Cancer Survivorship offers free publications and resources that empower people to become strong advocates for their own care or the care of others. The coalition's Cancer Survival Toolbox is a self-learning audio series developed by leading cancer organizations to help people develop crucial skills to understand and meet the challenges of their illness. For more information, visit www.canceradvocacy.org.

The Patient Advocate Foundation is a national nonprofit organization that seeks to safeguard patients through effective mediation assuring access to care, maintenance of employment, and preservation of financial stability. The foundation serves as an active liaison between patients and their insurer, employer and/or creditors to resolve insurance, job retention and debt crisis matters relative to their diagnosis through professional cancer managers, doctors and health care attorneys. For more information, visit www.patientadvocate.org.

Visit the Indiana Cancer Consortium website at IndianaCancer.org to learn more about local resources in your area.

REFERENCES

1 Mullan F. Seasons of survival: reflections of a physician with cancer. *New England Journal of Medicine* 1985; 313(4):270-3.

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3 Berry DA, Cronin KA, Plevritis SK, et al. Effect of screening and adjuvant therapy on mortality from breast cancer. *New England Journal of Medicine* 2005; 353(17): 1784-92.

4 Schmitz KH, Ahmed RL, Troxel AB, et al. Weight lifting for women at risk for breast cancer-related lymphedema: a randomized trial. Journal of the American Medical Association 2010; 304(24): 2699-705.

5 2013 Indiana Behavioral Risk Factor Surveillance System.

6 Kintzel PE, Chase SL, Schultz LM, O'Rourke TJ. Increased risk of metabolic syndrome, diabetes mellitus, and cardiovascular disease in men receiving androgen deprivation therapy for prostate cancer. *Pharmacotherapy* 2008; 28(12): 1511-22.

Recommended Cancer Screening Guidelines

Cancer Type	Risk Factors	Early Detection	Signs and Symptoms
Breast	Sex and age are the two greatest risk factors for developing breast cancer. Females have a much greater risk of developing breast cancer, and that risk increases with age. Factors associated with increased breast cancer risk include weight gain after the age of 18, being overweight or obese, use of menopausal hormone therapy, physical inactivity, and alcohol consumption. Research also indicates that long-term, heavy smoking increases breast cancer risk, particularly among females who start smoking before their first pregnancy. Additional risk factors may include: having one or more first degree relatives who have been diagnosed with breast cancer; having a family member who carries the breast cancer susceptibility genes (BRCA) 1 or 2; being African-American; having a long menstrual history (menstrual periods that start early and/or end later in life); have recently used oral contraceptives or Depo-Provera; have never had children, or had the first child after the age of 30; and certain medical findings such as high breast tissue density, high bone mineral density, Type 2 diabetes, certain benign breast conditions, and lobular carcinoma in situ. In addition, high dose radiation to the chest for cancer treatment increases risk. Factors associated with a decreased risk of breast cancer include breastfeeding, regular moderate or vigorous physical activity, and maintaining a healthy body weight.	Women should have frequent conversations with their health care provider about risks for breast cancer and how often they should be screened. In general, women should follow these recommendations: breast self-awareness (women in their 20s should be aware of the look and feel of their breasts); clinical breast exams (women in their 20s and 30s should have regular exams by a physician); screening mammograms.	The most common symptom of breast cancer is a new lump or mass. It's important to have anything new or unusual checked by a doctor. Other symptoms of breast cancer may include: hard knots, or thickening; swelling, warmth, redness, or darkening; change in size or shape; dimpling or puckering of the skin; itchy, scaly sore, or rash on the nipple; pulling in of the nipple or other parts of the breast; nipple discharge that starts suddenly; or new pain in one spot that doesn't go away. Although these symptoms can be caused by things other than breast cancer, it is important to have them checked out by your doctor.
Cervical	Infection with HPV is the single greatest risk factor for cervical cancer.	Average-risk women, ages 21 to 65 years, should receive a routine Pap test every three years. For women ages 30 and over, who want to extend the time periods between tests, a Pap smear combined with HPV co-testing can be done every five years.	Early stage cervical cancer often has no symptoms. The most common symptom is irregular vaginal bleeding (bleeding that starts and stops between periods, or after intercourse). Bleeding after menopause or increased vaginal discharge may also be symptoms
Colon and Rectum (Colorectal)	Indiana residents may have an increased risk if they are age 50 or over; male; African-American; have a personal history of cigarette smoking; have a personal or family history of colorectal cancer, inflammatory bowel disease, or certain inherited genetic conditions; have diabetes; are obese; are physically inactive; eat a diet high in red or processed meat and/or low in whole-grain fiber, fruits and vegetables; and have heavy alcohol consumption.	Beginning at age 50, both men and women with average risk for colorectal cancer should follow one of these schedules: 1) Tests that find polyps and cancer, such as a colonoscopy every ten years or a flexible sigmoidoscopy, double-contrast barium enema, or computed tomography colonography every five years. Or, 2) Tests that primarily find cancer such as yearly fecal occult blood test (FOBT) or fecal immunochemical test (FIT).	Early stage colorectal cancer typically has no symptoms. Later stage colorectal cancer symptoms include rectal bleeding, blood in stool, change in bowel habits, cramping pain in lower abdomen, decreased appetite or weight loss, weakness, and extreme fatigue.

Prevention	United States Preventive Services Task Force (USPSTF) Screening Guidelines	American Cancer Society Screening Guidelines
Individuals can take charge of their health by knowing their risk and talking to their doctor about personal and family history; getting screened regularly; avoiding tobacco use; maintaining a healthy weight; getting the recommended levels of moderate or vigorous physical activity; limiting alcohol consumption; limiting postmenopausal hormone use; and breastfeeding.	The USPSTF recommends biennial mammography for women ages 50-74. In addition, women should talk to their doctors about whether or not earlier screenings are needed.	The ACS recommends breast self-examination for women beginning in their 20s (women should be informed of the benefits and limitations of self-exams); clinical breast exams for women in their 20s and 30s, preferably every three years; and begin screening mammograms yearly at age 40.
Individuals can help prevent cervical cancer by getting the HPV vaccination, practicing safe sex, avoiding tobacco, getting routine screenings, getting HPV and Pap co-testing (women over the age of 30); and watch for abnormal vaginal discharge or bleeding.	The USPSTF recommends screening for cervical cancer in women age 21 to 65 years with cytology (Pap smear) every 3 years or, for women age 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and HPV testing every five years.	The ACS recommends Pap test screening for women ages 21-29. For women ages 30-65, screening should be done every five years with both the HPV test and the Pap test, or every three years with the Pap test alone.
Individuals can take charge of their health by getting regular, routine screenings, maintaining a healthy weight, adopting a physically active lifestyle, avoiding tobacco products, limiting alcohol consumption, and consuming a healthy diet that emphasizes plant sources, supports a healthy weight, includes at least two and a half cups of a variety of vegetables and fruits each day, includes whole grains and limits processed and red meats.	The USPSTF recommends colorectal cancer screening for adults aged 50-75 using high-sensitivity FOBT once a year, flexible sigmoidoscopy every five years (when done in combination with a high-sensitivity FOBT, the FOBT should be done every three years), or colonoscopy every 10 years. Colonoscopy is also used as a follow-up test if anything unusual is found during one of the other screening tests.	The ACS recommends screening for men and women beginning at age 50 using a FOBT or FIT every year, a stool DNA test every three years, a double-contrast barium enema every five years, a colonoscopy every ten years, or a CT colonography every five years.

Recommended Cancer Screening Guidelines

Cancer Type	Risk Factors	Early Detection	Signs and Symptoms
Lung	Smoking is the greatest risk factor for lung cancer. In addition, individuals at increased risk include those exposed to second-hand smoke; those exposed to other cancer-causing agents (such as asbestos, radon, arsenic, talc, vinyl chloride, coal products, and radioactive ores); males; and African-Americans.	Findings from the National Cancer Institute's National Lung Screening Trial established screening with the use of low-dose computed tomography in specific high-risk groups has been shown to be effective in reducing mortality.	Lung cancer symptoms do not usually occur until the cancer is advanced. Common signs and symptoms of lung cancer include a persistent cough, sputum streaked with blood, chest pain, voice changes, and recurrent pneumonia or bronchitis.
Melanoma/Skin Cancer	People of all ages, races and ethnicities are subject to developing skin cancer. Indiana residents may have increased risk if they are ages 50 or older; male; white; have fair to light skinned complexions; have natural blond or red hair; have blue or green eyes; have a large number of moles (more than 50); have a family history of melanoma; have excessive exposure to UV radiation from the sun or tanning beds; have a history of sunburn at an early age; have a weakened immune system or are being treated with immune-suppressing medicines; have a past history of basal or squamous cell skin cancers; and have an occupational exposure to coal tar, pitch, creosote, arsenic compounds, radium or some pesticides.	Indiana residents should be aware of any changes in skin growths or the appearance of new growths. Adult should thoroughly examine their skin regularly, preferably once a month. New or unusual lesions or a progressive change in a lesion's appearance (size, shape, or color for example) should be evaluated promptly by a health care provider.	A simple ABCDE rule outlines some warning signs of melanoma: A for Asymmetry (one half of the mole or lesion does not match the other half); B for Border (border irregularity, edges that are ragged, notched or blurred); C for Color (the pigmentation is not uniform, with variable degrees of tan, brown or black); D for Diameter (if the diameter is greater than 6 millimeters - or the size of a pencil eraser); and E for Evolution (moles that change in shape, size or color).
Prostate	Indiana residents may have an increased risk for prostate cancer if they are; over the age of 50; African American; or if they have a first-degree relative (a father, brother or son) with a history of prostate cancer.	Not all experts agree that screening for prostate cancer will save lives. The controversy focuses on the cost of screening, the age groups to be screened, and the potential for serious side effects associated with treatment after diagnosis. Not all forms of prostate cancer need treatment.	In the early stage, prostate cancer may not cause symptoms. It is important to know that some men have no symptoms at all. Other symptoms can include difficulty starting urination; weak or interrupted flow of urine; frequent urination (especially at night); inability to empty the bladder completely; pain or burning during urination; blood in the urine or semen; painful ejaculation; trouble having an erection; pain in the back, hips, or pelvis that doesn't go away.

Prevention	United States Preventive Services Task Force (USPSTF) Screening Guidelines	American Cancer Society Screening Guidelines
Individuals can help prevent lung cancer by being tobacco free and avoiding exposure to second-hand smoke.	The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.	The ACS recommends LDCT for current smokers, or former smokers (who have quit within the past 15 years), ages 55-74 with at least a 30 pack-per-year history.
Individuals can take charge of their health by limiting or avoiding exposure to the sun during peak hours (10 a.m. to 4 p.m.); wearing sunscreen with a SPF of 30 or higher that protects from both UVA and UVB rays; wearing clothing that has built-in SPF in the fabric, or wearing protective clothing such as long sleeves and long pants; wearing a hat that protects your scalp and shades your face, neck and ears; avoiding use of tanning beds and sun lamps; wearing sunglasses to protect your eyes; and always protecting skin. In addition, any new or unusual lesions or a progressive change in a lesion's appearance should be evaluated by a physician.	The USPSTF recommends counseling children, adolescents, and young adults aged 10 to 24 years who have fair skin about minimizing their exposure to ultraviolet radiation to reduce risk for skin cancer.	
Individuals can help prevent prostate cancer by eating a healthy diet with at least five servings of fruits and vegetables each day; limiting their intake of red and processed meats; avoiding excessive consumption of dairy products; include lycopene and vitamin E in the diet; and meet recommended levels of physical activity.	The USPSTF recommends against prostate-specific antigen (PSA)-based screening for prostate cancer.	Beginning at age 50, men who have at least a 10-year life expectancy should have an opportunity to make an informed decision with their health care provider about whether to be screened for prostate cancer, after receiving information about the potential benefits, limitations, and uncertainties associated with prostate cancer screening. Men at high risk should have this discussion with their health care provider beginning at age 45.

The Impact of Cancer in Indiana

twitter.com/IN_Cancer
facebook.com/IndianaCancer

Average Cases Per Year

(2008-2012)

About 2 in 5 people now living in Indiana will eventually develop cancer. Nationally, men have almost a 1 in 2 chance of developing cancer during their lifetime; women's lifetime risk of developing cancer is slightly more than 1 in 3.

The Indiana Cancer Facts and Figures 2015 provides the most up-to-date cancer information available and identifies current cancer trends and their potential impact on Indiana residents. Download a free copy at IndianaCancer.org.

32,620 Hoosiers were diagnosed with cancer each year

16,203 of those Hoosiers were male

16,417 of those Hoosiers were female

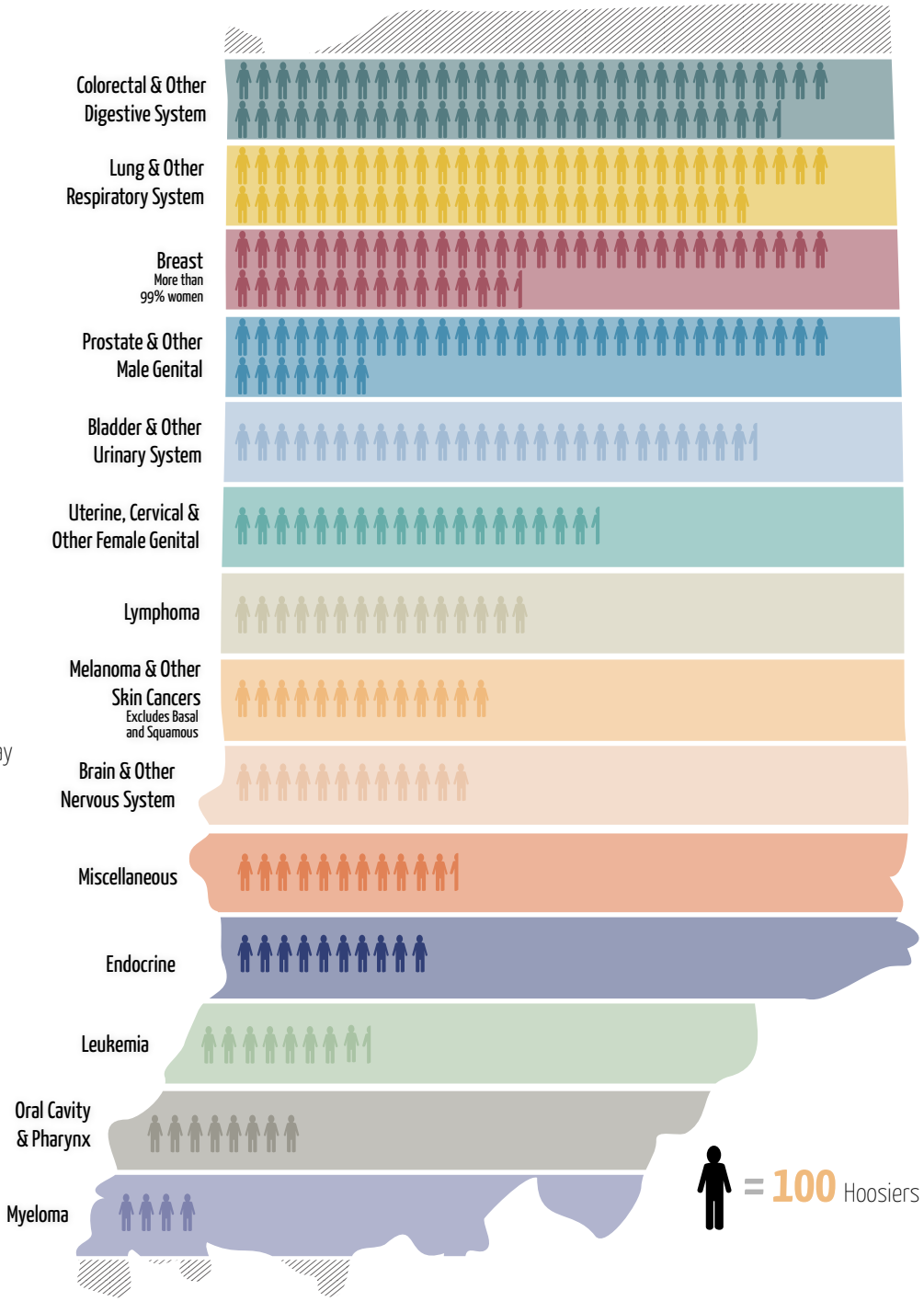
Meaning approximately...

89 Hoosiers were diagnosed with cancer every day

Estimated economic impact* ...

$1.92 billion is estimated to be spent in 2015 on direct costs of treating cancer in Indiana

$2.76 billion is the estimated amount of money Hoosiers will spend on direct costs for cancer care in 2023 if current trends continue



Data from: 2008-2012 Indiana State Cancer Registry (accessed April 6, 2015) and *The Milken Institute

IndianaCancer.org

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Twitter.com/IN_Cancer

Interactive Atlas of Heart Disease and Stroke Tables

Geographic Area

Select geographic area for report.

- (•) State report with county data. Select state: Indiana
- ( ) U.S. report with state data.
- ( ) U.S. report with county data.

Report Data

Select a tab to view different reports.

Health Indicators | Risk Factors | Social and Economic Data | Health Care Delivery and Insurance | Health Care Costs

Health Indicators

Diagnosis Categories:

Total Cardiovascular Disease

Health Indicator:

Hospitalizations

Year:	Race/Ethnicity:	Gender:	Age:	Spatial Smoothing:
2014-2016	All Races/Ethnicities	Both Genders	65+	Smoothed

Show Results

Summary Statistics | County Statistics

Indiana County Statistics

Total Cardiovascular Disease Hospitalization Rate per 1,000 Medicare Beneficiaries, 65+, All Races/Ethnicities, Both Genders, 2014-2016

County	State	Value	Category Range
Adams (javascript:cdcAtlasWeb.launchDetailedReport('18001');)	IN	98.7	98.7 - 146.2 (19)

County	State	Value	Category Range
Fulton (javascript:cdcAtlasWeb.launchDetailedReport('18049');)	IN	103.7	98.7 - 146.2 (19)
Lawrence (javascript:cdcAtlasWeb.launchDetailedReport('18093');)	IN	105.6	98.7 - 146.2 (19)
Decatur (javascript:cdcAtlasWeb.launchDetailedReport('18031');)	IN	110.9	98.7 - 146.2 (19)
LaGrange (javascript:cdcAtlasWeb.launchDetailedReport('18087');)	IN	120.2	98.7 - 146.2 (19)
Miami (javascript:cdcAtlasWeb.launchDetailedReport('18103');)	IN	123.8	98.7 - 146.2 (19)
Monroe (javascript:cdcAtlasWeb.launchDetailedReport('18105');)	IN	123.9	98.7 - 146.2 (19)
Rush (javascript:cdcAtlasWeb.launchDetailedReport('18139');)	IN	124.3	98.7 - 146.2 (19)
Pulaski (javascript:cdcAtlasWeb.launchDetailedReport('18131');)	IN	126.0	98.7 - 146.2 (19)
White (javascript:cdcAtlasWeb.launchDetailedReport('18181');)	IN	127.7	98.7 - 146.2 (19)
Steuben (javascript:cdcAtlasWeb.launchDetailedReport('18151');)	IN	129.1	98.7 - 146.2 (19)
Ripley (javascript:cdcAtlasWeb.launchDetailedReport('18137');)	IN	130.1	98.7 - 146.2 (19)
Tipton (javascript:cdcAtlasWeb.launchDetailedReport('18159');)	IN	131.9	98.7 - 146.2 (19)
Franklin (javascript:cdcAtlasWeb.launchDetailedReport('18047');)	IN	137.3	98.7 - 146.2 (19)

County	State	Value	Category Range
Greene (javascript:cdcAtlasWeb.launchDetailedReport('18055');)	IN	141.6	98.7 - 146.2 (19)
Putnam (javascript:cdcAtlasWeb.launchDetailedReport('18133');)	IN	142.4	98.7 - 146.2 (19)
Wabash (javascript:cdcAtlasWeb.launchDetailedReport('18169');)	IN	142.6	98.7 - 146.2 (19)
Warren (javascript:cdcAtlasWeb.launchDetailedReport('18171');)	IN	143.3	98.7 - 146.2 (19)
Brown (javascript:cdcAtlasWeb.launchDetailedReport('18013');)	IN	146.2	98.7 - 146.2 (19)
Orange (javascript:cdcAtlasWeb.launchDetailedReport('18117');)	IN	148.0	146.3 - 173.7 (18)
Perry (javascript:cdcAtlasWeb.launchDetailedReport('18123');)	IN	148.0	146.3 - 173.7 (18)
Jay (javascript:cdcAtlasWeb.launchDetailedReport('18075');)	IN	148.0	146.3 - 173.7 (18)
Owen (javascript:cdcAtlasWeb.launchDetailedReport('18119');)	IN	150.3	146.3 - 173.7 (18)
Hamilton (javascript:cdcAtlasWeb.launchDetailedReport('18057');)	IN	151.8	146.3 - 173.7 (18)
Clinton (javascript:cdcAtlasWeb.launchDetailedReport('18023');)	IN	154.0	146.3 - 173.7 (18)
Jennings (javascript:cdcAtlasWeb.launchDetailedReport('18079');)	IN	154.4	146.3 - 173.7 (18)
Marshall (javascript:cdcAtlasWeb.launchDetailedReport('18099');)	IN	158.2	146.3 - 173.7 (18)

County	State	Value	Category Range
Vermillion (javascript:cdcAtlasWeb.launchDetailedReport('18165');)	IN	159.3	146.3 - 173.7 (18)
Dubois (javascript:cdcAtlasWeb.launchDetailedReport('18037');)	IN	160.4	146.3 - 173.7 (18)
Fountain (javascript:cdcAtlasWeb.launchDetailedReport('18045');)	IN	161.9	146.3 - 173.7 (18)
Parke (javascript:cdcAtlasWeb.launchDetailedReport('18121');)	IN	162.8	146.3 - 173.7 (18)
Randolph (javascript:cdcAtlasWeb.launchDetailedReport('18135');)	IN	164.6	146.3 - 173.7 (18)
Elkhart (javascript:cdcAtlasWeb.launchDetailedReport('18039');)	IN	166.5	146.3 - 173.7 (18)
Jackson (javascript:cdcAtlasWeb.launchDetailedReport('18071');)	IN	168.2	146.3 - 173.7 (18)
Scott (javascript:cdcAtlasWeb.launchDetailedReport('18143');)	IN	172.1	146.3 - 173.7 (18)
Hancock (javascript:cdcAtlasWeb.launchDetailedReport('18059');)	IN	173.2	146.3 - 173.7 (18)
Hendricks (javascript:cdcAtlasWeb.launchDetailedReport('18063');)	IN	173.7	146.3 - 173.7 (18)
Carroll (javascript:cdcAtlasWeb.launchDetailedReport('18015');)	IN	174.0	173.8 - 189.7 (19)
Tippecanoe (javascript:cdcAtlasWeb.launchDetailedReport('18157');)	IN	174.5	173.8 - 189.7 (19)
Jasper (javascript:cdcAtlasWeb.launchDetailedReport('18073');)	IN	174.8	173.8 - 189.7 (19)

County	State	Value	Category Range
Sullivan (javascript:cdcAtlasWeb.launchDetailedReport('18153');)	IN	175.1	173.8 - 189.7 (19)
Benton (javascript:cdcAtlasWeb.launchDetailedReport('18007');)	IN	175.4	173.8 - 189.7 (19)
Cass (javascript:cdcAtlasWeb.launchDetailedReport('18017');)	IN	175.5	173.8 - 189.7 (19)
Harrison (javascript:cdcAtlasWeb.launchDetailedReport('18061');)	IN	175.5	173.8 - 189.7 (19)
Johnson (javascript:cdcAtlasWeb.launchDetailedReport('18081');)	IN	175.7	173.8 - 189.7 (19)
Newton (javascript:cdcAtlasWeb.launchDetailedReport('18111');)	IN	176.4	173.8 - 189.7 (19)
Crawford (javascript:cdcAtlasWeb.launchDetailedReport('18025');)	IN	178.2	173.8 - 189.7 (19)
St. Joseph (javascript:cdcAtlasWeb.launchDetailedReport('18141');)	IN	178.7	173.8 - 189.7 (19)
Boone (javascript:cdcAtlasWeb.launchDetailedReport('18011');)	IN	180.1	173.8 - 189.7 (19)
Morgan (javascript:cdcAtlasWeb.launchDetailedReport('18109');)	IN	180.6	173.8 - 189.7 (19)
Whitley (javascript:cdcAtlasWeb.launchDetailedReport('18183');)	IN	180.6	173.8 - 189.7 (19)
Wells (javascript:cdcAtlasWeb.launchDetailedReport('18179');)	IN	181.7	173.8 - 189.7 (19)
Blackford (javascript:cdcAtlasWeb.launchDetailedReport('18009');)	IN	184.7	173.8 - 189.7 (19)

County	State	Value	Category Range
Washington (javascript:cdcAtlasWeb.launchDetailedReport('18175');)	IN	186.1	173.8 - 189.7 (19)
Clay (javascript:cdcAtlasWeb.launchDetailedReport('18021');)	IN	186.9	173.8 - 189.7 (19)
Martin (javascript:cdcAtlasWeb.launchDetailedReport('18101');)	IN	189.7	173.8 - 189.7 (19)
Huntington (javascript:cdcAtlasWeb.launchDetailedReport('18069');)	IN	190.1	189.8 - 209.6 (18)
Howard (javascript:cdcAtlasWeb.launchDetailedReport('18067');)	IN	190.5	189.8 - 209.6 (18)
Bartholomew (javascript:cdcAtlasWeb.launchDetailedReport('18005');)	IN	191.8	189.8 - 209.6 (18)
Spencer (javascript:cdcAtlasWeb.launchDetailedReport('18147');)	IN	191.8	189.8 - 209.6 (18)
Montgomery (javascript:cdcAtlasWeb.launchDetailedReport('18107');)	IN	192.3	189.8 - 209.6 (18)
Kosciusko (javascript:cdcAtlasWeb.launchDetailedReport('18085');)	IN	192.3	189.8 - 209.6 (18)
LaPorte (javascript:cdcAtlasWeb.launchDetailedReport('18091');)	IN	195.2	189.8 - 209.6 (18)
Allen (javascript:cdcAtlasWeb.launchDetailedReport('18003');)	IN	196.0	189.8 - 209.6 (18)
Noble (javascript:cdcAtlasWeb.launchDetailedReport('18113');)	IN	196.1	189.8 - 209.6 (18)
Starke (javascript:cdcAtlasWeb.launchDetailedReport('18149');)	IN	197.8	189.8 - 209.6 (18)

County	State	Value	Category Range
Madison (javascript:cdcAtlasWeb.launchDetailedReport('18095');)	IN	198.4	189.8 - 209.6 (18)
Marion (javascript:cdcAtlasWeb.launchDetailedReport('18097');)	IN	199.4	189.8 - 209.6 (18)
Gibson (javascript:cdcAtlasWeb.launchDetailedReport('18051');)	IN	199.5	189.8 - 209.6 (18)
DeKalb (javascript:cdcAtlasWeb.launchDetailedReport('18033');)	IN	203.7	189.8 - 209.6 (18)
Union (javascript:cdcAtlasWeb.launchDetailedReport('18161');)	IN	207.2	189.8 - 209.6 (18)
Fayette (javascript:cdcAtlasWeb.launchDetailedReport('18041');)	IN	207.3	189.8 - 209.6 (18)
Delaware (javascript:cdcAtlasWeb.launchDetailedReport('18035');)	IN	208.5	189.8 - 209.6 (18)
Jefferson (javascript:cdcAtlasWeb.launchDetailedReport('18077');)	IN	209.6	189.8 - 209.6 (18)
Henry (javascript:cdcAtlasWeb.launchDetailedReport('18065');)	IN	212.8	209.7 - 273.8 (18)
Grant (javascript:cdcAtlasWeb.launchDetailedReport('18053');)	IN	213.9	209.7 - 273.8 (18)
Wayne (javascript:cdcAtlasWeb.launchDetailedReport('18177');)	IN	216.4	209.7 - 273.8 (18)
Floyd (javascript:cdcAtlasWeb.launchDetailedReport('18043');)	IN	218.3	209.7 - 273.8 (18)
Pike (javascript:cdcAtlasWeb.launchDetailedReport('18125');)	IN	219.1	209.7 - 273.8 (18)

County	State	Value	Category Range
Shelby (javascript:cdcAtlasWeb.launchDetailedReport('18145');)	IN	219.9	209.7 - 273.8 (18)
Dearborn (javascript:cdcAtlasWeb.launchDetailedReport('18029');)	IN	223.4	209.7 - 273.8 (18)
Warrick (javascript:cdcAtlasWeb.launchDetailedReport('18173');)	IN	225.8	209.7 - 273.8 (18)
Switzerland (javascript:cdcAtlasWeb.launchDetailedReport('18155');)	IN	230.5	209.7 - 273.8 (18)
Porter (javascript:cdcAtlasWeb.launchDetailedReport('18127');)	IN	233.6	209.7 - 273.8 (18)
Vanderburgh (javascript:cdcAtlasWeb.launchDetailedReport('18163');)	IN	235.1	209.7 - 273.8 (18)
Vigo (javascript:cdcAtlasWeb.launchDetailedReport('18167');)	IN	236.0	209.7 - 273.8 (18)
Daviess (javascript:cdcAtlasWeb.launchDetailedReport('18027');)	IN	237.7	209.7 - 273.8 (18)
Clark (javascript:cdcAtlasWeb.launchDetailedReport('18019');)	IN	244.1	209.7 - 273.8 (18)
Posey (javascript:cdcAtlasWeb.launchDetailedReport('18129');)	IN	247.7	209.7 - 273.8 (18)
Ohio (javascript:cdcAtlasWeb.launchDetailedReport('18115');)	IN	253.8	209.7 - 273.8 (18)
Knox (javascript:cdcAtlasWeb.launchDetailedReport('18083');)	IN	256.1	209.7 - 273.8 (18)
Lake (javascript:cdcAtlasWeb.launchDetailedReport('18089');)	IN	273.8	209.7 - 273.8 (18)

Interactive Atlas of Heart Disease and Stroke Tables

Geographic Area

Select geographic area for report.

- (•) State report with county data. Select state: Indiana
- ( ) U.S. report with state data.
- ( ) U.S. report with county data.

Report Data

Select a tab to view different reports.

Health Indicators | Risk Factors | Social and Economic Data | Health Care Delivery and Insurance | Health Care Costs

Health Indicators

Diagnosis Categories:

Total Cardiovascular Disease

Health Indicator:

Hospitalizations

Year:	Race/Ethnicity:	Gender:	Age:	Spatial Smoothing:
2014-2016	All Races/Ethnicities	Both Genders	65+	Smoothed

Show Results

Summary Statistics | County Statistics

Indiana County Statistics

Total Cardiovascular Disease Hospitalization Rate per 1,000 Medicare Beneficiaries, 65+, All Races/Ethnicities, Both Genders, 2014-2016

County	State	Value	Category Range
Adams (javascript:cdcAtlasWeb.launchDetailedReport('18001');)	IN	98.7	98.7 - 146.2 (19)

County	State	Value	Category Range
Fulton (javascript:cdcAtlasWeb.launchDetailedReport('18049');)	IN	103.7	98.7 - 146.2 (19)
Lawrence (javascript:cdcAtlasWeb.launchDetailedReport('18093');)	IN	105.6	98.7 - 146.2 (19)
Decatur (javascript:cdcAtlasWeb.launchDetailedReport('18031');)	IN	110.9	98.7 - 146.2 (19)
LaGrange (javascript:cdcAtlasWeb.launchDetailedReport('18087');)	IN	120.2	98.7 - 146.2 (19)
Miami (javascript:cdcAtlasWeb.launchDetailedReport('18103');)	IN	123.8	98.7 - 146.2 (19)
Monroe (javascript:cdcAtlasWeb.launchDetailedReport('18105');)	IN	123.9	98.7 - 146.2 (19)
Rush (javascript:cdcAtlasWeb.launchDetailedReport('18139');)	IN	124.3	98.7 - 146.2 (19)
Pulaski (javascript:cdcAtlasWeb.launchDetailedReport('18131');)	IN	126.0	98.7 - 146.2 (19)
White (javascript:cdcAtlasWeb.launchDetailedReport('18181');)	IN	127.7	98.7 - 146.2 (19)
Steuben (javascript:cdcAtlasWeb.launchDetailedReport('18151');)	IN	129.1	98.7 - 146.2 (19)
Ripley (javascript:cdcAtlasWeb.launchDetailedReport('18137');)	IN	130.1	98.7 - 146.2 (19)
Tipton (javascript:cdcAtlasWeb.launchDetailedReport('18159');)	IN	131.9	98.7 - 146.2 (19)
Franklin (javascript:cdcAtlasWeb.launchDetailedReport('18047');)	IN	137.3	98.7 - 146.2 (19)

County	State	Value	Category Range
Greene (javascript:cdcAtlasWeb.launchDetailedReport('18055');)	IN	141.6	98.7 - 146.2 (19)
Putnam (javascript:cdcAtlasWeb.launchDetailedReport('18133');)	IN	142.4	98.7 - 146.2 (19)
Wabash (javascript:cdcAtlasWeb.launchDetailedReport('18169');)	IN	142.6	98.7 - 146.2 (19)
Warren (javascript:cdcAtlasWeb.launchDetailedReport('18171');)	IN	143.3	98.7 - 146.2 (19)
Brown (javascript:cdcAtlasWeb.launchDetailedReport('18013');)	IN	146.2	98.7 - 146.2 (19)
Orange (javascript:cdcAtlasWeb.launchDetailedReport('18117');)	IN	148.0	146.3 - 173.7 (18)
Perry (javascript:cdcAtlasWeb.launchDetailedReport('18123');)	IN	148.0	146.3 - 173.7 (18)
Jay (javascript:cdcAtlasWeb.launchDetailedReport('18075');)	IN	148.0	146.3 - 173.7 (18)
Owen (javascript:cdcAtlasWeb.launchDetailedReport('18119');)	IN	150.3	146.3 - 173.7 (18)
Hamilton (javascript:cdcAtlasWeb.launchDetailedReport('18057');)	IN	151.8	146.3 - 173.7 (18)
Clinton (javascript:cdcAtlasWeb.launchDetailedReport('18023');)	IN	154.0	146.3 - 173.7 (18)
Jennings (javascript:cdcAtlasWeb.launchDetailedReport('18079');)	IN	154.4	146.3 - 173.7 (18)
Marshall (javascript:cdcAtlasWeb.launchDetailedReport('18099');)	IN	158.2	146.3 - 173.7 (18)

County	State	Value	Category Range
Vermillion (javascript:cdcAtlasWeb.launchDetailedReport('18165');)	IN	159.3	146.3 - 173.7 (18)
Dubois (javascript:cdcAtlasWeb.launchDetailedReport('18037');)	IN	160.4	146.3 - 173.7 (18)
Fountain (javascript:cdcAtlasWeb.launchDetailedReport('18045');)	IN	161.9	146.3 - 173.7 (18)
Parke (javascript:cdcAtlasWeb.launchDetailedReport('18121');)	IN	162.8	146.3 - 173.7 (18)
Randolph (javascript:cdcAtlasWeb.launchDetailedReport('18135');)	IN	164.6	146.3 - 173.7 (18)
Elkhart (javascript:cdcAtlasWeb.launchDetailedReport('18039');)	IN	166.5	146.3 - 173.7 (18)
Jackson (javascript:cdcAtlasWeb.launchDetailedReport('18071');)	IN	168.2	146.3 - 173.7 (18)
Scott (javascript:cdcAtlasWeb.launchDetailedReport('18143');)	IN	172.1	146.3 - 173.7 (18)
Hancock (javascript:cdcAtlasWeb.launchDetailedReport('18059');)	IN	173.2	146.3 - 173.7 (18)
Hendricks (javascript:cdcAtlasWeb.launchDetailedReport('18063');)	IN	173.7	146.3 - 173.7 (18)
Carroll (javascript:cdcAtlasWeb.launchDetailedReport('18015');)	IN	174.0	173.8 - 189.7 (19)
Tippecanoe (javascript:cdcAtlasWeb.launchDetailedReport('18157');)	IN	174.5	173.8 - 189.7 (19)
Jasper (javascript:cdcAtlasWeb.launchDetailedReport('18073');)	IN	174.8	173.8 - 189.7 (19)

County	State	Value	Category Range
Sullivan (javascript:cdcAtlasWeb.launchDetailedReport('18153');)	IN	175.1	173.8 - 189.7 (19)
Benton (javascript:cdcAtlasWeb.launchDetailedReport('18007');)	IN	175.4	173.8 - 189.7 (19)
Cass (javascript:cdcAtlasWeb.launchDetailedReport('18017');)	IN	175.5	173.8 - 189.7 (19)
Harrison (javascript:cdcAtlasWeb.launchDetailedReport('18061');)	IN	175.5	173.8 - 189.7 (19)
Johnson (javascript:cdcAtlasWeb.launchDetailedReport('18081');)	IN	175.7	173.8 - 189.7 (19)
Newton (javascript:cdcAtlasWeb.launchDetailedReport('18111');)	IN	176.4	173.8 - 189.7 (19)
Crawford (javascript:cdcAtlasWeb.launchDetailedReport('18025');)	IN	178.2	173.8 - 189.7 (19)
St. Joseph (javascript:cdcAtlasWeb.launchDetailedReport('18141');)	IN	178.7	173.8 - 189.7 (19)
Boone (javascript:cdcAtlasWeb.launchDetailedReport('18011');)	IN	180.1	173.8 - 189.7 (19)
Morgan (javascript:cdcAtlasWeb.launchDetailedReport('18109');)	IN	180.6	173.8 - 189.7 (19)
Whitley (javascript:cdcAtlasWeb.launchDetailedReport('18183');)	IN	180.6	173.8 - 189.7 (19)
Wells (javascript:cdcAtlasWeb.launchDetailedReport('18179');)	IN	181.7	173.8 - 189.7 (19)
Blackford (javascript:cdcAtlasWeb.launchDetailedReport('18009');)	IN	184.7	173.8 - 189.7 (19)

County	State	Value	Category Range
Washington (javascript:cdcAtlasWeb.launchDetailedReport('18175');)	IN	186.1	173.8 - 189.7 (19)
Clay (javascript:cdcAtlasWeb.launchDetailedReport('18021');)	IN	186.9	173.8 - 189.7 (19)
Martin (javascript:cdcAtlasWeb.launchDetailedReport('18101');)	IN	189.7	173.8 - 189.7 (19)
Huntington (javascript:cdcAtlasWeb.launchDetailedReport('18069');)	IN	190.1	189.8 - 209.6 (18)
Howard (javascript:cdcAtlasWeb.launchDetailedReport('18067');)	IN	190.5	189.8 - 209.6 (18)
Bartholomew (javascript:cdcAtlasWeb.launchDetailedReport('18005');)	IN	191.8	189.8 - 209.6 (18)
Spencer (javascript:cdcAtlasWeb.launchDetailedReport('18147');)	IN	191.8	189.8 - 209.6 (18)
Montgomery (javascript:cdcAtlasWeb.launchDetailedReport('18107');)	IN	192.3	189.8 - 209.6 (18)
Kosciusko (javascript:cdcAtlasWeb.launchDetailedReport('18085');)	IN	192.3	189.8 - 209.6 (18)
LaPorte (javascript:cdcAtlasWeb.launchDetailedReport('18091');)	IN	195.2	189.8 - 209.6 (18)
Allen (javascript:cdcAtlasWeb.launchDetailedReport('18003');)	IN	196.0	189.8 - 209.6 (18)
Noble (javascript:cdcAtlasWeb.launchDetailedReport('18113');)	IN	196.1	189.8 - 209.6 (18)
Starke (javascript:cdcAtlasWeb.launchDetailedReport('18149');)	IN	197.8	189.8 - 209.6 (18)

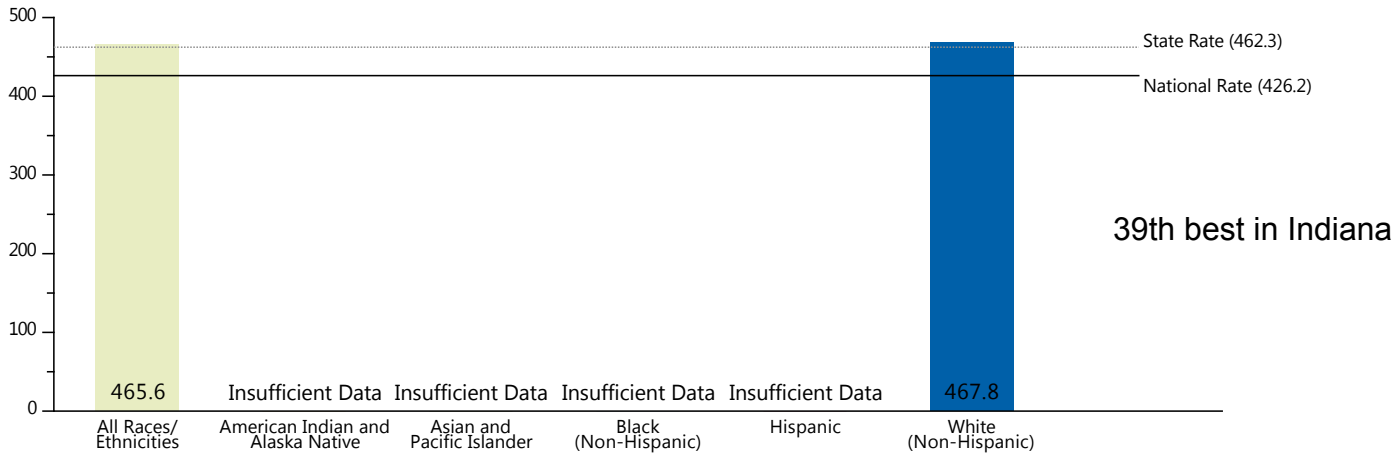
County	State	Value	Category Range
Madison (javascript:cdcAtlasWeb.launchDetailedReport('18095');)	IN	198.4	189.8 - 209.6 (18)
Marion (javascript:cdcAtlasWeb.launchDetailedReport('18097');)	IN	199.4	189.8 - 209.6 (18)
Gibson (javascript:cdcAtlasWeb.launchDetailedReport('18051');)	IN	199.5	189.8 - 209.6 (18)
DeKalb (javascript:cdcAtlasWeb.launchDetailedReport('18033');)	IN	203.7	189.8 - 209.6 (18)
Union (javascript:cdcAtlasWeb.launchDetailedReport('18161');)	IN	207.2	189.8 - 209.6 (18)
Fayette (javascript:cdcAtlasWeb.launchDetailedReport('18041');)	IN	207.3	189.8 - 209.6 (18)
Delaware (javascript:cdcAtlasWeb.launchDetailedReport('18035');)	IN	208.5	189.8 - 209.6 (18)
Jefferson (javascript:cdcAtlasWeb.launchDetailedReport('18077');)	IN	209.6	189.8 - 209.6 (18)
Henry (javascript:cdcAtlasWeb.launchDetailedReport('18065');)	IN	212.8	209.7 - 273.8 (18)
Grant (javascript:cdcAtlasWeb.launchDetailedReport('18053');)	IN	213.9	209.7 - 273.8 (18)
Wayne (javascript:cdcAtlasWeb.launchDetailedReport('18177');)	IN	216.4	209.7 - 273.8 (18)
Floyd (javascript:cdcAtlasWeb.launchDetailedReport('18043');)	IN	218.3	209.7 - 273.8 (18)
Pike (javascript:cdcAtlasWeb.launchDetailedReport('18125');)	IN	219.1	209.7 - 273.8 (18)

County	State	Value	Category Range
Shelby (javascript:cdcAtlasWeb.launchDetailedReport('18145');)	IN	219.9	209.7 - 273.8 (18)
Dearborn (javascript:cdcAtlasWeb.launchDetailedReport('18029');)	IN	223.4	209.7 - 273.8 (18)
Warrick (javascript:cdcAtlasWeb.launchDetailedReport('18173');)	IN	225.8	209.7 - 273.8 (18)
Switzerland (javascript:cdcAtlasWeb.launchDetailedReport('18155');)	IN	230.5	209.7 - 273.8 (18)
Porter (javascript:cdcAtlasWeb.launchDetailedReport('18127');)	IN	233.6	209.7 - 273.8 (18)
Vanderburgh (javascript:cdcAtlasWeb.launchDetailedReport('18163');)	IN	235.1	209.7 - 273.8 (18)
Vigo (javascript:cdcAtlasWeb.launchDetailedReport('18167');)	IN	236.0	209.7 - 273.8 (18)
Daviess (javascript:cdcAtlasWeb.launchDetailedReport('18027');)	IN	237.7	209.7 - 273.8 (18)
Clark (javascript:cdcAtlasWeb.launchDetailedReport('18019');)	IN	244.1	209.7 - 273.8 (18)
Posey (javascript:cdcAtlasWeb.launchDetailedReport('18129');)	IN	247.7	209.7 - 273.8 (18)
Ohio (javascript:cdcAtlasWeb.launchDetailedReport('18115');)	IN	253.8	209.7 - 273.8 (18)
Knox (javascript:cdcAtlasWeb.launchDetailedReport('18083');)	IN	256.1	209.7 - 273.8 (18)
Lake (javascript:cdcAtlasWeb.launchDetailedReport('18089');)	IN	273.8	209.7 - 273.8 (18)

County Profile for Perry, IN

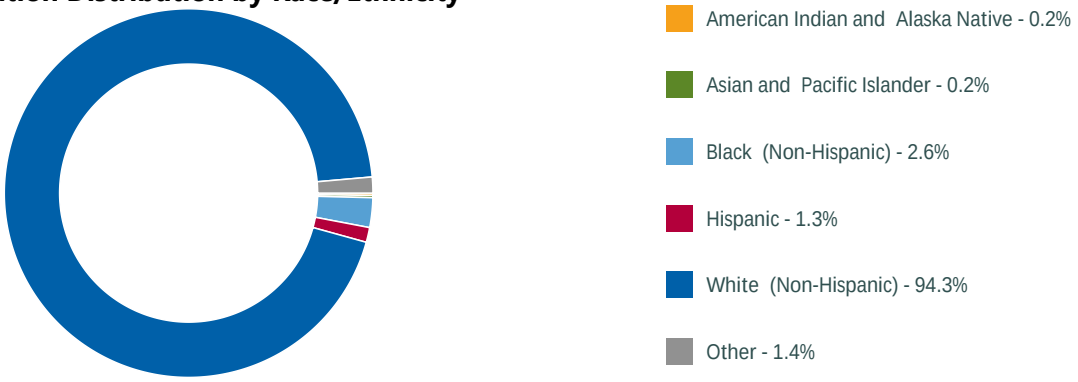
CDC Interactive Atlas of Heart Disease and Stroke

Total Cardiovascular Disease Death Rate per 100,000, 35+, All Races/Ethnicities, Both Genders, 2014-2016



Demographic, Social, and Economic Data

Population Distribution by Race/Ethnicity



Social and Economic Data	Value
Education - Less than High School (%)	12.1
Poverty (%)	14.9
Health Insurance Status (%)	8.4
Median Household Income ($)	48.9
Total Population	19229

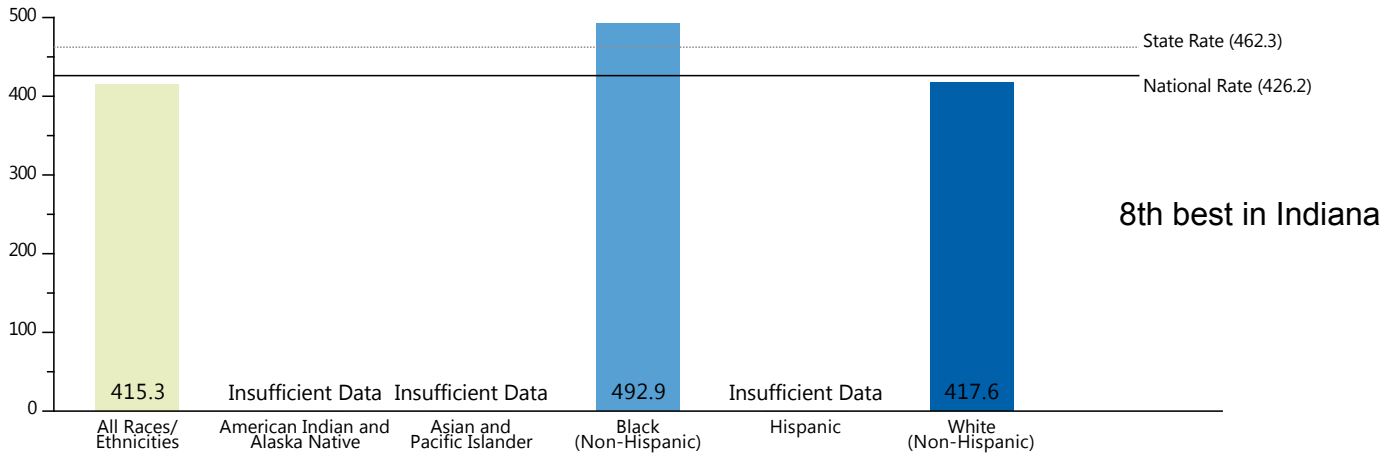
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Source: Interactive Atlas of Heart Disease and Stroke
www.cdc.gov/dhdsp/maps/atlas

County Profile for Spencer, IN

CDC Interactive Atlas of Heart Disease and Stroke

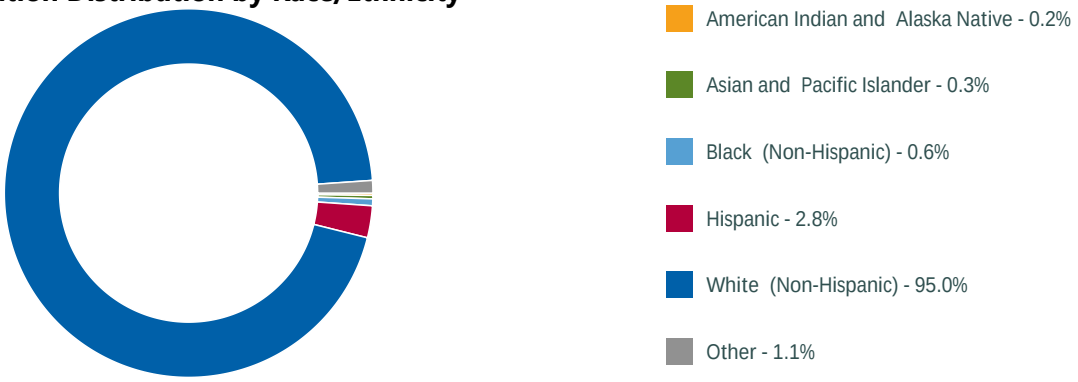
Total Cardiovascular Disease Death Rate per 100,000, 35+, All Races/Ethnicities, Both Genders, 2014-2016



8th best in Indiana

Demographic, Social, and Economic Data

Population Distribution by Race/Ethnicity

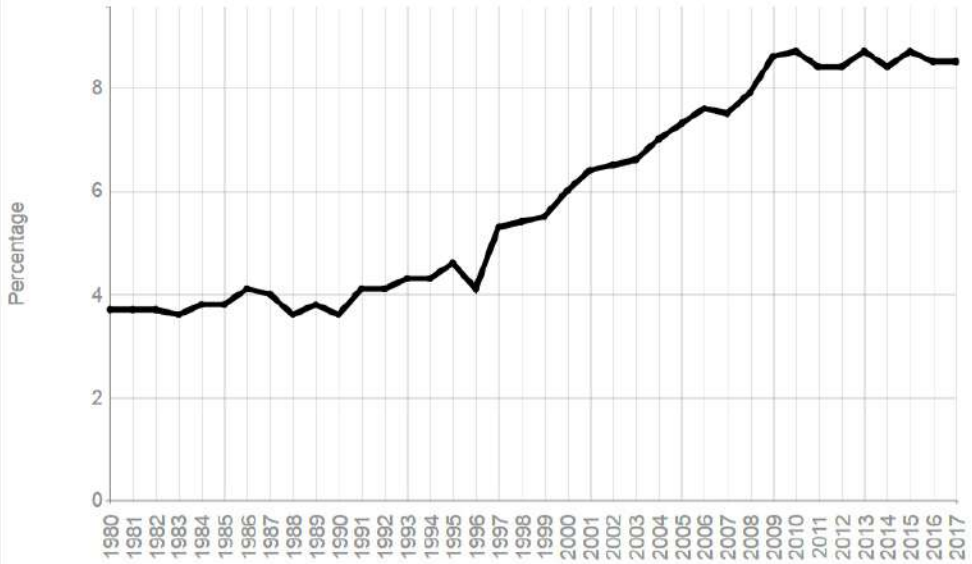


Social and Economic Data	Value
Education - Less than High School (%)	10.2
Poverty (%)	9.1
Health Insurance Status (%)	8.3
Median Household Income ($)	58.2
Total Population	20610

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Source: Interactive Atlas of Heart Disease and Stroke
www.cdc.gov/dhdsp/maps/atlas

Diagnosed Diabetes,
Total, Adults Aged 18+ Years, Age-Adjusted Percentage, National



Horizontal dotted line indicates "No Data", "Suppressed Data" or both.

Diagnosed Diabetes,
Total, Adults Aged 18+ Years, Age-Adjusted Percentage, National

Year	Total		
	Percentage	LL	UL
2010	8.7	8.3	9.1
2011	8.4	8.1	8.7
2012	8.4	8.1	8.8
2013	8.7	8.4	9.0
2014	8.4	8.0	8.7
2015	8.7	8.3	9.1
2016	8.5	8.2	8.9
2017	8.5	8.1	8.9

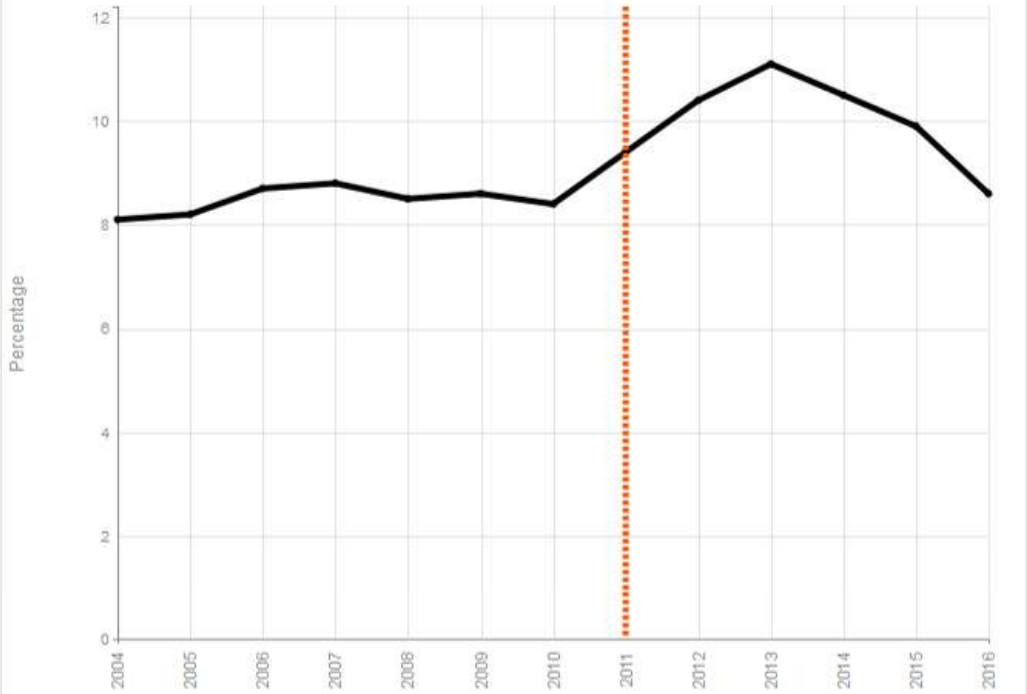
Showing 31 to 38 of 38 entries Previous 1 2 3 4 Next

* indicates 'No Data', ** indicates 'Suppressed Data', LL - Lower Limit, UL - Upper Limit

Diagnosed Diabetes,
Total, Adults with Diabetes, Age-Adjusted Percentage, Indiana

Year	Total		
	Percentage	LL	UL
2004	7.6	6.9	8.3
2005	8.1	7.4	8.8
2006	7.9	7.2	8.6
2007	8.1	7.4	8.9
2008	9.2	8.2	10.3
2009	8.9	8.3	9.5
2010	9.3	8.6	10.1
2011	9.6	8.9	10.3
2012	10.1	9.4	10.8
2013	10.0	9.4	10.6

Diagnosed Diabetes,
Total, Adults Aged 20+ Years, Age-Adjusted Percentage, Perry County, Indiana



Vertical orange dotted line indicates major changes to the survey methods in 2011
Horizontal dotted line indicates "No Data", "Suppressed Data" or both.

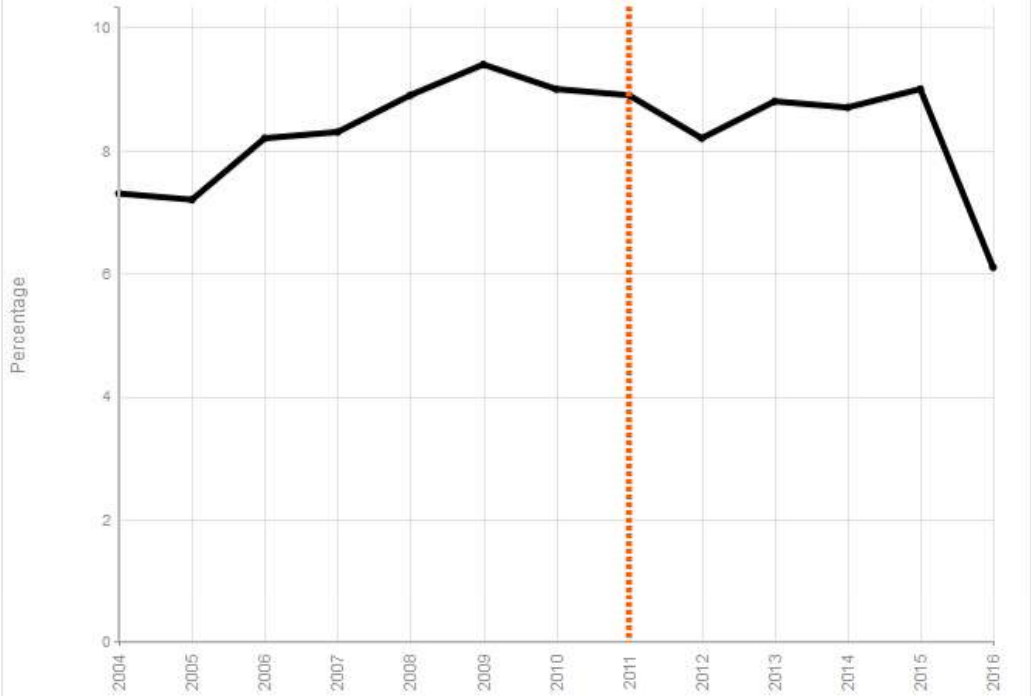
Diagnosed Diabetes,
Total, Adults Aged 20+ Years, Age-Adjusted Percentage, Perry County, Indiana

Year	Total		
	Percentage	LL	UL
2014	10.5	8.1	13.5
2015	9.9	7.4	13.1
2016	8.6	4.8	14.8

Showing 11 to 13 of 13 entries Previous 1 2 Next

* indicates 'No Data', ** indicates 'Suppressed Data', LL - Lower Limit, UL - Upper Limit

Diagnosed Diabetes,
Total, Adults Aged 20+ Years, Age-Adjusted Percentage, Spencer County, Indiana



Vertical orange dotted line indicates major changes to the survey methods in 2011
Horizontal dotted line indicates "No Data", "Suppressed Data" or both.

Diagnosed Diabetes,
Total, Adults Aged 20+ Years, Age-Adjusted Percentage, Spencer County, Indiana

Year	Total		
	Percentage	LL	UL
2014	8.7	6.6	11.5
2015	9.0	6.5	12.1
2016	6.1	3.1	10.4

Showing 11 to 13 of 13 entries Previous 1 2 Next

* indicates 'No Data', ** indicates 'Suppressed Data', LL - Lower Limit, UL - Upper Limit

Data Brief 329. Drug Overdose Deaths in the United States, 1999–2017

Data table for Figure 1. Age-adjusted drug overdose death rates: United States, 1999–2017

	Total		Male		Female	
Year	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	16,849	6.1	11,258	8.2	5,591	3.9
2000	17,415	6.2	11,563	8.3	5,852	4.1
2001	19,394	6.8	12,658	9.0	6,736	4.6
2002	23,518	8.2	15,028	10.6	8,490	5.8
2003	25,785	8.9	16,399	11.5	9,386	6.4
2004	27,424	9.4	17,120	11.8	10,304	6.9
2005	29,813	10.1	18,724	12.8	11,089	7.3
2006	34,425	11.5	21,893	14.8	12,532	8.2
2007	36,010	11.9	22,298	14.9	13,712	8.8
2008	36,450	11.9	22,468	14.9	13,982	8.9
2009	37,004	11.9	22,593	14.8	14,411	9.1
2010	38,329	12.3	23,006	15.0	15,323	9.6
2011	41,340	13.2	24,988	16.1	16,352	10.2
2012	41,502	13.1	25,112	16.1	16,390	10.2
2013	43,982	13.8	26,799	17.0	17,183	10.6
2014	47,055	14.7	28,812	18.3	18,243	11.1
2015	52,404	16.3	32,957	20.8	19,447	11.8
2016	63,632	19.8	41,558	26.2	22,074	13.4
2017	70,237	21.7	46,552	29.1	23,685	14.4

NOTES: Deaths are classified using the *International Classification of Diseases, 10th Revision*. Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Data Brief 329. Drug Overdose Deaths in the United States, 1999–2017

Data table for Figure 2. Drug overdose death rates, by selected age group: United States, 1999–2017

	15–24		25–34		35–44		45–54		55–64		65 and over	
Year	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	1,240	3.2	3,236	8.1	6,295	14.0	4,067	11.1	991	4.2	930	2.7
2000	1,435	3.7	3,169	7.9	6,469	14.3	4,389	11.6	1,013	4.2	854	2.4
2001	1,700	4.2	3,410	8.6	6,968	15.5	5,115	13.0	1,185	4.7	910	2.6
2002	2,095	5.1	4,125	10.5	8,064	18.1	6,466	16.2	1,601	6.0	1,060	3.0
2003	2,491	6.0	4,488	11.4	8,358	18.9	7,325	17.9	1,943	6.9	1,070	3.0
2004	2,751	6.6	4,680	11.9	8,439	19.3	8,040	19.3	2,283	7.8	1,104	3.0
2005	2,918	6.9	5,340	13.6	8,506	19.6	8,968	21.1	2,761	9.0	1,203	3.3
2006	3,460	8.1	6,346	16.1	9,373	21.7	10,421	24.1	3,355	10.5	1,321	3.6
2007	3,550	8.2	6,663	16.8	9,152	21.4	11,012	25.1	4,043	12.2	1,435	3.8
2008	3,487	8.0	6,739	16.8	8,885	21.1	11,222	25.2	4,396	12.9	1,587	4.1
2009	3,377	7.7	7,013	17.2	8,524	20.5	11,390	25.4	4,858	13.7	1,721	4.3
2010	3,571	8.2	7,572	18.4	8,546	20.8	11,299	25.1	5,486	15.0	1,722	4.3
2011	3,762	8.6	8,445	20.2	9,130	22.5	11,933	26.7	6,060	15.9	1,892	4.6
2012	3,518	8.0	8,508	20.1	8,948	22.1	11,895	26.9	6,423	16.6	2,094	4.9
2013	3,664	8.3	8,947	20.9	9,320	23.0	12,045	27.5	7,551	19.2	2,344	5.2
2014	3,798	8.6	10,055	23.1	10,134	25.0	12,263	28.2	8,122	20.3	2,568	5.6
2015	4,235	9.7	11,880	26.9	11,505	28.3	12,974	30.0	8,901	21.8	2,760	5.8
2016	5,376	12.4	15,443	34.6	14,183	35.0	14,771	34.5	10,632	25.6	3,075	6.2
2017	5,455	12.6	17,400	38.4	15,949	39.0	15,996	37.7	11,747	28.0	3,529	6.9

NOTES: Deaths are classified using the *International Classification of Diseases, 10th Revision*. Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Data Brief 329. Drug Overdose Deaths in the United States, 1999–2017

Data table for Figure 3. Age-adjusted drug overdose death rates, by state: United States, 2017

State	Number	Deaths per 100,000
Alabama	835	18.0
Alaska	147	20.2
Arizona	1,532	22.2
Arkansas	446	15.5
California	4,868	11.7
Colorado	1,015	17.6
Connecticut	1,072	30.9
Delaware	338	37.0
District of Columbia	310	44.0
Florida	5,088	25.1
Georgia	1,537	14.7
Hawaii	203	13.8
Idaho	236	14.4
Illinois	2,778	21.6
Indiana	1,852	29.4
Iowa	341	11.5
Kansas	333	11.8
Kentucky	1,566	37.2
Louisiana	1,108	24.5
Maine	424	34.4
Maryland	2,247	36.3
Massachusetts	2,168	31.8
Michigan	2,694	27.8
Minnesota	733	13.3
Mississippi	354	12.2
Missouri	1,367	23.4
Montana	119	11.7
Nebraska	152	8.1
Nevada	676	21.6
New Hampshire	467	37.0
New Jersey	2,685	30.0
New Mexico	493	24.8
New York	3,921	19.4
North Carolina	2,414	24.1
North Dakota	68	9.2
Ohio	5,111	46.3
Oklahoma	775	20.1
Oregon	530	12.4
Pennsylvania	5,388	44.3
Rhode Island	320	31.0
South Carolina	1,008	20.5
South Dakota	73	8.5
Tennessee	1,776	26.6
Texas	2,989	10.5
Utah	650	22.3
Vermont	134	23.2
Virginia	1,507	17.9
Washington	1,169	15.2
West Virginia	974	57.8
Wisconsin	1,177	21.2
Wyoming	69	12.2

NOTES: Deaths are classified using the *International Classification of Diseases, 10th Revision*. Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. The age-adjusted drug overdose death rate in the United States in 2017 was 21.7 per 100,000 standard population.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Data Brief 329. Drug Overdose Deaths in the United States, 1999–2017

Data table for Figure 4. Age-adjusted drug overdose death rates, by opioid category: United States, 1999–2017

Year	Any opioid		Heroin		Natural and semisynthetic opioids		Methadone		Synthetic opioids other than methadone	
	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	8,050	2.9	1,960	0.7	2,749	1.0	784	0.3	730	0.3
2000	8,407	3.0	1,842	0.7	2,917	1.0	986	0.4	782	0.3
2001	9,496	3.3	1,779	0.6	3,479	1.2	1,456	0.5	957	0.3
2002	11,920	4.1	2,089	0.7	4,416	1.5	2,358	0.8	1,295	0.4
2003	12,940	4.5	2,080	0.7	4,867	1.7	2,972	1.0	1,400	0.5
2004	13,756	4.7	1,878	0.6	5,231	1.8	3,845	1.3	1,664	0.6
2005	14,918	5.1	2,009	0.7	5,774	1.9	4,460	1.5	1,742	0.6
2006	17,545	5.9	2,088	0.7	7,017	2.3	5,406	1.8	2,707	0.9
2007	18,516	6.1	2,399	0.8	8,158	2.7	5,518	1.8	2,213	0.7
2008	19,582	6.4	3,041	1.0	9,119	3.0	4,924	1.6	2,306	0.8
2009	20,422	6.6	3,278	1.1	9,735	3.1	4,696	1.5	2,946	1.0
2010	21,089	6.8	3,036	1.0	10,943	3.5	4,577	1.5	3,007	1.0
2011	22,784	7.3	4,397	1.4	11,693	3.7	4,418	1.4	2,666	0.8
2012	23,166	7.4	5,925	1.9	11,140	3.5	3,932	1.2	2,628	0.8
2013	25,052	7.9	8,257	2.7	11,346	3.5	3,591	1.1	3,105	1.0
2014	28,647	9.0	10,574	3.4	12,159	3.8	3,400	1.1	5,544	1.8
2015	33,091	10.4	12,989	4.1	12,727	3.9	3,301	1.0	9,580	3.1
2016	42,249	13.3	15,469	4.9	14,487	4.4	3,373	1.0	19,413	6.2
2017	47,600	14.9	15,482	4.9	14,495	4.4	3,194	1.0	28,466	9.0

NOTES: Deaths are classified using the *International Classification of Diseases, 10th Revision*. Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Among deaths with drug poisoning as the underlying cause, the following multiple cause-of-death codes indicate the drug type(s) involved: any opioid, T40.0–T40.4 and T40.6; heroin, T40.1; natural and semisynthetic opioids, T40.2; methadone, T40.3; and synthetic opioids other than methadone, T40.4. Deaths involving more than one opioid category (e.g., a death involving both methadone and a natural and semisynthetic opioid such as oxycodone) are counted in both categories. Natural and semisynthetic opioids include drugs such as morphine, oxycodone, and hydrocodone; and synthetic opioids other than methadone include such drugs as fentanyl, fentanyl analogs, and tramadol. The percentage of drug overdose deaths for which at least one specific drug was identified as being involved varied by year, ranging from 75%–79% from 1999 through 2013 and from 81%–88% from 2014 through 2017.

SOURCE: NCHS, National Vital Statistics System, Mortality.

ADDITIONAL MEASURES - DRUG OVERDOSE DEATHS

Indiana Summary Information

Range in Indiana(Min-Max):	5-70
Overall in Indiana:	23

Years ofData Used:	2015-2017

An Alcohol and Drug Use measure

Drug overdose deaths

Number of drug poisoning deaths per 100,000 population.

The 2019 County Health Rankings used data from 2015-2017 for this measure.

Place	# Drug Overdose Deaths	Drug Overdose Mortality Rate
Adams	12	11
Allen	229	21
Bartholomew	56	23
Benton		
Blackford	18	49
Boone	43	22
Brown	11	24
Carroll		
Cass	12	11
Clark	109	31
Clay	12	15
Clinton	15	15
Crawford		
Daviess		
Dearborn	51	34
Decatur	18	23
DeKalb	14	11
Delaware	124	36
Dubois	11	9
Elkhart	83	14
Fayette	49	70
Floyd	69	30
Fountain		
Franklin	18	26
Fulton	12	20
Gibson		
Grant	77	38
Greene	16	17
Hamilton	120	13

Place	# Drug Overdose Deaths	Drug Overdose Mortality Rate
Hancock	46	21
Harrison	30	25
Hendricks	74	15
Henry	24	16
Howard	85	34
Huntington	18	16
Jackson	40	30
Jasper	20	20
Jay	21	33
Jefferson	16	17
Jennings	29	35
Johnson	96	21
Knox	16	14
Kosciusko	40	17
LaGrange		
Lake	338	23
LaPorte	72	22
Lawrence		
Madison	124	32
Marion	939	33
Marshall	20	14
Martin		
Miami	20	19
Monroe	73	17
Montgomery	21	18
Morgan	56	27
Newton	12	29
Noble	13	9
Ohio		
Orange		
Owen		
Parke		
Perry	11	19
Pike		
Porter	131	26
Posey		
Pulaski	13	34
Putnam	12	11
Randolph	33	44
Ripley	29	34
Rush	14	28
Scott	41	57
Shelby	23	17
Spencer		
St. Joseph	187	23
Starke	30	44
Steuben		
Sullivan	11	18

Place	# Drug Overdose Deaths	Drug Overdose Mortality Rate
Switzerland	10	31
Tippecanoe	90	16
Tipton		
Union	11	51
Vanderburgh	158	29
Vermillion	13	28
Vigo	56	17
Wabash	25	26
Warren		
Warrick	10	5
Washington	20	24
Wayne	133	67
Wells	11	13
White	13	18
Whitley		

Appendix B

Focus Group Materials

PERRY COUNTY Community Health Needs Assessment attendee Roster

First name	Last Name	Organization	email	Phone
[illegible]	Snyder	HC Health Coalition	hcplky@gmail.com	270-927-6555
Kyle	Newton	" "	knewton@audubon-area.com	270-927-7580
[illegible]	Hendershot	Waupaca Foundry	ross.hendershot@waupacafoundry.com	812-[illegible]8580
Theresa	Harney	North Spencer Comm Act	NSCACOLEECTOR@gmail.com	812 937-[illegible]
Gigi Morton	Morton	Tell City Com Council	gjmort@psci.net	812-549-[illegible]
Brandy	Hopkins	Everbody's Fitness	brandy@everbodys.com	812-547-[illegible]
Donna	Nance	Tell City Housing	tchous@psci.net	812-547-[illegible]
Denise	Malone	Mulzer Crushed Stone	denise.malone@mulzer.com	812-[illegible]
Barbara	Ewing	PCMH Auxiliary	cwewin1@psci.net	812-547-[illegible]
Donna	Harpenau	PCMH Auxiliary	mdharpenau@psci.net	812-719-[illegible]
Tara	Lucas	Perry Co. Health Dept	lucas.tara85@gmail.com	812-[illegible]
Teresa	Kannenberg	Perry County	CountyAdmin@perrycounty.in.gov	[illegible]
Nicki	Rice	PC Chamber	chamber@picketperrycom	[illegible]
Breanne	Walsh	Everbodys	breanne@everbodys.com	812-619-[illegible]
Rene	Kreisle	ATTC	rkreisle@attcmfg.com	812/547-5060
Laura	Noble	Tell City Schools	laura.noble@tellcity-k12.in.us	812-[illegible]
Lacy	Jones	United Way	unitedwayperry@gmail.com	[illegible]
Sarah	Kluender	Counseling in the Cou[illegible]	sladurs@psci.net	(812) 686-8766
Mary	James	Common[illegible] Foundation	mjames@common...org	812
Jennifer	Mitchell	Perry Central	jmitchell@pccommodores.org	812-549-3549
[illegible]	Meyer	Purdue Extension	meyer258@purdue.edu	812-630-3006

PERRY COUNTY Community Health Needs Assessment attendee Roster

First name	Last Name	Organization	email	
Christal	Meakos	LKDC	cmeakos@LKDC.com	
Polly Story	Story	Oakwood	polly.story@oakwood	
Becca Etienne	Etienne		rdetienne@psci.net	
Brenda Graves		PCMH - Foundation	bgraves60@psci.net	
Sharman	Jarboe	Troy Town Council	sharmanjarboe@yahoo.com	
Lina	Kratzer	Hancock Co Senior Services	senior@hancockky.us	
Dan	Hopkins	Pastor/Homeless shelter	missions@sochotmail.com	
Todd	Mosby	PCDC	todd@pickperry.com	812 547
Dr. William	Marcum	Marcum, Hickman, Baile		

Perry County Focus Group Comments & Prioritized List of Needs

Strengths

Facilities for physical activity
Schools
Promotion of wellness events
Focus on prevention
Mental health education/awareness
System of Care
Clinical access throughout the county
Council on Aging
Same-day provider access
Food services—prison program, school gardens, farmers market
Homeless shelter
Strong EMS & Fire Departments
Schools as resources
Proximity to urban areas with more amenities
Parks—trails, tennis courts
DME Exchange
National Forest—hiking club
Government lakes
Running groups & races
Silver Sneakers
Ohio River
Multiple ambulance locations around the county
Work/Life balance
LifeSpring Counseling
Farm to table
Behavioral health events
Schools sports
Non-emergency transport
Telehealth services
"Pearls" Program
Early Head Start
Healthy families
Broadband services
Faith-based networks
Weekend food program for schools
Collaborative community organizations

Values

Welcoming/friendly
Emphasis on healthy lifestyles

Community pride
Schwitzerfest
Caring
Community activism
Community engagement
Community support
Family oriented
Safe
Quality of life
Education
Faith
Progressive

Concerns/Needs

Wait times for behavioral health
Transportation
Alzheimer care facility
On-site case management for behavioral health
School-based behavioral health
Addiction services
Education and resources regarding vaccines
Lack of preventative health
Parental education/family counseling
Funding for social services & schools
Housing at all levels
Recovery community organization
Generational poverty
Lack of funding for health department
Foster care
24-hour urgent care
Lack of afterhours/weekend care
Lack of physical activity resources
Enough treatment/clinical services for mental health

Priority Needs

Mental/behavioral health services
Suicide
Substance use disorder
Lack of adequate housing at all levels
Parental education regarding healthy living for infants through high school
Transportation
After hours care
Poverty

Appendix C

Survey

* 1. What is your zip code?

- a. 47514
- b. 47515
- c. 47520
- d. 47525
- e. 47551
- f. 47574
- g. 47576
- h. 47515
- i. 47586
- j. 47637
- k. 47637
- l. 47588
- m. 47523
- n. 47531
- o. 47536
- p. 47537
- q. 47550
- r. 47577
- s. 47579
- t. 47611
- u. 47615
- v. 47617
- w. 47634
- x. 47635
- y. 42348
- z. 42351
- Other
- Other, please specify

* 2. What is your age:

- a. 18 or under
- b. 19 -25
- c. 26 — 35
- d. 36 — 45
- e. 46 — 55
- f. 56 - 65
- g. 66 - 74
- h. 75+

3. What is your ethnicity?

- a. White
- b. Black
- c. American Indian/Alaskan Native
- d. Asian
- e. Native Hawaiian/Pacific Islander
- f. Hispanic or Latino
- g. White persons, not Hispanic
- h. Persons reporting two or more races
- i. Other
- Enter an answer

4. How do the following issues affect your community?

	Very Negative Effect	Some Negative Effect	No Effect	Some Positive Effect	Very Positive Effect	No Opinion/Don't Know
availability of non-emergency and non-medical transportation	○	○	○	○	○	○
availability of rural transportation	○	○	○	○	○	○
availability of weekend/after hours transportation	○	○	○	○	○	○
mental/behavioral health of the community	○	○	○	○	○	○
availability of mental/behavioral health services	○	○	○	○	○	○
affordable housing	○	○	○	○	○	○
illegal or prescription drug misuse	○	○	○	○	○	○
availability of treatment for Substance Use Disorder	○	○	○	○	○	○
availability of housing for people with Substance Use Disorder	○	○	○	○	○	○
suicide prevention options	○	○	○	○	○	○
poverty	○	○	○	○	○	○
social services for the impoverished	○	○	○	○	○	○
parental education	○	○	○	○	○	○
parental health education	○	○	○	○	○	○
weekend or after hours medical services	○	○	○	○	○	○

5. Do you see a need for the following services/facilities in your community?

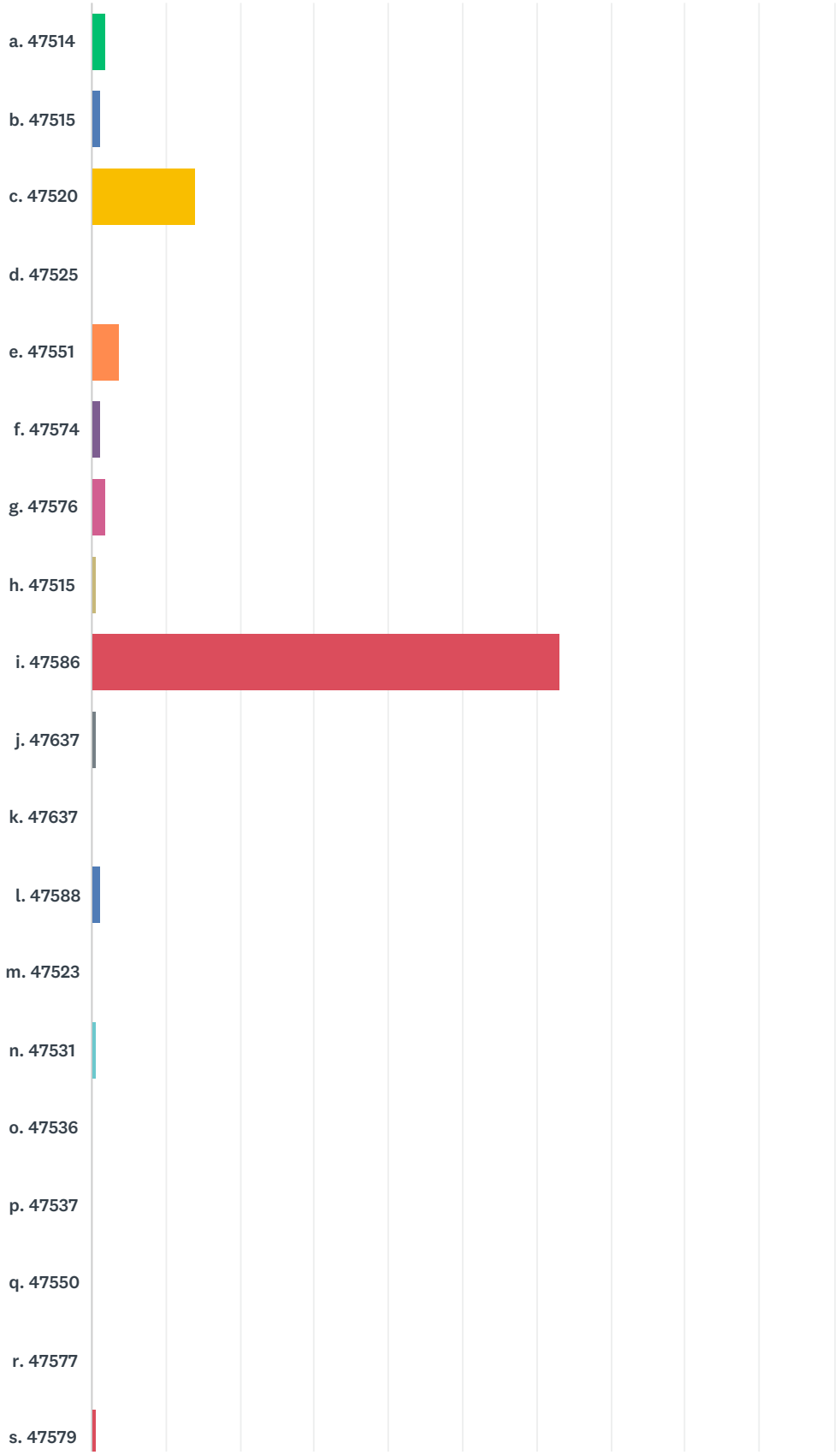
	No Need	Slight Need	Definite Need	Extreme Need	No Opinion/Don't Know
mental/behavioral health services	○	○	○	○	○
non-emergency and/or non-medical transportation	○	○	○	○	○
rural transportation	○	○	○	○	○
weekend or after hours transportation	○	○	○	○	○
weekend of after hours medical services	○	○	○	○	○
affordable housing	○	○	○	○	○
illegal and/or prescription drug education	○	○	○	○	○
illegal and/or prescription drug rehabilitation services	○	○	○	○	○
illegal and/or prescription drug rehabilitation facilities	○	○	○	○	○
transitional housing for individuals in recovery	○	○	○	○	○
suicide prevention services	○	○	○	○	○
suicide prevention training	○	○	○	○	○
parental education training	○	○	○	○	○
parental health education training	○	○	○	○	○
social services for the impoverished	○	○	○	○	○

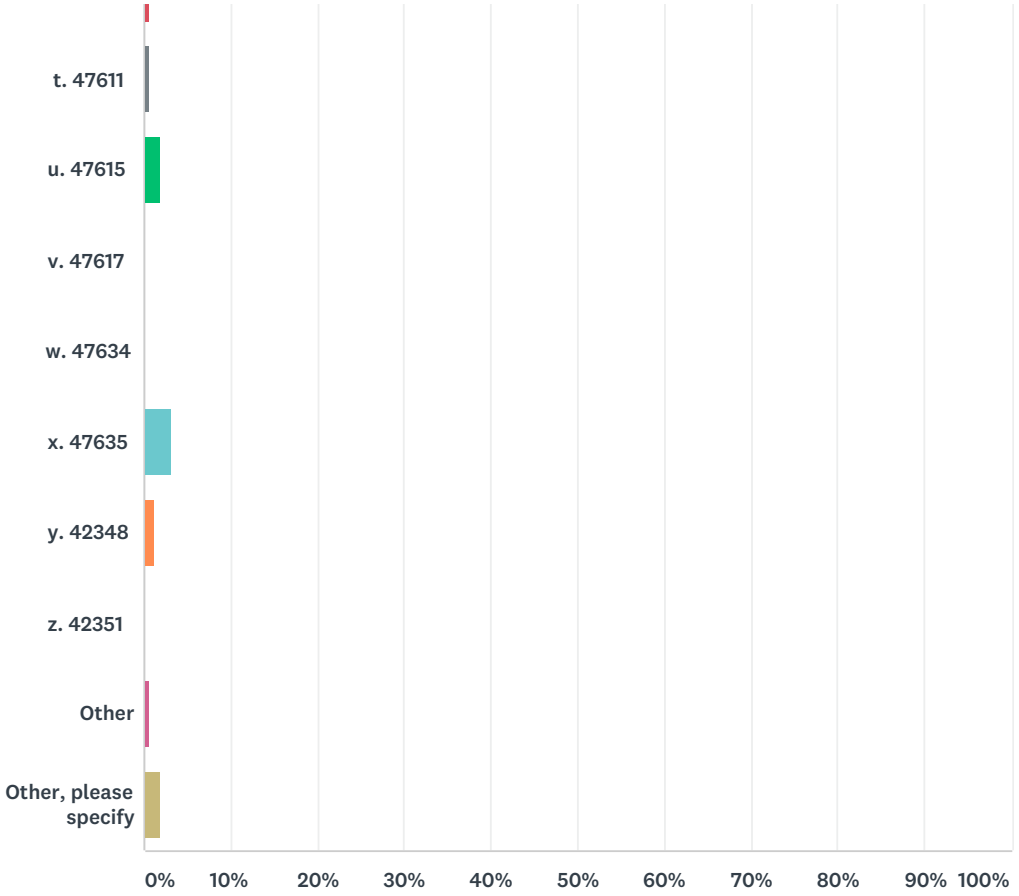
Other (please specify)

6. Open comments:

Q1 What is your zip code?

Answered: 163 Skipped: 0





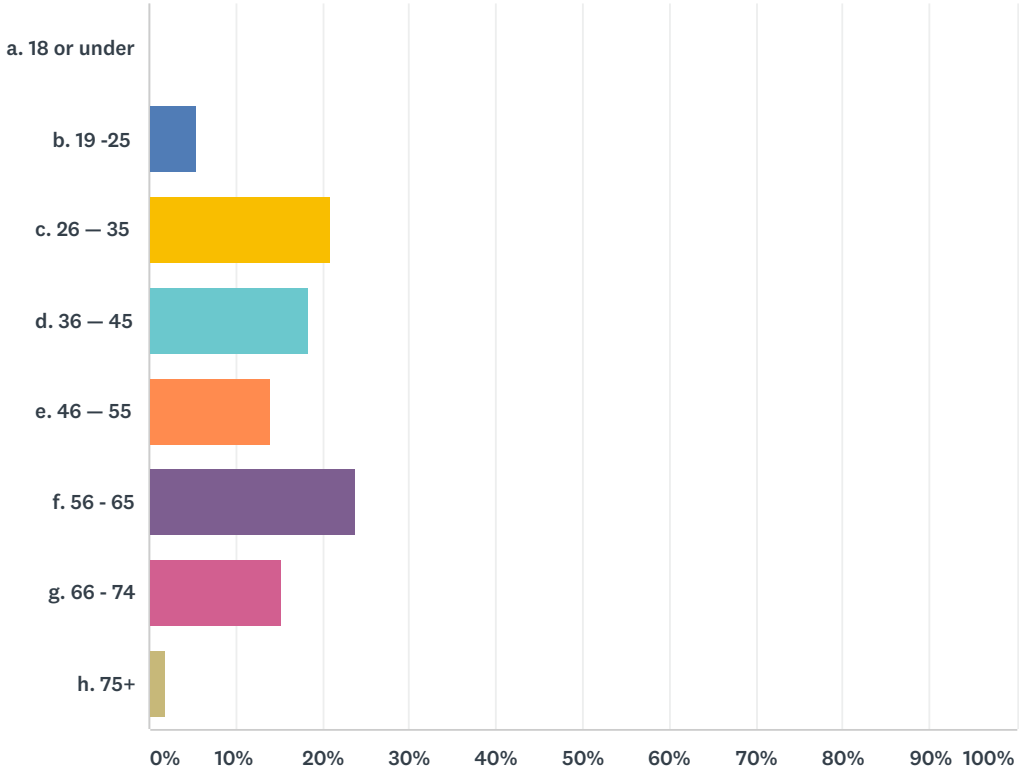
ANSWER CHOICES	RESPONSES	
a. 47514	1.84%	3
b. 47515	1.23%	2
c. 47520	14.11%	23
d. 47525	0.00%	0
e. 47551	3.68%	6
f. 47574	1.23%	2
g. 47576	1.84%	3
h. 47515	0.61%	1
i. 47586	63.19%	103
j. 47637	0.61%	1
k. 47637	0.00%	0
l. 47588	1.23%	2
m. 47523	0.00%	0
n. 47531	0.61%	1
o. 47536	0.00%	0
p. 47537	0.00%	0

q. 47550	0.00%	0
r. 47577	0.00%	0
s. 47579	0.61%	1
t. 47611	0.61%	1
u. 47615	1.84%	3
v. 47617	0.00%	0
w. 47634	0.00%	0
x. 47635	3.07%	5
y. 42348	1.23%	2
z. 42351	0.00%	0
Other	0.61%	1
Other, please specify	1.84%	3
TOTAL		163

#	OTHER, PLEASE SPECIFY	DATE
1	47514	12/2/2019 7:07 PM
2	42301	11/27/2019 3:36 PM
3	47586	11/27/2019 3:24 PM

Q2 What is your age:

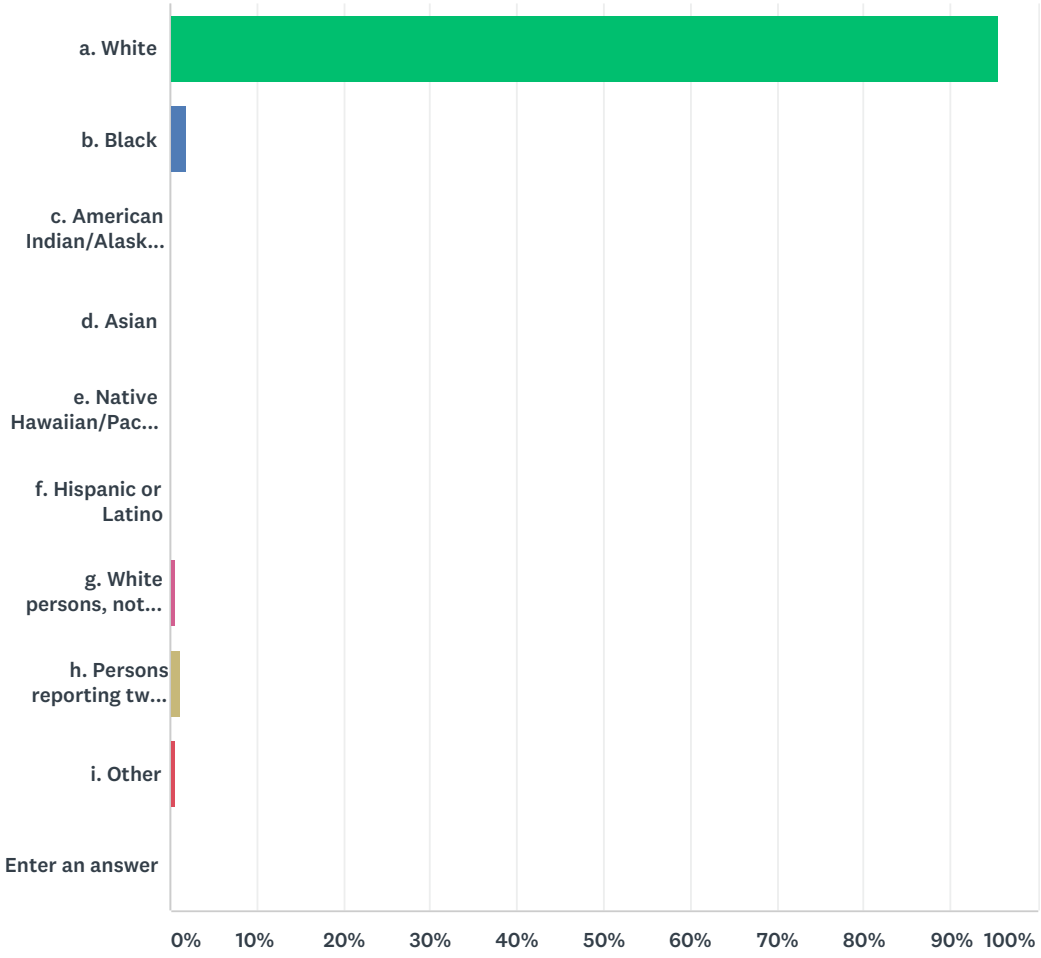
Answered: 163 Skipped: 0



ANSWER CHOICES	RESPONSES	
a. 18 or under	0.00%	0
b. 19 -25	5.52%	9
c. 26 — 35	20.86%	34
d. 36 — 45	18.40%	30
e. 46 — 55	14.11%	23
f. 56 - 65	23.93%	39
g. 66 - 74	15.34%	25
h. 75+	1.84%	3
TOTAL		163

Q3 What is your ethnicity?

Answered: 162 Skipped: 1

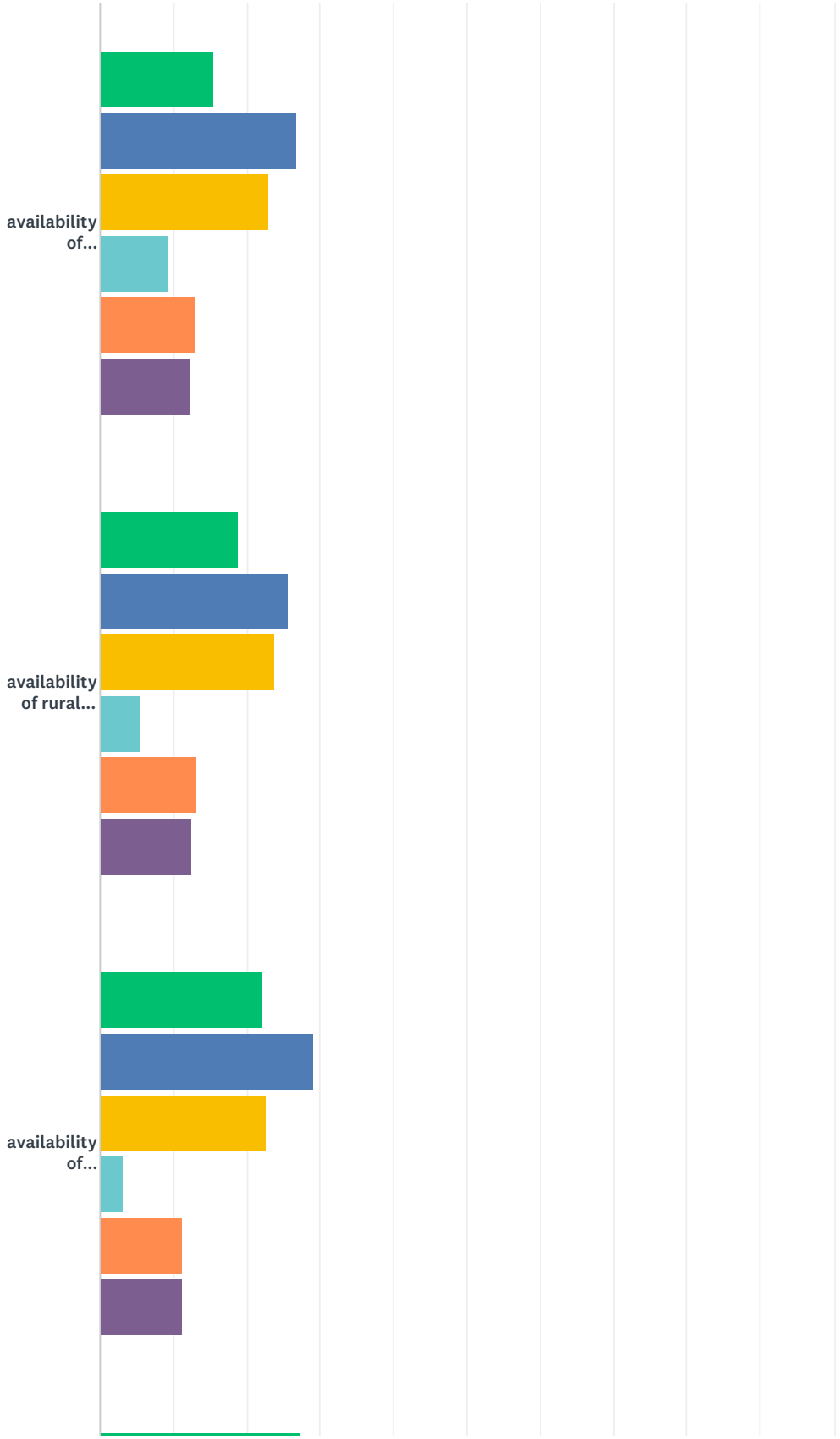


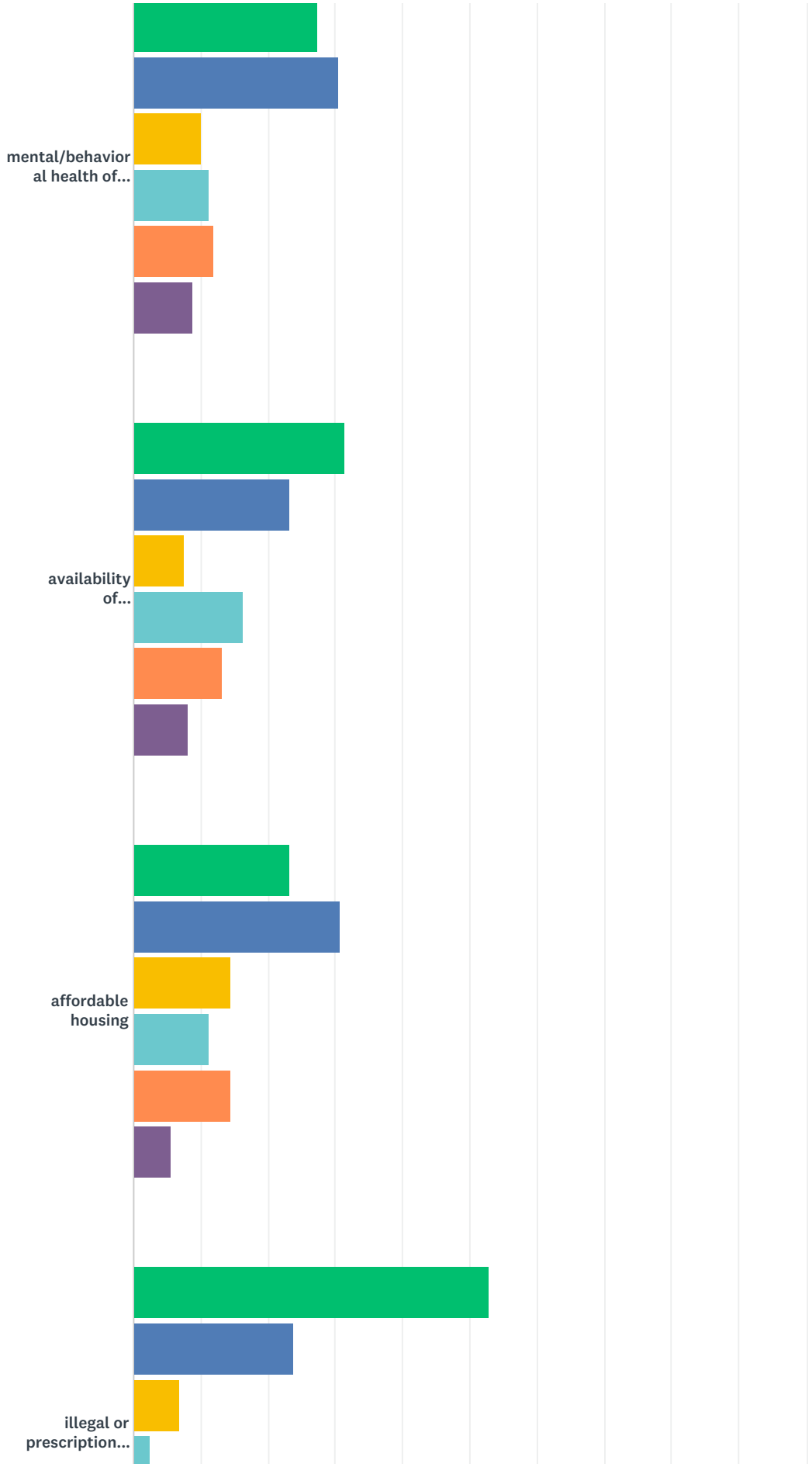
ANSWER CHOICES	RESPONSES	
a. White	95.68%	155
b. Black	1.85%	3
c. American Indian/Alaskan Native	0.00%	0
d. Asian	0.00%	0
e. Native Hawaiian/Pacific Islander	0.00%	0
f. Hispanic or Latino	0.00%	0
g. White persons, not Hispanic	0.62%	1
h. Persons reporting two or more races	1.23%	2
i. Other	0.62%	1
Enter an answer	0.00%	0
TOTAL		162

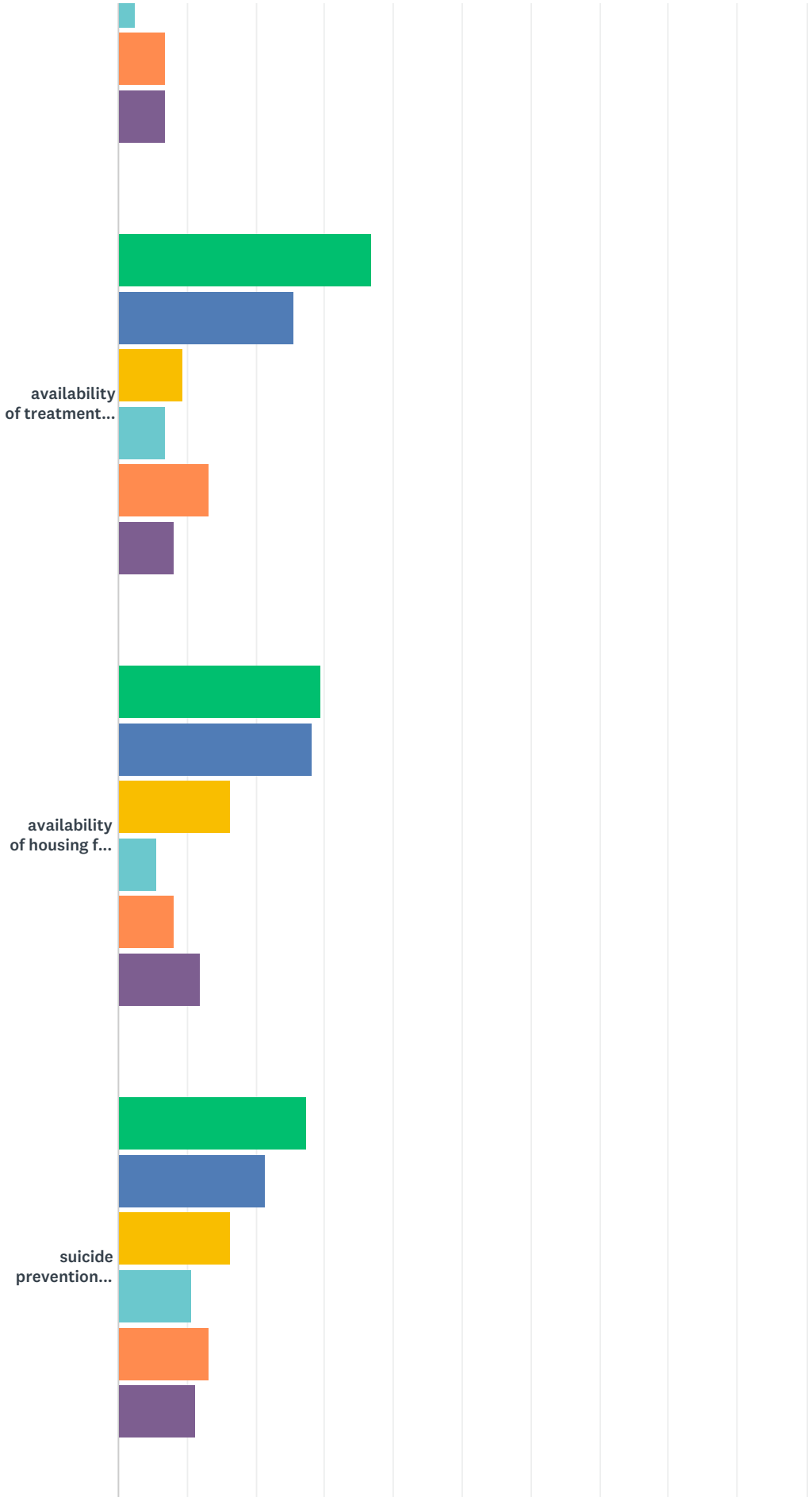
#	ENTER AN ANSWER	DATE
	There are no responses.	

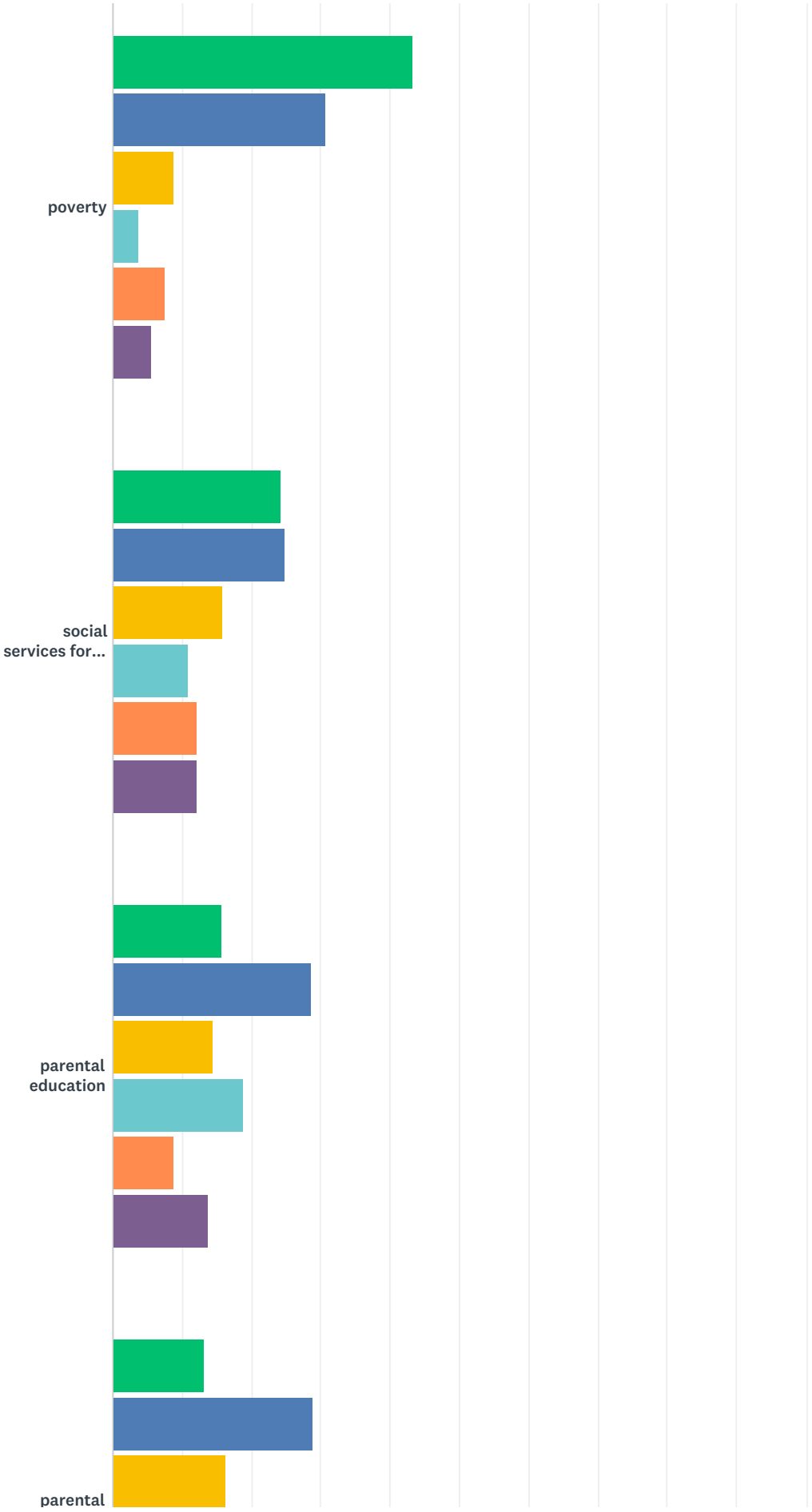
Q4 How do the following issues affect your community?

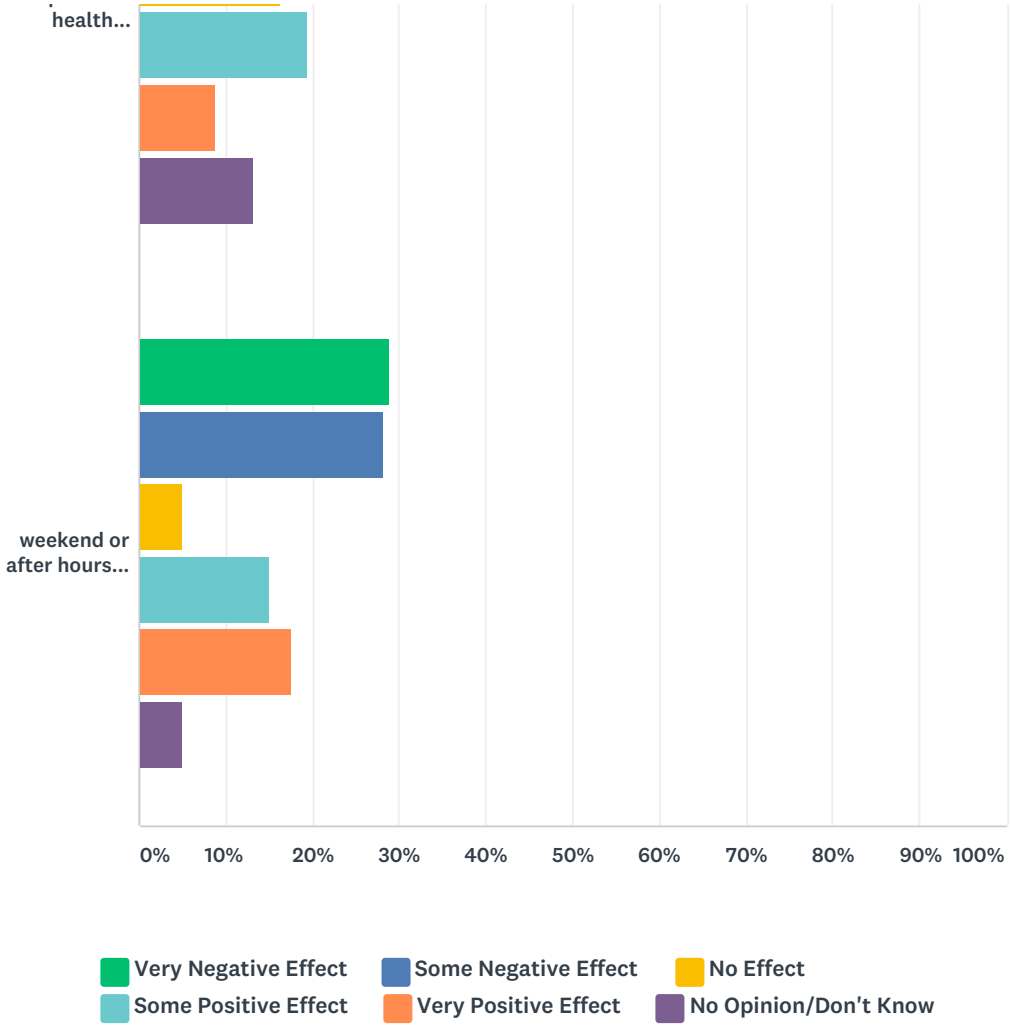
Answered: 163 Skipped: 0




mental/behavioral health of...
availability of...
affordable housing
illegal or prescription...


availability of treatment...
availability of housing f...
suicide prevention...


poverty
social services for...
parental education
parental

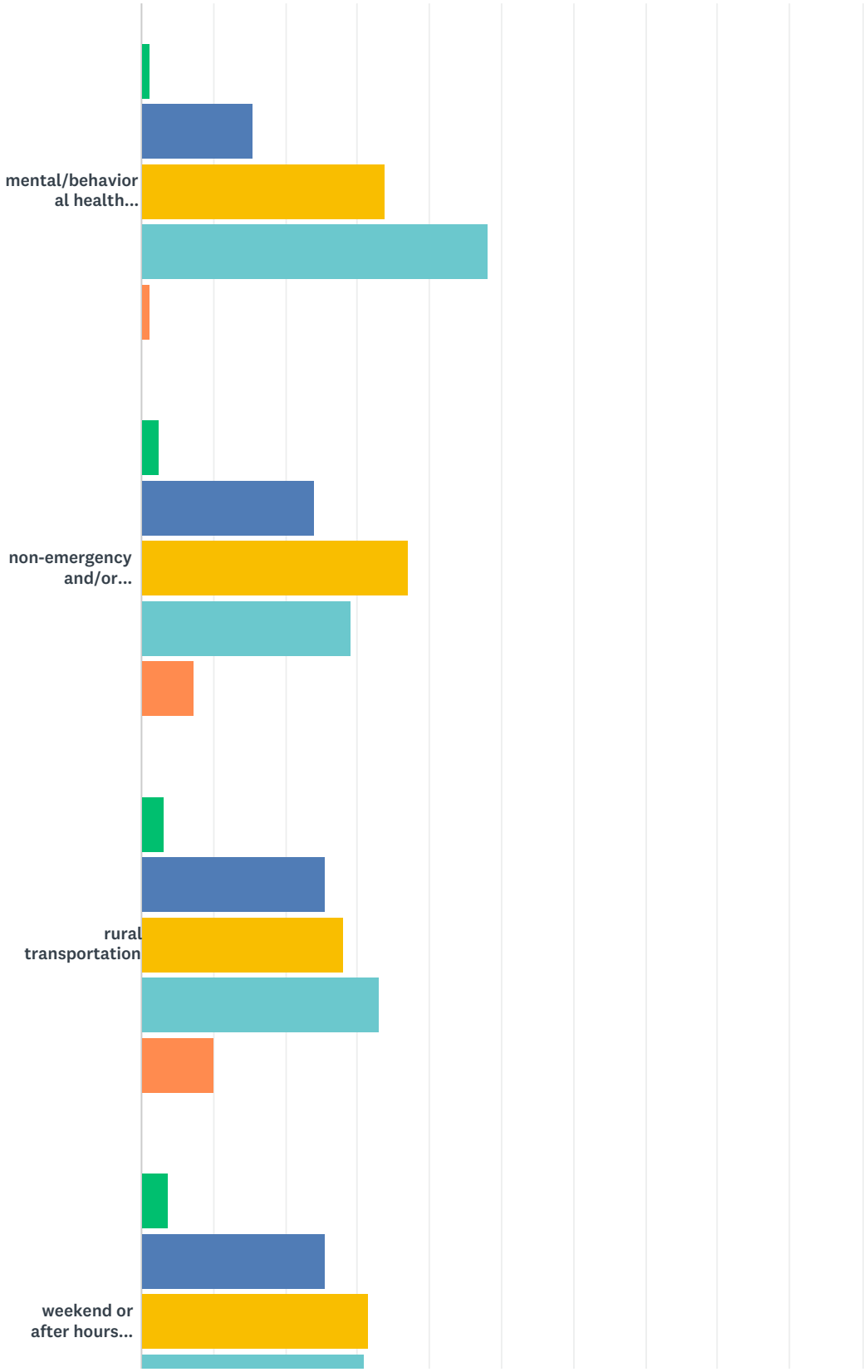


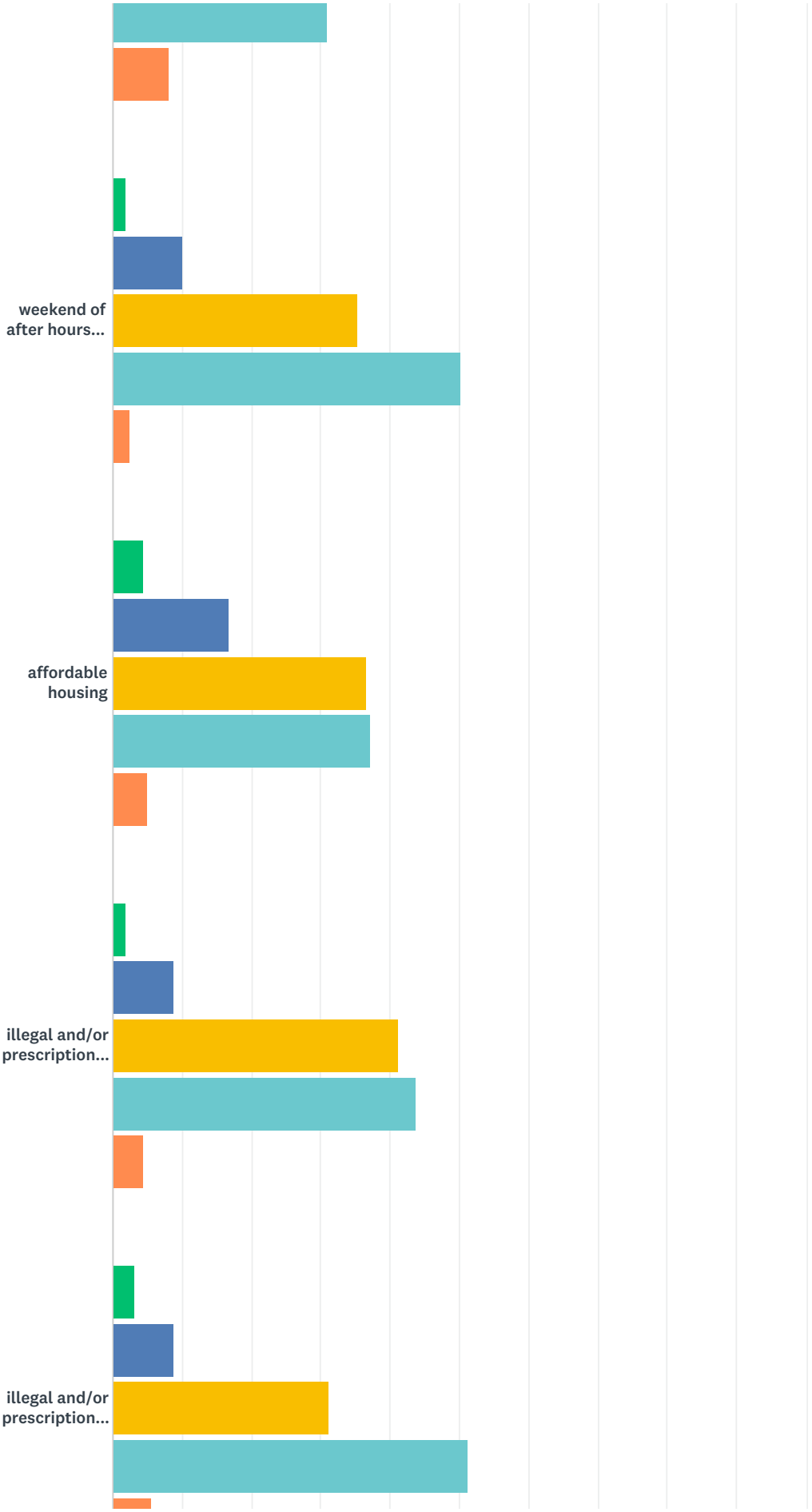
	VERY NEGATIVE EFFECT	SOME NEGATIVE EFFECT	NO EFFECT	SOME POSITIVE EFFECT	VERY POSITIVE EFFECT	NO OPINION/DON'T KNOW	TOTAL	WEIGHTED AVERAGE
availability of non-emergency and non-medical transportation	15.53% 25	26.71% 43	22.98% 37	9.32% 15	13.04% 21	12.42% 20	161	2.74
availability of rural transportation	18.87% 30	25.79% 41	23.90% 38	5.66% 9	13.21% 21	12.58% 20	159	2.64
availability of weekend/after hours transportation	22.15% 35	29.11% 46	22.78% 36	3.16% 5	11.39% 18	11.39% 18	158	2.46
mental/behavioral health of the community	27.50% 44	30.63% 49	10.00% 16	11.25% 18	11.88% 19	8.75% 14	160	2.45
availability of mental/behavioral health services	31.45% 50	23.27% 37	7.55% 12	16.35% 26	13.21% 21	8.18% 13	159	2.53
affordable housing	23.27% 37	30.82% 49	14.47% 23	11.32% 18	14.47% 23	5.66% 9	159	2.61
illegal or prescription drug misuse	52.83% 84	23.90% 38	6.92% 11	2.52% 4	6.92% 11	6.92% 11	159	1.78

availability of treatment for Substance Use Disorder	36.88% 59	25.62% 41	9.38% 15	6.88% 11	13.13% 21	8.13% 13	160	2.28
availability of housing for people with Substance Use Disorder	29.56% 47	28.30% 45	16.35% 26	5.66% 9	8.18% 13	11.95% 19	159	2.26
suicide prevention options	27.50% 44	21.25% 34	16.25% 26	10.63% 17	13.13% 21	11.25% 18	160	2.56
poverty	43.40% 69	30.82% 49	8.81% 14	3.77% 6	7.55% 12	5.66% 9	159	1.95
social services for the impoverished	24.20% 38	24.84% 39	15.92% 25	10.83% 17	12.10% 19	12.10% 19	157	2.57
parental education	15.63% 25	28.75% 46	14.37% 23	18.75% 30	8.75% 14	13.75% 22	160	2.72
parental health education	13.21% 21	28.93% 46	16.35% 26	19.50% 31	8.81% 14	13.21% 21	159	2.79
weekend or after hours medical services	28.93% 46	28.30% 45	5.03% 8	15.09% 24	17.61% 28	5.03% 8	159	2.62

Q5 Do you see a need for the following services/facilities in your community?

Answered: 163 Skipped: 0

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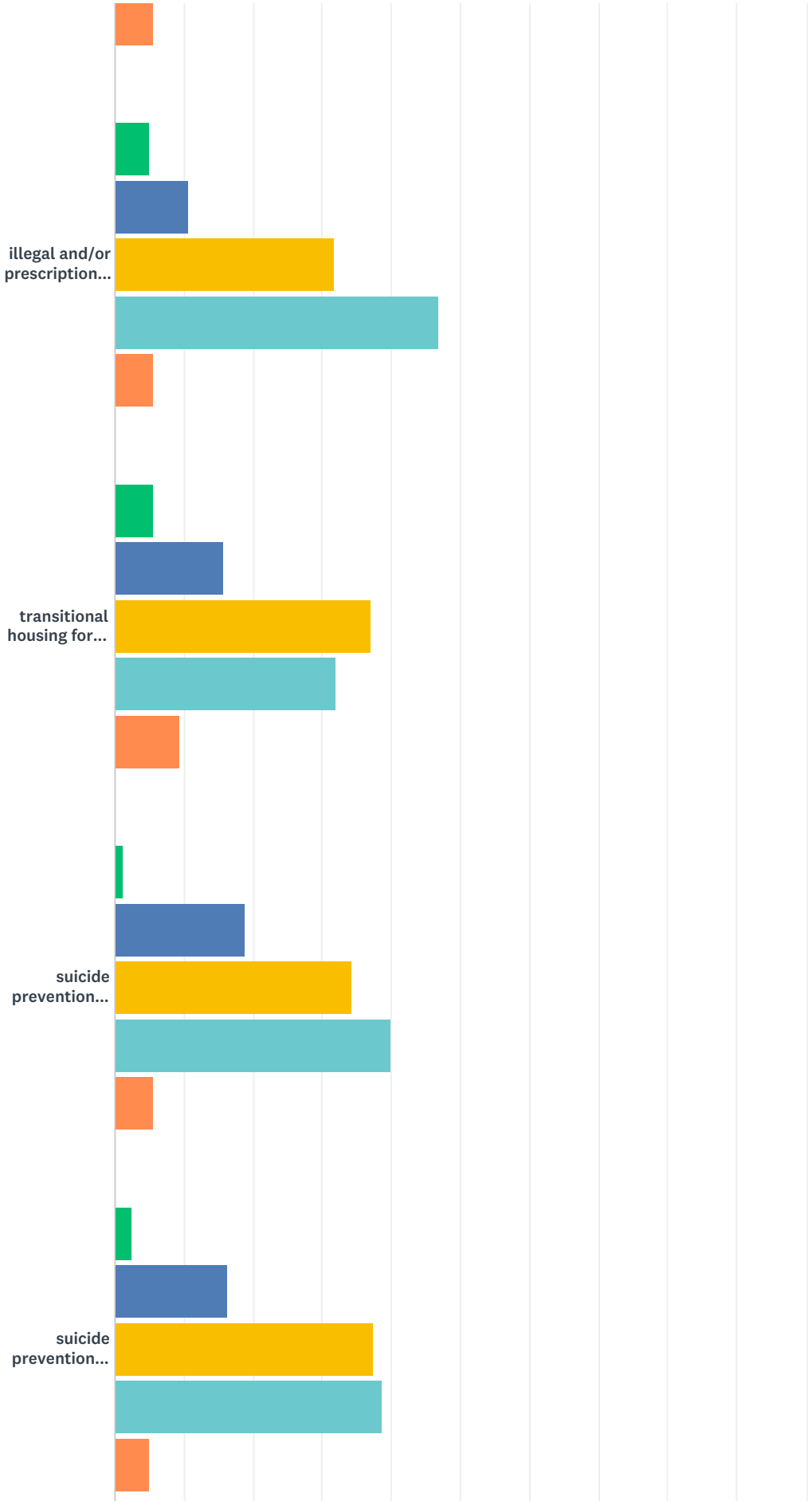
illegal and/or prescription...
illegal and/or prescription...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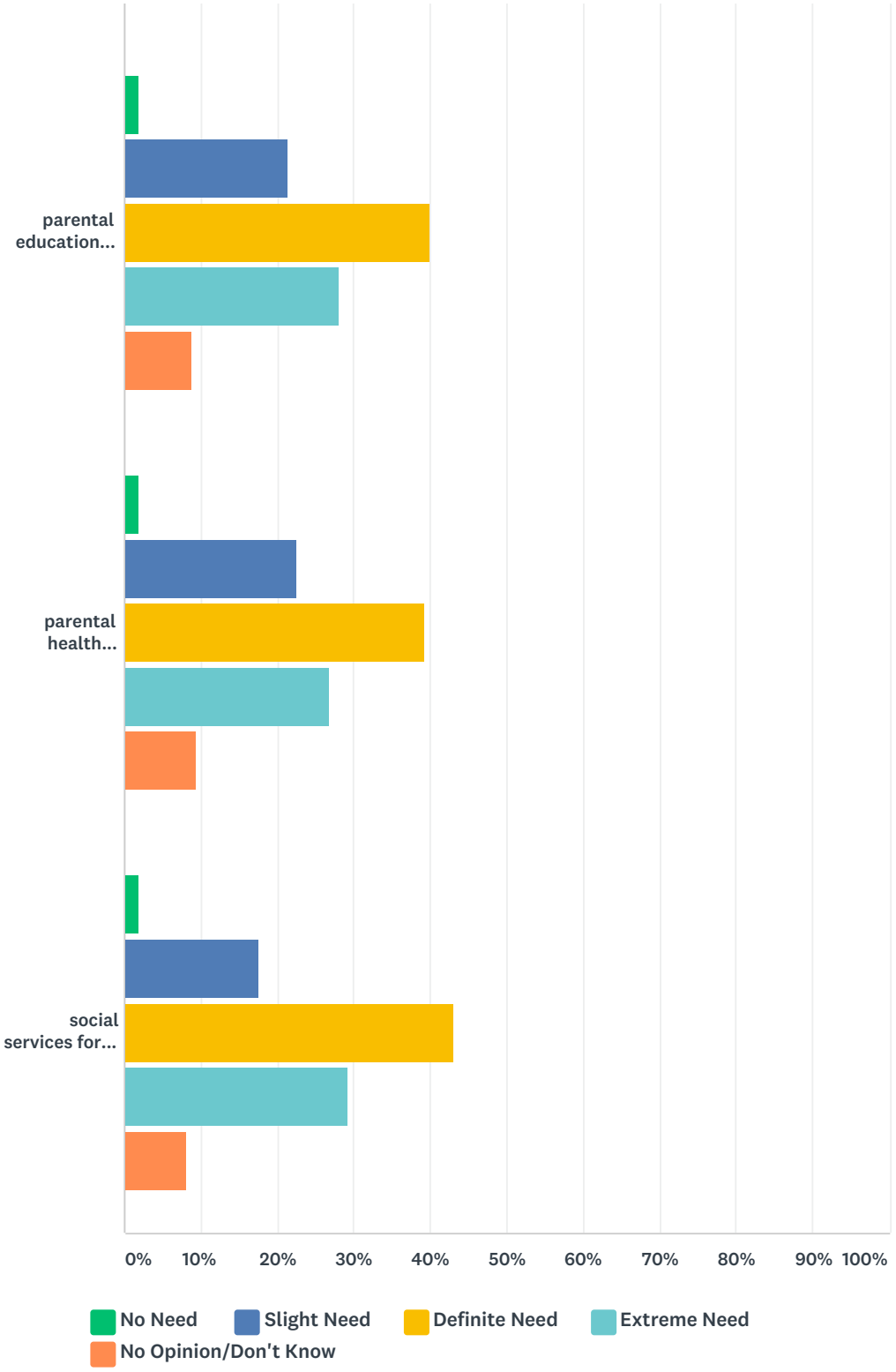
transitional housing for...
suicide prevention...
suicide prevention...



	NO NEED	SLIGHT NEED	DEFINITE NEED	EXTREME NEED	NO OPINION/DON'T KNOW	TOTAL	WEIGHTED AVERAGE
mental/behavioral health services	1.23% 2	15.43% 25	33.95% 55	48.15% 78	1.23% 2	162	3.31
non-emergency and/or non-medical transportation	2.47% 4	24.07% 39	37.04% 60	29.01% 47	7.41% 12	162	3.00

rural transportation	3.13% 5	25.62% 41	28.13% 45	33.13% 53	10.00% 16	160	3.01
weekend or after hours transportation	3.73% 6	25.47% 41	31.68% 51	31.06% 50	8.07% 13	161	2.98
weekend of after hours medical services	1.86% 3	9.94% 16	35.40% 57	50.31% 81	2.48% 4	161	3.38
affordable housing	4.35% 7	16.77% 27	36.65% 59	37.27% 60	4.97% 8	161	3.12
illegal and/or prescription drug education	1.88% 3	8.75% 14	41.25% 66	43.75% 70	4.38% 7	160	3.33
illegal and/or prescription drug rehabilitation services	3.13% 5	8.75% 14	31.25% 50	51.25% 82	5.63% 9	160	3.38
illegal and/or prescription drug rehabilitation facilities	5.00% 8	10.63% 17	31.87% 51	46.88% 75	5.63% 9	160	3.28
transitional housing for individuals in recovery	5.66% 9	15.72% 25	37.11% 59	32.08% 51	9.43% 15	159	3.06
suicide prevention services	1.25% 2	18.75% 30	34.38% 55	40.00% 64	5.63% 9	160	3.20
suicide prevention training	2.50% 4	16.25% 26	37.50% 60	38.75% 62	5.00% 8	160	3.18
parental education training	1.88% 3	21.25% 34	40.00% 64	28.13% 45	8.75% 14	160	3.03
parental health education training	1.88% 3	22.50% 36	39.38% 63	26.88% 43	9.38% 15	160	3.01
social services for the impoverished	1.88% 3	17.50% 28	43.13% 69	29.38% 47	8.13% 13	160	3.09

#	OTHER (PLEASE SPECIFY)	DATE
1	Allergy and digestion specialist!	12/28/2019 9:16 PM
2	Availability of more specialists such as Neurologist for me and Cardiologist for my partner	12/24/2019 11:26 PM
3	More family doctors who will accept Medicare & Medicaid.	12/22/2019 2:17 PM
4	Cooperation between all facilities vying for patients in our area.	12/2/2019 7:07 PM
5	services for seniors-sitters, non - medical assistance	11/4/2019 11:31 AM
6	Home Health for Family’s who take care of handicapped and elderly Extreme need	11/2/2019 12:42 AM

Q6 Open comments:

Answered: 40 Skipped: 123

#	RESPONSES	DATE
1	Better ER doctors in Tell City	12/31/2019 7:02 PM
2	Need quality ER doctors, not these quacks that are manning the ER. will never use ER AGAIN unless bleeding to death!	12/31/2019 1:07 PM
3	As a community we have to offer more options for mental health services.	12/30/2019 2:04 PM
4	I feel Perry County Hospital is striving towards better services.	12/30/2019 3:02 AM
5	I feel as if we need to open up a place that has rehabilitation, housing, etc for those with drug abuse, mental health, and coming out of jail to be able to go into. That would help get a lot of crime off the streets	12/29/2019 2:31 PM
6	Our community is comprised of many residents suffering from substance abuse and mental illness with nowhere to receive the proper treatment without having to be sent over an hour away just to have access to the care and facilities they need. Then once they come home they have no continuity of the care they received at other facilities, no where to go home to where they will be in a stable environment and the cycle repeats itself. Lincoln hills is no longer adequate for the long term rehabilitation these individuals need. Bring in more services to keep people in Perry county instead of sending them out to other hospitals and losing all the revenue that could be coming into Perry county and the hospital. Set a higher standard for the doctors, specifically in the ER.	12/29/2019 3:52 AM
7	The people in our community deserve excellent healthcare services. A majority of people go out of town for almost all their healthcare needs due to inadequate care given in Perry County	12/29/2019 2:02 AM
8	None	12/28/2019 11:52 PM
9	We need more doctors at the hospital	12/28/2019 7:05 PM
10	Perry County Hospital is a great hospital just people in the county don’t use it all the time.	12/28/2019 6:08 PM
11	I feel that the county is lucky to have a local hospital to provide emergent care and short term stays.I think the hospital should focus on providing services that are not already available in the community instead of duplicating services. Maybe offering a true Mec Center for after hours care that is not considered and billed as emergency services would be a good start.	12/28/2019 1:54 PM
12	Pcmh is a poor hospital. Would not recommend it	12/27/2019 2:41 AM
13	The after hours clinic at the Tell City clinic is not suitable for this community. There needs to be a distinction between family practice and "quick care". The Tell City Clinic does not have the proper equipment or staff to run a quick care clinic.	12/26/2019 2:03 PM
14	We need more than two ambulances in Perry county. To cover our citizens. Especially for transfers . If the is a multiple person accident and one of our two ambulances is on transfer. We cannot provide Buick enough care to those injured. Its leaving us unprotected for a major disaster or multiple injury accident. The time it would take to call in for other transport Could be life or death for the injured or ill.	12/26/2019 2:28 AM
15	The quick care hours at the Tell City Clinic wanted to send me to the hosp er for a bladder infection. I got there at 610pm no cars in the parking lot except mine. I begged them to see me had to wait till almost 730 before they called me back. Not one person came in or went out. Dont know the reason for this. They had a really bad attitude towards me.	12/25/2019 7:29 PM
16	Our hospital should definitely overhaul the emergency room services. I'm sitting here now with a sick child for 2 hrs with 1 doctor and 2 nurses, none of which have checked on us. Quite ridiculous	12/24/2019 2:38 AM

17	You need to focus on improving your staff. All the buildings in the world won't make it better if your staff is rude andyou leave people in the waiting room when there's only one other patient there. People who go to the er need your help. Telling someone to go home and walk it off when they are clearly in labor or sending someone home with morphine when they clearly need their gallbladder removed isn't really helping. Also, when someone comes to you barely conscious and you send them home to rest because you think they're coming down with something, that's not helping. That person should have even received a bill because they didn't get any treatment. Furthermore, getting charged for an xray locally with your doctor looking at it, then charged again for a company in Illinois to look at it is absolutely ridiculous. What we actually have in this county is a lack of adequate emergency services. The building is there, but it seems that no one really knows what to do with it. And what little service is available is grossly overpriced. Most people in this area are better off going to a neighboring city, like Jasper. The cost is lower, the staff is friendly, and they treat the patients instead of just putting a temporary fix on it and sending them home.	12/24/2019 2:37 AM
18	Extreme need for transportation for elderly who have medical appointments including those on Medicaid. Also there is an extreme need for substance abuse and counseling options for the families.	12/23/2019 2:08 AM
19	Need a hospital that can take care of patients instead of transporting everyone to another hospital which takes our ambulances out of the county. This happens all the time and needs to stop. Keep our ambulances here in the county	12/23/2019 12:42 AM
20	Perry county is full of people who have addiction issues with illegal substances. If we could provide help to those who self medicate because they have no other options, example would be inability to afford insurance to pay for said therapy. We may have a great impact on the community. However, only if these services are goal oriented and not just another place to give people with addiction issues something else to be addicted to. Such as people with addiction to meth, transitioning to pills. In the end these are people who need help, not a money sign. These people also have to want to get better instead of chasing another high.	12/22/2019 10:54 PM
21	More inhouse services or doctors willing to admit at PCMH, too many patients have to be transferred to other hospitals to receive standard of care	12/22/2019 10:17 PM
22	I have had 3 xrays this year read negative. Then had to go to another facility for a 2nd zray that were read positive. Get a radiologist that can read xrays!!!!	12/22/2019 9:47 PM
23	Need weekend medical care and clinic needs to take more than 12 walk ins in the evening especially during flu season. They are so rushed they don’t run the appropriate tests like flu and strep	12/22/2019 4:25 PM
24	More specialists in Perry County who also accept Medicare & Medicaid.	12/22/2019 2:17 PM
25	We also need a hospital that doesn't charge outrageously for services. My family travels to Owensboro for better and cheaper care. It is embarrassing that the State Police insurance goes further in a sister state than it does in our home town. My daughter had an EKG, two flu tests, and an IV and we walked away from Owensboro only owing $385 out of pocket. The bill from PCMH would have been astronomical. Not to mention the fact that payments go virtually nowhere. I lost $400 after making payments and was told those payments were never made. We will drove to Owensboro no matter what and luckily havent used PCMH in two years and never plan to again.	12/22/2019 4:36 AM
26	While PCMH offers a lot of great services. The ER department needs A LOT of work. wait time is too long. Doctors are of no help and barely offer anything. Better off going to another emergency room if you arent dying	12/21/2019 11:18 PM
27	Perry County needs a urgent care facility or an after hours clinic that takes more then 15 patients. There is a need for weekend care for being sick but not sick enough for a er visit. Having a urgent care would cut down on non emergent visits to the er allowing the the er staff to focus more on the emergent cases.	12/21/2019 10:21 PM
28	We need more family doctors. Can’t be admitted to the hospital unless you go to ER. Not acceptable. I have a chronic illness, seeing a different doctor so often is very bad. It is forcing me to go to special doctors in Evansville.	12/17/2019 12:25 AM
29	The availability of HUD housing is a blessing and a curse. We see many displaced/transient people coming into the county - often times not becoming productive citizens.	12/11/2019 3:38 PM
30	Pick perry!	12/6/2019 5:51 PM
31	We need: Neurologist Dermatologist	12/2/2019 8:10 PM
32	Is concerning when hear things about poor morale among hospital staff. Impacts confidence.	12/2/2019 7:07 PM

33	Affordable housing is a critical issue in Perry County, but so is job availability and pay. People feel defeated and better off living on assistance. I've actually had people tell me those words. Without a job and sense of accomplishment in life; why not turn to drugs, dependence, or suicide? People need a reason to live, not just education or housing help.	12/2/2019 3:00 PM
34	It would be nice to have more medical services in our area so we didn't have to drive an hour or more out of town.	11/27/2019 3:27 PM
35	Home health care for elderly rehabilitation in rural area	11/27/2019 3:22 PM
36	I have had to cancel or reschedule Dr. appts. due to an inability to get transportation. It sometimes requires 48 hours notice and even then there is no guarantee of a ride.	11/27/2019 3:03 PM
37	Too many handouts in Spencer county. Everyone needs to work for a living. I work 3 jobs just trying to make a living. Need to drug test people who get food stamps, Medicaid, and Medicare. I have a job and get tested regularly. Drs. need to cut back on giving out prescription narcotics.	11/27/2019 3:00 PM
38	Improved ER services 3D mammography Updated clinics/buildings	11/9/2019 12:12 AM
39	We need an urgent care type clinic or a few hours open on weekends. We need a newly updated clinic that doesn't look like a dungeon. More providers located rurally outside of town.	11/1/2019 10:15 PM
40	Need for more ambulances. The wait times for ambulances is horrendous.	11/1/2019 9:13 PM

Appendix D

Existing Facilities

County	Service Type	Physician/Practitioner	Facility
Perry	Cardiology	Phillip Behrens, M.D.	Tell City Clinic
Hancock	Chiropractor		Complete Wellness Chiropractic
Hancock	Chiropractor	Nicholas A. Brockman, DC	Complete Wellness Chiropractic
Perry	Chiropractor	Adam Brockman, D.C.	Complete Wellness Chiropractic Spine and Sport
Perry	Chiropractor	Jared Gladish, D.C.	Gladish Chiropractic Clinic
Spencer	Chiropractor	Scott R. Sovar, DC	Sovar Chiropractic
Spencer	Chiropractor	Rebekah A. Wittman, DC	
Hancock	Clinic		The Hancock Clinic
Perry	Clinic		Perry County Family Practice
Perry	Clinic		Perry County OB/GYN
Perry	Clinic		Perry County Surgical Associates
Perry	Clinic		Tell City Clinic
Perry	Clinic		Troy Clinic
Spencer	Clinic		Spencer County Clinic
Hancock	Dentistry	Choctaw B. Badgett	
Hancock	Dentistry	William H. Nance, DMD	Hancock Dental Arts
Hancock	Dentistry	Patti K. Allen, DMD	Allen & Allen Family Dentistry
Hancock	Dentistry	Kyle L. Craighead, DMD	Hancock Dental Arts
Perry	Dentistry	Matthew Butler, DDS	Butler Family Dentistry
Perry	Dentistry	Meghan Butler, DDS	Butler Family Dentistry
Perry	Dentistry	Joe Danzer, DMD	Danzer Orthodontics
Perry	Dentistry	Mark Flannagan, DDS	
Perry	Dentistry	Dianne Rudolph, DMD	
Perry	Dentistry	William Rudolph, DMD	
Perry	Dentistry	Joseph P. Walker, DDS	
Spencer	Dentistry	John P Atkinson, DDS	Spencer County Medical Center
Spencer	Dentistry	Braun Arnold, DDS	Braun Dental Associates
Spencer	Dentistry	Jessica R. Walters, DDS	Santa Claus Family Dentistry
Spencer	Dentistry	Brittany Eirwin-Maqueda, DMD	Braun Dental Associates
Spencer	Dentistry		Kizior & Young Orthodontics
Spencer	Dentistry	Joseph Antonini, DDS	
Spencer	Dentistry	Nicholas Olinger, DMD	
Spencer	Dentistry	Amanda K. Braun, DDS	Braun Dental Associates

Perry	Dialysis		Davita Dialysis Center
Perry	Domestic/Sexual Violence		Crisis Connection
Perry	FACS	Brad Cornell, M.D.	Perry County Memorial Hospital Professional Building
Perry	FACS	Chris Glaser, M.D.	Perry County Memorial Hospital Professional Building
Perry	FACS	Roger Humphrey, M.D.	Perry County Memorial Hospital Professional Building
Perry	FACS	Alan Mullins, M.D.	Perry County Memorial Hospital Professional Building
Hancock	Family Medicine	Joel A. Johnston, M.D.	
Perry	Family Medicine	Thomas Bailey, M.D.	The Office of Drs. Marcrum, Bailey, and Kleeman
Perry	Family Medicine	Eric Kleeman, M.D.	The Office of Drs. Marcrum, Bailey, and Kleeman
Perry	Family Medicine	William Marcrum, M.D.	The Office of Drs. Marcrum, Bailey, and Kleeman
Perry	Family Medicine	Andrea Polk, FNP-C	Perry County Family Practice
Perry	Family Medicine	James R. Rogan II, M.D.	Dr. Rogan & Associates
Perry	Family Medicine	Stephen E. Syler, M.D.	Tell City Clinic
Perry	Family Medicine	Isaac Gatwood, M.D.	Memorial Hospital and Healthcare Center Bristow Clinic
Spencer	Family Medicine	Glenn Sherman, M.D.	Spencer County Clinic
Spencer	Family Medicine	Melinda J. Gruber, M.D.	Santa Claus Family Medicine
Spencer	Family Medicine	Stanley J. Tretter, M.D.	Dale Family Medicine
Spencer	Family Medicine		Santa Claus Family Medicine
Spencer	Family Medicine	Susan M. Martin, M.D.	Deaconess Clinic Reo
Spencer	Family Medicine	Carrie Arias, M.D.	
Spencer	Family Medicine	Jennifer A Marin, M.D.	
Spencer	Family Medicine		Deaconess Clinic Reo
Perry	Fitness Center		EverBody's Fun & Fitness Center
Perry	Fitness Center		New Directions Health & Fitness Center
Perry	Fitness Center		Cannelton Community Center/Gym
Perry	Food Pantry		Catholic Charities
Perry	General Surgery	Gilbert Field, D.O.	Perry County Surgical Associates
Perry	General Surgery	Jerry Pearson, M.D.	Perry County Surgical Associates
Perry	Home Health		Home Instead Senior Care of Jasper
Spencer	Hospice		Spencer County Hospice Inc.
Perry	Internal Medicine	Anastacia Lagunzad, D.O.	Tell City Clinic
Perry	Mental Health		LifeSpring Health Systems
Perry	Mental Health		Perry County Memorial Hospital Telepsychiatry
Perry	Mental Health		Groups of Tell City Substance Abuse Treatment

Perry	Nurse Practitioner	Megan Harth, FNP-BC	Troy Clinic
Perry	Nurse Practitioner	Sam Polk, FNP-C	Tell City Clinic
Perry	Nurse Practitioner	Michele Winchell, FNP-C	Tell City Clinic
Perry	Nurse Practitioner	Aubrey Welp, FNP-C	Tell City Clinic
Perry	OB/GYN	Ed Kemper, M.D.	Tell City Clinic
Perry	Oncologist-Hematologist	Jewraj Maheshwari, M.D.	Perry County Memorial Hospital
Perry	Oncologist-Hematologist	Dattatraya Prajapati, M.D.	Perry County Memorial Hospital
Hancock	Optometry		Emmick Eye Care, PLLC
Perry	Optometry	Eric P. Burris, O.D.	Burris, LeClere and Labhart Eye Center
Perry	Optometry	J.E. LeClere, O.D.	Burris, LeClere and Labhart Eye Center
Perry	Optometry	Mark Labhart, O.D.	Burris, LeClere and Labhart Eye Center
Perry	Optometry		Walmart Vision Center
Spencer	Optometry	Wood C Michael, O.D.	
Spencer	Optometry	Sisley Joseph, OD	
Perry	Otolaryngology	Mark Logan, M.D.	Perry County Memorial Hospital
Perry	Pain Management	Shawn Sikka, M.D.	Troy Clinic
Perry	Pediatrics	Krystle Hahus, M.D.	Tell City Clinic
Perry	Pediatrics	Krystle Hahus, M.D.	Perry County Family Practice
Hancock	Pharmacy		Fred's Pharmacy Xpress
Perry	Pharmacy		CVS Pharmacy
Perry	Pharmacy		Walmart Pharmacy
Spencer	Pharmacy		Sheldon's Express Pharmacy
Spencer	Pharmacy		Faulkenberg Harth
Spencer	Pharmacy		Rockport Pharmacy
Spencer	Pharmacy	James M. Braun, RPh	
Hancock	Physical Therapy		Rehabilitation & Performance Institute
Perry	Physical Therapy		Advanced Rehabilitation
Perry	Physical Therapy		Perry County Memorial Hospital Therapy Department
Spencer	Physical Therapy		Advanced Rehabilitation
Spencer	Physical Therapy		Pro Rehab
Perry	Podiatry	Donald Rothrauff, DPM	Perry Regional Foot and Ankle
Perry	Radiology	Scott Babin, M.D.	Perry County Memorial Hospital
Perry	Radiology	Sean Ladson	Perry County Memorial Hospital
Perry	Urology	Phillip Gilson, M.D.	Perry County Memorial Hospital

Street	City	State	Zip	Phone
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
135 Main Cross St S	Hawesville	KY	42348	270-927-1000
135 Main Cross St S	Hawesville	KY	42348	270-927-1000
602 Main St	Tell City	IN	47586	812-772-2300
1430 Main St	Tell City	IN	47586	812-547-8692
826 IN-161 Ste D	Rockport	IN	47635	812-649-4926
2702 N County Rd 700 W	Richland City	IN	47634	812-971-8235
185 Ky-271	Lewisport	KY	42351	270-927-9991
18485 State Rd 37	Leopold	IN	47551	812-843-3038
109 E. Hwy 66 East	Tell City	IN	47586	812-547-9661
148 13th St	Tell City	IN	47586	812-547-0333
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
315 Main St.	Troy	IN	47588	812-547-9552
559 Main St., Suite 1	Rockport	IN	47586	812-649-2271
8340 US Hwy 60 W	Lewisport	KY	42351	270-295-3432
501 Main St	Hawesville	KY	42348	270-927-6653
140 Cross St N	Hawesville	KY	42348	270-927-6045
501 Main St	Hawesville	KY	42348	270-927-6653
819 Main St	Tell City	IN	47586	812-548-4444
819 Main St	Tell City	IN	47586	812-548-4444
740 9th St	Tell City	IN	47586	812-547-7566
741 12th St	Tell City	IN	47586	812-547-3478
740 9th St	Tell City	IN	47586	812-547-2876
740 9th St	Tell City	IN	47586	812-547-2876
607 Washington St	Cannelton	IN	47520	812-547-2824
559 Main St #4	Rockport	IN	47635	812-649-2331
3430 IN-66	Rockport	IN	47635	812-649-4416
1 N Kringle Pl	Santa Claus	IN	47579	812-937-9750
3430 IN-66	Rockport	IN	47635	812-649-4416
100 Louis J Koch Blvd	Santa Claus	IN	47579	812-634-2040
421 W Medcalf St	Dale	IN	47523	812-937-2591
100 W Hammond St	Dale	IN	47523	812-937-4818
3430 IN-66	Rockport	IN	47635	812-649-4416

1602 Main St	Tell City	IN	47586	812-547-1140
302 Main St., Suite 102	Tell City	IN	47586	812-547-8878
111 E. Hwy 66	Tell City	IN	47586	812-547-7448
111 E. Hwy 66	Tell City	IN	47586	812-547-7448
111 E. Hwy 66	Tell City	IN	47586	812-547-7448
111 E. Hwy 66	Tell City	IN	47586	812-547-7448
185 Lee Henderson Spur	Lewisport	KY	42351	270-927-9991
421 7th Street	Tell City	IN	47586	812-547-9663
421 7th Street	Tell City	IN	47586	812-547-9663
421 7th Street	Tell City	IN	47586	812-547-9663
18485 State Rd 37	Leopold	IN	47551	812-843-3038
8475 Dauby Lane	Tell City	IN	47586	812-547-1377
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
26020 State Road 145	Bristow	IN		812-357-2097
559 Main St., Suite 1	Rockport	IN	47586	812-649-2271
92 W Christmas Blvd	Santa Claus	IN	47579	812-937-4120
4 W Vine St	Dale	IN	47523	812-937-7140
92 W Christmas Blvd	Santa Claus	IN	47579	812-937-4120
3434 IN-66	Rockport	IN	47635	812-649-5061
105 S 2nd St	Rockport	IN	47635	812-649-4313
825 N Main St	Richland City	IN	47634	937-762-5000
3434 IN-66	Rockport	IN	47635	812-649-5061
710 Fulton St	Tell City	IN	47586	812-547-3565
632 Main St	Tell City	IN	47568	812-547-1200
100 S 4th St	Cannelton	IN	47520	
802 9th St	Tell City	IN	47586	812-547-0903
148 13th St	Tell City	IN	47586	812-547-0333
148 13th St	Tell City	IN	47586	812-547-0333
				866-936-1978
225 Main St.	Rockport	IN	47635	812-649-9151
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
1443 9th St	Tell City	IN	47586	812-547-7905
				812-772-0579
109 East Hwy 66	Tell City	IN	47586	800-683-8313

315 Main St.	Troy	IN	47588	812-547-9552
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
8885 State Road 237	Tell City	IN	47586	812-547-0185
8885 State Road 237	Tell City	IN	47586	812-547-0185
123 Eastwind Ct	Hawesville	KY	42348	270-927-8700
715 Main St., PO Box 457	Tell City	IN	47586	812-547-3396
715 Main St., PO Box 457	Tell City	IN	47586	812-547-3396
715 Main St., PO Box 457	Tell City	IN	47586	812-547-3396
730 E. IN 66	Tell City	IN	47586	812-548-0030
102 N 6th St	Rockport	IN	47635	812-649-4266
102 N 6th St	Rockport	IN	47635	812-649-4266
8885 State Road 237	Tell City	IN	47586	812-547-0185
315 Main St.	Troy	IN	47588	812-547-9552
109 E. Hwy 66 East	Tell City	IN	47586	812-547-3447
18485 State Rd 37	Leopold	IN	47551	812-843-3038
1590 4th St #1	Lewisport	KY	42351	270-295-3356
225 12th St.	Tell City	IN	47586	812-547-4201
730 IN 66 E	Tell City	IN	47586	812-547-9950
815 Sycamore St	Rockport	IN	47635	812-649-2227
400 Main St	Rockport	IN	47635	812-649-9181
804-814 N Lincoln Ave	Rockport	IN	47635	812-649-9181
509 Main St	Rockport	IN	47635	812-649-2227
117 Eastwind Ct	Hawesville	KY	42348	270-927-9229
1020-C 11th St	Tell City	IN	47586	812-547-7770
8885 State Road 237	Tell City	IN	47586	812-547-0320
5 E Christmas Blvd Suite D	Santa Claus	IN	47579	812-937-4970
2827 West State Road 66, Suite B	Rockport	IN	47635	812-627-7007
620 Main St	Tell City	IN	47586	812-547-7482
8885 State Road 237	Tell City	IN	47586	812-547-0185
8885 State Road 237	Tell City	IN	47586	812-547-0185
8885 State Road 237	Tell City	IN	47586	812-547-0185