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Community Health Needs Assessment
CHI St. Vincent North
June 2016

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Introduction

The 2016 CHI St. Vincent North (SVN) Community Health Needs Assessment (CHNA) is a comprehensive evaluation of the health needs of the SVN community. SVN, located in Sherwood, Arkansas is one of four hospitals in the CHI St. Vincent Health System, a wholly-owned subsidiary of Catholic Health Initiatives. The hospital is licensed for 69 beds, is a Level IV Trauma Center, and has since 1999 furthered the healing ministry of the Catholic Church in the greater Sherwood, North Little Rock, Jacksonville, and surrounding communities.

Primary service area

The primary service area was determined by our Strategy and Business Development Office. Using 75% of patient discharges as the threshold, three counties were identified as encompassing the SVN primary service area. These counties include Faulkner, Lonoke, and Pulaski.

CHI St. Vincent North Primary Service Area

Methodology

The following section details the data collection process for the CHNA and the methods of analysis employed in the assessment.

Secondary Data Analysis

Indicator Selection & Data Collection

The indicators that were selected to drive our secondary data analysis were a combination of health outcomes, health behaviors and socioeconomic health determinants used in the 2013 SVN CHNA report. Additionally, indicators were extracted from the Robert Wood Johnson Foundation County Health Ranking and Roadmaps program to be compared against the 2013 indicator list for inclusion or substitution in the 2016 assessment.

In order to obtain data on the chosen indicators for each county in SVN's primary service area, as well as data for the State of Arkansas and United States, publicly available data sources were used. See *Glossary*

for a list of all indicators used in our Community Health Needs Assessment, as well as the secondary data sources that were used for each of these indicators (indicators for which data could not be found, either for certain counties or in whole, are identified as such).

Gaps/Limitations

While secondary data was readily found for many of the identified indicators, there were issues of limited and/or dated data for others.

Relevant gaps in data for the 2016 SVN CHNA include:

- Quantitative data related to the homeless population
- Due to changes in the survey methodology for the Behavioral Risk Factor Surveillance System, data before 2011 at the county, state, and national level are not comparable to data in years 2011 and later.

Analysis and Interpretation of Secondary Data.

In an effort to analyze generated data on these core indicators for the SVN community within an interpretable context, the following data was compared for each variable: the value for each individual county, the mean value for the aggregate SVN primary service area, the Arkansas State value, and the U.S. value. For certain indicators, or indicator subsets, data was not available for one or more of the above areas, in these instances data was still analyzed and reported for the areas as available.

Primary Data Analysis

Integral to the identification and understanding of the health needs of the SVN Community was the collection of qualitative insight from key leaders and community stakeholders, representing diverse backgrounds and perspectives. These individuals shared their insight and concerns regarding a broad range of health related issues in the community. The results of these interviews and focus groups represent the primary data incorporated into this report. For detailed information regarding the participants in the interviews and focus groups, please see the section titled, *Summary of Qualitative Data Findings*.

Gaps/Limitations

While the interview process was extensive and encompassed stakeholders across Central Arkansas there were still limitations in the data collected.

- Interviews with stakeholders from the adolescent population

Analysis and Interpretation of Primary Data

In an effort to analyze the interviews into an interpretable context, for all questions asked through this process we identified consistent themes and provided a summary.

Evaluation of SVN 2013 CHNA Implementation

The hospital has implemented several ongoing initiatives in response to its community health needs assessment and its implementation plan from 2013. There are five major categories of influence on health: 1. genes and associated biology; 2. health behaviors such as dietary habits, tobacco, alcohol and drug use,

and physical fitness; 3. medical care and public health services; 4. the ecology of all living things; and 5. social and societal characteristics. The hospital's efforts are aimed primarily at the second and third categories of influence with some additional efforts in the fifth category of influence. Although progress is being made for individual community members, the total impact on downstream health status indicators at this juncture is negligible due to the multi-factorial nature of health and disease. In future years we plan to address more upstream efforts by partnering with city, county and state officials to impact the built environment and address the social determinants of health while maintaining our work around prevention, behavior and treatment.

Next Steps

The results of the 2016 SVN CHNA will be used to generate specific strategies to address a list of prioritized health needs in the SVN community. These prioritized health needs will be incorporated into an implementation plan, to be released at a later date, and used to inform strategic planning at both CHI St. Vincent Health System and CHI St. Vincent North.

Executive Summary

After an extensive data collection and interview process the top health issues in the CHI St. Vincent North (SVN) primary service area (PSA) are access to healthcare services, obesity and obesity-related illnesses, mental health and suicide prevention, health promotion and health education, chronic disease management, senior health, and Latino health.

CHI St. Vincent North primary service area Analysis: Faulkner, Lonoke, and Pulaski County

- Many of the residents within the primary service area report or exhibit unhealthy behaviors.
    - Approximately ⅓ of the adult primary service area population is obese and approximately ⅓ of children and adolescent primary service area population grades K-10 are considered obese or overweight.
    - 86.0% of the adult primary service area population report consuming less than 5 servings of fruits or vegetables a day.
    - 29.4% of the adult primary service area report that they have no leisure-time physical activity.
- Excessive alcohol consumption in the primary service area is higher than state and national averages. 21% of the primary service area population reports that they use tobacco every day or most days which is slightly less than state average 22% and higher than the national average of 18%.
- Crime and violence - Homicide rates across the primary service area have decreased from 10.75 to 7.36, per 100,000 population over 2011-2014, with the lowest rate of 7.15 recorded in 2013. Blacks recorded higher homicide rates when compared to other races. Males recorded higher rates when compared to the female population.
- Mental health - SVN primary service area records a high number of mental health days of 3.57 when compared to the rate for rest of the country (2.3). From 2011 - 2014, the number of inpatient psychiatric discharges have gone up from 6,273 to 7,645 discharges. Suicide rates per 100,000 population across the primary service area have decreased from 14.75 in 2011 to 14.51 in 2014. Whites recorded higher rates compared to the other races. Males recorded higher rates

when compared to the female population. Suicide rates were higher for people between the ages of 35 - 54 years.

- In terms of maternal and child health, infant mortality was a major concern. Black mothers saw extraordinarily high rates ranging from 8.61 to 12.26 per 100,000 population, compared to mothers of other races in the primary service area. This indicates that more education and awareness about the significance of prenatal care may be an opportunity. Besides higher infant mortality rates, the primary service area also recorded higher percentages of babies being born that weigh less than 1,500 grams.
- The primary service area aggregate rates for mortality due to cardiovascular diseases are higher than state and national rates. However, the state rates for these measures have declined over the last four years (2011 - 2014).
- With respect to Cancer mortality, Breast Cancer mortality rates for the primary service area ranged from 12.97 to 15.61, per 100,000 population, over the four years. These rates far exceeded the state and national rates. Whites had higher incidence rates for the different cancers, while Blacks had higher mortality rates for the different cancers. In terms of Preventative measures, 60% of female Medicare Enrollees age 67-69 primary service area received a Mammogram which is higher than the state average of 58% and lower the national average at 71%.
- The needs consistently identified in the interviews with community stakeholders include:
    - Health needs of the Latino Population
    - Access to Nutritious Food
    - Health needs of the Senior Population
    - Health education
    - Chronic disease prevention and management
    - Coordinated case management after hospital discharge
    - Access to healthcare services

County Profiles

Faulkner County

- Population, 2014 estimate – 120,768
- County seat – Conway (fastest growing city in Arkansas)
- Located on the northern side of Arkansas river
- Home to the popular fishing destination, Lake Conway
- Proximity to Little Rock and to major transportation routes
- Attractive to industry such as light manufacturing
- Hendrix college, central Baptist college and university of central Arkansas located in Conway
- Arkansas Educational Television Network, Woolly Hollow State Park, Lake Conway, Toad Suck Daze – some local attractions that attract large crowds of local people and many visitors
- Race & Ethnicity(2014)
    - White alone 84.6%
    - Black or African American alone 11.3%
    - Hispanic or Latino 4.1%

    - American Indian/Alaskan Native 0.7%
    - Asian alone 1.2%
    - Native Hawaiian/Other Pacific Islander 0.1%
    - Two or more Races 2.0%
- Average Household size 2.63
- Average Family size 3.13
- Median Household Income $51,095
- Per Capita income $24,703
- % total Population below poverty line 15.1%

Lonoke County

- Population, 2014 estimate – 71,557
- County seat – Lonoke
- Is the eastern most county in the SVN primary service area
- Named after a “lone oak” tree that was used as a landmark by a railroad surveyor
- Primarily agricultural county
- Joe Hogan Fish Hatchery, Smoke Hold Natural Area, Toltec Mounds State Park
- Race & Ethnicity(2014)
    - White alone 90.4%
    - Black or African American alone 6.2%
    - Hispanic or Latino 4.0%
    - American Indian/Alaskan Native 0.7%
    - Asian alone 0.9%
    - Native Hawaiian/Other Pacific Islander 0.1%
    - Two or more Races 1.8%
- Average Household size 2.74
- Average family size 3.15
- Median Household Income $52,805
- Per Capita income $23,339
- % total Population below poverty line 13.2%

Pulaski County

- Population, 2014 estimate – 392,702
- County seat – Little rock (also AR state capital)
- Home of former American President Bill Clinton
- Most populous county in the state
- Economic base is largely government and support services
- Race & Ethnicity(2014)
    - White alone 59.2%
    - Black or African American alone 36%
    - Hispanic or Latino 6%

    - American Indian/Alaskan Native 0.5%
    - Asian alone 2.2%
    - Native Hawaiian/Other Pacific Islander 0.1%
    - Two or more Races 2.0%
- Average Household size 2.49
- Average Family size 3.23
- Median Household Income $46,410
- Per Capita income $27,506
- % total Population below poverty line 16.9%

Key Community Socioeconomic Factors

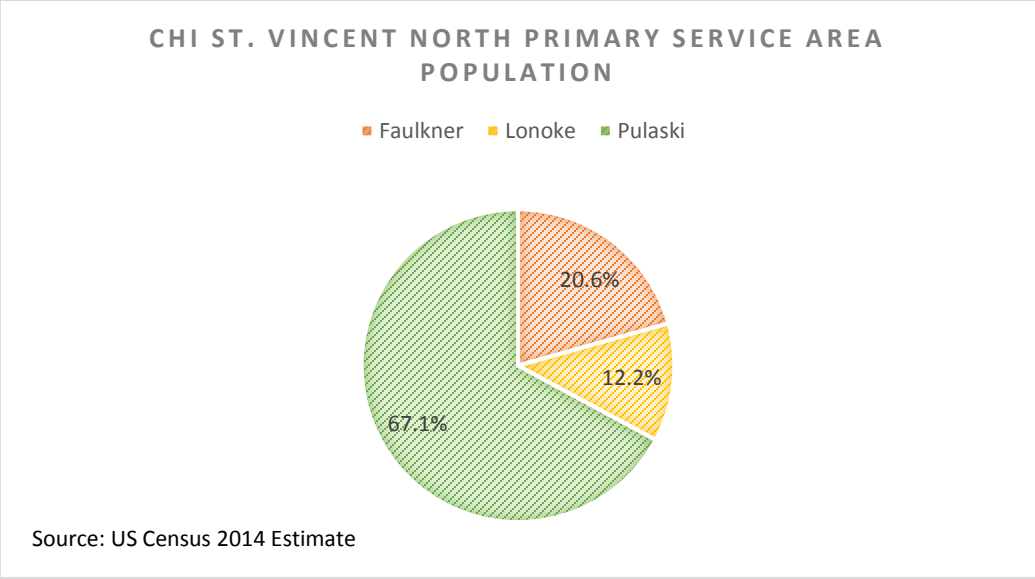
Population Growth

According to the US Census and indicated in the table below, all of the counties in the SVN primary service area, have seen a positive change in population growth between 2010 and 2014.[1] Faulkner County (6.7%) experienced the most significant growth over the four year period and performed better than the state (1.7%) and US (3.3%) averages.

Population Growth, US Census 2014 Estimate	
County	% Change
Faulkner	6.7%
Lonoke	4.7%
Pulaski	2.6%
Arkansas	1.7%
US	3.3%
Aggregate	4.7%

As indicated in the pie graph below, Pulaski County represents the bulk of the population of the primary service area with 67.1% of the population.[2] Faulkner County (20.6%) is the second most populous county in the primary service area and Lonoke County (12.2%) has the lowest population.

[1] Growth rate calculated by taking the percentage change in population from 2010-2014 (provided by the US Census) divided by 4.
[2] US Census 2014 Data



Age

According to the US Census, in 2014, the median age of Arkansas and the US was 37.6 and 37.4 years, respectively. The median age of the three counties representing the SVN primary service area was 34.4 years. Pulaski County (36.2 years) was the oldest county in the primary service area, and has the highest senior population in the SVN primary service area. The youngest county was Faulkner County (31.5 years) and 11.2% of the population was age 65 years or older.

Age Characteristics, US Census, 2014 Estimate			
	Median Age	% under age 5	% age 65 or over
Faulkner	31.5	6.6%	11.2%
Lonoke	35.4	6.7%	12.6%
Pulaski	36.2	7.0%	13.5%
Arkansas	37.6	6.5	15.70%
US	37.4	6.2	14.50%
Aggregate	34.4	6.8%	12.4%

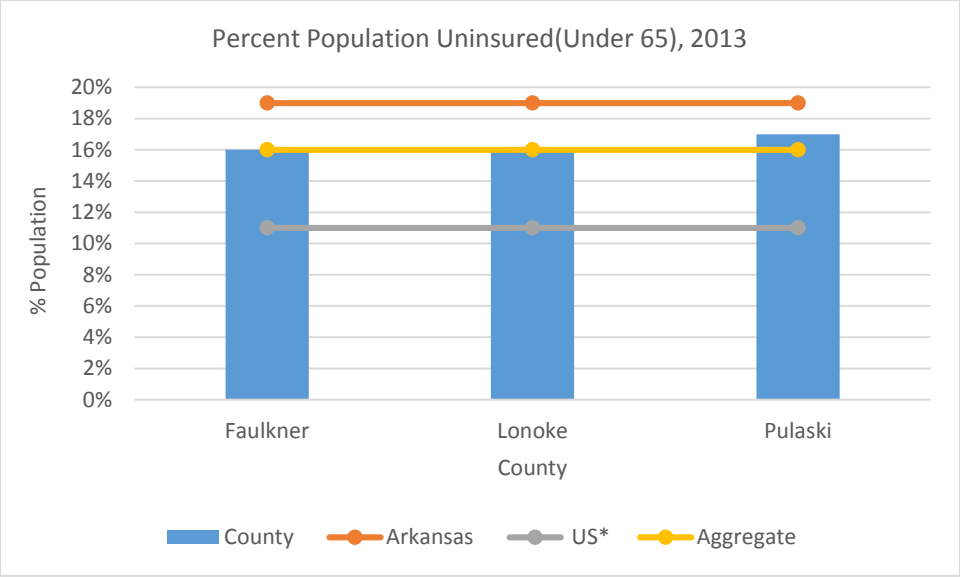
Race- Ethnicity

Race and Ethnicity are often risk factors for adverse health conditions and so understanding the racial and ethnic breakdown of the population provides important context. According to the US Census, in 2014, the counties within the SVN primary service area have similar racial and ethnic breakdowns among persons reporting one race as indicated in the table below. There are however some exceptions. Pulaski County has the largest Black population (36%) as well as the largest Hispanic population (6%) in the SVN primary service area. In regards to the Black population, this is more than double the state figure (15.6%) and also higher than the US figure of 13.2% for this population. Pulaski County's Hispanic population (6%) is slightly lower than the state average of 7% and significantly lower than the national average of 17%.

Race-Ethnicity, US Census, 2014 Estimate Among Persons Reporting One Race				
	White	Black	Other	Hispanic (any race)
Faulkner	84.6%	11.3%	2.0%	4.1%
Lonoke	90.4%	6.2%	1.7%	4.0%
Pulaski	59.2%	36.0%	12.7%	6.0%
Arkansas	79.7%	15.6%	2.8%	7.0%
US	77.4%	13.2%	6.8%	17%
Aggregate	78.1%	17.8%	5.5%	4.7%

Uninsured

Health insurance coverage is an important driver in ensuring access to healthcare services. As indicated in the graph below, Pulaski County (17%) had the highest uninsured population in 2013.[3] All counties in the SVN primary service area had a lower uninsured population figure than the state average of 19%. However, none of the counties performed better than the top US performers[4] (11%) for this measure.



**Constitutes the Top US performers (10th percentile)*

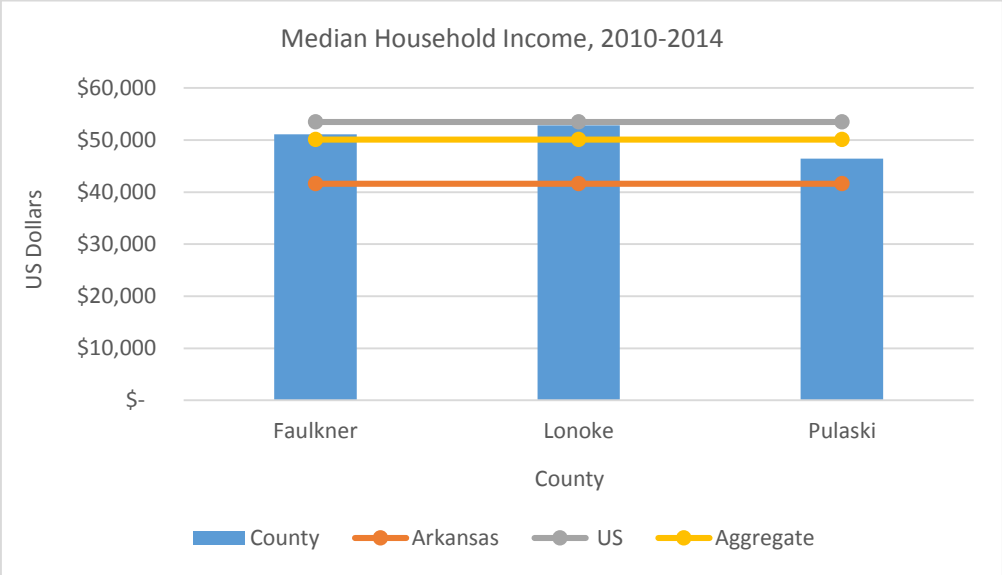
[3] 2013 Small Area Health Insurance Estimates sponsored by the US Census Bureau and the Centers for Disease Control and Prevention and accessed at County Health Rankings & Roadmap.

[4] 10th Percentile Ranking

It is important to note that from 2013 to 2014, through the Arkansas Private Option, Arkansas was able to reduce the uninsured population (65 and younger) almost in half.[5] This was the second highest reduction in the nation and the most recent data available at the county level does not reflect this.

Income

As indicated in the graph below, all counties within the SVN primary service area fall below the US median household income of $53,482.6. Pulaski County has the lowest median household income at $46,410.



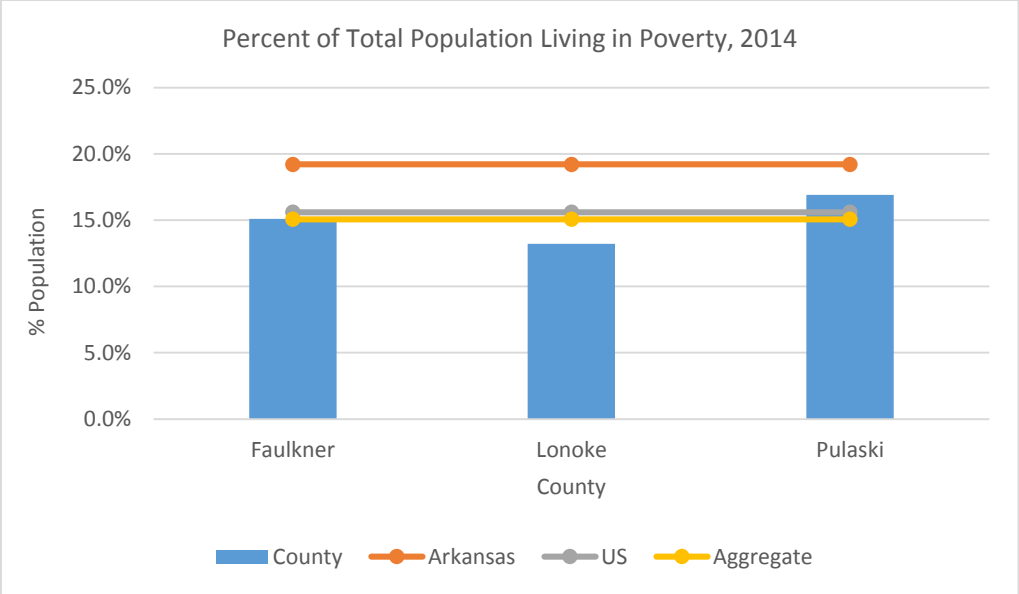
Poverty

All counties in the SVN primary service area have a lower percentage of the population living in poverty than Arkansas overall (19.2%).[7] Pulaski County (16.9%), has the highest percentage of the total population living in poverty and Lonoke County (13.2%) the lowest percentage of the total population living in poverty.

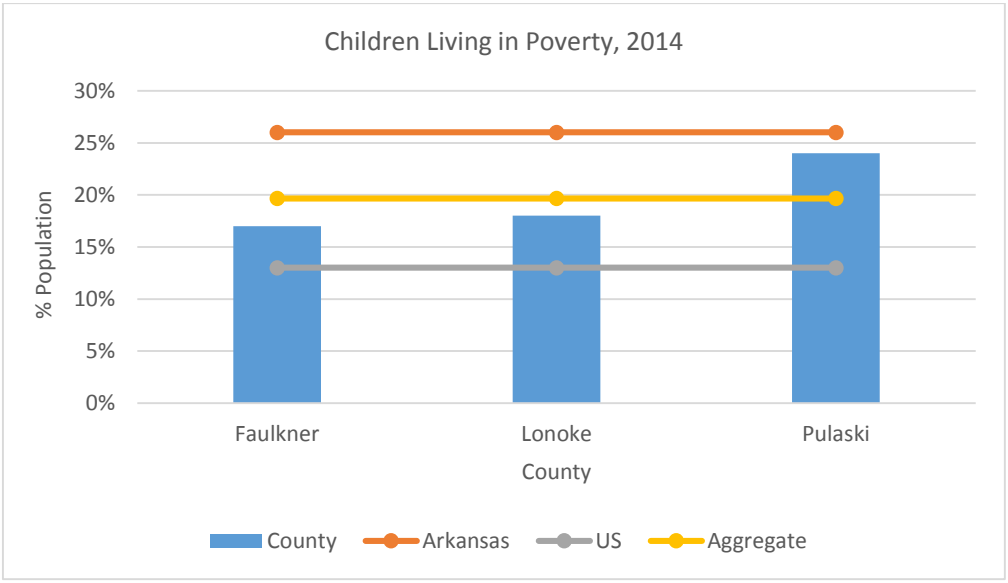
[5] Guyer, Jocelyn, Naomi Shine, Mary Beth Musumeci, and Robin Rudowtiz. "A Look at the Private Option in Arkansas." The Henry J. Kaiser Family Foundation, 2015. Web.

[6] Source: US Census Bureau, 2010-2014 American Community Survey 5-year Estimates

[7] US Census American Community Survey, 5 –year estimates 2010-2014



Pulaski County (24%) has the highest percentage of children living in poverty (age 18 and under) and all the counties in the primary service area perform better than Arkansas overall (26%).[8] None of the counties however performed equal to or better than top US performers (13%) for this measure.

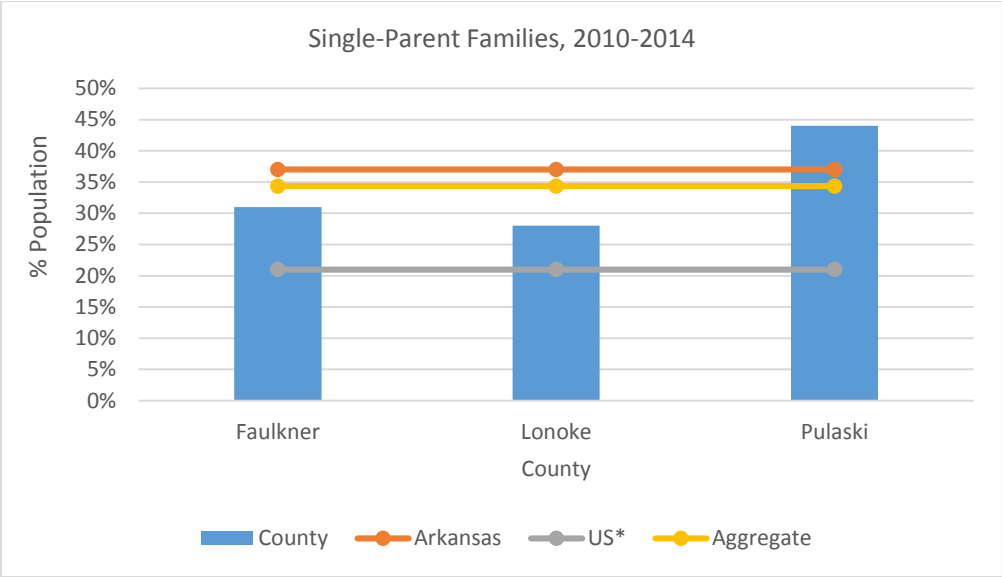


**Constitutes the Top US performers (10th percentile)*

[8] United States Census Bureau, Small Area Income and Poverty Estimates(SAIPE) program, 2014 accessed at County Health Rankings & Roadmap, 2016

Single-Parent Families

Pulaski County has the highest percentage of children living in single parent households in the SVN primary service area at 44% which is higher than the state average of 37% and higher than top US performers (21.0%). [9] Lonoke County (28%) has the lowest percentage of children living in a single parent household.



**Constitutes the Top US performers (10th percentile)*

Unemployment

According to the US Department of Labor, in 2014, Lonoke County (5.2%) had the lowest unemployment rate in the SVN primary service area.[10] This is lower than the state and US averages for this period of 6.0% and 6.2%, respectively. Faulkner County had the highest unemployment rate at 5.7%, followed by Pulaski County at 5.6%.

Disability

The percentage of the population 5 years and older with one type of disability (either sensory, physical, mental, or self-care) in Lonoke County (15.8%) is lower than the overall state average (16.7%) and higher than the US averages 12. 3%.[11] Faulkner County (12. 4%) has the lowest disabled population in the primary service area, followed by Pulaski County (13.1%).

Education

When looking at the total population of residents age 25 and over reporting less than a 9th grade education, all of the counties within the SVN primary service area perform better than the state (5.8%)

[9] US Census American Community Survey, 5 –year estimates 2010-2014 access at County Health Ranking
[10] Source: United States Department of Labor. Bureau of Labor Statistics, 2014 Annual Averages
[11] US Census American Community Survey, 5 –year estimates 2010-2014

and US figure (5.8%) for this measure. Additionally, all of the counties within the SVN primary service area with the exception of Pulaski County, have a higher percentage of the population age 25 and over with a high school diploma than the state and US at 35% and 28%, respectively.

Education in 2014 among Population Age 25 and Over			
	%Less than 9th Grade	%High School Graduate	%Bachelor's Degree or Higher
Faulkner	3.4	31.7	27.3
Lonoke	3.8	34.8	18.7
Pulaski	3	27.6	32.1
State	5.8	35	20.6
US	5.8	28	29.3

Educational attainment is often a predictor of income status and higher levels of education and income are associated with better health outcomes. As indicated in the table below, the poverty rate by educational attainment level in the SVN primary service area is lowest among individuals that have a bachelor's degree or higher.

Poverty Rate by Educational Attainment 25 years and over			
	%Less than High School Graduate	%High School Graduate	Bachelor's Degree or Higher
Faulkner	25.9	12.4	4
Lonoke	22.8	13.3	3.5
Pulaski	29	17	4.5
State	28.4	16.2	4.4
US	27.6	14.2	4.5

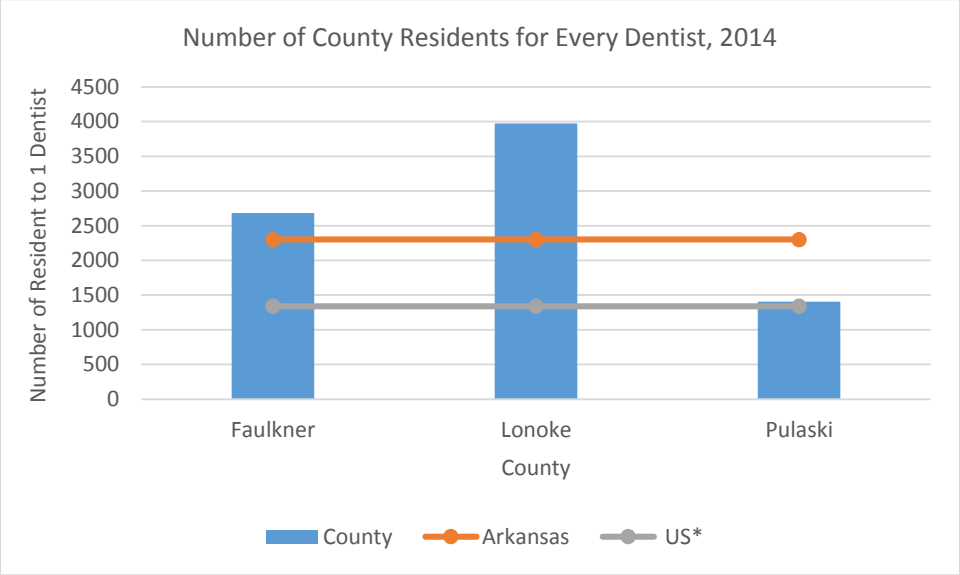
Language Spoken at Home

The 2009-2013 American Community Survey 5 Year Estimates, reports that in all three counties, 3.4% or less of the population speaks English less than "very well".

Health Resource Availability

Licensed Dentist

In the SVN primary service area the number of residents for every dentist varies.[12] Pulaski County (1403:1) the most populated county in the SVN primary service, had the lowest number of county residents to licensed dentists, and was the only county to fall below the overall Arkansas ratio (2300:1). Additionally, Pulaski County's ratio of licensed dentists to the population was only slightly higher than the top US performing counties (1340:1).



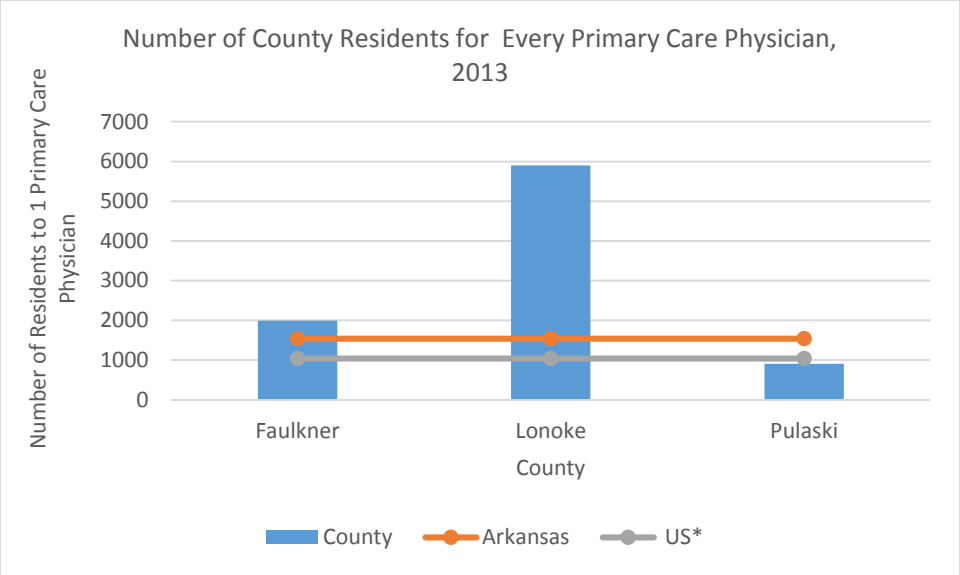
**Constitutes the Top US performers (10th percentile)*

Primary Care Physicians

A critical component of improving population health outcomes is access to primary care physicians for preventative care and when needed, referrals to specialty care. Pulaski County (904:1), the most populous county in the primary service area, has a higher concentration of primary care physicians for every person.[13] At this ratio, Pulaski County performs better than the overall Arkansas ratio (1540:1) and better than the top US performers (1040:1). All of the remaining counties in the primary service area performed worse than Arkansas overall for this measure.

[12] Area Health Resource Fie/American Medical Association 2014 at accessed at County Health Rankings & Roadmap 2016 County Health Rankings

[13] Area Health Resource Fie/American Medical Association 2013, accessed at County Health Rankings & Roadmaps 2016 County Health. In this measure, primary care physicians includes non-federal, practicing physicians (M.D.'s and D.O.s) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics

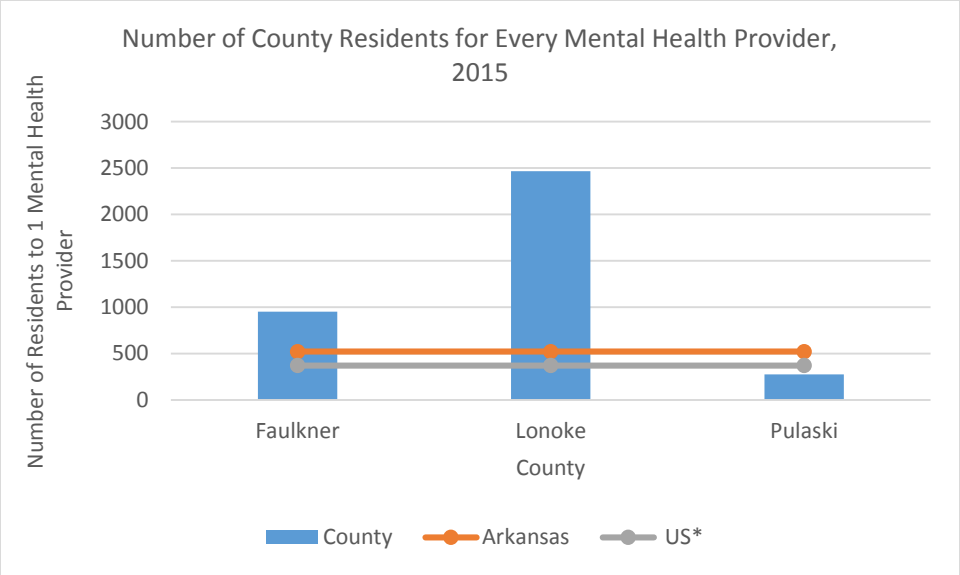


**Constitutes the Top US performers (10th percentile)*

Mental Health Providers

Access to mental health resources is critical to the overall health of a community and the ratio of mental health providers varies across the SVN primary service area. Mental Health providers in this measure include psychiatrist, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and advanced practice nurses specializing in mental health care.[14] Pulaski County (275:1) has the highest concentration of mental health providers in the SVN primary service. Pulaski County performs better than the overall Arkansas ratio (520:1) and the top US performers (370:1). Lonoke County (2467:1), has the lowest concentration of mental health providers in the SVN primary service area.

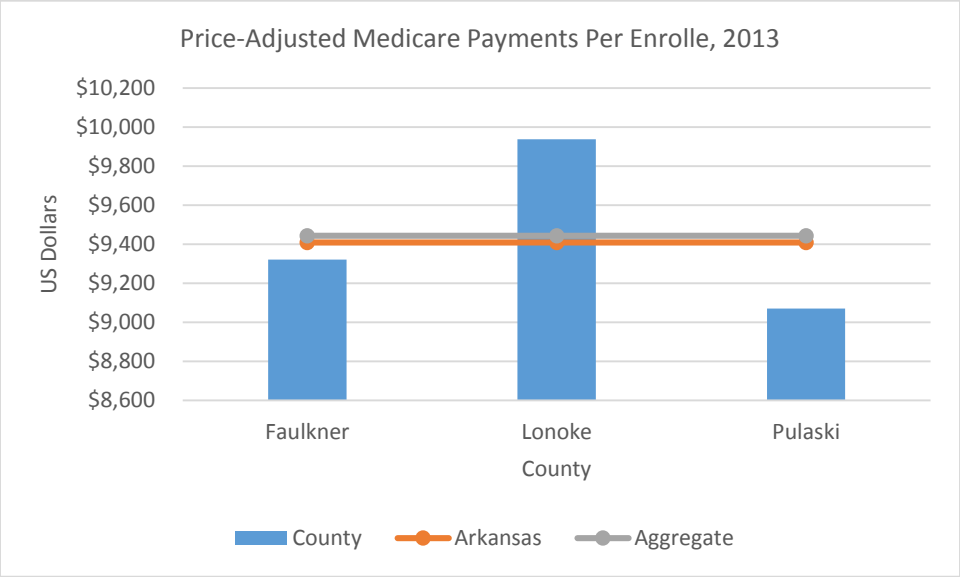
[14] CMS, National Provider Identification 2015 accessed at County Health Rankings & Roadmaps 2016



**Constitutes the Top US performers (10th percentile)*

Price- Adjusted Medicare Payments per Enrollee

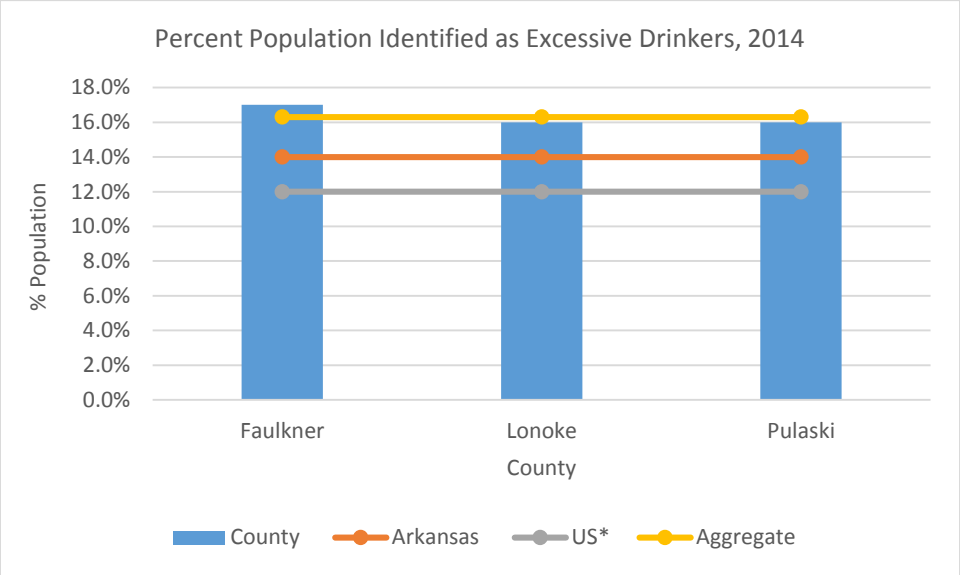
According to the Dartmouth Health Atlas, the 2013 price-adjusted Medicare payments per enrollee was $9,444 for the SVN primary service area. All of the counties, with the exception of Lonoke County ($9,938) within the SVN primary service area have lower price-adjusted Medicare payments per enrollee than the overall Arkansas average of $9,409.



Behavioral Risk Factors

Excessive Drinking

Excessive alcohol consumption is associated with negative outcomes related to chronic conditions and accidental/intentional deaths.[15] Among the counties in the SVN primary service area, Faulkner County has the highest prevalence of excessive drinking[16] with 17% of the population reporting excessive alcohol consumption. This is higher than the state at 16% and greater than the top US performers at 12%.



**Constitutes the Top US performers (10th percentile)*

According to the Behavioral Risk Factor Surveillance System Report, in 2014, Black, non-Hispanic adults reported a higher prevalence of binge drinking than White, non-Hispanic adults at 12.60% in Arkansas overall. However, White, non-Hispanic adults had a higher prevalence of heavy drinking at 5.5% versus Black, non-Hispanic adults at 3.70%.

There was no available data for binge drinking in the Hispanic population in 2014, however in 2012 14% of the Hispanic population identified as binge drinkers with White, non-Hispanics and Black non-Hispanics reporting 12.0% and 10.6%, respectively.[17]

Tobacco Use

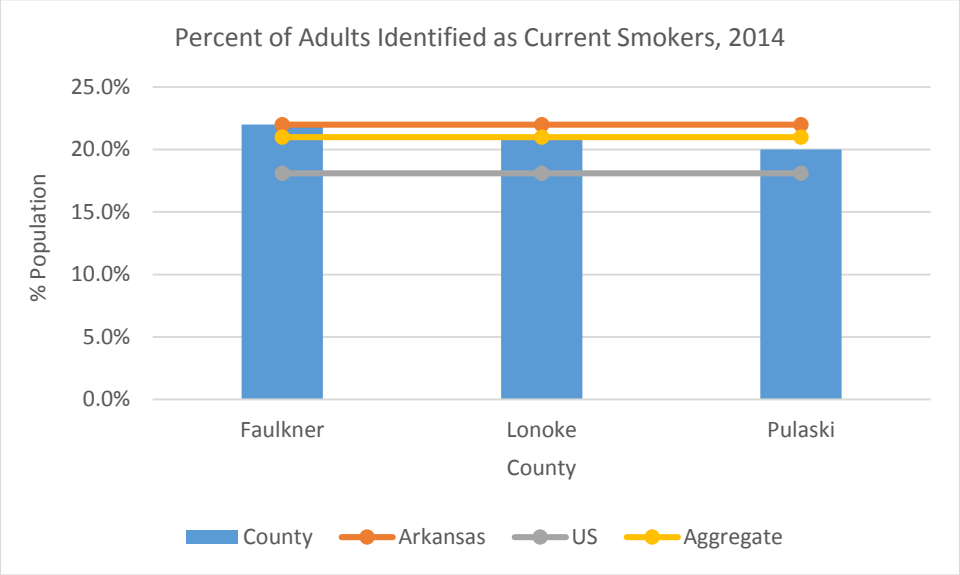
Tobacco use has been proven to cause various cancers and chronic conditions. Having an understanding of its use within the SVN primary service area is therefore important to understanding the health needs

[15] Behavioral Risk Factor Surveillance System (BRFSS), 2014, accessed at County Health Rankings & Roadmap (CHRR) 2016

[16] Excessive Drinking is the percentage of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than one (women) or 2 (men) drinks per day on average.

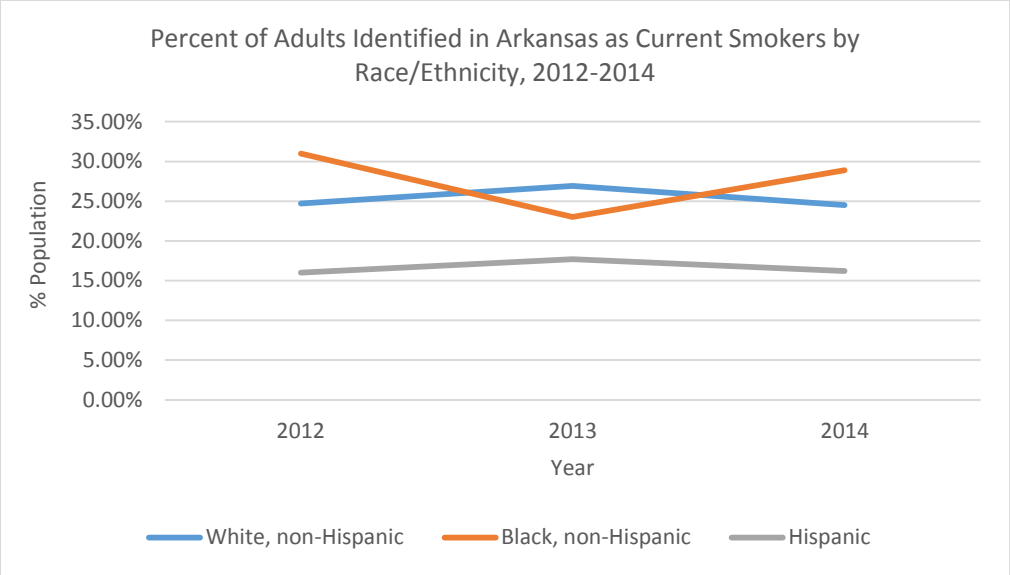
[17] Behavioral Risk Factor Surveillance System (BRFSS), 2014

of this community. The overall prevalence of adults in Arkansas that identify as a current smoker[18] is 22% which is higher than the national population at 18.1%. In the SVN primary service area, 21% of the population identify as current smokers. All of the counties within the primary service area have a higher population identifying as current smokers then the national average. Faulkner County has the highest figure in the primary service area with 22% of the population identifying as current smokers.



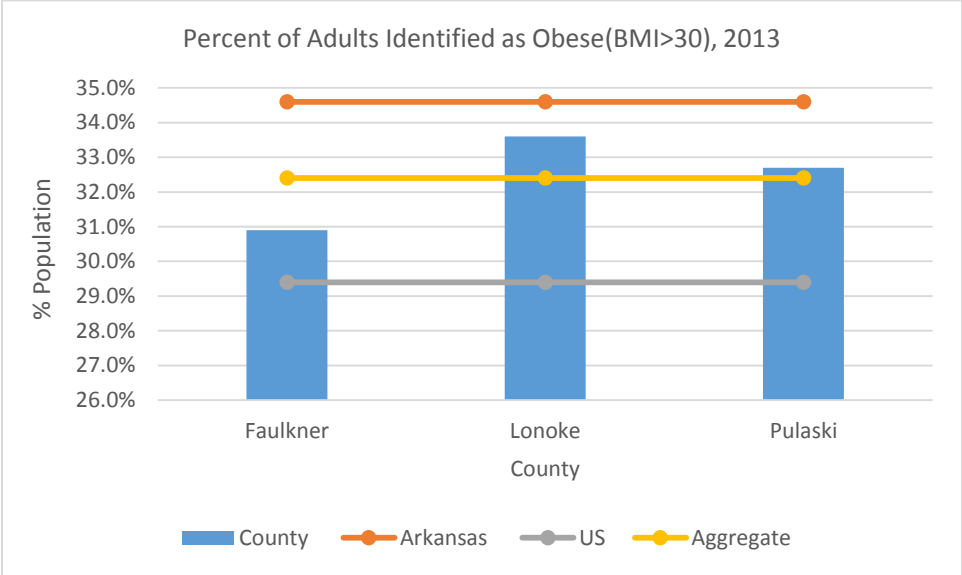
In regards to racial/ethnic groups in the state of Arkansas, Blacks report a greater prevalence of smoking than Whites and the Hispanic population. In 2014, the percent of Black adults identified as current smokers was 28.9%, higher than the percentage in 2013 of 23.0%, but lower than the 2012 figure of 31.0% for this group.

[18]Adult Smoking is the percentage of the adult population that currently smokes every day or most days and has smoked at least 100 cigarettes in their lifetime.



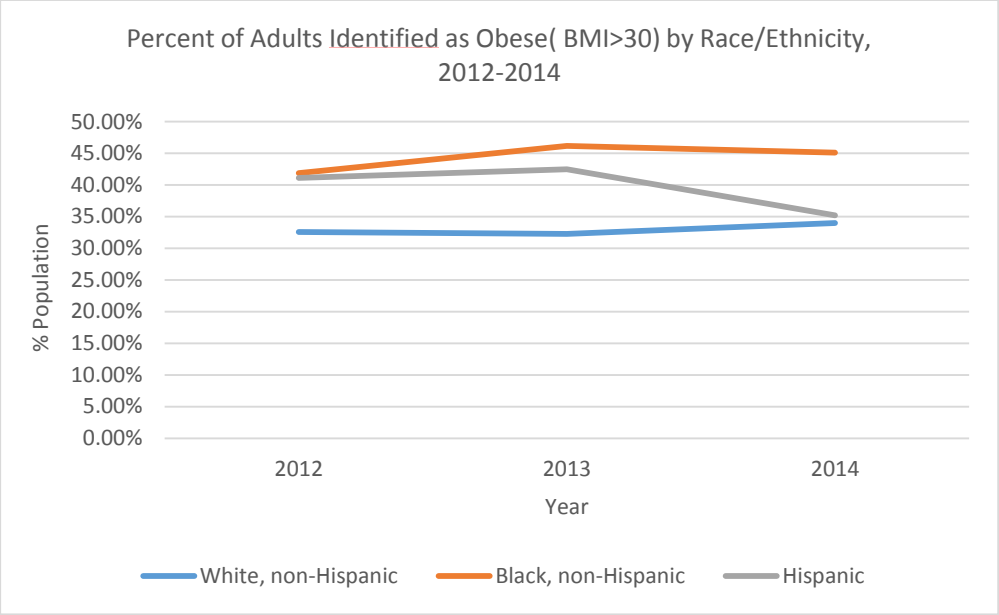
Obesity

Arkansas, overall has the highest population of obese individuals in the US.[19] This is a major health concern as obesity increases the risk for a host of chronic health conditions and diseases. Lonoke County (33.6%) had the highest prevalence of obesity in the SVN primary service area and as indicated in the graph below all of the counties have a lower prevalence of obesity than state average of 34.60%. None of the counties however performed better than the national average.



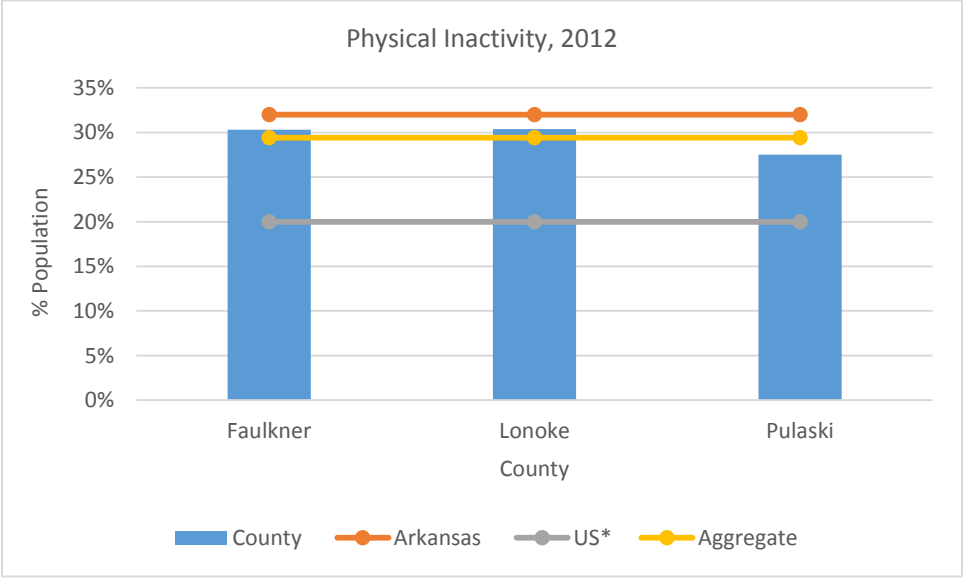
In Arkansas, Blacks have a higher prevalence of obesity than Whites and Hispanics. In 2014, the obesity rate amongst Blacks was 45.19% and as indicated in the graph below the Black population had the highest prevalence of obesity in 2012(41.90%) and 2013(46.20%).

[19] "Arkansas Ranking". State of Obesity. http://stateofobesity.org/adult-obesity/



Physical Inactivity

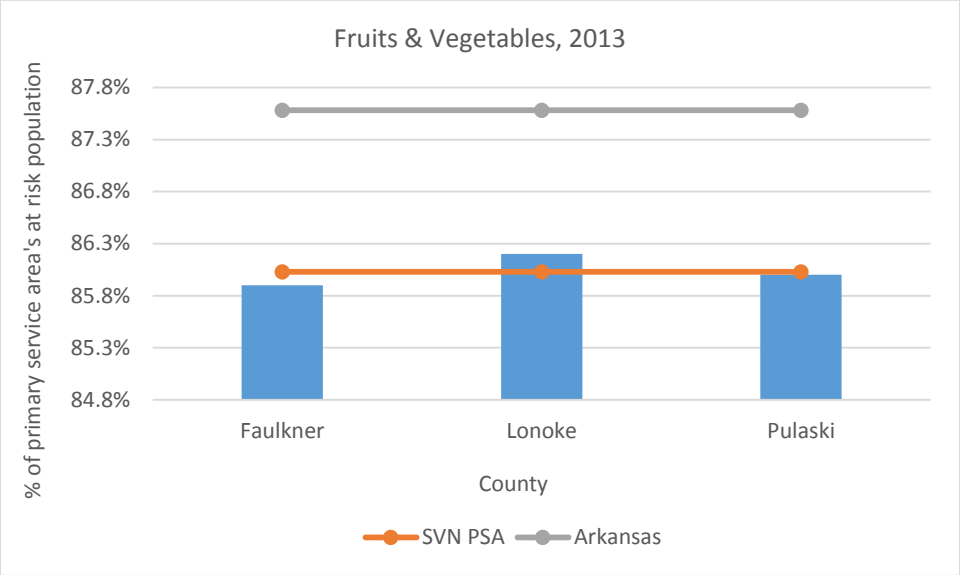
This measure refers to the percentage of adults age 20 and over that report no leisure physical activity.[20] All of the counties in the SVN primary service area have a lower percentage of the population reporting no leisure physical activity than compared to the state (32%). As indicated in the graph below, Pulaski County (28%) had the lowest average. None of the counties, in the SVN primary service area perform equal or better than the top US performers (20%).



**Constitutes the Top US performers (10th percentile)*

[20] "Physical Inactivity is defined as the percentage of adults aged 20 and over reporting no leisure-time physical activity. Examples of physical activities provided include running, calisthenics, golf, gardening, or walking for exercise." Source: County Health Rankings & Roadmaps

Nutrition



Fruits and vegetables contribute important nutrients for the human body. Eating fruits and vegetables lowers the risk of developing many chronic diseases and can also help with weight management. [21] This measure reports the percentage of adults (aged 18 years and older) not consuming the recommended five servings of fruit and vegetables a day. [22] Very few adults in SVN's primary service area are consuming the recommended number of fruits and vegetables each day. In 2013, 86.03% of the SVN primary service area population reported not having consumed the recommended five servings. [23] This percentage is lower than Arkansas State's reported percentage of 87.58% adults. Two out of three counties in the primary service area report lower percentages for this measure compared to the SVN primary service area aggregate, but all three counties report a lower percentage when compared to the state as a whole. In 2013, Lonoke County reported the largest percentage of its population (86.20%) not having met the required criteria, while Faulkner County reported the lowest percentage (85.90%) for the same measure.

[21] State Indicator Report on Fruits & Vegetables, 2013 accessed at the Centers for Disease control and Prevention website

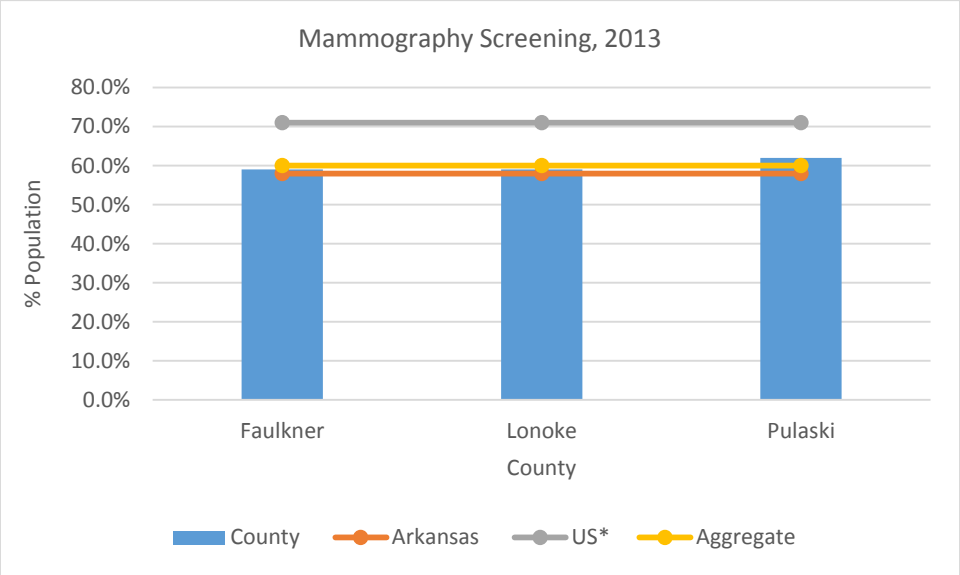
[22] 2010 Dietary Guidelines published by the Office of Disease Prevention and Health Promotion

[23] Behavioral Risk Factor Surveillance System accessed at Arkansas Department of Health website

Protective Factors

Mammography

In the SVN primary service area, all of the counties are performing better the state average (58%) for mammography screenings.[24] The most populous county, Pulaski County (62%), performed the best for this measure in the SVN primary service area but did not perform better or equal to top US performers (71%).



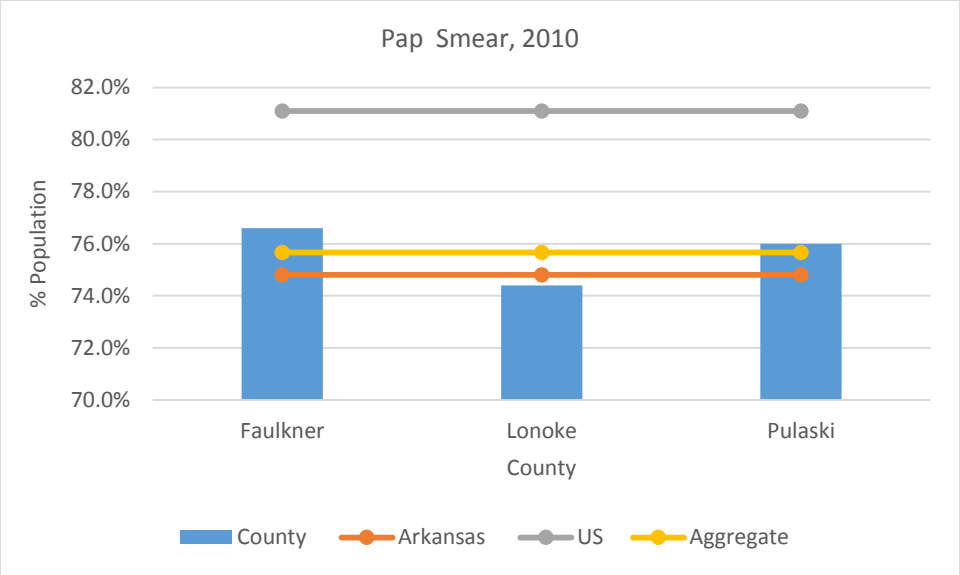
**Constitutes the Top US performers (10th percentile)*

Pap Smear

Pap Smears are a screening tool for cervical cancer and pre-cancerous cells. In the SVN primary service area, 75.70% of women age 18 and above report that they have had a pap test in the past three years. [25] As indicated in the graph below, Faulkner County (76.6%) and Pulaski County (76.0%) performed better than Arkansas overall (74.8%), however none of the counties performed better than the US (81%).

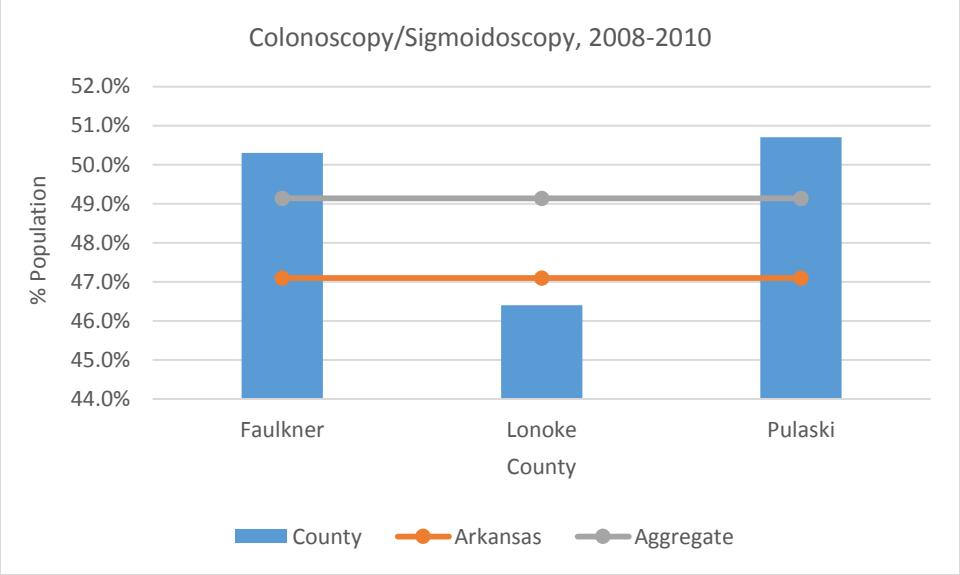
[24] Mammography indicates the percent of female Medicare enrollees ages 67-69 who received a mammography screening in 2013. Source: BRFSS, 2013, accessed at CHRR website.

[25] Arkansas Department of Health. *County Data Estimates: Pap smear*. 2010 report



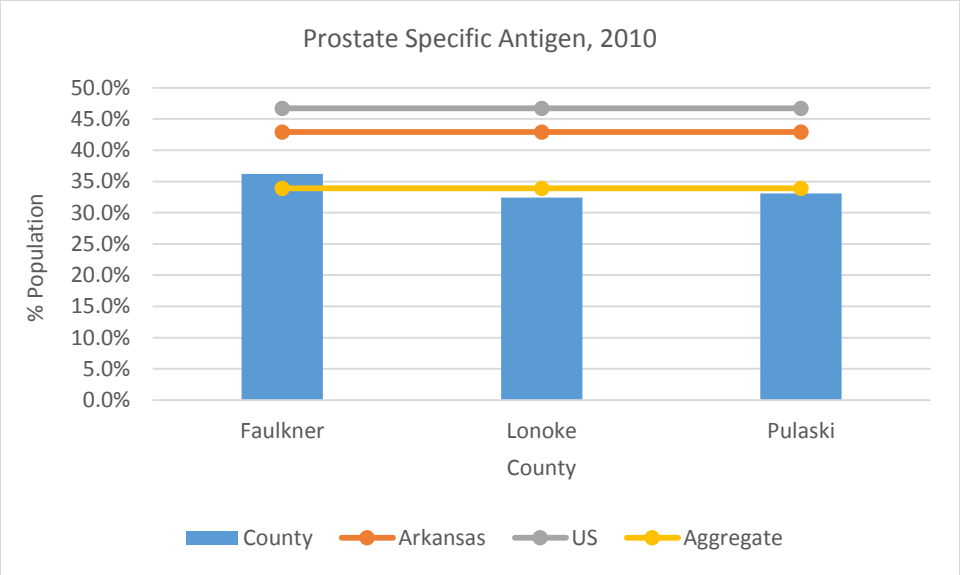
Colonoscopy/ Sigmoidoscopy

Pulaski County (50.7%) has the greatest percentage of adults over the age of 50 in the SVN primary service area that had the recommended colonoscopy or sigmoidoscopy. Faulkner County (50.3%) also performed better than the overall Arkansas average (47.1%).



Prostate Specific Antigen Testing

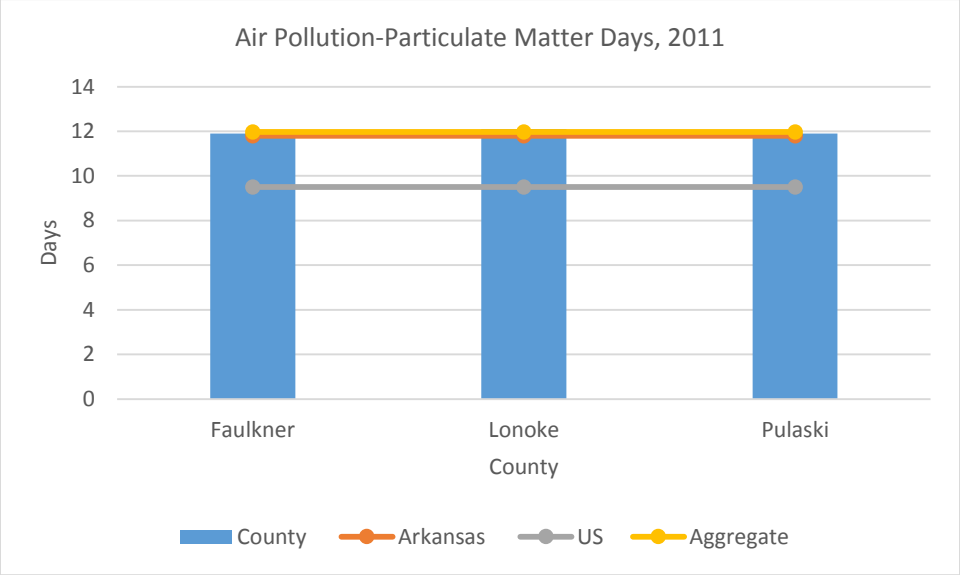
This measure refers to the percentage of men that report not having a prostate specific antigen test in the past two years. Faulkner County has the highest percentage in the SVN primary service area with 46.8% of men reporting not having a prostate specific antigen test in the past two years.[26] All of the counties performed better than Arkansas (42.9%) and US (46.7%) averages for this measure.



[26] County Data Estimates. Arkansas Department of Health.

Environmental Health Factors

Air Pollution



**Constitutes the Top US performers (10th percentile)*

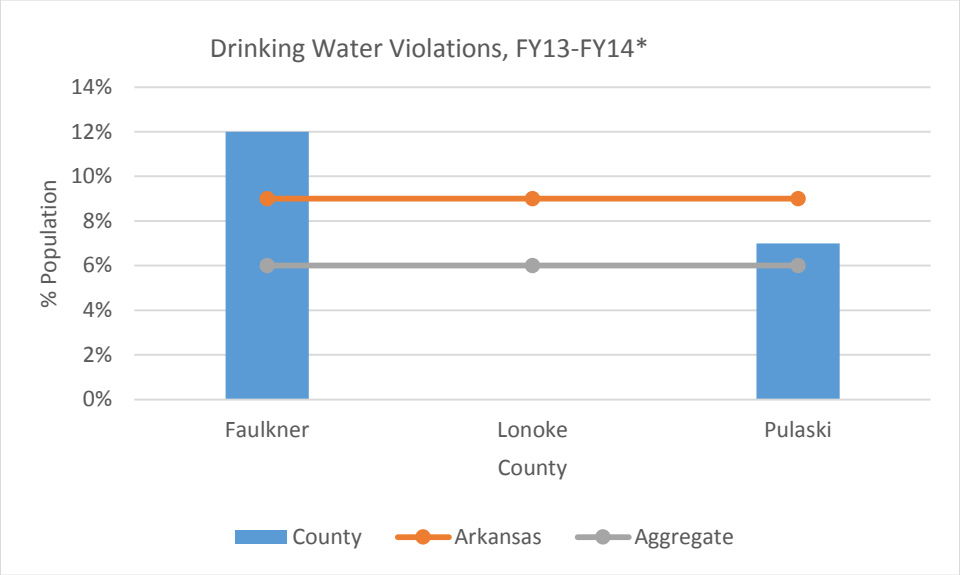
Air Pollution- Air Particulate Matter is the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) in a county.[27] Lonoke County (12.1) has the highest average daily density of fine particulate matter in the SVN primary service area and all of the counties have a higher figure than the state average of 11.8 PM2.5.

Drinking Water Violations

According the Environmental Protection Agency, Faulkner County (12%) had the greatest average annual percentage of the population exposed to water that did not meet drinking water standards from FY13-FY14. [28] Following Faulkner County, was Pulaski County (7%), and Lonoke County (0%). Both Pulaski County and Lonoke County were below the state average of 9%.

[27] Outdoor Air Quality-Fine Particulate Matter data -CDC Wonder 2011 accessed at County Health Rankings & Roadmap, 2016

[28] Drinking Water Violations is the annual average percentage of the population served by community water systems who receive drinking water that does not meet all applicable health-based drinking water standards. Safe Drinking Water Information System(SDWIS), EPA, FY2013- 2014 accessed at County Health Rankings & Roadmap, 2015

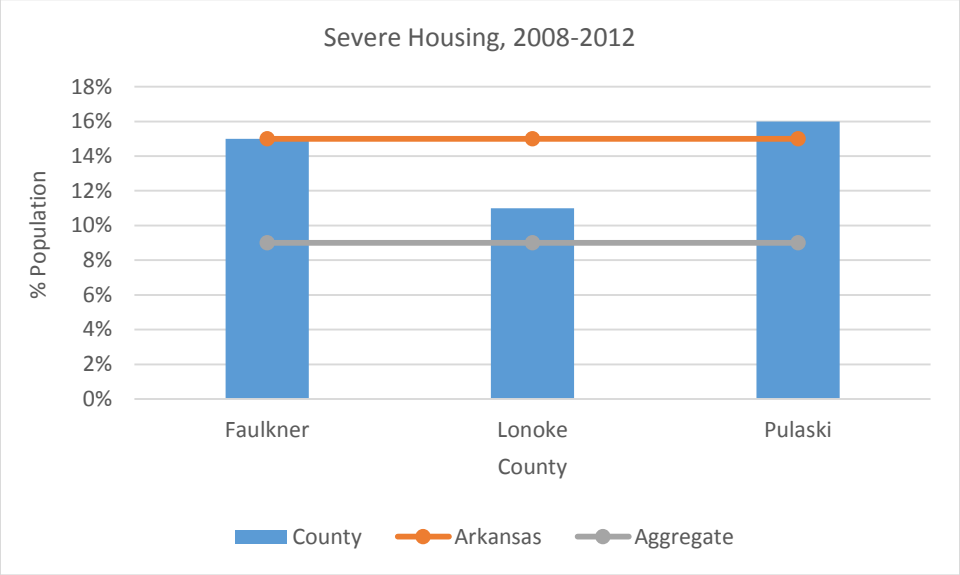


*October 1, 2012- September 30, 2014

Severe Housing

In the SVN primary service area, Pulaski County had the highest percentage of the population in a house identified as having a severe housing problem with a figure of 16.0% which is higher than the state figure of 15%. [29] As indicated in the graph below, none of the counties in the primary service area are performing better or equal to the top performing counties in the US (9%).

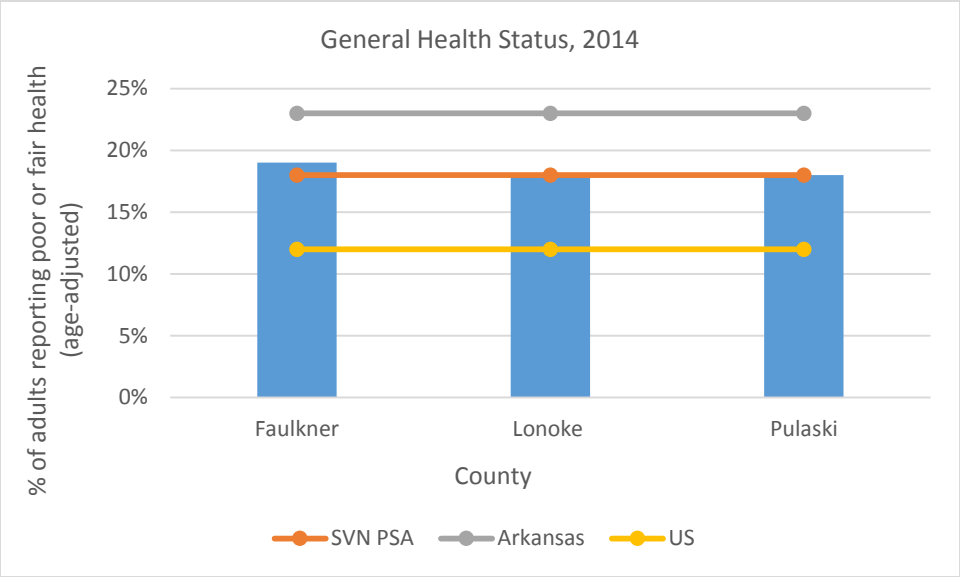
[29] Severe Housing. Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities. U.S. Department of Housing and Urban Development (HUD)



**Constitutes the Top US performers (10th percentile)*

Social Health & Mortality

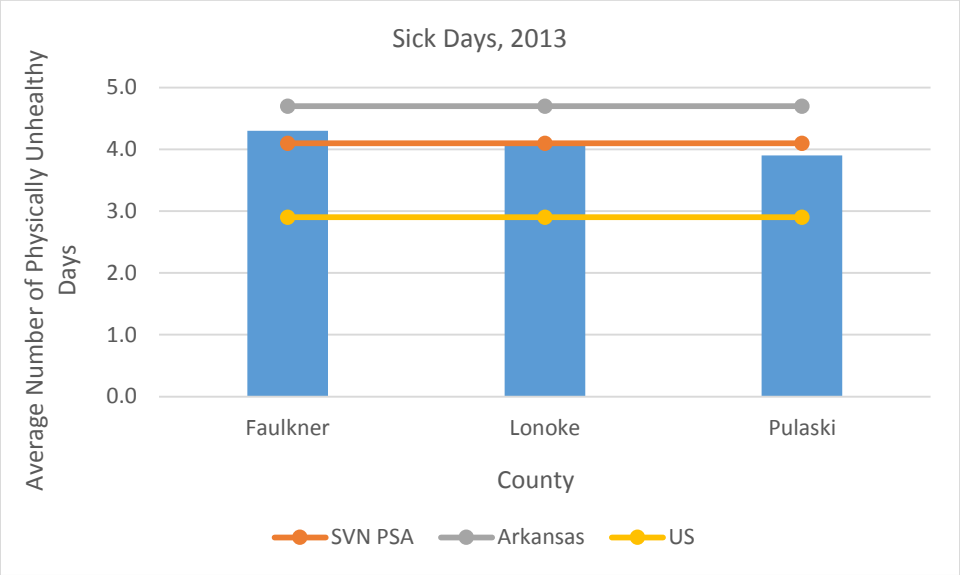
General health status



Health-Related Quality of Life (HRQoL) is a multi-dimensional concept that includes domains related to physical, mental, emotional, and social functioning. It goes beyond direct measures of population health, life expectancy, and causes of death, and focuses on the impact that health status has on quality of life. [30] As a self-reported measure, general health status is a measure of HRQoL in a county's population. The measure reports the percentage of adults, aged 18 years and older, reporting poor or fair health, modeled and age-adjusted to the 2000 US population. In 2014, 18% of adults in the SVN primary service area reported poor or fair health, whereas 23% of adults in Arkansas State reported poor or fair health. Adults in the SVN primary service area and the state reported much higher percentages than the top US performers' average of 12% adults across the country reporting fair or poor health in the same year. Faulkner County reported the largest percentage (19%) of adults reporting poor or fair health, while Lonoke and Pulaski Counties reported similar and lower percentages (18%) for this measure. [31]

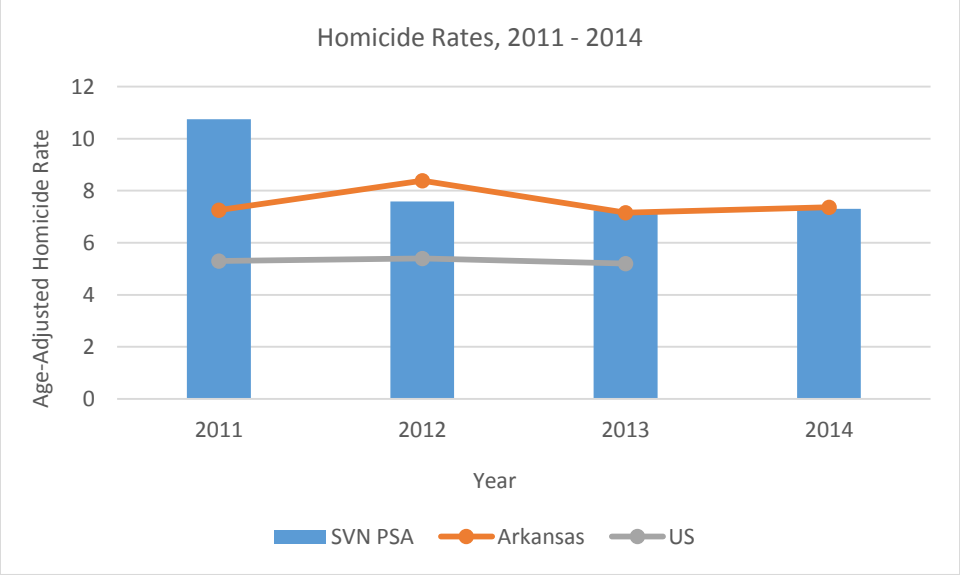
[30] Healthy People 2020 accessed at the Office of Disease Prevention and Health Promotion website
[31] Behavioral Risk Factor Surveillance System accessed at County Health Rankings & Roadmaps website

Average number of sick days

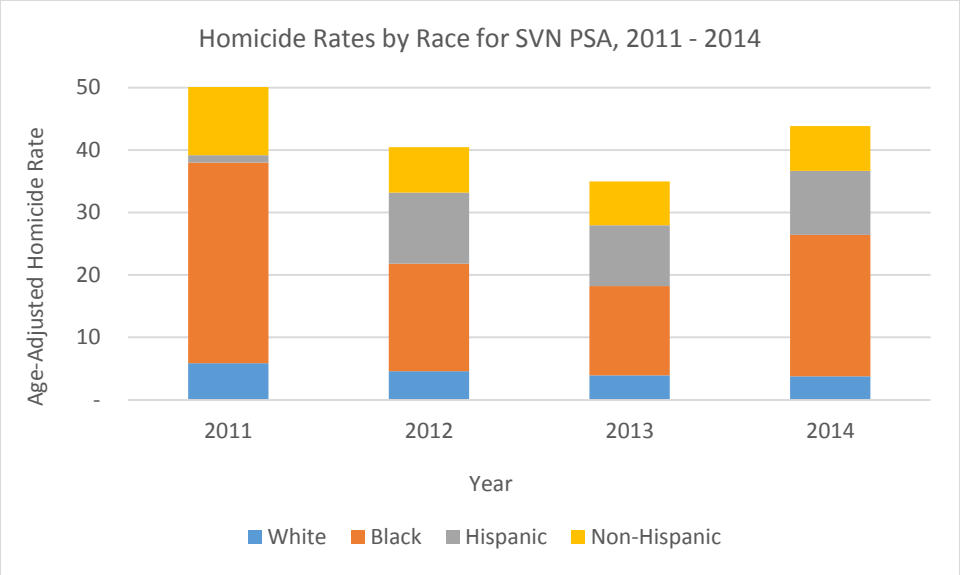


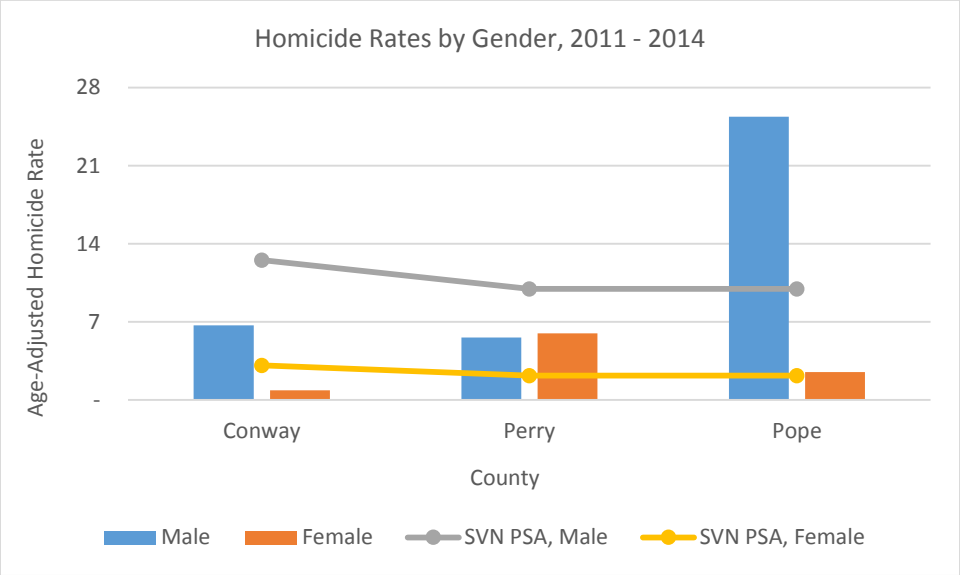
This measure is defined as the average number of days that adults, aged 18 years and older, report that their physical health is not good, age-adjusted to the 2000 US Population. In 2014, adults in the SVN primary service area reported an average of 4.1 physically unhealthy days which is lower than the state's average of 4.7 days. The top US performers in the country (which account for 10 percentile) reported an average of 2.7 physically unhealthy days, which is lower than both the state and the SVN primary service area aggregate numbers. Adults in Faulkner County reported the highest average (4.3 days) of physically unhealthy days, while adults in Pulaski County reported the lowest average (3.9 days) for this measure. [32]

Homicide



[32] Behavioral Risk Factor Surveillance System accessed at County Health Rankings & Roadmaps website



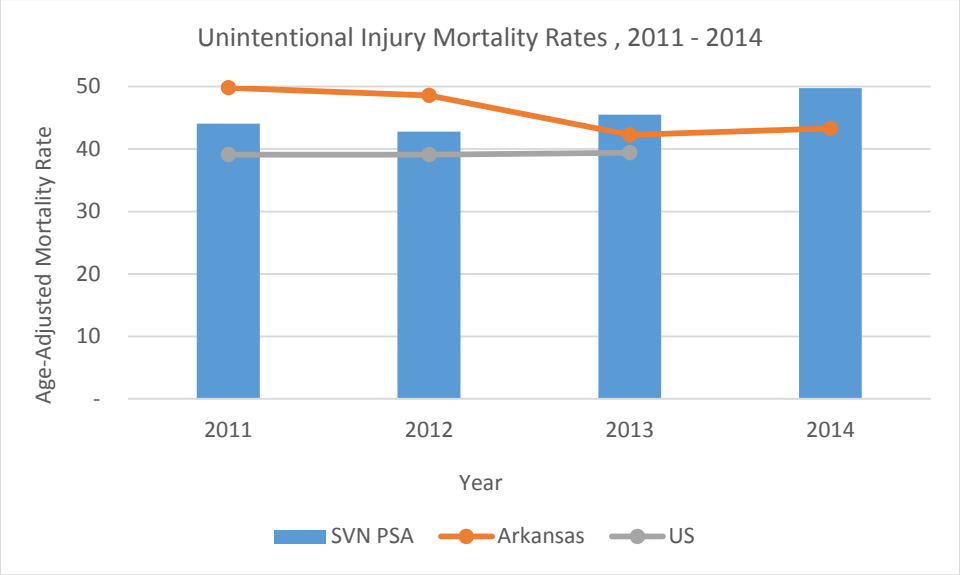


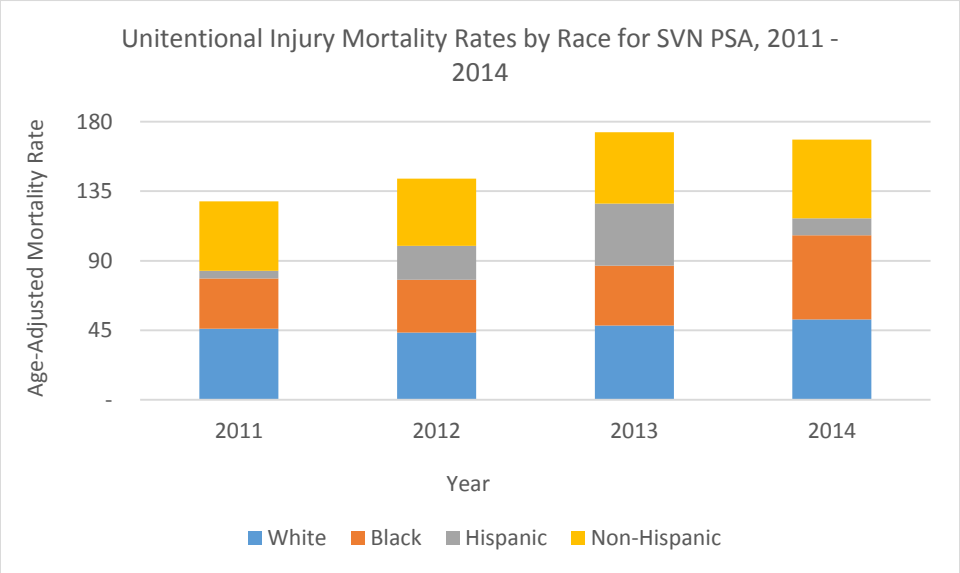
Homicides are defined as the number of deaths from assaults, murder and non-negligent manslaughter, assigned to ICD-10 codes X85-Y09, per 100,000 population (age-adjusted). [33] Nearly 17,000 men, women, and children are victims of criminal homicide every year. [34] Homicide rates across the SVN primary service area have decreased from 10.75 homicides in 2011 to 7.30 homicides in 2014. Homicide across the state however, have increased from 7.25 homicides in 2011 to 7.36 homicide sin 2014. [35] Among the three counties in the primary service area, Pulaski County reported the highest overall homicide rate (16.31 deaths) and Lonoke County reported the lowest rate (1.64 deaths) in 2014. Over the four years, across the SVN primary service area and the state, Blacks reported higher rates when compared to the other races. Males reported consistently higher rates compared to females. Homicide rates varied by age groups across the primary service area over the four years. In 2014, people between the ages of 15 – 34 years

[33] Compressed Mortality File accessed at County Health Rankings & Roadmaps website
[34] Violent Crimes Victim Services – Homicide Facts
[35] Arkansas Center for Health Statistics - Arkansas Department of Health

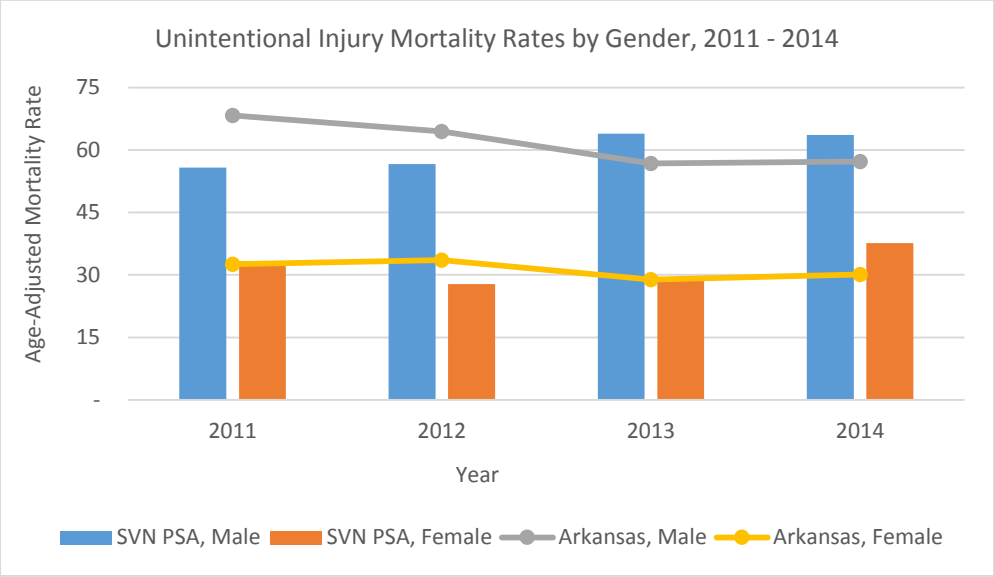
recorded the highest homicide rates, while people between the ages of 65 – 74 years recorded the lowest rates. The national homicide rates remained lower than the state and the SVN primary service area aggregate rates, and decreased from 5.30 deaths in 2011 to 5.20 deaths in 2013. [36]

Unintentional Injury Mortality





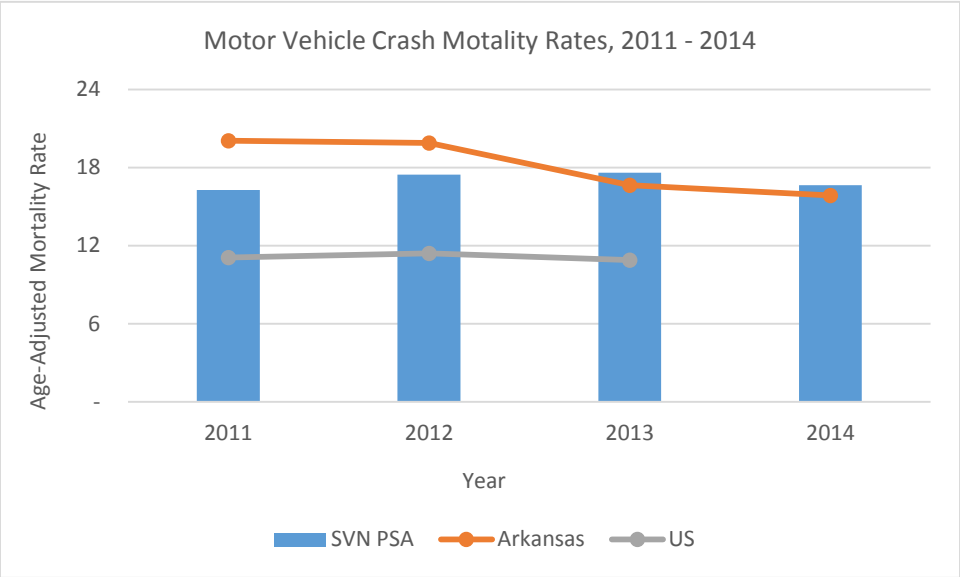
[36] National Center for Health Statistics – Mortality Files

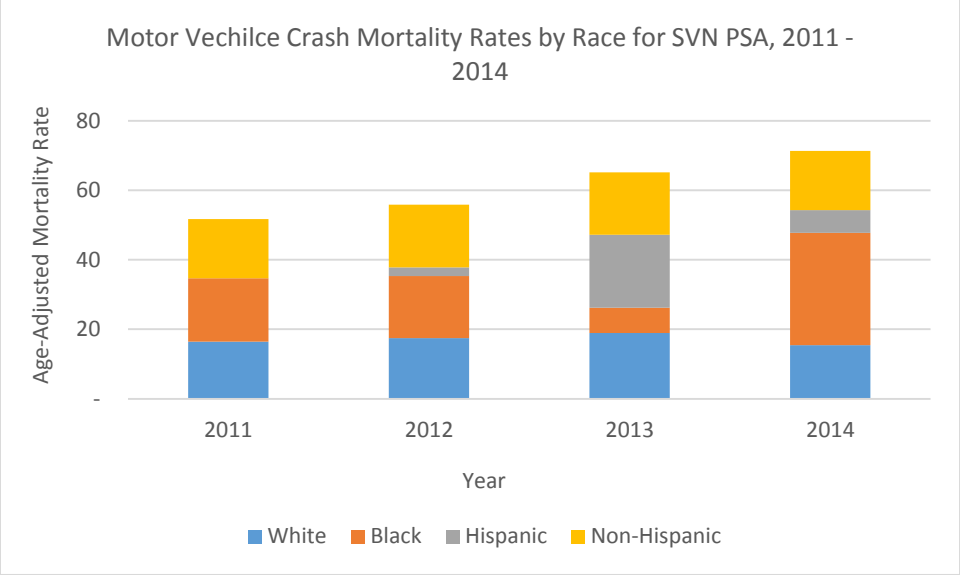


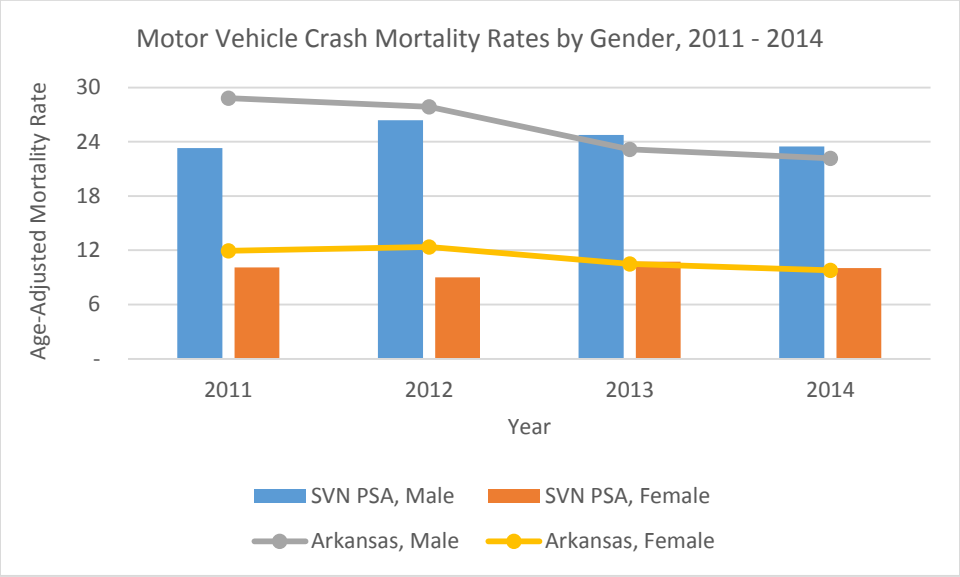
Accidents are defined as number of deaths due to unintentional injuries, assigned to ICD-10 codes V01-X59, age-adjusted to the 2000 US population. [37] Across the SVN primary service area, mortality rates (per 100,000 population) from unintentional injuries have increased from 44.06 deaths in 2011 to 49.75 deaths in 2014. Faulkner County reported the highest overall unintentional injury mortality rate (53.88 deaths), while Pulaski County reported the lowest rate (43.77 deaths). Across the state however, mortality rates have decreased from 49.80 deaths in 2011 to 43.30 deaths in 2014. Over the four years, across the primary service area and the state, Whites have reported higher mortality rates from unintentional injuries when compared to the other races. Males consistently reported higher rates when compared to females. The national rates were lower than the state and the primary service area rates from 2011 – 2013 (39.10 deaths in 2011 to 39.40 deaths in 2013). [38]

[37] Arkansas Center for Health Statistics - Arkansas Department of Health
[38] National Center for Health Statistics – Mortality Files

Motor Vehicle Crash Mortality

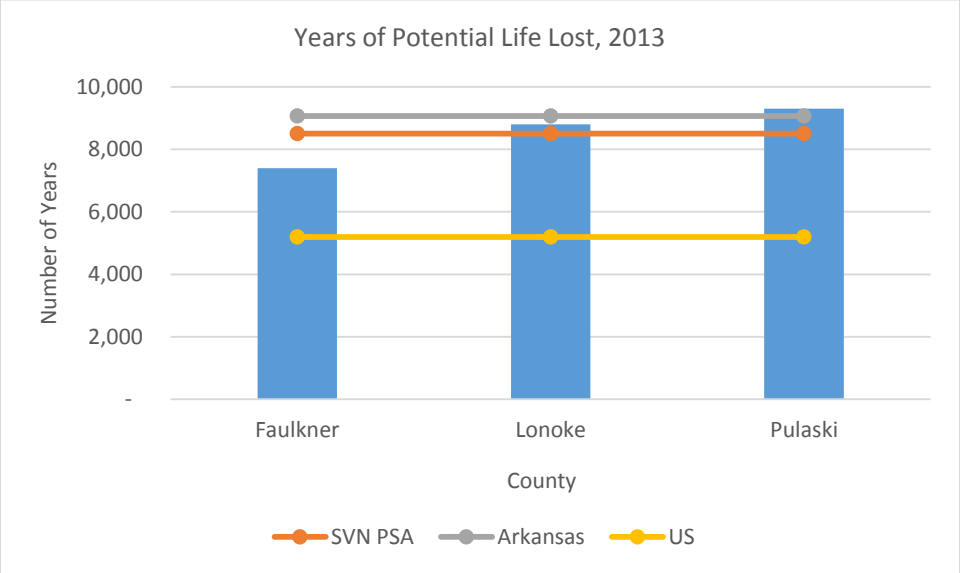






This measure is defined as the number of deaths due to motor vehicle crashes, age-adjusted to the 2000 US population. [39] Across the SVN primary service area, mortality rates (per 100,000 population) from motor vehicle crashes have increased from 16.29 deaths in 2011 to 16.65 deaths in 2014. Lonoke County reported the highest overall mortality rate from motor vehicle crashes (19.02 deaths), while Pulaski County reported the lowest rate (13.41 deaths) in 2014. However, across the state, motor vehicle crash mortality rates have declined from 20.06 deaths in 2011 to 15.86 deaths in 2014. Black and Whites alternatively reported the highest rates each year. Males consistently reported higher rates across the primary service area and state over the four years when compared to the female population. The national rates remained lower than the state and primary service area rates, and declined from 11.10 deaths in 2011 to 10.90 deaths in 2013. [40]

Years of Productive Life Lost

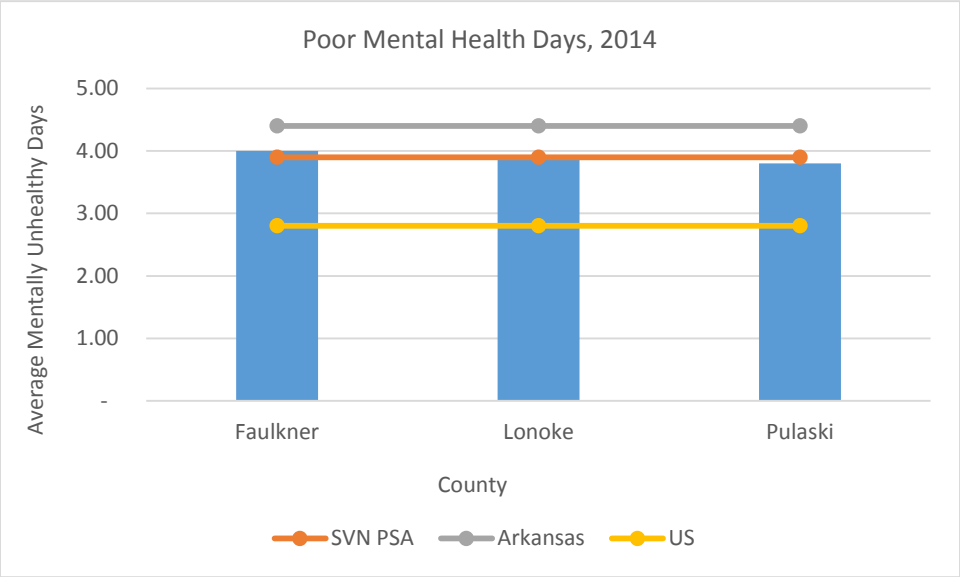


[39] Arkansas Center for Health Statistics – Arkansas Department of Health
[40] National Center for Health Statistics – Mortality Files

Years of productive life lost (YPLL) is measured as the number of years of potential life lost before the age of 75 years. [41] Every death occurring before the age of 75 contributes to the total number of YPLL. For example, a person dying at age 25 contributes 50 years of life lost. During years 2011 – 2013, SVN primary service area recorded an average of years 8,500 YPLL which is a lot lesser than the state's rate of 9,100 years. The state's rate was 43% higher than the national rates (3,900 more years). Over the three years, Pulaski County reported the highest YPLL (9,300 years) while Faulkner County reported the lowest YPLL (7,400 years).

Mental Health

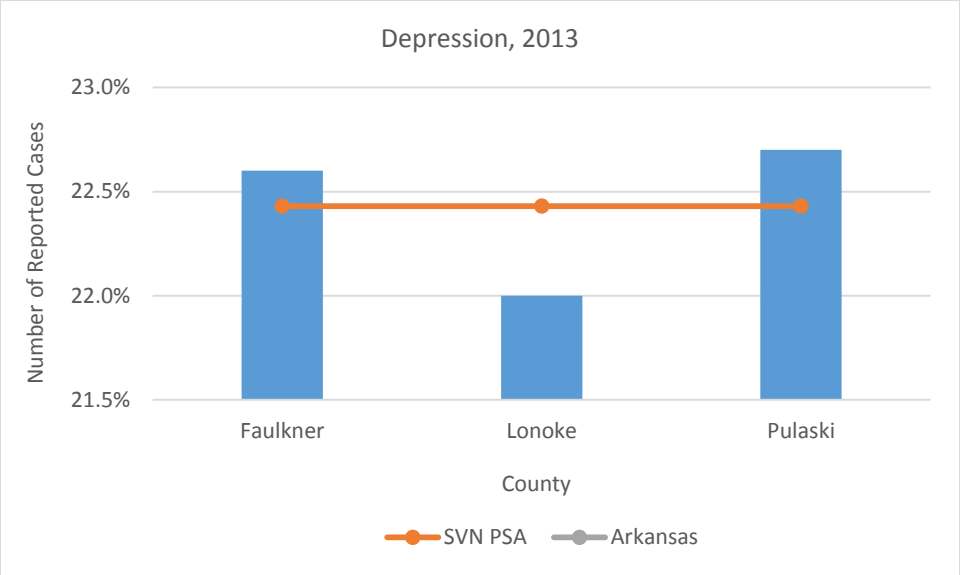
Poor Mental Health



The average number of mentally unhealthy days reported in the past 30 days by adults aged 18 years and above is an important indicator of mental health status. [42] In 2013, adults across the SVN primary service area reported an aggregate of 3.9 mentally unhealthy days, which is lesser than the state's average of 4.4 days but higher than the national average of 2.8 days. Among the three counties in the SVN PSA, adults in Faulkner County reported the highest average of mentally unhealthy days (4 days), whereas adults in Pulaski County reported the lowest average of this measure (3.8 days).

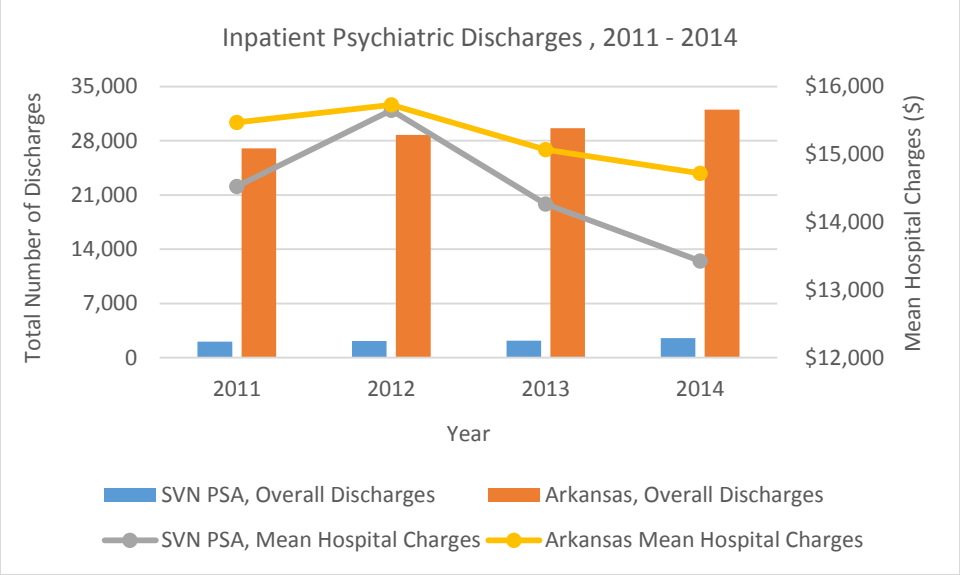
[41] National Center for Health Statistics – Mortality Files
[42] Behavioral Risk Factor Surveillance System accessed at County Health Rankings and Roadmaps website

Depression

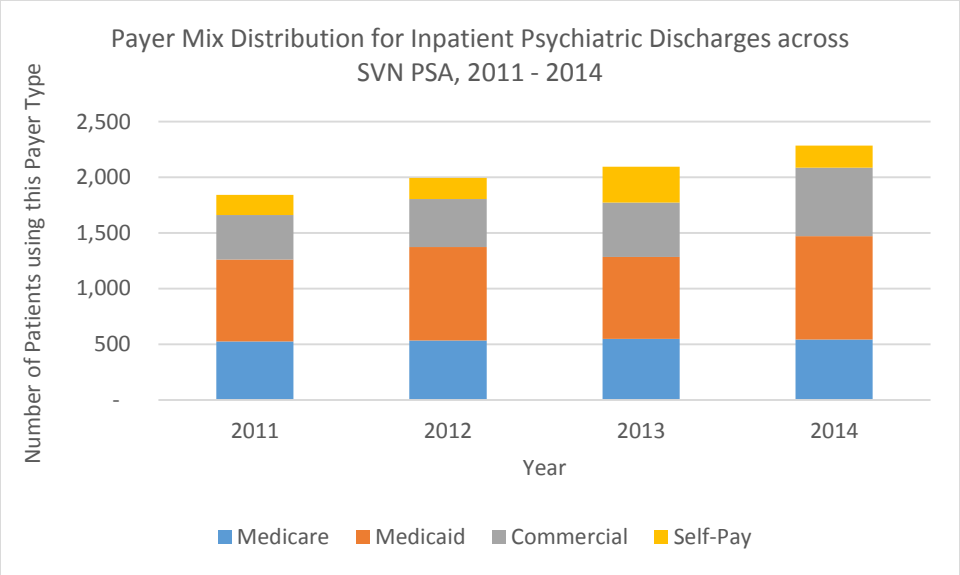


Depression (major depressive disorder or clinical depression) is a serious mood disorder. It is one of the most common mental disorders in the country. [43] In 2013, 22.43% of the primary service area's at-risk population reported being depressed. [44] This number was much lower than the state's percentage of depression cases (23.4% of the state's at-risk population). Pulaski County reported the highest percentage (22.70%) of its population being depressed. Lonoke County reported the lowest percentage (22%) of its population being depressed.

Inpatient Psychiatric Discharges



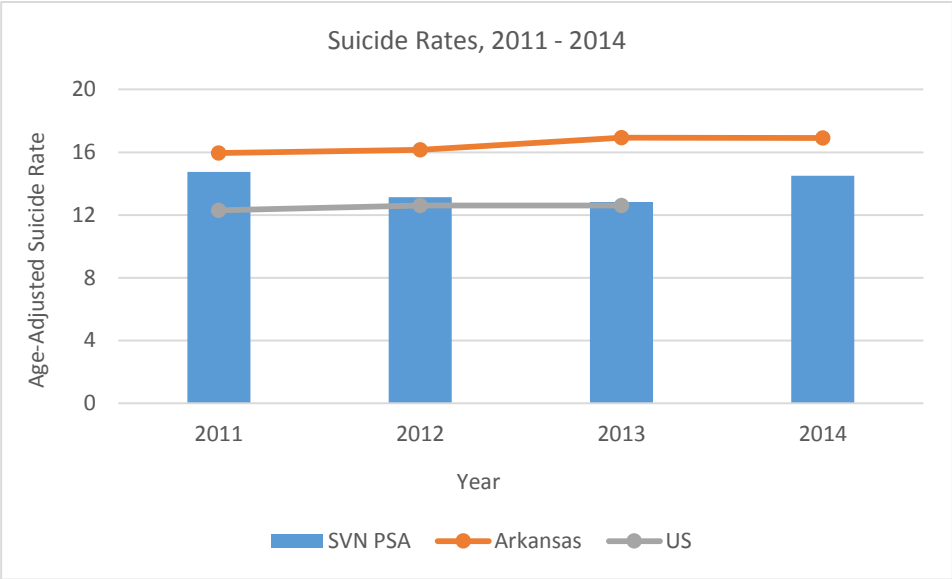
[43] Depression – National Institute of Mental Health
[44] Behavioral Risk Factor Surveillance System accessed at Arkansas Department of Health

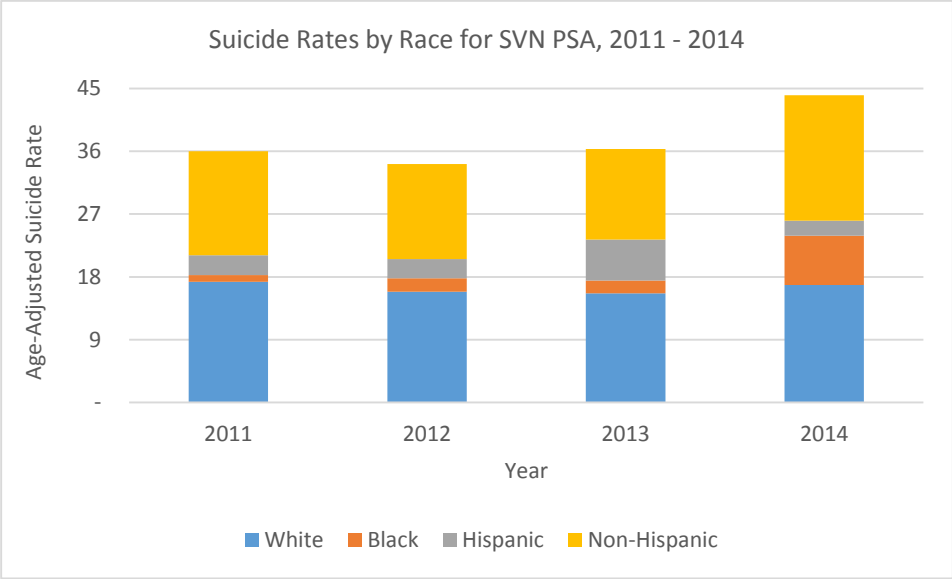


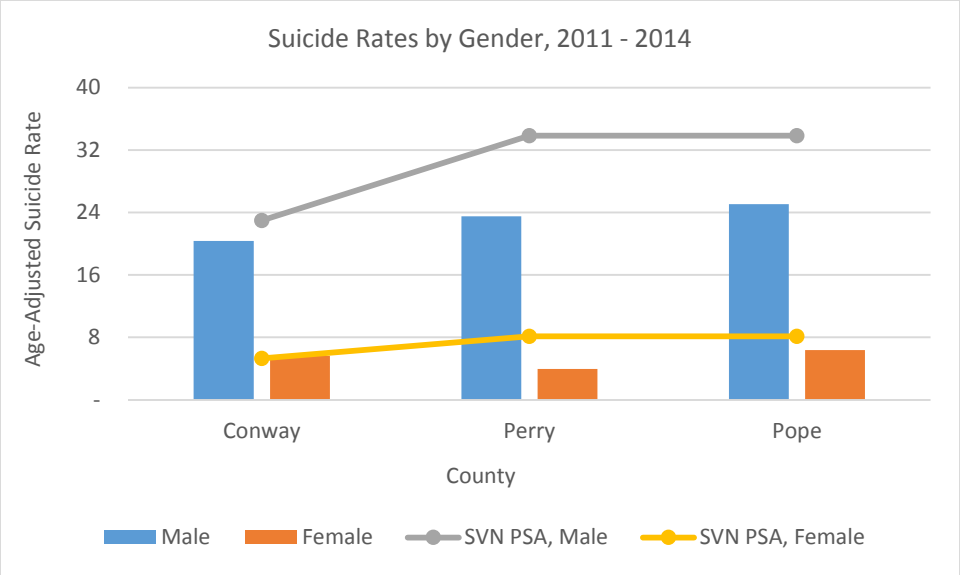
The total number of inpatient psychiatric discharges across the SVN primary service area and the state have increased over 2011 – 2014. [45] In 2014, the SVN primary service area recorded an aggregate of 2,548 discharges while the state recorded an average of 32,007 discharges. Pulaski County recorded the highest (5,585) number of discharges in 2014 while Lonoke County recorded the lowest (982) number. While the total number of discharges across the primary service area and state may have increased over time, the mean hospital charges during that period decreased. The SVN primary service area recorded mean hospital charges of $13,425 in 2014, which was lower than the state's mean hospital charge rate of $14,720. Over the four years, across the primary service area and the state, Whites recorded the highest number of discharges when compared to other races. Males and females alternatively reported higher numbers each year. These numbers varied across different age groups each year. Medicaid patients recorded the highest number of inpatient psychiatric discharges when compared to patients using other payers such as Medicare, commercial insurance and self-pay. Patients who covered their own healthcare costs often recorded the lowest number of discharges.

[45] Arkansas Center for Health Statistics – Arkansas Department of Health

Suicide


Suicide Rates, 2011 - 2014
Age-Adjusted Suicide Rate
20
16
12
8
4
0
2011
2012
2013
2014
Year
SVN PSA
Arkansas
US


Suicide Rates by Race for SVN PSA, 2011 - 2014
Age-Adjusted Suicide Rate
45
36
27
18
9
-
2011
2012
2013
2014
Year
White
Black
Hispanic
Non-Hispanic

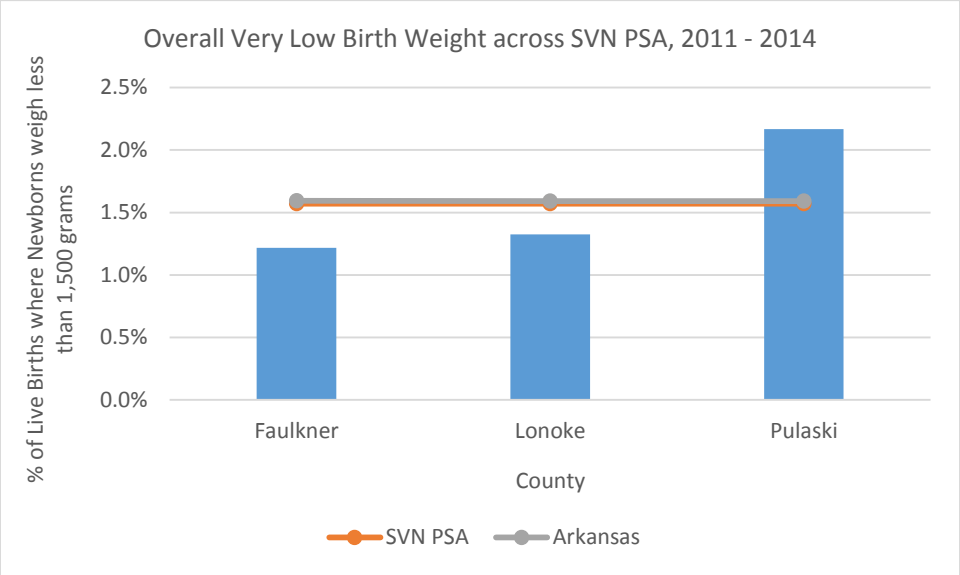


Suicide is defined as deaths caused by self-directed injurious behavior with an intent to die as a result of the behavior. [46] These deaths (per 100,000 population) are assigned to ICD-10 codes X60-X84, Y87.0, age-adjusted to the US 2000 population. Suicide was the tenth leading cause of death for all ages in 2013. There were 41,149 suicides in 2013 in the United States – which is equal to 113 suicides each day or 1 every 13 minutes. Suicide results in an estimated $51 billion in combined medical and work loss costs. [47] Suicide rates across the SVN primary service area have decreased from 14.75 suicides in 2011 to 14.51 suicides in 2014. Suicide rates across the state however, while higher than the primary service area aggregate, have increased from 15.95 suicides in 2011 to 16.9 suicides in 2014. [48] Among the three counties in the SVN primary service area, Pulaski County reported the highest suicide rate (15.95 suicides) while Lonoke County reported the lowest suicide rate (13.08 suicides) in 2014. Whites reported higher suicide rates across the SVN primary service area and the state when compared to other races. Males consistently recorded higher suicide rates when compared to the female population across the SVN primary service area and the state. The highest suicide rates each year were reported by people between the ages of 35 – 54 years, while people above the age of 75 years reported consistently lower rates in the SVN primary service area. The national rates remained lower than the state and primary service area rates, and increased from 12.3 suicides in 2011 to 12.6 deaths in 2013. [49]

[46] Injury Prevention & Control: Division of Violence Prevention – Centers for Disease Control and Prevention
[47] Suicide Datasheet accessed at Injury Prevention & Control: Division of Violence Prevention – Centers for Disease Control and Prevention
[48] Arkansas Center for Health Statistics – Arkansas Department of Health
[49] National Center for Health Statistics – Mortality Files

Maternal & Child Health

Very Low Birth Weight



This measure reports the percentage of live births where newborns weighed less than 1,500 grams. Infants born with low weight face a number of serious health risks. Babies who have very low birth weight (VLBW - less than 1,500 grams) have a 22% chance of dying within their first year. Risk factors for low and VLBW include multiple births, maternal smoking, low maternal weight gain, fetal stress, infections and violence towards the pregnant women. Infants born with VLBW are also at increased risk of long-term disability and impaired development. [50] The percentages of babies born with VLBW across the SVN primary service area and the state have decreased from 2011 to 2014. [51] SVN primary service area reported an aggregate of 1.35% of babies born with VLBW in 2014, while the state reported a slightly higher rate of 1.45% babies born with VLBW. Pulaski County reported the highest percentage (1.87%) while Faulkner County reported the lowest percentage (0.79%) of babies born with VLBW. Across the SVN primary service area and the state, more babies with VLBW were born to Black mothers than White mothers. Babies born pre-term (between 17 – 36 weeks) were more likely to have VLBW than babies carried to term (> 36 weeks). More babies were born to mothers who received no prenatal care than to mothers who received prenatal care during one of the trimesters.

Neonatal Mortality

Neonatal deaths are defined as deaths among infants aged less than 28 days. These deaths are reported per 1,000 live births. Although congenital anomalies are prominent among infant deaths at any age during the first year, neonatal deaths are more commonly caused by prematurity and medical complications of the pregnancy and newborn periods. [52] In 2013, SVN primary service area recorded an aggregate of 5.23 neonatal deaths, which is higher than the state's rate of 4.39 neonatal deaths and the national rate of

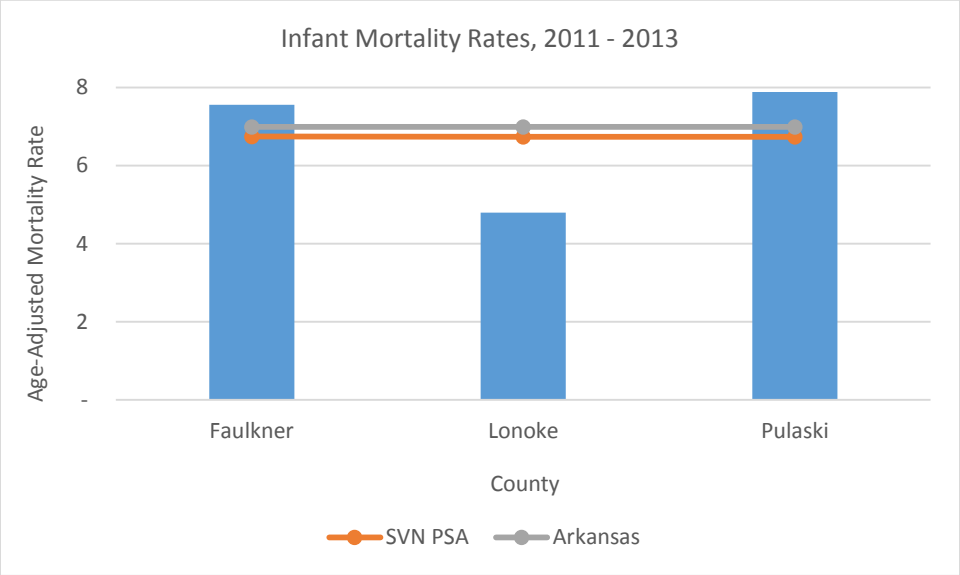
[50] Child Trends Data Bank
[51] Arkansas Center for Health statistics – Arkansas Department of Health
[52] A Background Paper on Infant Mortality in Arkansas, March 2012 accessed at Arkansas Department of Health website

4.04 neonatal deaths. Lonoke County reported the highest neonatal mortality rate (6.25 deaths) while Faulkner County reported the lowest rate (4.54 deaths).

Post-neonatal mortality

Post-neonatal deaths are defined as deaths among infants between the ages of 28 days to less than one year old. These deaths are reported per 1,000 live births. Post-neonatal deaths are often due to sudden infant death syndrome, unintentional injuries and diseases of the post-neonatal period. In 2013, SVN primary service area recorded an aggregate post-neonatal mortality rate of 2.55 deaths, which is much lower than the national rate of 1.93 deaths and the state's rate of 2.88 deaths. Pulaski County reported the highest post-neonatal mortality rate (3.26 deaths), while Faulkner County reported the lowest rate (1.30 deaths).

Infant Mortality



An infant death occurs when a live born baby dies before its first birthday. The infant mortality rate, is the number of infant deaths in a year per 1,000 live births. Influences leading to infant death range from broad economic and lifelong issues, to general maternal risk conditions/behaviors, structural obstetric conditions, obstetric history, chronic diseases or disorders, infectious disease and infant-related conditions. Infant mortality rates across the SVN primary service area have declined between 2011 and 2013, however they have increased for Arkansas State over the same period. In 2013, SVN primary service area recorded an aggregate of 5.63 infant deaths, while the state recorded a higher rate of 7.16 deaths. Pulaski County recorded the highest infant mortality rate in 2013 (7.97 deaths) while Lonoke County reported the lowest rate (3.09 deaths) among the three counties in the SVN primary service area. Black mothers had higher infant mortality rates compared to mothers of other races. Infants born pre-term were more likely to die than infants who were carried to term. Infants born to mothers who lacked even a high school degree of education were more likely to die than infants born to mothers with varying education levels (ranging from a high school degree to a college degree). Infants born to mothers who received no prenatal care were more likely to die than those born to mothers who received prenatal care during one of the trimesters.

Child Maltreatment

Child maltreatment is the abuse and neglect of children under 18 years of age. It includes all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence and commercial or other exploitation, which results in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power. Child maltreatment is a global problem with serious life-long consequences. [53] The child maltreatment rate is defined as the total number of child maltreatment assessments completed by the Division of Children and Family Services (DCFS), the Crimes against Children Division (CACD) and law enforcement that were determined to be true. The average number of true assessments completed across the SVN primary service area have declined from 441 in 2011 to 292 in 2014. Similarly, across the state of Arkansas, this number has declined from 7,969 in 2011 to 5,971 in 2014. Among the three counties in the primary service area, Pulaski County recorded the highest number (437) of true assessments of child maltreatment completed in 2014, while Lonoke County recorded the lowest number (148). [54]

Child Mortality

Child mortality rate is defined as the number of deaths among children under age of 18 years per 100,000 population. Despite the fact that the number of true assessments of child maltreatment declined over the years, the child mortality rate is still concerning. One child death is too many. During 2010 – 2013, the SVN primary service area recorded an aggregate child mortality rate of 70 child deaths, which is the same rate as the state's rate of 70 child deaths. Pulaski County reported the highest child mortality rate (80 deaths), a rate higher than the state and the SVN primary service area aggregate rates. Lonoke County reported the lowest child mortality rates (60 deaths). [55]

Teen Birth Rate

Teen birth rate is reported as the number of live births born to women between the ages of 15 – 19 years, per 1,000 residents. [56] In 2013, the SVN primary service area reported an aggregate teen birth rate of 38.10 births for teenage mothers. This rate was lower than the state's teen birth rate of 42.5 births. Pulaski County recorded the highest teen birth rate (42 births), while Faulkner County reported the lowest rate (33.40 births) among all the counties in the primary service area.

[53] Child Maltreatment – World Health Organization

[54] Total Number of True assessment of Child Maltreatment – Data provided by Arkansas Advocates for Children & Families accessed at Kids Count Data Center

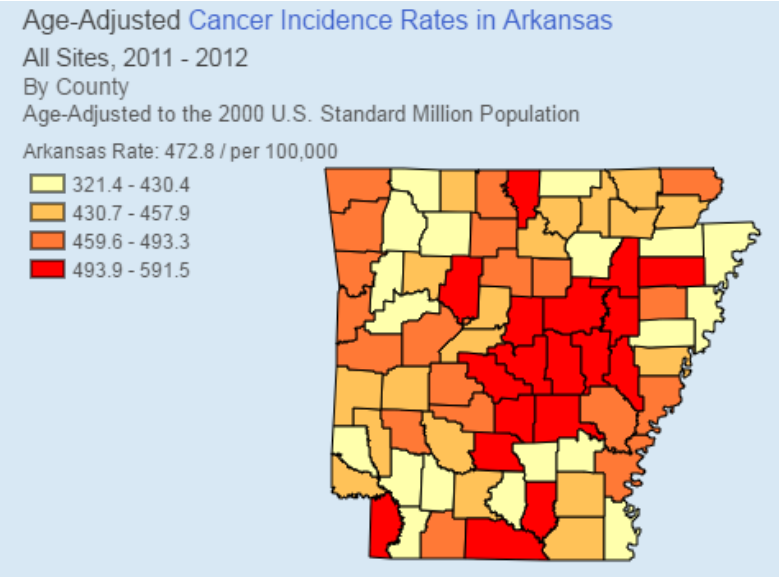
[55] Compressed Mortality Files – Centers for Disease Control and Prevention

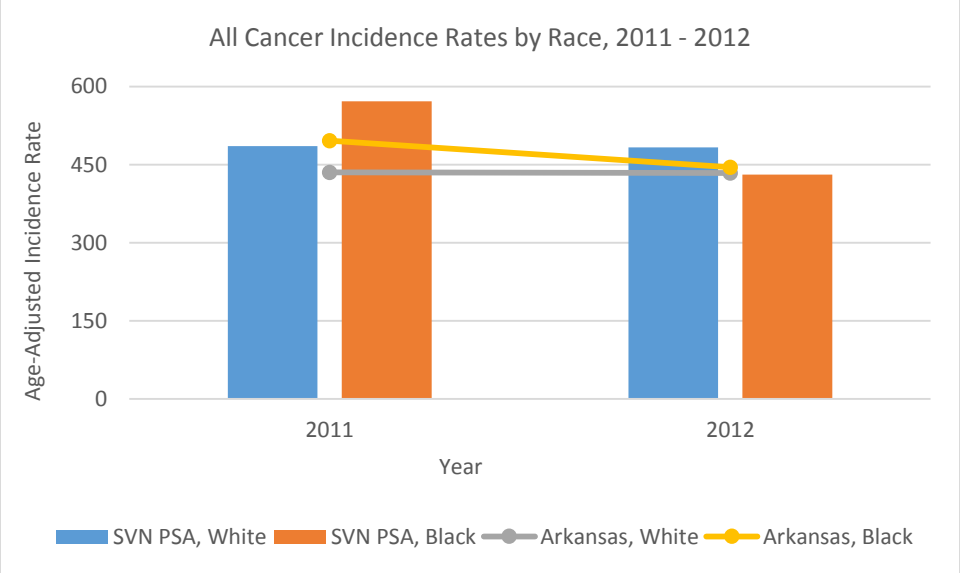
[56] Arkansas Advocates for Children & Families accessed at Kids Count Data Center website

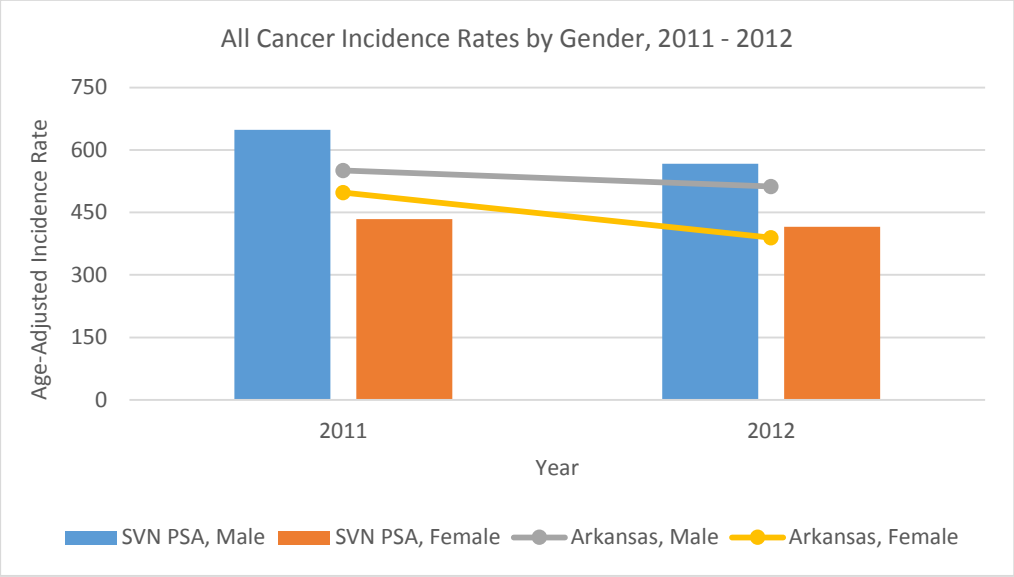
Death, Illness, and Injury

Cancer Incidence & Mortality

All Cancer Incidence

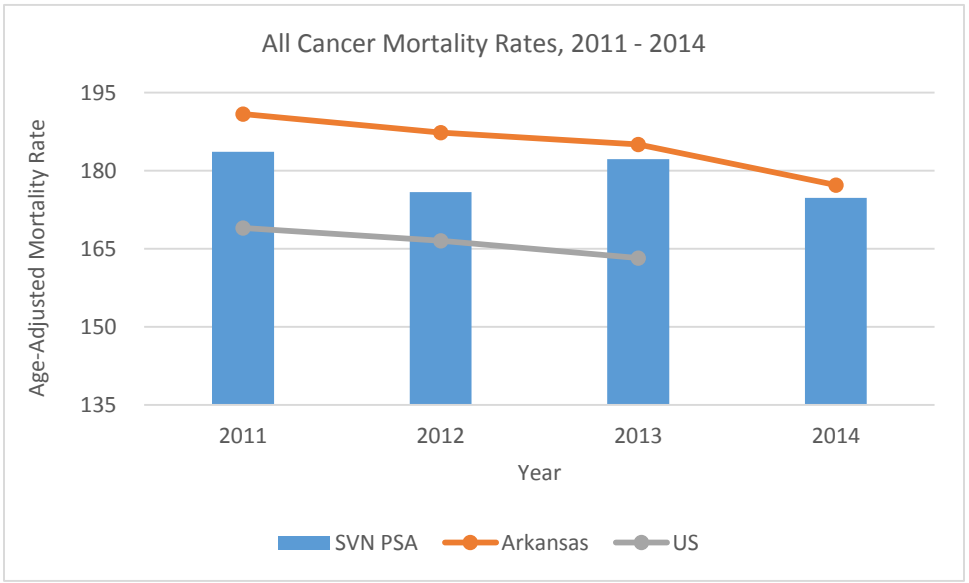




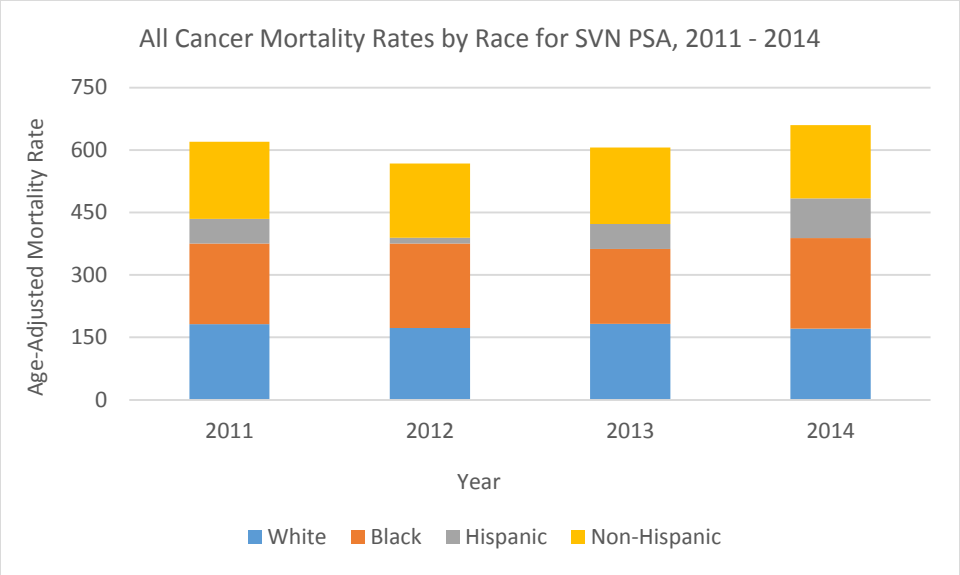


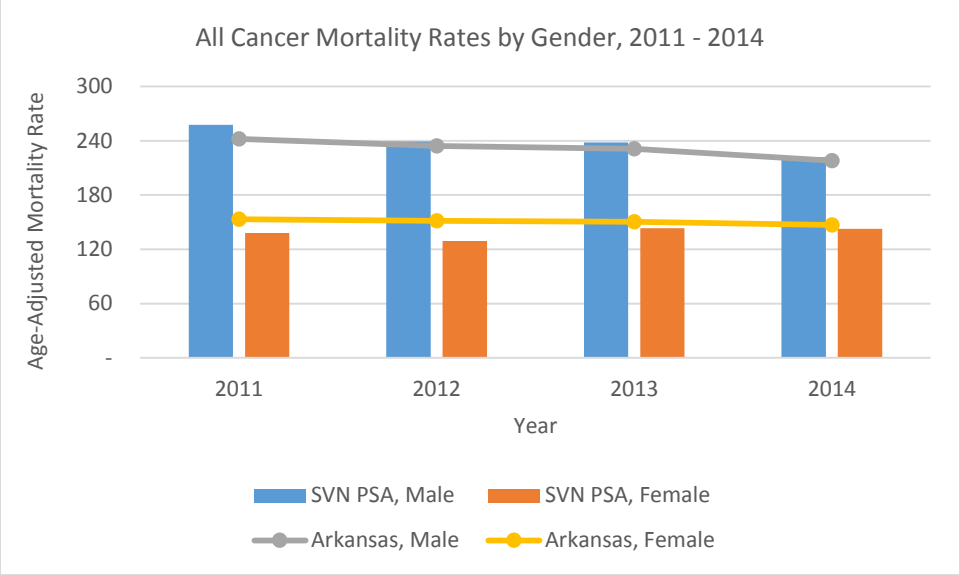
According to the data reported by Arkansas Central Cancer Registry, the SVN primary service area aggregate incidence rate for all cancers in 2012 was 478.7 cases per 100,000 population. This was higher than the Arkansas state average incidence rate for the same year (441.9 cases). Lonoke County reported the highest incidence rate (491.9 cases), while Pulaski County reported the lowest rate (461.3 cases). Across the primary service area and the state, more Whites reported having cancer than Blacks. Similarly, more males in the primary service area and the state reported having cancer than females. Across the state, people between the ages of 75 – 79 years reported the highest all cancer incidence rates (2,318.3 cases) while people between the ages of 5 – 14 years reported the lowest incidence rates (7 – 9.6 cases).[57]

All Cancer Mortality



[57] Arkansas Central Cancer Registry – all Cancer Incidence data is provided by the ACCR

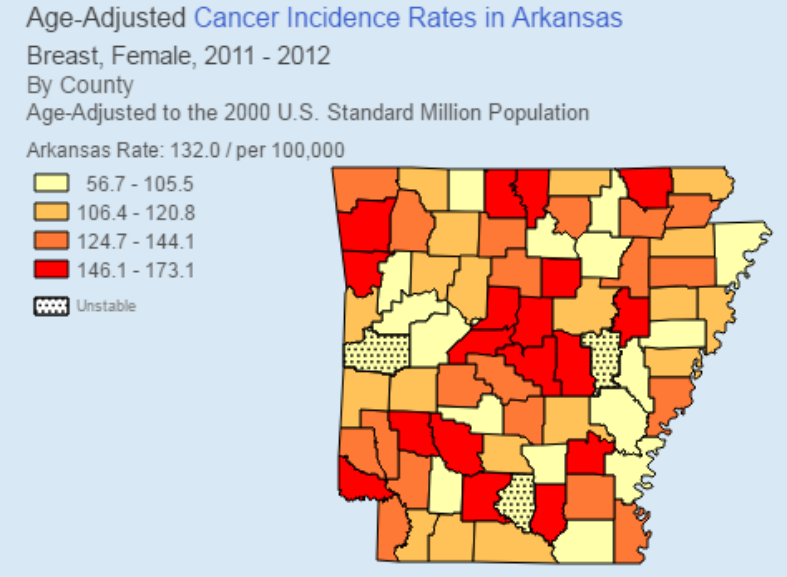


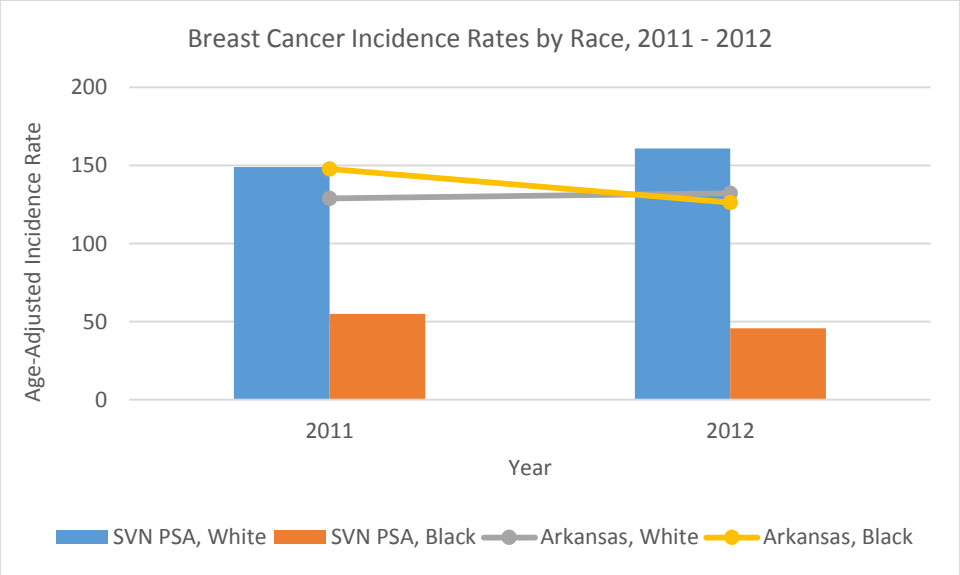


According to provisional data reported by the Arkansas Center for Health Statistics, age-adjusted mortality rates (per 100,000 population) for all cancers across the primary service area have decreased from 183.65 deaths in 2011 to 174.74 deaths in 2014. Similarly, all cancer mortality rates across the state, though higher than the aggregate rates, have steadily declined from 190.88 deaths in 2011 to 177.21 deaths in 2014. Lonoke County reported the highest mortality rate (178.54 deaths), while Pulaski County reported the lowest all cancer mortality rate (173.34 deaths) in 2014. Blacks across the primary service area and the state reported higher mortality rates when compared to the other races. Males reported higher all cancer mortality rates compared to females across the primary service area and state. All Cancer mortality

rates across the country while remaining lower than the SVN primary service area aggregate and the state rates, declined from 169 deaths in 2011 to 163.20 deaths in 2013. [58]

Breast Cancer Incidence



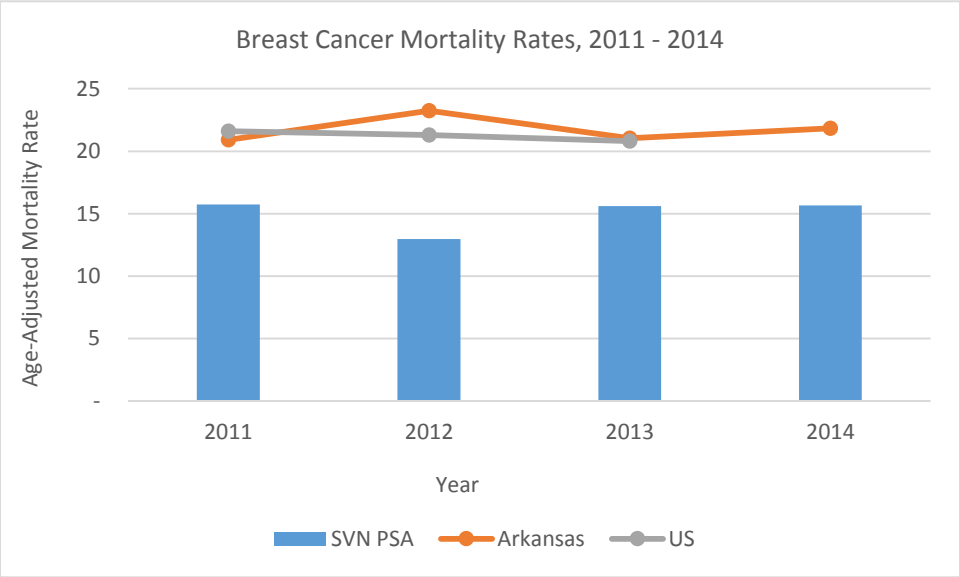


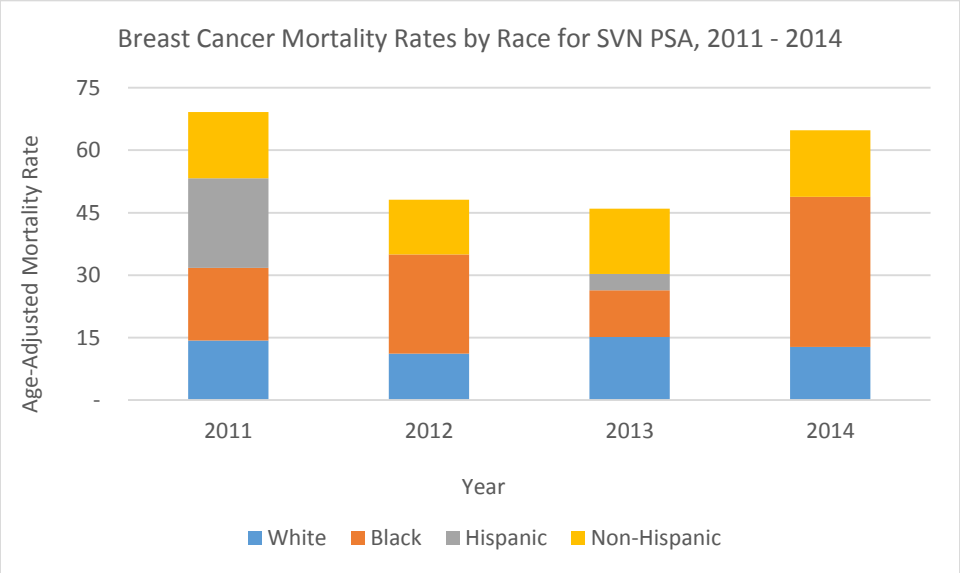
According to data reported by the Arkansas Central Cancer Registry, the SVN primary service area aggregate incidence rate for breast cancer in 2012 was 159 cases per 100,000 population. This was higher than the Arkansas state average incidence rate for the same year (133.5 cases). Faulkner County reported the highest incidence rate (163 cases), while Lonoke County reported the lowest rate (156.6 cases). Across the primary service area and the state, more White women reported having breast cancer than Black

[58] All Cancer Mortality Data at the county and state level in this report is provided by the Arkansas Center for Health Statistics – Arkansas Department of Health. All cancer mortality data at the national level is provided by the National Center for Health Statistics – Mortality Files.

women. Across the state, women between the ages of 75 – 79 years reported the highest breast cancer incidence rates (449.6 cases) while women between the ages of 30 -34 years reported the lowest incidence rates (22.1 cases).

Breast Cancer Mortality

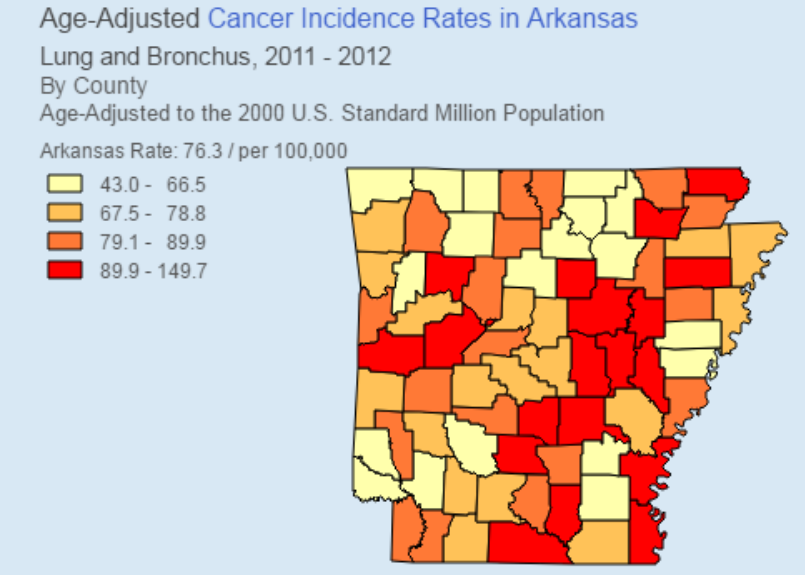


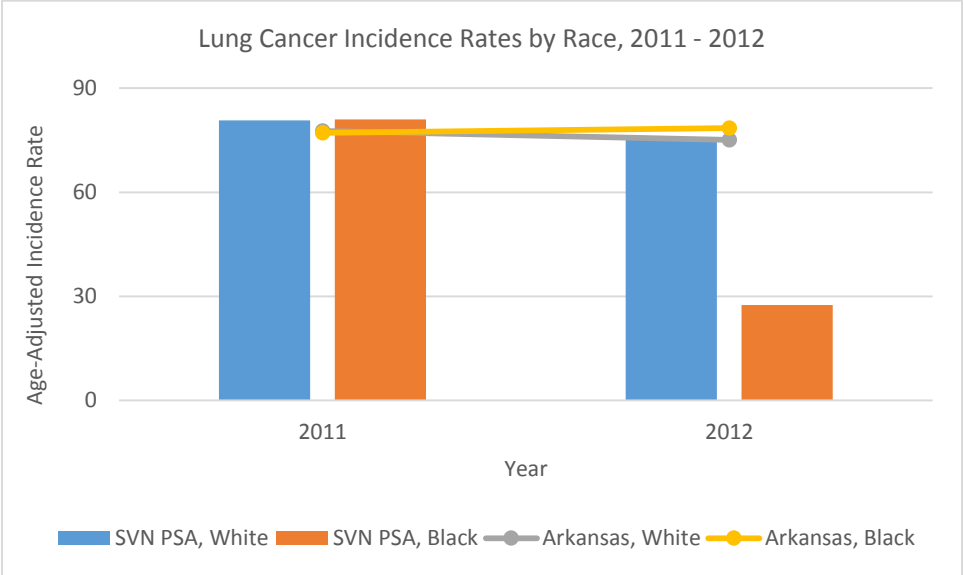


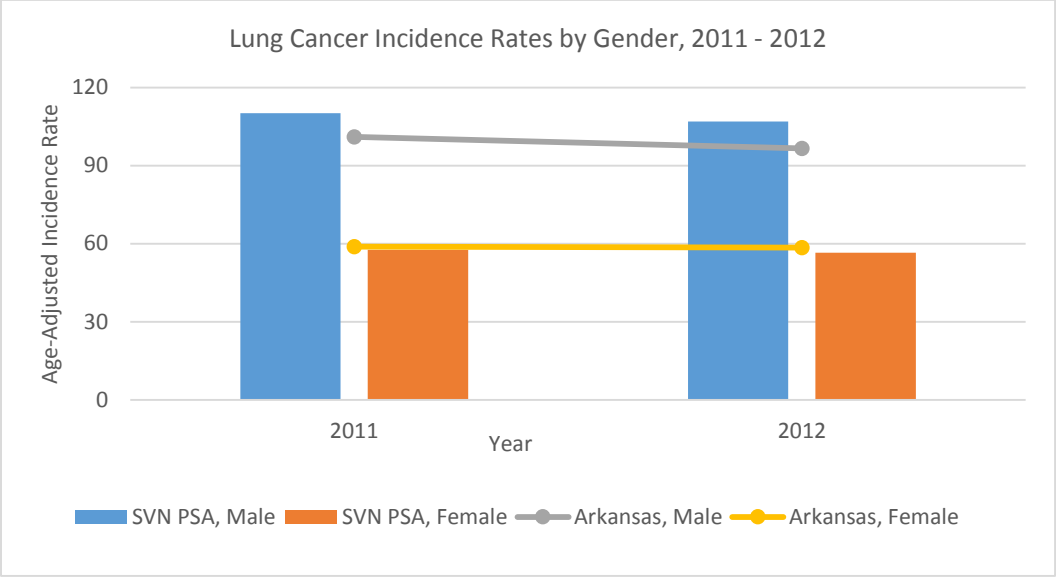
According to provisional data reported by the Arkansas Center for Health Statistics, age-adjusted mortality rates (per 100,000 population) for breast cancer across the primary service area have decreased from 15.74 deaths in 2011 to 15.67 deaths in 2014. Unlike the primary service area's rates, breast cancer mortality rates across the state have increased from 20.91 deaths in 2011 to 21.83 deaths in 2014. Pulaski County reported the highest breast cancer mortality rate (18.99 deaths), while Faulkner County reported the lowest rate (13.52 deaths) among the three counties in the SVN primary service area, in 2014. Black women across the primary service area and the state reported higher rates when compared to other

races. Breast cancer mortality rates across the country have declined from 21.60 deaths in 2011 to 20.80 deaths in 2013.

Lung Cancer Incidence

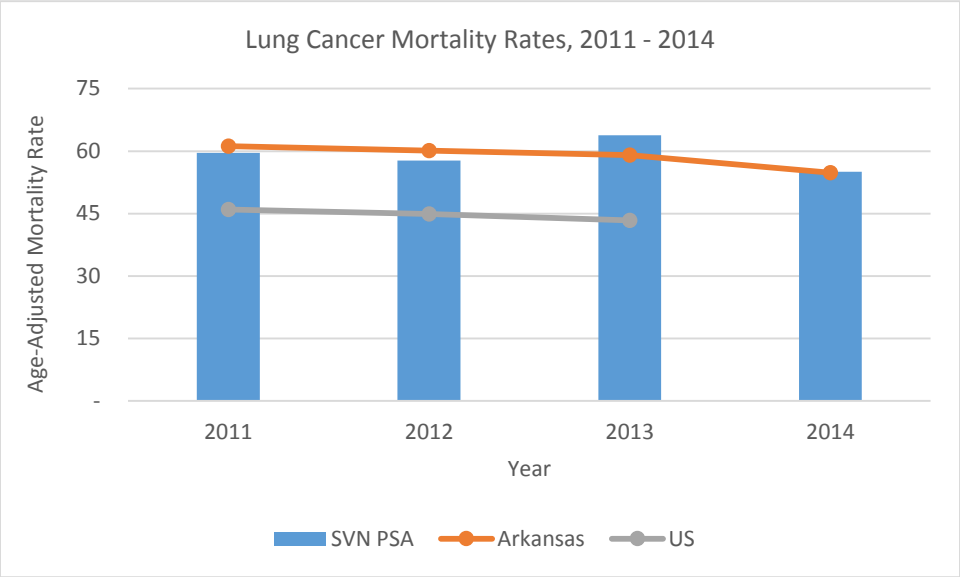


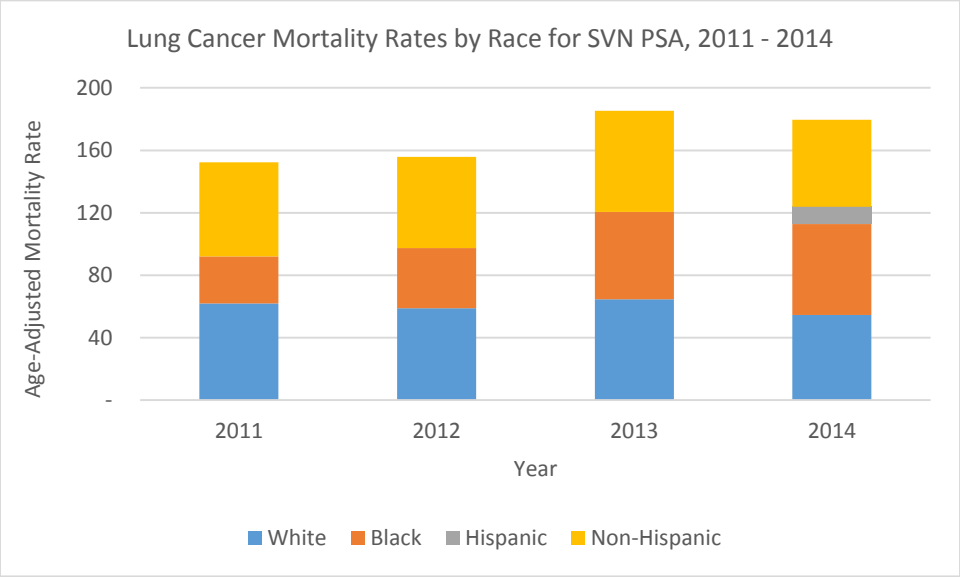


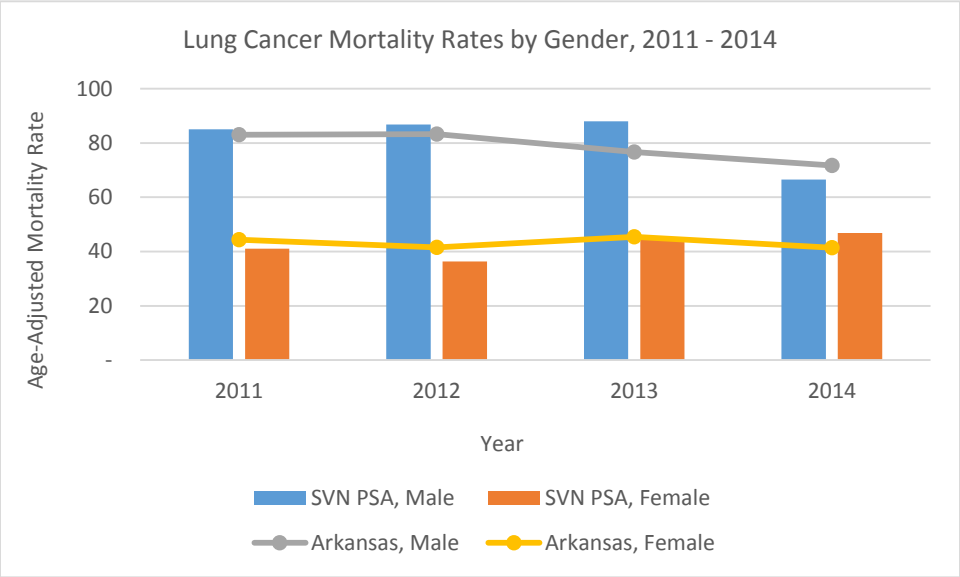


According to data reported by the Arkansas Central Cancer Registry, the SVN primary service area aggregate incidence rate for lung cancer in 2012 was 78 cases per 100,000 population. This was higher than the Arkansas state average incidence rate for the same year (75.3 cases). Lonoke County reported the highest incidence rate (92 cases), while Pulaski County reported the lowest rate (63.9 cases). Across the primary service area, more Whites reported having lung cancer than Blacks. More males in the primary service area and the state reported having cancer than females. Across the state, people between the ages of 75 – 79 years reported the highest lung cancer incidence rates (477 cases) while people between the ages of 40 to 44 years reported the lowest incidence rates (12.9 cases). Incidence rates for people below the age of 40 years were not reported for the years 2011 and 2012.

Lung Cancer Mortality

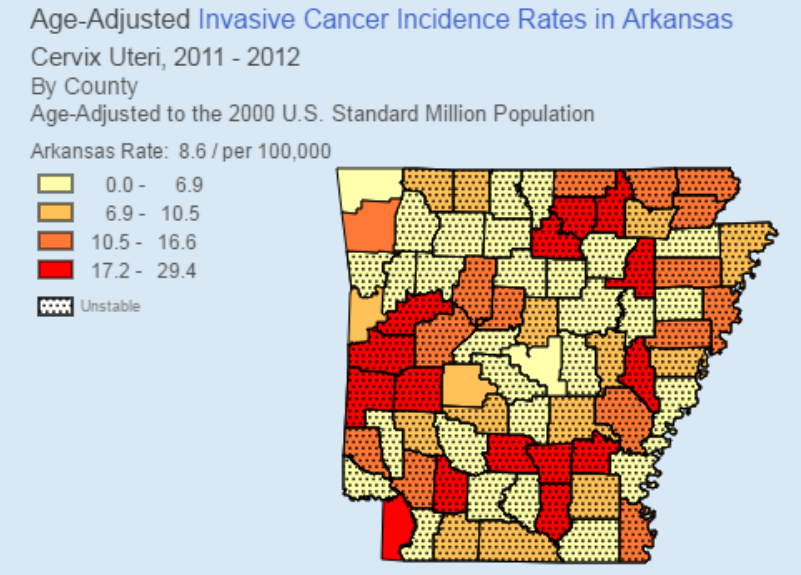






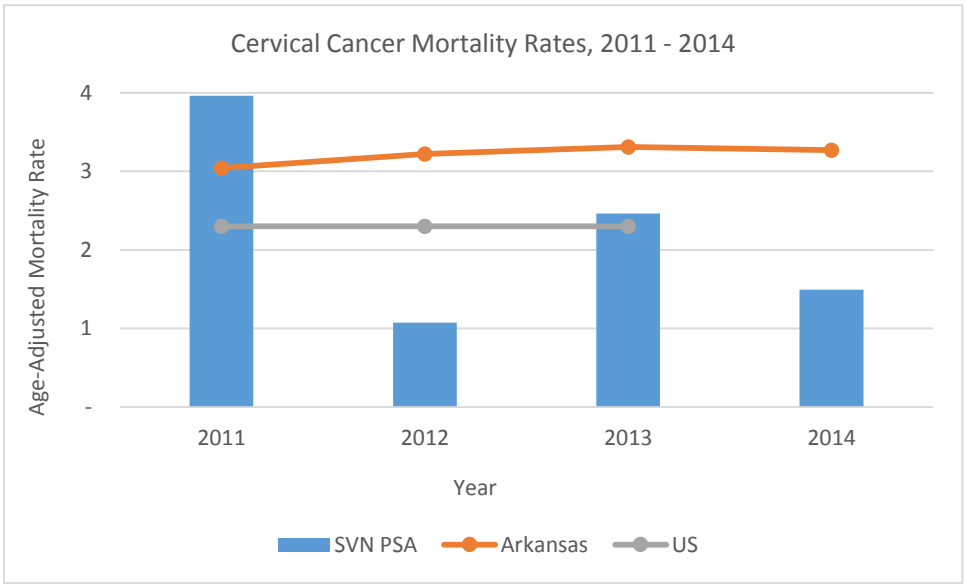
According to provisional data reported by the Arkansas Center for Health Statistics, age-adjusted mortality rates (per 100,000 population) for lung cancer across the primary service area have decreased from 59.56 deaths in 2011 to 55.07 deaths in 2014. Similarly, mortality rates across the state, though higher than the primary service area aggregate, have also decreased from 61.22 deaths in 2011 to 54.82 deaths in 2014. Lonoke County reported the highest mortality rate (64.58 deaths) in 2014, while Pulaski County reported the lowest rate (49.20 deaths). Whites across the primary service area reported higher mortality rates when compared to other races, from 2011 - 2013. Blacks across the state, and in the primary service area (in 2014 alone) have reported higher mortality rates when compared to other races. Males have consistently reported higher rates than females across both the SVN primary service area and the state. Lung cancer mortality rates across the country, which were lower than the state and the primary service area aggregate, have declined from 46 deaths in 2011 to 43.40 deaths in 2013.

Cervical Cancer Incidence



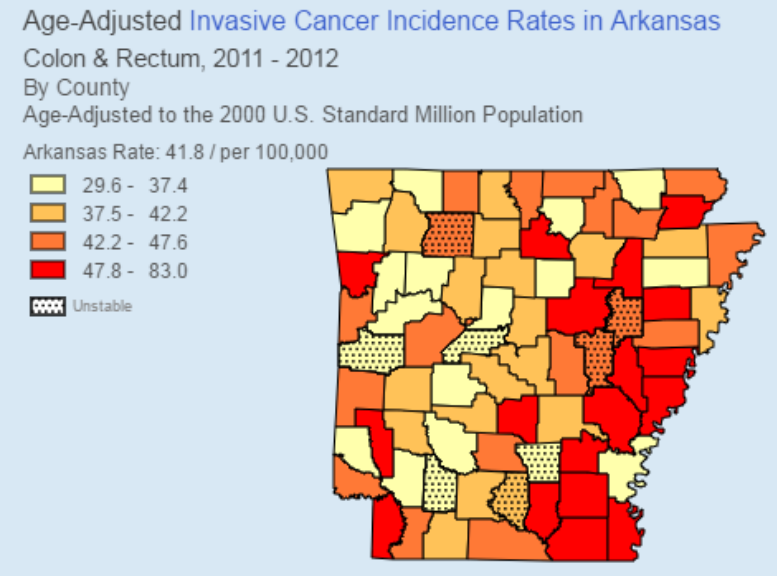
According to data reported by the Arkansas Central Cancer Registry, the overall cervical cancer incidence rate across the SVN primary service area in 2012 was 1.9 cases per 100,000 population. This was much lower than the Arkansas state average incidence rate for the same year (9.2 cases). Among the three counties in the primary service area only Pulaski County reported a cervical cancer incidence rate (5.7 cases). The Cancer Registry does not report data for counties were the rate were less than 5 cases. Hence, county-level data for different races were not reported out leading to the assumption that cervical cancer incidence rates among White and Black women in the primary service area were not of statistical significance when you compare across different types of cancers. Across the state, women between the ages of 40 - 44 years reported the highest cervical cancer incidence rates (25.6 cases) while women between the ages of 35 - 39 and 60 – 64 years reported the lowest incidence rates (13.4 cases). Incidence rates for women less than 30 years old or more than 65 years old were not reported.

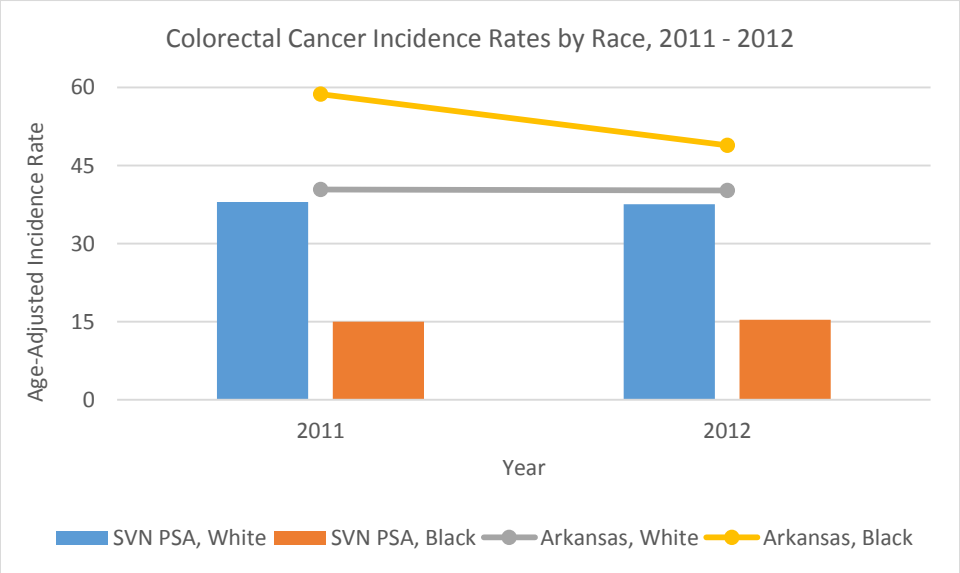
Cervical Cancer Mortality

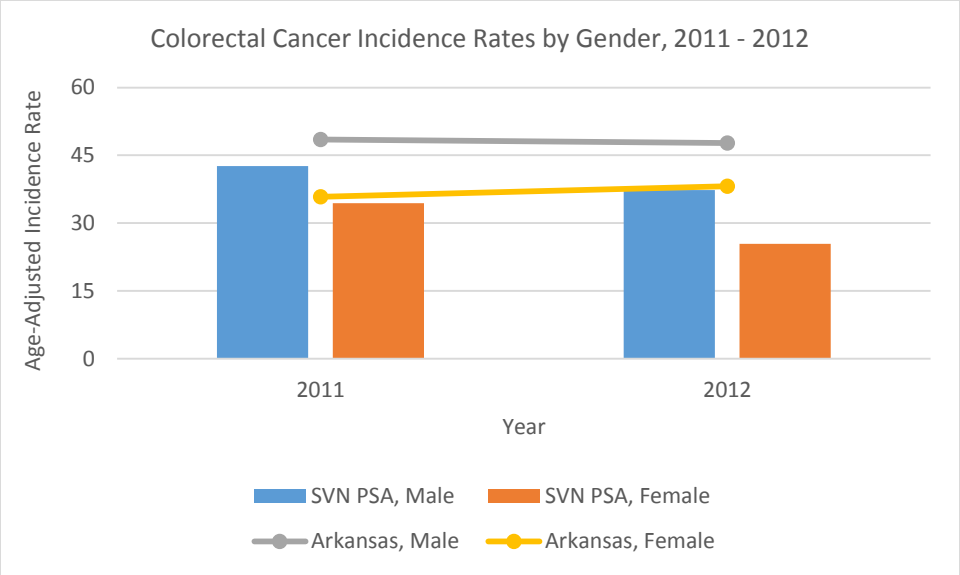


According to provisional data reported by the Arkansas Center for Health Statistics, age-adjusted mortality rates (per 100,000 population) for cervical cancer across the primary service area have decreased from 3.96 deaths in 2011 to 1.49 deaths in 2014. However, cervical cancer mortality rates across the state, which were higher than the primary service area aggregate, have increased from 3.04 deaths in 2011 to 3.27 deaths in 2014. Pulaski County reported the highest mortality rate (2.39 deaths) in 2014 while Lonoke County reported the lowest rate (2.09 deaths). White women across the primary service area reported higher mortality rates in 2011 and 2012 while Black women reported higher rates in more recent years. Black women across the state reported higher rates over the four years (2011 – 2014). Cervical cancer mortality rates across the country, though lower than the state's rates, have remained the same at 2.30 deaths from 2011 to 2013.

Colorectal Cancer Incidence

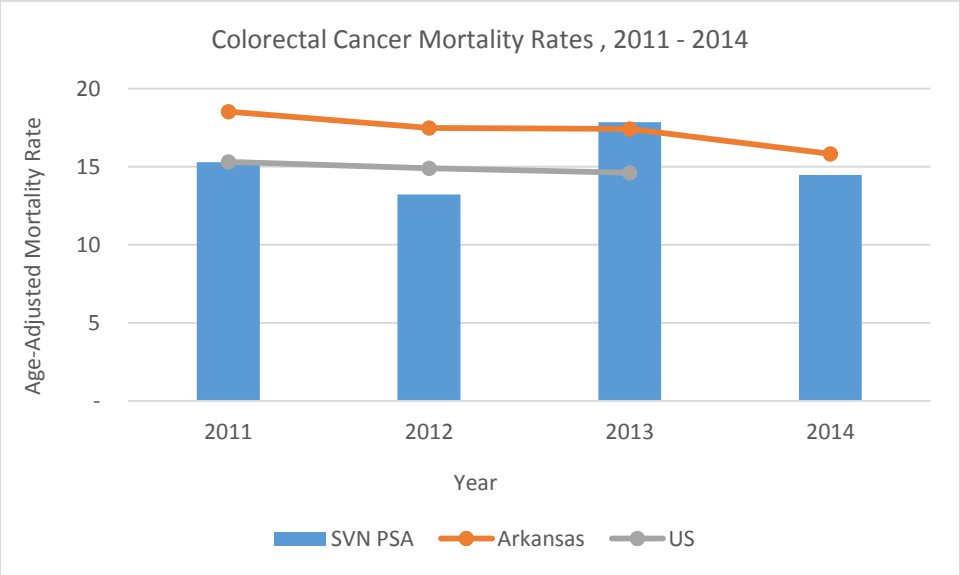


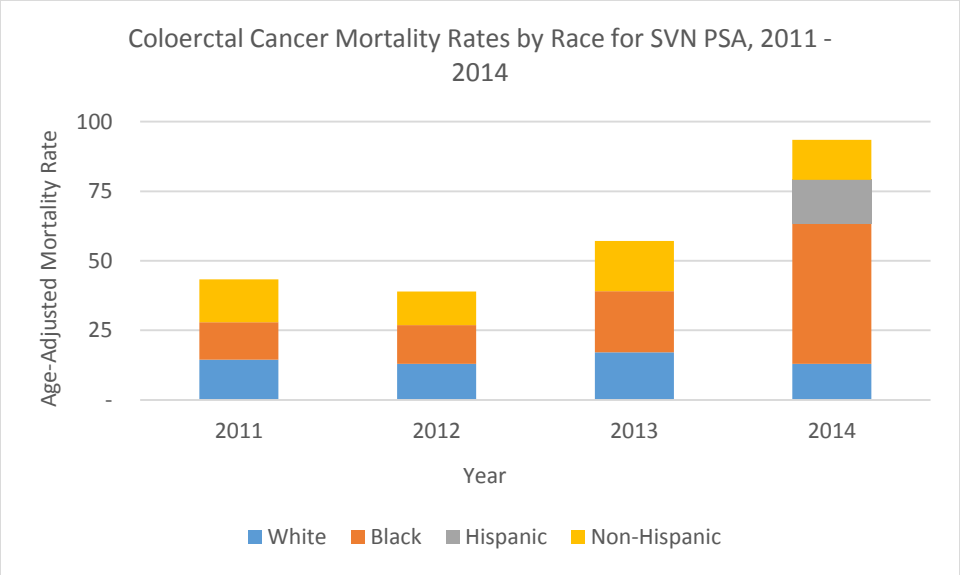


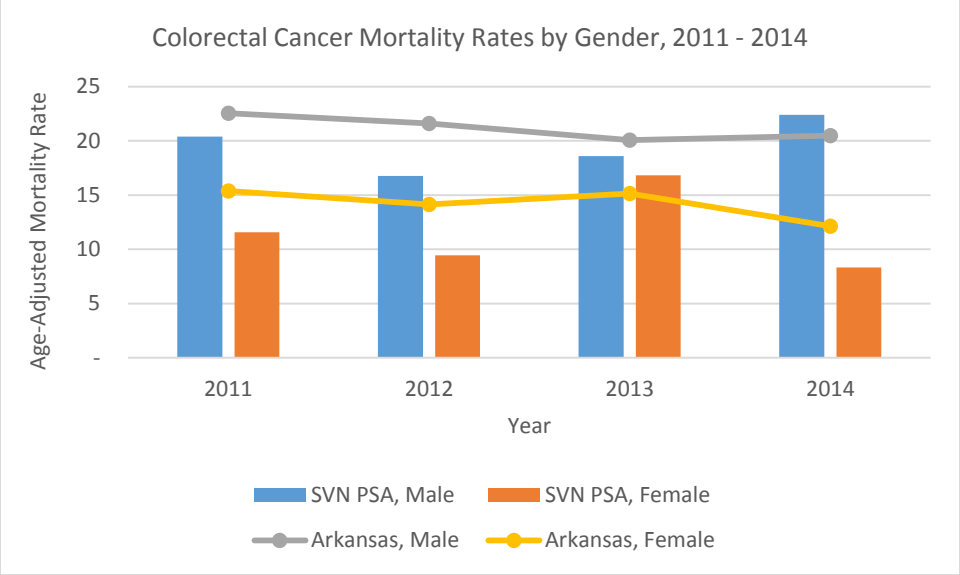


According to data reported by the Arkansas Central Cancer Registry, the overall colorectal cancer incidence rate across the SVN primary service area in 2012 was 38.6 cases per 100,000 population. This rate was lower than the state incidence rate of 41.5 cases for the same year. Lonoke County reported the highest incidence rate (45 cases) while Faulkner County reported the lowest rate (34.7 cases). Across the primary service area, more Whites reported having colorectal cancer than Black. However, across the state, the reverse was true. More males across the primary service area and the state reported having colorectal cancer than females. Across the state, people above the age of 85 years reported the highest colorectal cancer incidence rates (273.5 cases) while people between the ages of 35 - 39 years reported the lowest incidence rates (11.8 cases). Incidence rates for people less than 35 years were not reported.

Colorectal Cancer Mortality



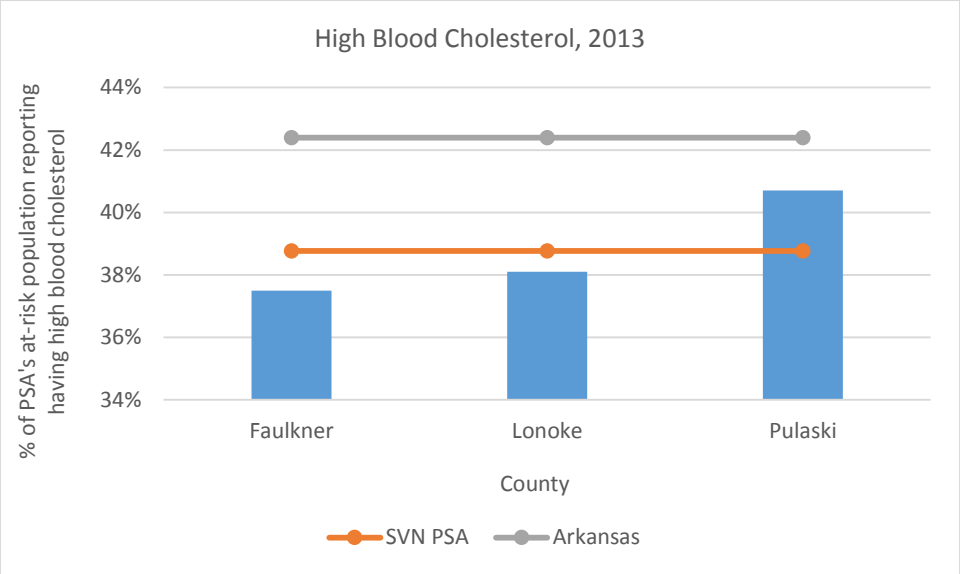




According to provisional data reported by the Arkansas Center for Health Statistics, age-adjusted mortality rates (per 100,000 population) for colorectal cancer across the primary service area have decreased from 15.29 deaths in 2011 to 14.47 deaths in 2014. Similarly, mortality rates across the state, though higher than the SVN primary services area's aggregate rates, have decreased from 18.52 deaths in 2011 to 15.82 deaths in 2014. Faulkner County reported the highest colorectal cancer mortality rate (17.68 deaths), while Pulaski County reported the lowest rate (10.53 deaths) among the three counties in the primary service area in 2014. Blacks across the primary service area and the state reported higher mortality rates when compared to other races. Males reported higher colorectal cancer mortality rates than females, across the primary service area and the state. Colorectal cancer mortality rates across the country have also decreased from 15.30 deaths in 2011 to 14.60 deaths in 2013.

Cardiovascular Diseases: Indicators, Incidence & Mortality

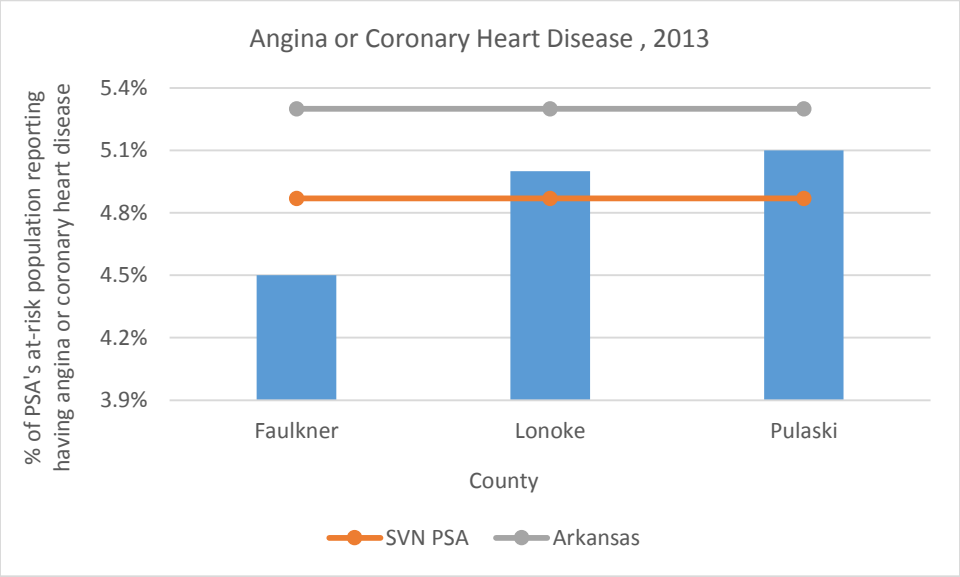
High Blood Cholesterol Incidence



High blood cholesterol is one of the major risk factors for heart disease. The higher your blood cholesterol level, the greater your risk for developing heart disease or having a heart attack. [59] Almost half of the SVN primary service area's adult population (38.77%) reported having high blood cholesterol in 2013. [60] Arkansas State reported a higher percent of its overall population (42.4%) as having high blood cholesterol as well. Out of the three counties in the primary service area, only one county reported a higher percentage numbers for this measure relative to the SVN primary service area aggregate. All three counties remained below the state level. Pulaski County reported the highest percent (40.70%) of its population having high blood cholesterol, while Faulkner County reported the lowest percent (37.50%).

[59] National Heart, Lung, and Blood Institute
[60] Behavioral Risk Factor Surveillance System accessed at Arkansas Department of Health

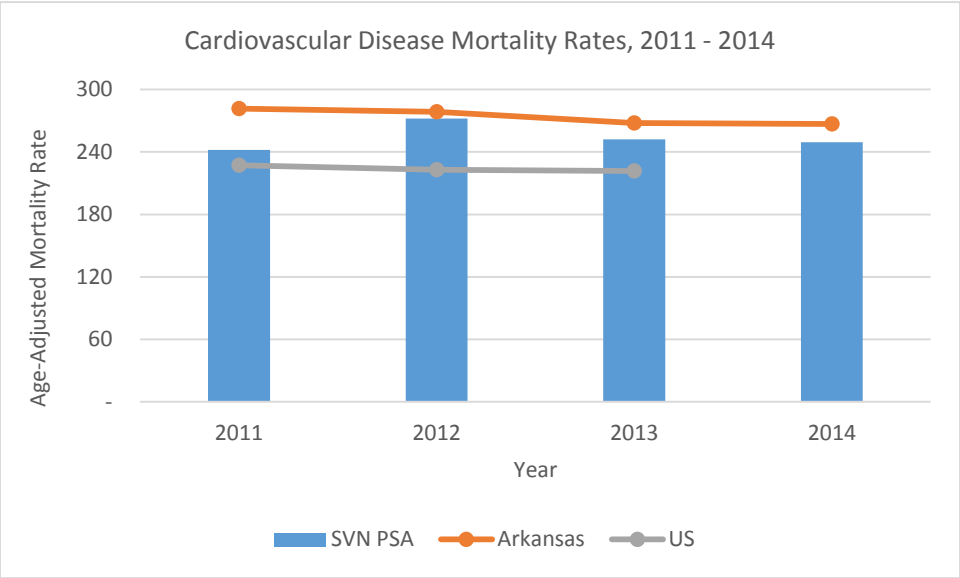
Coronary Heart Disease Incidence

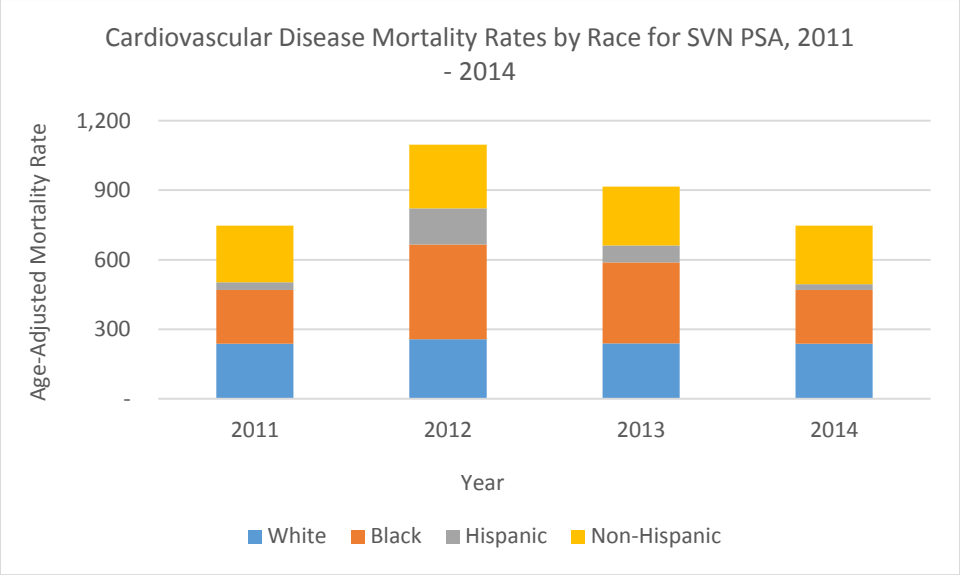


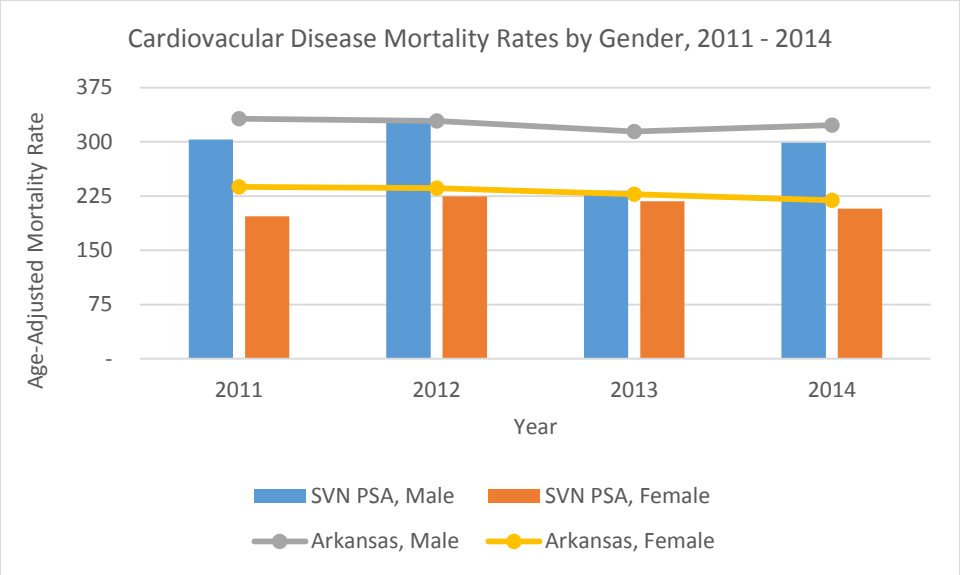
Coronary Heart Disease or CHD, is a common heart disease or condition in which a waxy substance called plaque builds up on the inner walls of the coronary arteries and reduces blood flow to the heart muscle. Eventually these plaques can rupture forming a blood clot which when large enough can sometimes lead to a heart attack. There are many risk factors for CHD some of which can be controlled such as high blood cholesterol, Diabetes, obesity, smoking, and lack of physical activity. [61] In 2013, 4.87% of the SVN primary service area's aggregate population at-risk (or 7,238 people out of an average of 146,765) reported having CHD, which was a lower percent when compared to the state (5.30% or 118,529 people out of 2,236,326 people). [62] Two out of three counties in the primary service area report higher percentages compared to the SVN primary service area aggregate, while all three counties remained below the state. Pulaski County reported the highest percentage (5.10%) of its population having CHD, while Faulkner County reported the lowest percentage (4.50%).

[61] National Heart, Lung and Blood Institute
[62] Behavioral Risk Factor Surveillance System accessed at Arkansas Department of Health

Cardiovascular Disease Mortality





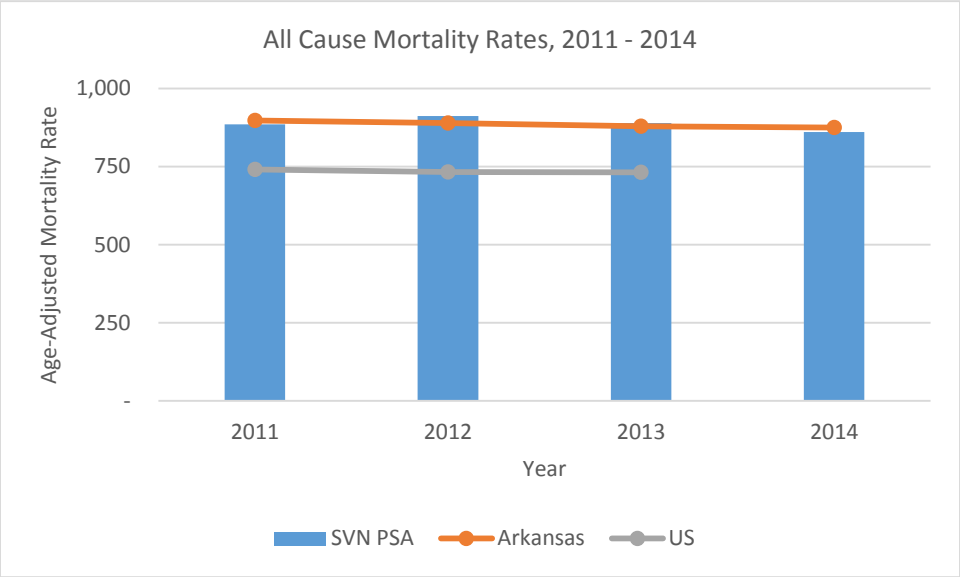


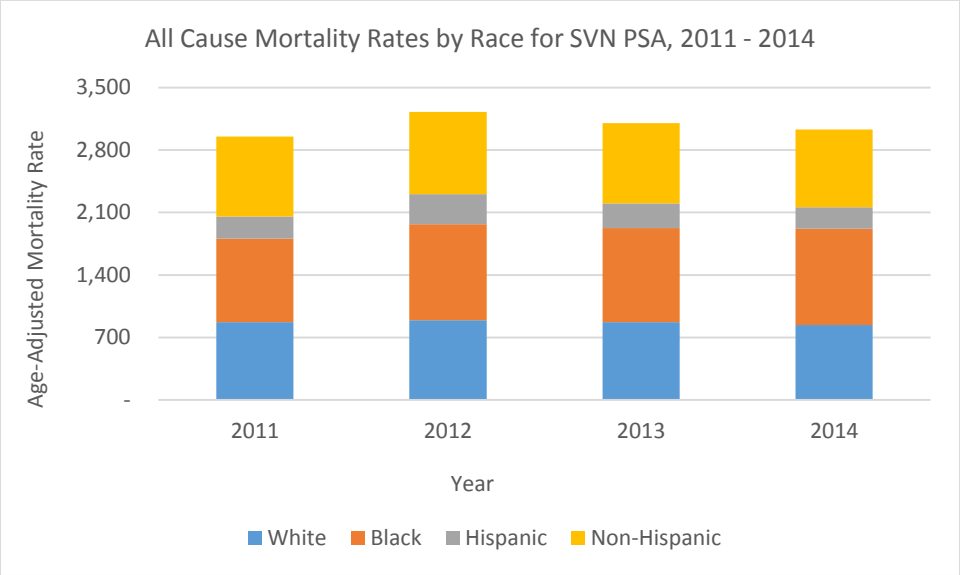
Cardiovascular Disease (CVD) was the leading cause of death in the United States in 2009. More than 600,000 Americans die of heart disease each year. [63] Provisional data provided by the Arkansas Center for Health Statistics reported that the age-adjusted mortality rates per 100,000 population for CVD across the SVN primary service area have increased from 241.94 deaths in 2011 to 249.24 deaths in 2014. [36] These rates were lower than the state's rates which have decreased over time (281.74 deaths in 2011 to 266.79 deaths in 2014). While Whites across the primary service area reported higher stroke mortality rates in 2011 and 2014, Blacks reported higher rates in 2012 and 2013. Blacks across the state consistently reported higher mortality rates when compared to other races. Males reported higher mortality rates compared to females across the SVN primary service area and the state. In 2014, CVD mortality rates in two out of three counties exceeded the SVN primary service area aggregate rate while all three counties stayed below the state's rate. Pulaski County reported the highest CVD mortality rate (252.24 deaths) while Faulkner County reported the lowest CVD mortality rate (245.34 deaths) in 2014. Age-adjusted mortality rates for the nation were only available till 2013. Similar to the CVD mortality rates across Arkansas state, the country overall has seen a decline in CVD mortality rates over time (227.3 deaths in 2011 to 221.7 deaths in 2013). The country's rates remained lower than the state and the SVN primary service area's aggregate rates during this time period. [37]

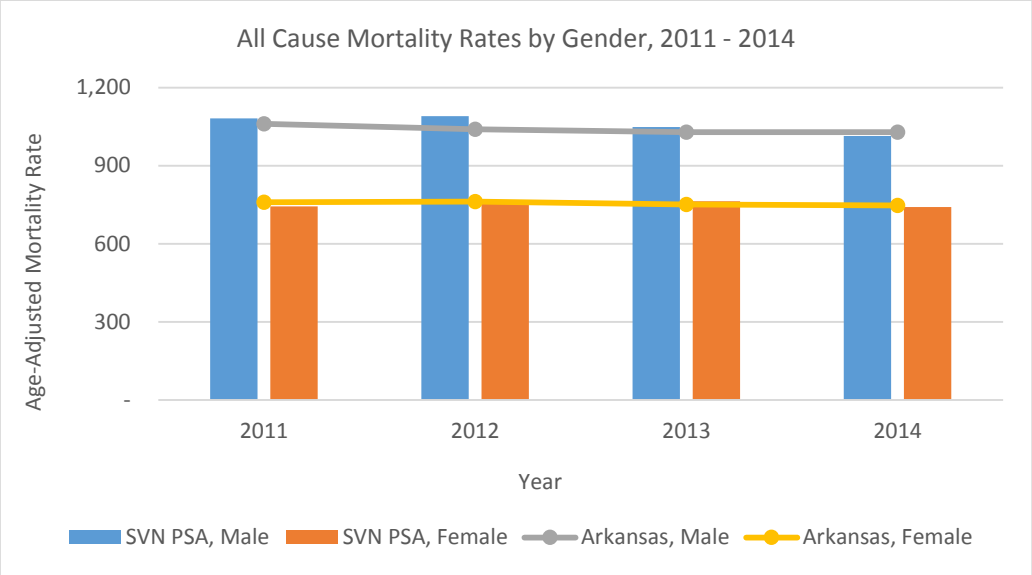
[63] Heart Disease Fact Sheet – Centers for Disease Control and Prevention

Other Types of Incidence & Mortality Data

All-Cause Mortality

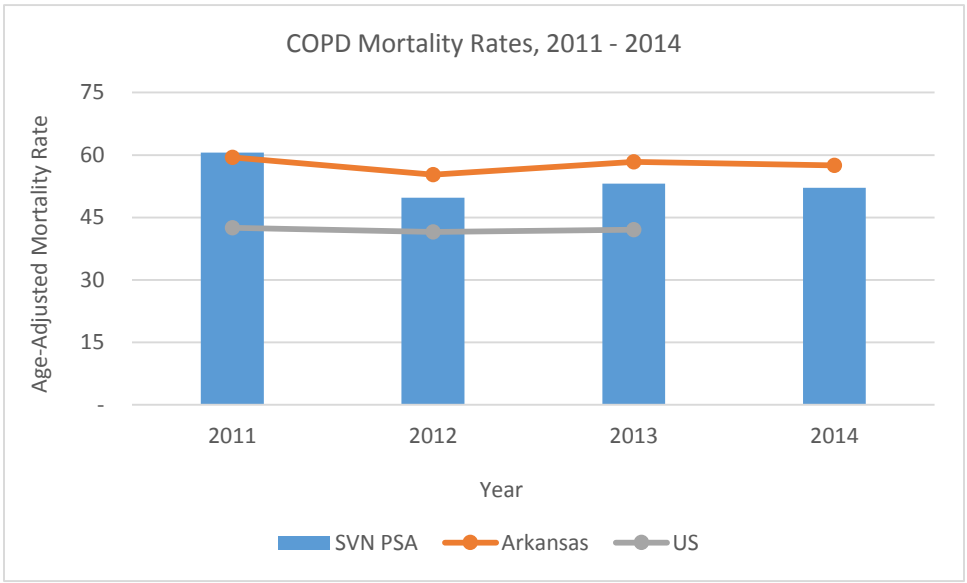




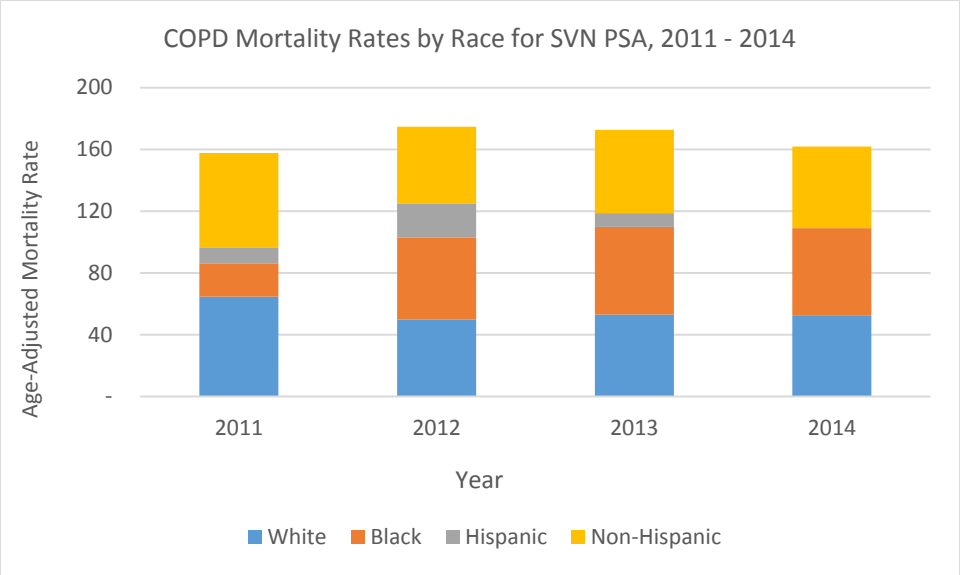


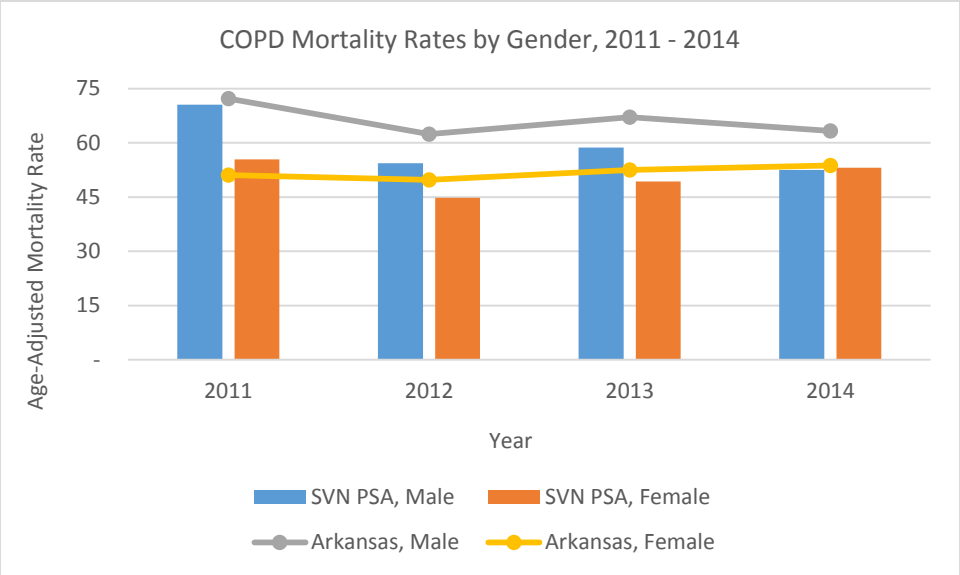
This measure reports mortality rates from all causes, age-adjusted to US 2000 population. All-cause mortality rates across SVN primary service area have decreased from 885.37 deaths (per 100,000 population) in 2011 to 860.94 deaths in 2014. Lonoke County reported the highest all-cause mortality rate (871.26 deaths), while Pulaski County reported the lowest rate (846.20 deaths) among the three counties in the SVN primary service area, in 2014. Across the state, all-cause mortality rates have declined from 897.49 deaths in 2011 to 875.59 deaths in 2014. Blacks across the primary service area and state reported higher all-cause mortality rates, when compared to other races. Males consistently reported higher all-cause mortality rates across the SVN primary service area and the state. [64] All-cause mortality rates across the country, though lower than the state and the SVN primary service area aggregate rates, declined from 741.30 deaths in 2011 to 731.90 deaths in 2014.

COPD Mortality



[64] Arkansas Center for Health Statistics – Arkansas Department of Health



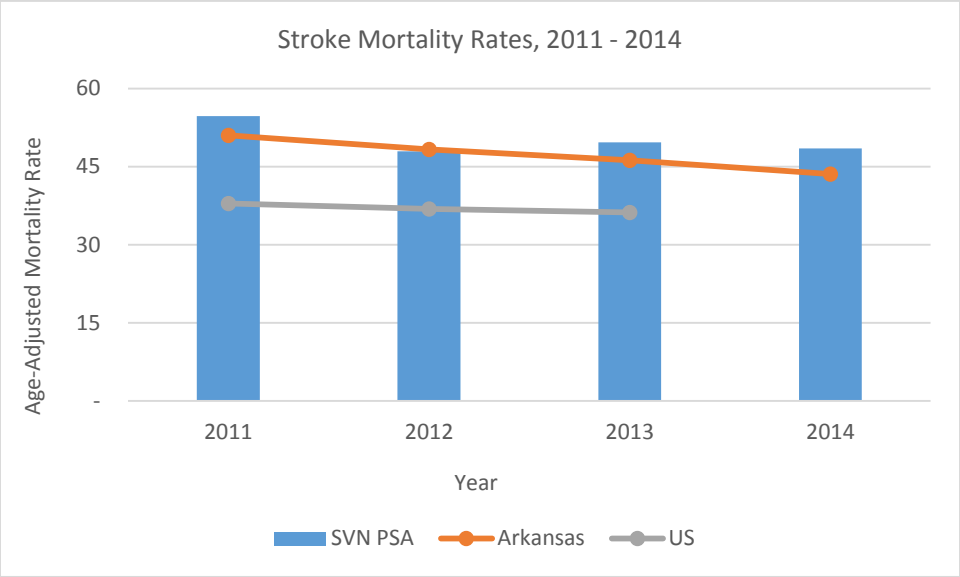


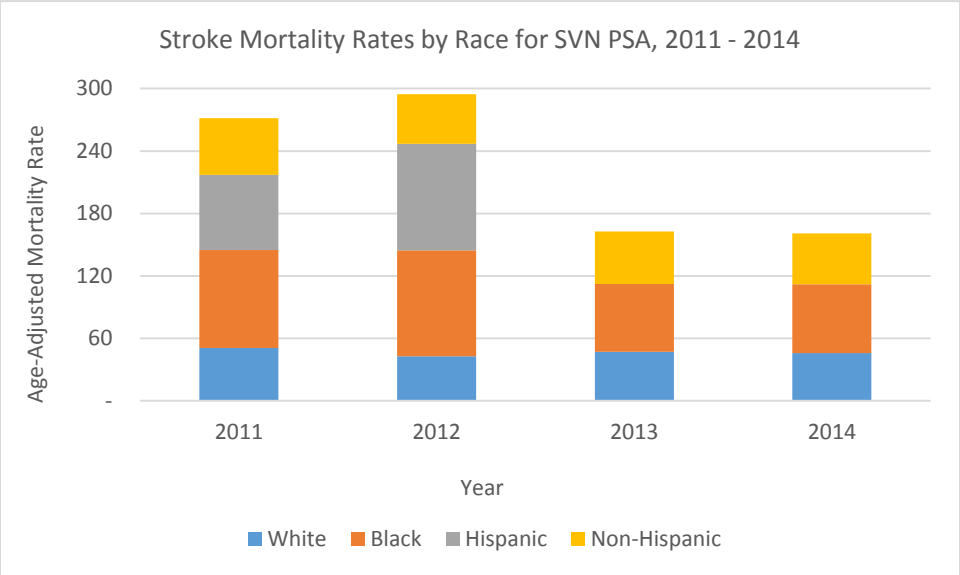
COPD, or chronic obstructive pulmonary disease, is a progressive disease that makes it hard to breathe. Cigarette smoking is the leading cause of COPD. It is a major cause of disability, and it's the third leading cause of death in the United States. Currently, millions of people are diagnosed with COPD. [65] Arkansas Department of Health reports provisional data on mortalities due to COPD, assigned to ICD-10 codes J40 – J47, age-adjusted to US 2000 population. COPD mortality rates across the SVN primary service area have decreased from 60.62 deaths (per 100,000 population) in 2011 to 52.16 deaths in 2014. Faulkner County reported the highest overall COPD mortality rate (61.71 deaths), while Pulaski County reported the lowest rate (41.07 deaths) in 2014. Across the state however, COPD mortality rates have decreased from 59.40 deaths in 2011 to 58.34 deaths in 2014. Whites across the primary service area and the state report higher mortality rates when compared to other races. Males consistently report higher rates when compared to

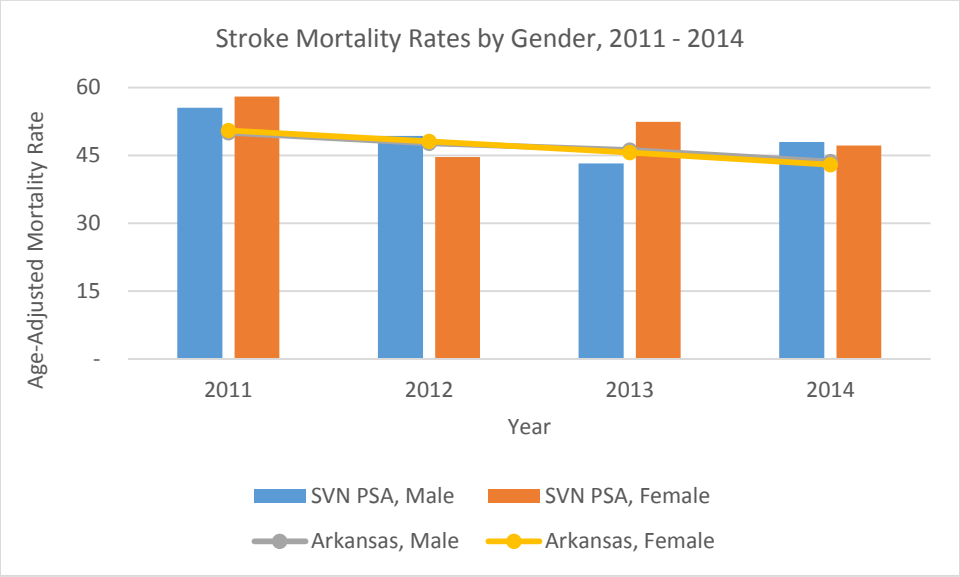
[65] National Heart, Lung, and Blood Institute

the female population across the state and the primary service area. COPD mortality rates across the nation have remained lower than the state and SVN primary service area's aggregate rates and have decreased from 42.50 deaths in 2011 to 42.10 deaths in 2013.

Stroke Mortality



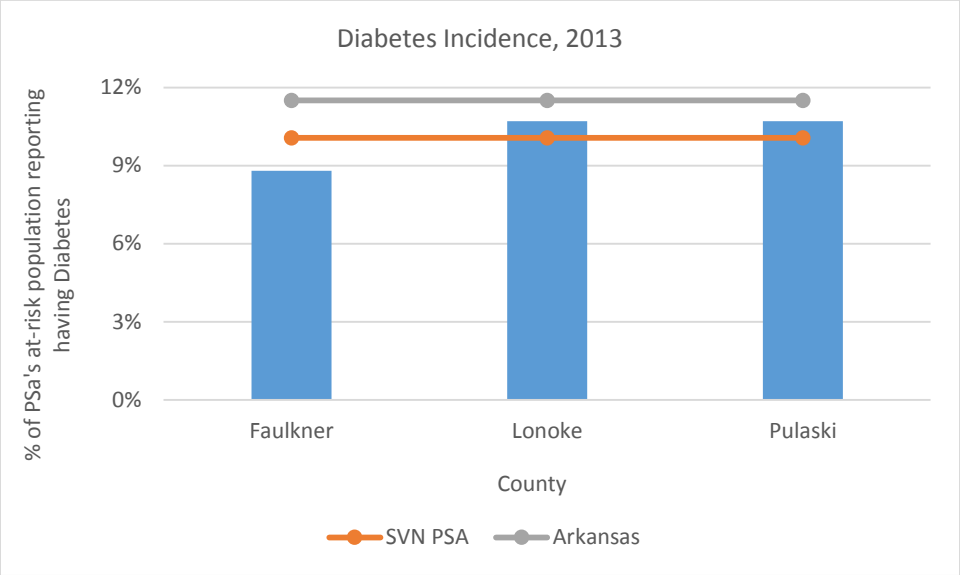




A stroke, sometimes called a brain attack, occurs when a clot blocks the blood supply to the brain or when a blood vessel in the brain bursts. [66] Stroke is the fifth leading cause of death in the United States, but the risk of having a stroke increases with age and varies with race and ethnicity. The country's highest death rates from stroke are in the southeastern United States. Provisional data provided by the Arkansas Center for Health Statistics reported that age-adjusted mortality rates per 100,000 population for stroke across the SVN primary service area have decreased from 54.72 deaths in 2011 to 48.47 deaths in 2014. These rates, though higher than the primary service area's aggregate rates (51.04 deaths in 2011 to 43.58 deaths in 2014) which have also decreased over time. Blacks across the primary service area and the state reported higher stroke mortality rates compared to other races. Males and females alternatively reported higher stroke mortality rates across the primary service area and the state. In 2014, stroke mortality rates in out of three counties exceeded the SVN primary service area aggregate and state rates. Faulkner County reported the highest stroke mortality rate (58.16 deaths) while Lonoke County reported the lowest rate (36.84 deaths) in 2014. Age-adjusted mortality rates for the nation were only available till 2013. Stroke mortality rates across the country have remained lower than the state and the SVN primary service area's aggregate rates, while decreasing from 37.9 deaths in 2011 to 36.2 deaths in 2013.

[66] Stroke Fact sheet – Centers for Disease Control and Prevention

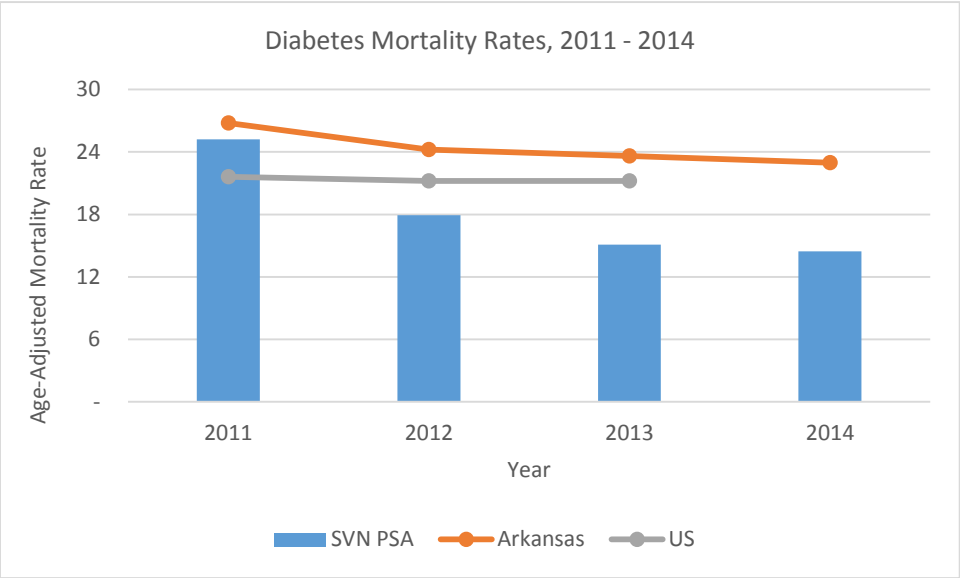
Diabetes Incidence

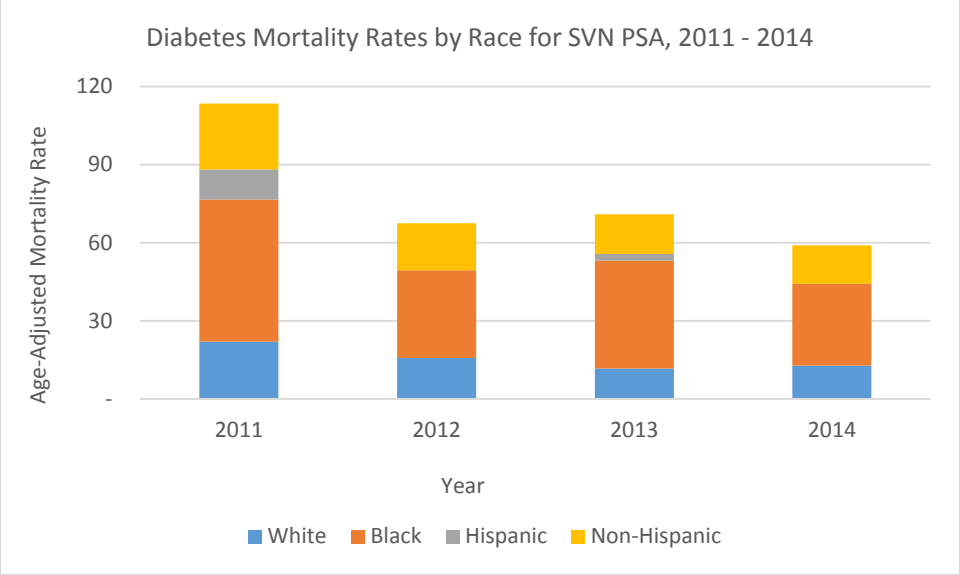


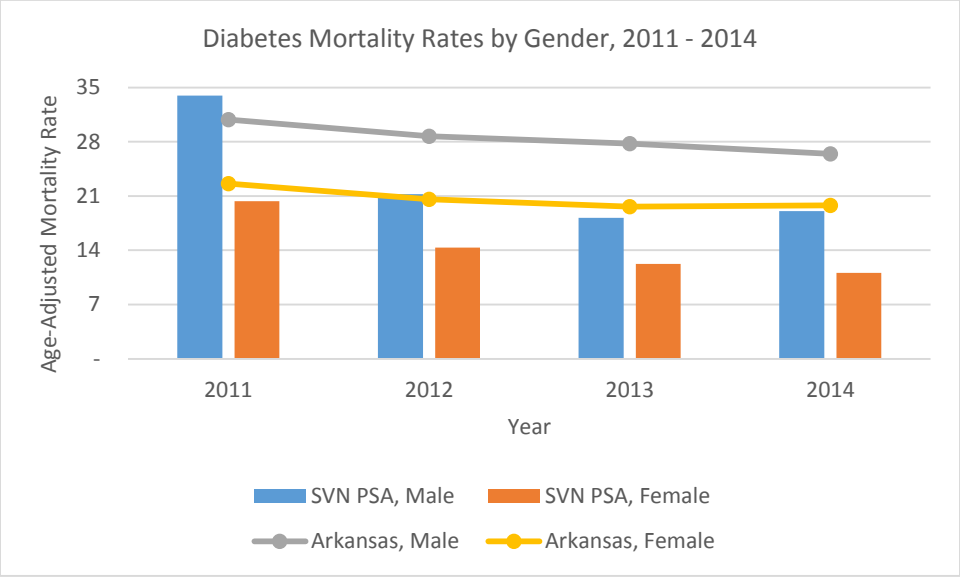
Diabetes Mellitus, the most common form of diabetes, is defined as a condition characterized by hyperglycemia resulting from the body's inability to use blood glucose for energy. [67] Chronic diabetes conditions include type 1 and type 2 diabetes. [68] The condition can be treated and managed by healthy eating, regular physical activities and medications to lower blood glucose levels. [69] Diabetes is one of the risk factors that lead to CHD. In 2013, 10.07% of the SVN primary service area's at-risk population reported having diabetes mellitus (15,122 out of a population of 146,765 people). [70] Arkansas State as a whole reported a higher percentage (11.65%) of its population having diabetes mellitus. In 2013, two out of three counties reported a higher percentage of its population having diabetes relative to the SVN primary service area aggregate. Lonoke and Pulaski Counties reported the largest percentage (10.70%) while Faulkner County reported the lowest percentage (8.80 %).

[67] American Diabetes Association
[68] Diabetes – Mayo Clinic
[69] National Diabetes Statistics Report, 2014 – Centers for Disease Control and Prevention
[70] Behavioral Risk Factor Surveillance System accessed at Arkansas Department of Health

Diabetes Mortality

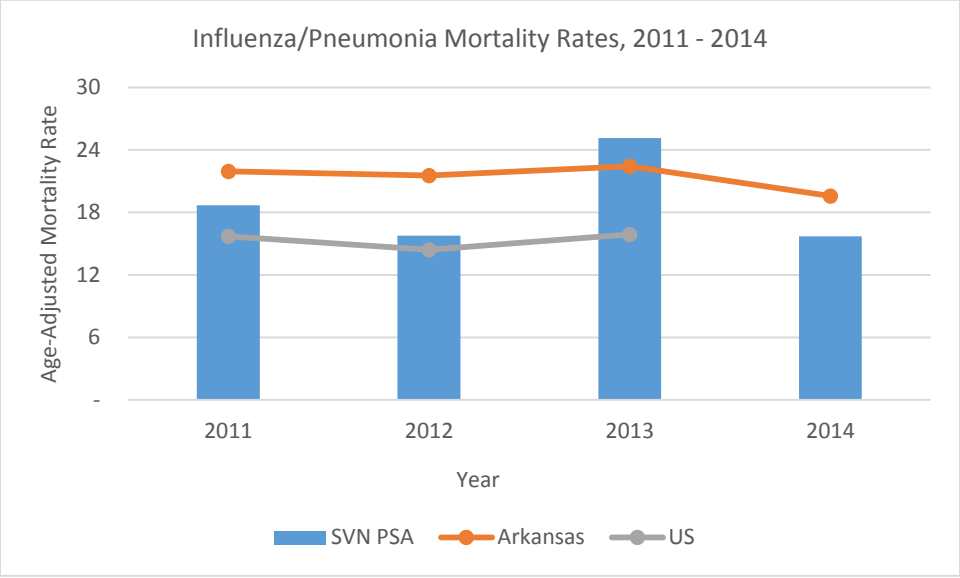


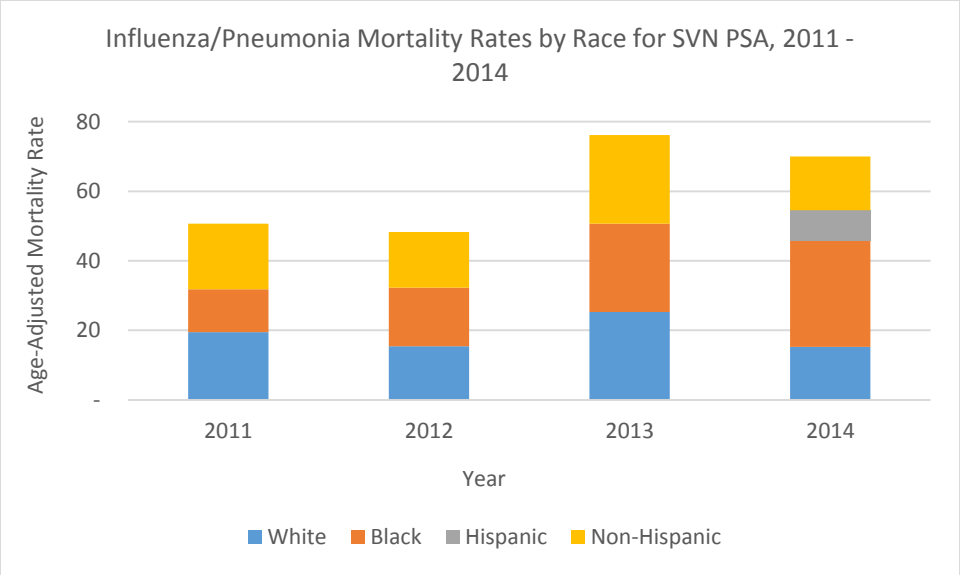


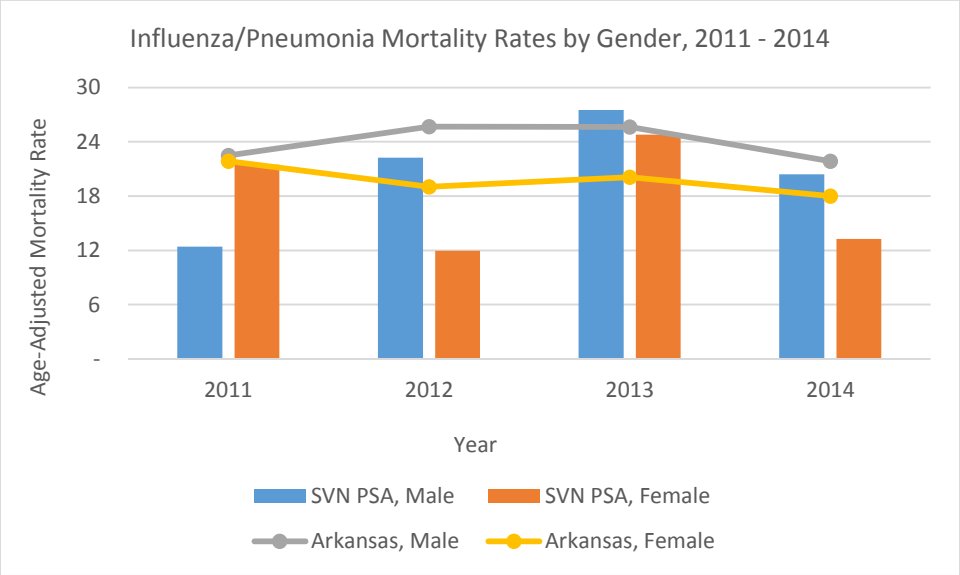


According to the provisional data reported by the Arkansas Department of Health, mortality rates due to Diabetes Mellitus are deaths assigned to ICD-10 codes E10-E14, age-adjusted to the 2000 US population. Diabetes mortality rates across the SVN primary service area and the state have decreased from 2011 to 2014. In 2014, SVN primary service area recorded an aggregate diabetes mortality rate of 14.45 deaths (per 100,000 population), while the state recorded a higher rate of 22.96 deaths. Lonoke County reported the highest diabetes mortality rate (16.01 deaths), while Faulkner County reported the lowest rate (12.45 deaths) among the three counties in the SVN primary service area, during the same year. Blacks across the primary service area and the state reported higher diabetes mortality rates when compared to other races. Males across the SVN primary service area and the state consistently reported higher mortality rates when compared to the female population. Diabetes mortality rates across the country have decreased from 21.60 deaths in 2011 to 21.20 deaths in 2013.

Influenza/Pneumonia Mortality







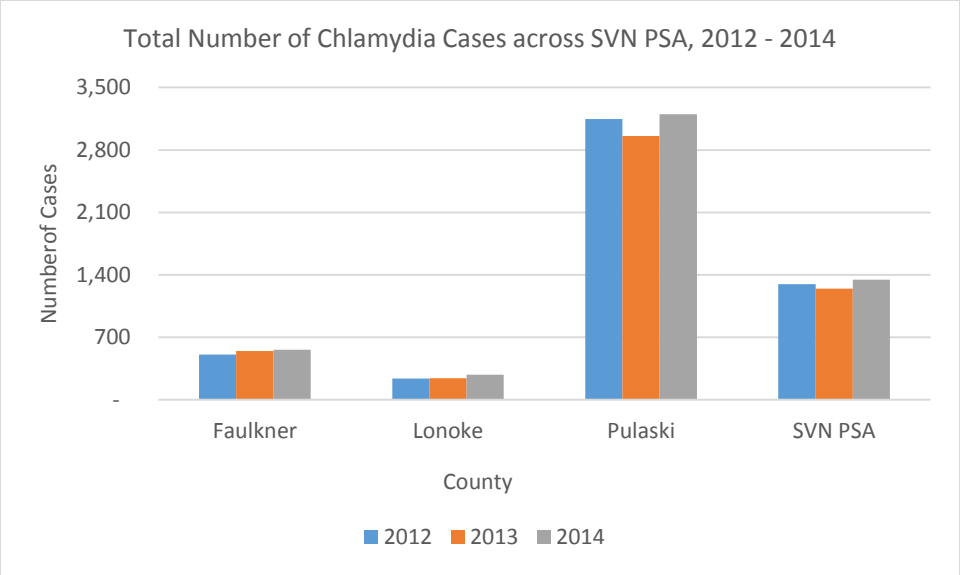
Influenza (flu) is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and lungs. It can cause mild to severe illness, and at times can lead to death. [71] Pneumonia is an infection of the lungs that can be caused by viruses, bacteria and fungi. Similar to the flu, it can cause mild to severe illness in people of all ages. It is the leading cause of death in children younger than 5 years of age worldwide. [72] The Arkansas Department of Health reports out provisional mortality data for influenza and pneumonia together, assigning the deaths to ICD-10 codes J10 – J18, age-adjusted to the 2000 US population. Influenza/Pneumonia mortality rates across the SVN primary service area have decreased from 18.70 deaths (per 100,000 population) in 2011 to 15.72 deaths in 2014. Lonoke County reported the highest overall mortality rate (23.48 deaths), while Faulkner County reported the lowest rate (7.11 deaths)

[71] Influenza Key Facts – Centers for Disease Control and Prevention
[72] Pneumonia Key Facts – Centers for Disease Control and Prevention

in 2014. Similar to SVN primary service area's rates, influenza/pneumonia mortality rates across the state have decreased from 21.96 deaths in 2011 to 19.59 deaths in 2014. Blacks across the primary service area have reported higher mortality rates, while Whites across the state have reported higher rates, when compared to other races. Males reported consistently higher rates when compared to females across the primary service area and the state. Influenza/pneumonia mortality rates across the nation have remained lower than the state and the primary service area's aggregate rates. Unlike the state and SVN primary service area rates however, national mortality rates increased from 15.70 deaths in 2011 to 15.90 deaths in 2013.

Communicable Diseases

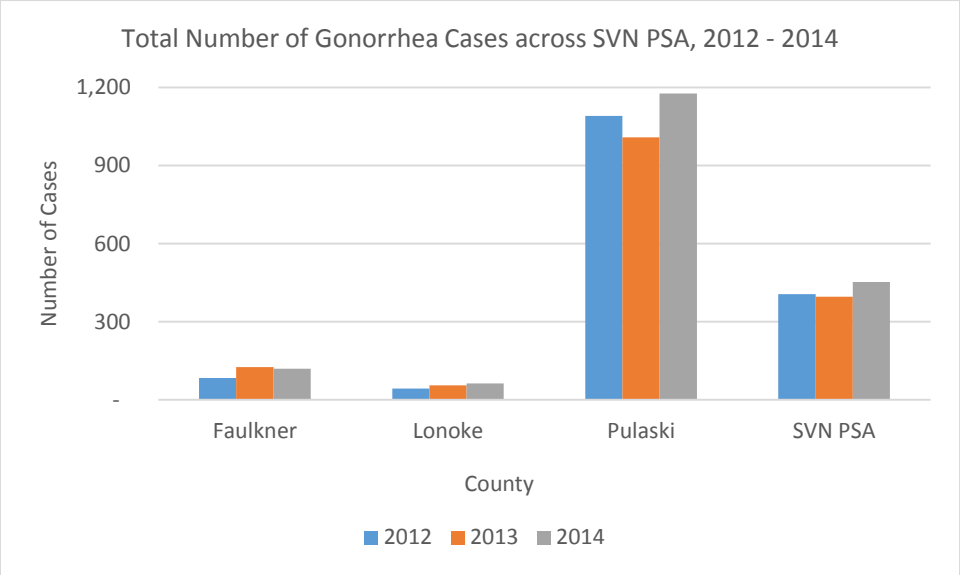
Chlamydia



Chlamydia is a common sexually transmitted disease (STD) caused by infection with *Chlamydia trachomatis*. It is the most frequently reported bacterial STD in the United States with an estimated 2.86 million infections occurring annually. A large number of cases are not reported because most people with chlamydia are asymptomatic and do not seek testing. [73] The average number of reported chlamydia cases in the SVN primary service area have increased from 1,298 cases in 2012 to 1,348 cases being reported in 2014. Pulaski County reported the largest number of chlamydia cases (3,202 cases) and Lonoke County reported the lowest number (282 cases) in 2014. Unlike the pattern of chlamydia cases across the SVN PSA, the total number of chlamydia cases ac declined from 16,590 cases in 2012 to 15,428 cases in 2014. Black, Non-Hispanics across the state reported the highest number of cases (7,758 cases) in 2014 when compared to other races. Females reported higher number of chlamydia cases (11,504 cases) when compared to males (3,924 cases) in the same year. People between the ages of 15 – 24 years reported the highest number of cases (11,027 cases) while people above the age of 65 years reported the lowest number of cases (6 cases). [74]

[73] Chlamydia – Centers for Disease Control and Prevention
[74] STI Surveillance Report, 2014 produced by the Infectious Disease Branch of the Arkansas Department of Health

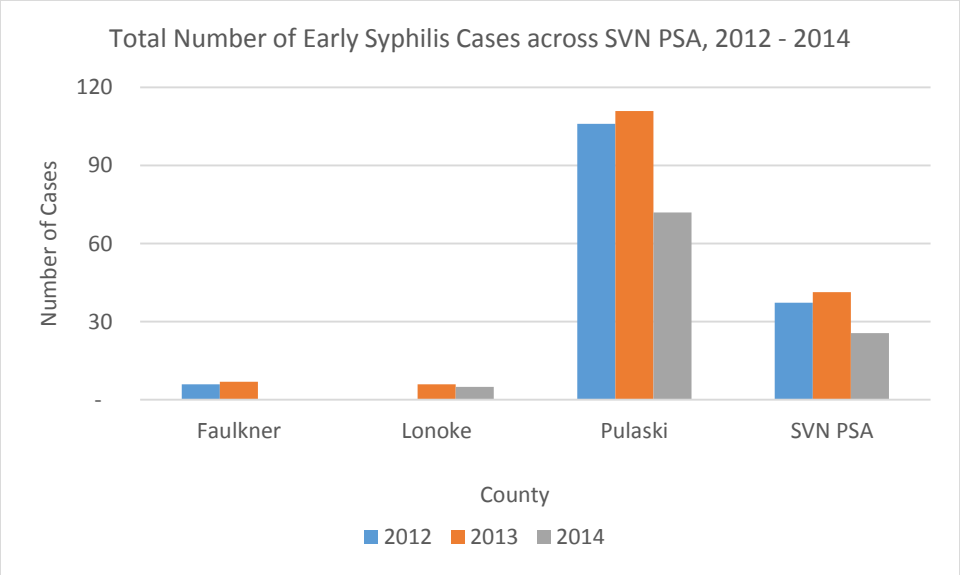
Gonorrhea



Gonorrhea is an STD caused by infection with *Neisseria gonorrhoeae* bacterium. The CDC estimates that approximately 820,000 new gonorrheal infections occur each year and that less than half of these infections are detected and reported to the CDC. [75] The average number of gonorrhea cases reported in the SVN primary service area increased from 406 cases in 2012 to 453 cases in 2014. In 2014, Pulaski County reported the largest number of gonorrhea cases (1,177 cases) and Lonoke County reported the lowest number of gonorrhea cases (63 cases). Similar to the PSA, the total number of gonorrhea cases across the state of Arkansas increased from 4,279 cases reported in 2012 to 4,398 cases being reported in 2014. Black, Non-Hispanics across the state reported the highest number of cases (2,872 cases) in 2014 when compared across other races. Females reported a higher number of gonorrhea cases (2,412 cases) in 2014 when compared to males (1,986 cases). People between the ages of 15 – 24 years reported the highest number of cases (2,663 cases) while people above the age of 65 years reported the lowest number of cases (4 cases).

[75] Gonorrhea – Centers for Disease Control and Prevention

Syphilis



Syphilis is an STD caused by the bacterium *Treponema pallidum*. Syphilis can cause long-term complications if not adequately treated. [76] The average number of early syphilis cases across the SVN primary service area has declined from 37 cases in 2012 to 26 cases being reported in 2014. Pulaski County reported the largest number of cases (72 cases) and Lonoke County reported the lowest number of cases in 2014. Similar to the SVN PSA, the total number of early syphilis cases reported in the state of Arkansas has declined from 291 cases reported in 2012 to 257 reported in 2014. Black, Non-Hispanics across the state reported the highest number of cases (136 cases) in 2014 when compared across other races. Males reported higher numbers (195 cases) when compared to females (62 cases). While people between the ages of 25 – 34 years recorded the highest number of cases (97 cases), people between the ages of 55 - 64 years reported the lowest number of cases (5 cases).

[76] Syphilis – Centers for Disease Control and Prevention

Summary of Qualitative Data Findings

As indicated, a major component in the process for identifying the health needs of the community was collecting primary data through focus groups, personal interviews, and surveys conducted from January 2016 – April 2016. The participants listed in the table below represent a balanced and diverse mix of community members and officials representing the general population, the underserved, the low income, minority populations, and populations with chronic disease needs. Four broad questions were used to survey the personal opinions of community members:

1. How has the passing of the Affordable Care Act and Arkansas' Medicaid Private Option impacted the health of the state and community as a whole?
2. What are some of the unique health needs of the community?
3. What are some barriers that routinely prevent citizens from accessing the care that they need?
4. What can CHI St. Vincent Health System do to address the health needs of the community?

In addition to these general interviews, focus groups and surveys centered on particular population groups or health needs were also held, and include:

1. Senior Health
2. Latino Health
3. Suicide Prevention
4. Community violence

All responses collected were summarized and common themes that were cited as concerns by a majority of the respondents were considered as priorities. Additionally, any outlying (uncommon) health gaps were also highlighted as issues that need immediate, continued or future attention.

CHI St. Vincent North 2016 CHNA Interview Participants		
Organization	**Name**	**Title**
Sherwood Chamber of Commerce	Marcia Cook	Executive Director
City of Sherwood	Beverly Williams	Alderman
CHI St. Vincent Methodist Church Outreach Clinic – North Little Rock	Rhonda Higgins	RN-Coordinator
CHI St. Vincent Methodist Church Outreach Clinic – North Little Rock	Nancy Watson	Volunteer
CHI St. Vincent Methodist Church Outreach Clinic – North Little Rock	Dr. Schudey	Volunteer Physician
CHI St. Vincent Methodist Church Outreach Clinic – North Little Rock	Translators(2)	
UAMS School of Public Health	Dr. M. Kate Stewart	Professor – Health Policy and Management, Director – Office of Community based Public Health
UAMS School of Public Health	Ashley Bachelder	Office of Community Based Public Health
Hometown Health Improvement, Arkansas Department of Health	Laura Taylor	Central Region Coordinator

Organization	Name	Title
Hometown Health Improvement, Arkansas Department of Health	Julie Harlan	Director
Metropolitan Emergency Medical Services(MEMS) of Little Rock	Jon Swanson	Executive Director
Metropolitan Emergency Medical Services(MEMS) of Little Rock	Mack Hutchison	Quality Manager
Metropolitan Emergency Medical Services(MEMS) of Little Rock	Edward Gilbertson	Program Director
Arkansas House District 36	Charles Blake	Representative
City of Little Rock, CHI St. Vincent Health System	Bruce T. Moore	City Manager, Board Member
Sisters of Charity of Nazareth, CHI St. Vincent Health System	Sr. Trudy Foster	Board Member
CHI St. Vincent Health System	Dr. Drew Kumpuris	Board Chair
CHI St. Vincent Auxiliary Volunteers	Senior Citizen Focus group (6) age 65 and over	

IMPACT OF THE AFFORDABLE CARE ACT AND ARKANSAS' MEDICAID PRIVATE OPTION ON THE STATE'S HEALTH

It was expressed by participants that since the passing of the Affordable Care Act and Arkansas' Medicaid Private Option, the state has seen an increase in the number of people being insured. However, there is concern that access is still an issue because there has not been a proportional increase in the number of providers to the increase of insured population.

IDENTIFIED HEALTH NEEDS AND BARRIERS

ACCESS

A common thread across all interviews was the concern that individuals are not accessing the right level of care. Additionally, there were concerns that where citizens lived dictated their ability to access specialty care and special services. (Rural vs. Urban)

OBESITY

Another consistent finding across all interviews conducted was the concern around obesity. It was overwhelmingly expressed that addressing obesity should be a top priority as it leads to issues with blood pressure, diabetes, cholesterol, and cancer. Additionally, there was discussion in most interviews on food desserts (lack of access to nutritious food) in the SVN primary service area.

SENIOR HEALTH

Across the interviews as well through direct feedback provided from senior citizens, it was cited that there are issues in this senior community related to senior hunger, chronic disease management, resources for medication management, and transportation to physician appointments.

LATINO HEALTH

With the growing Latino population in Arkansas, it was often cited in interviews as well as in the Latino focus group that there needed to be structural processes in place to be sure that this population needs were being met. The examples provided include increasing interpreter services as well as education and prevention efforts aimed at addressing some of the chronic conditions that have a high prevalence in this community such as diabetes and high blood pressure.

MENTAL HEALTH

Mental Health resources was identified as a significant need in all interviews conducted with the concern being that there are not enough resources to provide the level of mental health care needed for the community.

OTHER NEEDS

Community Violence

Interviewees were asked to provide their opinion on how they felt violence impacted the overall health of the community and how CHI St. Vincent could help address these issues. The general consensus was that there is violence within the community that creates a negative perception of safety for both community members and those who live outside the area and this impacts the mental and social health of the community.

Additional Opportunities

Some members of the community also feel that adult smoking is an ever-existing issue in the state and could potentially add to the list of factors contributing to the bad state of health in Arkansas.

WAYS THAT CHI ST. VINCENT HEALTH SYSTEM CAN EFFECTIVELY ADDRESS THESE NEEDS AND BARRIERS

The common recommendations provided by interview participants are included below:

- Case Management. Participants in the interviews expressed that case management could help individuals with chronic health conditions and improve the overall health of the population.
- Health Education. It was encouraged that CHI St. Vincent sponsor education sessions around chronic disease management, smoking, prenatal care and other health conditions that could be avoided or effectively managed.
- Partnership and Collaboration. It was recommended that the hospital and health system continue to find ways to engage the community. Examples provided include local community agencies, schools, and churches.

Glossary Table

Data Measures by Category	Source	Definition
		County Profile
Population, 2014 estimate	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	All persons who are "usually resident" in a specified geographic area. The population count or estimate used as the starting point in the estimates process. It can be the most recent updated Census count or the estimate for a previous date within the same vintage. (The vintage year (e.g., 2014) refers to the final year of the time series).
Population Density, 2010	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	**Persons per square mile** is the average number of inhabitants per square mile of land area. These figures are derived by dividing the total number of residents by the number of square miles of land area in the specified geographic area. The land area measurement is from the Census 2010. To determine population per square kilometer, multiply the population per square mile by .3861. Source: United States Census Bureau, State & County QuickFacts
White alone, percent, 2014	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian
Black or African American alone, percent, 2014	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	**Black or African American**. A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black, African Am., or Negro"; or report entries such as African American, Kenyan, Nigerian, or Haitian.
Hispanic or Latino, percent, 2014	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	**Hispanics or Latinos** are those people who classified themselves in one of the specific Spanish, Hispanic, or Latino categories listed on the Census 2010 questionnaire -"Mexican," "Puerto Rican", or "Cuban"-as well as those who indicate that they are "another Hispanic, Latino, or Spanish origin." People who do not identify with one of the specific origins listed on the questionnaire but indicate that they are "another Hispanic, Latino, or Spanish origin" are those whose origins are from Spain, the Spanish-speaking countries of Central or South America, or the Dominican Republic. The terms "Hispanic," "Latino," and "Spanish" are used interchangeably.
American Indian and Alaska Native, 2014	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	**American Indian and Alaska Native.** A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. This category includes people who indicate their race as "American Indian or Alaska Native" or report entries such as Navajo, Blackfeet, Inupiat, Yup'ik, or Central American Indian groups or South American Indian groups.
Asian, 2014	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	**Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes people who indicate their race as "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," and "Other Asian" or provide other detailed Asian responses.
Native Hawaiian and other Pacific Islander	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	**Native Hawaiian and Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicate their race as "Native Hawaiian," "Guamanian or Chamorro," "Samoan," and "Other Pacific Islander" or provide other detailed Pacific Islander responses. Source: United States Census Bureau, State & County QuickFacts
Two or More Races , 2014	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	**Two or more races.** People may have chosen to provide two or more races either by checking two or more race response check boxes, by providing multiple responses, or by some combination of check boxes and other responses.
Median Age	Source: U.S Census Bureau, 2010-2014 American Community Survey(ACS) 5 Year Estimates accessed at American FactFinder, United States Census Bureau	The median age is the age at the midpoint of the population. Half of the population is older than the median age and half of the population is younger. The median age is often used to describe the "age of a population.

Data Measures by Category	Source	Definition
Average Household size	Source: American Community Survey(ACS) 2010-2014 accessed at American FactFinder, United States Census Bureau	A measure obtained by dividing the number of people in households by the total number of households (or householders).
Median Household Income	Source: American Community Survey(ACS) 2010-2014 accessed at American FactFinder, United States Census Bureau	The median household income is the midpoint of the of the income distribution of half of the population.
Per Capita Income	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	**Per capita income** is the mean money income received in the past 12 months computed for every man, woman, and child in a geographic area. It is derived by dividing the total income of all people 15 years old and over in a geographic area by the total population in that area. Note -- income is not collected for people under 15 years old even though those people are included in the denominator of per capita income. This measure is rounded to the nearest whole dollar. Source: United States Census Bureau, State & County QuickFacts
% total population below poverty line	Source: U.S. Census Bureau, 2010-2014 American Community Survey 5- year Estimates	Following the Office of Management and Budget's (OMB's) Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is considered in poverty. Source: American Community Survey(ACS) 2009-2013 accessed at American FactFinder, United States Census Bureau
County Health Factors		
Population Growth	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	Percent Population Change-- The difference between the population of an area at the beginning and end of a time period, expressed as a percentage of the beginning population.
Unemployment	Source: United States Department of Labor. Bureau of Labor Statistics, 2014 Annual Averages	Percentage of population ages 16 and older unemployed but seeking work. Source: United States Department of Labor. Bureau of Labor Statistics, 2014 Annual Averages
% under age 5, 2014	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	These data are derived from estimates of the resident population of all U.S counties and county equivalents by single years of age (age 0, 1, 2 ...85 and over) for July 1 of the reference year, for years since 2010, or for April 1 for 2010. Source: United States Census Bureau, State & County QuickFacts
% over age 65, 20141	Source: United States Census Bureau, State & County QuickFacts accessed at quickfacts.census.gov	These data are derived from estimates of the resident population of all U.S counties and county equivalents by single years of age (age 0, 1, 2 ...85 and over) for July 1 of the reference year, for years since 2010, or for April 1 for 2010. Source: United States Census Bureau, State & County QuickFacts
Children in Poverty	Source: United States Census Bureau, Small Area Income and Poverty Estimates(SAIPE) program, 2014 accessed at County Health Rankings & Roadmap 2016	Percentage of children under age 18 in poverty.
Language Spoken at Home	Source: American Community Survey(ACS) 2009-2013 accessed at American FactFinder, United States Census Bureau	*Percent of Population that speaks English less than very Well.*
Single -Parent Families	Source: American Community Survey(ACS) 2010-2014 accessed at County Health Rankings & Roadmaps, 2016	Percentage of children that live in a household headed by single parent
Disability	Source: American Community Survey(ACS) 2010-2014 accessed at American FactFinder, United States Census Bureau	Total Civilian non-institutionalized population with a disability.

Data Measures by Category	Source	Definition
Behavioral Risk Factor		
Binge Drinkers and Alcohol Consumption	Source: Behavioral Risk Factor Surveillance System (BRFSS), 2014, accessed at County Health Rankings & Roadmap (CHRR) 2016	Excessive Drinking is the percentage of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than one (women) or 2 (men) drinks per day on average
Tobacco Use	County Source: BRFSS, 2014, accessed at CHRR website 2016	Adult Smoking is the percentage of the adult population that currently smokes every day or most days and has smoked at least 100 cigarettes in their lifetime.
Obesity(Adult)	Source: BRFSS, 2012, county level data accessed at CDC Diabetes Data and Statistics - County Data website	Obesity (adult) indicates the percent of adults who reported a body mass index of 30 and above
Overweight & Obesity(Child & Adolescent)	Source: Arkansas Center for Health Improvement. Assessment of Childhood and Adolescent Obesity in Arkansas: Year Eleven (Fall 2013 – Spring 2014)	Overweight (child & adolescent) indicates the percent of children and adolescents grades K - 10 with BMI-for-age between the 85th percentile and less than the 95th percentile.
Physical Activity(Adult)	Source: BRFSS, 2012, accessed at CDC Diabetes Data and Statistics - County Data website	Physical Inactivity (adult) indicates the percent of adults who reported no leisure-time physical activity. Source: BRFSS, 2012, accessed at CDC Diabetes Data and Statistics - County Data website.
Nutrition(Adult)	Source: Arkansas Department of Health (ADH) Health Statistics Branch 2009 BRFSS County Estimates. Note: This is the most recent year for which data was available at the county level.	Nutrition (adult) indicates the percent of adults who reported consuming less than five fruits and vegetables per day. Source: ADH Health Statistics Branch 2009 BRFSS County Estimates. Note: This is the most recent year for which data was available at the county level.
Mammography	Source: BRFSS, 2013, accessed at CHRR website, 2016	Mammography indicates the percent of female Medicare enrollees ages 67-69 who received a mammography screening in 2012. Source: BRFSS, 2013, accessed at CHRR website.
Pap Smear	Source: ADH Health Statistics Branch 2010 BRFSS County Estimates. Note: This is the most recent year for which data was available at the county level.	Pap Test indicates the percent of adult women who did had a pap test within the past 3 years.
Colonoscopy/sigmoidoscopy	Source: State Cancer Profiles 2008-2010 County Level Modeled Estimate Combining BRFSS & National Health Interview Survey data.	Colonoscopy/sigmoidoscopy indicates the percent of individuals ages 50+ who had ever had a sigmoidoscopy or colonoscopy.
Prostate Specific Antigen(primary service area Testing)	Source: ADH Health Statistics Branch 2010 BRFSS County Estimates. Note: This is the most recent year for which data was available at the county level.	Prostate Specific Antigen (primary service area Testing) indicates the percent of adult men ages 40+ who reported not having had a primary service area test within the last 2 years.
Physical Environment		
Air Pollution-Particulate Matter Days	Source: Outdoor Air Quality-Fine Particulate Matter data -CDC Wonder 2011 accessed at County Health Rankings & Roadmap, 2016	Average daily density of fine particulate matter in micrograms per cubic meter(PM2.5) The US numerical figure represents the figure for the Top US performers(10^{th} percentile).
Drinking Water Violations	Source: Safe Drinking Water Information System(SDWIS), EPA, FY2013- 2014 accessed at County Health Rankings & Roadmap, 2016	Percentage of population potentially exposed to water exceeding a violation limit during the past year. The US numerical figure represents the figure for the Top US performers (10^{th} percentile).

Data Measures by Category	Source	Definition
Severe Housing Problems	Source: Comprehensive Housing Affordability Strategy- US Department of Housing & Urban Development 2008-2012 accessed at County Health Rankings & Roadmap, 2016	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities. The US numerical figure represents the figure for the Top US performers (10th percentile).
Health Resource Availability		
Health care Costs	Source: Dartmouth Atlas of Healthcare 2013 at accessed at County Health Rankings & Roadmaps 2016	Amount of price-adjusted Medicare reimbursements per enrollee. Source: Dartmouth Atlas of Healthcare 2013 at accessed at County Health Rankings & Roadmaps 2016
Dentists ratio	Source: Area Health Resource Fie/American Medical Association 2014 at accessed at County Health Rankings & Roadmap 2016	Ratio of population to dentists. The US numerical figure represents the figure for the Top US performers (90th percentile).
Mental Health Providers	Source: CMS, National Provider Identification 2015 accessed at County Health Rankings & Roadmaps 2016	Mental Health Providers is the ratio of the county population to the number of mental health providers including psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists and advanced practice nurses specializing in mental health care. In 2015, marriage and family therapists and mental health providers that treat alcohol and other drug abuse were added to this measure. The US numerical figure represents the figure for the Top US performers (90th percentile).
Primary care ratio	Source: Area Health Resource Fie/American Medical Association 2013, accessed at County Health Rankings & Roadmaps 2016	Ratio of population to primary care physicians. Primary Care Physicians is the ratio of the population to total primary care physicians. Primary care physicians include non-federal, practicing physicians (M.D.'s and D.O.'s) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics. The US numerical figure represents the figure for the Top US performers(90th percentile).Source: Area Health Resource Fie/American Medical Association 2013, accessed at County Health Rankings & Roadmaps
Social Health & Mortality		
General Health Status % of Adults reporting fair or poor health	Source: BRFSS 2006-2012 accessed at CHRR Website	Self-reported health status is a general measure of health-related quality of life (HRQoL) in a population. This measure is based on survey responses to the question: "In general, would you say that your health is excellent, very good, good, fair, or poor?" The value reported in the County Health Rankings is the percentage of adult respondents who rate their health "fair" or "poor." The measure is age-adjusted to the 2000 US population. Years of Data Used: 2006-12; weight in health outcomes: 10% Note: For the National Data, the Top US Performers value is recorded
Avg. Number of Sick days	Source: BRFSS 2006-2012 accessed at CHRR Website	This measure is based on survey responses to the question: "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?" The value reported in the County Health Rankings is the average number of days a county's adult respondents report that their physical health was not good. The measure is age-adjusted to the 2000 US population. Years of data used: 2006-12; weight in health outcomes: 10% Note: For the National Data, the Top US Performers value is recorded
Homicide	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Homicide rates are calculated as number of deaths assigned to ICD-10 codes X85-Y09,Y87.1 per 100,000 population, age-adjusted to the standard US 2000 population

Data Measures by Category	Source	Definition
Unintentional Injuries	Source: National Center for Health Statistics - National Vital Statistics Reports; vol 61 no. 4 accessed at the Centers for Disease Control and Prevention Community Health Status Indicators	Unintentional injury death rates are calculated as the number of deaths assigned to ICD-10 codes V01–X59, Y85–Y86 per 100,000 population, age adjusted to the 2000 standard population. Death rates are calculated based on the sum of the resident populations for each of the data years involved (e.g. the denominator of a rate for 2008-2010 combined is the sum of the population estimates for 2008, 2009, and 2010). For census years (e.g. 2010), population counts enumerated as of April 1 are used. For all other years, population estimates as of July 1 are used. Postcensal population estimates are used in rate calculations for years after a census year and match the data year vintage (e.g. July 1, 2011 resident population estimates from Vintage 2011 are used as the denominator for 2011 rates).
Motor Vehicle Crashes	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Motor vehicle crash-related injuries are the leading cause of death among younger people aged 5 to 34 years. Motor vehicle crash fatality rates are especially high in rural areas and for residents of tribal lands, in part because of poor road maintenance, higher rates of alcohol impaired driving, lower rates of seat belt and child safety seat use, and less access to emergency response and trauma care. Motor vehicle traffic-related death rate per 100,000. ICD-10 codes V02-V04 (.1, .9), V09.2, V12-V14 (.3-.9), V19 (.4-.6), V20-V28 (.3-.9), V29-V79 (.4-.9), V80 (.3-.5), V81.1, V82.1, V83-V86 (.0-.3), V87 (.0-.8), V89.2. Death rates are calculated based on the sum of the resident populations for each of the data years involved (e.g. the denominator of a rate for 2008-2010 combined is the sum of the population estimates for 2008, 2009, and 2010).
Years of Productive Life Lost	Source: National Center for Health Statistics - Mortality Files accessed at: CHRR Website	Premature Death is the years of potential life lost before age 75 (YPLL-75). Every death occurring before the age of 75 contributes to the total number of years of potential life lost. For example, a person dying at age 25 contributes 50 years of life lost, whereas a person who dies at age 65 contributes 10 years of life lost to a county's YPLL. The YPLL measure is presented as a rate per 100,000 population and is age-adjusted to the 2000 US population. Years of data used: 2006-12; weight in health outcomes: 10% Note: For the National Data, the Top US Performers value is recorded
Mental Health		
Mentally Unhealthy Days	Source: BRFSS 2006-2012 accessed at CHRR Website	This measure is based on survey responses to the question: “Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” The value reported in the County Health Rankings is the average number of days a county’s adult respondents report that their mental health was not good. The measure is age-adjusted to the 2000 US population. Note: For the National Data, the Top US Performers value is recorded
Depression	Source: BRFSS accessed at Arkansas Department of Health Website	As a self-reported measure, this question asks "(Ever told) you have a depressive disorder, including depression, major depression, dysthymia or minor depression?” This measure reports the Arkansas adults (age 18+) reporting depression.
Suicide	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Suicide rates are calculated as number of deaths assigned to ICD-10 codes X60-X084,Y87.0 per 100,000 population, age-adjusted to the standard US 2000 population
Inpatient Psychiatric Discharges	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	The hospital discharge rate for inpatients primarily diagnosed with a mental disease or disorder per 100, 00 population.
Maternal and Child health		
Very Low Birth Rate	Source: Arkansas Department of Health Programs and Services Family Health accessed at Arkansas Department of Health Website	% of live births in the state where newborns weigh less than 1,500 grams

Data Measures by Category	Source	Definition
Neonatal Mortality	Source: Arkansas Department of Health Programs and Services Family Health Infant Mortality accessed at Arkansas Department of Health Website	number of deaths among those aged less than 28 days per 1,000 live births
Post-Neonatal Mortality	Source: Arkansas Department of Health Programs and Services Family Health Infant Mortality accessed at Arkansas Department of Health Website	number of deaths among those aged 28 days to less than one year old per 1,000 live births
Infant Mortality Rate	Source: Arkansas Department of Health Programs and Services Family Health Infant Mortality accessed at Arkansas Department of Health Website	Infant mortality is a statistic that looks at the number of babies who die each year before they reach their first birthday. It is usually calculated as the number of babies who die out of every 1,000 babies who are born alive in a year
Child Maltreatment	Source: Arkansas Advocates for Children & Families, 2014, accessed at Kids Count Data Center website.	Child maltreatment means abuse, sexual abuse, neglect, sexual exploitation or abandonment by the caretaker of the child (a parent, guardian, custodian, or foster parent). The caretaker may be anyone who is age 10 or older and entrusted with the child's care. Child maltreatment occurs when the caretaker harms the child or let's harm come to the child, or fails to meet the child's basic needs. Child Maltreatment indicates the total number of true assessment of child maltreatment.
Child Mortality Rate	Source: CDC Wonder Mortality Data - Compressed Mortality File accessed at CHRR Website	number of deaths among children under age 18 per 100,000 population
Teen Birth Rate	Source: Arkansas Advocates for Children & Families accessed at Kids Count Data Center Teenage Births www.datacenter.kidscount.org	The number of births to unmarried teens 15-19 years of age as well as the birth rate for women 15 to 19 years of age per 1,000 residents. Source: Arkansas Department of Health - www.healthyarkansas.com
Cancer Incidence and Mortality		
All Cancer Incidence	Source: Arkansas Central Cancer Registry	All cancer incidence rates are defined as the age-adjusted rate of newly diagnosed cases of all cancers each year.
All cancers (Age-adjusted death rate per 100,000 population)	Source: National Center for Health Statistics - National Vital Statistics Reports; vol 61 no. 4 accessed at the Centers for Disease Control and Prevention Community Health Status Indicators	Cancer death rates are calculated as the number of deaths assigned to ICD-10 codes C00-C97 per 100,000 population, age adjusted to the 2000 standard population. Death rates are calculated based on the sum of the resident populations for each of the data years involved (e.g. the denominator of a rate for 2008-2010 combined is the sum of the population estimates for 2008, 2009, and 2010). For census years (e.g. 2010), population counts enumerated as of April 1 are used. For all other years, population estimates as of July 1 are used. Postcensal population estimates are used in rate calculations for years after a census year and match the data year vintage (e.g. July 1, 2011 resident population estimates from Vintage 2011 are used as the denominator for 2011 rates). Data Years: 2005 - 2011
Breast Cancer Incidence	Source: Arkansas Central Cancer Registry	Breast cancer incidence rates are defined as the age-adjusted rate of newly diagnosed cases of breast cancers each year.
Breast Cancer (Age-adjusted death rate per 100,000 population)	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Breast cancer death rates are calculated as the number of deaths assigned to ICD-10 codes C50 per 100,000 female population, age-adjusted to the 2000 standard US population.
Lung Cancer Incidence	Source: Arkansas Central Cancer Registry	Lung cancer incidence rates are defined as the age-adjusted rate of newly diagnosed cases of Lung cancers each year.

Data Measures by Category	Source	Definition
Lung Cancer (Age-adjusted death rate per 100,000 population)	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Lung cancer death rates are calculated as the number of deaths assigned to ICD-10 codes C33-34 per 100,000 population, age-adjusted to the 2000 standard US population
Cervical Cancer Incidence	Source: Arkansas Central Cancer Registry	Cervical cancer incidence rates are defined as the age-adjusted rate of newly diagnosed cases of Cervical cancers each year.
Cervical Cancer (Age-adjusted death rate per 100,000 population)	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Cervical cancer death rates are calculated as the number of deaths assigned to ICD-10 codes C53 per 100,000 female population, age-adjusted to the 2000 standard US Population
Colorectal Cancer Incidence	Source: Arkansas Central Cancer Registry	Colorectal cancer incidence rates are defined as the age-adjusted rate of newly diagnosed cases of Colorectal cancers each year.
Colorectal Cancer (Age-adjusted death rate per 100,000 population)	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Colorectal cancer death rates are calculated as the number of deaths assigned to ICD-10 codes C18-C21 per 100,000 population, age-adjusted to the 2000 standard US population
Cardiovascular Diseases: Indicators, Incidence & Mortality		
Fruits & Vegetables	Source: BRFSS accessed at Arkansas Department of Health Website	% of the county's population at-risk that report having not consumed the recommended five servings of fruits and vegetables a day.
High Blood Cholesterol Incidence	Source: BRFSS accessed at Arkansas Department of Health Website	% of a county's at-risk population reporting having high blood cholesterol
Coronary Heart Disease	Source: BRFSS accessed at Arkansas Department of Health Website	% of a county's at-risk population reporting having angina or coronary heart disease.
Cardiovascular Disease	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Cardiovascular disease death rates are calculated as the number of deaths assigned to ICD-10 codes I00-78 per 100,000 population, age-adjusted to the 2000 standard US population
Diabetes Reported Cases	Source: BRFSS accessed at Arkansas Department of Health Website	% of primary service area's at-risk population reporting having diabetes
Diabetes Mellitus	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Diabetes is a disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches and other food into energy needed for daily life. Diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. Diabetes death rates are calculated as the number of deaths assigned to ICD-10 codes E10-14 per 100,000 population, age-adjusted to the 2000 standard US population.
Other Types of Mortality		
All causes	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Death rates are calculated as the number of deaths assigned to ICD-10 codes A00-Y89.9 per 100,000 population, age-adjusted to the 2000 standard population.
Chronic Obstructive Lung Disease	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Chronic Obstructive Pulmonary Diseases rates are calculated as the number of deaths assigned to ICD-10 codes J40-47 per 100,000 population, age adjusted to the 2000 standard US population

Data Measures by Category	Source	Definition
Pneumonia/Influenza	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Pneumonia/Influenza death rates are calculated as the number of deaths assigned to ICD-10 codes J10-18 per 100,000 population, age-adjusted to the standard 2000 US population
Stroke	Source: Arkansas Center for Health Statistics Branch Query System accessed at Arkansas Department of Health Website	Stroke death rates are calculated as the number of deaths assigned to ICD-10 codes I60-I69 per 100,000 population, age adjusted to the 2000 standard population. Death rates are calculated based on the sum of the resident populations for each of the data years involved (e.g. the denominator of a rate for 2008-2010 combined is the sum of the population estimates for 2008, 2009, and 2010). For census years (e.g. 2010), population counts enumerated as of April 1 are used. For all other years, population estimates as of July 1 are used. Postcensal population estimates are used in rate calculations for years after a census year and match the data year vintage (e.g. July 1, 2011 resident population estimates from Vintage 2011 are used as the denominator for 2011 rates).
Communicable Diseases		
Syphilis	County and State Source: Arkansas Department of Health STI/HIV/Hepatitis C/TB Section accessed at Arkansas STD*MIS Surveillance Data System. National Source: Centers for Disease Control and Prevention. HIV Surveillance Report, 2013: vol. 25 accessed at www.cdc.gov/std/syphilis/	Number of cases of syphilis reported
Gonorrhea	County and State Source: Arkansas Department of Health STI/HIV/Hepatitis C/TB Section accessed at Arkansas STD*MIS Surveillance Data System. National Source: 2013 Sexually Transmitted Diseases Surveillance accessed at www.cdc.gov/std/stats13/gonorrhea/	Number of cases of Gonorrhea reported
Chlamydia	County and State Source: Arkansas Department of Health STI/HIV/Hepatitis C/TB Section accessed at Arkansas STD*MIS Surveillance Data System. National Source: 2013 Sexually Transmitted Diseases Surveillance accessed at www.cdc.gov/std/stats13/chlamydia/	Number of cases of Chlamydia reported

Resource List

1. This directory contains listings of area social, health, support, educational and employment services in Pulaski County - http://cityconnectionsinc.org/documents/I%20Believe%20Resource%20List.pdf

2. The Arkansas Times published a resource list of public and private agencies in Pulaski County that offers services to those in need of assistance - http://www.arktimes.com/arkansas/pulaski-county-help-list/Content?oid=3596796

3. The Homeless Shelter directory published a list of all homeless shelters in and around Little Rock and Sherwood in Pulaski County - http://www.homelessshelterdirectory.org/cgi-bin/id/city.cgi?city=Benton&state=AR

4. Public Schools in Conway published this list of community resources for Faulkner County - http://www.conwayschools.org/uploads/6/4/5/4/6454635/faulkner_county_community_resources.pdf

5. The Ward Chamber of Commerce in Cabot published this comprehensive resource guide for people in need of food, clothing, shelter, and necessities in Lonoke County - http://www.wardchamber.com/uploads/Cabot_Area_Resource_Guide.pdf

6. Arkansas Department of Health
   4815 W. Markham St.
   Little Rock, AR 72205
   (510) 661-2000
   http://www.healthy.arkansas.gov/Pages/default.aspx

7. Arkansas Advocates for Children & Families
   1400 W. Markham St.
   Little Rock, AR 72201
   (510) 371-9678
   http://www.aradvocates.org/

8. United Family Services
   715 W 2nd St.
   Little Rock, AR 72201
   (501) 376-0111
   http://ufamservices.com/

9. AARP Senior Community Service Employment Program
   10220 W. Markham St.
   Little Rock, AR 72205
   (501) 661-1098
   http://states.aarp.org/?s=arkansas

10. Diocese of Little Rock
    2500 N Tyler St.
    Little Rock, AR 72207
    (501) 664-0340
    http://www.dolr.org/

11. Arkansas Community Foundation
    1400 W. Markham St.
    Little Rock, AR 72201
    (501) 372-1116
    http://www.arcf.org/

12. Pulaski County Health Unit – Central Little Rock
    3915 W. 8th St.
    Little Rock, AR 72204
    (501) 280-3100

13. Pulaski County Health Unit – Jacksonville
    3000 N. 1st St. PO Box 725
    Jacksonville, AR 72076
    (501) 982-7477

14. Pulaski County Health Unit – North Little Rock
    2800 N. Willow St.
    N. Little Rock, AR 72114
    (501) 791-8551

15. Pulaski County Health Unit – Southwest Little Rock
    8901 Dailey Drive
    Little Rock, AR 72209
    (501) 565-9311

16. Pulaski County In-Home Services Office
    3600 Cantrell Rd., Ste. 203
    Little Rock, AR 72202
    (501) 280-3234

17. Faulkner County Health Unit – Conway
    811 N. Creek Drive
    Conway, AR 72033
    (501) 450-94941

18. Lonoke County Health Unit – Cabot
    118 south First Street
    Cabot, AR 72023
    (501) 843-7561

19. Lonoke county Health Unit – Lonoke
    306 N. Center street
    Lonoke, AR 72086
    (501) 676-2268

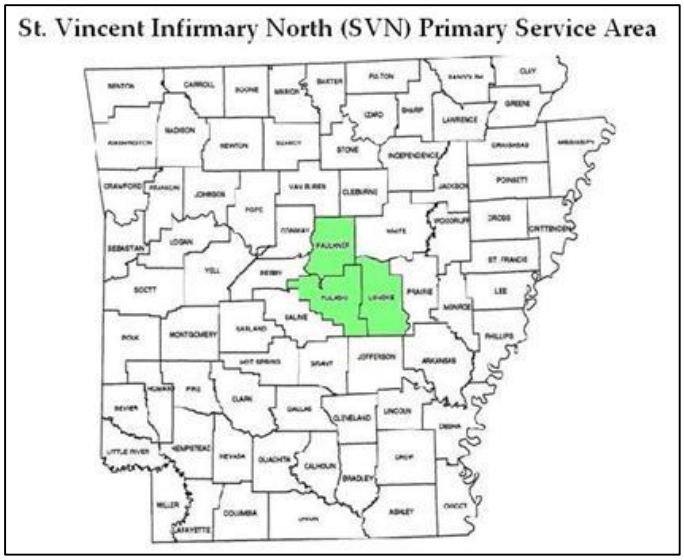
Appendix A.

CHI St. Vincent North 2013 Implementation Strategy

CHNA Implementation Strategies- SVN

Intro

Hospital Name: St. Vincent North Medical Center



Hospital Description: St. Vincent North is located in the city of Sherwood and is licensed for 69 beds. All acute care rooms are private throughout the health system.

The 2012 St. Vincent North (SVN) Primary Service Area Community Health Needs Assessment (CHNA) utilizes quantitative information based on review of secondary social, demographic, economic, health, and quality-of-life data. In addition, the Assessment incorporated qualitative primary data based on interviews with community leaders and representatives of local agencies.

SVN, part of St. Vincent Health System, a wholly-owned subsidiary of Catholic Health Initiatives, is located in Sherwood, AR. The 2012 SVN CHNA is a collaborative effort by graduate students of Cornell University's Sloan Program in Health Administration, St. Vincent North and St. Vincent Health System.

Data were reviewed on the three counties making up the SVN primary service area: **Faulkner, Lonoke, and Pulaski Counties** (see figure).

History:

Mission: The mission of St. Vincent Health System and Catholic Health Initiatives (CHI) is to nurture the healing ministry of the Church by bringing it new life, energy and viability in the 21st Century.

Fidelity to the Gospel urges us to emphasize human dignity and social justice as we move toward the creation of healthier communities.

Values: Reverence - Profound respect and awe for all of creation, the foundation that shapes spirituality, our relationships with others and our journey to God.

Integrity - Moral wholeness, soundness, fidelity, trust, truthfulness in all we do.

Compassion - Solidarity with one another, capacity to enter into another's joy and sorrow.

Excellence - Preeminent performance, becoming the benchmark, putting forth our personal and professional best.

When Conducted: 2012-2013

Timeframe included in implementation Strategy:

Quantitative Data Findings:

Executive Summary

- Pulaski County is the most populous of the counties in the SVN primary service area (PSA) and the most race-ethnically diverse. Pulaski County makes up 68% of the SVN primary service area.
- Pulaski County is the oldest of the three counties in the PSA with a median age of 35.5 (Arkansas' median age is 37.4), and has the greatest percent of population age 65 or older (12.0%; Arkansas value is 14.4%).
- All three counties in SVN's PSA surpass the state average median income.
- Among the three counties, Pulaski County has the highest poverty (individual and childhood poverty) percentages (16.7% and 25.4% respectively).
- In terms of behavioral risk factors, no county in the SVN PSA fares consistently better or worse across a variety of indicators: Pulaski County has the highest percentage of adult binge drinkers and the lowest percentage of adult current smokers.
- Obesity is a key health concern: In 2010, every county in the SVN PSA had a greater percent of adults identified more obese than did the US as a whole (26.9%). Blacks are more likely to be obese than Whites.
- In terms of protective factors like annual pap smears, mammograms, colonoscopy/sigmoidoscopy, and prostate specific antigen screenings, the counties in the SVN PSA generally perform better than the state on these indicators, but worse than the US as a whole.
- Of the three SVN PSA counties, only Pulaski County had non-zero days of high ozone concentration and had the highest reported particulate matter days in the PSA.
- In terms of social and mental health, Faulkner and Pulaski Counties reported fewer mentally unhealthy days and a lower child maltreatment rate than the state and the US. While Faulkner and Lonoke Counties had a lower homicide rate than the state and nation, the homicide rate in Pulaski County was considerably higher than the state and national rates.
- Infant mortality is a key health concern: From 2005-2007, Faulkner and Pulaski Counties had a higher infant mortality rate than the US. Infant mortality is higher among Black women than White women (excluding Lonoke County).
- With the exception of Faulkner County, the SVN PSA counties had a higher teen birth rate than the nation (39.1 births per 1,000 females aged 15-19) in 2009. However, for the same year, all SVN PSA counties had a lower teen birth rate than the state (59.2 births per 1,000 females aged 15-19).

- Cancer mortality is a key health concern: In 2003-2007, all three counties in the SVN PSA had higher cancer mortality rates (all cancers) than the US (183.8 deaths due to lung cancer per 100,000 population). Lung cancer mortality rates also exceed the US rate (52.5 lung cancer deaths per 100,000 population) in all three counties and, with the exception of Pulaski County, exceed the state rate of 67.1 lung cancer deaths per 100,000 population.
- Stroke mortality is a key health concern: In 2000-2006, rates of stroke mortality were higher in the three SVN PSA counties than in the state (132 stroke deaths per 100,000 population ages 35+) and US as a whole (98 stroke deaths per 100,000 population ages 35+). Stroke mortality rates are especially high among Blacks.
- Sexually transmitted infections are a concern in Pulaski County which reports greater cases and rates of syphilis, gonorrhea, chlamydia, and HIV/AIDS than all other counties.

Qualitative Data Findings:

Executive Summary

As part of St. Vincent Health North's Community Health Needs Assessment, a team of St. Vincent employees and Cornell University students met with community leaders from the St. Vincent North (SVN) primary service area to gather information on what health issues they believe are the most pressing in the community and how SVN can better serve those needs. From a high-level perspective, access to affordable care, prevention of disease, and patient awareness were the most commonly recognized issues. Addressing these issues could further alleviate other identified health problems like obesity, diabetes, and heart disease. Interviewees suggested that SVN partner with other community organizations (schools, free clinics, etc.) to improve health education and health resource availability. In addition, it was recommended that SVN use its powerful faith-based brand to reach out and connect with community members. The themes and corresponding summary of the relevant interview are provided below.

CHI St. Vincent North Implementation Update

The CHI St Vincent North CHNA was developed in 2013. [77] It was developed in concert with the CHI St Vincent Infirmary CHNA because they share service areas. They also identified several community health needs from a high-level perspective,

Access to affordable care: The hospital maintains a comprehensive charity care program in order to enhance access for the uninsured and indigent population. The hospital operates several clinics in the Little Rock and North Little Rock area to serve this population and provides through its pharmacy department access to medication. Additionally the hospital partners with other low-cost/free clinics to provide access to needed specialist services e.g. orthopedic care and specialized surgery. The hospital also maintains hospital-based primary care, wound and cardiology clinics to enhance access for the uninsured.

Health Information and health literacy: The hospital participates in a variety of methods to promote health literacy throughout its service area. The hospital partners with Little Rock television stations to

[77] There were no written comments received on the 2013 CHI St. Vincent North CHNA

enhance public awareness around crucial health needs such as obesity, diabetes, heart disease, motor cycle safety etc.

Cardiovascular Disease: The hospital's CHNA identified cardiovascular disease as a significant issue and address it through screenings, public education and outreach throughout the service area in cooperation and collaboration with Heart Clinic Arkansas and other collaborators such as the American Heart Association.

Stroke Mortality and Treatment: In collaboration with the Arkansas Neuroscience Institute the hospital has provided education and training to emergency rooms throughout the state and provides 24 hour access to world renowned physicians to accept and treat patients with strokes and aneurysms. The hospital accepts patients in transfer from around the state.

Obesity and exercise: The hospital participates in various outreach activities including heart walks, 5k, supporting the Little Rock Marathon and other events to raise awareness of the importance of exercise to combat obesity. The hospital publishes a newsletter; The Well fed Heart to promote healthy eating and reduce obesity and obesity related diseases.

Areas identified on the CHNA that were not addressed

Sexually transmitted diseases and teen pregnancy- These issues were identified in our CHNA but they are not addressed by the hospital because of our religious prohibition on contraception and the availability of other groups addressing these issues.

Excessive drinking- This was not addressed due to lack of expertise and resources.

Pollutants- Not addressed due to lack of resources.